

**TOWNSHIP OF ROXBURY PLANNING BOARD
MORRIS COUNTY, NEW JERSEY**

**TOWNSHIP OF ROXBURY
MASTER PLAN
LAND USE PLAN ELEMENT**

July 11, 2000



Robert A. Michaels, P.P., AICP

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LAND USE PLAN ELEMENT
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**TOWNSHIP OF ROXBURY
MORRIS COUNTY, NEW JERSEY
LAND USE PLAN ELEMENT**

1.0 Introduction

The Township of Roxbury has a history of comprehensive planning which dates back to 1958, when the Planning Board adopted its first Township Master Plan. In 1975, the Planning Board initiated a comprehensive revision of the plan. With the adoption of the Municipal Land Use Law in 1976, municipalities in the State were required to reexamine their master plans at least every six (6) years. The Planning Board adopted reexamination reports in July, 1982, and August, 1988. A Master Plan subcommittee of the Planning Board was established in 1988, and developed a program with the aid of a consultant to establish a new master plan. In 1990, the Planning Board adopted a comprehensive revision to the Master Plan which included the following elements:

- Land Use Plan
- Housing Plan
- Circulation Plan
- Utilities Plan
- Community Facilities Plan
- Conservation Plan
- Stormwater Management Plan
- Recreation Plan
- Historic Preservation Plan
- Recycling Plan
- Economic Development Plan
- Visual Design Plan

The Housing Plan Element was updated with the adoption of a new Housing Plan in 1997. The most recent comprehensive planning document undertaken by the Planning Board was Master Plan Reexamination report adopted on June 24, 1998.

The 1998 Master Plan Reexamination concluded that there have been significant changes in the community in terms of new development and changes in the land use planning / development climate. There was also a shift in general planning philosophy relative to the desirability of large scale commercial and industrial development. Among the priority planning activities recommended in the reexamination report was the preparation of a revised and updated land use plan element, with specific goals and objectives. Those goals and objectives were delineated in the reexamination report and are reiterated and updated in this element.

This updated land use plan element is the next step in the continuing planning efforts of the Township. It reflects the changes in the community which have occurred

since those earlier planning projects. The latest Master Plan and Reexamination Report were examined in preparation for this plan, and some of the physical background conditions of the community reported in those documents are included here by reference. Additionally, the existing land uses found within the community were updated, along with the demographic characteristics of the Township and region.

This Land Use Plan Element is prepared pursuant to the requirements of the Municipal Land Use Law in N.J.S.A. 40:55D-28. The statute requires that the municipal zoning and development ordinances be substantially consistent with the land use and housing plans, or designed to effectuate those plans. This land use plan is developed with the intent of being the policy basis for the Township's development ordinances as intended by statute.

The content of this element is comprised of background studies, a statement of goals and objectives, and the land use plan. It also includes, as required by statute, a statement of the relationship of this plan to the plans and ordinances of the adjacent municipalities, Morris County, and the State Development and Redevelopment Plan (SDRP).

2.0 Background Studies

2.1 Regional Location

The Township of Roxbury comprises 21.35 square miles and is located in the western portion of Morris County (Map 1). Morris County is part of the greater New York metropolitan region, and is midway between New York City and Pennsylvania. Roxbury is linked to the County and the region via a highway network that includes Interstate Route 80, Route 46, Route 10, and Route 206. Vehicular access to the region is excellent with three (3) interchanges with I-80 located either within or immediately adjacent to the municipality. Passenger rail service is available to New York City from the Landing section of the Township via the Boonton Line.

Roxbury shares its borders with nine (9) municipalities, all but one of which are located in Morris County. Hopatcong Borough, in Sussex County sits on a portion of the Township's northern border. The Morris County communities which bound Roxbury are Netcong, Mount Olive, Chester Township, Randolph, Mine Hill, Wharton, Jefferson, and Mount Arlington.

2.2 Physical Characteristics

An integral part of the background studies which are necessary to document before the development of an updated master plan is the physical characteristics of a community. These characteristics include physical features such as bedrock, soils, topography, flood plains, wetlands, aquifers, and other critical environmental conditions which impact land use. The following documents were examined to establish the environmental conditions within the community:

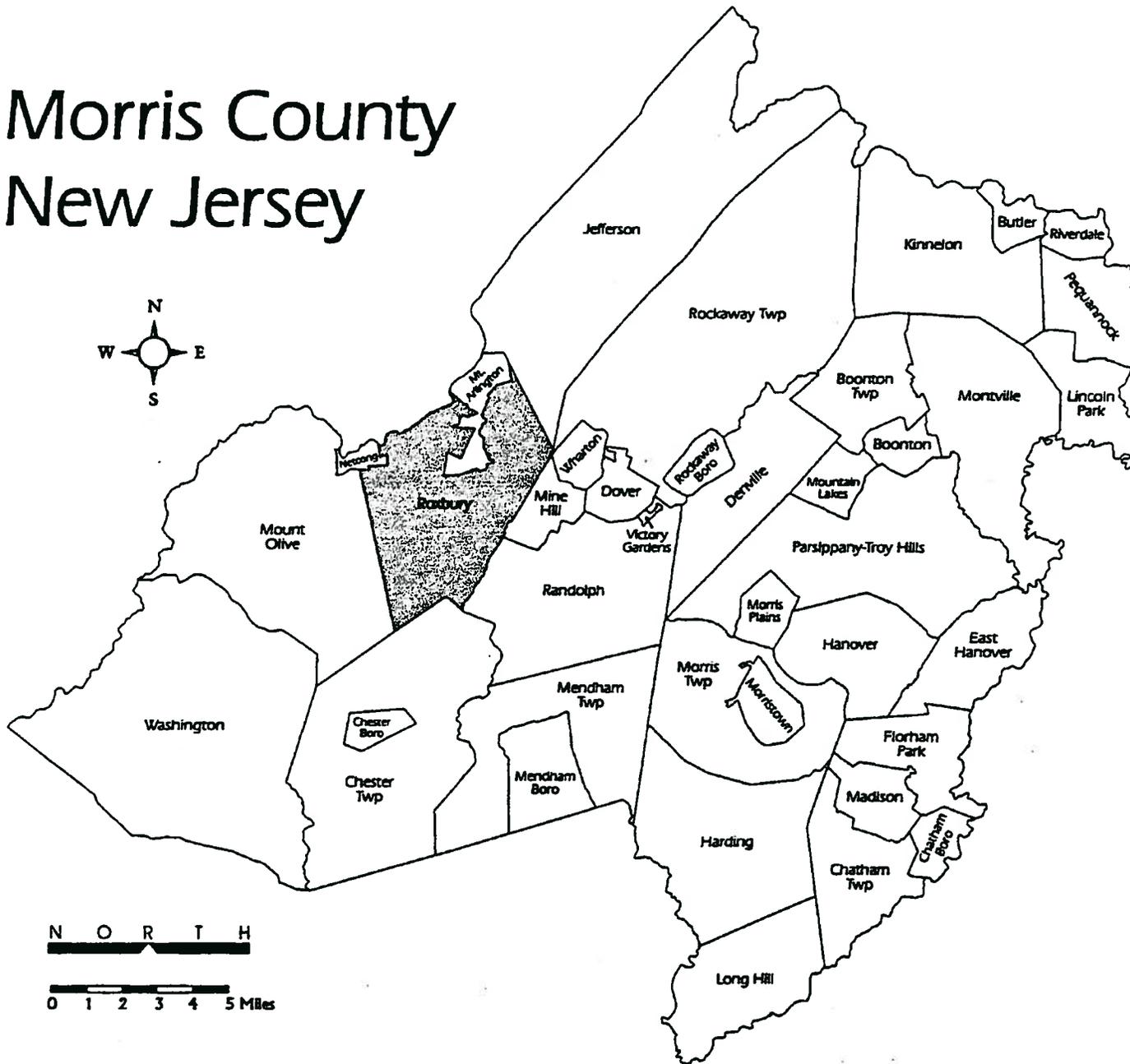
- A Natural Resource Inventory for the Roxbury Township Environmental Commission, 1975, prepared by Robert Catlin and Associates.
- "Alamatong Wellhead Protection Study", December, 1998, A Collaborative Effort of Chester Township, Randolph Township, Roxbury Township, County of Morris Planning Board, The Morris County Municipal Utilities Authority, The United States Geological Survey, The State of New Jersey Department of Environmental Protection, and the Upper Raritan Watershed Association.
- "Rockaway River Sustainable Watershed Management Plan", Second Draft August 28, 1999, Prepared by The Rockaway River Watershed Cabinet with technical assistance from Cahill Associates and Andropogon Associates.
- Morris County Master Plan, Water Supply Element, April 7, 1994, Prepared by Camp Dresser & McKee, Inc., with the Morris County Planning Board and Morris County Municipal Utilities Authority.

MAP #1

REGIONAL LOCATION

TOWNSHIP OF ROXBURY

Morris County
New Jersey



The above studies are referenced here and have been examined as part of the documentation of the environmental conditions which are present in the community. These conditions should be considered in land use decisions both in the development of this Land Use Plan, other master plan elements, and site plans and subdivisions. On-site investigation of specific parcels is necessary for development applications rather than the generalized information presented here.

2.2.1 Bedrock Geology

The Township is part of the Highlands physiographic region of New Jersey and New York, which is an area of alternating ridges and valleys running northeast through the north central portion of the State. The Township of Roxbury is underlain by crystalline gneisses, sandstone, limestone, shale and conglomerate bedrock formations. The oldest bedrock formations are the Pre-Cambrian gneisses. Younger bedrock formations resulted from sediments and terminal moraine deposited by glaciers.

For planning purposes, the significance of the bedrock geology are the depth to bedrock, and the hydrologic characteristics of the bedrock for potable water supplies. The depth to bedrock relates to issues such as the risk of erosion from soil disturbance, drainage characteristics which may be exacerbated from intense development, limestone formations which may contribute to the risk of sinkholes, and the suitability of areas for individual waste disposal systems.

The Township's 1975 Natural Resource Inventory (NRI) included a map which identified the depth to bedrock within the community. It noted that the depth to bedrock was greater than ten (10) feet in over eighty (80%) percent of the Township. This was found primarily in the eastern portion of the municipality in which is characterized by stream valleys at lower elevations. The shallow depth to bedrock was found in the higher elevations which include the Upper Berkshire Valley north of Route 80, Mooney Mountain, and other ridgelines and locales noted in the NRI. It is noted that none of the bedrock found in Roxbury has significant natural porosity and water is stored or transmitted through open fractures or solutional channels.

2.2.2 Topography and Slopes

Topographic conditions are integrally related to the underlying geology, and present the most obvious natural condition to the casual observer. The general topographic conditions found in Roxbury Township are characterized by rugged, irregular, hilly terrain, running along a northeasterly alignment with "U" shaped glacial valleys between them. Elevations range within the Township from a high point of about 1,200 feet south of Mountain Avenue in the western portion of the community to a low point of about 700 feet along the Black River on the eastern border. The general topography of the Township is depicted in the NRI based on mapping from the U.S. Geological Survey at contour intervals of twenty (20) feet.

The presence of steep or excessive slopes is an important factor in land use and development decisions. Steep slopes present a constraint on development and increase the risk of erosion and soil sliding. Development on steep slopes often requires larger areas of soil disturbance in order to bring the disturbed land back to the natural grade of the surrounding lands. Therefore larger areas of vegetation disturbance occur, and the necessity for retaining walls or other measures of slope stabilization are often employed.

The Township has recognized the need to regulate development of areas of steep slopes and has adopted steep slope disturbance application procedures. Disturbance limitations are enforced for slopes starting at fifteen (15%) percent, and increase in restrictions to slopes over twenty-five (25%) percent. It is the ordinance's intent to limit disturbance of slopes of fifteen (15%) or greater.

A generalized slope map of the Township was developed based on the U.S.G.S. topographic mapping, and placed slopes within the community into four (4) categories of 0%- 8%, 8%-15%, 15%-25%, and 25% and greater. There is a larger concentration of slopes greater than eight (8%) percent and reaching up to 25% north of Route 80. A strong line of slopes greater than 25% runs in a northeasterly direction north of Emmans Road, as well as a concentration of steep slopes south of Route 46 between the Ledgewood Circle and Route 80.

2.2.3 Soils

The presence of different soil types is indicative of various conditions which have an impact on development. The existing soil conditions found in the Township have been determined from the NRI and the Morris County Soil Survey prepared by the Morris County Soil Conservation District. The soil types relate to the underlying geologic conditions, and much of the present soil cover in Roxbury Township is associated with the most recent Wisconsin Ice Age.

Some of these soil types include those resulting those resulting from the scour and erosion from glacial activity of the pre-existing soil and bedrock, particularly in areas of high relief. There are also areas of glacial debris which are characterized as either, "young till", along the glacier path or as, "terminal moraine", at the terminus of the glacier's path.

Other soil types found in low elevation areas resulted from the long term erosion of materials which were transported and redeposited as "alluvium" along watercourses. Soil types identified as "organic muck" were formed in this manner in low lying areas of poor drainage. There are also areas of the community in which human activity has altered the natural soil conditions through excavations and fills associated with development. Portions of the community which have been developed since the 1975 NRI have been added to this soil category.

The NRI classified the soil types found in the community into nine (9) groups based on geologic origin and constituents. These soil groupings are classified as follows: Old Till, Young Till, Glacial Outwash, Lake Deposit, Alluvium, Organic Muck, Residual, Urban Land and Made Land. Each of these soil groups have characteristics which are relevant to planning and development. The Soil Survey classifies limitations on various development activities such as the construction of buildings both with and without basements, road subgrades, the installation of utilities, and septic disposal systems. The location of the soil types and their limitations are included in the NRI and are referenced here as an existing condition which should be considered in land use decisions.

2.2.4 Wetlands

Wetlands, and activities conducted in and around them are regulated in New Jersey by the Department of Environmental Protection (NJDEP). When properties are proposed for development the presence of wetlands should be determined through the request for a Letter of Interpretation (LOI). A LOI is requested from the NJDEP to determine the presence and extent of wetlands as well as the classification of the wetlands. The presence of wetlands are generally determined by a three (3) parameter method which includes evidence in the soil, indicative vegetation, and hydrologic conditions.

Wetlands are classified as exceptional, intermediate, and ordinary value, which determines whether a transition or buffer area is required. The classification also determines the width of the transition area. Wetlands which are classified as exceptional resource value are those which discharge into waters which are classified as trout production or their tributaries; or those which are present habitats for threatened or endangered species, or those which are documented habitats for threatened or endangered species which remain suitable for breeding, resting, or feeding by these species during the normal period these species would use the habitat.

The NRI includes a Critical Areas Map which identifies, "Lands Subject to Stream Overflow", and "Assorted Wet Areas". The wet areas identified in the map are not the latest general identification of the location of wetlands. The NJDEP has since published mapping based on U.S.G.S. Quad Maps which identify the generalized location of wetlands, although these also should be subject to on-site investigation per the three parameter method discussed above. These maps are on file and available at the Township Engineering office.

2.2.5 Surface Drainage and Flooding

The land area that encompasses the Township of Roxbury is tributary to three major watersheds; the Delaware River, the Passaic River, and the Raritan River. Roxbury sits at the upper reaches of these watersheds, and the development activity and land disturbance can have impacts far beyond the Township's municipal borders. The northeast corner of the Township drains into the Rockaway River which is part of the Passaic River watershed. The eastern portion of the community drains into the Black River / Lamington River which runs along the border with Randolph Township. The Black River is tributary to the North Branch of the Raritan River. The central and western portions of the Township drain into Drakes Brook and other tributaries which cross into Mount Olive Township and drain into the South Branch of the Raritan River. The northwestern portion of the Township drains into Lake Hopatcong and Lake Musconetcong which form the headwaters of the Musconetcong River. The Musconetcong river is tributary to the Delaware River.

Development and site disturbance within areas designated as flood plains are regulated by both the NJDEP and the Federal Emergency Management Administration (FEMA). Where intrusions into the flood plain, or crossings of streams and drainageways with tributary areas over certain acreages are proposed, permits are needed from the NJDEP. These stream encroachment permits, for drainage areas not already delineated by the NJDEP require such calculations from the developer to determine both the size and extent of the flood plain, and the potential impact of the development on stream flow and drainage pattern.

Both the FEMA and NJDEP publish flood plain maps which identify lands at risk of periodic flooding. The common designation of such areas are known as the 100-year flood plain. These areas have a statistical chance of flooding once every one hundred (100) years, or a one percent chance of flooding each year. Obviously these areas can, and sometimes do flood more frequently than once per year. An examination of the FEMA maps shows that these flood prone areas are related to the streams and lakes located within the Township, including the Lamington River, Drakes Brook, the Rockaway River, Horseshoe Lake, Triple Lakes, and Chester Lake. Roxbury's development ordinances already include the prohibition against platting new lots in floodplains, as well as other development controls. Those maps are included here by reference.

2.2.6 Aquifers

The source of all groundwater is from precipitation which falls on the surface of the land. This is part of the hydrologic cycle which is the inter-related system of water sources which consists of water which evaporates from the earth's water bodies, and is deposited as precipitation over the land surface. The precipitation is absorbed by plants and the soil, retained in surface depressions, or flows over land in ditches, streams and

rivers. The water that infiltrates through the soil or fractures in the bedrock becomes groundwater.

The Morris County Water Supply Master Plan notes the aquifer which is located in the basins of the Lamington and Black Rivers. The Master Plan states that this aquifer reaches from Rockaway Township, through Roxbury, Mount Olive, and Chester Township to Washington Township. The area is within the Highlands province, and overlies the largest of the three Paleozoic outcrop belts in Morris County. The Master Plan also states that one of the bedrock formations in this area has the potential of being a high producing aquifer.

A large portion of the Township of Roxbury has been identified within the study area of the Alamatong Wellfield Protection Project. This study area lies within the drainage areas of the North Branch of the Raritan River, the South Branch of the Raritan River, and to a lesser extent, the drainage area of the Rockaway River. Obviously, aquifers such as this do not respect municipal boundaries, and this aquifer is under a number of communities in the region. Given the inter-relation between these surface waters and the aquifer which supplies the Alamatong Wellfield, protection of both surface and groundwater quality should be a priority. The aquifer which supplies the Alamatong well field, has been characterized as a highly complex resource, and consists of three interrelated aquifers. These three aquifers include an upper valley-fill aquifer, a lower-fill aquifer, and a carbonate rock aquifer. This overall aquifer is the source of potable water via major public water supply wells operated by the Morris County Municipal Utilities Authority, the Roxbury Water Company, and several large industrial wells. The estimated extent of this aquifer in Roxbury Township and the neighboring communities is illustrated on maps included in the Alamatong Wellhead Protection Study, as well as the Morris County Water Supply Master Plan, and are included here by reference.

The data developed for the Alamatong Wellfield Protection Project was derived from a technical simulation model devised by the United States Geological Survey (USGS). The study analyzed data relating to the time of travel of groundwater and contaminants that could effect the wellhead areas under different pumping scenarios within different time of travel criteria. The time of travel periods used for the analysis were both five (5) and twelve (12) years. The total contributing area to the pumping wells were calculated under three (3) pumping scenarios. They are illustrated as follows:

Total Contributing Area Under Selected Pumping Scenarios

<u>Scenario</u>	<u>Land Area Included (acres)</u>
1. Current Pumping Rates (1991-1995)	3,268.78
2. Projected 2005 Pumping Rates	4,094.30
3. Full Allocation Pumping Rates	4,157.93

The current pumping rates were taken from the actual withdrawals of groundwater from 1991 through 1995. The year 2005 rates are those projected in 2005 resulting from increased demand, and the full allocation pumping rates are the maximum amount of groundwater currently legally permitted to be withdrawn. Under the full allocation pumping rates of the 4,157 acres of land, the acreages and percentages of land within the various land use / land cover scenarios are illustrated in the table which follows.

The Wellhead Protection Study includes a number of recommendations which are extremely relevant to this land use plan element. The recommendations are geared both individually to the various land uses / land covers, and generally throughout the contribution area.

Some of the recommendations pertaining to land use and development regulations are:

- Amend local Master Plan to reflect the data contained in the study.
- Consider downzoning undeveloped areas (5+ acre zones).
- Incentive Zoning (Encourage development to avoid recharge areas in exchange for an increase in density.
- Permit clustering on lands other than within recharge areas.
- Overlay zoning (Special Environmental controls to apply)
- Apply appropriate policies from State Plan of Development and Redevelopment, such as Critical Environmental/Historic Site (CEHS) or Planning Area designation for the critical areas associated with the well field areas.
- Subdivision/site plan review to force developers to construct environmentally neutral projects which will not stress surface or ground water resources with specific concern for recharge areas.
- Manage the occupancy and reoccupancy of non-residential land uses by enacting local ordinances designed to screen uses within the recharge areas.
- Operating and management procedures (BMP's, Integrated Pest Management, collection and storage of first flush of storm water, limit use of road salts, fertilizers, pesticides).
- Design standards (develop new guidelines for fuel tanks, septic systems in limestone formations, etc.).
- Source prohibition (prohibit dumping, junk yards, and projects using hazardous materials) especially within recharge areas.
- Use recharge areas to target priority areas for open space acquisition.
- Consider fee simple, conservation easements, or development rights purchase.
- Land within recharge areas should be considered higher priority for open space acquisition.

**TABLE 1
ALAMATONG WELLHEAD, LAND USE/LAND COVER WITHIN
CONTRIBUTING AREA, 1995**

CATEGORY	SUB-CATEGORY	ACRES	PERCENT
Agriculture Total		172.57	4.1
	Agricultural Wetlands	10.49	
	Cropland and Pastureland	162.07	
Barren Land Total		82.10	1.9
	Disturbed Wetlands (modified)	20.01	
	Extractive Mining	45.09	
	Undifferentiated Barren Lands	17.01	
Forest Total		1,011.20	24.3
	Brushland Shrubland	284.18	
	Coniferous Forest	50.98	
	Coniferous/Deciduous Forest	11.89	
	Deciduous Forest	657.57	
	Deciduous Coniferous Forest	6.59	
Urban Total		1,955.83	47
	Athletic Fields (schools)	27.54	
	Commercial/Services	183.02	
	Industrial	367.94	
	Other Urban or Built Up Land	75.17	
	Recreational Land	68.83	
	Residential	1,176.98	
	Transportation/Communications /Utilities	54.22	
	Wetland Rights of Way	2.12	
Water Total		136.91	3.2
	Artificial Lakes	136.91	
Wetlands Total		799.32	19.2
	Deciduous Scrub/Shrub	37.05	
	Deciduous Wooded Wetlands	720.54	
	Herbaceous Wetlands	11.35	
	Managed Wetlands (modified)	30.39	
Total		4,157.93	100

Source: Alamatong Wellhead Protection Study, December, 1998. Acreage is within drainage area only. Percentages do not sum due to rounding.

2.2.7 Habitats and Threatened and Endangered Species

The New Jersey Natural Heritage Program, which is within the Department of Environmental Protection compiles data on threatened, rare and endangered species of flora and fauna throughout New Jersey. Much of their data is from sources which have

conducted on - site analyses and examinations. It has been estimated that there are at least fourteen (14) habitat types present in Roxbury Township, as follows:

Lacustrine System

Open Water Lake Zone
Bladderwort-Pondweed-Bulrush Submergent Lake Zone
Spatterdock-Pickerelweed-Water Lily Emergent Lake Zone

Palustrine System

Open Canopy

Inland Noncalcareous Pond Shore
Streamside/Lakeside Shrub Swamp
Inland Gramminoid Marsh
Inland Red Maple Swamp

Terrestrial System

Open Canopy

Siliceous Rock Outcrop Community
Talus Slope Community

Closed Canopy

Dry Mesic Mixed Oak Forest
Chestnut Oak Forest
Remnant Boreal Bog
Vernal Pond

The opportunity for threatened or endangered species is heavily related to the nature of the habitat. The above habitats occur in varied conditions such as along slopes, ridgelines, rocky soils, wet areas, etc. Seven (7) species of endangered, threatened or rare plant species, four (4) of herptiles, and three (3) of bird species have been noted within the Township. Those species are as follows:

Plants

- Mountain Spleenwort
- Wild Pink
- Purple Cress
- American ginseng
- Worlded Milkweed
- Variable Sedge
- Hitchcock's Sedge

Amphibians

- Jefferson's Salamander
- Four-toed Salamander
- Spotted Salamander

Reptiles

- Bog Turtle
- Wood Turtle

Birds

- Red-shouldered Hawk
- Cooper's Hawk
- Barred Owl

The above species were observed in various locations throughout the community over a number of years. Some of the locales are privately owned and have been developed since the inventories were conducted.

2.3 Utilities

The location and capacity of utilities such as sanitary sewer service and public potable water are significant factors in determining the type and intensity of land uses. The 1990 Master Plan and the 1998 Master Plan Reexamination documented these utility service areas and their plans for expansion and upgrade. Additionally, the Musconetcong Sewerage Authority amended its Wastewater Management Plan in 1993, and a new Wastewater Management Plan was developed for the Township in 1996.

2.3.1 Sanitary Sewerage

The Township is served by three major public sanitary sewerage treatment facilities, although one is currently planned to be decommissioned. The sanitary sewerage service areas are depicted on Map 2. The first is the Ajax Treatment Plant which is located in the southeast corner of the municipality. The capacity of the plant is being increased by approximately 300,000 gallons. This gallonage was intended to correct existing septic problem areas, to serve infill development, and to extend service only to areas with approved low and moderate housing within the scope of the Township's approved Housing Plan. The area served by this treatment facility is the southern and southeastern portion of the community. The 1995 flow to this plant was 1.686 million gallons per day (mgd), which will increase to 2.0 mgd by 2015.

The northwest portion of the Township is within the Musconetcong Sewerage Authority Service area. The treatment facility is located in Mount Olive, and the service area also includes Netcong, Stanhope, and portions of Mount Olive. This facility has been expanded since the last master plan.

The third sanitary sewer service area is the Skyview Sewage Treatment Plant which is currently planned to be decommissioned. Effluent which was treated at this facility will be pumped to the expanded Ajax Treatment Plant. This plant currently serves a 210 home development, and is operated by the Township of Roxbury.

There are also two smaller waste water treatment systems within the municipality. They are the Hercules Water Pollution Control Plant which has a design capacity of 0.19 mgd and serves the Hercules industrial facility, and the Days Inn Water Pollution Control Plant with a design capacity of 0.04 mgd. The Days Inn Plant is located in Ledgewood on Route 46, east of Mooney Road. It is a package plant which serves the Days Inn Hotel and Restaurant.

The 1990 Census reported that 3,425 dwellings within the Township were served by public sewers, and 3,350 dwellings were served by a septic tank or cesspool. Twenty-four (24) dwellings were reported to have some other form of sewage disposal.

2.3.2 Potable Water

The Township of Roxbury is served by two water purveyors, the Roxbury Water Company, which is a private company, and the Roxbury Township Water Department. Both of these purveyors obtain their water from underground wells.

The Roxbury Water Company serves approximately 2,930 customers from six (6) wells located in the southern portion of the Township. Its service area is Succasunna and Kenvil portions of the Township. Extensions of public water service have been completed to 300 homes in the Kenvil area which had experienced contaminated water for approximately twenty (20) years.

The Township's Water Department serves its customers from four (4) wells located in the western and northern portions of the community. It services the Port Morris, Landing and Ledgewood sections of the Township. The Berkshire Valley section of the Township in the north is also within the Township's Water Service Area. An interconnection between the Roxbury Township Water Department and the Morris County Municipal Utilities Authority (MCMUA) has been constructed along Route 46 near the Township's border with Mine Hill Township. The past problems with water pressure in the Shore Hills / Landing section of the Township have been substantially corrected.

The 1990 Census reported the following concerning the source of water for dwellings within the community:

<u>Source of Water</u>	<u>Number of Dwellings</u>
Public System or Private Company	4,405
Drilled Well	2,128
Dug Well	230
Other	36

According to the 1990 Master Plan, approximately 5,000 residents of the Township were served by private wells. It is expected that this number has been reduced since that time, given the new connections reported above.

2.4 Demographics

This analysis examines the demographic trends which have occurred in Roxbury Township and Morris County, as they relate to the land use plan. Detailed data concerning housing and income, including housing conditions, rental and ownership values, and per capita and family income are not included here because they are more relevant to the housing plan rather than the land use plan element. It also needs to be noted that the census data used here is almost ten (10) years old. Therefore, where possible, more recent information, including school enrollment, birth and death statistics, assessments and building permit activity have been used to update the data as much as possible.

The Township of Roxbury has been steadily increasing in population since 1970, as is evidenced in Table 2. The U.S. Census reported the 1990 population to be 20,429, and the New Jersey Department of Labor estimated it to have grown to 23,520 by 1998. The Morris County Planning Board projects the population to continue to grow to 25,240 people by 2010. These figures show that the rate of population growth in the Township between 1980 and 1990 was 8.2 percent, which was greater than that of the County which was 3.4 percent for the same ten year period. The County has projected for the population growth rate to accelerate to 16.8 percent for the Township and 8.5 percent for the County, between 1990 and 2000.

TABLE 2						
TOTAL POPULATION, POPULATION ESTIMATES, AND POPULATION PROJECTIONS						
ROXBURY TOWNSHIP AND MORRIS COUNTY						
	1970	1980	1990	1998	2000	2010
Roxbury	15,754	18,878	20,429	23,520	23,864	25,240
Morris County	383,454	407,630	421,353	458,073	457,363	487,440
SOURCE: U.S. Census and Morris County Planning Board.						

The births and deaths of Township residents for 1990 through 1996 are identified in Table 3 in order to assess the natural increase in population. The birth statistics were obtained by the New Jersey Department of Health and Senior Services. The death statistics were obtained from the Township's Health Department and are the total of deaths of residents reported outside of Roxbury, and deaths occurring within Roxbury, which may include some non-resident deaths. That table shows a net natural increase in population over the seven (7) year period of over 1,300 people, which averaged about 190 people per year. Projected out to 2000, the growth in population attributed to natural increase would be about 1,900 people.

**TABLE 3
TOWNSHIP OF ROXBURY
RESIDENT BIRTHS AND DEATHS, 1990 - 1996**

Year	Births	Deaths	Net Increase
1990	272	113	159
1991	274	121	153
1992	286	126	160
1993	314	132	182
1994	365	118	247
1995	333	140	193
1996	390	148	242
Total	2,234	898	1,336

Source: New Jersey Department of Health and Senior Services, and Roxbury Health Dep

The increase in total population projected by the New Jersey Department of Labor and reported in Table 2 for the year 2000 is almost 3,435 people. Therefore, the portion of the projected population increase attributable to net in-migration is approximately 1,500 persons. As is illustrated in the following tables, many of these new residents are housed in the new dwelling units constructed since the last census.

The 1990 populations of both Roxbury Township and Morris County partitioned by age groups are illustrated in Table 4. It should be remembered that these figures are almost ten years old, and the current age cohorts may have shifted as the population has aged. Generally it can be seen that Roxbury is younger than the overall County. In 1990, 22 percent of the Township's population was between five (5) and 18 years of age, compared to 17.6 percent of the County. Additionally, twenty (20%) percent of the County population was older than 55 years of age, while just over 16 percent of the Township's population were in those age categories. Nevertheless, it can be seen that this is a segment of the population which is growing, consistent with the national trends.

**TABLE 4
POPULATION BY AGE, 1990
ROXBURY TOWNSHIP AND MORRIS COUNTY**

Age Group	Township of Roxbury		Morris County	
	Number	Percent	Number	Percent
4 & Under	1,392	6.8	27,637	6.6
5-18	4,539	22.2	74,047	17.6
19-24	1,551	7.6	35,715	8.5
25-34	2,963	14.5	71,457	16.9
35-44	3,938	19.3	72,240	17.1
45-54	2,693	13.2	55,965	13.3
55-64	1,669	8.2	39,870	9.5
65 & Over	1,684	8.2	44,422	10.5
TOTAL	20,429	100	421,353	100

SOURCE: U.S. Census, Morris County Planning Board, Calculations by Robert Michaels and Associates.

**TABLE 5
SCHOOL ENROLLMENT
TOWNSHIP OF ROXBURY
1994 - 1999**

Grade	1994	1995	1996	1997	1998	1999
Pre-K	17	13	11	9	14	15
K	296	263	304	286	349	281
1	295	303	270	323	319	363
2	271	296	303	273	316	327
3	260	258	298	303	292	321
4	285	261	278	303	309	298
5	277	276	272	268	305	326
6	273	277	294	283	282	316
7	290	270	287	269	298	285
8	301	292	276	284	293	310
9	333	352	358	347	347	335
10	293	322	342	356	335	344
11	279	288	321	349	347	325
12	289	265	282	322	339	347
Special Ed.	165	160	164	148	165	155
Total	3,907	3,883	4,049	4,114	4,296	4,333

Source: Roxbury Board of Education

The enrollment in Roxbury Township public schools from 1994 through 1999 is illustrated in Table 5. The total enrollment has increased fairly steadily from 1994 to the current school year. Over the six (6) year period there has been an increase of about eleven (11%) percent or 426 students. The growth in school enrollment confirms the attractiveness of the community for young families, and the population growth which was reflected in the population by age and birth figures reported in tables 3 and 4.

While the population has grown in the Township and the County the number of people per occupied households has declined, as is illustrated in Table 6. The population numbers used in this table are those people who resided in households, which excludes, group homes, nursing homes, dormitories, etc. The number of persons per household declined in Roxbury from 3.38 in 1980 to 3.13 in 1990, while in the same ten year period the number of occupied housing units expanded by 922 dwellings. Over the same ten year period the population per household in Morris County also declined from 3.02 to 2.78, also accompanied by an increase in the number of dwelling units.

Year	Roxbury Township			Morris County		
	Household Population	Occupied Housing Units	Population Per Household	Household Population	Occupied Housing Units	Population Per Household
1980	18,818	5,575	3.38	398,629	131,820	3.02
1990	20,362	6,497	3.13	413,688	148,751	2.78

SOURCE: U.S. Census Bureau

The number of dwellings currently found in the community and the County have been approximated in Tables 7 and 8. Table 7 includes the new dwellings added to the inventories from added assessments. These include dwelling units which occur as single family detached units, and as part of multi-family developments. Between 1990 and 1998, 1,194 new dwelling units were added to the housing stock in Roxbury Township which increased the number of dwellings by approximately 17.6 percent. This is greater in raw numbers and in percentage than the increase in the full ten years between 1980 and 1990. The number of dwelling units in the Township in 1998 was estimated to be 7,993. This is an estimate, because it does not include demolitions which may have occurred, and there could be an overlap in counting dwelling units.

TABLE 7		
TOTAL NUMBER OF HOUSING UNITS, 1980 AND 1990, AND NEW HOUSING UNITS FROM ADDED ASSESSMENT 1990 - 1998		
TOWNSHIP OF ROXBURY AND MORRIS COUNTY		
Year	Roxbury	Morris County
1980	5,938	137,992
1990	6,799	155,748
From Added Assessment		
1991	49	731
1992	190	1,575
1993	187	1,913
1994	67	2,122
1995	103	2,367
1996	227	2,160
1997	218	2,124
1998	153	2,100
Sub-Total 1991-1998	1,194	15,092
Approx. Total 1998	7,993	170,840
Percent Increase 1990-1998	17.6%	9.7%
SOURCE: U.S. Census, Morris County Planning Board, Morris County Tax Board.		

Table 8 identifies the number of building permits issued for new residences for each year from 1990 through October, 1999. These include all residential dwelling units, including those in multi-family structures. The total number of 1,312 units for the nine (9) year, ten (10) month period corresponds to the 1,194 new units calculated from added assessments reported in Table 7. The numbers in the two tables do not exactly conform due to permits issued at the end of the period which were not constructed before the end of 1998, and dwellings completed in 1991 from permits issued earlier. The 106 permits issued during the first ten (10) months of 1999 and reported by the New Jersey Department of Labor are more than the number of permits issued for the each of the two previous years.

The Morris County Planning Board annually reports on development activity within the County. The data is partitioned into such categories as preliminary and final subdivision plats reviewed, major subdivisions recorded, multi-family site plans reviewed and certain proposed commercial, industrial and office site plans. In the period from 1994 through 1998, there were 4,409 single family lots recorded from major subdivisions in the County Clerk's Office. The communities within the County with the most lots recorded in that period were as follows:

Single-family Lots from Major Subdivisions
Recorded between 1994 and 1998

<u>Municipality</u>	<u>Single-family Lots</u>
Mount Olive Twp.	696
Randolph Twp.	522
Jefferson Twp.	463
Washington Twp.	341
Roxbury Twp.	320
Montville Twp.	283
Chester Twp.	202

With the exception of Montville Township, all of the communities listed above are located in western Morris County, which has seen the most development pressure and has the largest tracts of undeveloped land.

TABLE 8	
TOWNSHIP OF ROXBURY	
NEW DWELLING RESIDENTIAL BUILDING PERMITS, 1990-1998	
Year	Residential Building Permits
1990	70
1991	121
1992	165
1993	80
1994	71
1995	349
1996	167
1997	94
1998	89
Jan.-Oct., 1999	106
Total	1,312

Source: New Jersey Department of Labor

Table 9 compares the residential building permits issued within the Morris County municipalities with the most new lots created. This is data which illustrates the number of permits issued for new residential dwellings, both in multi-family and single-family developments, between 1990 and October, 1999. As can be seen, only Montville and Randolph had more permits issued during that time period than Roxbury Township.

Municipality	Residential Building Permits 1990-Oct.
Mount Olive Township	1,006
Randolph Township	1,671
Jefferson Township	737
Washington Township	612
Roxbury Township	1,312
Montville Township	1,981
Chester Township	467

Source: New Jersey Department of Labor

Year Housing Unit Built	Township of Roxbury		Morris County	
	Number of	Percent	Number of	Percent
1980-March 1990	1,006	14.8	23,886	15.3
1970-1979	1,372	20.2	24,408	15.7
1960-1969	1,546	22.7	36,210	23.2
1950-1959	1,363	20.0	29,619	19.0
1940-1949	559	8.2	13,805	8.9
1939 or earlier	953	14.0	27,817	17.9
TOTAL	6,799	100	155,745	100

Note: Percentages may not sum due to rounding
Source: U.S. Bureau of the Census

Examining Table 10 in conjunction with Tables 7 and 8, the housing construction activity in the 1990's can be compared to that of previous decades. The approximately 1,200 dwellings constructed from 1990 to 1998 is more than the 1,006 constructed in the last decade. When the additional 106 permits issued between January and October, 1999 are added to the total, the number of residences constructed is similar to the numbers constructed in the 1970's and the 1950's. Additionally, when compared to the housing stock in the County, the housing in Roxbury is slightly younger.

2.5 Existing Land Use

The existing land use has been categorized through an examination of recent tax records, and field inspections. The land use is illustrated in graphic form on a map and in Table 11, which follows. The land use designations follow those categories in the tax records. Multi-family dwellings include units identified as apartments and multi-family condominium developments in the Township. The Industrial category include both office and industrial uses.

Land Use	Acreage	Percent
Single Family Dwellings	3,685	26.9
Multi-family Dwellings	242	1.8
Total Residential	3,927	28.6
Commercial	623	4.5
Industrial	1,060	7.7
Total Commercial and Industrial	1,683	12.3
Municipal	1,549	11.3
Morris County	327	2.4
State of New Jersey	1,400	10.2
Board of Education	167	1.2
Quasi-Public	97	0.7
Total Public and Quasi-Public	3,540	25.8
Farm	858	6.3
Vacant	2,047	14.9
Total Farm and Vacant	2,905	21.2
Roads / Right of Ways	1,257	9.2
Water Bodies	412	3
Grand Total	13,724	100
Source: Tax Records and Field Inspections conducted by Robert Michaels and Assoc.		

As would be expected residential uses, which include both single and multi-family development account for the largest land use in the Township, and covers almost 29 percent of the community. Of that single family detached dwellings make up 26.9 percent of the acreage in the Township, while multi-family dwellings account for only 1.8 percent on 242 acres.

Commercial land uses include the retail shopping areas along Routes 10 and 46, and the neighborhood retail stores in Succasunna and Landing. Scattered commercial uses within the Township are also included in this category which comprises 623 acres. Industrial uses are located in the Industrial Zones throughout the Township and also include construction yards and the like. A portion of the Hercules property is also

classified as industrial use in the tax records even though the plant is dormant. Industrial lands comprise 1,060 acres, or almost eight (8%) percent of the Township's land area. Of this, 758 acres are attributable to the Hercules property.

Public and Quasi-public lands comprise 3,540 acres which is 25.8 percent of the Township's land area. These include parkland owned by the State, County and Township, publicly owned buildings such as the municipal complex and the library, schools and churches.

Farmland is identified in the tax records as either regular or qualified farmland which receives a lower tax assessment. Some of these parcels may be wood lots, in which firewood is harvested to achieve the lower tax assessment. The 2,905 acres or 21.2 percent of the community identified as either vacant or farm are the parcels in the community in which most new development will likely be directed. These are lands in the path of potential development, and therefore are of special significance to this Land Use plan.

The percentages of the various land uses as determined in 1983, 1988, and 1999 are compared in Table 12. There is some question about the validity of the comparison because the classifications of the earlier studies is not known. As is illustrated, residential acreage has increased, as has public lands, while privately owned vacant land has decreased. The figures show a decrease in the lands put to commercial use, which may result from a difference in use classification between 1988 and 1999. Nevertheless, as was shown in the demographic and housing data, there has been a significant growth in housing and population in the Township over the past decade.

Land Use Category	1983	1988	1999
Residential	19	28	29
Commercial	3	7	5
Industrial	8	8	8
Public and	15	22	26
Agriculture / Vacant	48	23	21
Water Bodies	3	3	3
Roads / Rights of	9	9	9
Total	100*	100	100*

Sources: Robert Michaels and Associates, 1999, Madden/Kummer, Inc., 1988, Robert Catlin and Associates, 1983.

* The figures reported in the 1983 Master Plan equal 105%. The 1999 figures equal 101% due to rounding.

Additionally, non-residential development since 1990 has been quantified through an examination of major development reviews conducted by the Morris County Planning Board. They have been partitioned into commercial, industrial, and office categories and identified per their building square footage. Table 13 illustrates that there were additions of 242,752 square feet of commercial square footage, 157,796 square feet of office space, and 105,500 square feet of industrial space reviewed by the County Planning Board between 1990 and 1998.

ROXBURY TOWNSHIP NON-RESIDENTIAL DEVELOPMENT, 1990 - 1998				
Year	Name	Type and Square Footage		
		Commercial	Office	Industrial
1991	Name Unknown	4,204		
1991	Name Unknown		1,396	
1992	B.J.'s Wholesale Club	115,660		
1992-1995	Roxbury Business Park			61,000
1993	80-206 Office Campus (Portion)		86,400	
1993	Willow Walk		70,000	
1996-1997	Adam Metal Products			44,500
1996	P.C. Richards & Son	46,334		
1998	Roxbury Commons	76,554		
Total		242,752	157,796	105,500

Source: Morris County P. B., Annual Development Activity Reports 1990-1998.

The development pattern of the Township is characterized in one regard by the place names of the community. They include Succasunna, Kenvil, Port Morris, Flanders, Landing, Ledgewood and Berkshire Valley. Some of these areas include portions of other municipalities, and are identified by a post office. Succasunna includes both commercial and residential area and functions as a town center in the image of centers discussed in the State Development and Redevelopment Plan.

3.0 Goals and Objectives

The 1998 Master Plan Reexamination Report amended goals and objectives in light of the changes which were documented since the adoption of the last Master Plan. The amended goals and objectives addressed all areas of the Master Plan including land use, housing, circulation, utility service, community facilities, recreation, park and open space, conservation, and visual design. This land use plan includes the goals and objectives from all of the master plan elements which impact and guide land use. Following the land use plan goals and objectives are those listed in the Reexamination Report for the other plan elements.

2000 Land Use Plan Goals and Objectives

Residential

To preserve and protect the integrity of existing residential areas.

- by decreasing the development intensity on undeveloped and underdeveloped land in residential areas and increasing the protection of open space, environmentally sensitive and natural areas to promote and maintain the overall quality of life for residents throughout the Township.
- by maintaining a development intensity and population density appropriate to the regional location of the Township, the natural constraints of the land area, and the location of public facilities and utilities.
- by assuring the compatibility of adjacent and infill land uses and development to protect neighborhoods from inappropriate types and densities of development, to maintain property values and protect the quality of life of residents in existing neighborhoods.
- by utilizing cluster development to create useable pattern of open space where appropriate to the existing character of the area and to the benefit of the community.
- by amending development regulations where appropriate to maintain the scale of development in existing neighborhoods, the open space character and visual quality via the use of methods such as, but not limited to: setbacks, residential floor area ratios, maximum square footage requirements and impervious cover requirements.
- by designating land areas appropriate to the characteristics of each residential land use type.

- by recognizing that additional single-family residential development incurs fiscal impacts on the community which are heavily borne by both new and existing property owners with a finite capacity to absorb those impacts.

Commercial

To control commercial development.

- by siting commercial development along specified highway corridors and by arranging such development on sites in a manner which best protects nearby residential areas from potential conflicts, avoids environmentally sensitive areas and provides adequate landscape and setback areas from the adjacent roadway.
- by regulating the appearance and functioning of new and redeveloped highway commercial development to promote an improved visual environment, thus making the Township a more desirable place to live and work.
- by ensuring that the scale of development does not result in traffic which exceeds the capacity of the adjoining roadway to reasonably accommodate it safely and within an acceptable level of service.
- by developing regulations to promote a scale, type design and intensity of commercial development in appropriate locations, which is compatible with the protection of surface and groundwater quality and the minimizing of negative impacts to these critical recharge areas, as well as other environmental resources and sensitive areas.

Major Office and Industrial

To control major office and industrial development.

- by reserving land suitable for major office and industrial use in relation to utilities, access to arterial and primary roadways and rail access.
- by siting such development in a manner to preserve the greatest amount of open space and reduce impervious coverage.
- by developing regulations to promote a scale, type, design and intensity of office and industrial development in appropriate locations which are compatible with the protection of surface and groundwater quality and the minimizing of negative impacts to these critical recharges areas, as well as other environmental resources and sensitive areas.

- by further defining the types of permitted industrial uses in the Township and to exclude from those permitted uses any which are found to be potentially dangerous / in conflict with the goal of protecting the surface and groundwater quality of the Township and region.
- by developing a comprehensive planned development scheme for the Hercules tract which will respect and preserve the site's environmental constraints, and minimize traffic and other undesirable impacts on the remainder of the community.

Open Space and Conservation

To preserve and maintain the ecological, historic, visual, agricultural and scenic resources of the Township; to preserve the environment and to maintain and enhance the overall quality of life for Township residents.

- limiting or prohibiting development in critical environmental areas and areas subject to environmental constraints.
- by limiting environmental degradation and adverse impacts such as noise, water and air pollution due to improper use of land.
- by discouraging types and intensities of development which may cause, individually or cumulatively, significant environmental degradation or pollution.
- by encouraging the highest quality site design which limits potential environmental degradation.
- by encouraging land development which does not aggravate drainage problems affecting the Township and downstream communities.
- by preserving resources such as Conklin Pond, Horseshoe Lake, ridgelines, and other viewshed areas.
- by prohibiting stream channel relocation and development and by providing for suitable wildlife habitat.
- by continuing to work with State and County officials to promote their efforts to identify and protect wellhead protection areas and other environmentally sensitive areas throughout the community.
- by seeking open space funding from the state and the county whenever available.

- by updating the Township's Natural Resource Inventory.
- by the development of a Township-wide open space plan to provide a continuous network of open space along stream, slopes, scenic areas and critical environmental areas.
- by acquiring land through fee-simple acquisition, the acquisition of development rights and clustering for a linked open space system, along the major stream corridors and hillsides in Roxbury Township.
- by protecting, maintaining, and where possible, enhancing historical and cultural resources.

Other Plan Element Goals and Objectives

As was noted above the 1998 Reexamination Report included goals and objectives for other master plan elements. They are repeated and in some cases amended here.

Housing Plan Element

To provide for a variety of housing densities and types.

- by permitting development of a range of residential densities and building types appropriate to local needs and the age requirements of Township residents, consistent with protection of natural resources and environmentally sensitive areas to maintain a high quality of life for Township residents.
- by designating land areas appropriate to the characteristics of each residential land use type.
- by encouraging municipal action to sponsor needed housing programs, with emphasis upon measures to induce the provision of such housing by private and non-profit developers where necessary.

To maintain the quality of existing housing.

- by maintaining the quality of municipal services to residential areas.
- by updating maintenance codes and enforcement regulations.

To meet affordable housing obligations in connection with COAH requirements and to meet the need for senior citizen housing.

Circulation Plan Element

To improve the efficiency of the Township road network.

- by strongly discouraging non-local and commercial truck traffic in residential neighborhoods.
- by improving local circulation (i.e. street linkages) between residential neighborhoods while also discouraging nonresidential traffic and excessive speed in these areas.
- by continuing the coordinated capital improvement program for road improvements, construction, and reconstruction.
- by improving intersections which are unsafe or congested, and by reducing the intensity of adjacent land uses.
- by encouraging major roadway and interchange improvements or construction including the Ledgewood Circle and the Commerce Boulevard Extension.
- by regulating the quality of the roadside environment, reducing visual clutter, increasing landscaping and reducing the number of driveways.
- by limiting access to critical environmental areas in all subdivision and site plan design to the greatest degree possible.
- by strongly encouraging bus service serving major commercial and suitably dense residential areas of the Township in cooperation with such organizations as McRides of Morris County.
- by providing for regional mass transit and encouraging ride sharing programs, staggered work hours and other traffic management programs.
- by continuing to encourage development of bikeway and walkway systems, particularly in and between residential developments, with connections, as appropriate, to nonresidential areas.
- by encouraging sidewalk plans to link schools, public uses, and recreation areas.

To provide revised street design standards that accommodate streets that are safe, economical and appropriate to the function of the particular street.

Utility Service Plan Element

To monitor potable water supply in accordance with the principles of the Safe Drinking Water Act, in a manner consistent with the financial standing of the water utility. This plan encourages the following goals and objectives in light of the existing debt carried by the water utility.

- by regular testing of municipal wells to ensure potability, including the testing of municipal and public non-community wells.
- by encouraging residents to test their on-site private wells.
- by continuing to extend public water to areas of ground water contamination.
- by eliminating gaps in the water distribution and storage system to correct low water pressures.
- by interconnecting as many wells and water supply systems as possible throughout the Township.
- by discouraging large amounts of interbasin transfer of water (wastewater, stormwater, potable and surface waters) to prevent the depletion of groundwater resources.

To provide adequate sanitary sewer service to all residents.

- by supporting required maintenance of existing treatment plants and collection systems.
- by preserving sewer capacity for low cost housing obligations.
- by limiting service in sparsely populated areas or where infeasible due to natural constraints.

To regulate storm drainage effectively and alleviate flooding damage in the Township and downstream areas.

- by comprehensive drainage plans in accordance with regional drainage planning.
- by preserving natural stream corridors through various means, including but not limited to expansions of stream buffers setbacks.
- by restricting development in flood hazard areas.

- by using new technologies, such as geographic information systems (GIS) in the development of water management plans.
- by promoting best management practices in all site designs.

Community Facilities Plan Element

To promote a superior level of community facilities well located in regard to population and accessibility, and built with due consideration to site amenities, needed facilities and adjacent land uses.

- by continuing to provide information to the School District regarding population growth and development trends for assessing educational facility needs.

To plan for and provide adequate fire protection and emergency services for Township residents, especially during the day.

- by encouraging the coordination of emergency services with surrounding municipalities.
- by encouraging appropriately located emergency access in all subdivisions and site design in coordination with review by local emergency services providers.

To continue to provide facilities for community groups and cultural activities as needed.

To provide facilities necessary for efficient operation of municipal administrative functions.

Recreation, Park and Open Space Plan Element

To provide a network of publicly owned and other park areas and permanently preserved open space of appropriate type and location to support a full range of active and passive recreational activities; of sufficient size and quality to maintain an ecologically balanced community; located within walking or bicycling distance to serve residential, school and employment locations.

- by identifying large potential park sites most vulnerable to potential development and determining a priority acquisition schedule for these sites.
- by encouraging State and County acquisition and funding of park lands.
- by encouraging the long-term preservation of private and semi-public park and open space areas.

- by protecting valuable conservation areas and preserving them for limited recreational use.
- by requiring future higher density development to provide usable open space and recreational area for its residents, and by requiring proper development and continuing maintenance of on-site recreational facilities.
- by establishing high development standards and criteria for parks and open space areas.
- by developing park facilities with an emphasis on broadening the outdoor recreation opportunities within each neighborhood area, and with an emphasis on good ecology and sound development and maintenance practices.
- by developing non-motorized pathway systems connecting major residential areas, schools and parks.
- by periodic review and update of park acquisition and development planning in order to ensure an ecologically balanced community and provide for a sufficient amount and quality of parks and open space land to ensure a healthy environment in the Township.

Conservation Plan Element

(This was included in the above stated Land Use Plan Element with the following exception.)

To encourage recycling and alternatives to the incineration of toxic and solid wastes.

Visual Design Plan Element

To preserve and enhance the visual environment, both natural and man-made.

- by cataloging the visual assets and liabilities present in the Township as part of a Natural Resource Inventory or as part of a separate Master Plan study.
- by working with adjoining communities to ensure that intermunicipal scenic resources such as ridge-lines are protected from unnecessary or visually intrusive disturbance.
- by continuing to improve design standards for building and site improvements and examining current architectural guidelines with the goal of providing enhanced visual character for all new or renovated structures.

- by encouraging the highest architectural and site design possible for all new residential and nonresidential projects.
- by providing district design plans with specific development standards.
- by reviewing and upgrading the design standards for landscaping, particularly in nonresidential areas and in connection with buffer yards, lawn treatments and detention basin location and landscaping associated with the roadside environment.
- by continuing to review and upgrade design standards for all signage.

4.0 Land Use Plan Element

The Land Use Plan addresses the physical development of the Township. It is intended to guide the use of lands and intensity of development within the community. The Municipal Land Use Law requires the zoning ordinance to, "be substantially consistent with the land use plan element and the housing plan element of the Master Plan or designed to effectuate such plan elements." The Land Use Plan therefore is not intended to be interchangeable with the zoning ordinance, but rather it should provide the specific guidance necessary to craft zoning and development ordinances needed to implement the plan's goals and objectives. These have been identified in the previous section of this plan, and in the Reexamination Report adopted in 1998. This element will describe the proposals and techniques recommended to implement those goals and objectives.

The 1998 Master Plan Reexamination expressed the clear intent to, "further examine and potentially reduce the permitted intensity of residential and nonresidential uses." This intent was generated by the recognition that the state of development of both the residential and nonresidential uses have reached the general capacity of the Township to accommodate its impacts. These impacts of development have been manifest in traffic burdens which lead to costs of circulation improvements and accelerated roadway maintenance. Other impacts are increased municipal service costs, and costs associated with increased pollution and stormwater management.

There also is an increased awareness as was documented in the background studies, that there are environmentally sensitive areas and resources in the community and the region which are at risk from development. The protection and preservation of these areas will not only generate benefits for the quality of life for residents, but will help to safeguard those resources with the potential for cost savings in the long term. It is the intent of this Land Use Plan Element to follow the policies of the Reexamination Report.

This Land Use Plan is presented in both graphic and narrative form. The Land Use Plan Map (Map 4) illustrates the proposed land uses, with their boundaries for the Township. These areas should become zoning districts when the Zoning Ordinance is amended to conform with this plan. The narrative describes the proposed provisions of the land use plan which include development and zoning standards recommended to be adopted, and future action by the Planning Board and Governing Body in furtherance of the implementation of this plan.

4.1 Residential Land Uses

There are twelve (12) categories of residential land uses proposed in this Land Use Plan. Additionally, there are two (2) land use categories which are primarily commercial land uses in which residences are permitted, and some residential use is permitted in the Open Space District. The twelve (12) residential use categories range

from rural residential districts which allow single family dwellings on lots with a minimum size of five (5) acres, to multi-family districts with affordable housing components.

The ordinance should be amended to allow limited home offices as an accessory use in all residential districts in lieu of them regulated as conditional uses currently. These are uses with little impact on the neighboring properties. Some categories of home businesses with greater potential impact should remain as conditional uses.

The appropriateness and parameters of clustering in single family districts should be reexamined.

4.1.1 Rural Residential Single Family Districts

This Land Use Plan proposes two (2) rural residential districts, one with a minimum lot size of five (5) acres and another with a minimum lot size of three (3) acres. The five (5) acre rural residential district is a new land use category for the community and it is proposed in areas with existing large lots and environmental and access conditions which warrant very low density development. The following are the locales which are recommended to be zoned rural residential with minimum lot sizes of five (5) acres:

- The area abutting the border with Chester Township with lots fronting on Pleasant Hill Road and Reger Road. This area sits atop the high quality aquifer which feeds the Alamatong Wellfield, and has a concentration of steep slopes over fifteen (15%) percent, and areas where the slopes exceed twenty-five (25%) percent.
- An area in the west central portion of the Township fronting on Mooney Road. This area is not served by sanitary sewers, has some wet and flood prone areas as well as some moderately steep slopes. This area was determined to be environmentally sensitive as documented in the "Route 206 Stream Corridor Study".

The areas recommended for zoning as rural residential districts with minimum lot sizes of three (3) acres are proposed in a number of scattered areas throughout the community where the existing environmental, access and land use conditions warrant that designation. Those portions of the Township are as follows:

- Lands fronting on Emmans Road are proposed to be zoned rural residential with minimum lot sizes of three (3) acres. The frontage along the north side of Emmans Road is currently zoned R-1, and the deeper lots have their rear portion in the RR Zone. The topography rises sharply up from the road towards the north, with concentrations of steep slopes. The area is in the Drakes Brook drainage basin and has been identified as the habitat for threatened and endangered species. The land is also identified in the

Alamatong Wellhead Protection Study as within a zero (0) to five (5) year travel time for ground water to the wells. Areas of RR Zoning east of Route 206, fronting on Mountain Road are currently zoned RR and are proposed to remain in that designation.

- The land on the east side of Green Lane and Mark Lane which abut the Black River are proposed to be rezoned rural residential. These are large lots which are in the Alamatong wellfield drainage area, which abuts lands proposed as open space. The general area has a number of lakes, ponds and streams which warrant protection from additional development. The intent of the rezoning is to protect these resources from additional development and allowing the existing density found in the area to remain.
- The lower Berkshire Valley area in the northeast portion of the community also has areas designated for rural residential zoning. This area is not served by sanitary sewers, lacks public water, has constrained access due to narrow railroad bridge underpasses, borders large areas of preserved land, has some steep slopes and drains to the Rockaway River. The areas of large lots on the west side of Berkshire Valley Road, north of Interstate 80 is proposed for rural residential zoning. The industrial zoning which is currently located here is not recommended to remain, and is not appropriate for this area. Additional rural residential zoning is proposed in the area south of the I-80 and railroad rights of way. These areas are also currently zoned for industrial use, and are used as a sand and gravel pit. Once the mining activities cease, and the land restored, low density residential use is more appropriate than industrial use. It complements the open space designations and the existing small residential lots along Berkshire Valley Road. Only limited industrial zoning which is discussed below is to remain in this vicinity, reflective of the existing industrially developed areas.
- The large lot adjacent to Hopatcong State Park and fronting on Lakeside Boulevard is currently zoned rural residential, with the exception of the portion fronting on Kingsland Road. The entire tract is proposed to be zoned rural residential, including the current R-3 portion. Any development of the parcel pursuant to the zoning should not have lots fronting directly onto Lakeside Boulevard. Any development should also respect the existing dwellings located to the east along the Lake and fronting on Kingsland Road.

4.1.2 Single family Detached Districts

The bulk of the housing in the Township of Roxbury is characterized by single family detached dwellings on lots between one acre and 7,500 square feet. Most of these areas are already fully developed with scattered non-developed or under developed parcels found in some areas. The boundaries of the existing zones in the R-1, R-2, and R-3 Zones are recommended to be shifted in areas illustrated on the Land Use Plan Map and as described here. Where environmental and physical conditions warranted a

change, the lands are proposed to be down zoned to lower densities and larger lots. The areas that are proposed to be rezoned from these single-family detached zones to rural residential zones were discussed above. The other areas where changes are proposed in the Township's zoning scheme are identified here:

One Acre Residential Districts

- There are new areas of R-1 zoning proposed in the lower Berkshire Valley section of the Township. These are proposed for lower density residential development for the same reason that rural residential densities were proposed. The one acre minimum lot size reflects the size of the existing lots proposed for the zone designation change. These areas were previously zoned for one half acre lots.
- The existing R-1 Zone which is located on the south side of Kings Highway in the Port Morris section of the community is proposed to be reduced in size. The intent of the plan is to permit R-1 zoning along the road frontage only, and the rear yards are to be buffered from any non-residential development which may take place behind their rear yards. Since there are already homes which front on the road, the use is appropriate, and any new commercial traffic along the road should be discouraged.
- The largest area of R-1 zoning is located in the southwest portion of the Township abutting the Mount Olive border. The size of this district is proposed to be reduced from the current zoning as a result of an increase in the RR and OS zone designations.

Residential Districts Under One Acre

- This Land Use Plan also recommends that the lands on the northwest corner of Unneberg Avenue and Eyland Avenue be rezoned from R-3 to R-2. A lower density of residential development is appropriate for this area because it is within the Alamatong Wellfield influence area. The existing properties are also generally large enough not to create a concentration of nonconforming lots.
- An area on the west side of Dell Avenue South, and south of First Street is recommended to be rezoned from R-4 to R-3. These are vacant, larger parcels which would conform to the R-3 Zone bulk requirements. It is proposed to abut OS, Open Space zoning and therefore is compatible with the surrounding land uses and zones.
- The limits of the R-3 Zone which fronts on Kings Highway is recommended to generally follow the boundaries of the currently developed lots within that zone. The areas to the south are to be nonresidentially zoned which is discussed in a following section.

- The current zoning map does not include the R-6 designation which encompasses the proposed Shippenport Road development. That area is identified on the Land Use Plan Map. Appropriate accessory uses and development standards should be established for the zone.
- Other changes to single family residential districts are discussed in the sections which deal with nonresidential and open space districts. All of the zone boundary recommendations are illustrated on the Land Use Map. The zone designation of what is currently designated as AH-1 and developed as Poet's Peak is recommended to be labeled R-1.8 as a recognition of the overall density of the tract. The "affordable" label has been eliminated since contributions were made to the housing fund and no low and moderate income units were built on the site.

There has been an increasing problem with the introduction of dwellings which are out of scale and character with existing development. The Master Plan Reexamination recognized this problem and recommended that bulk standards be reviewed. The current zoning code does not include building coverage nor total impervious coverage for single family detached dwelling lots. The addition of such standards will help to regulate the scale of housing with a relation to the size of the lot. The following are recommended building and lot coverage standards for the various zones within the Township:

<u>Zone</u>	<u>Min. Lot Area</u>	<u>Max. Bldg. Cov.</u>	<u>Max. Lot Cov.</u>
RR-5	5 Acres	10%	15%
RR	3 Acres	15%	20%
R-1	40,250 S.F.	15%	20%
R-2	25,000 S.F.	15%	25%
R-3	15,000 S.F.	15%	25%
R-4	7,500 S.F.	20%	35%
R-2.5	--	25%	35%
R-1.8	--	25%	35%

Another tool which can be employed to regulate the scale of housing so that the street presence of the dwellings do not overwhelm the neighborhood is to ensure adequate spacing between dwellings. Currently the size of side yards within a zone are identified on a foot basis, without regard to the width of the lot. In order to maintain the scale of spacing between dwellings an aggregate side yard standard is recommended for both side yards as a percentage of the lot width. The following side yards are recommended:

<u>Zone</u>	<u>Minimum each Side Yard</u>	<u>Minimum Aggregate of Both Side Yards</u>
RR	50 Ft.	40% of Lot Width
R-1	20 Ft.	23% of Lot Width
R-2	15 Ft.	24% of Lot Width
R-3	10 Ft.	20% of Lot Width
R-4	10 Ft.	15% of Lot Width

4.1.3 Multi-family Residential Districts

This Land Use Plan includes no additions to the existing multi-family residential districts within the community. There exists an adequate balance of housing types available within the Township, and the municipality has satisfied its Mount Laurel obligation. There is no need for additional multi-family zones beyond those currently accommodated within the Township’s zoning scheme. There are currently multi-family residential developments in the AH-2, AH-3, AH-3A, AH-3B, R-5 and OB/R Districts. Additionally, the R-5 District located on Route 46 near the Netcong border permits multi-family dwellings, with a Mount Laurel component and is not yet developed. The OB/R district should be renamed to reflect that only multi-family residential development occurs within the zone. It is identified on the Land Use Plan Map as a multi-family residential district.

Multi-family rental units are permitted in the AH-3A and AH-3B Zones. Both zones, located near the commercial center of the community include low and moderate income housing which should be restricted to senior citizens. The New Jersey Council on Affordable Housing classifies senior citizens as those age 62 and older.

The R-5 Multiple-Family Residence Zone permits two-family, four-family quadruplex and townhouse residences on a comprehensively designed basis at a density not to exceed five (5) dwelling units per gross acre. Low and moderate income dwelling units provided within the zone may be constructed as condominium apartments. There are existing single-family dwellings located within the zone district. The regulations within the district should be amended to permit those existing dwellings to remain as conditional uses subject to the R-3 Zone standards, and any expansion of existing residences would be as conditional uses subject to those standards.

4.2 Commercial Land Uses

Commercial land uses described in this plan include office, retail, light and limited industrial uses, planned retail, and planned office and light industrial districts. This plan recommends fourteen (14) different districts which permit some type of nonresidential land uses. These include the existing planned shopping center districts and a new comprehensively planned district which is intended to encompass the Hercules

property. The following subsections discuss the various types of commercial land uses including their locations and design criteria.

4.2.1 Office Districts

Within the current zoning ordinance, office uses are permitted in all of the commercial districts. This section deals with those zones in which office uses are permitted to the exclusion of other commercial uses. Specifically the following two (2) zoning districts are of concern here:

- Professional Office / Residential District (PO/R)
- Office Building District (OB)

This plan recommends that certain areas be rezoned to PO/R as a means to provide compatible land uses, promote a desirable visual environment and to control traffic volume and movements in key locations. One of these areas is the intersection of Hillside Avenue and Route 10. This important gateway into the community is currently zoned Highway Business which permits a wide variety of retail and office uses. Rezoning the intersection and its environs for strictly office use will direct the redevelopment of the properties affected to uses which will not exacerbate the existing burdens on this intersection, and adjoining residential neighborhoods.

Another area proposed for PO/R zoning is the Saint Therese tract and the properties on the west side of Commerce Boulevard. This area is currently zoned for single family detached dwellings on one-third acre lots. With frontage on Commerce Boulevard and Main Street, residential zoning is no longer appropriate for the tract, and office use is compatible with the nature of the roads and the surrounding land uses. It should also be noted that institutional uses are permitted as conditional uses in the PO/R zone, therefore the status of the existing church and school will be unchanged.

Professional Office / Residential zoning is also recommended for the west side of Shippenport Road across from the R-6 Zone. The current zoning for industrial use on lots of at least five (5) acres is no longer appropriate for this area with the proposed residential development on the east side of Shippenport Road. Limited office development and the existing residential uses already in the area will be a compatible use with the neighborhood, and should not unduly burden the road network. The small area of highway business zoning located on the east side of Shippenport Road is also recommended to become PO/R.

There are two (2) areas which are currently zoned PO/R, which are not recommended to be changed. These are the areas along Main Street adjacent to Drakesville, east of the Ledgewood Circle, and the area north of the lots which front on Route 46, along Roxbury Avenue and Arlington Avenue.

The area known as the Triple Lakes Ranch currently zoned B-2 along Main Street, adjacent to the Randolph border, should be rezoned to PO/R. B-2 Zoning is not appropriate because the predominant access and frontage of this tract is not along the highway, but rather Main Street and Green Lane. Given the environmental sensitivity of this area with the pond and the Alamatong Wellfield, a more restrictive zoning is appropriate and more compatible with the neighboring properties.

Currently the Ordinance prohibits drive through windows and automatic teller machines with financial institutions in the PO/R Zone. This Land Use Plan recommends that they be permitted as a conditional use in those zones. The conditions which should be established should address buffering, especially from residential uses, queuing, access and traffic circulation.

This Land Use Plan includes a slight reduction of the Office Business Zone along Mary Louise Drive, with the affordable housing zone already existing in that location. The OB Zone was reduced along Old Howard Boulevard as the road alignment was no longer conducive to office development. Open Space designation will promote greater compatibility with adjoining residences and the State Park. As was noted in the previous section concerning multi-family residential uses, the name of the Office Building / Residential District should be changed to reflect only the multi-family residential development nature of the zone. There are no other recommendations to alter the Office Business (OB) Zone.

4.2.2 Retail Districts

There are four (4) categories of retail shopping districts within the Township's Zoning Code. This plan has no recommendations to increase the number of those districts, although there are proposals to shift some of their boundaries and refine their development criteria. The retail zones are as follows:

- Limited Business (B-1)
- Limited Business (B-1/A)
- Highway Business (B-2)
- Planned Shopping Center (B-3)

In light of broadened business markets it is appropriate to rename the Neighborhood Business District (B-1) to Limited Business District (B-1). A reduction of coverages should be considered particularly where retail districts are identified in the Alamatong Wellhead Protection plan as prime aquifer recharge areas.

Limited Business Districts

The intent of the Limited Business districts is to provide locations for retail and service type businesses designed to serve the needs of the residential neighborhoods. Therefore the scale of the retail and service establishments is intended to be small and

local. Since they are in proximity to residential areas, they should be designed to be compatible with the nearby residential uses. The zoning ordinance should be clarified to prohibit theaters in the B-1 and B-1/A Zones.

The current zoning scheme includes four (4) Limited Business (B-1) districts within the community. They are located along Main Street in Succasunna, Center Street in Port Morris, Landing Road and Lakeside Boulevard in Landing, and a small area on Mount Arlington Boulevard on the east shore of Lake Hopatcong.

This plan recommends that the B-1 Zone on Main Street, Succasunna be redesignated B-1/A given the more restrictive nature of uses permitted in that zone and the historic district centered on Main Street. The limits of the B-1 Zone in Port Morris are proposed to be reduced to better reflect the actual limits of the commercial uses in that neighborhood. The actual commercial area in Port Morris is more compact than the current zoning reflects. The limits of the B-1 Zone in Landing and along Mount Arlington Boulevard are not recommended for any change.

There are a number of areas where the Limited Business District (B-1/A) is proposed to be located. Additionally, some parameters of the zone are recommended to be refined. Generally the intent of this district is similar to the B-1 Zone, except that the bulk requirements are more restrictive. This zone designation is recommended for areas where those restrictions are appropriate. The following recommendations are for the parameters and the locations of the B-1/A Zone:

- The restrictions of the zone should be clarified to prohibit drive through, window service restaurants.
- The B-1 District along Main Street, Succasunna should be rezoned B-1/A as was described above.
- In an effort to control development at the major intersections with Routes 10 and 46, the south side of the intersection of Route 46 and Commerce Boulevard is proposed to be rezoned from B-2 to B-1. More restrictive land uses and development requirements are appropriate as increasing amounts of traffic use this intersection from Interstate Route 80. Additionally, the B-1/A designation is more compatible with the multi-family development which abuts this district to the south.
- The east side of Landing Road north of I-80 and Route 46 interchange is currently zoned I-5. This plan recommends that those properties up to the railroad line be rezoned to B-1/A. Industrial zoning is no longer appropriate in this location, and residential zoning adjacent to the railroad line should be avoided. Limited neighborhood business zoning will allow commercial development at an appropriate intensity in an area with good access where it can serve the needs of nearby residents.

- The existing B-1/A District located along Route 206 adjacent to the Mount Olive border is not proposed to be altered.

Highway and Planned Business Districts

The Ledgewood Circle area has become a regional retail center in western Morris County. One of the intents behind this Land Use Plan is to maintain the desirability and quality of this retail center without expansion. The Master Plan Reexamination acknowledged that regional retail growth has outpaced other forms of nonresidential development. That report stated:

The Land Use Plan should be amended to reduce the potential for new regional retail development. While the major highway corridors continue to be appropriate locations for nonresidential development, additional "fine tuning" of these areas in respect to intensities, site development and the location of particular uses should be undertaken.

Many of the proposals discussed above including the rezoning of the key intersections of Routes 10 and 46, are in response to the above policy guidelines. Much of the highway frontage of those roads are to remain as zoned as B-2 or B-3, which are the highway business and planned shopping center designations, respectively.

The B-2 Zone should remain as the zone designation for most of the highway frontage areas as is illustrated on the Land Use Plan Map. The areas recommended for change have been identified above. The Master Plan Reexamination recommended directing new retail uses to Route 46 with the goal of redeveloping that commercial corridor. Some of the obstacles to accomplishing this goal are the shallow lots fronting on the Route 46, the narrowness of the roadway near the Mine Hill border, and the fragmentation of lots. Some of the recommendations for this zone in order to help foster an upgrade for this area are as follows:

- A commercial property maintenance code should be adopted.
- Mini-warehousing / self-storage should be prohibited in this zone, and only permitted in the Industrial Zones.
- Change of tenancies should be reviewed by the zoning officer with a effort to upgrade sites and signage where possible.
- Consolidation of undersized lots to create conforming lots should be encouraged where appropriate, in order to combine access and eliminate curb cuts. A higher floor area ratio (F.A.R.) could be offered where lots are combined and adequate parking is provided as an incentive for meaningful lot consolidation.

The Planned Shopping Center District (B-3) is designed for a building or group of buildings in single ownership used exclusively for retail sales and services and business or professional offices. It is found in four locations within the Township. There are two locations on the south side of Route 10 which are the sites of the Roxbury and Ledgewood Malls. There is also B-3 zoning north of Route 46, just east of the Ledgewood Circle, and the Grand Union Shopping Center located on Lakeside Boulevard and Center Street. No additions nor deletions are proposed for these zones.

4.2.3 Major Office and Industrial Zones

This Land Use Plan recommends significant changes to the industrial zones within the Township of Roxbury. The intent of the changes is to limit the type of industrial use within the various zones in order to encourage limited industrial uses which will have a benign impact on the environment and natural resources. New zones are recommended which emphasize office use over industrial activities, and place limits on those industrial activities. The plan also includes the creation of a planned office and industrial zone for the Hercules property. The details of this district are described in detail below.

Office Research District

The Office Research District (OR-5) is currently found in two locations in the Township along Route 206 near the Mount Olive border in proximity to the I-80 interchange with Route 206. There are no proposed changes to the boundaries of those districts. The intent of this district is primarily for professional, executive and administrative offices, corporate offices and research operations with only incidental shipping and receiving related to non-production oriented uses. In this regard, the maximum floor area devoted to warehousing in this zone should be reduced from 70 percent to 50 percent. Hotels and conference centers, data processing and communications businesses of a non-retail nature are also permitted. The development parameters and requirements of this zone should be refined to ensure the protection of neighboring residential areas and sensitive environmental features such as Conklin Pond. An increase in the permitted floor area ratio could be used as an incentive to preserve these sensitive features. Adequate setbacks and buffers are necessary to provide compatibility with the surrounding land uses. The appropriateness of lot averaging for this district should be examined.

OR-5 zoning is also proposed on the properties located on the west side of Howard Boulevard and Ledgewood / Mount Arlington Road, south of the Route 80 right of way. It is felt that this use in this location would complement the plans for the Hercules tract with its limitation on industrial use, and emphasis on office development. It is also proposed for the interior lots of the block formed by Hercules Road, Berkshire Valley Road and Route 46.

Light Industrial / Office-Research District

This Land Use Plan recommends the creation of a new zone which would permit limited light industrial and office research uses. The intent of this zone is to permit only those manufacturing uses which entail the assembly or packaging of materials manufactured elsewhere. No manufacturing of raw materials, no outdoor storage of materials, and no processes which create emissions or effluent would be permitted. These controls are necessary due to the sensitive environmental nature which impacts much of the municipality. Offices would be a permitted use and warehousing of packaged goods would be a permitted accessory use. No retail uses are proposed to be permitted within this zone either as a principal nor conditional use. Self storage facilities are proposed to be permitted in this zone. The minimum lot size within this is proposed to be five (5) acres.

This new zone is proposed in areas of the community which are currently zoned Limited Industrial on five (5) or ten (10) acre tracts. Specifically, the zone is recommended in the following locations:

- The triangular shaped area south of Route 80, north of Route 46, and west of the proposed OR-5 Zone is proposed for the zone designation of LI/OR-5.
- The McNear property and adjacent lots located west of Landing Road and north of Route 80.
- The area south of the Route 80 right of way in the lower Berkshire Valley, abutting Berkshire Valley Road and West Dewey.

Planned Office / Light Industrial District

The Planned Office / Light Industrial District (PO/LID) is proposed for the Hercules property. This property was noted in the Master Plan Reexamination, as a site of approximately 890 acres which is no longer in active industrial use. This strategically located property is currently zoned I-10, which is no longer appropriate. This single tract offers unique opportunities for compatible development and significant environmental preservation. The best way to comprehensively plan such a tract is through a planned development district as envisioned in the Municipal Land Use Law. This approach would afford the developer of the site flexibility of design within a framework of uses and intensities which meet municipal goals and objectives.

The site's attributes which foster planned development are its size, proximity to the interstate highway and its ramp system, proximity to Route 46, and proximity to a planned commuter rail station. Additionally, there are environmental conditions of wetlands and steep slopes on the property which will benefit from the comprehensive planning approach. The most appropriate portions of the tract can be preserved and

protected through a planned development scheme. Access to the site can be controlled and limited to the most beneficial locations.

The following parameters should control the uses permitted in the proposed zone:

- Business, executive and professional offices will be principal permitted uses.
- Limited industrial uses which include assembly and packaging of materials manufactured elsewhere should be permitted. No manufacturing from raw materials, no outdoor storage, and no processes which create emissions or effluent will be permitted.
- Warehousing will only be permitted as an accessory use to a permitted limited industrial operation. This will be controlled through a maximum percentage of floor area devoted to warehousing in an industrial building. Trucking depots, bulk storage, and self storage will not be permitted.
- Hotels, conference centers, executive suites hotels, and extended stay hotels are proposed to be permitted uses.
- Limited service businesses will be permitted, such as banks, sandwich shops, travel agents, etc., provided they are located in office buildings, hotels, and conference centers, and are not in free standing buildings.

The zoning parameters for the design and development of the tract should address the following criteria. Some of the exact standards are not established here, but the areas of concern in which standards should be established are identified.

- Access to the site should only be provided via Howard Boulevard, Route 46, or if possible, direct access from Interstate Route 80.
- A minimum acreage or percentage of the tract should remain in open space. The actual percentage and minimums will be determined when the ordinance is drafted. This should include land left both in its natural condition, and developed recreational open space. Separate minimums could be established for both undisturbed and developed open space. The disposition of the ownership of the open space should be at the discretion of the Township.
- Maximum building controls such as height limitations, floor area ratios, building coverage, and total impervious coverage criteria should be established. These controls should be established for the entire zone and additional regulations should be developed for individual parcels which require compliance with the overall zone plan. Individual lots should be no smaller than ten (10) acres. Setbacks from the tract and lot boundaries should also be adopted as part of the zone package.

- The development scheme for the tract should concentrate the developed portions of the property near the western part of the site and preserve the more natural areas in proximity to Berkshire Valley Road. The location of the open space should follow the Planning Area 5 (PA5) designation of the State Plan, as depicted on the draft State Plan Map, and also take into consideration, the Township's Open Space Plan.
- The zoning amendment which creates this planned development zone should also create a development procedure in conformance with the Municipal Land Use Law as a general development plan as described in N.J.S.A. 40:55D-45.2. Such a plan should initially be presented as a conceptual development proposal, followed by the general development plan which would include land use, circulation and transportation, open space, utility, and storm water management plans at a minimum.
- Phasing of the planned development should be included in the general development plan, and the duration of the effect of the approval shall be for a time period determined by the Planning Board in light of the proposed project, but not to exceed twenty (20) years.

Limited Industrial Districts

The zoning ordinance includes Limited Industrial Districts identified as Zones I-1, I-3, I-5 and I-10. The principal permitted uses in the zones are industrial uses, business and professional offices, sales and limited retail sales incidental to the principal use. The I-3, I-5 and I-10 zones also permit wholesale / discount self-service stores.

The permitted uses in the Limited Industrial Districts should be modified in order to direct suitable development to appropriate areas. Retail sales is permitted as an accessory and clearly incidental use to the principal permitted industrial use. Limitations to the floor area devoted to retail sales should be established so there is no question that it is ancillary and subordinate to the principal use. Wholesale / discount self-service stores are not always compatible to the uses in an industrial district. Therefore that use should be made a conditional use in the I-3 Zone and be permitted as a conditional use only where it abuts a retail zone. Self storage warehouses should only be permitted in industrial zones, including the newly created Light Industrial / Office-Research Zone (LI/OR), and no others.

The ordinance should be amended to limit outdoor storage to the rear yards of lots within this zone. Additionally, there should be parameters established controlling the type and amount of outdoor storage permitted, as well as the location. Also, the appropriateness of lot averaging within the zone should be examined.

The locations and size of the industrial zones recommended in this plan are generally smaller than currently exist. Much of the land devoted to the I-5 and I-10 zones

have been proposed for the new districts described above. I-1, I-3 and I-10 zoning remain on the eastern portion of the Township in the vicinity of Dell Avenue where existing industrial uses are located. The I-3 Zone at Holland Manufacturing also remains as does the I-1 Zone on Lenel Road. Other industrial districts are located on Orben Drive and adjacent to the New Jersey Transit rail lines north of Kings Highway.

4.3 Open Space and Government Use Zones

There are many areas throughout the Township which have been designated as Open Space Districts, or Government Use Districts. These are lands either currently in public ownership or identified in the Township Open Space Plan as proposed for public ownership or preservation, or within or encumbered by a conservation easement which ensures their preservation as open space. The intent of the Open Space District is the preservation and enhancement of open space, environmentally sensitive areas and recreation.

This Land Use Plan recommends that the minimum lot size permitted in the Open Space Zone be increased from one (1) to three (3) acres. This change is in keeping with the intent of the zone to preserve land and lower the intensity of development. The ultimate intent of the district is to encourage land to be placed in public ownership or otherwise preserved. Therefore privately owned property in this zone may be developed for single family detached housing at one lot per three (3) acres.

The amount of land in the Open Space designation on the Land Use Plan Map is greater than that currently zoned in the community, because it reflects newer properties acquired since the last zoning map update.

The Government Use (G.U.) Zone designation is for institutional uses such as schools, government buildings, and municipal buildings and facilities. No changes other than corrections to the existing zoning map are proposed for this designation.

4.4 Build-out Projections

This plan includes projections for a complete build-out of residential development within the community both pursuant to the zoning changes proposed in this Land Use Plan and under the current zoning scheme. A number of assumptions were employed in this calculation. They are as follows:

- Existing developments and developments under construction were not included in the projections.
- Twenty (20%) percent of the acreage of parcels was assumed to be devoted to roads, right of ways and easements. The remaining 80 percent was used in the calculation for build-out.

- Parcels proposed for Open Space designation in the plan, even if in private ownership are assumed to remain in open space and not be developed, since that is the intent of this plan. If all of those privately owned open space parcels were to be developed, it is estimated that they would total approximately 37 additional single family lots.
- Lots in non-residential districts are not included. No variances or rezoning was assumed.
- Broad deductions of acreage on a gross basis were assumed for steep slopes, flood plains, and wetlands where known.

Given the above assumptions, the following are the build-out projections:

<u>Unit Type</u>	<u>Proposed Zoning per Land Use Plan</u>	<u>Existing Zoning</u>
Single-family *	398	538
Multi-family **	414	414

* These include 190 lots as part of the Villages project adjacent to Shippenport Road.

** These are properties currently zoned R-5 under the Township's Low and Moderate Income Housing Plan with a set-aside for affordable housing.

Full build-out of the community pursuant to the proposed rezoning incorporated in this Land Use Plan is projected to result in 140 fewer single family dwellings than could be developed under the current zoning. Without counting the 190 units which will be part of the Villages, the number of new single family dwellings is about forty (40%) percent less under the proposed plan.

5.0 Relationship to Other Plans

The Municipal Land Use Law in Section 40:55D-28d. requires that the Master Plan include a policy statement indicating the relationship of the proposed Master Plan to (1) the master plans of contiguous municipalities, (2) the County Master Plan, (3) the State Development and Redevelopment Plan (SDRP), and (4) the district solid waste management plan. These relationships are examined here.

5.1 Neighboring Municipalities

The zoning for the adjacent portions of the neighboring municipalities to Roxbury is illustrated on Map 5. The communities examined include Hopatcong Borough in Sussex County, and the Morris County communities of Mount Arlington Borough, Jefferson Township, Wharton Borough, Mine Hill Township, Randolph Township, Chester Township, Mount Olive Township and Netcong Borough. The proposed land uses in Roxbury are generally compatible with the zoning and land uses of the adjacent communities.

The zoning and land use designations of the portions of these neighboring communities which are adjacent to Roxbury are generally compatible with the proposals in this Land Use Plan. There are some locations where the intensity of similar uses are different. The southern portion of the Mount Olive border includes multi-family residential zoning and smaller lot residential zoning than proposed in Roxbury. The adjacent zoning in Chester in two (2) acre single family zoning, which is smaller lots than proposed for this area of Roxbury. Nevertheless, they are compatible.

Physical barriers which form municipal boundaries, such as the Black River, the Musconetcong River, Lake Hopatcong, and Interstate Route 80 help to mitigate potential land use conflicts. An example of this is the Planned Unit Development zone in Mount Arlington which includes the Seasons Glens Condominiums. This higher density housing and mixed use zoning may have been in conflict with adjacent areas of Roxbury, except that they are separated by Route 80 and significant grade changes. The proposed land use designations in the vicinity of Howard Boulevard and the Borough of Mount Arlington is compatible with the zoning of that community. The intent of land uses proposed along Howard Boulevard is to lessen heavy truck traffic and to encourage more office type development, which is compatible with the plans in Mount Arlington.

5.2 County Plans

The last land use plan completed for Morris County was adopted by the Morris County Planning Board in December, 1975. In spite of its age, it remains relevant to today's situation. The Future Land Use Element was built upon two basic principals as follows:

1) That all future development proceed only after careful analysis of environmental considerations, and within any limitations imposed by such an analysis;

2) That future growth be clustered, in order to preserve open land, and to render utility services and public transportation feasible and economical.

The County Land Use Plan identified centers in various locations throughout the County in which development was intended to concentrate and focus. These centers were meant to suggest an area of flexible size with a mix of land uses and a shared commercial focus. Centers are further partitioned into “traditional” and “growth” centers reflecting locations where there are existing concentrations of development and those where new concentrations should be encouraged. Succasunna was identified as a growth center in the 1975 plan, and recognized as the center within Roxbury Township.

This Roxbury Township Land Use Plan Element is substantially consistent with the Morris County Future Land Use Plan, and the Solid Waste Management Plan. Utilizing environmental considerations in land use decisions and promoting clustering to preserve environmentally sensitive lands are consistent with the municipal plans. There has been a significant amount of development which has occurred in Succasunna since the 1975 plan, and this municipal plan does not encourage any further growth.

5.3 State Development and Redevelopment Plan

The State Development and Redevelopment Plan (SDRP) was initially adopted in 1992, after a cross-acceptance process with the municipalities and counties of the state. The next iteration of the SDRP is in the final stages of the cross-acceptance process. This Land Use Plan is substantially consistent with the State Plan. . The SDRP includes a Resource Planning and Management Map which designates Planning Areas, parklands, centers, and nodes. The Draft Map was unanimously approved by the State Planning Commission at their December, 1999 meeting. The State Plan includes a number of Planning Areas within the boundaries of Roxbury Township reflective of the various conditions and development patterns within the community.

- The sewered and developed areas of the municipality which include most of the Route 10 and Route 46 corridors as well as Succasunna have been designated as Planning Area 1 - Metropolitan Planning Area.
- The developed areas of Landing and Port Morris have been proposed as Planning Area 2 - Suburban Planning Area. This designation is included along the Howard Boulevard corridor and the western portion of the Hercules Tract.
- The eastern portion of the Hercules Tract and most of the remainder of that portion of the Township are proposed as Planning Area 5 - Environmentally

Sensitive Planning Area. The Emmans Road area, and the Route 206 corridor, are also proposed PA-5.

- The Land Use Plan's proposal for the Hercules tract conforms with the draft State Plan, in that development is to be concentrated in the western portion of the site, while the eastern portion, designated PA-5 is proposed for open space and preservation. Additionally, the areas currently zoned I-10, within PA-5 are proposed to be designated for more environmentally sensitive uses, including open space.
- Parkland which includes the State owned land in Berkshire Valley and Hopatcong State Park are also recognized.

The SDRP maps also recognize Critical Environmental Sites (CES) where ever they occur regardless of what Planning Area they are located. These may include wetlands, flood plains, steep slopes, water bodies, or other sensitive environmental conditions. This Land Use Plan concurs with the efforts to preserve these sensitive sites.

The exact boundaries of the State Plan designations do not correspond to all locations of proposed development within the Township. There are some locations of higher intensity or density land uses within Roxbury which are within Planning Area 5. Nevertheless, it has been stated by State of New Jersey Officials that the State mapping is not intended to be a zoning map. Therefore, this municipal land use plan is substantially consistent with the State Development and Redevelopment Plan.