

2005 Master Plan Reexamination Report for the Township of Voorhees

Adopted after a public hearing by Resolution #05-028 by the
Township of Voorhees Planning Board on July 13, 2005



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The original of this document was signed and
sealed in accordance with NJAC 13:41-1.3.b

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- Thomas Fanelli
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REEXAMINATION REPORT

INTRODUCTION

Pursuant to the Municipal Land Use Law (N.J.S.A. 40:55D-89) a re-examination of the master plan should be completed every six years. The report must state the major land development problems and objectives present when the last report or plan was prepared and the status of these conditions today. The report must also make any recommendations for changes to the master plan or development regulations that would further achieve the original goals or address any significant changes that have occurred since the last report was adopted. This report is separated into five sections addressing each element required by the Municipal Land Use Law.

The Township Master Plan was last reexamined on September 23, 1998. This document was used as the basis for this report. Other Township reports that were referenced as part of the preparation of this document include the 1995 Master Plan reexamination (amended through December 4, 1996), The Route 73 Corridor Study (2003), Sanitary Sewer Systems Master Plan (1996), Route 73 Sanitary Sewer Corridor Study (1998), and the Cooper Road Pump Station Upgrade Report (2004).

PART I: MAJOR PROBLEMS AND OBJECTIVES

40:55D-89.a.

The major problems and objectives relating to land development in the municipality at the time of the adoption of the last reexamination report.

The issues relating to land development in 1998 were expressed through the Goals and Objectives of the Master Plan. Following are the Planning Goals and Objectives as adopted:

I. Commerce and Industry

Goal: To allow an appropriate mix of retail, and office/light industrial uses in order to achieve economic viability in the Township of Voorhees.

Objective: To provide increased opportunities for office uses in appropriate areas of the Township.

Objective: To encourage retail development along certain designated transportation routes.

Objective: To encourage increased utilization of existing office development.

Objective: To provide limited manufacturing and light industrial uses which are compatible with the environment of the Township

II. Housing

Goal: To achieve a balance of housing types and housing quantity which meets the needs of Township residents and does not place a burden on Township fiscal sustainability.

Objective: To control the residential tax burden by reducing future residential densities and promoting commercial and office/light industrial uses.

Objective: To provide senior and disabled special needs housing to meet the requirements of Township residents.

Objective: To integrate new development with substantial open space areas and discourage the growth of suburban sprawl.

Objective: To minimize the visual impact of new development and to promote effective visual buffers.

Objective: To encourage infill development.

Objective: To promote energy conservation.

III. Community Facilities

Goal: To provide for the general needs of the community by making available those facilities necessary for the common good.

Objective: To promote facilities for local groups to meet and work together.

Objective: To encourage community assistance for those having special needs and to expand compliance with the American with Disabilities Act (ADA) in public places.

IV. Recreation

Goal: To encourage the development of recreation facilities which meet the active and passive recreational needs of Voorhees Township citizens of all ages.

Objective: To provide family oriented parks and green spaces throughout the Township.

Objective: To keep current with active recreational trends and needs of Voorhees residents, and to meet those needs by providing ample amounts of active and recreational opportunities.

V. Land Use and the Environment

Goal: To preserve environmentally sensitive areas in their natural state and to protect natural resources and areas of conservation.

Objective: To protect and maintain wetland and floodplain areas, to protect long term public water supplies to reduce development pressure on aquifer recharge areas and to preserve wooded areas for wildlife habitat. The management of these and other natural constraints should meet or exceed statewide standards.

Objective: To promote stormwater management practices which positively affect aquifer recharge areas and floodplains, waterways and properties abutting waterways.

Objective: To provide significant natural space within and around existing development to lessen the impact of the built environment.

Objective: To seek appropriate locations for the establishment of greenways linking areas of environmental and recreational importance.

Objective: To promote wildlife preservation areas.

Objective: To promote lake management which encourages the maintenance of the aesthetic elements, environmental integrity and water quality of lakes as well as the financial benefit of increased realty value.

VI. Open Space

Goal: To preserve appropriate remaining open space areas throughout the Township.

Objective: To ensure that open space planning plays an important role in developing the character, location, magnitude and timing of growth and development in the Township.

Objective: To give priority to preserving large contiguous tracts of forests and lands containing unique areas of environmental sensitivity.

Objective: To identify and protect the habitats of threatened and endangered species of wildlife and vegetation and to control the character, location and magnitude of growth and development in and adjacent to such habitats to avoid direct or indirect impacts on threatened or endangered species.

Objective: To promote and encourage the protection of privately owned tracts of open space, wetlands or forest lands through easement purchase, deed restrictions, and other appropriate planning techniques.

Objective: To locate open space as close as possible to the populations they serve, and encourage passive public recreational use of such lands, where appropriate.

VII. Transportation

Goal: To provide for the orderly and efficient movement of people and goods throughout the Township.

Objective: To protect the existing transportation routes from development which exceeds the capacity of the road system.

Objective: To utilize the existing major transportation routes as much as possible and to avoid the expansion of new major arterial roads.

Objective: To carefully design new roads to enhance and facilitate the movement of traffic.

Objective: To encourage the development and use of public transit.

Objective: To promote the development of pedestrian walkway systems, while integrating connections with neighborhood bikeways.

VIII. Solid Waste

Goal: To promote recycling and the reduction of solid waste generation throughout the Township.

Objective: To set community standards for source reduction of solid waste generation.

Objective: To set community standards for maximizing recycling.

Objective: To educate our residents regarding recycling and to provide for the recycling process.

PART II: POPULATION AND DEMOGRAPHIC ANALYSIS

40:55D-89.b.

The extent to which such problems and objectives have been reduced or have increased subsequent to the adoption of the 1998 Master Plan Update.

In examining the Master Plan, it is vital to consider the factors that shaped the 1998 Master Plan Update. The following demographic data provides the historical context, along with information which may be used to extrapolate trends in the Township and surrounding Region. When comparing Voorhees Township with nearby communities, only those that are similar were chosen.

A. Population

The 2000 census for Voorhees Township was 28,126 persons. This is an increase of 3,567 persons from 1990 for a 14.5% increase in population. Based upon residential building permits issued from 2000 through July, 2004, the estimated population for the Township is 29,036 persons, an increase of 3% from 2000, [(350 permits with an average of 2.60 persons per dwelling unit) + 28,126]. (Note: projections were made for New Jersey from 2000 to 2004 due to the disparity that would result from the building permit data and varied household size throughout the state.)

The population in Camden County only increased 1.2% to 508,932 persons and the State of New Jersey increased 8.8% to 8,414,350 persons from 1990 to 2000. The small increase

in the population in Camden County is reflective of the older suburbs and towns that saw their development peak during the 1950's through the 1970's. A majority of the older suburbs and towns are much smaller in size and have little land, if any, left to support new construction. Voorhees' development peaked in the 1980's, with a 90% growth rate from 1980 to 1990.

Table 1 Population Trends			
	Voorhees Township	Camden County	New Jersey
1990	24,559	502,824	7,730,188
2000	28,126	508,932	8,414,350
July, 2004	29,036	520,005	n/a
1990 to 2000	14.5%	1.2%	8.8%
2000 to 7/2004	3.2%	2.2%	n/a

Table 2 PERCENT POPULATION CHANGE 1990 to July 2004		
	1990-2000	2000-July 2004
Voorhees Township	15.0%	3.0%
Evesham Township	20.0%	8.0%
Medford Township	8.0%	5.0%
Mount Laurel Township	33.0%	0.8%
Camden County	1.0%	2.0%

B. Age Cohorts

The largest growth of the population in Voorhees Township occurred in the 10-14 age cohort, with a 48% increase in this bracket; and in the 55-64 age cohort, with a 47% increase. The remaining age brackets grew, but at much smaller rates. While the 10-14 age cohort grew at the highest rate, the total percentage of the Township's population in this bracket is only 8%.

Since there was not a similar increase in the younger age cohorts, it can reasonably be concluded that this type of growth should not be expected in the near future from within the community. This will, however, most likely impact Eastern Regional High school district in the coming years as the growth spills into the 15-19 age cohort. Without proper planning with the Board of Education, the Regional School District could end up with larger classroom sizes to accommodate this population bracket.

Table 3 1990 & 2000 Population Profiles or Cohorts										
Age	Voorhees Township					Camden County				
	1990		2000		1990 to 2000	1990		2000		1990 to 2000
< 5	1,930	7.9%	1,767	6.3%	-8.4%	39,653	7.9%	34,411	6.8%	-13.2%
5-9	1,777	7.2%	2,082	7.4%	17.2%	37,732	7.5%	38,642	7.6%	2.4%
10-14	1,552	6.3%	2,298	8.2%	48.1%	35,267	7.0%	40,256	7.9%	14.4%
15-19	1,421	5.8%	1,816	6.4%	27.8%	33,838	6.7%	35,238	6.9%	4.1%
20-54	13,920	56.7%	14,704	52.3%	5.6%	251,697	50.1%	253,575	49.8%	0.7%
55-64	1,619	6.6%	2,384	8.5%	47.3%	43,446	8.6%	43,041	8.5%	-0.9%
65+	2,340	9.5%	3,075	10.9%	31.4%	61,191	12.2%	63,769	12.5%	4.2%
Median Age	33.7	n/a	37.2	n/a	10.4%	32.8	n/a	35.8	n/a	9.1%

The second largest growth was in the 55 to 64 and over 65 age cohorts. The total percentage of Voorhees Township's population that is over the age of 55 is 19%. The aging of the Township's population is further evidenced by the increase in the median age from 33.7 in 1990 to 37.2 years of age in 2000.

C. Race, Ethnicity And Gender

The 2000 Census further revealed, as shown in Table 4, that Voorhees Township has a predominantly white population. The percentage of the population that was White was 78, the percentage Black was 8, the percentage of Asian descent was 11 and the percentage of all other races was less than 1 for the Township. By comparison Camden County is 71% White and the State is 72.6% White. Camden County is 18% Black and the State is 13.6% Black. Persons of Hispanic origin comprised 2.5% of the population of Voorhees Township; significantly less than both the County with 10% and the State with 13%.

The breakdown of gender is generally slightly in favor of females for Voorhees Township (see Table 5). This is comparable with both the County and the State where the female population is predominating.

Table 4 Voorhees Township 2000 Population Distribution by Age		
	Total	Percentage
School Age		
5-11	2,998	10.6%
12-14	1,382	4.9%
15-17	1,280	4.6%
Working/Voting		
16+	21,550	76.6%
16-64	18,475	65.7%
18+	20,699	73.6%
18-64	17,624	62.7%
Other		
0-4	1,767	6.3%
5-17	5,660	20.1%
18-44	10,713	38.1%
45-64	6,911	24.6%
65+	3,075	10.9%

**Table 5
2000 Population by Categories**

	Voorhees		Camden		New Jersey	
	Persons	%	Persons	%	Persons	%
Total	28,126	100%	508,932	100%	8,414,350	100%
Sex						
F	14,621	52%	263,355	51.7%	4,331,537	51.5%
M	13,505	48%	245,577	48.3%	4,082,813	48.5%
Race						
White	22,011	78.3%	360,756	70.9%	6,104,705	72.6%
Black	2,249	8.0%	92,059	18.1%	1,141,821	13.6%
Asian	3,217	11.4%	18,910	3.7%	480,276	5.7%
Other	202	0.7%	27,396	5.4%	473,793	5.6%
Two or More Races	447	1.6%	9,811	1.9%	213,755	2.5%
Hispanic Origin	694	2.5%	49,166	9.7%	1,117,191	13.3%
Age						
25-64	15,844	56.3%	267,860	52.6%	4,537,028	53.9%
> 64	3,075	10.9%	63,769	12.5%	1,113,136	13.2%
Median Age	37.2	n/a	35.8	n/a	36.7	n/a
Persons Per Household	2.60	n/a	2.68	n/a	2.68	n/a

D. Population Trends

As seen in Table 6, the Delaware Valley Regional Planning Commission (DVRPC) indicates that Voorhees Township will have a population of approximately 30,000 people. This figure is slightly higher than the projected population using the building permit data indicated in the beginning of this section. Voorhees Township has a forecasted population of approximately 35,600 in the year 2025. This would account for approximately 7 percent of the overall population of the Township.

Area Name	2000 Census population	2005 Forecast	2010 Forecast	2015 Forecast	2020 Forecast	2025 Forecast	2000-2010 Absolute Change	2000-2010 Percent Change	2010-2020 Absolute Change	2010-2020 Percent Change	2000-2025 Absolute Change	2000-2025 Percent Change
Voorhees Township	28,126	30,090	30,840	32,910	34,600	35,620	2,714	10%	3,760	12%	7,494	27%
Evesham Township	42,275	43,830	45,480	47,220	48,900	50,610	3,205	8%	3,420	8%	8,335	20%
Medford Township	22,253	23,620	25,930	28,040	29,900	31,930	3,677	17%	3,970	15%	9,677	43%
Mount Laurel Township	40,221	41,680	44,110	46,740	49,050	51,780	3,889	10%	4,940	11%	11,559	29%
Camden County, NJ	508,932	511,770	512,710	512,790	514,760	513,530	3,778	1%	2,050	0%	4,598	1%
Burlington County, NJ	423,394	438,780	457,660	476,550	496,490	513,450	34,266	8%	38,830	8%	90,056	21%

Source: Delaware Valley Regional Planning Commission. Revised March 2002.

E. Housing Trends

Table 7 indicates housing trends from 1990 to July 2004. During this period the housing stock in the Township grew by 13.4%. In actual construction units, Voorhees Township added 1,534 dwelling units during the 1990 to July 2004 period. The rate of increase in housing units for Voorhees Township was higher than Camden County, 13.4 percent to 7.3 percent. However, the growing unavailability of developable land in the Township has made the Township's housing stock grow at a smaller rate than other municipalities. The recent increase in the housing market is in response to market demands. With interest rates at an all time low the pressure for new housing is increasing in South Jersey.

Voorhees must also be cognizant of the housing growth occurring in the surrounding municipalities. For example, Evesham Township has seen a 26 percent increase in housing over the past 14 years. The increasing housing and population in the nearby communities will impact the infrastructure and commercial development trends in Voorhees Township.

It is interesting to note that while the County and nearby municipalities have seen a decrease in the average household size, Voorhees has remained steady (see Table 7).

Table 7 Housing Trends							
Municipality	1990 Units	2000 Units	1990-2000 Change	Building Permits Issued 2000- 7/2004	2004 Units	2000- 7/2004 Change	1990- 7/2004 Change
Voorhees Township	9,905	11,084	10.6%	355	11,439	3.1%	13.4%
Evesham Township	13,268	16,324	18.7%	1,666	17,990	9.3%	26.2%
Medford Township	7,116	8,147	14.5%	432	8,579	5.0%	17.1%
Mount Laurel Twp.	12,613	17,163	26.5%	129	17,292	0.7%	27.1%
Burlington County	143,236	161,311	12.6%	10,047	171,358	5.9%	16.4%
Camden County	190,145	199,679	5.0%	5,479	205,158	2.7%	7.3%

* Source: New Jersey Department of Labor

As Table 8 indicates, 54.9 percent of the Township's housing stock consists of single-family detached dwellings. This figure is comparable to Evesham Township (57.9 percent) and Mount Laurel Township (50.2 percent). However, single family attached (townhouse) units comprise 13.7 percent of the Township's housing stock, which is less than Evesham Township (19.2 percent) and Mount Laurel (23.3 percent). Voorhees Township has a significantly higher percentage of occupied housing units in excess of 10 units. Approximately 20.9 percent of the Township's residents live in multi-family housing developments which comprise of ten units or more. Evesham Township (12.1 percent) and Mount Laurel Township (7.5 percent) do not approach this figure. Voorhees Township has a substantial amount of multi-family dwellings as an overall percentage of the housing stock when compared to similar Southern New Jersey municipalities.

Table 8
Tenure by Units in Structure, Occupied Units 2000

Municipality	Total Occ. Units	1 unit det.	% of Total Occ. Units	1 unit attached	% of Total Occ. Units	2 units (duplex)	% of Total Occ. Units	3 or 4 units	% of Total Occ. Units	5 to 9 units	% of Total Occ. Units	10 to 19 units	% of Total Occ. Units	20+ units	% of Total Occ. Units	Mobile Home	% of Total Occ. Units
Voorhees Township	10,489	5,763	54.9%	1,442	13.7%	61	0.6%	299	2.9%	706	6.7%	838	8.0%	1,353	12.9%	17	0.2%
Evesham Township	15,824	9,169	57.9%	3,042	19.2%	129	0.8%	467	3.0%	1,103	7.0%	1,054	6.7%	855	5.4%	5	0.0%
Medford Township	7,946	6,243	78.6%	685	8.6%	91	1.1%	148	1.9%	438	5.5%	216	2.7%	125	1.6%	0	0.0%
Mount Laurel Twp.	16,570	8,318	50.2%	3,860	23.3%	216	1.3%	693	4.2%	1,936	11.7%	773	4.7%	468	2.8%	298	1.8%

F. Employment

Table 9 indicates the Delaware Valley Regional Planning Commission's employment projections for the Township and surrounding areas. The DVRPC predicts that there are currently 25,000 jobs within the Township, which is approximately 4,000 more jobs more than what is estimated for Evesham Township and 7,000 jobs less than Mount Laurel Township. Currently, it is estimated that Voorhees Township possesses approximately 10.7 percent of all jobs within Camden County. The 2025 projections reveal that the estimated number of jobs in the Township will be 33,410 jobs, accounting for 12.6 percent of the overall jobs in Camden County.

Area Name	Total emp., 1990 Census	Total emp., 1997 estimate	2000 Forecast	2005 Forecast	2010 Forecast	2015 Forecast	2020 Forecast	2025 Forecast	2000-2010 Absolute Change	2000-2010 Percent Change	2010-2020 Absolute Change	2010-2020 Percent Change	2000-2025 Absolute Change	2000-2025 Percent Change
Voorhees Township	14,925	19,210	21,400	25,490	28,020	31,220	33,440	33,410	6,620	30.9%	5,420	19.3%	12,010	56.1%
Evesham Township	16,189	18,392	19,550	21,500	22,700	24,300	26,000	29,550	3,150	16.1%	3,300	14.5%	10,000	51.2%
Medford Township	9,335	9,906	10,800	12,400	12,750	13,500	14,200	16,750	1,950	18.1%	1,450	11.4%	5,950	55.1%
Mount Laurel Township	21,161	26,576	28,600	32,150	33,800	36,650	38,750	41,200	5,200	18.2%	4,950	14.6%	12,600	44.1%
Camden County, NJ	227,933	230,778	232,290	237,610	244,420	251,720	258,690	264,160	12,130	5.2%	14,270	5.8%	31,870	13.7%
Burlington County, NJ	191,345	201,144	207,050	217,100	226,350	233,650	240,400	250,550	19,300	9%	14,050	6%	43,500	21.0%

Source: Delaware Valley Regional Planning Commission 1999.

PART III: CHANGES IN ASSUMPTIONS, POLICIES AND OBJECTIVES

40:55D-89.c.

The extent to which there have been significant changes in the assumptions, policies and objectives forming the basis for the Master Plan or development regulations as last revised, with particular regard to the density and distribution of population and land uses, housing conditions, circulation, conservation of natural resources, energy conservation, collection, disposition and recycling of designated recyclable materials, and changes in State, county and municipal policies and objectives:

A. State Plan

There has been a significant policy accomplishment effecting land use since the last Master Plan update was adopted. In 2001, under the aegis of the State Planning Act, a revised State Development and Redevelopment Plan (SDRP) was adopted. This plan and policy document divides the State into Planning Areas based upon the environmental capabilities, infrastructure availability, existing patterns of development and other principals. At this time, a number of State agencies have agreed to base their decision-making upon the SDRP and Planning Area designations. There are two Planning Area designations in Voorhees Township, Metropolitan Planning Area (PA1) and Suburban Planning Area (PA2).

Approximately three-quarters of Voorhees is located in the PA1 State Plan area while the eastern portion of the Township abutting Route 73 is located in the PA2 area. The purpose of both of these designations is to protect the character of existing stable communities and encourage growth in compact forms while reducing and redesigning sprawl.

B. Land Use Issues

Four major issues were cited as the basis for the 1998 Master Plan update:

- Fiscal Concerns
- Service Demands
- Environmental Concerns
- Ordinance Complexity

As in any planning exercise, there are relationships among all of these and one cannot be addressed by either policy decision or subsequent implementation without affecting the others in a way, perhaps, not consistent with the other policy desires. The essence of any planning effort is to design a land use pattern and system of controls, which result in the most optimum balance amongst those policies.

We have reviewed trends in the valuation properties based upon land use over the last several years and find the following:

	Percentage of Total Property Value			
	1996	1999	2000	2004
Residential	73	73	72	74
Com/Ind	24	25	26	25

* Source: Voorhees Township Tax Office:
Forms SR-3A

Clearly, the share paid by the residential and commercial/industrial sector has remained basically constant for at least the last eight years and probably longer. Thus, the basic dilemma facing Voorhees during the last review of these land use issues remains constant as well: how to enhance the non-residential sector while protecting that which makes this Township extraordinary.

Based upon the concerns in the 1998 Master Plan reexamination report and experience since then as well as new legislative and administrative initiatives, action items are summarized below:

1. Route 73 Zoning

The existing zoning for the Route 73 corridor requires revision in order to:

- a. Simplify use and bulk regulations
- b. Provide more effective incentives for appropriate development such as lot consolidation and preservation of open area through non-contiguous Planned Developments

- c. Create a specialized zone for medical and related uses with a GDP option
- d. Promulgate appropriate building design standards
- e. Institute incentives for the extension of sewer service infrastructure
- f. Recommend to the NJDOT alternatives for traffic calming consistent with the principles of the SDRP and Smart Growth

2. Route 561 Planning

The stretch of Berlin Road between While Horse Road and Evesham Road is one of the oldest commercial strips in the Township. As such many of the sites and areas along this highway do not meet contemporary standards as to design, coverage and other regulatory subject areas.

In addition, there may be significant opportunities to improve circulation patterns through a comprehensive replanning of this area of the Township including intersection improvements. These problems and opportunities must be addressed.

3. Impact Fees

The recent legislation sets out extensive requirements for utilizing this tool. However, the circulation study, now being done, would enable imposition of fair share.

4. Residential Clustering/Open Space Enhancement

In order to preserve open areas while allowing same level of residential development, a system of regulations to give developers incentives to apply the clustering concept should be included. Alternative methods of adding to the open space inventory should be explored.

5. COAH

The new regulations have been adopted. They provide for a growth-shore methodology. That is 1 affordable unit for every 8 new market units and every 25 new jobs (calculated by square footage of new retail/office/industrial space). Although the Township's 2004 COAH Certification includes a surplus, a projection of development should be done to assure continued compliance. It is anticipated that the new regulations will be challenged and the final outcome is problematical.

6. General Ordinance Review

There are inconsistencies and internal contradictions in Chapter 152. These should be evaluated and eliminated. Some reorganization of this Chapter should also take place for clarity and the proper composition of variance and waiver requirements.

PART IV: RECOMMENDED CHANGES

40:55D-89.d.

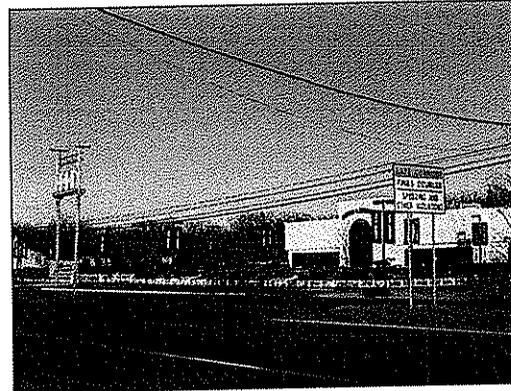
The specific changes recommended for the Master Plan or development regulations, if any, including underlying objectives, policies and standards, or whether a new plan or regulations should be prepared.

A. Route #73

From its origin at the Delaware River to its terminus in Winslow Township, State Highway #73 has always been a pre-eminent regional corridor along its entire length. The relative importance of each of the sections, however, has evolved. Once important mainly as a connector to other locations, the stretch from the Marlton Circle south has and is becoming an attractor and destination of its own, both due to the residential development off of the highway and the business uses bordering the right-of-way.



BJ's Shopping Center – Route 73



Auto Lenders – Route 73

There is a dilemma, which may even be a paradox. The issue is whether Voorhees Township can take maximum economic and fiscal advantage of this resource while alleviating the disadvantages of the traffic burdens which accompany such development.

While no program can hope to maximize the one while minimizing the other, there may be some reasonable balance point between those extremes.

The Zoning Regulations at present for the major districts along Rt. 73 provide for a total maximum impervious coverage of 60%. This would generate the following square footage for various uses per acre:

	Commercial	Office (multi-story)
Building	8,712 SF	11,300 SF
Total	26,136 SF	26,136 SF

These expected building sizes are based upon parking needs per 1,000 sq. ft. and may vary but are a generally valid estimate. They are also not at significant variance from the commonly accepted development potential in most suburban communities with utilities. The issue here, however, is the availability of sewer service.

Various documents are extant regarding the provisions of sewer service along the Rt. 73 corridor. The overall conclusion and prognosis is for the replacement of the Cooper Road and Sturbridge Road facilities with a new pump station at Dutchtown Road with a much larger capacity capable of handling the flow from Rt. 73 development generally.

It is a usual technique in residential land use delineation to impose different densities or lot sizes in areas with and without sewer availability. This provides, in appropriate sections of a municipality, economic incentives for the extension of infrastructure. This is less common but no less valid a tool for non-residential areas. It is proposed therefore that in the zoning districts on Rt. 73 this coverage requirement be revised to include separate maximums as follows:

(x) Maximum Impervious Coverage

- (1) without sewers 30%
- (2) with sewers 60%

In order to increase coverage beyond that another technique is proposed. There is a current requirement for 25% of the tract to be in contiguous open space with the balance in smaller areas. For the minimum lot size of 5 acres in the 03 and SC zones this is reasonable, generating a 1.25 acre area. For larger tracts the same visual and aesthetic impact can be achieved with a smaller percentage. Additionally, with a larger tract because of more design options a higher impervious surface maximum is not unreasonable, as the absolute acreage will increase and in a more efficient and sensitive manner.

It is proposed therefore that the following be added to the relevant section.

(x) Maximum Impervious Coverage

- (1) 70% with sewerage and a minimum lot size of 20 acres
- (2) A minimum of 25% of the entire tract 20 acres or less and 20% of a larger tract on which the development is being proposed shall be set aside as contiguous open area. Of that amount, no more than 50% shall be NJDEP designated wetlands or floodplain.

It is anticipated that this combination of regulations will encourage larger projects and provide economic incentives for the pursuing a comprehensive strategy for capitalizing the upgrade of the wastewater collection system for the corridor.

An additional tool to add incentives to the development potential of the corridor is the consolidation of districts and the subsequent simplification of regulations. There are currently five major zones fronting Rt. 73: SC, O3, EB, EIB and ORB. Many of the uses permitted in these zones are common to more than one. Some other uses may no longer be appropriate for the area. The following recommendations are made, therefore:

- Eliminate EIB zone specification and others potentially along Rt. 73 and replace with below.
- Create a new Major Business (MB) zone with permitted uses in categories based on different minimum lot sizes, locations, impact on residential uses, and size of use, with access to local streets by non-residential uses to be discouraged..

Example of Uses and Regulations for MB Zone:

Use	Offices	Shopping Centers	Medical Complex
Tract Size	3 acres	5 acres	100 acres
Location	Both	East Side	West Side
Frontage	100 ft	200 ft	500 ft
Coverage	See Sect.		
Buffers			
Residential	100 ft	100 ft	200 ft
Other	60 ft	60 ft	75 ft

This new zone could replace all the SC, ORB, and EB zoning on Rt. 73.

- Add a new category of use in the MB (or other zone) of Medical Campus with large minimum tract size, appropriate buffers and other design regulations for the Rt. 73 corridor zone.

The following standards are proposed for this use:

1. Uses:

All types of medical uses, such as hospitals, clinics, doctor's offices, and the like, and support services, including conference facilities. Restaurants may be permitted as ancillary uses along with some lodging type uses to be used by visiting staff, conferees, and patient families. These uses shall be limited in scope and controlled by size, number, and intensity/density regulations. No air transport uses shall be permitted.

2. Minimum tract size: 100 acres
3. Minimum frontage: 1,000 feet
4. Maximum building coverage: 25%
5. Maximum total coverage: 60%
6. Minimum setbacks
 - a) at Route 73: 150 feet
 - b) others: 75 feet
 - c) 200 feet from residential uses
7. Maximum height
 - a) at Route 73 setbacks: 50 feet

- b) at all other setbacks: 50 feet with one (1) foot of additional height for every five (5) feet added to the minimum, to a maximum of 100 feet
- 8. Circulation: There shall be a single boulevard entrance from Route 73 with a maximum offset from any public right-of-way intersecting Route 73 North and a ring road providing access to all elements of the campus with emergency access only from Dutchtown Road. In addition, uses and structures shall be restricted in the areas directly across from residential communities adjacent to and accessing Route 73, to those of low impact with extra buffering.
- 9. Signage shall be limited to a major identification sign at the Rt. 73 entrance, and directional and specifying signs along the ring road.
- 10. Parking shall be based upon Section 154.002, except shared parking may be utilized based upon ULI, ITE, and other sources acceptable to the approving agency. Parking areas shall be interconnected.
- 11. Pedestrian access: There shall be a comprehensive system for parking areas, all facilities, and open space areas.
- 12. The development of a medical campus shall utilize the General Development Plan procedure in accordance with NJSD 40:55D-45 et seq., including phasing.
- 13. Phasing: Any development including hospital uses shall include a schedule which assures an appropriate proportion of other uses as the

development progresses.

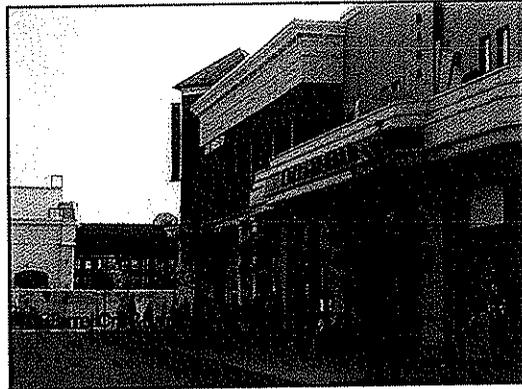
B. Haddonfield-Berlin Road (CR 561)

The segment of Haddonfield-Berlin Road (C.R. 561) between Evesham Road and White Horse Road has historically been a location of commercial activity in the Township of Voorhees.

As early as the pre-World War II era, various retail and other commercial establishments lined the streets of the neighborhood. This area is the gateway to Voorhees Township from Cherry Hill Township and is an excellent location for a better-designed commercial district.

The Township seeks an area of mixed use development where locally-oriented shopping activity can flourish. The study area boundary for this area includes the portions of Block 139 fronting Haddonfield-Berlin Road, and all of the following Blocks: 140, 141, 142, 143, 144, 145, 146 and 147.

The overall length of the area is long for the creation of a traditional, compact commercial area. Typically, a locally-oriented commercial area does not exceed 100,000 square feet. However, the additional space can be used to assist in the development of commercial uses that compliment the traditional commercial area including parking and other forms of transit facilities.



A more carefully designed area would help create a "sense of place" in Voorhees Township.

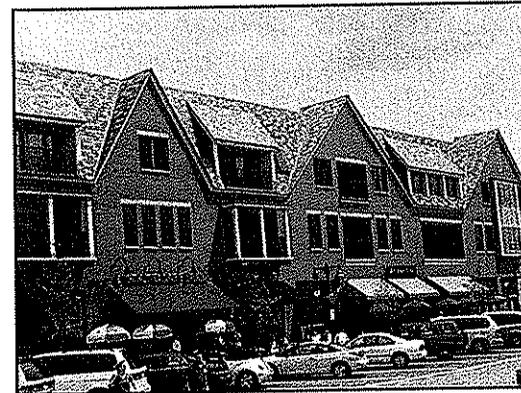
The goal is an area that is compact and designed for the human scale. The human scale is defined as the relationship between the dimensions of the human body and the proportion of space which people use. The significance of creating space for the human scale is that special attention needs to be paid to walking distances, the height of buildings, size of sidewalks, design of streetlights, size and orientation of signs and other features.

It should be designed to include a mixture of uses. This means that various non-residential uses as well as civic and open-space uses can be mixed together in a neighborhood. The mixing of uses helps promote walking between uses.

Uses:

The following non-residential uses are recommended in a commercial core at the center of the area:

1. Retail establishments (excluding drive-through facilities);
2. Restaurants, bars and other food establishments (excluding drive-in and drive-through facilities).
3. Personal service (dry cleaners, barber shops, beauty salons, etc.)
4. Professional and medical offices (located on second or third floors only).
5. Municipal or civic uses.



First floor retail with second and third floor office is recommended.

Bulk and Area Requirements:

Area and bulks requirements should be established under any plan. They should focus on developing commercial areas that delineate and create a continuous building façade along the street frontages of the 1,500 feet commercial core. The design should incorporate shared parking areas amongst the users that are located in the rear of the buildings. Parking should be limited along the frontage of Haddonfield-Berlin Road.

The design should promote buildings that are connected and should mirror other commercial areas in Southern New Jersey in communities such as Collingswood, Haddonfield, and Moorestown. Due to the large right-of-way along Haddonfield-Berlin Road, one-story buildings are discouraged. Ideally, two (2) story buildings should be constricted to create the human scale. The following minimal standards are recommended (additional standards should ultimately be developed as part of any ordinance):

	Recommended Standards
Max principal building height	30 ft.
Max. outbuilding height	15 ft.
Min Front setback	0 ft.
Min. Rear Setback, Principal Building	50 ft.
Min. Rear Setback, Outbuilding	10 ft.
Minimum Side Setback	0 ft, 10 ft if between buildings



To be pedestrian oriented, buildings should abut the sidewalk.

Impervious and building coverage standards for the proposed development exceed what would typically be applied in development in other portions of the Township. A maximum impervious coverage of 80 percent and a maximum building coverage of 50 percent is recommended.

The following regulations shall apply to principal buildings:

1. Building floors shall be delineated and shall be executed through windows, belt courses, cornice lines or similar architectural detailing.
2. The primary pedestrian entrance for pedestrians to access all street level uses and business establishments with street frontage:
 - a. Shall face and be visible from the street.
 - b. Shall be directly accessible and visible from the sidewalk, or edge of right-of-way when no sidewalk is provided.
3. Buildings should be designed to be situated along Haddonfield-Berlin Road as well as the side streets to create a true traditional neighborhood layout.

Loading Areas, Loading Dock Entrances and Building Mechanical and Accessory Features.

1. Loading areas: Dumpsters and loading areas shall be screened so as not to be visible from any public plaza,

street level or sidewalk level outdoor dining area, public sidewalk or public right-of way.

2. Loading dock entrances for non-residential uses shall be screened so that loading docks and related activity are not visible from the public right-of-way.
3. Shall be located to the side or rear of the principal structure and shall be in the location of least visibility from the public right-of-way. Screening with plant or fence materials shall be required if the equipment is otherwise visible from the public right-of-way.
4. Shall be incorporated in the design of the building and screened with building materials similar to the building when located on rooftops.
5. Shall not be permitted between a building and any public street.

Sidewalks

Sidewalks at a minimum of ten (10) feet in width and a maximum of 15 feet in width are recommended within the area.

Lighting

All street lighting shall be provided from decorative lighting fixtures that measure twelve (12) to sixteen (16) feet in height.

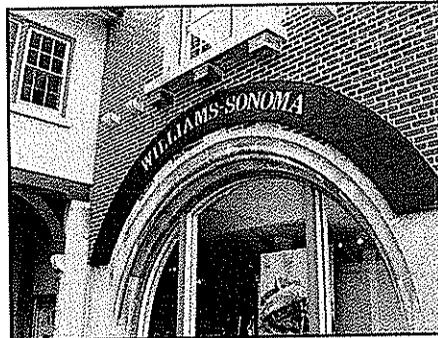
Storefront Regulations

All buildings shall provide a storefront character on the first floor adjacent to the sidewalk. All buildings, with a storefront character shall meet the following requirements:

1. The length of façade without intervening fenestration or entryway shall not exceed twenty (20) feet.
2. Fenestration shall be provided for a minimum of seventy-five (75%) percent of the length of the frontage:
3. Beginning at a point not more than three (3) feet above the sidewalk, to a height no less than ten (10) feet above the sidewalk;
4. Beginning at the finished floor elevation to a height no less than ten (10) feet above the finished floor elevation when the finished floor elevation is three (3) or more feet above the sidewalk; or
5. Beginning at a point not more than sidewalk level, to a height no less than ten (10) feet above the finished floor elevation when the finished floor elevation is below the sidewalk.

Signage

A comprehensive sign program should be established for the neighborhood that establishes a uniform sign theme. Signs shall share a common style. All signs should be wall signs or cantilever signs. Signage should not dominate the front facades and should be designed at the human scale.



A common sign theme at an appropriate scale should be established.



Off Street Parking Lot Layout

1. The following additional regulations should apply to the area:
2. Continuous landscaped buffer strips shall be constructed along public sidewalks and public rights-of-way where parking is adjacent to such sidewalks or public rights-of-way, except at points of ingress and egress into the facility. Such landscaped buffer strips shall be a minimum of five (5) feet in width and shall contain, in

addition to grass and/or ground cover, trees planted a maximum of fifty (50) feet on center along the entire length.

3. All landscaped buffer strips along public sidewalks and public rights of way shall have a minimum of one (1) tree.
4. Newly planted trees shall be a minimum of two (2) inches in caliper as measured at a height three (3) feet above ground level, shall have a forty (40) foot minimum mature height and shall be drought-tolerant. Trees shall be planted a minimum of thirty (30) inches from any barrier curb so as to prevent injury to trees from vehicle bumpers.
5. Surface parking lots shall have a minimum landscaped area equal to at least ten percent (10%) of the paved area within said lot. In no case shall a parking lot owner be required to provide landscaped areas that exceed ten percent (10%) of the paved area.



Parking areas should be adequately landscaped.

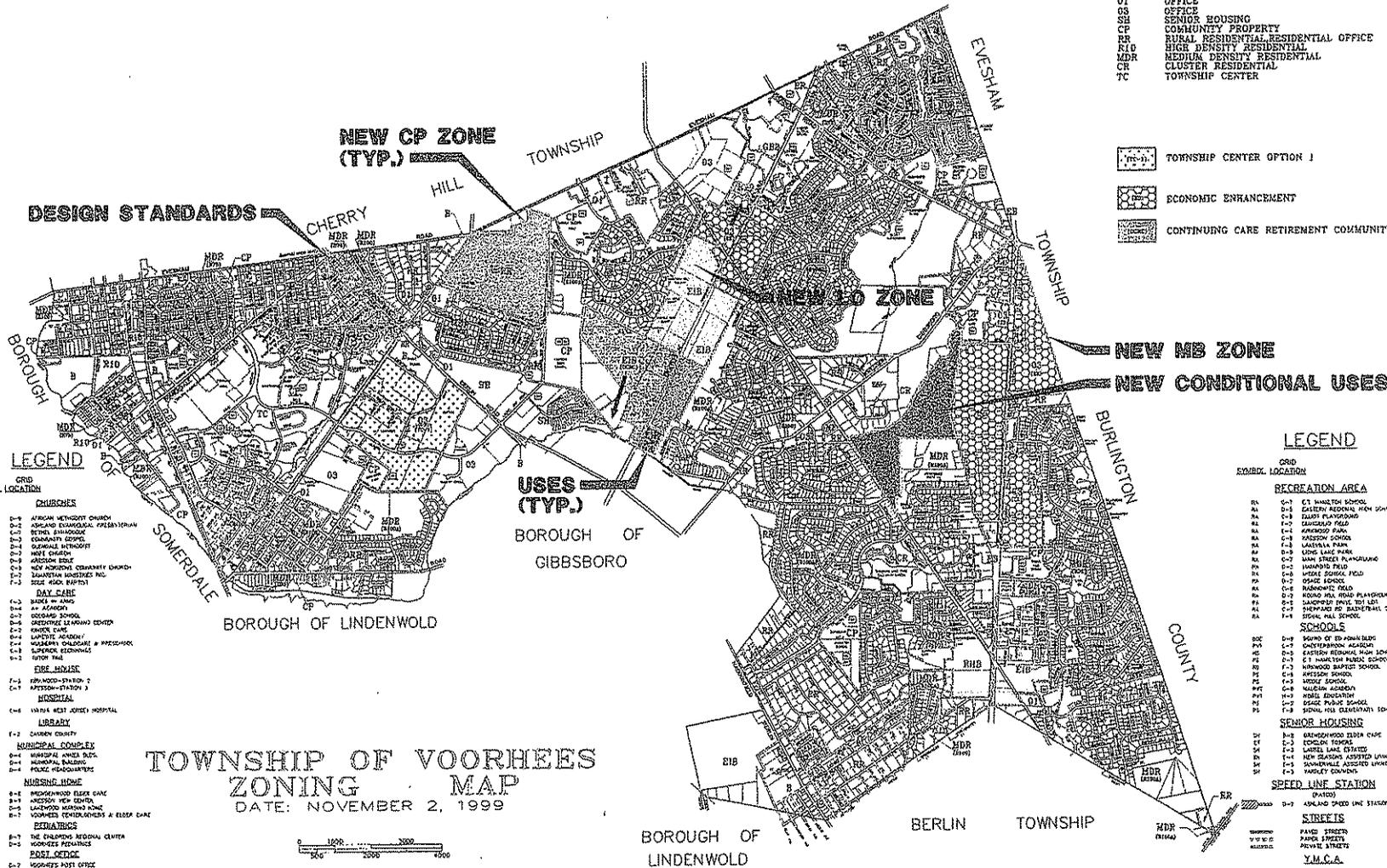
6. A minimum of one (1) tree per eight (8) parking spaces shall be included in the required landscaped areas for surface parking lots.
7. In addition to trees, ground cover shall be provided in order to protect tree roots and to prevent erosion. Ground cover shall consist of shrubs, mulch and other similar landscaping materials.
8. Barrier curbs shall be installed around the perimeter of surface parking lots and around landscaped areas that are required herein, except where the perimeter abuts an adjacent building or structure and at points of ingress and egress into the facility, so as to prevent encroachment of vehicles onto adjacent property, rights-of-way and landscape areas.
9. All commercial uses shall provide bicycle/moped parking facilities at a ratio of at least one (1) bicycle/moped parking space for every twenty (20) automobile parking spaces.
10. No surface level parking lots should abut Haddonfield-Berlin Road. Driveways leaving to rear parking areas shall be permitted.
11. Shared parking lots and facilities amongst buildings is recommended.

Existing Township parking standards should be measured for their applicability in the neighborhood. New parking standards should be developed as part of any specific ordinance.

ZONING DISTRICTS

- ORB OFFICE, RETAIL, BUSINESS
- B BUSINESS
- REB RESTRICTED HIGHWAY BUSINESS
- EB ECONOMIC BUSINESS
- GB2 GENERAL BUSINESS
- EIB ECONOMIC INDUSTRIAL BUSINESS
- SC SHOPPING CENTER
- O1 OFFICE
- OS OFFICE
- SH SENIOR HOUSING
- CP COMMUNITY PROPERTY
- RR RURAL RESIDENTIAL, RESIDENTIAL OFFICE
- R1D HIGH DENSITY RESIDENTIAL
- MDR MEDIUM DENSITY RESIDENTIAL
- CR CLUSTER RESIDENTIAL
- 7C TOWNSHIP CENTER

- TOWNSHIP CENTER OPTION 1
- ECONOMIC ENHANCEMENT
- CONTINUING CARE RETIREMENT COMMUNITY



LEGEND

- GRID SYMBOL LOCATION
- 44 CHURCHES
 - 45-46 AFRICAN METHODIST CHURCH
 - 47-48 ASPEN AND GARDENS PRESBYTERIAN
 - 49-50 BETHLEHEM LUTHERAN
 - 51-52 BETHLEHEM METHODIST
 - 53-54 BETHLEHEM UNITED METHODIST
 - 55-56 BETHLEHEM UNITED METHODIST
 - 57-58 BETHLEHEM UNITED METHODIST
 - 59-60 BETHLEHEM UNITED METHODIST
 - 61-62 BETHLEHEM UNITED METHODIST
 - 63-64 BETHLEHEM UNITED METHODIST
 - 65-66 BETHLEHEM UNITED METHODIST
 - 67-68 BETHLEHEM UNITED METHODIST
 - 69-70 BETHLEHEM UNITED METHODIST
 - 71-72 BETHLEHEM UNITED METHODIST
 - 73-74 BETHLEHEM UNITED METHODIST
 - 75-76 BETHLEHEM UNITED METHODIST
 - 77-78 BETHLEHEM UNITED METHODIST
 - 79-80 BETHLEHEM UNITED METHODIST
 - 81-82 BETHLEHEM UNITED METHODIST
 - 83-84 BETHLEHEM UNITED METHODIST
 - 85-86 BETHLEHEM UNITED METHODIST
 - 87-88 BETHLEHEM UNITED METHODIST
 - 89-90 BETHLEHEM UNITED METHODIST
 - 91-92 BETHLEHEM UNITED METHODIST
 - 93-94 BETHLEHEM UNITED METHODIST
 - 95-96 BETHLEHEM UNITED METHODIST
 - 97-98 BETHLEHEM UNITED METHODIST
 - 99-100 BETHLEHEM UNITED METHODIST

USES (TYP.)

- BOROUGH OF GIBBSBORO
- BOROUGH OF LINDENWOLD
- BOROUGH OF SOMERDALE

LEGEND

- GRID SYMBOL LOCATION
- RECREATION AREA
 - 0-1 CT. HANLON SCHOOL
 - 0-2 EASTVIEW MEDICAL WEN SCHWEN
 - 0-3 EARLY PLAYGROUND
 - 0-4 GARDNER FIELD
 - 0-5 KENNEDY PARK
 - 0-6 PASTOR SCHOOL
 - 0-7 WASHINGTON PARK
 - 0-8 LONG LAKE PARK
 - 0-9 MAIN STREET PLAYGROUND
 - 0-10 HANLON FIELD
 - 0-11 WOODS SCHOOL FIELD
 - 0-12 SPAGE SCHOOL
 - 0-13 HANLON FIELD
 - 0-14 HANLON FIELD
 - 0-15 HANLON FIELD
 - 0-16 HANLON FIELD
 - 0-17 HANLON FIELD
 - 0-18 HANLON FIELD
 - 0-19 HANLON FIELD
 - 0-20 HANLON FIELD
 - SCHOOLS
 - 1-1 SOUND OF ED JORDAN
 - 1-2 CHRISTOPHER ACADEMY
 - 1-3 EASTVIEW MEDICAL WEN SCHWEN
 - 1-4 CT. HANLON SCHOOL
 - 1-5 HANLON BAPTIST SCHOOL
 - 1-6 AMESON SCHOOL
 - 1-7 WOODS SCHOOL
 - 1-8 MAULIN ACADEMY
 - 1-9 HANLON ACADEMY
 - 1-10 SPAGE PUBLIC SCHOOL
 - 1-11 SOUNDVIEW ELEMENTARY SCHOOL
 - SENIOR HOUSING
 - 2-1 BRIDGEWOOD ELDER CARE
 - 2-2 ELDERS HOMES
 - 2-3 LITTLE LAKE ELDERS
 - 2-4 NEW BRASSON ASSURED LIVING
 - 2-5 HANLONVILLE ASSURED LIVING
 - 2-6 PARKLEY ELDERS
 - SPEED LINE STATION
 - 3-1 ASPEN AND GARDENS STATION
 - STREETS
 - 4-1 PAVED STREETS
 - 4-2 PAVED STREETS
 - 4-3 PAVED STREETS
 - Y.M.C.A.
 - 5-1 Y.M.C.A.

TOWNSHIP OF VOORHEES ZONING MAP
DATE: NOVEMBER 2, 1999

SCALE: 1" = 1000'

MDR > **CONDITIONAL DENSITY**
RR

LAND USE REVISIONS
VOORHEES TOWNSHIP
CAMDEN COUNTY, NEW JERSEY

MARC R. SHUSTER, PP, AICP
1226 North Church Street • Suite 5 • Moorestown, N.J. 08057
(609) 261-1004 • FAX • (609) 782-0179
Planning and Community Development

DATE: 12/15/94
SCALE: 1"=3000'
SHEET: 1 of 1

C. Impact Fees

Recent legislation allows municipalities to impose a fair share of certain off-site improvements upon applicants. For certain areas (sewers, water, drainage and circulation) this technique has been permitted since 1975 in Section 42 (NJSA 40:55D-42). Both pieces of legislation require other documents to be part of the overall scheme. These include a capital improvement program, specific master plan elements, and a rational formula for determining pro rata share. This document's section on circulation can serve as a major part of these requirements.

The Township has, in Sub-section 156.034 off-tract Improvements, the basic formulae for determining proportionate share. This formula compares the capacity of the improvement to the developments traffic using the improvement, both at per peak. This is a common methodology.

The Township should utilize studies done to adopt impact fee ordinances.

D. Residential

There is an unnecessary density bonus in the RR zone. The basis for clustering is a trade-off between the applicant and municipality: the development costs less to build based upon reduced lot widths and more lots will be adjacent to open space, making them premium. In return the Township gets open space and lessened municipal service costs.

Thus, any bonus density for clustering is generally unnecessary as it is desirable to the developer in any case. It is proposed, therefore, that the density increase be permitted only as a conditional use with the condition being a per unit contribution to the Township open space fund of \$25,000 per unit added.

The MDR zoning should be changed to permit an increase in density over the 1.5 units per acre to 2.0 units per acre with the condition of a \$25,000 per unit contribution to the Township open space fund.

There is no indication that the addition of these units will have a significant negative impact upon the capacity of the relevant school systems due to theoretical and empirical pupil generation rates and current capacities.

E. Other Land Use

1. Centennial Boulevard

The character of this corridor is changing. The types of uses permitted in this EIB zone such as Light Industrial, are no longer appropriate. It is recommended that a new zone be created for this area. On both sides, it is recommended that a Limited Office (LO) zone be created. The regulations should generally include a lower impervious surface limit about 60%, a height maximum of 35 feet and building size limits of no

more than 10,000 SF to generate a campus type development.

2. Lot Changes

- a. Block 207, Lot 13 (Centennial Boulevard/Sheppard Road) now R-10, change to O-3.
- b. Block 200, Lots 5.01, 7 (Centennial Boulevard/Egg Harbor Road) now EIB/EE, change to EIB/CCRC.

3. Design Regulations

Currently in non-residential zones, except for the Route 73 corridor sections 154.025-037, there are no substantial building design standards. Indeed, it is unclear in what zones the above noted standards apply.

It is recommended that the Route 73 corridor regulations be moved to the Zoning Chapter 152 as in the specific Zone MB for the area and that these be supplemented by additional regulations including:

Building Design:

- a. All buildings in a development approved as a single project shall be compatible in design as to façade material,

proportionality of features, color and texture.

- b. There shall be an apparent change in features, material, color and texture for each separate user or for every 40 ft of the primary façade.
- c. The material and design elements used on the front or primary façade shall be replicated on any side or rear elevation visible to the general public from rights-of-way or adjacent properties.
- d. No more than 2/3 of the front building line shall be at the same setback line and the offset shall be at least equal to 10% of the average depth of the building.
- e. There shall be additional breaks in the front or primary façade for a length equaling at least 25% of the total length. These breaks shall be at a depth of at least 5% of the average depth of the building and there shall be two separate breaks for every 100 ft of façade length.
- f. The aforementioned design regulations should apply to all non-residential zones.

4. Conference Center Conditional Use

It is recommended that a new conditional use be added to the CR zone west of Dutchtown Road. This would permit a conference center use, including a hotel/conference type complex. The conditions should include a minimum tract size of at least 30 acres and appropriate design regulations, similar to those of the proposed large medical complex use proposed on Route 73.

Table 1 presents density indicators for the Township and neighboring municipalities. The table indicates that the Township of Voorhees is relatively dense in terms of population, employment and housing, especially when compared with the surrounding municipalities of Berlin, Evesham and Gibbsboro.

F. Housing Element

Newly revised COAH regulations have been adopted. The methodology of determining each municipality's obligation was completely changed from a formula with a myriad of variables on a regional and local level to a 'growth share' concept. That is, for every eight new market rate units and every 25 new jobs (calculated by square footage of non-residential building) there is an obligation for one affordable unit. The 2004 certification of Voorhees Township's Housing Element Fair Share Plan includes a surplus of 63 units. This provides some flexibility into the future for a maximum 500 new units±, 1,575 new jobs (or 800,000 SF± of space) or some combination.

Analysis:

Residential property (valuation) serves as the largest single component of the Township's tax base, at 70%, while all other nonresidential valuations (farmland, commercial, industrial and vacant) are 30%.

Table 1 - Density Indicators for the Township of Voorhees and Adjacent Municipalities

	Area (Acres)	Square Miles	Densities (units/sq. mi.)		
			2000 Population	1997 Employment	2000 Housing
Voorhees	7,429.6	11.6	2,422.6	1,656.0	955.5
Berlin	2,089.5	3.3	1,622.7	1,332.1	608.8
Cherry Hill	15,538.6	24.3	2,881.6	2,049.8	1,114.2
Evesham (Burl. Co.)	19,000.8	29.7	1,423.9	619.3	553.4
Gibbsboro	1,461.9	2.3	1,068	1,204.8	368.3
Lindenwold	2,449.9	3.8	4,546.7	755.5	2,169.5
Somerdale	870.2	1.4	3,817.7	1,445.7	1,559.3
Camden County	143,554.1	224.3	2,269.0	1,028.9	890.2
Burlington County	518,639.4	810.4	522.5	248.2	199.1
New Jersey	4,748,032	7,418.8	1,119.9	N/A	446.2

Population and Demographic Analysis: In examining the Master Plan, it is vital to consider the factors that shaped the original Plan and subsequent revisions. The following demographic data provides some historical context for this, along with information that may be used to extrapolate trends in the Township and surrounding County.

The 2000 census population for Voorhees was 28,126 persons. The US Census Bureau's Population Estimates Program has subsequently estimated that the July 1, 2003 population was 28,549 persons. This is the most recent population estimate published by the US Census Bureau.

Table 2 - 1940 - 2000 Population Growth

Area	1940	1950	1960	1970	1980	1990	2000
Voorhees	1,450	1,823	3,784	6,214	12,919	24,559	28,126
Camden County	255,727	300,743	392,035	456,291	471,650	502,824	508,932
Burlington County	97,013	135,910	224,499	323,132	362,542	395,066	423,394
New Jersey	4,160,165	4,835,329	6,066,782	7,171,112	7,365,011	7,730,188	8,414,350

As with much of Southern New Jersey, the Township of Voorhees has experienced dramatic growth since 1940 (see Table 2). This expansion is evidenced by the population growth rate from 1940 to 2000 of 1,840%. A large part of this population increase was from the significant number of single-family dwelling units constructed in the 1970's and 1980's. By contrast, the population in Camden County increased by 99% to 508,932 persons and the State of New Jersey increased by 102% to 8,414,350 persons in the period of 1940 to 2000. This increase in the population of the Township of Voorhees is due to development pressures creeping southeast as the outer suburbs of metropolitan Philadelphia become increasingly developed.

Age Cohorts: The overall growth in the population of Voorhees has begun to stabilize, which is evident in the fact that the population grew by only 14.5% in the period from 1990 to 2000; in the period from 1980 to 1990 the population grew by approximately 90.1%. Interestingly, there has been no change in Voorhees' average household size between 1990 and 2000. It

remained at 2.60 persons per household, which is slightly less than both Camden County and the State with 2.68 persons per household (see Table 4). In addition, there has been a slight increase in the percentage of Voorhees' population aged 18 years and under from 1990 to 2000. In 1999 this portion of the population was 25.1%, where in 2000 it grew by just 1.3% to 26.4% of the total population.

It is also important to note that Voorhees' proportion of population aged 65 years and older (10.9%) is slightly less than the Camden County (12.5%) and State (13.2%) populations. This is likely to increase as a major demographic shift that will continue is the general aging of the population. There are important implications for planning in this phenomenon that are discussed later.

Table 3 - 2000 Population by Cohorts

Age	Voorhees	%	Camden County	%
below 5	1,767	6.3	34,411	6.8
5-9	2,082	7.4	38,642	7.6
10-14	2,298	8.2	40,256	7.9
15-19	1,816	6.5	35,238	6.9
20-54	14,704	52.3	253,575	49.8
55-64	2,384	8.5	43,041	8.5
65+	3,075	10.9	63,769	12.5

Race, Ethnicity and Gender: The 2000 Census further revealed, as shown in Table 4, that Voorhees has a predominantly white population, which is

significantly greater than the State of New Jersey and Camden County on average. The percentage of the population that was White was 78.3, and the percentage Black was 8.0. By comparison Camden County is 70.9% White and the State is 76.2% White. Camden County is 18.1% Black, while the State's population is 13.6% Black.

Asians comprised was 11.4% of the population in Voorhees, a level much higher than the Camden County and New Jersey levels of 3.7 and 5.7, respectfully. On the other hand, persons of Hispanic origin comprised 2.5% of the population of the Township of Voorhees, while they comprised 9.7% of the population of Camden County and 13.3% of the State's.

The breakdown of gender is generally slightly in favor of females (see Table 4). Voorhees's population illustrates this trend with 52% female and 48% male. Camden County was 51.7% female and 48.3% male. The State was 51.5% female and 48.5% male.

Policy Implications: The likely increase of the elderly population will require a response from public agencies. The demand for local services by the elderly will center around housing rehabilitation programs, or alternative housing type, as it will become increasingly difficult for the elderly to maintain their homes and demands will eventually lead to the need for affordable rental housing for the elderly. Existing housing rehabilitation programs will need to be expanded as of the percentage senior

occupied housing units increases with the aging population.

Table 4 - 2000 Population by Categories

	Voorhees Township		Camden County		New Jersey	
	Persons	%	Persons	%	Persons	%
Total	28,126	100	508,932	100	8,414,350	100
Sex						
Female	14,621	52.0	263,355	51.7	4,331,537	51.5
Male	13,505	48.0	245,577	48.3	4,082,813	48.5
Race						
White	22,011	78.3	360,756	70.9	6,104,705	72.6
Black	2,249	8.0	92,059	18.1	1,141,821	13.6
Asian	3,217	11.4	18,910	3.7	480,276	5.7
Other	611	2.2	35,907	7.1	668,056	7.9
Hispanic Origin	694	2.5	49,166	9.7	1,117,191	13.3
Median Age	37.2	n/a	35.8	n/a	36.7	n/a
Persons Per Household	2.6	n/a	2.68	n/a	2.68	n/a

Table 5 – Summary of Population Characteristics Voorhees 2000

	No. of Persons	% of Total
Under 5	1,767	6.4
5 - 14	4,380	12.8
15 - 24	3,060	14.3
25 - 34	3,829	19.9
35 - 44	5,104	16.3
45 - 54	4,527	10.7
55 - 64	2,384	9.4
65+	3,075	10.1
Number of Families	7,072	100.0
1 Person Household	2,826	26.9
Male	1,158	11.0
Female	1,666	15.9
2+ Person Household	7,072	67.4
Married Couple	5,974	57.0
Single Male	267	2.5
Single Female	831	7.9
Non-Family Household	3,417	32.6
Number of Households	10,489	100.0
Persons Per Household	2.60	n/a

Employment: Recognizing that the U.S. Census data in this analysis was collected approximately six years ago, the indications remain that Voorhees has retained its slightly higher than average percentage of population in the labor force. The average percentage of population in the labor force for all geographies

shown in Table 6 is 67.7; Voorhees's percentage of population in the labor force surpassed those of New Jersey, Camden and Burlington Counties, and several of the municipalities shown in Table 6 with, on average, 69.6% of its population (aged 16 and over) in the labor force. This information indicates that Voorhees' residents are competitive in today's labor market.

Table 6 - 2000 Employment Data

Area	% of Population in Labor Force
New Jersey	64.2
Camden County	64.6
Burlington County	66.8
Voorhees	69.6
Berlin	68.0
Cherry Hill	64.1
Evesham (Burl. Co.)	72.8
Gibbsboro	69.4
Lindenwold	71.1
Somerdale	65.9

Projected Employment 2000 - 2010: The Delaware Valley Regional Planning Association (DVRPA) has forecasted 31,220 jobs in Voorhees Township in the year 2015, an increase of 12,010 jobs since the 1997 estimate of employment in the Township. This

represents an annual growth rate of 2.73% for the period from 1997 to 2015.

Income: As Table 7 indicates, only 1 of the surrounding municipalities had a higher Median Household Income in the County, while none had a higher Per Capita Income than the Township of Voorhees. Voorhees performed favorably in Percent Change in Median Household Income and had a lower percentage of families living below the poverty line than three of the surrounding municipalities, as well as the State and Camden County.

Table 7 - 1999 Income Data

Area	Median Household Income	Per Capita Income	% Change in Median Income (1989-1999)	% of Families w/ Income in 1999 Below Poverty Line
New Jersey	\$55,146	\$27,006	34.7	6.3
Camden County	\$48,097	\$22,354	32.9	8.1
Burlington County	\$58,608	\$26,339	38.3	3.2
Voorhees	\$68,402	\$33,635	32.4	3.7
Berlin	\$54,448	\$22,178	42.1	4.8
Cherry Hill	\$69,421	\$32,658	27.5	2.5
Evesham (Burl. Co.)	\$67,010	\$29,494	29.7	1.7
Gibbsboro	\$57,326	\$26,035	20.7	2.4
Lindenwold	\$36,080	\$18,659	13.5	11.3
Somerdale	\$46,898	\$21,259	34.5	6.4

Housing: As indicated by Table 11, the greatest growth in the Voorhees housing stock took place

during the period from 1980 to 1990. During this period the housing stock grew by more than 102.8%, far exceeding the growth in Camden County the other geographies represented in Table 11. In the actual number of units, Voorhees added 5,022 dwelling units during the period from 1980 to 1990. This is far above the number of dwelling units added in all surrounding towns except Evesham Township in Burlington County. The growth in dwelling units within Voorhees has decreased through the 1990s with an average of 118 new single-family dwellings being constructed each year. Because the increase experienced by Voorhees was so great, the Township faces a significant level of the growth management issues, including the control of development and evolving infrastructure needs.

As previously mentioned, the average household size has not changed in the period from 1990 to 2000. This figure is contrasted by those of both Camden County and the State, which have both decreased in the same period. In 1990 the average household size in Camden County and the State were 2.76 and 2.70 persons, respectively. In 2000 both geographies' average household size was 2.68 persons. Voorhees' average household size affects policies for future land use and service needs of the residents of the Township.

The dwellings in Voorhees are slightly larger than the homes in Camden County (see Table 14). There are 30% of all dwelling units with less than 5 rooms in Voorhees while there are 27% of all dwelling units

with less than 5 rooms in Camden County. This impacts the housing market in the Township.

Table 8 – Household Size per Owner-Occupied Unit in 2000

Persons in Household	Households	%
1	1,068	15.1
2	2,012	28.5
3	1,456	20.6
4	1,645	23.3
5	630	8.9
6	182	2.6
7+	71	1.0

During recent years there has been reduced growth in the number of dwelling units constructed outside of the established neighborhoods on larger parcels. New construction has led to an increase in the percentage of renter-occupied units in the Township. In 1990, 31.3% of Voorhees' dwelling units were occupied by renters; this figure had increased to 32.7% at the time of the 2000 Census. By contrast, the percentage of owner-occupied units is has decreased during the same period, comprising 68.8% of all occupied units in 1990 and 67.3% in 2000. Camden County has historically had a higher percentage of dwelling units occupied by owner households. In 2000, owners occupied 70% of all dwelling units in Camden County.

Table 9 - Value of Specified Owner Occupied Units in 2000

	Units	Voorhees (%)	Camden County (%)
less than \$50,000	81	1.3	7.7
\$50-99,999	594	9.2	32.9
\$100-149,999	1,733	26.9	36.3
\$150-199,999	1,343	20.8	13.5
\$200-299,999	1,699	26.3	6.7
\$300-499,999	833	12.9	2.3
\$500-999,999	157	2.4	0.6
\$1,000,000 or more	10	0.2	0.1

Table 10 - 2000 Housing Data

	Voorhees	Camden County
Median Value	\$179,500	\$111,200
Median Rent	\$864	\$635

In 2000 there were 11,084 year-round housing units in the Township of Voorhees, of which 10,489 were occupied and 595 were vacant, which translates into a vacancy rate of 5.4%.

Additional selected housing indicators for Voorhees, surrounding municipalities and Camden County are provided on the following tables.

Voorhees contrasts with the adjoining municipalities and Camden and Burlington Counties in that the bulk of its housing stock was built during the period from 1980 to 1990, however, the Township's rate of new construction in the 1990s was similar to that of many of the neighboring communities.

Table 11 - Housing Trends 1980 – 2000

Municipality	Sq. Miles	1980 Units	1990 Units	% Change 80-90	2000 Units	% Change 90-00	% Change 80-00
Voorhees	11.6	4,883	9,905	102.8	11,084	11.9	127.0
Berlin	3.3	1,737	1,838	5.8	2,009	9.3	15.7
Cherry Hill	24.3	22,746	25,788	13.4	27,074	5.0	19.0
Evesham (Burl. Co.)	29.7	7,075	13,271	87.6	16,436	23.8	132.3
Gibbsboro	2.3	784	759	-3.2	847	11.6	8.0
Lindenwold	3.8	8,113	8,527	5.1	8,244	-3.3	1.6
Somerdale	1.4	2,081	2,153	3.5	2,183	1.4	4.9
New Jersey	7,418.8	2,771,774	3,075,310	11.0	3,310,275	7.6	19.4
Camden County	224.3	173,653	190,145	9.5	199,679	5.0	15.0
Burlington County	810.4	121,231	143,236	18.2	161,311	12.6	33.1

Table 12 - Selected Housing Characteristics

	Persons Per Household	% Housing Stock Built 1939 or Earlier	% Housing Stock Built 1990-2000	% Housing Stock with 1+ Bedrooms	% Housing Stock with 4+ Bedrooms
Voorhees	2.60	2.1	19.1	61.6	35.3
Berlin	2.77	10.0	11.1	75.8	22
Cherry Hill	2.61	3.2	7	54.9	42.5
Evesham (Burl. Co.)	2.68	1.1	25	66.4	32.9
Gibbsboro	2.91	18.4	13.7	71	28.7
Lindenwold	2.32	5.6	3.1	90.2	6.5
Somerdale	2.51	7.5	5.2	77.2	22.4
Burlington County	2.65	11.8	16.5	69.5	29.5
Camden County	2.68	18.8	8.4	76.1	21.7

Table 13 - Percent Distribution of Housing Units by Type, 2000

	Number of Units in Structure			
	1	2 to 9	10+	Mobile Home/Trailer/Other
Voorhees	66.2	10.7	22.9	.3
Berlin	80.3	14.2	5.4	0
Cherry Hill	81.5	4.5	13.4	.6
Evesham (Burl. Co.)	76.2	11.4	12.4	0
Gibbsboro	95.6	4.3	0	0
Lindenwold	43.5	22.1	34.3	.1
Somerdale	77.3	7.7	15	0
Burlington County	78.4	11.4	8.8	1.5
Camden County	74.6	11.1	13.6	.8

Table 14 presents a breakdown of the Township's housing stock by number of rooms as they relate to County averages. Voorhees has a lower percentage of five-plus room units and a greater percentage of one, two, four, and six-room units than Camden County overall. In both Voorhees and Camden County, 10.4 percent of the housing stock is comprised of three-room units.

Table 14 - Year Round Housing Units by Number of Rooms, 2000

# Rooms	Voorhees # Units	Voorhees %	Camden County %
1	290	2.6	1.4
2	471	4.2	3.3
3	1,156	10.4	10.4
4	1,416	12.8	11.9
5	1,096	9.9	14.4
6+	6,655	60.1	58.5
Mean # Rooms	6.4	n/a	n/a

2000 Census data indicates the Township's housing stock is well maintained overall. However, 35 occupied units were lacking complete plumbing facilities, and there are up to 179 units with overcrowded conditions (1.01 persons or more per room). Although these units represent a small part of the total housing stock, efforts should be made to bring them up to standard.

Table 15 presents housing units by tenants and occupancy status. Owner-occupied units account for 61.5% of the housing stock. Voorhees exhibits an above average rental vacancy rate and a substantially higher median contract rent in comparison to all neighboring municipalities except Evesham, while median housing value is the highest of the surrounding municipalities (see Table 16).

Table 15 - Housing Units by Tenant and Occupancy Status, 2000

Year Round Housing Units			Owner-occupied		Rental	
Occupied	Vacant	Total	Number	%	Number	%
10,489	595	11,084	6,450	61.5	3,387	32.3

Table 16 - Selected Housing or Housing-Related Characteristics, 2000

	Median Housing Value	Median Contract Rent	Median Household Income	Value Income Ratio	Rental Vacancy Rate (%)
Voorhees	179,500	864	\$68,402	2.62:1	9.8
Berlin	109,600	590	\$54,448	2.01:1	14.0
Cherry Hill	154,900	793	\$69,421	2.23:1	6.5
Evesham (Burl. Co.)	157,000	886	\$67,010	2.34:1	6.9
Gibbsboro	117,500	782	\$57,326	2.05:1	4.1
Lindenwold	84,000	615	\$36,080	2.33:1	10.2
Somerdale	97,700	544	\$46,898	2.08:1	4.9
Burlington County	137,400	758	\$58,608	2.34:1	5.8
Camden County	111,200	635	\$48,097	2.31:1	6.8

In 1980, Voorhees' housing stock counted 4,883 occupied units and in 1990 it counted 9,905, an increase of 5,022 units or 102.8%. Between 1990 and January 2000 it increased by 1,179 units, an increase of more than 11.9% since 1990. This trend toward stabilization in the level of development is anticipated to continue as Voorhees and other Camden County municipalities approach their build-out populations.

The DVRPC forecasts for Voorhees Township from 2005-2015 are 2,820 populations and 5,730 jobs. This would be equivalent to almost 1,000 new units and 143,000,000 square feet of commercial space. Both of these are clearly out of line. The projection of future space and vacant land available and other documents will go towards their replacement with more probable numbers.

Response:

The Township should adopt a development fee ordinance. This will allow a build-up of funds to purchase RCA's in the future to accommodate any future growth. These are now 1% of residential and 2% of non-residential value of new construction.

Since the amount of future residential development is likely to be limited and Voorhees Township has not utilized RCA's up to this point, the inclusion of them in a plan for the future using fees seems to be the most reasonable tactic at this juncture. A detailed projection of employment and residential growth should be done along with the ordinance. Any

ordinance must be accompanied by a spending plan and both submitted to COAH. COAH's model development fee ordinance can be found in Appendix A. It is anticipated that the surplus units and the use of RCA's will be sufficient to address all of the Township's anticipated affordable housing requirement.

G. Other Ordinance Revisions

1. Signs and Fences

- a. These regulations are currently in Chapter 154, Improvement Regulations and Design Standards. While such areas as lighting, parking spaces and others are subject to significant technical input for decision-making, sign dimensions, size and number more a matter of preference and policy. Thus, they should be a matter for variances rather than waivers. It is recommended, therefore, that Section 154.003 and 154.004 be relocated to Chapter 152 as Section 152.187 and 152.188 or other appropriate place.
- b. In order to cure a court-determined deficiency in the sign regulations a change is recommended for the new Rt. 73 zoning district, including limits on design, size, location, proximity and absolute number.

2. Adult Uses

This is one of the more difficult subjects to deal with. Courts have ruled that these uses have First Amendment protection and cannot be prohibited outright. However, they can be especially regulated. New Jersey has adopted legislation permitting a proximity regulation to be imposed in the case of these uses. Such an Ordinance adhering to the acceptable proximity regulations should be adopted as Section 152.155. Definitions of various terms will also have to be added to Section 150.10.

3. EIB

Light Industrial warehousing and distributing uses are no longer appropriate categories of uses in a highly developed suburban community such as Voorhees Township. It is recommended that while existing uses be protected, no new uses of these types be permitted and EIB zones changed to EB.

4. Other Ordinance Issues

There are a number of inconsistencies, ambiguities and omissions in the current ordinances, which make review and issuance of permits difficult. The following issues have been identified in collaboration with staff:

- Accessory uses for residential districts including basketball set-ups, swimming pools, ponds and other ornaments, retaining walls and satellite dishes need regulation.
- Additions and accessory uses in townhouse development.
- Temporary Structures becoming permanent such as carports.
- Administrative approval for minor site alterations.
- Adding Certificates of Conformance for change of ownership or tenant.
- Add as-built surveys as a requirement for appropriate approvals.
- Add lot grading plan requirement.
- Fence regulations need revisions on corner lots and type of fencing.
- Temporary tents and other structures in parking lots.
- Massage Parlors and related uses require regulations. The following is recommended:

“Any use described as providing any type of therapy or related service regarding health or well-being shall require proof of State license or other generally recognized specialized education or training.”

- In-law suites need definition and regulation.
- The Zoning Map needs revisions to eliminate many split zone lots and a Boundary Tolerance section should be added to provide guidance in other cases.

H. Environmental/Open Space

A comprehensive water quality plan should be prepared and should include:

1. A system or an ordinance to help monitor on-site stormwater management systems to ensure proper maintenance and operation of on-site stormwater management facilities.
2. A plan to improve the water quality of water bodies adjacent to existing development. Identification of areas with poor or deteriorating water quality should be identified. Grants and other funding sources should be examined to promote this initiative.
3. A stream corridor protection ordinance to protect the water quality of the Township's streams.

Other suggestions include:

1. The Open Space Plan should include a system of interconnected greenways, where feasible, with connections to both municipal and inter-municipal greenways.
2. The Township should adopt State goals for remediation for all identified brownfield sites within the Township.
3. Any capital improvement plan initiated by the Township should make open space acquisition a top priority.
4. There should be a regular update on the open space priority list and a monitoring of parcel status with a re-prioritization for purchase as necessary.
5. A Stormwater Management Plan has been adopted and an implementing ordinance is being prepared.

I. TC Zone

The Echelon mixed-use project has been part of the physical and social fabric of Voorhees Township for decades. The zoning which enabled it was part of a unique set of parameters and concepts that generated Planned Development throughout New Jersey.

The Town Center (TC) Zone was created thirty years ago to make real a vision borne of its time of a multi-use planned unit development anchored by a major shopping mall (The Echelon Mall) which would draw from the residential sectors of development. Since that era, massive shifts have occurred in the economics of the retail sector, development concepts and the realities of the built environment in the region.

However, because the mall and the rest of the uses within the development have been part of the built environment for some time reasonable options for the future are severely limited.

There is no basis, therefore, to recommend any change in the Township Master Plan for this area. There is, however, another area relevant to this community that does deserve attention: design standards. Certainly, the expectations for sensitive design have changed since these were first utilized and any new development should reflect those current standards.

The Township shall consider the potential of a true Town Center in the TC zone to include municipal and community facilities with the goals and principles of a transit-oriented/traditional neighborhood development concept.

It is also recommended that, at a minimum, the following specific items in Section 152-135 Area and Bulk Standards be reviewed and revised where appropriate:

Minimum Lot Size: Now 10,000 square feet for most uses – Should be increased.

Setbacks

Front Yard: 30 feet at all local rights-of-way – Should be increased for major uses.

Rear and Side Yard: 50 feet for all non-residential structures to residential uses – Should be increased on a scale based upon size of use and structure.

Distance to any Lot Boundary: Residential Shopping Centers 15 feet – Should be increased depending on abutting uses.

Parking Setback: 25 feet – Should be increased depending upon abutting uses.

Buffer: 25 feet – Should be increased and specified as to material, berming, etc.

PART V: REDEVELOPMENT PLANS

40:55D-89.e.

The recommendations of the Planning Board concerning the incorporation of redevelopment plans adopted pursuant to the “Local Redevelopment and Housing Law,” into the land use plan element of the municipal master plan, and recommended changes, if any, in the local development regulations necessary to effectuate the redevelopment plans of the municipality.

There are no redevelopment plans recommended at this time.

TRANSPORTATION ELEMENT

INTRODUCTION

A. Background

The Township of Voorhees, containing approximately 11.6 square miles in Camden County, New Jersey, has experienced significant growth over the past 50 years. This growth may be noted in the increase in development of residential housing, retail centers, office space, health care facilities, and public facilities such as schools and recreational parks. The Township is located in close proximity to Philadelphia (about 20 miles), the Atlantic City casinos, and the Jersey shore. Voorhees has easy access to major roadways such as Interstate 295, Route NJ 73, and the New Jersey Turnpike, while a network of County roadways provides access to various portions of the Township.

It is evident that most of the Township is quickly approaching full build-out, considering the wetlands and environmental constraints on much of the remaining land that is undeveloped. Scattered small parcels remain for development, and some commercial areas are currently being studied for redevelopment.

The exception is the area of Route 73, where vacant and underutilized properties remain undeveloped. Development of these commercially zoned properties would add significant traffic volumes to the Route 73

corridor and adjacent County arterial roadways. Regardless of development locally within Voorhees Township, it should be noted that traffic volumes on Route 73 are expected to continue to rise, as development proceeds more rapidly along the southerly portion of Route 73 in southeastern Camden County. In addition, traffic volumes will also continue to rise as a result of growth in other towns within the region, including shore traffic from Pennsylvania.

B. Scope of Study

This Transportation Element has been prepared for the Reexamination of the Voorhees Township Master Plan. The focus of this report is on the Route NJ 73 corridor through the Township, as well as general traffic circulation throughout the Township. The purpose of the analysis is to ascertain the existing traffic conditions in the Township, determine what impacts additional development may have on these conditions, and identify locations where potential improvements may be further investigated.

This study includes the collection and review of available data, field inspections, and traffic data analysis. Specifically, the traffic analysis for Route 73 consists of an evaluation of the existing traffic volumes at the major signalized intersections, as well as estimated future build-out conditions for the year

2015. For the build-out conditions, two options for development are presented for comparison - one with public sewer service, and one without.

REVIEW OF PLANNING DOCUMENTS

The following sections include summaries of some significant planning documents that were reviewed regarding development and traffic issues.

A. Voorhees Township Land Use Pamphlet, 2004
(Contains 2004 S-9, current through Ordinance 43-04, passed March 22, 2004)

The Voorhees Township Unified Land Development Ordinance (ULDO) includes some notable regulations applicable to traffic issues. Chapter 154 (Improvement Regulations and Design Standards), Section 154.009 indicates that any development along a bicycle route (established in the Master Plan) shall include design and construction of the bicycle route. This is also reiterated in Section 154.030 regarding the Route 73 corridor. The Ordinance specifies that proposed bicycle routes shall comply with the New Jersey Department of Transportation (NJDOT) Bicycle Compatible Roadways and Bikeways Planning and Design Guidelines.

The Submission Requirements Checklist in Section 158.02 of the ULDO indicates that a Circulation Plan is required for all General Development Plans, as well as Site Plan and Subdivision applications. For Site Plan and Subdivision Applications, more detailed traffic information is required in a Traffic Impact Study. It may also be noted within the Ordinance, that Section 156.034 provides a methodology for assessing a pro rata share of the cost for off-tract improvements

based on peak hour traffic volumes.

B. Voorhees Township Master Plan Update, 1995
(Prepared by Clarke Caton Hintz, Adopted March 29, 1995, Amended December 4, 1996)

The 1995 Update was prepared as a revision to the 1987 Master Plan. Within this update, the following goals and objectives that apply to future development and traffic are identified:

Commerce and Industry

- To allow a limited mix of retail, office and/or appropriate light industrial uses to promote economic enhancement in the Township of Voorhees.
- To encourage retail development along certain designated transportation routes.
- To encourage increased utilization of existing office development.
- To provide limited manufacturing and light industrial uses which are compatible with the environment of the Township.

Transportation

- To protect the existing transportation routes from development which exceeds capacity of the road system.
- To utilize the existing major transportation routes as much as possible and to avoid expansion of new major arterial roads.
- To carefully design new roads to enhance and facilitate the movement of traffic.

- To encourage the development and use of public transit.
- To promote the development of pedestrian walkway systems, while integrating connections with neighborhood bikeways.

Some notable changes in the land use regulations were focused around an Economic Enhancement Strategy for the Township. The goal for commercial areas was to increase opportunities for economic enhancement by allowing greater floor area ratios (FAR) in certain districts, as well as promoting additional retail usage, land assembly, interior access roads, enhanced landscaping, and greater buffering where appropriate. Some zones, formerly office, industrial, and/or residential, were also expanded to permit additional retail and/or office uses (but prohibiting high trip generators) based on observed trends in traffic and development.

The "Circulation Plan" included in the 1995 Update provided basic information on the Township roadway network, and anticipated changes in traffic as a result of the zoning changes. General information and recommendations were also made regarding existing stub streets, parking, and public transit.

C. Voorhees Township Master Plan Update, 1998
(Prepared by Alaimo Group, Adopted September 23, 1998)

The 1998 Update was prepared to supplement and/or supersede specific sections of the 1995 Master Plan document. Within this update, the primary focuses

included simplifying and consolidating land uses, and open space preservation. The goals and objectives related to future development and transportation issues remained nearly the same as those presented in 1995. Revisions included consolidation and shifting of zoning boundaries. Planned development was encouraged for several commercial zones permitting office and/or retail space, potentially reducing the number of curb cuts for better traffic conditions.

The 1998 Update did not include a review of motor vehicle traffic or circulation; however, a section regarding pedestrians and bicyclists was included. This section promoted pedestrian and bicycle compatible roadways and bikeways as an alternate means of transportation between significant residential and commercial areas of the Township, as well as a compliment to scenic open space areas. It also provided a basic layout for bikeway routes and connections.

D. Voorhees Township, New Jersey, Bicycle and Pedestrian Master Plan Update, Fall 2003
(Prepared by McCormick, Taylor & Associates, Inc. (MTA))

As noted above, the 1998 Master Plan Update included an examination of pedestrian and bicycle facilities, with a proposed bicycle network throughout the Township. Over the next few years, bicycle lanes were striped on some roadways. Through meetings with the Township, NJDOT, and MTA, it was determined that an update was needed to address specific bicycle and pedestrian concerns in the

growing Township. The update refined the bicycle routes, identified necessary links between various land uses and neighboring towns, and also addressed appropriate bicycle racks and signage. Improvements were also recommended to alleviate problems at difficult pedestrian crossings.

E. Route 73 Corridor Review Study, Final Report, 2003

(Prepared by Orth-Rodgers Associates, Inc., dated June 2003)

This study on the Route 73 corridor focused on two major goals for development along Route 73. The first goal was to provide a unique, aesthetic, environmentally sensitive, and architecturally pleasing appearance for development. The second was to provide a safe route for both residents and visitors. A detailed analysis of the Township zoning districts within the Route 73 corridor was completed, including the purpose of each zone, permitted/conditional/prohibited land uses, bulk requirements, and zone specific design standards. Open space and environmentally sensitive areas were also considered. Recommendations were made regarding buffers, land uses, and physical building features.

Township design standards were also reviewed, including parking, access, signs, architectural elements, landscaping, and buffering. The study promoted a compatible mix of land uses, with future developments to share common styles and compliment each other; thereby creating a unique,

consistent appearance for this prominent area of Voorhees Township.

The study recommended several changes to the zoning ordinance. First, proposed zones were created to eliminate retail uses in select zones in an effort to reduce future traffic volumes. The proposed changes included eliminating inconsistencies in permitted land uses within various zones, and eliminating retail from select zones in an effort to reduce traffic. It was also recommended that the floor area ratio (F.A.R.) be revised from 0.25 to 0.20 to reduce traffic.

Roadway improvements were also discussed, including the need for a third travel lane in each direction on Route 73, two (2) possible new traffic signals on Route 73, as well as new roadways to serve as connectors.

F. NJ 73 Corridor Study – Year 2020 Planning Corridors – Report 4 (August 2000)

(Delaware Valley Regional Planning Commission (DVRPC))

This Planning Corridor Study completed by DVRPC includes a regional look at the Route 73 corridor from the Tacony-Palmyra Bridge to the Atlantic City Expressway. Details are provided regarding the existing and anticipated demographics, land use, and traffic volumes in the area. Transportation needs for the corridor are presented, and problem locations are identified based on the results of research and discussions with appropriate stakeholders. The Study also notes some projects that are programmed for

implementation as part of the Transportation Improvement Program (TIP), or are included in other long range planning studies.

The following two (2) location were identified in Voorhees Township:

- Route NJ 73 & Signal Hill Drive/Lakeside Drive
- Route NJ 73 and Kresson Road (CR 671)/ Braddock Mill Road.

It may be noted that many of the recommendations for improvements at these intersections have since been implemented, and have mitigated some of the traffic problems.

CIRCULATION PLAN

The following subsections include general descriptions and functional classifications for the network of roadways throughout Voorhees Township. Planned improvements and problem areas are also identified, with general recommendations regarding future improvements.

A. Roadway Inventory

The transportation system within Voorhees Township consists of numerous roadways, as illustrated on the overall Township Street Map (Figure 1). Route 73 is the only roadway under State jurisdiction (NJDOT), while the roadways listed below are under the jurisdiction of Camden County; all other public roadways are under the jurisdiction of the Township. NJDOT Straight Line Diagrams (2004) are included in Appendix D for State and County roads within Voorhees, providing basic functional and geometric data.

Voorhees contains a number of traffic signals at major intersections. All traffic signals along Route 73 are operated and maintained by NJDOT, while all other traffic signals on County and/or municipal roadways are operated and maintained by the Township. The Township currently retains a contractor specializing in traffic signals to provide repair and maintenance services for the signals.

TABLE 1: County Routes in Voorhees Township

<i>Road Name</i>	<i>County Route No.</i>	<i>ADT (year) (in vehicles per day)</i>
Evesham Road	544	15,400 (03)
Haddonfield-Berlin Road	561	15,500 – 25,900 (03)
Burnt Mill Road	670	17,600 (02)
Kresson Road	671	11,300 (00)
White Horse Road	673	17,000 +/-
Cooper Road	675	8,200 (02)
Somerdale Road	678	13,600 (02)
Preston Avenue	679	---
Kirkwood-Gibbsboro Road	684	---
Kresson-Gibbsboro Road	685	---
Lafayette Avenue	693	---
Spruce Avenue	745	---

B. Roadway Classifications

All levels of roadways may be grouped into designated classes based on their location, geometric features, and service (or function) that they provide. Figure 2 illustrates the current functional classifications for the roadway network throughout Voorhees Township, as classified by the Federal Highway Administration (FHWA) and the NJDOT (June 2004). It may be noted that all of Voorhees

Township is considered "urban" based on the population density. The following are general descriptions of the various classes of roadways found within the Township, as well as examples of each.

Urban Principal Arterials

Principal arterials are intended to carry high volumes of traffic at relatively high speeds with minimal disruptions. (Disruptions may include elements such as stop signs, traffic signals, and vehicles making left-turn movements from the major roadway.) Arterials are designed for maximum mobility and longer trips between large urban areas, and typically carry a significant amount of commuter traffic from outside the immediate vicinity. Principal arterials within Voorhees are New Jersey State Highway Route 73, Evesham Road (CR 544) and Haddonfield-Berlin Road (CR 561). The posted speed limit on Route 73 is 55 miles per hour (mph), and the speed limit varies from 35 to 45 mph on CR 544 and CR 561. A complete description of the Route 73 corridor is provided in a later section of this report.

Urban Minor Arterials

Minor arterials are connector routes from lower order roadways to the principal arterials. Minor arterials through Voorhees Township include most of the remaining County roadways such as Kresson Road (CR 671), White Horse Road (CR 673), and Cooper Road (CR 675), with posted speed limits generally ranging from 25 to 45 mph. These roadways carry

significant volumes of traffic from within Voorhees and neighboring municipalities to primary roadways such as Route NJ 73, Interstate 295, Route US 30, and the New Jersey Turnpike. Commercial development is often located along these roadways for accessibility.

Urban Collectors

Collector roadways are ranked between the arterial and local roadways, transporting traffic from various local districts to the arterial roads. A few County roadways and select municipal roadways in Voorhees Township may be considered collectors, as shown on the figure.

Local Roads

Local roads make up the remainder of the roadway system, consisting of the lowest order roadways. These make up the greatest percentage of roadway mileage, but carry the lowest volumes. These roads are not designed to accommodate through traffic, and are typically used for short trips to access higher order roadways.

C. Circulation & Problem Locations

In an effort to identify the quality of traffic circulation throughout the Township, and identify any areas within Voorhees where traffic problems are evident, requests were made of the following agencies and departments for any pertinent information regarding

development and traffic conditions in Voorhees Township, particularly along the Route 73 corridor:

- New Jersey Department of Transportation (NJDOT): Transportation and Corridor Analysis, Transportation Data Development, Planning & Development, and Planning Assistance.
- Delaware Valley Regional Planning Commission (DVRPC): Transportation Planning, Transportation Studies / Corridors, and Land Use/Planning/Economic Development.
- Camden County Department of Public Works: Engineering Department and Planning Department.
- Voorhees Township: Police Department, Economic Development, Planning Board, Engineering, Public Works, and Public Schools.

Information that was received is presented at various locations within the text of this report. Many of the departments listed above did not have any recent information regarding traffic in the Township, and there were no recent transportation studies discovered (other than those already discussed).

Traffic studies for numerous proposed development sites were provided by the Voorhees Township Police Department. However, several of these appear to be older projects that have been constructed or abandoned, and there were no newer studies that would significantly affect the analysis included herein.

One primary source of information regarding traffic throughout the Township was a meeting with Township officials in September 2004. As noted in the minutes (see Appendix C), several intersections were identified as operating at acceptable levels, while problems were identified at others. The following locations exhibit problems that the Township may desire to further examine, in order to determine the extent, feasibility, and cost associated with obtaining a worthwhile level of improvement:

- Haddonfield-Berlin Road (CR 561)/Somerdale Road (CR 678) /Evesham Road (CR 544) – It has been considered to close the Somerdale Road approach in order to improve traffic conditions. Roadway widening and left-turn lanes would be needed to improve the intersection, in addition to alternative access for Somerdale Road.

Recommendations: Based on the high traffic volumes at this 5-way signalized intersection, particularly on CR 561 and CR 544 (principal arterials), this intersection should be studied to identify the scope of work necessary for improvements. Eliminating the time required for the Somerdale Road approach in the overall signal cycle length could significantly reduce congestion at this location during peak hours. Particular attention should be directed toward any alternatives for additional right-of-way that would be required to relocate Somerdale Road.

- Cooper Road (CR 675) & Kresson-Gibbsboro Road (CR 685) – Cooper Road backs up heading toward Route 73, and left-turns cause additional congestion. Possible plans to widen Cooper Road to 4 lanes would reportedly require realignment of Centennial Boulevard. Improvements would cost a significant amount of money, and many details would be involved including condemnation of existing house.

Recommendations: The Township is concerned with the overall function of Cooper Road, assuming that much of the traffic is through traffic between Berlin and Cherry Hill. Regardless of where the trips originate, it is recommended that a basic study be completed of the roadway to identify the current volumes and critical areas that need improvement. Cooper Road is currently one lane in each direction with minimal shoulders.

- East Red Oak Drive & Cooper Road (CR 675) – The Township has noted a considerable number of rear-end accidents at this intersection. A short-term solution may be the addition of a left-turn lane. The Township has requested that the Camden County Engineer review this concern.

Recommendations: Particularly since the County depends on the Township to initiate improvements, the Township should follow up on this issue. This location, and any other location, that exhibits a significant number of accidents should be examined to identify the apparent cause

of the accidents and determine what, if any, improvements could reduce the number of accidents.

- Burnt Mill Road (CR 670) & White Horse Road (CR 673) – The Township Police Department reports 60-70 motor vehicle accidents per year at this location. Wawa has conceptually proposed NB/SB left-turn lanes. This intersection is reportedly on the County list of worst intersections.

Recommendations: Based on the reported poor traffic conditions at this intersection, a study should be completed to identify possible improvements. Any proposed concepts (e.g. Wawa) should be submitted to the Township Engineer for review, and should be accompanied by traffic data to demonstrate that the proposed improvements are justified.

- Evesham Road (CR 544) – This heavy volume roadway experiences significant delay during peak hour periods. This roadway should be studied to identify if any coordination and/or re-timing could be completed to improve traffic flow. Coordination and cooperation would be required with Cherry Hill Township, since most of Evesham Road is the municipal boundary.

Recommendations: Evesham Road is another heavily traveled County roadway, straddling the border of Voorhees Township and Cherry Hill

Township. Some of the existing traffic signals may be too far apart to maintain good progression through coordinated traffic signals. However, the Township may coordinate with Cherry Hill Township to study this roadway and determine if there are any feasible alternatives to improve progression.

- Route 73 & Cooper Road (CR 675) – The Police Department reports a significant number of rear-end accidents at this location. The speed limit on Route 73 is 55 mph through Voorhees, while it is 50 mph to the north in Marlton. The Township would like to have 55 mph speed limit reduced; however, they feel that NJDOT would not welcome reducing the speed since all the traffic signals would need to be re-timed, etc.

Recommendations: Again, the Township should review accident reports for any intersection of concern to determine the probable cause and potential improvements. See the section of this report on the Route 73 Corridor for further recommendations regarding this intersection and the State Highway.

It may be noted that most of the traffic problems exist along the County roadway network within the Township. Many of these roadways consist of one lane in each direction with no provisions for left-turn movements, particularly at traffic signals. The 1995 Master Plan Update identified proposed improvements to several existing intersections, many of which

included the addition of left-turn lanes. Proposed traffic signals were also identified. Many of these improvements have been constructed since then; however, there are several remaining intersections that still need to be updated to accommodate the increased traffic volumes.

D. Planned Improvements

As noted above, a significant amount of information was discussed with Township officials regarding traffic conditions throughout the Township. This information included several improvement projects that have been completed in the last few years, as well as on going or planned improvement projects for various roadways and intersections. Planned projects include scheduled resurfacing and re-striping of County roadways (which do not significantly change the capacity of the roadways), as well as the following more notable improvements affecting capacity:

- Evesham Road (CR 544) at Patco Driveway – Patco is proposing a metering signal to stop traffic along Evesham Road, with Patco to pay for construction. The Camden County Engineer has indicated that the idea sounds acceptable, and he is currently reviewing a concept plan.
- Haddonfield-Berlin Road (CR 561) & Laurel Oak Road – DVRPC is working on a study of potential improvements in this vicinity.

- Coordination of Traffic Signals along White Horse Road (CR 673) – The DVRPC is managing a project to coordinate traffic signals along CR 673 in Camden County. The goal of the project is to develop a unified traffic signal coordination plan to improve traffic flow without roadway reconstruction, realignment, or right-of-way acquisitions. An inventory study has been prepared by Remington & Vernick Engineers (with cover letter to the Township dated March 18, 2004) that identifies the following five (5) traffic signals along CR 673 in Voorhees Township for potential closed loop coordination: Burnt Mill Road, Lucas Lane, Shopping Center Entrance, Echelon Road, and Executive Drive. It should be noted that every traffic signal cannot be coordinated, based on geometric configurations, geographic locations, and proximity to other major roadways. According to the DVRPC in December 2004, the project is currently waiting for final approval of funding to proceed to the design phase.

E. Public Transit, Pedestrians & Bicycles

Alternate forms of transportation include public transit, walking, and bicycling. Several forms of public transportation are available to Voorhees Township, including the PATCO Speedline operated by the Delaware River Port Authority. The Ashland Station for the Speedline is located in Voorhees on Somerdale Road in the vicinity of Burnt Mill Road (see Figure 3). This route includes nine (9) stops in

Camden County, and can be used to travel between Philadelphia and the Lindenwold Station just south of Voorhees.

Another passenger train in the area is the Atlantic City Line operated by New Jersey Transit. This route travels from 30th Street Station in Philadelphia to Atlantic City (Figure 4). Although there are no stops for this train in Voorhees, access is available just north of Voorhees at the Cherry Hill Station, and just south of Voorhees at the Lindenwold Station. Passengers may also switch between the Speedline and the Atlantic City Line at the Lindenwold Station.

A final passenger rail line that is accessible from Voorhees is the River Line operated by NJ Transit. This newer light rail line runs along the Delaware River, from Camden to Trenton (Figure 5). The River Line is easily accessed by the Voorhees area via the Speedline (from the Broadway PATCO Walter Rand Transportation Center in Camden), or by driving to the Pennsauken/Route 73 station (Park & Ride). A connecting rail in Trenton may also be utilized to reach various points in northern New Jersey and New York City (Figure 4).

In addition to the trains, NJ Transit bus service is also available, with a variety of routes stopping at locations such as the Echelon Mall, Main Street, Eagle Plaza, and the Voorhees Corporate Center. Public transit should always be encouraged to reduce pollution and traffic congestion, particularly in the South Jersey region. Therefore, easy accessibility to

these resources should be maintained for motorists, pedestrians, and bicycles, and expansion should be proposed when needs arise.

Regarding pedestrian and bicycle traffic, the Bicycle and Pedestrian Master Plan Update (Fall 2003) described above included detailed discussion and recommendations for pedestrian and bicycle facilities throughout the Township. Therefore, the scope of this study does not include analysis of these facilities. Based on the detail provided in the recent update prepared by MTA, it is recommended that the Township continue to implement this plan, with appropriate revisions based on the progression of development or apparent need for expansion.

F. Planning Guidelines & Recommendations

Based on a general review of the various County and Township roadways throughout Voorhees, the following important concepts should be considered for future development and improvement of the existing transportation system.

- The results of previous reports and continuing efforts by the Township have added significant improvements to the pedestrian and bicycle compatibility of the Township. These planning efforts should be maintained, with a focus on connecting existing residential, commercial, and recreational centers.

Any new development must also consider

pedestrians and bicycles as they relate to the overall circulation. This will include the Route 73 Corridor, where a multi-use path is proposed. This path should be required of any new development or redevelopment to provide safe, convenient access to commercial areas, without conflict with vehicular traffic on Route 73. Accommodations for pedestrian circulation along this corridor could also promote the expansion of public transit facilities into this area.

- Most of the local residential streets throughout the Township are well developed and efficiently carry local traffic. As noted in previous Master Plans, some isolated residential areas remain to be developed where there are potential connections to existing stub streets. Connections to existing stub streets can help distribute the traffic, minimizing impacts on adjacent facilities. These connections should be examined in each case, ensuring that the connection will not cause an undesirable increase in traffic volumes, vehicle speeds, or cut-through traffic.
- Particularly along arterial roadways, the number of access points should be limited in order to minimize conflicting movements and disruption of smooth traffic flow. Wherever possible, combined access and cross-access easements should be encouraged. Access points can also be limited by grouping existing parcels for proposed commercial development, while encouraging interior access roadways between uses (particularly for land to be

developed on Route 73).

- Many of the County roadways throughout Voorhees appear to be at or exceeding their capacity during peak hour periods. This is particularly evident on many of the roads that carry significant traffic volumes with only one lane in each direction. Camden County typically relies on individual municipalities to initiate improvements to County transportation facilities. Therefore, for any County roadways or intersections, the Township must identify potential improvements and coordinate the planning of these improvements with the Camden County Department of Public Works.
- The current traffic signal contractor for Voorhees Township suggested in February 2005 that a maintenance program be implemented for the existing traffic signals throughout the Township. There is currently no scheduled maintenance program in place. A maintenance program could effectively track the condition of traffic signal hardware, signage, and striping at intersections. Timing and phasing could also be reviewed on a regular basis to determine if minor adjustments could improve traffic flow.
- It is recommended that the Township prioritize potential improvements, so that available State, County, and/or Township funding may be utilized appropriately.
- For any development project submitted for approval, the Township may assess a required fair share contribution based on the increase in traffic volumes. This can be particularly helpful for many areas of the Township where traffic volumes are already at critical levels, and improvements are needed. As noted previously, the Township Ordinance provides a methodology for determining fair-share contributions for off-tract improvements based on peak hour traffic volumes. The following is a listing of potential intersection improvements, with an approximate cost of each for planning purposes.
 - Minor intersection improvements - \$40,000 (Pedestrian accommodations, hardware upgrades, signage and striping)
 - Moderate intersection improvements - \$300,000 (Roadway widening, addition of turn lanes, new traffic signal hardware and loop detectors, signage and striping)
 - Major intersection improvements - \$450,000 (Roadway widening for additional lanes, new traffic signal system, signage and striping, drainage)

It is recommended that more precise cost estimates be prepared as specific improvements are defined for each location. This is especially critical where right-of-way may be required, since acquisition costs can vary significantly.

TRAFFIC ANALYSIS METHODOLOGY

In order to evaluate the capacity of the Route 73 corridor, the existing and future traffic volumes at the subject intersections were evaluated. In order to model the highest daily traffic demand on the intersections, peak hours are typically identified for traffic analysis. Peak hours generally include the weekday AM and PM commuter peak periods (highest one-hour from about 7:00 AM and 9:00 AM, and from 4:00 PM and 6:00 PM), as well as the Saturday mid-day peak hour (usually between 10:00 AM and 2:00 PM). For purposes of this analysis of Route 73, the existing traffic counts are noted to exhibit significant PM peak volumes, and traffic generated by future retail development is presumed to have a significant impact on capacity during this period. Therefore, the PM peak hour has been selected for this general analysis.

Traffic analysis included herein was performed in accordance with standard traffic engineering practice as contained in the Highway Capacity Manual 2000, (Transportation Research Board, 2000), Highway Capacity Software modeling program (HCS 2000 by McTrans), and Trip Generation, 7th Edition (Institute of Transportation Engineers, 2003). Synchro modeling software (v.6 by Trafficware) was also utilized to accurately model the intersection capacity of the actuated/coordinated traffic signals.

It may be noted that the capacity of any roadway system is limited by physical restraints, fixed interruptions, or any other constraints that limit "the time of use that is available to various component movements of the traffic stream" (HCM, 2000). A traffic signal may be considered a fixed interruption, thereby requiring an analysis of the effect of its

reduction in the normal capacity of the system. Unsignalized stop-controlled intersections are also considered interrupted flow facilities since stops signs are fixed elements that interrupt traffic flow, irrespective of how much traffic exists. These stop-controls, as well as conflicting turning movements, tend to limit capacity. Since the limitations to capacity may exist at intersections, the subject intersections have been analyzed for the purpose of determining capacity and assigning levels of service (LOS).

Signalized Intersections

The capacity of each lane group at a signalized intersection is defined as the maximum rate of flow (vehicles per hour, VPH) that may pass through the intersection under prevailing conditions. Capacity is affected by the geometric characteristics of the facility, traffic composition, as well as phase time allocation. Capacity analysis for a signalized intersection results in the computation of volume-to-capacity (v/c) ratios for each lane group.

The level of service for a signalized intersection is based on the average control delay per vehicle for various movements within the intersection. Control delay is the delay for the motorist due to the traffic control device (i.e. traffic signal), and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Level of service is classified by letter designations "A" through "F", with LOS A demonstrating excellent conditions with minimal delay (less than 10 seconds), and LOS F demonstrating generally undesirable conditions with excessive delay (over 80 seconds). Appendix B, Table 1 provides a more detailed description of LOS designations for signalized intersections.

Intersection Capacity Utilization (ICU)

In addition to the HCM level of service, which is based on estimated delay, the Intersection Capacity Utilization (ICU) method is another powerful tool for measuring intersection capacity. This method is based on the calculation of the amount of time required to serve all movements at saturation (100% capacity). This method is particularly useful for intersections that are presumed to be near capacity, since the HCM delay equations are unstable near capacity. The ICU method is independent of a particular timing plan; therefore it provides a real evaluation of how much reserve capacity may be available for the intersection, or how much the intersection is over capacity. For example, if an intersection exhibits LOS F on several approaches, but the ICU indicates reserve capacity, the intersection could be retimed to provide better levels of service. The result of the ICU calculation is a percentage of utilization for the intersection. ICU "levels of service" may also be assigned based on the percentage, as shown in Appendix B, Table 2.

ROUTE NJ 73 CORRIDOR

The following subsections include an overview of the existing physical characteristics of Route 73, as well as land use and access along the State Highway. Existing peak hour traffic volumes and future volumes based on anticipated development are analyzed to determine the capacity of the signalized intersections along the roadway.

A. Roadway Inventory

Route NJ 73 is a major arterial, extending for approximately 35 miles from the Black Horse Pike (Route US 322) in Folsom Borough, Atlantic County, to the Tacony-Palmyra Bridge in Palmyra Borough, Burlington County. The highway is classified as an urban principal arterial, and is under the jurisdiction of the New Jersey Department of Transportation (NJDOT). It may also be noted that Route 73 continues as PA 73 on the Pennsylvania side of the Tacony-Palmyra Bridge.

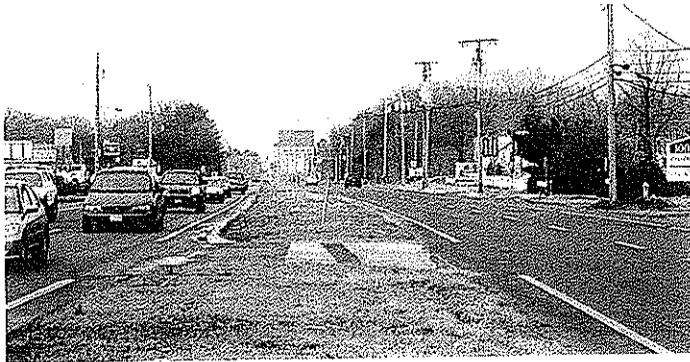
NJ 73 is a primary north-south arterial in the area, providing direct access to the Philadelphia region. It is also a common route to the New Jersey shore points for residents from Camden County and the western portions of Burlington County, as well as from Pennsylvania. Route 73 intersects with several east-west arterials, such as Route NJ 70 and NJ 38. NJ 90 also connects with the northerly portion of Route 73, providing access to the Betsy Ross Bridge. In addition, Route NJ 73 provides access to I-295 and the New Jersey Turnpike (NJTPK), just north of

Voorhees. The NJTPK and I-295 are major limited access highways that generally run north and south, providing access to northern New Jersey and New York to the north, and Wilmington/Baltimore to the south.

Route NJ 73 generally travels north and south through Voorhees Township for approximately 2.4 miles, from Berlin Township, Camden County to the south in the vicinity of Lafayette Avenue (CR 693), to Evesham Township, Burlington County to the north in the vicinity of Kresson Road (CR 671). Based on the location of the highway on the eastern edge of the Township, most Township residents do not need to access Route 73 for local trips, with the exception of the residential area along William Feather Drive and Signal Hill Drive. See Figure 6 for an aerial photograph of the Route 73 corridor study area. It may also be noted that the highway has been designated as a "Safe Corridor Area" by NJDOT from just north of Cooper Road to Kresson Road (milepost 19.38 to 21.43). The posted speed limit on Route 73 through Voorhees is 55 mph in both directions.

The roadway contains two lanes and a full outside shoulder in each direction of travel within the study area, separated by a grass median through the Township (see photo below). The existing right-of-way is shown to be 126 feet wide on the official Tax Maps of Voorhees Township. Median breaks exist at about twenty (20) locations to accommodate u-turn movements, with separate left-turn/u-turn slots at select locations. Some of the breaks are not officially

designated, and are not signed or striped appropriately. These breaks can be hazardous, as they do not provide area for queued vehicles, forcing queued vehicle to remain in the left-hand through lane on Route 73.



Route 73 Typical Section
(MP 19.3 looking north)

It should be noted that DVRPC Project Number 94035 (part of the Transportation Improvement Program (TIP)) includes closing three (3) of these median openings in the vicinity of Terrace Boulevard and Villa Lake Drive (see NJDOT correspondence dated August 19, 2004 in Appendix C). According to NJDOT Project Manager, Frank Inverso, the project is being completed as a maintenance project for safety reasons. Therefore, no traffic analysis was completed to identify the traffic impacts of the median closures. The project is scheduled for construction in early 2005.

B. Intersection Inventory

Five (5) signalized intersections are located within Voorhees Township along Route 73. One is the intersection with Kresson Road (CR 671) and Braddock Mill Road; this intersection is split with Evesham Township, Burlington County. Another traffic signal was recently constructed for the BJ's site on the northbound side of the highway between Signal Hill Drive and William Feather Drive. A forward jughandle is also located at this new intersection to accommodate u-turns. It should be noted that the BJ's site is undergoing phased construction and is not yet complete; therefore, the intersection is not yet experiencing full build-out of the site. The other three traffic signals, which are analyzed in this study, are located at the following three (3) locations:

- Route 73 & William Feather Drive
- Route 73 & Signal Hill Drive/Lakeside Avenue
- Route 73 & Cooper Road (CR 675)

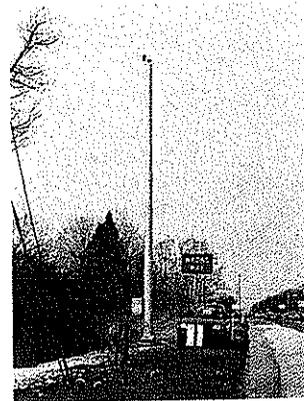
Official Traffic Signal Plans (LTS) and Timing Schedules were obtained from NJDOT to properly model the traffic signal systems. These documents, which show the existing lanes configurations and timing plans for each intersection, are included in Appendix E for reference. Photographs of each intersection are provided in Appendix J, and a typical intersection photo is provided below.



Route 73 Typical Signalized Intersection
(Lakeside Drive/Signal Hill Drive, looking north)

The existing traffic signals along the Route 73 corridor are progressively becoming part of an Intelligent Transportation System (ITS). Planning began for this project nearly 10 years ago, and Route 73 was among the first highways in South Jersey to utilize the technology. Route 73 is particularly suited for ITS, based on the transportation system demands and opportunities for management. The ITS system includes the implementation of current technology (e.g. advanced computers, traffic sensors, and communications equipment) to optimize the safety and efficiency of traffic flow along the highway. The Advanced Traffic Management System includes elements to monitor real time traffic conditions, assist in incident management, and provide information to the motoring public. Elements include closed circuit television cameras (CCTV), variable message signs (VMS), and highway advisory radio (HAR).

Fiber optic cable is being installed to provide closed loop coordination of all traffic signals, controlled from the NJDOT Traffic Operations Center (TOC) 24 hours a day. Fiber optic cable is currently installed and traffic signals are coordinated along Route 73 from the Tacony-Palmyra Bridge to Prospect Avenue in Berlin Township (including Voorhees). Many CCTV cameras have also been installed, including one in Voorhees Township at the intersection of Route 73 and Cooper Road (see photo). Additional fiber optic cable is being installed for the ITS system along the southern portion of Route 73, from Prospect Avenue to the Atlantic City Expressway. With this system, the traffic signal timing may vary based on the time of day (TOD), instantaneously measured traffic volumes (Traffic Responsive Operation (TRO)), or it can be overridden by the TOC based on special circumstances (e.g. motor vehicle accident causing severe traffic delay).



Route 73 ITS Camera
(Southbound at Cooper Road)

A few stop-controlled intersections also exist along Route 73 in Voorhees Township, including Dutchtown Road, Lake Villa Drive, and South Terrace Boulevard. Intersecting stop-controlled roadways and driveways are not within the scope of this analysis, as the analysis of the noted traffic signals will provide sufficient information for this study.

C. Bicycle And Pedestrian Compatibility

As noted previously, full shoulders are provided along Route 73 through Voorhees Township. These shoulders accommodate bicycle travel along the corridor.

On the other hand, sidewalks do not exist along most of Route 73 and many of the feeder roadways to accommodate pedestrians. In addition, some of the signalized intersections do not include sufficient measures to safely accommodate pedestrian activity.

D. Land Use

The NJ 73 corridor exhibits dense development along the northerly portion gradually becoming less dense toward the southern portion, following the typical pattern of suburban growth moving from the city into agricultural/wooded areas. Some of the most heavily populated municipalities in Burlington and Camden Counties are located along the northern portion of Route 73 (including Voorhees Township). As a result of continued growth, traffic congestion is an

increasing problem along the corridor, particularly with the combination of daily commuter through traffic and local retail traffic during peak hours.

The existing properties along the Route 73 corridor within Voorhees exhibit a mix of land uses, including retail, office, and public facilities, while many tracts are vacant or underutilized. Underutilized sites include single-family dwellings and small-scale commercial or service uses. A remarkable number of these properties are currently posted with real estate signs indicating that there are “for sale” or “available” (February 2005).



Typical Underutilized Property
(Single-family dwelling currently used as an office at William Feather Drive)



Typical Vacant Property
(Vacant property for sale near Kresson Road)

In recent years, development has been limited in this area as a result of the lack of public sewer service. However, based on information provided by the Voorhees Township MUA, extending the sewer into these areas is now much more feasible. The potential to extend and improve the utility infrastructure, coupled with the current value of commercial real estate, suggest that this area will likely be developed in the near future.

E. Access

Access management is a process that involves the regulation of access to land development, addressing issues such as the quantity, location, and geometry of driveways (and intersecting streets). Access points along principal arterials such as Route 73 should be limited, in order to minimize conflicting movements and disruption of smooth traffic flow. Therefore, shared access and internal collector streets should be promoted for commercial development or redevelopment along Route 73. Research has shown

that intelligent access management can reduce motor vehicle accidents and improve traffic flow.

In accordance with the NJDOT State Highway Access Management Code (New Jersey Administrative Code, Title 16, Chapter 47), any proposed or revised access along a State Highway such as Route 73 must be reviewed by NJDOT for conformance with the Access Management Code prior to approval. Access permits must be obtained for any new access points, revised access points, or access points where a significant increase in traffic is anticipated (i.e. 10% increase in total daily traffic, and an additional 100 trips during a peak hour).

F. Existing Traffic

Existing Traffic Volumes

Existing traffic volumes were obtained for the three (3) signalized intersections noted above. The counts were completed over a 12-hour period in July 2003. The count data is compiled in 15-minute intervals, and is available for review in Appendix F. As noted previously, the PM peak hour has been selected for analysis. The PM peak hours for the intersections were observed to occur from 4:30-5:30 PM or 4:45-5:45 PM. The existing peak hour volumes are illustrated on Figure A1 in Appendix A.

Automated traffic recorders (ATR) are used to monitor weekly and 24-hour variations in the data, as well as to confirm the validity of manual turning

movement count data. A comparison of the manual count data with available ATR data confirmed that the volumes obtained during the manual counts represent “typical” days; therefore, the manual count data may be used in the capacity analysis. The ATR data indicates an average daily traffic (ADT) volume of about 42,000 vehicles per day (vpd) on Route 73 in Voorhees.

Existing Traffic Analysis

The existing level of service (LOS) for each movement was calculated using the modeling software. No significant activities of pedestrians, bus stops, or parking maneuvers were observed in close proximity to the studied intersections. Therefore, these factors are not expected to create noticeable delay for motorists and are not included in the

operational analysis of the intersections. An assumed peak hour factor of 0.95 was utilized for all approach lanes. Appropriate default values were used for any other factors and values not physically measured.

Figure 7 illustrates the LOS and delay times by lane and by intersection for the signalized intersections under existing conditions. The intersection levels of service are also summarized on Table 2 below for comparison with future conditions. As shown on the figure, the various approach lanes exhibit levels of service from LOS A to LOS E during the PM peak hour period, with most significant delay experienced on the minor street approaches and left-turns from Route 73. This condition is typical, with priority given to the through movements on the State highway. The calculation summary sheets are provided in Appendix H for reference.

TABLE 2: Level of Service Summary

<i>Intersection</i>	<i>Analysis Year</i>			
	<i>2003</i>	<i>2015 Base</i>	<i>2015 Build (w/sewer)</i>	<i>2015 Build (w/o sewer)</i>
Route 73 & Cooper Road (CR 675)	E	F	F	F
Route 73 & Signal Hill Drive / Lakeside Avenue	C	C	F	F
Route 73 & William Feather Drive	B	B	F	F

Table 3 provides the Intersection Capacity Utilization (ICU) for existing and future conditions. As indicated on the table, the intersection at Cooper Road is currently over capacity, while the other two intersections show some reserve capacity available for increased volumes.

TABLE 3: Intersection Capacity Utilization (ICU)

<i>Intersection</i>	<i>Analysis Year</i>			
	2003	2015 Base	2015 Build (w/o sewer)	2015 Build (w/sewer)
Route 73 & Cooper Road (CR 675)	105%	115%	126%	153%
Route 73 & Signal Hill Drive / Lakeside Avenue	67%	71%	127%	165%
Route 73 & William Feather Drive	83%	84%	92%	112%

G. Future Base Traffic

Background Growth

In order to analyze future traffic impacts, the existing PM peak hour traffic volumes were projected to the year 2015. This 10-year projection was selected based on the desired analysis period for build-out of the Route 73 corridor through Voorhees. Growth rates are often selected from the New Jersey Department of Transportation Annual Background Growth Rate Table for various roadway classifications in each county of New Jersey (Appendix B). For Route 73 in Voorhees Township, a 1.50% per year growth rate would be utilized (Urban Principal Arterial in Camden County). However, use of this table is only recommended for a 1-3 year projection, and it may not provide accurate projections for long-term growth. A growth rate of 1.00% per year has been selected for this analysis, consistent with NJDOT long-term projections. The 2003 existing volumes were projected to 2015 utilizing this percentage.

Future Base Traffic Analysis

The background growth was added to the existing intersection volumes to calculate the total future base volumes. The PM future base peak hour volumes are shown graphically in Appendix A, Figure A2.

The future base levels of service were calculated using the modeling software (assuming background growth only with no additional development). Table 2 and

Figure 7 illustrate the levels of service for the signalized intersections under future base conditions. It may be noted that overall intersection LOS for the three intersections remain the same as the existing conditions. All individual movements at the William Feather Drive intersection and Signal Hill Drive/Lakeside Drive intersection exhibit some increase in delay times, but the level of service classifications remain the same as the existing conditions. Some movements at the Cooper Road intersection degrade one level to LOS D, E, or F. The critical conditions at Cooper Road are also noted by the intersection capacity utilization for the future base conditions (Table 3, above).

H. Anticipated Future Development

In order evaluate the traffic generated by future development or redevelopment, the existing zoning and land uses have been reviewed. As noted in the Route 73 Corridor Review Study prepared by Orth-Rodgers, the Route 73 corridor in Voorhees Township contains 125 parcels, totaling approximately 450 acres. Of this area, about 205 acres have been identified as developable; that is, area without wetlands or other significant environmental constraints. This area is shown on Figures 8A and 8B, while a table prepared by Orth-Rodgers identifies the lots and associated buildable area (Appendix G). Developable land includes all vacant and underutilized land. Long-standing established businesses, churches, and the Voorhees Township Board of Education were classified as being already developed.

The current zoning for the majority of the Route 73 corridor permits a mix of retail and office space (Figure 9 – Route 73 Zoning Map). Development with alternative uses would clearly be possible, if the Township desired. However, for this analysis, we have assumed the worst-case scenario for peak hour conditions, with all development being retail.

As noted previously, public sewer service has not been available for much of the corridor, which has seemingly limited development. However, now that it is apparent that the sewer infrastructure could be extended, the potential for development is expanded. Based on site requirements such as maximum impervious coverage, building coverage, parking, and open space, a conservative estimate of 25% is assumed for potential building coverage (or floor area ratio, F.A.R.) in this area with public sewer. Without public sewer, more open space is required for on-site disposal. Therefore, approximately half of the 25% coverage (i.e. 12%) is assumed for development without public sewer.

The traffic analysis included in this study presents two scenarios. The first assumes development served by public sewer (25% F.A.R.), and the second assumes on-site disposal with good subsurface soils (12% F.A.R.). This has been done to provide the ability to compare build-out traffic conditions for the Route 73 corridor under each condition. This will assist the Township in planning and zoning for development or redevelopment of this area.

Potential Hospital / Medical Complex

Although no formal applications have been made to the Township, it is reported that Virtua-West Jersey Health Systems is planning to develop a new hospital/medical complex on the west side of Route 73, between Route 73 and Dutchtown Road. The land area begins at the intersection of Dutchtown Road and Route 73 (Block 228, Lot 1), encompassing all of Block 228 and part of adjoining Block 223, reportedly ending at the southerly property line of Block 223, Lot 8 (see Figure 8A/8B). This land area totals approximately 100 acres on 30 existing lots. It may be noted that this land is located primarily within the Shopping Center (SC) zoning district, with the most southern portion being in the Economic Business (EB) district at the intersection of Dutchtown Road & Route 73. Based on a review of available real estate records, it is evident that Virtua has already purchased at least 8 of these lots, totaling approximately 39 acres.

BJ's Site

The site of the BJ's Wholesale Club on the east side of Route 73 has been partially developed since the previous Route 73 corridor study. This site is being constructed in Phases, and is not yet built-out. Therefore, in this analysis, the BJ's site is still considered in the developable area.

I. Future Build-Out Traffic

Trip Generation & Distribution

The number of vehicle trips generated by future development was determined using the methodology presented in the Institute of Transportation Engineers (ITE) Trip Generation, 7th Edition, 2003. Since the exact uses of the land to be developed are not known, the general ITE land use category "Shopping Center" (Land Use Code 810) has been selected. When the various tracts are developed, they will most likely be a combination of relatively high, medium, and low traffic generators. Therefore, using the "Shopping Center" land use in this study is a reasonable way to estimate the total trips and account for their net effect on the adjacent roadways and intersections. ITE Trip Generation data sheets, as well as trip generation calculations and distributions and are provided in Appendix G for reference.

As shown on Table 4 below, the retail shopping center land use is one of the highest PM peak hour traffic generators that could potentially be developed along Route 73. It may be noted that a hospital use could result in less than half of the peak hour trips generated by retail development. This is significant, since Virtua may develop half of the total area included in this study (roughly 100 acres).

TABLE 4: Average Trip Generation Rates
(PM peak hour trips per 1,000 square feet)

Land Use	Avg. Rate
Shopping Center (Retail)	3.75
Medical-Dental Office Building	3.72
General Office Building	1.49
Hospital	1.18

The following is a summary of estimated trips generated for a typical weekday PM peak hour (full build-out as retail):

TABLE 5: Total Site Traffic Volumes

Trips with sewer (FAR=0.25):	7,804 vph	Pass-By Trips	Primary Trips
	Enter = 3,746	899	2847
	Exit = 4,058	974	3084
Trips without sewer (FAR=0.12):	4,808 vph	Pass-By Trips	Primary Trips
	Enter = 2,308	669	1639
	Exit = 2,500	725	1775

The proposed vehicle trips noted above were distributed between various turning movements at the intersections. Based on a review of existing traffic patterns, future growth, and the proximity of other retail centers, the following percentages were determined for the distribution of traffic.

TABLE 6: Trip Distribution

Route	Retail & Pad Sites
To/From NJ 73 North	35%
To/From NJ 73 South	25%
To/From William Feather Drive	5%
To/From Lakeside Avenue	15%
To/From Signal Hill Drive	5%
To/From CR 675 West	5%
To/From CR 675 East	10%

The distributed PM peak hour traffic volumes generated by the future development are illustrated in Appendix A on Figure A3 for development without sewer, and Figure A4 for development with sewer.

Pass-By and Internal Trips

Trip generation studies compiled by the Institute of Transportation Engineers have indicated that a significant percentage of trips to and from retail land uses are “pass-by” or “diverted-linked” trips. Pass-by trips are trips where motorists are already on the roadways adjacent to the site, and they choose to visit the site on their way to or from another destination (often to/from work during weekday peak periods). A diverted-linked trip is similar to a pass-by trip; however, the motorist must take one or more additional roadways to access the site, “diverted from” their

typical route. The remaining trips generated by a site are “primary” trips in which the site is the sole destination, and the entering and exiting primary trips are new trips that are added to the existing traffic on the roadways.

For the anticipated retail development along Route 73, the ITE methodology in the *Trip Generation Handbook*, March 2001 was used to estimate the number of pass-by trips. Pass-by percentages and volume calculations are included in Appendix G, and the total pass-by volumes for the site are shown on Table 5 above.

As discussed in the *ITE Trip Generation Handbook*, March 2001, “multi-use development” is expected to draw motorists that will be attracted to more than one use within the site in the same trip. For example, some vehicles may visit two or more of the various retail stores or pad sites in the same trip; this could cause a decrease in the total number of trips generated by the site. The proportion of internal trips to total trips is called the internal capture rate. The summary of literature on this topic provided by ITE presents internal capture rates from roughly 10% to 50%. However, the small number of studied sites is over a broad range of sizes and land use types, making it difficult to apply the information to specific sites. In addition, the *Handbook* states that the data is provided for “informational purposes”, not as “recommended practices, procedures, or guidelines.” Based on the available information and general nature of the “Shopping Center” land use, internal capture rates

were not applied. Based on observations at similar commercial centers in the area, it is apparent that some percentage of traffic generated by the site will be internal trips among the various uses; therefore, the actual build-out traffic conditions at the studied intersections would likely be better than the results presented herein.

Future Build-Out Traffic Analysis

The estimated site trips were added to the 2015 future base volumes in order to evaluate the level of service provided under the 2015 build-out conditions. Figure A5 and A6 in Appendix A illustrate the 2015 PM peak hour volumes for build-out conditions with and without sewer service, assuming that all development is retail.

As indicated on Table 2 and Figure 7, the considerable increase in traffic due to development of the corridor results in significant increases in delay times and poor levels of service. The intersections exhibit an overall LOS F for the future build-out condition, with LOS F on many individual movements, including several of the through movements on Route 73. It may be noted that the levels of service are nearly the same, regardless of whether the future development is assumed to be with sewer service (FAR=0.25) or without sewer service (FAR=0.12).

Based on the estimated build-out traffic, the ICU values for the build-out conditions indicate that the three intersections will be over capacity by significant

percentages (see Figure 7 and Table 3, above). This indicates that simple re-timing of the intersections will not improve capacity, and that geometric improvements are required (i.e. additional lanes) to provide significant improvements in the capacity of the intersections.

J. Conclusions and Recommendations

As noted by the capacity analyses included herein, the Route 73 corridor generally operates at acceptable levels under existing conditions. The ITS system activated several years ago provides traffic signal coordination and is effective in maintaining good progression along the highway during most time periods. Traffic responsive signal timing and emergency responses are also facilitated by the ITS system. Most traffic movements to/from the minor streets (Cooper Road, Signal Hill Drive, Lakeside Drive, and William Feather Drive) exhibit level of service D, E, or F under existing conditions. Considerable delay is expected on these approaches due to the high traffic volumes and the length of green time required for the Route 73 through movements during each cycle. As indicated by the Intersection Capacity Utilization (ICU) calculations, two of the intersections are approaching full capacity for existing conditions, while the Cooper Road intersection is just over capacity (105% ICU).

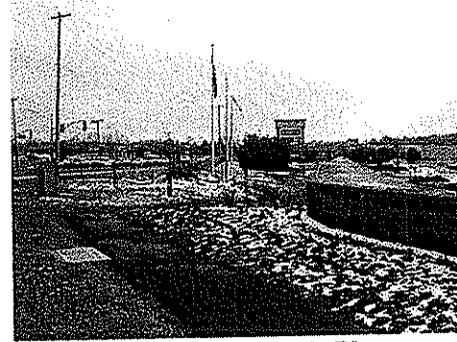
It is anticipated that the undeveloped and underdeveloped areas of the Route 73 corridor through Voorhees will be developed in the near future.

Much of the area will likely be retail land uses, while there is also good potential for approximately half of the area to be developed as a medical complex on the west side of Route 73. If all development is assumed to be retail, it is estimated that failing conditions will exist at the intersections along Route 73 due to the increase in traffic from the development (LOS F), as well as background growth in the region. These conditions are evident regardless of the permitted floor area ratio (FAR). In addition, the ICU values for the build-out conditions indicate that the three intersections will be over capacity by significant percentages, indicating that geometric improvements are required (i.e. additional lanes) to provide significant improvements in the overall traffic conditions.

Based on the physical and operational characteristics of the Route 73 corridor identified in this study, the following important concepts should be considered for future development and improvement of the existing transportation system.

- Most of the corridor does not have sidewalk. It is presumed that retail development along the corridor would generate additional pedestrian traffic in the area. Any new development must consider pedestrians and bicycles as they relate to the overall circulation of the site. A multi-use path should be required of any new development or redevelopment to provide safe, convenient access to commercial areas, without conflict with vehicular traffic on Route 73. See photos below

for paths already constructed. As pedestrian traffic in this area increases, recommendations should be made to NJDOT to supplement pedestrian accommodations at the intersections, where appropriate. Pedestrian facilities along this corridor could also promote the expansion of public transit facilities in this area.



Pathway at Cooper's Plaza



Pathway at BJ's

- The number of access points should be limited in order to minimize conflicting movements and disruption of smooth traffic flow. Wherever

- possible, combined access and cross-access easements should be encouraged. Access points can also be limited by grouping existing parcels for proposed commercial development, while encouraging interior access roadways between uses (e.g. potential medical complex).
- The speed limit on Route 73 is 55 mph through Voorhees, while it is 50 mph to the north in Marlton. The Township would like to have the 55 mph speed limit reduced. Based on the complexity of the ITS timing along the corridor, it is unlikely that NJDOT will lower the posted speed limit under current conditions. However, as the area is developed and/or re-developed, a new speed study would be warranted, and the Township could request that a study be completed.
 - As noted in the capacity analyses, it is predicted that the intersections along Route 73 will be over capacity in the future without geometric improvements. To mitigate this problem, it appears that an additional through lane will be required in each direction along Route 73. Eliminating left-turn lanes by the addition of jughandles would also greatly improve the capacity, since dedicated left-turn phases would not be required in the traffic signal timing. The feasibility of these improvements should be further investigated and then discussed with NJDOT.
 - As site plans are submitted and development progresses, traffic conditions should be monitored and re-analyzed based on specific proposed land uses, access points, and current traffic counts. Traffic impact analysis should be required for any proposed site of significant size.

HADDONFIELD-BERLIN ROAD (CR 561)

The Township is considering new design regulations for Haddonfield-Berlin Road (CR 561) from Evesham Road (CR 544)/Somerdale Road (CR 678) to White Horse Road (CR 673).

Should the Township pursue design improvements, context sensitive design (CSD) must be applied in considering the interrelated aspects of the overall function of the highway, nature of proposed land uses, construction and right-of-way costs, and adjacent land uses.

A. Roadway Inventory

The subject section of Haddonfield-Berlin Road is classified as an urban principal arterial, and is under the jurisdiction of Camden County. It is approximately 3,000 feet long, bounded by a traffic signal at CR 544/CR 678 and a traffic signal at CR 673. The roadway consists of two 12-foot lanes in each direction, with no shoulders and concrete curbing. The posted speed limit is 40 miles per hour (mph), although this speed is not always maintained during congested, stop-and-go periods. Land uses include small businesses (retail and services) and residential dwellings with numerous driveways serving the individual lots. Several residential side streets intersecting Haddonfield-Berlin Road along the subject portion are stop-controlled. Sidewalk exists along most of the roadway. It is estimated that the average daily traffic (ADT) along this section of roadway is about 24,000 vehicles per day (vpd).

B. Recommendations

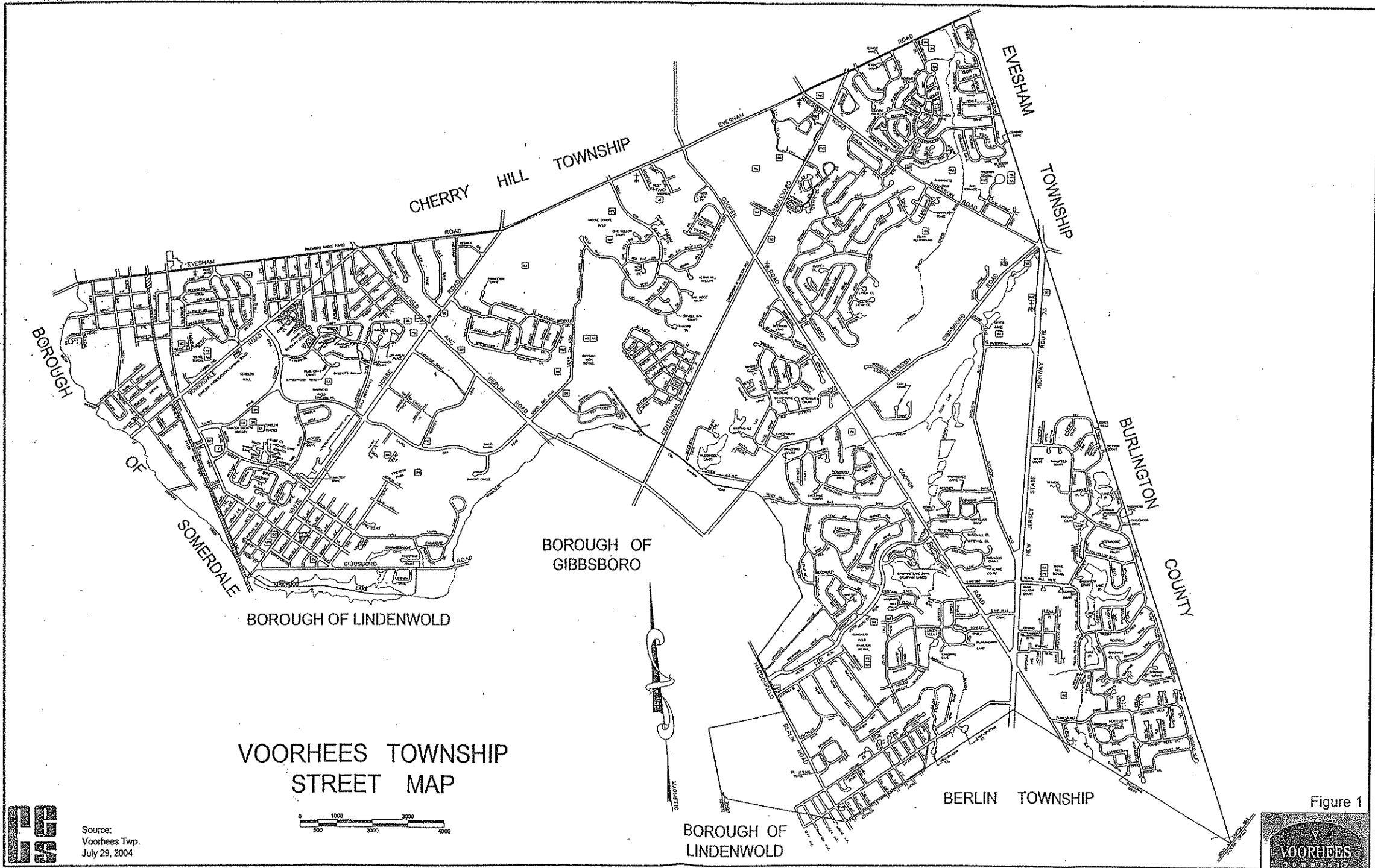
Based on the information discussed about the existing roadway and future development, the items listed below should be considered to complement any new substantial development.

- Shared parking should be provided along the rear of the structures at convenient locations. Shared parking areas should be centrally located, providing the feel that it is part of the atmosphere. Parking should not be detached from the development, and should not be concentrated at the end of the project. Planning of parking facilities and access points should be carefully considered early in the design process.
- Overall circulation should be addressed as it relates to existing surrounding land uses to remain. The proposed access locations and operation of existing side streets should be examined to determine if modifications are warranted. Types of modifications may include closure of side streets at CR 561 and/or creation of one-way patterns. Such measures can help maintain the capacity of the arterial road by reducing left and right turn conflicts and queues. One way roads can also be used to create parking areas off of the arterial boulevard.
- An additional coordinated traffic signal may be considered mid-way through the subject area (possibly at an existing side street), providing a

traffic calming effect, a safe location for pedestrian crossings, and an efficient location for left-turns between rear parking areas and CR 561. This signal could be located in the area of Somerset Avenue and Hudson Avenue.

SUMMARY

This Transportation Element has provided a review of general traffic circulation throughout Voorhees Township, as well as a focus on Route 73 regarding existing and future traffic conditions. The Township has grown considerably over the past 50 years, and many transportation improvements have been made to accommodate the growth. Some areas exhibit current traffic concerns, and these areas have been identified for further study. Recommendations have been made concerning future development and transportation improvements. For Route 73, the build-out conditions are anticipated to exhibit fair to poor levels of service, regardless of whether the corridor is developed with sewer service (FAR=0.25) or without sewer service (FAR=0.12). Future development should be carefully planned regarding access points and traffic impacts, with mitigation and or fair share contributions required as appropriate.



VOORHEES TOWNSHIP
STREET MAP

Figure 1

Source:
Voorhees Twp.
July 29, 2004



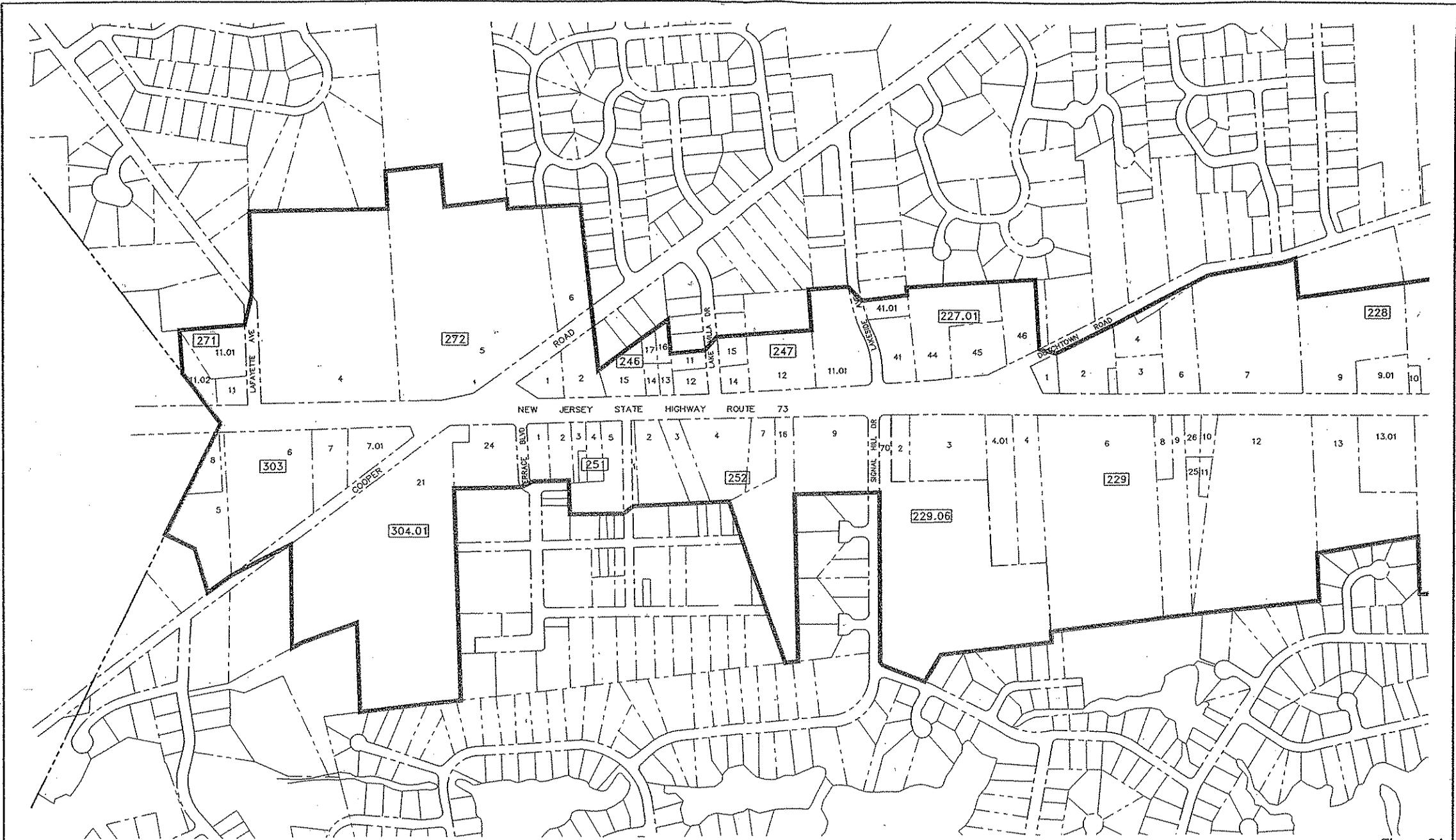
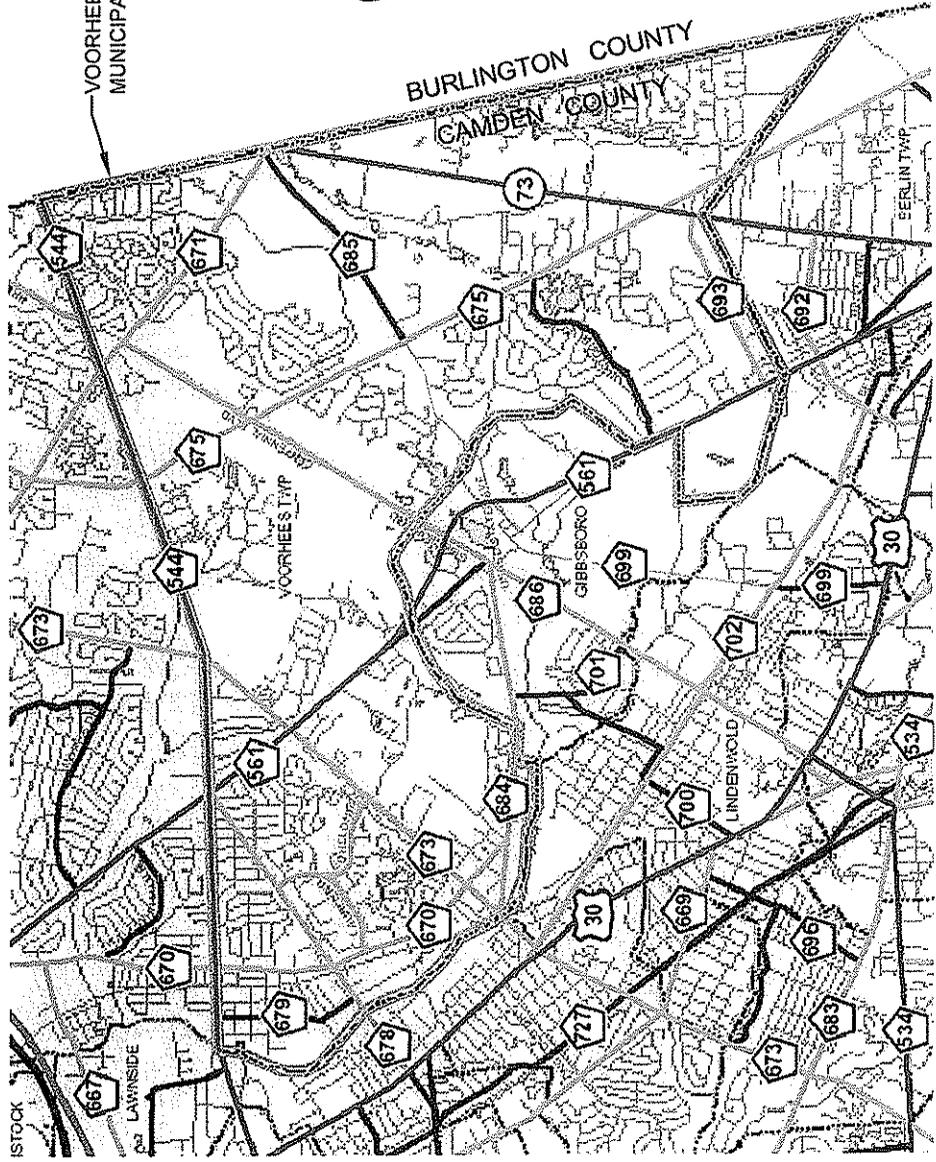


Figure 8A

**ROUTE NJ 73 STUDY AREA
(LOTS)**

Source:
Voorhees Twp.
July 29, 2004





Legend

Functional Class

- Urban Interstate
- Urban Freeway / Expressway
- Urban Principal Arterial
- Urban Minor Arterial
- Urban Collector
- Urban Local

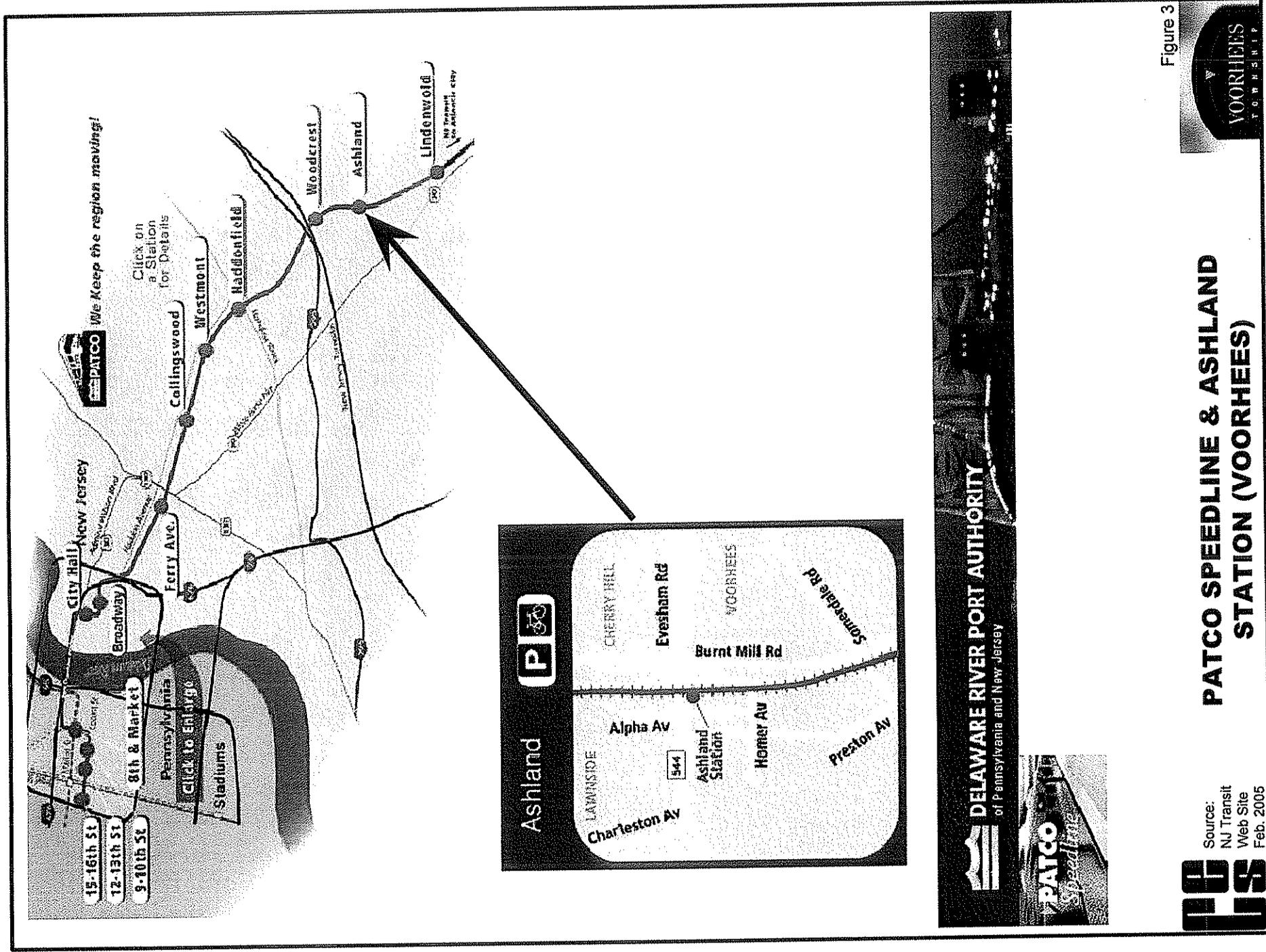


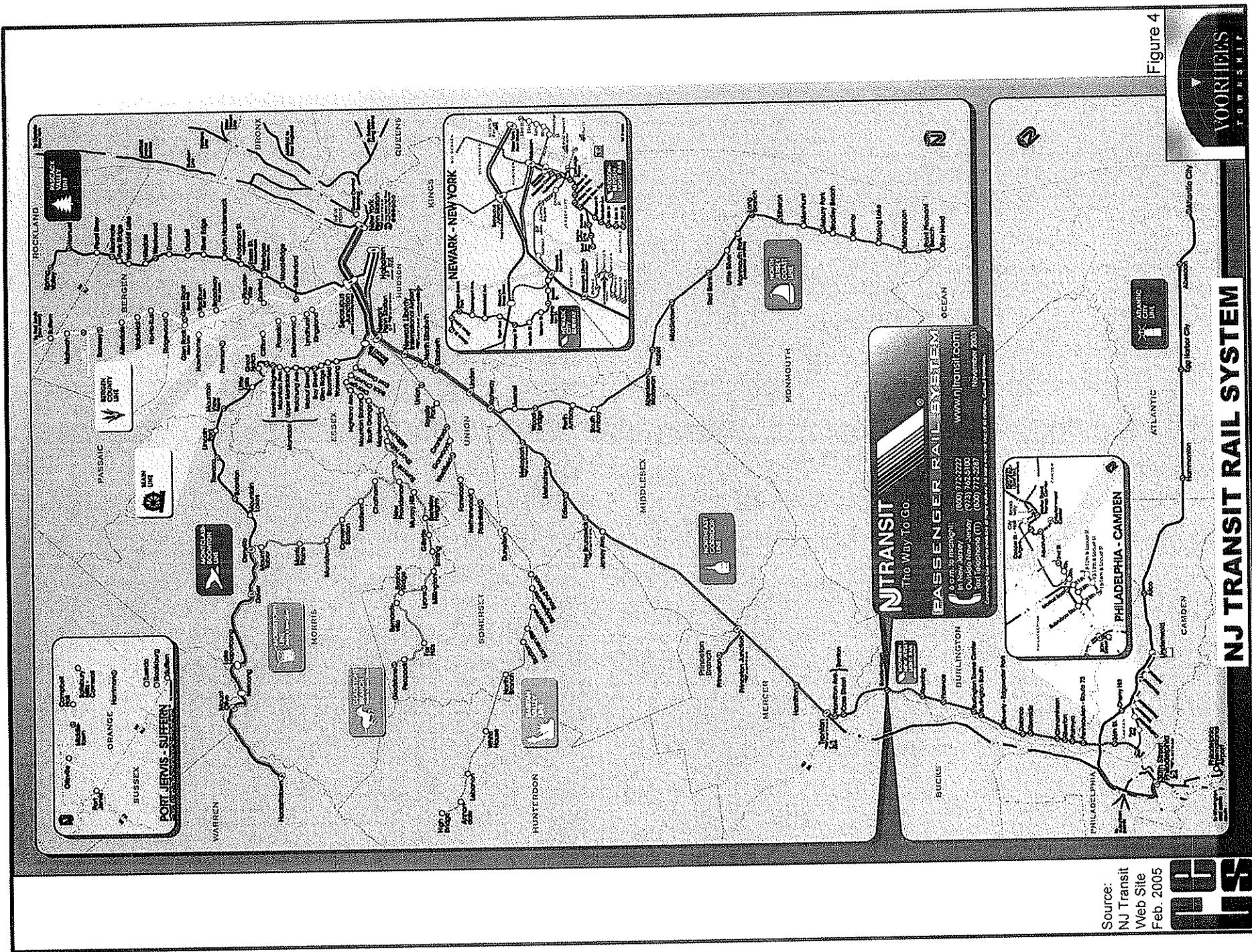
Source:
NJDOT / FHWA
June 2, 2004

2000 URBAN FUNCTIONAL CLASSIFICATION MAP

Figure 2



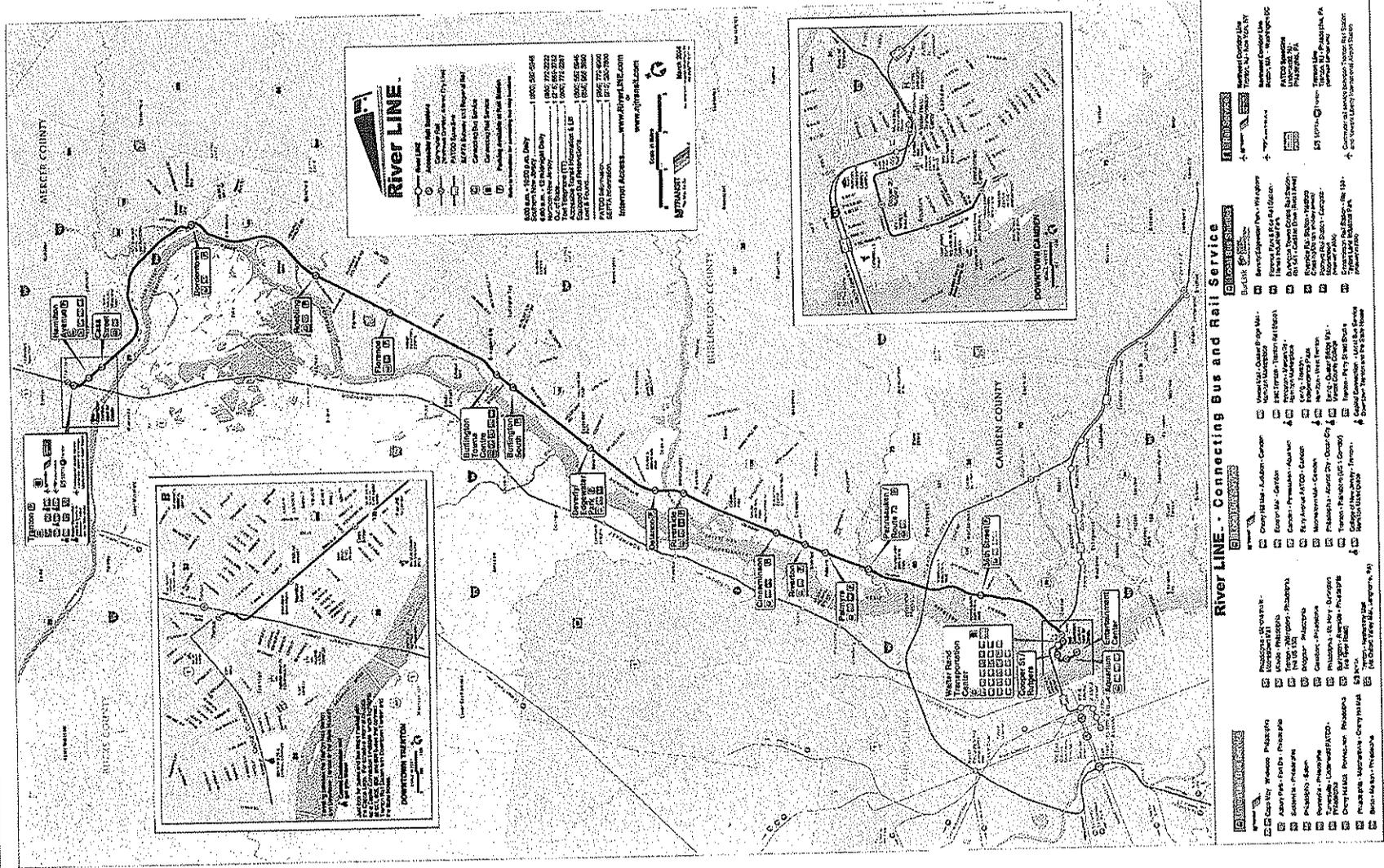




Source:
NJ Transit
Web Site
Feb. 2005



Figure 4



Source:
NJ Transit
Web Site
Feb. 2005

NEW JERSEY TRANSIT RIVER LINE

Figure 5



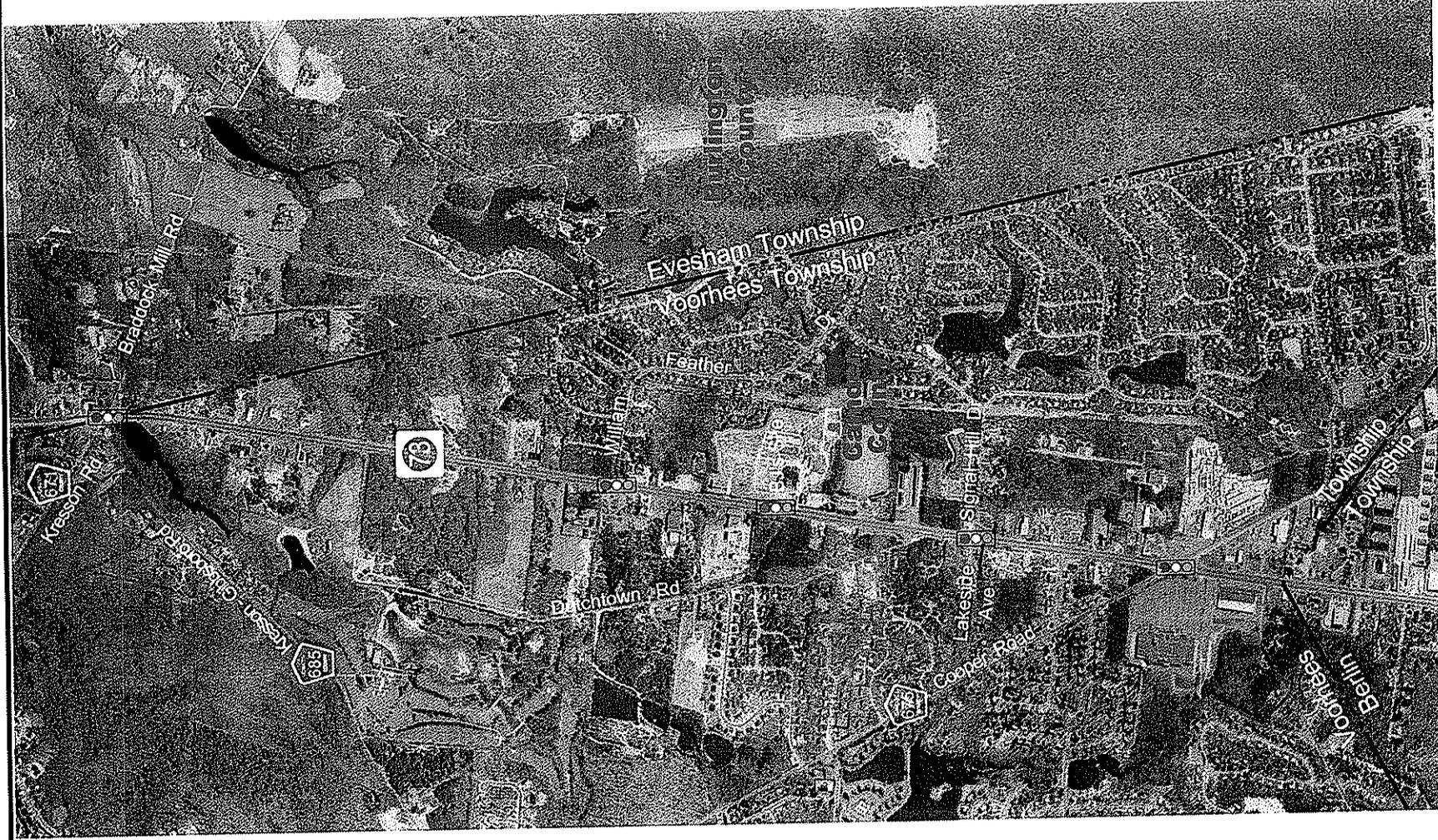


Figure 6



**ROUTE NJ 73 STUDY AREA
(AERIAL PHOTO)**

Source:
DVRPC
2000 Aerial Photograph





B/B/F/F
ICU=83%/84%/92%/112%

B/B/B/C
E/E/E/E

WILLIAM FEATHER DR

B/B/D/F
A/A/A/A

ROUTE 73

C/C/F/F
ICU=67%/71%/127%/165%

D/D/D/C
D/D/D/D

SIGNAL HILL DR

E/E/F/F
B/B/F/F

D/D/F/F
E/E/E/E

LAKESIDE DR

E/F/F/F
ICU=105%/115%/126%/153%

D/D/D/E
F/F/F/F

(CR 673)

E/E/E/E
C/D/F/F
A/A/A/A

B/B/B/B
E/E/F/F
E/E/F/F

D/E/E/F
F/F/F/D

COOPER RD

A/B/C/D=OVERALL INTERSECTION LOS
ICU=INTERSECTION CAPACITY UTILIZATION

- A/B/C/D → 2015 BUILD LOS (w/ SEWER)
- 2015 BUILD LOS (w/o SEWER)
- 2015 BASE LOS
- 2003 EXISTING LOS

**ROUTE 73 CORRIDOR
LEVEL OF SERVICE
(PM PEAK HOUR)**

Figure 7



ZONING DISTRICTS

- ORB OFFICE RETAIL BUSINESS
- B BUSINESS
- RHB RESTRICTED HIGHWAY BUSINESS
- EB ECONOMIC BUSINESS
- GB2 GENERAL BUSINESS
- EIB ECONOMIC INDUSTRIAL BUSINESS
- SC SHOPPING CENTER
- 01 OFFICE
- 03 OFFICE
- SH SENIOR HOUSING
- CP COMMUNITY PROPERTY
- RR RURAL RESIDENTIAL, RESIDENTIAL OFFICE
- R10 HIGH DENSITY RESIDENTIAL
- MDR MEDIUM DENSITY RESIDENTIAL
- CR CLUSTER RESIDENTIAL
- TC TOWNSHIP CENTER



ECONOMIC ENHANCEMENT

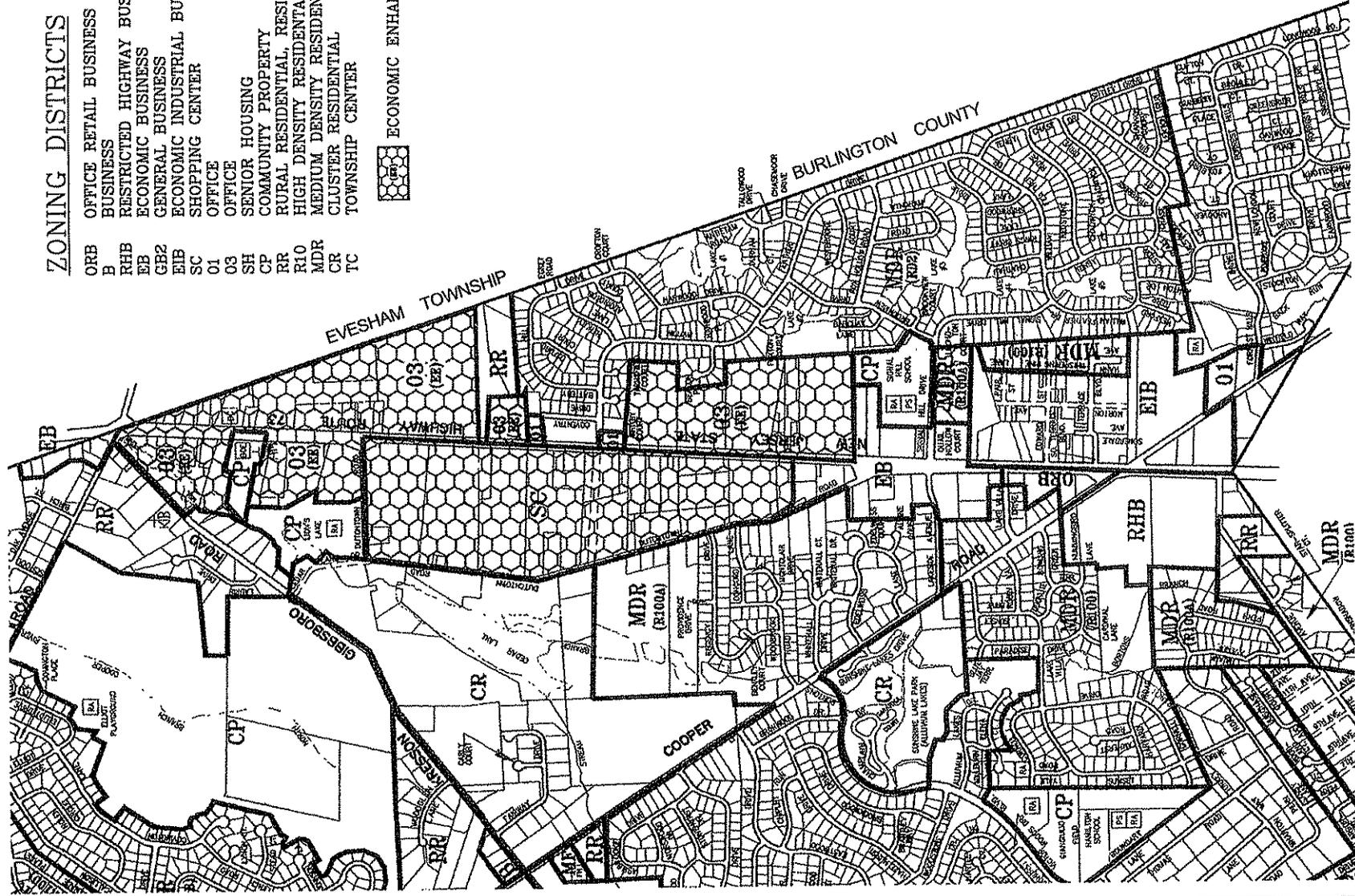


Figure 9



**ROUTE NJ 73
ZONING MAP**

Source:
Voorhees Twp.
November 2, 1999

V
VOORHEES
TOWNSHIP