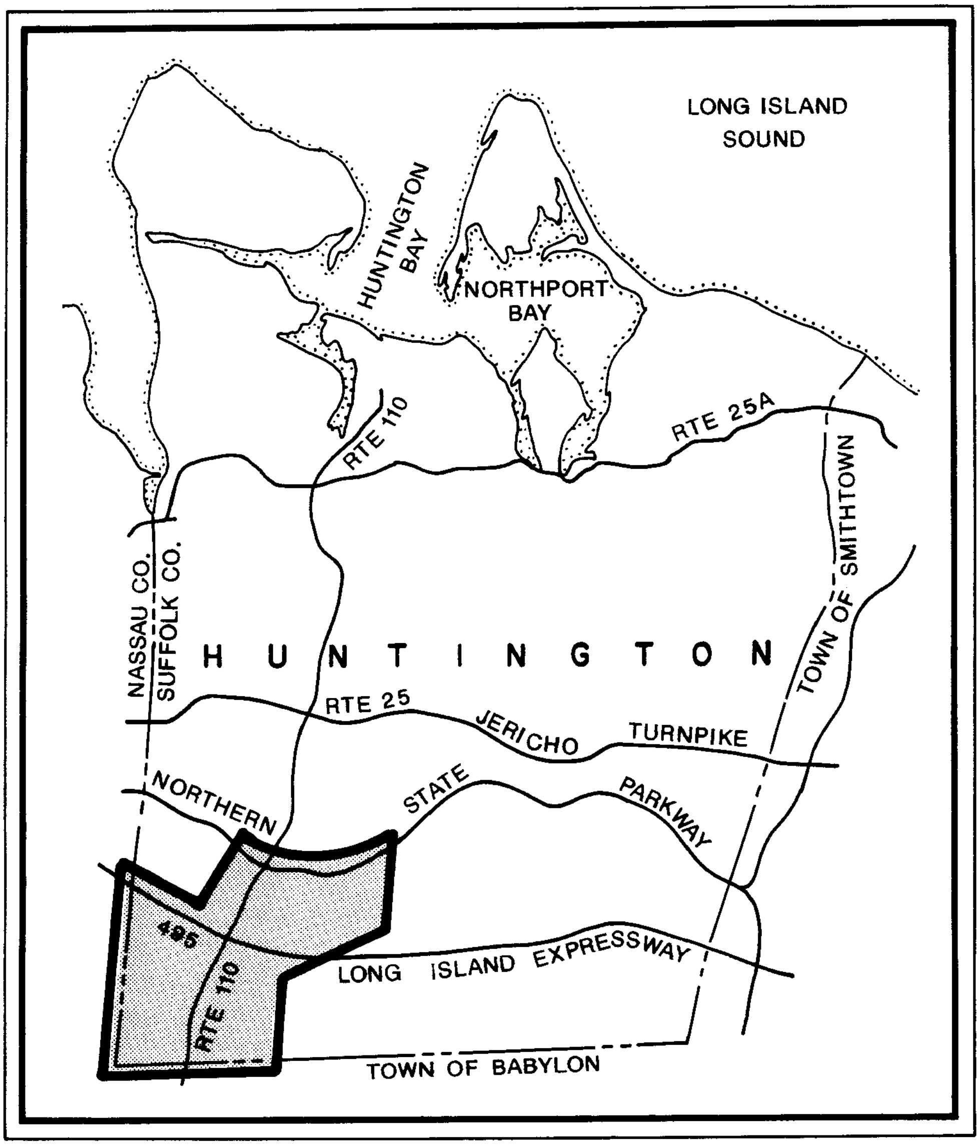
DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT

MELVILLE - ROUTE 110 AREA



TOWN OF HUNTINGTON

LOCKWOOD, KESSLER & BARTLETT, INC.
CONSULTING ENGINEERS SINCE 1889
SYOSSET, NEW YORK

RPPW
PLANNING & DEVELOPMENT CONSULTANTS
TARRYTOWN, N.Y.

APRIL 1988

DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT

for the

MELVILLE - ROUTE 110 AREA

Prepared for:

TOWN OF HUNTINGTON
DEPARTMENT OF ENVIRONMENTAL CONTROL
100 Main Street
Huntington, NY 11743

Prepared by:

LOCKWOOD, KESSLER AND BARTLETT, INC.
CONSULTING ENGINEERS
One Aerial Way
Syosset, NY 11791

RPPW, INC.
Planning and Development Consultants
555 White Plains Road
Tarrytown, NY 10591

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MELVILLE/ROUTE 110 AREA
GENERIC ENVIRONMENTAL IMPACT STATEMENT

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EXECUTIVE SUMMARY

The Melville-Route 110 Area has developed into the major center of economic activity in the Town of Huntington, N.Y. and the surrounding areas of Nassau and Suffolk County. This area is in the southwestern corner of the Town, and is traversed by the Long Island Expressway (LIE) and New York State Route 110. The area is generally bounded by: The Nassau-Suffolk County line to the west; the Huntington-Babylon Town line to the south; Old East Neck Road including the New York State Development Center to Carman Road to the east and Northern State Parkway and Old County Road to the north. Originally consisting of farms and vacant land, the Melville-Route 110 area currently supports one of the largest concentrations of office, commercial and light industrial activities on Long Island.

In 1965, the area supported less than 275,000 square feet of office space and 1.49 million square feet of industrial space. Growth of the area by office development was encouraged by planning guidelines set forth by the Town of Huntington's 1966 Comprehensive Plan. Through June 1986, approximately 5.77 million square feet of office space and approximately 6.6 million square feet of industrial space had been built or approved. This rate of growth is expected to continue under the currently favorable economic conditions existing in the region.

The increase in the intensity of development of the Melville-Route 110 area has placed pressures on the environment, the infrastructure system, and existing public services. Currently, an overburdened road system, the level of noise, stressed emergency services and impaired visual quality affect the operation of business and the quality of life in the area.

The Town of Huntington is aware of the increasing environmental stresses resulting from continued growth in the Melville-Route 110 Area. The Town has sought to closely examine present conditions and evaluate alternatives for future growth of this area. In order to address this problem, the Town commissioned the preparation of this Generic Environmental Impact Statement (GEIS) to analyze the existing environmental conditions within a 3000 acre study area, the potential cumulative effects of its continued development, and to evaluate development scenarios for the future. This GEIS presents a recommendation for land use policy and area growth that will help to ensure the quality of life for area residents and a quality working environment for businesses.

Objectives of the GEIS include definition of the existing environmental and socioeconomic character of the area; identification of current development and an assessment of its impacts on the area; analysis of potential future development scenarios and resulting impacts; and preparation of recommendations for land use policy and implementation. Approval of the policy recommendations as set forth by the GEIS are the responsibility of the Huntington Town Board and the Town of Huntington Planning Board.

PREFERRED PLAN FOR DEVELOPMENT

The Preferred Plan was formulated in consideration of: the Town's planning goals, as reflected in the 1966 Comprehensive Plan; sound land use principles; existing development conditions; environmental constraints; and limitations of the existing and projected infrastructure system. Analysis and evaluation of the existing and projected infrastructure capacity (roadways, water, sewer, schools, community services) indicated that the primary determining factor of desirable maximum growth within the study area is the capacity of the roadway network. Evaluation of existing conditions demonstrates that the road system is presently overburdened. The extent of problems created by the high volume of traffic in the Route 110 corridor and adjoining roads indicates that additional non-residential development cannot be accommodated until the roadway system is upgraded.

Several alternative development plans were tested in the formulation of a Preferred Plan for future development of the study area. An upgrading of the road system was assumed in order to evaluate the alternative plans. Also, land use actions to reduce vehicular movements were considered, such as rezoning office/industrial areas for residential use, limiting new non-residential land use to industrial development, establishing a maximum Floor Area Ratio (building floor area to total lot area - FAR) to limit development density, and allow other nonresidential uses which generate less peak hour traffic such as retail, service and hotel uses. One alternative examined was a total ban on all non-residential development beyond presently committed projects. A second alternative evaluated was the development of the non-residential uses to the minimum average density that is likely to occur under present trends, which is currently at FAR 0.35.

The results of these evaluations, which are presented later in this summary, indicated that the non-residential ban scenario is an unreasonable approach to long term planning and inconsistent with the guidelines set forth by the 1966 Comprehensive Plan. On the other hand, future development following current trends in the development of the area (FAR 0.35), would stress beyond their capacities existing and/or currently planned roadways and sewer systems and recommended roadway systems.

Considering the limitations and difficulties associated with the alternative plans, a third plan for development was formulated which would reduce the amount of land allocated for non-residential development. This plan proposes other changes to reduce the burden on the future infrastructure, especially roadways, while it follows the planning principles set forth in the 1966 Comprehensive Plan. A significant part of the non-residential areas would be limited primarily for industrial buildings. For all office and industrial areas, a FAR of 0.30 was proposed. This proposed plan would result in a maximum of approximately 17 million square feet of non-residential development in the study area. Existing vacant areas and farmland within the study area would continue to be planned for residential development in the future to provide housing and minimize the increase in future traffic volumes. This development plan was identified as the Preferred Plan for development for the Melville-Route 110 Area.

ADVERSE AND BENEFICIAL IMPACTS OF THE PREFERRED PLAN

The Preferred Plan for development will allow for non-residential office and industrial uses but at a lower development density. Under this scenario, full development of the office/industrial zone could occur only after the necessary improvements to the utilities and roadway infrastructure are completed, as described in the GEIS. The land use plan will allow for an increased amount of residential land at a higher density than the Comprehensive Plan presently indicates. Residential development will have a lesser impact on traffic volumes than non-residential developments. Another positive consideration of the Preferred Plan includes improvements to the visual environment expected to result from well landscaped residential developments. A summary of beneficial and adverse impacts resulting from implementation of the proposed plan follows.

- Topography and Geology

  In sections of the study area where slopes exceed 10 percent, conventional development for residential purposes will require regrading. An increase in soil erosion may occur in these areas during construction. However . . .

- Groundwater

The quality of groundwater in the study area will be affected by implementation of the Preferred Plan. Increased development will create increases in nitrates from fertilizer application and sewage disposal system leachate in non-sewered areas. Deicing of new roadways will increase the amount of chlorides added into the groundwater. However, groundwater concentrations of nitrates and chlorides are not expected to be increased above NYSDEC standards. The quantity of water available in the study area is adequate to support implementation of the Preferred Plan. Sufficient natural recharge is available to replace consumptive use. Development at a greater density than recommended in the Preferred Plan could stress the groundwater supply. However . . . .

- Terrestrial Ecology

Development of the study area under the Preferred Plan will not significantly affect ecological quality. Newly landscaped areas will create new habitat areas that will attract some less sensitive wildlife such as song birds and some small mammals. There will be isolated adverse affects including habitat loss resulting from woodlands clearing for development. minimized by cluster devel

- Transportation and Traffic

The impacts of the Preferred Plan on roadways without mitigation will exacerbate the existing conditions of poor peak hour traffic flow. Roadway improvements are expected to create a beneficial effect upon area traffic conditions. The area's roadways and intersections will be operating at acceptable levels of service with implementation of the

Preferred Plan and recommended roadway improvements. Roadway improvements beyond those presently planned in the Nassau-Suffolk Traffic Improvement Program are recommended to relieve existing (year 1987) traffic congestion. These improvements include reconstruction of Route 110 to six lanes between the LIE and Northern State Parkway, and reconstruction of the Route 110/Northern State Parkway interchange. For projected traffic that will result from developments already approved and for regional growth through year 1992, improvements will include reconstruction of Route 110 to eight lanes between the LIE and Ruland Road, and reconstruction of Pinelawn Road to six lanes between Route 110 and Ruland Road. To accommodate traffic flow resulting from future development under the Preferred Plan and regional growth projected through year 2007, necessary roadway improvements will include reconstruction of: Route 110 from the LIE to Northern State Parkway, the LIE service roads from Old Walt Whitman Road to Old East Neck Road, Old Walt Whitman Road from the LIE to Old Country Road, Old Country Road from Route 110 to Old Walt Whitman Road, and Baylis Road from Route 110 to Old East Neck Road.

- Air Resources

Microscale analysis of locations within the study area under future development (year 2007) conditions showed one-hour and eight-hour carbon monoxide concentrations to be well below the ambient air standards. No significant adverse impact on air quality is expected to result from implementation of the Preferred Plan.

- Noise Conditions

Future noise levels within the study area were predicted to increase slightly at four representative locations along major roadways. The expected increases are expected to be less than three dBA, or generally considered as imperceptible. Noise impacts of implementation of the Preferred Plan are not expected to be significant.

- Utility Systems

Utility systems are proposed for improvement under the Preferred Plan, including expansion and operation of the Melville Industrial Sewer District and the South Huntington Water District. Beneficial impacts are generally expected to result from the expansion of the utility system service, including improved service for residential areas and individual businesses. Utility systems as planned can adequately support future development under the Preferred Plan.

- Land Use and Zoning

Implementation of the Preferred Plan will have a significant beneficial impact on land use and zoning in the study area. Future land use characteristics will remain consistent with the planning principles set forth in the Comprehensive Plan of 1966. A decrease in office/ industrial development density to 0.30 FAR will slightly affect the amount of floor space that could be built. The modifications of the Zoning regulations will limit non-residential development to the geographic core section of the study area.

- Demography

Additional residential development of approximately 3100 dwelling units predicted to be constructed in the study area will add 8000 to 10,000 people to the area population. Development of office and light industrial facilities could also add 16,000 new jobs to the study area. The existing housing shortage that exists could be worsened by the growth of the area under the Preferred Plan. ?

- Economics

Approximately 16,000 new jobs could be created as a result of office, industrial, commercial and service businesses. The new developments will yield an estimated increase of tax revenues of approximately $32.6 Million (1987 dollars), which include approximately $18.6 Million in school tax revenues.

- Market Conditions

Implementation of the Preferred Plan will have an impact on market conditions in the study area for real estate. Because of the limitations placed on new office development, there will be a greater market demand for existing and new office spaces. A long-term market demand will exist for future residential and industrial land in the study area.

- Community Services

Future development of the study area under the Preferred Plan will increase the demand on community services such as fire protection, police protection, schools, libraries, recreational facilities and hospitals. Additional tax revenues derived from new development is expected to improve community services.

- Visual Resources

Implementation of the Preferred Plan will create visual changes to include additional office and light industrial buildings, parking areas, expanded roadways, and new residential developments. New office developments will be surrounded by greater amounts of open space than office buildings presently built. Large farmland areas which currently provide expansive views across open areas will be eliminated for the development of residential subdivisions. This will represent the most significant visual impact of the future development of the area. New commercial centers will also provide visual focal points along Ruland Road, and between Route 110 and Old Walt Whitman Road.

- Historic and Archeological Resources

Historic resources may be adversely affected by the implementation of the Preferred Plan. Some privately owned residences which are listed on local, state or national historic place listings may not be protected from future reconstruction changes. Historic structures which are located on land proposed for office/industrial land use could, in some cases, be eliminated by new development.

Archeological resources existing within the study area will not be adversely affected by implementation of the Preferred Plan. There is the potential for recovery of some lithic artifacts at some locations. Documentation of representative types of these materials has been accomplished in the area, and future development is not expected to be affected by the presence of similar materials.

MITIGATION

Mitigation measures are recommended by the GEIS to minimize the impacts generated by implementation of the Preferred Plan for development of the Melville-Route 110 Area. These measures are specific actions that are recommended for individual site developments and future expansion of the study area. A description of the recommended mitigation measures follows:

- Water Resources

  Since the quality of the shallow and deep aquifers is important to the area's water supply, the quality of water recharge must be acceptable. Individual non-residential buildings and medium-high or high density residential developments within the study area should be connected to the municipal sewer system to reduce nitrate loading to groundwater. The retention of existing NATIVE ~~nature~~ vegetation and/or the replanting with low maintenance grass and vegetation are recommended to help reduce fertilizer loading of nitrates and the conservation of water. In addition, limitations on turf and landscaped areas should be instituted to minimize consumption of water resources. A mixture of salt and sand should be utilized for deicing operations to minimize chloride addition to the groundwater. Regular leak testing of storage tanks in the study area should be carried out to minimize the potential for accidential leakage. ?

- Terrestrial Ecology

  Planting of near native low maintenance landscape vegetation should be required at new office and industrial facilities and residential developments to create new habitat areas for song birds and small mammals.

- Transportation and Traffic

  Roadway improvements are a critical part of the implementation of the Preferred Plan. These improvements are described in the Preferred Plan discussion in this summary.

- Air Quality

  Transportation infrastructure improvements are expected to significantly reduce traffic delays, which will reduce adverse emission from vehicles.

- Noise

  Improvements in noise conditions could be accomplished during the construction period by operating heavy equipment only during normal weekday working hours.

- Land Use and Zoning

  Modifications to the zoning regulation to reduce floor area ratios and to alter the mix of land use in conformance with the Preferred Plan is the major mitigation measure proposed for land use and zoning. Because of market forces, residential development will replace the agricultural areas within the project area. Provisions for extensive landscaping should be included in these developments. Landscaping should limit the amount of turf area and should consist of plants that do not require the extensive use of water or fertilizer.

- Utilities

Wastewater generation, by new facilities and residences in the study area should be reduced by: (1) the required installation of water saving devices on residential and commercial water services; (2) water saving washroom equipment in office buildings; and (3) industrial wastewater reuse, where practicable.

- Demography

Affordable housing incentives have been recommended to provide dwelling units for moderate income households to be purchased at a below market purchase price or rental.

- Community Services

New facilities for fire protection, ambulance service, police protection, schools and libraries and other such facilities, should be provided or existing facilities improved utilizing new tax revenues generated by new developments.

- Visual Resources

Proper landscaping and revegetation of newly developed residential and office building areas will enhance visual quality in the study area.
Cluster will allow natural forest to remain etc

ALTERNATIVES

The future development of the Melville-Route 110 Area was examined under several development alternatives. An evaluation of alternative plans was undertaken at the outset of the GEIS process to determine which development scenario would become the Preferred Plan for development. In addition to the Preferred Plan, the alternative scenarios examined included:

- plan that imposes a ban on all non-residential development beyond committed projects;
- plan that allows development to occur at an average FAR of approximately 0.35 following recent trends (No-Action Plan).

Since analysis of the No-Action alternative showed that the levels of development is unworkable because of infrastructure limitations, no extensive evaluation of a more intensive level of development was performed, although under existing zoning, a higher non-residential development density is possible.

A summary discussion of each alternative development follows.

<u>Plan Based on No Further Non-Residential Development</u>

Non-residential development which is currently under construction or approved would add an additional two million square feet of office/industrial floor space and create about 6600 new jobs. This alternative for future development would not allow further non-residential development in the study area. All undeveloped land remaining would be zoned for low density residential use, resulting in 450 additional dwelling units and approximately 1620 people.

This plan diverges from the 1966 Comprehensive Plan guidelines for the area. The short term implementation of this plan would be reasonable, however, it does not provide a reasonable plan for the long term because it totally excludes future development of office, industrial or commercial uses.

The least amount of new vehicle movements would be added to the study area under this scenario. With roadway improvements presently planned to be completed by year 1992, intersections within the study area will still operate at an unsatisfactory level of service. Utility systems would be able to accommodate this level of new development. Impacts to air quality and noise conditions would not be substantially different than under existing conditions. Some additional effects on groundwater would result from residential septic system nitrates contributions. Tax revenues would not be substantially increased under this scenario. However, cluster Housing Typically HAS fewer people occupy Than Conventional.

<u>Plan Based on Future Development Following Recent Trends</u>

This plan follows the 1966 Comprehensive Plan guidelines. The "Trend Plan" is essentially the no-action alternative for the future development of the Melville-Route 110 Area. Under the current development trend, office/industrial facilities have been built at an average FAR of at least 0.35. Future development of the study area under these densities would result in an increase of 11.7 million square feet of office/industrial space for a total non-residential development in excess of 23 million square feet. Approximately 600 new dwelling units would be built under this scenario, with a population increase of 2040 people. The existing office/industrial floor space would more than double, creating about 40,000 new employment opportunities.

Significant adverse impacts would result from implementation of the no action alternative. Due to the large increase in new employment opportunities, traffic conditions would worsen severly. The new traffic volume would create unacceptable levels of service at most intersections, even with the roadway improvements recommended in this study. In addition, the sewer system would not be able to accommodate wastewater generated by this level of office/industrial development without implementing extensive wastewater reduction measures or new major sewer construction. Adverse air quality and noise conditions would increase slightly under this scenario.

Beneficial impacts of the no action alternative would include greater tax revenues from a larger amount of office/industrial development. Groundwater degradation could be less under this scenario, because the number of residences, and their associated individual septic systems, would be less than those occurring under the Preferred Plan. Slightly greater chloride impacts would result from a 10 percent expansion of roadways for FAR 0.35 versus the Preferred Plan.

SECTION 1

SECTION 1

DESCRIPTION OF PROJECT

1.1 Study Purpose and Need

1.1.1 Area Background and Development History

The Melville-Route 110 Area has emerged as the dominant area of economic activity in both the Town of Huntington and the Nassau/Suffolk bi-county area. Due to its central location on Long Island (Figure 1-1) and the ease of access to the area, the Melville-Route 110 Area is a prime location for office, commercial and light industrial activity. Originally consisting of farms and vacant land, the Melville-Route 110 Area currently supports one of the largest concentration of office space on Long Island (LIRPB, 1982). In 1980, the Melville-Route 110 Area was also ranked second in the bi-county area in terms of industrially zoned land used for industrial and manufacturing purposes. Furthermore, the Long Island Area Development Agency and the Long Island Regional Planning Board have identified the Route 110 corridor, of which the Melville-Route 110 Area is the major part, as an important growth center for the bi-county area (Fine, 1986).

Development patterns in the Melville-Route 110 Area have been controlled primarily by the adoption and application of a Town Zoning Ordinance, and the development of the Comprehensive Plan of 1966. Huntington's first zoning ordinance was adopted in 1934. It contained provisions for residential districts, business districts, and industrial districts. The Melville area was zoned residential in the 1934 zoning ordinance, except along both sides of Old Walt Whitman Road, from Old Country Road south to Pinelawn Road, which was zoned as a business district.

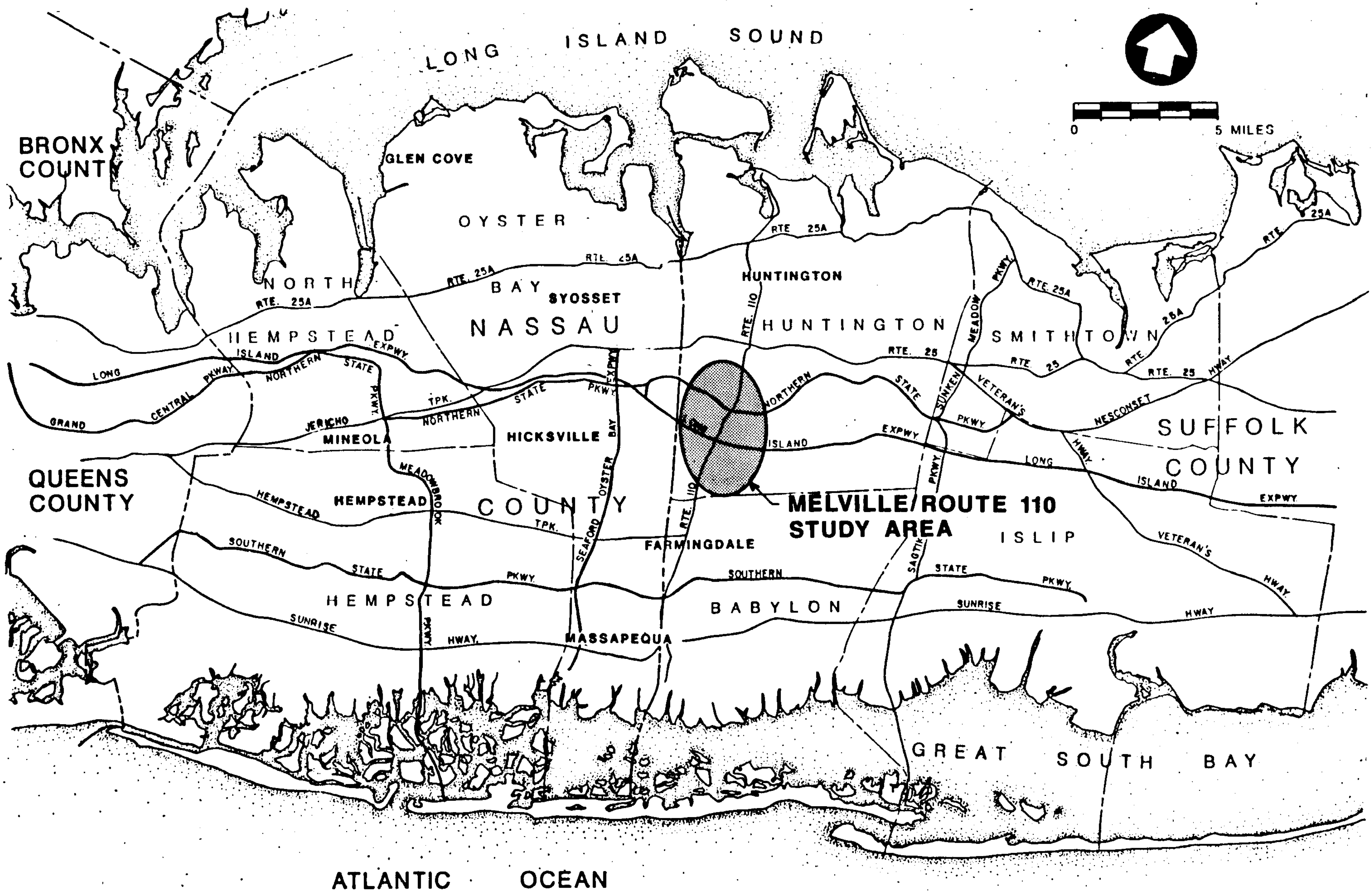


FIGURE 1-1

LKB / RPPW

LOCATION MAP

In 1947, much of the vacant and agricultural lands in the Melville-Route 110 Area were zoned residential with a one acre minimum lot area. Significant portions of the land that was rezoned to one acre residential eventually became sites for industrial businesses. Two industrial districts were created in 1947, but industrial development did not begin real growth until the late 1950's.

Construction of the Northern State Parkway and the plans for the Long Island Expressway resulted in increased interest in the Melville-Route 110 area as a business location. The growing number of requests for development of land for commercial office and light industrial uses prompted the Town of Huntington to create a single purpose office building district in 1956. This district also allowed for the establishment of research institutions (Fine, 1986). Completion of the LIE through Route 110 and the creation of the office district further increased interest in developing office-industrial facilities in the Melville-Route 110 Area.

Many of the zoning changes of the late 1950's and early 1960's were superceded by widespread zoning changes that went into effect in February, 1963. Large sections of the Melville-Route 110 Area were combined into light industrial zones, which have remained as the core of this office-industrial area. In April 1963, a zoning ordinance amendment was approved which allowed for office development in all light industrial districts. In April 1965, banking institutions that located within these office buildings were also permitted in the light industrial districts.

The Comprehensive Plan was adopted by the Town in February 1965, with the objective of providing additional jobs and an improved tax base for Huntington. In October 1966, an amendment to the Comprehensive Plan expanded the boundaries of the office-industrial area at Melville eastward to

Pinelawn Road. The 1963 zoning change and the 1966 amendment to the Comprehensive Plan paved the way for the growth and development of the Melville area as a major center for office and industrial activity. The basis of this plan was to establish a core office-industrial area, surrounded by support services. Through the end of 1965, Melville had less than 275,000 square feet of approved office space on less than 200 acres, and 1.49 million square feet of approved industrial space on less than 199 acres. By 1970, approvals had been secured for a total of 829,000 square feet of office space on 86 acres and 2.66 million square feet of industrial space on 520 acres (Fine, 1986).

The 1980's have been characterized by the continued development of new office buildings and clustered industrial development. Through June 1986, there were 4.53 million square feet of office space built, with 624,000 square feet under construction, and an additional 400,000 square feet approved but not yet constructed. In addition, there were 6.08 million square feet of industrial space built, with 322,000 square feet under construction, and another 193,500 square feet approved, but not yet constructed (Fine, 1986).

1.1.2 Public Need for the Plan

The Melville-Route 110 Area has experienced rapid growth in recent years. This growth is forecasted to continue under the currently favorable economic conditions existing in this region. The recent increase in the intensity of development has placed additional pressures on the environment, the infrastructure system, and the delivery of public services. As development continues, these pressures may be transformed into such problems as: increased traffic congestion (apparent in Melville today), a stressed water supply, impaired air quality, and decreased emergency services.

In addition, the cumulative impacts upon area resources may affect people living in other parts of the Town, and the overall quality of life within the community could deteriorate.

The Town of Huntington is aware of the increasing environmental stresses resulting from the continued growth of development in the Melville-Route 110 Area. In order to address this situation, the Town commissioned the preparation of a Generic Environmental Impact Statement (GEIS) to analyze the existing environmental conditions and the potential cumulative effects of development. A GEIS is a broadly scoped document which assesses the combined effects of a group of actions (NYSDEC, 1982). For this study, existing and future development of office, industrial and residential land uses in the Melville-Route 110 Area constitute the group of actions.

Public interest in the development of the Melville-Route 110 Area is evident by the participation of local civic groups and individuals in the public hearings held for various proposed projects in the study area. Key issues of public concern were also voiced at the scoping session for the GEIS on September 22 and 23, 1986. Furthermore, the Town approved a Controlled Development Moratorium, that prohibits all changes of zone that would result in an increase in development density. The moratorium has provided the time needed for the completion and evaluation of the GEIS.

1.1.3 Study Objectives

The overall objective of this GEIS process is to develop an optimum land use plan for the area. The GEIS presents a recommendation for land use policy and area growth that will help to insure a favorable quality of life for area residents, and a favorable quality of working environment for businesses.

The specific objectives of the GEIS include:

- definition of the existing environmental and socioeconomic character of the Melville-Route 110 Area (within a defined study area) and the surrounding area;

- identification of existing development, projects under construction or approved and an assessment of their impacts on the environmental and socioeconomic character of the area;

- analysis of the potential for future development in the area, the limitations to and opportunities for development, and the associated environmental and socioeconomic impacts that would result; and

- preparation of recommendations for land-use policy and implementation techniques for balancing growth that would mitigate the potential impacts of development and guide future area growth.

1.1.4 Required Approvals to Implement the Plan

Approval and implementation of the land-use policy recommendations of this GEIS are the responsibility of the Huntington Town Board and the Town of Huntington Planning Board.

1.2 Location

The Melville-Route 110 Area is located in the central portion of Long Island (Figure 1-1). More specifically, it lies in the southwestern corner of the Town of Huntington in Suffolk County (Figure 1-2).

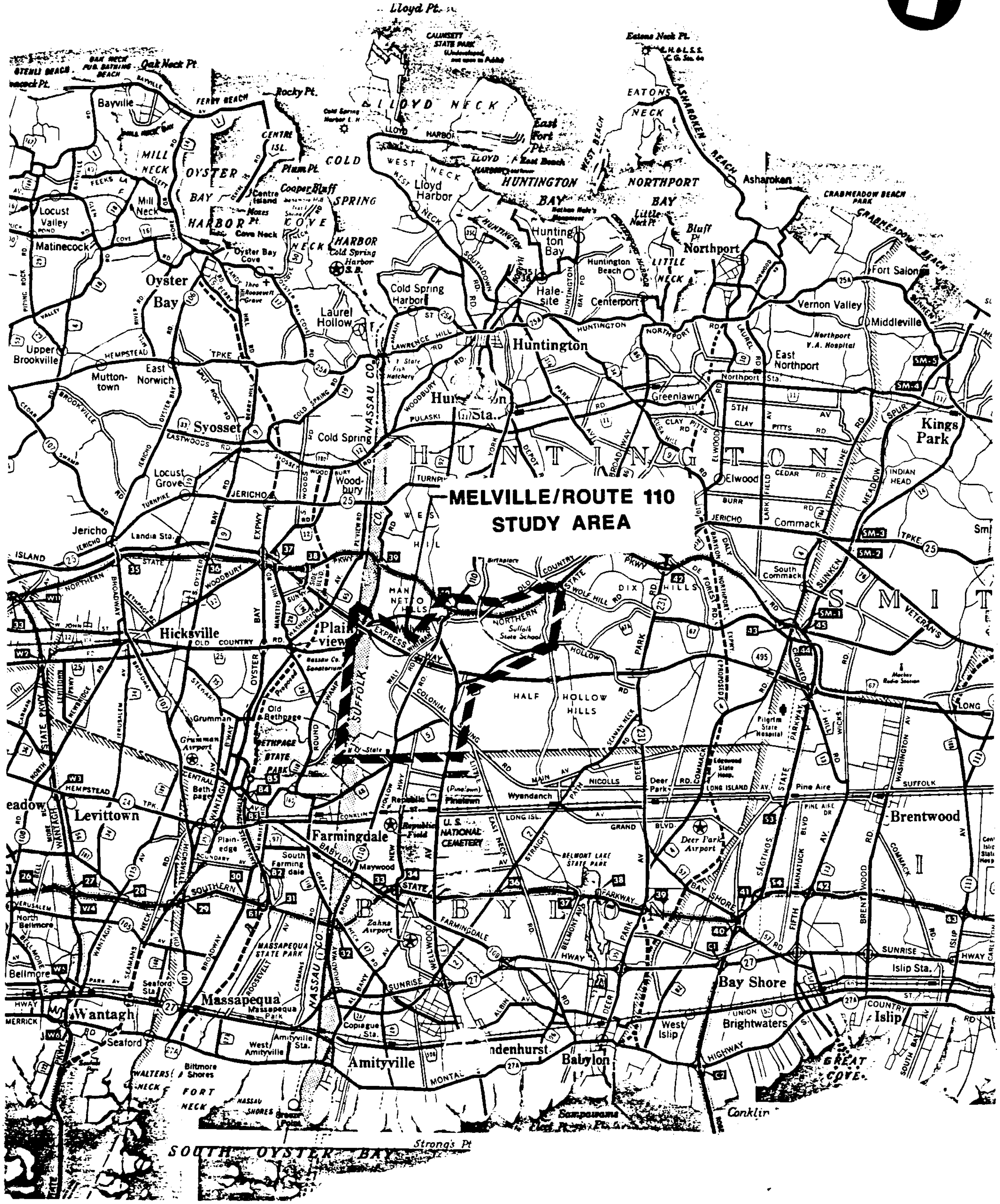


FIGURE 1-2

VICINITY MAP

LKB / RPPW INC

1.2.1 Geographic Boundaries of Study Area

For the purposes of the GEIS, a study area was defined by the Town of Huntington, encompassing more than 3000 acres of land within the Melville-Route 110 Area. The study area is shown on Figure 1-3 and is bounded as follows:

- The southern border is the Huntington/Babylon Town line.

- The eastern border runs along Pinelawn Road from the Babylon Town line north to Old East Neck Road, and continues north along Old East Neck Road to Old South Path; then east to Half Hollow Road and continues east to Carman Road; then north to the northern side of the Northern State Parkway.

- The northern border begins at the intersection of Carman Road and the northern right-of-way of the Northern State Parkway and extends westward to Sweet Hollow Road; south on Sweet Hollow Road to Old Walt Whitman Road; southwest on Old Walt Whitman Road to the northern side of the Long Island Expressway; then west along the Long Island Expressway's northern right-of-way to the west side of Round Swamp Road.

- The western border begins at the intersection of Round Swamp Road and the northern right-of-way of the Long Island Expressway and runs south along the Nassau-Suffolk County line to the Babylon Town line.

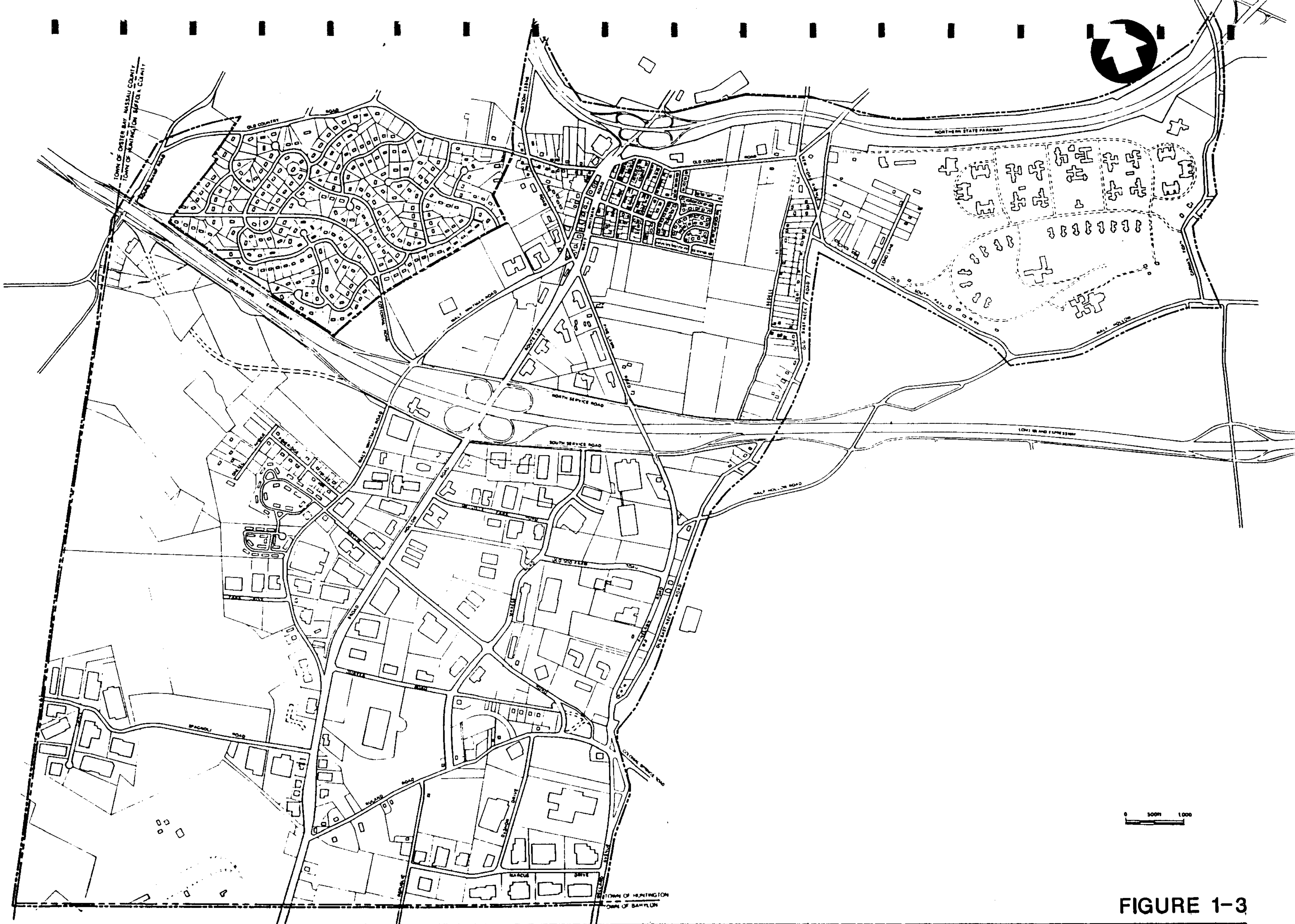


FIGURE 1–3

LKB / RPPW INC

MELVILLE–ROUTE 110 STUDY AREA

1.2.2 Major Access to the Area

The Melville-Route 110 Area is readily accessible to the surrounding area (Figures 1-1 and 1-2). The Long Island Expressway (Interstate 495), and the Northern State Parkway constitute the major east-west routes of travel. New York State Route 110 (Broad Hollow Road) acts as the major north-south artery. These major roadways are connected to and serviced by arterial and collector streets throughout the study area.

SECTION 2

SECTION 2.

ENVIRONMENTAL SETTING

This section provides a comprehensive description of the existing environmental setting of the Melville-Route 110 Area. The information serves as a background with which to assess the potential environmental impacts of the Preferred Plan and its alternatives. The description of the environmental setting is based on information and data from a variety of sources. This existing data base was supplemented by field investigations, that included: a traffic study, a noise survey, a land use inventory, a wildlife and vegetation inventory, and a visual resources inventory.

2.1 Topography/Geology

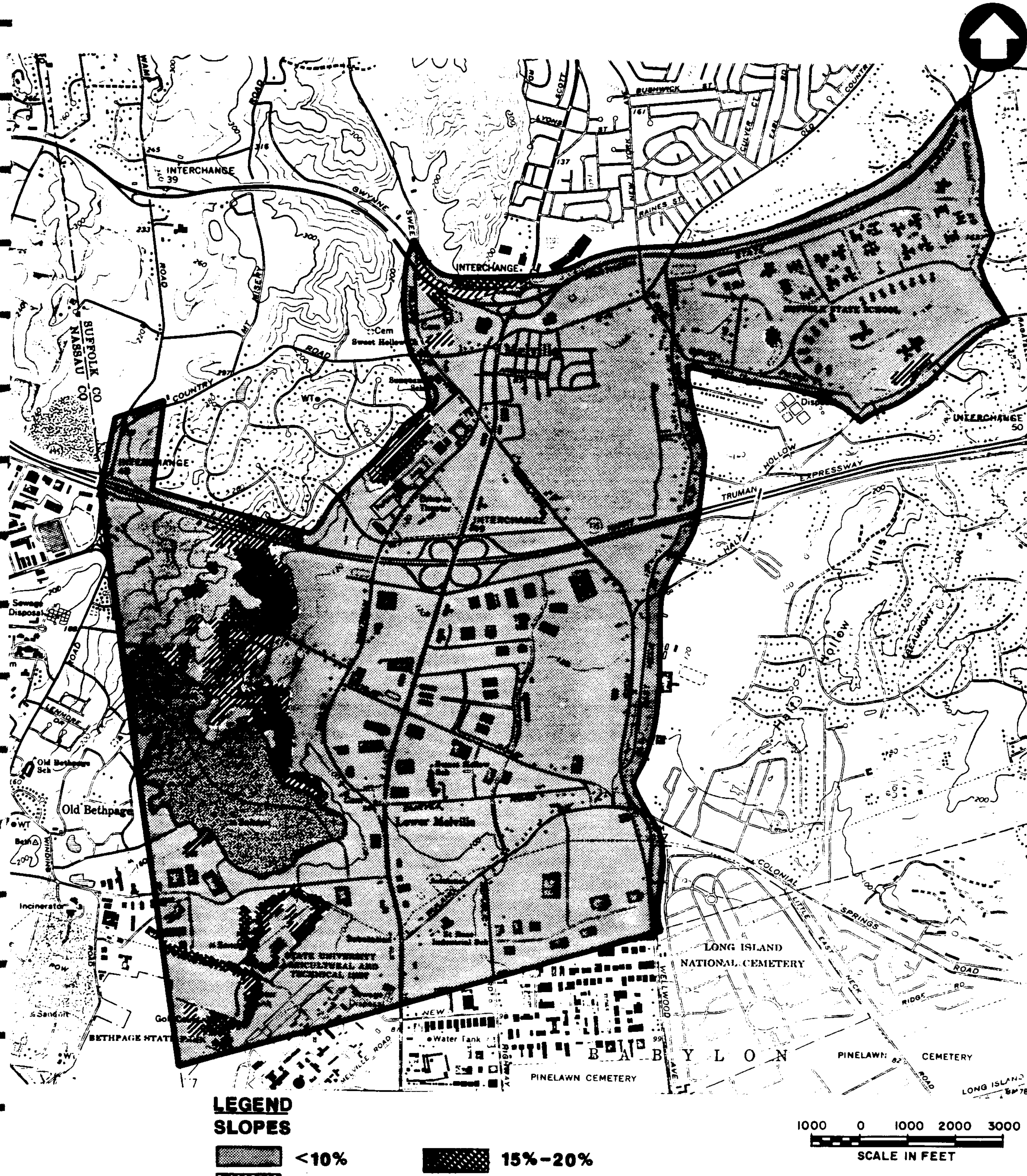
2.1.1 Topography

Description of Study Area Topography

The Melville-Route 110 Area is located on land created by a glacial outwash plain associated with the Ronkonkoma Moraine. The topography of the area is one of gently rolling hills and level plains, with slopes in the study area ranging generally from four to 20 percent (Figure 2-1).

The central and eastern portions of the study area represent a breach in the Ronkonkoma Moraine and are primarily level plains. Elevations in the central portion of the study area range from 120 to 140 feet above mean sea level (msl), with higher elevations (140 to 180 feet above msl) occurring in the northeastern corner of the study area, but the slope is gentle and does not exceed four percent.

The western portion of the study area lies within the West Hills, which is part of the Ronkonkoma Moraine. Both slopes and elevations are greater in



LEGEND

SLOPES

- <10%
- 10%–15%
- 15%–20%
- SANDPIT–SLOPES RANGE FROM <10% TO >50%

1000 0 1000 2000 3000

SCALE IN FEET

FIGURE 2–1

LKB / RPPW INC

TOPOGRAPHY & LOCATION OF STEEP SLOPES

the western portion. The greatest relief is found in the northwestern corner of the study area, where the elevations increase from 120 feet above msl to 260 feet above msl.

The western portion of the study area contains a commercial sand and gravel pit (the 110 Sand Company). The original topography at this location has been greatly altered by this operation. The land surface along the northern boundary of the mined area is 260 feet above msl and slopes southeast to 120 feet above msl at the southern boundary. Fill has been placed at the site to reclaim completed sections of the sand mine and to restore the original topography.

The study area does not contain any flood plains and is located beyond the 500-year flood boundary (NYSDEC, March 19, 1987). Natural flooding is not considered a problem in this area.

Topography of Surrounding Area

To the south of the study area the glacial outwash plain is relatively flat, with an average elevation of approximately 100 feet above msl. The outwash plain slopes southward about 20 feet per mile until it merges with Holocene lagoonal deposits along the coast. The outwash plain also extends to the west and east. The topography is similar to that found within the study area, consisting of gently rolling hills and relatively level plains.

To the north of the Melville-Route 110 Area, elevations increase with steep slopes that are part of the terminal moraine system. The southernmost line of hills, the Ronkonkoma Moraine, extends eastward and eventually forms the South Fork of Long Island. The northern line of hills, the Harbor Hill Moraine, extends eastward to form the North Fork of Long Island. The northern hills terminate in deeply eroded headlands adjoining the Long Island Sound.

2.1.2 Surface Geology

Soil Types and Distribution

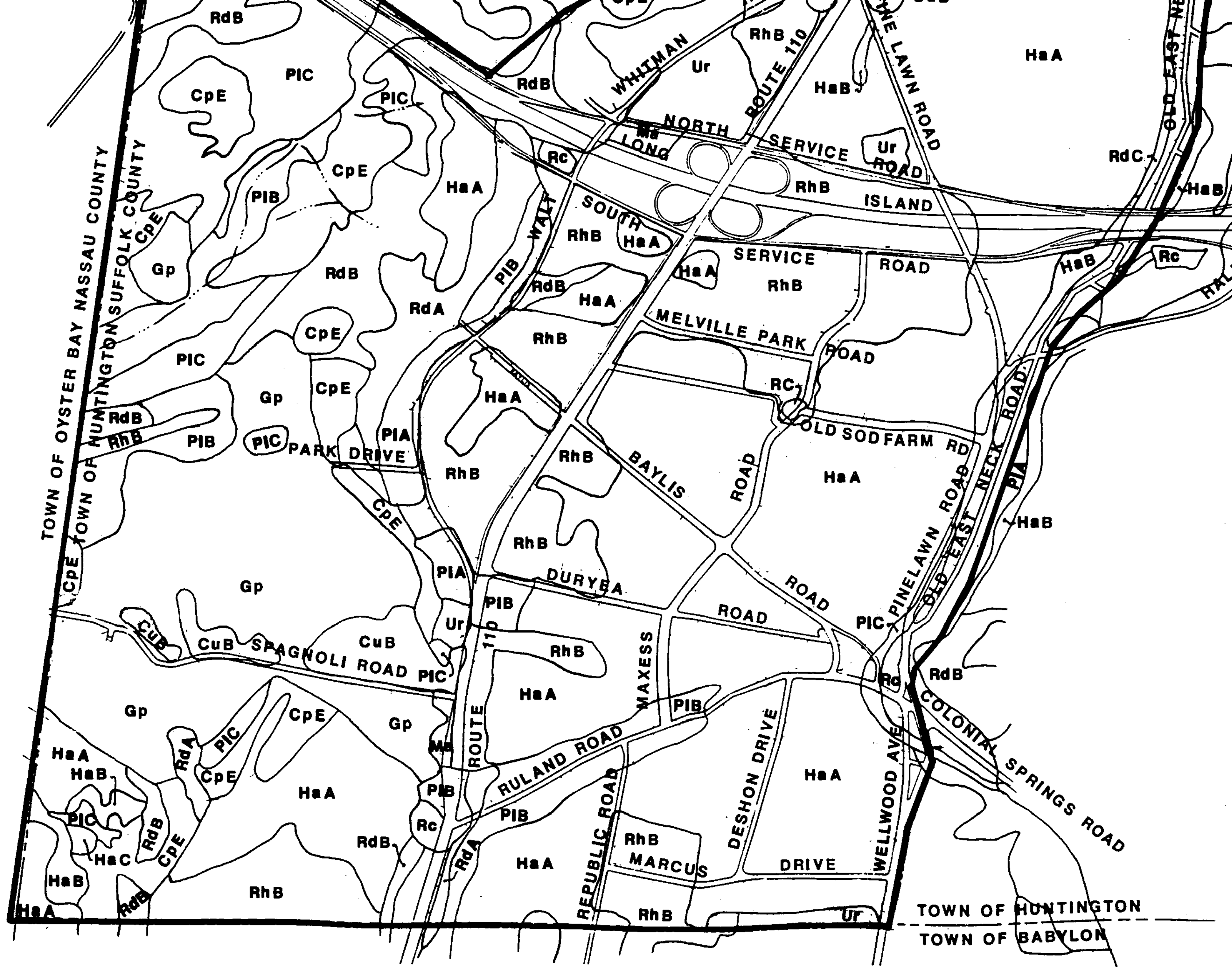
The majority of the study area is composed of soils of the Haven and Riverhead Series (Figure 2-2). These soils occur mainly in the central and northeastern portions. In the northwestern section the soils are mainly from the Plymouth Series with lesser amounts of the Riverhead Series and the Carver Series. Minor amounts of silty loam of the Scio Series are also present. The remainder of the study area consists of urban land, made land and a sand and gravel pit. More than 80 percent of urban land is made up of areas that are covered by buildings and pavements. Made land consists of areas that are mostly covered with pieces of concrete, brick, trash, wire, metal and other non-soil material. The gravel pit represents a region that has been extensively mined for sand and gravel.

Soil Characteristics

The characteristics of the several soil series present in the study area are described below. Soil characteristics were obtained from a U.S. Department of Agriculture Soil Survey of Suffolk County (USDA, 1978).

The Haven Series consists of deep, well-drained, medium-textured soils that formed in a loamy or silty mantle over stratified coarse sand and gravel. These soils are generally present on outwash plains with slopes up to 12 percent. Haven soils have high to moderate available moisture capacity. Permeability is moderate in the surface layer and subsoil, and rapid to very rapid in the substratum.

The Riverhead Series consists of deep, well-drained, moderately coarse-textured soils that form in a mantle of sandy loam or fine sandy


TOWN OF OYSTER BAY NASSAU COUNTY
TOWN OF HUNTINGTON SUFFOLK COUNTY
TOWN OF HUNTINGTON
TOWN OF BABYLON
ROUTE 110
SPAGNOLI ROAD
PARK DRIVE
RULAND ROAD
REPUBLIC ROAD
MAXESS ROAD
DURYEA ROAD
BAYLIS ROAD
MARCUS DRIVE
DESHON DRIVE
WELLWOOD AVE
WALT WHITMAN
MELVILLE PARK ROAD
OLD SOD FARM RD
PINELAWN ROAD
OLD EAST NECK ROAD
COLONIAL SPRINGS ROAD
NORTH SERVICE ROAD
SOUTH SERVICE ROAD
LONG ISLAND
PINE LAWN ROAD

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loam over thick layers of coarse sand and gravel. The soils occur in rolling to steep areas on moraines and in level to gently sloping areas on outwash plains. Slopes range from zero to 15 percent. Riverhead soils have moderate to high available moisture capacity. Permeability is moderately rapid in the surface layer and in the subsoil and very rapid in the substratum.

The Plymouth Series consists of deep, excessively drained, coarse-textured soils that formed in a mantle of loamy sand or sand. These soils occur on broad, gently sloping to level outwash plains and on steep moraines. Slopes range from zero to 15 percent. Plymouth soils have low to very low available moisture capacity. The permeability is rapid in all of these soils.

The Carver Series consists of deep, excessively drained, coarse-textured soils. The soils of this series that occur in the study area are limited to the Carver sands, found almost exclusively on the moraines where slopes exceed 15 percent. The Carver soils have a very low available moisture capacity with rapid permeability throughout.

The Scio Series consists of deep, moderately well drained, medium-textured soils. These soils occur mainly on outwash plains in low-lying areas and range in slopes from zero to six percent. Scio soils have moderate to high available moisture capacity and exhibit moderate permeability.

Constraints/Suitability for Construction and Agriculture

Based on the estimated engineering properties, the limitations of the soil types common in the study area for urban and rural planning are shown in Appendix A. For the Haven Series, with slopes of zero to six percent, there are few limitations to use except as a location for a sanitary landfill due to their highly permeable nature. As the slope increases from six to 12 percent, there are further limitations on use for streets, parking lots and athletic fields, in that regrading may be required.

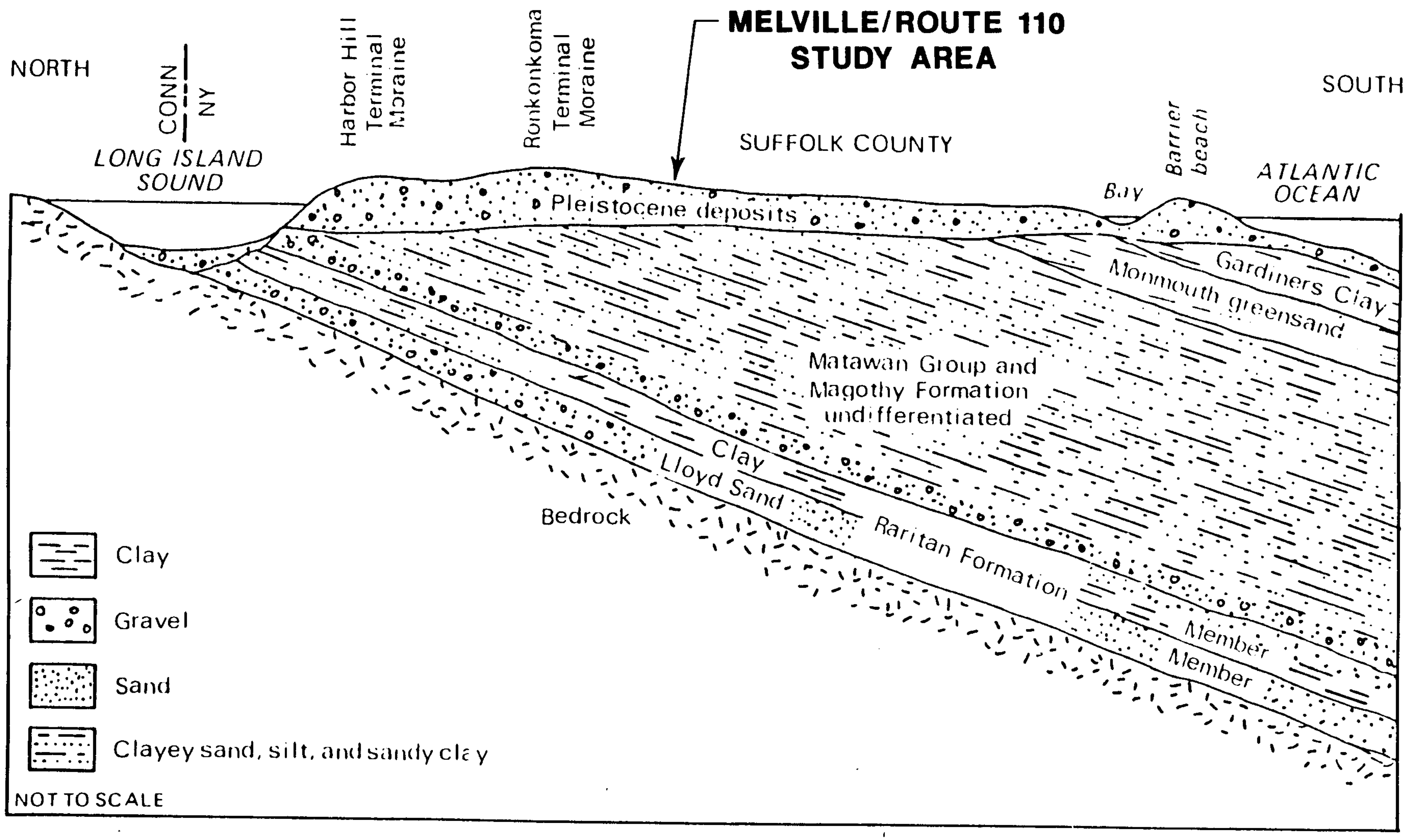
Similar use limitations exist for the Riverhead Series also based on the highly permeable nature of the soils. Again, the limitations on potential land uses on various soil types increase as the slopes increase.

Due to the sandy, permeable nature of the Plymouth soils and the steep slopes of some of the series, the use of these soils is slightly more limited than for the Haven and Riverhead Series. They are additionlly limited in the variety of vegetation that can be used for lawns and landscaped areas.

In the study area, the soils of the Carver Series are only located in areas with steep slopes over 15 percent. Without regrading, these slopes will severely limit the use of these soil areas for any type of construction. The occurrence of Carver Series soils in the study area are limited, so the restrictions of these soils will have little impact on planning.

2.1.3 Subsurface Geology

The study area is underlain by approximately 1,400 feet of unconsolidated deposits resting on southeasterly sloping bedrock (Figure 2-3). The uppermost unit, the Upper Glacial Formation, consists of sand and gravel deposits locally interbedded with clay. In the study area, this unit is approximately 140 feet thick. Underlying the Upper Glacial Formation in descending order are: the Magothy Formation (approximately 700 feet thick), the clay member of the Raritan Formation (approximately 200 feet thick), and the Lloyd Sand Member of the Raritan Formation (approximately 300 feet thick).



SOURCE:
U.S.G.S. (KRULIKAS, 1986)

LKB RPPW

FIGURE 2-3

GENERALIZED GEOLOGIC SECTION

The Magothy Formation is composed of gray and white fine to coarse sand, interstitial clay and silt, and lenses of clay. Gravelly zones are common near the bottom of this formtion but are rare in the upper parts. The Raritan Clay Formation consists of gray, black and multi-colored clay, silt, and fine sand. The Lloyd Sand Formation consists of white and gray fine-to-coarse sand and gravel with some clayey beds (Krulikas, 1986).

2.2 Water Resources

2.2.1 Groundwater

Hydrologic System

The major water bearing units beneath the Melville-Route 110 Area are the Upper Glacial, Magothy and Lloyd aquifers. The water table is the upper surface of groundwater, beneath which all water bearing units are saturated. Below the study area the water table occurs in the Upper Glacial aquifer and ranges from 65 to 100 feet above mean sea level (msl) or 35 to 160 feet below the land surface (SCDHS, March 1986).

The changes in elevation of the water table create hydraulic gradients which cause groundwater to flow. Groundwater flow in the vicinity of the Melville-Route 110 Area is influenced by regional flow regimes, but can be modified by local conditions such as artificial recharge or the drawdown of pumping wells. Beneath the study area, the direction of regional horizontal flow is predominantly toward the south (Figure 2-4), but does occur in some areas to the southeast and southwest. In the vertical plane, regional flow can be characterized by steep, downward hydraulic gradients. Figure 2-5 is a conceptual depiction of groundwater flow in the vertical

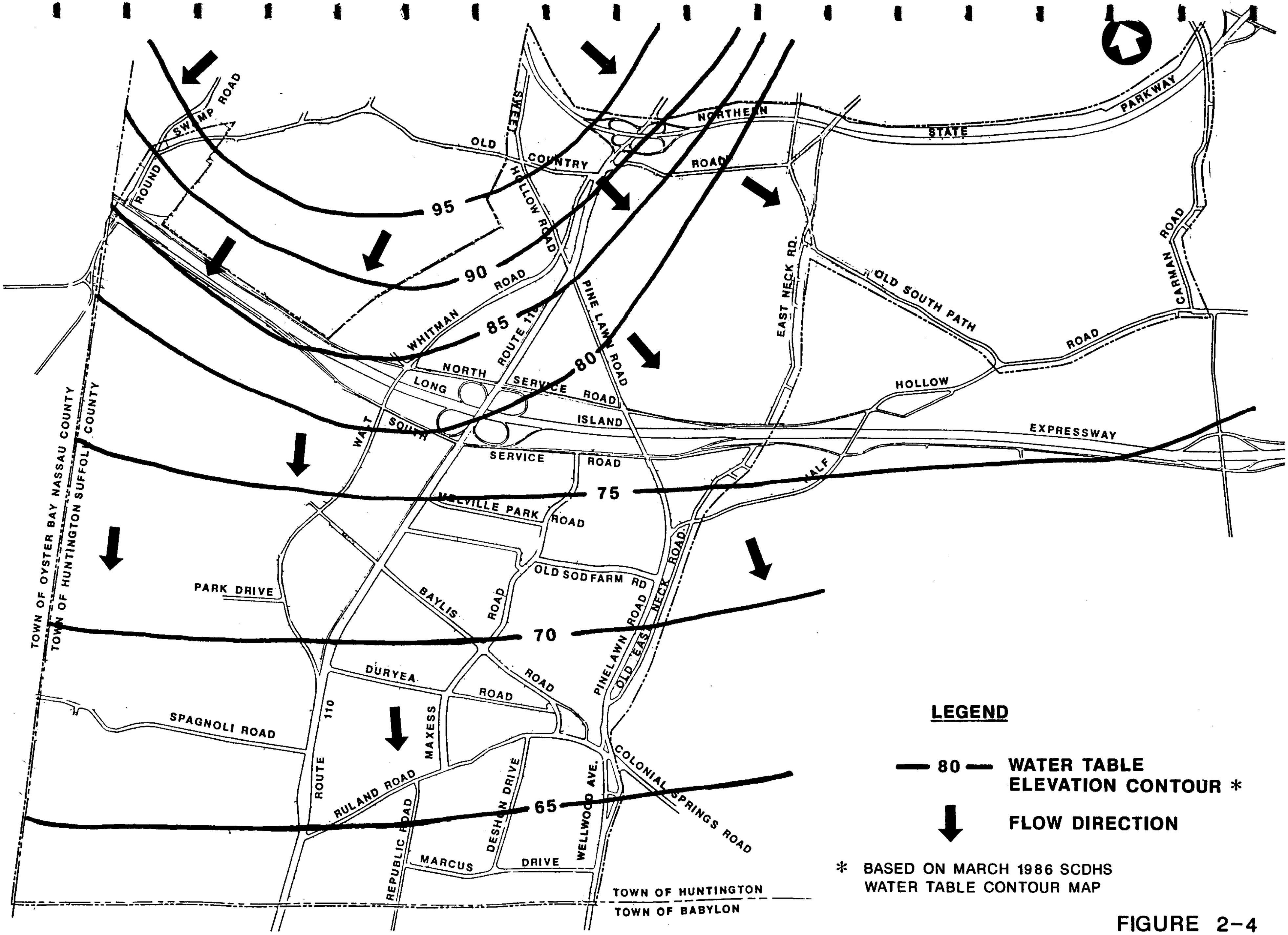


FIGURE 2-4

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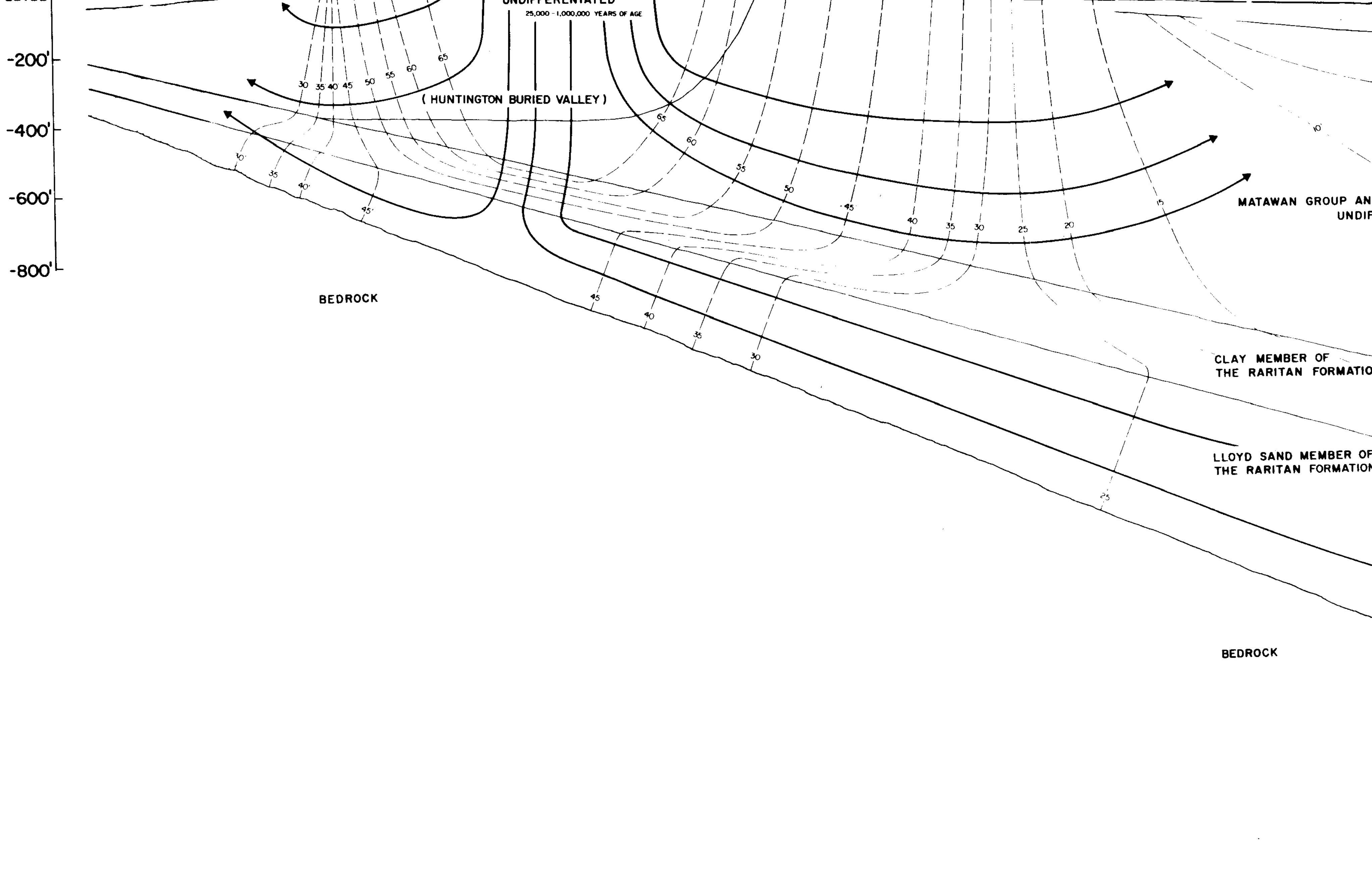
REGIONAL HORIZONTAL GROUNDWATER FLOW DIRECTION



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plane beneath the site. As illustrated, the Melville-Route 110 Area is located in an area where the vertical components of groundwater flow are greater than the corresponding horizontal components. This condition makes it possible for potential contamination in the Upper Glacial Aquifer to reach the deeper aquifers.

Based on these flow patterns, the Melville-Route 110 Area has been defined in the Nassau-Suffolk 208 Areawide Waste Treatment Management Study (LIRPB, 1977), known as the 208 Study, as being located within a deep flow recharge area. Deep flow recharge areas are defined as areas where recharge from precipitation percolates downward to the deeper Magothy and Lloyd aquifers. The 208 Study classified hydrogeologic zones by groundwater flow patterns and water quality for the purpose of regional water supply management. Under the 208 Study, the Melville-Route 110 Area is identified as lying within Hydrogeologic Zone I. Zone I possesses the following characteristics, as summarized from the 208 Study:

- deep flow recharge
- no serious groundwater problems
- primary source of drinking water supply

Subsequent to the 208 Study, Suffolk County adopted Suffolk County Sanitary Code, Article 7, Water Pollution Control. The intent of the article is to safeguard all the water resources of the County from pollution, especially those in deep recharge areas. In the Article, deep recharge areas are identified as Groundwater Management Zones I, II, III and V. Groundwater Management Zones mean any of the Hydrogeologic Zones delineated in the 208 Study, as revised by the Long Island Groundwater Management Plan prepared by the New York State Department of Environmental Conservation (NYSDEC,

1986) and subsequent revisions adopted by Suffolk County. Based on these revisions, the Melville-Route 110 Area lies within Groundwater Management (Hydrogeologic) Zones I and II, as depicted on Figure 2-6. Characteristics of Zone II are therefore important to note and are as follows:

- a deep flow recharge area,
- highly developed land area, and
- an area of existing groundwater quality problems, primarily organic chemicals.

Identification of Present Groundwater Uses

An inventory of wells in and immediately adjacent to the Melville-Route 110 Area has been prepared from available Suffolk County Department of Health Services (SCDHS) data. Locations of the wells are shown on Figure 2-7 and well use and other pertinent data for the wells are provided in Table 2-1.

The various types of well uses within the study area are municipal water supply, irrigation, cooling, processing, washing and observation. Based on the information provided in the table, the most common use of wells in the study area is for cooling (19 of the 56 wells). The second most common usage among the wells is for irrigation (12 wells). In general, most wells in the study area were drilled from the late 1950's through the early 1970's in the Upper Glacial and Magothy Aquifer, and are at depths ranging from 71 to 712 feet below grade. Several of these wells may no longer be in use at the present time.

Groundwater Quality

Information on the quality of groundwater in the vicinity of the study area was obtained from the Suffolk County Department of Health Services (SCDHS).

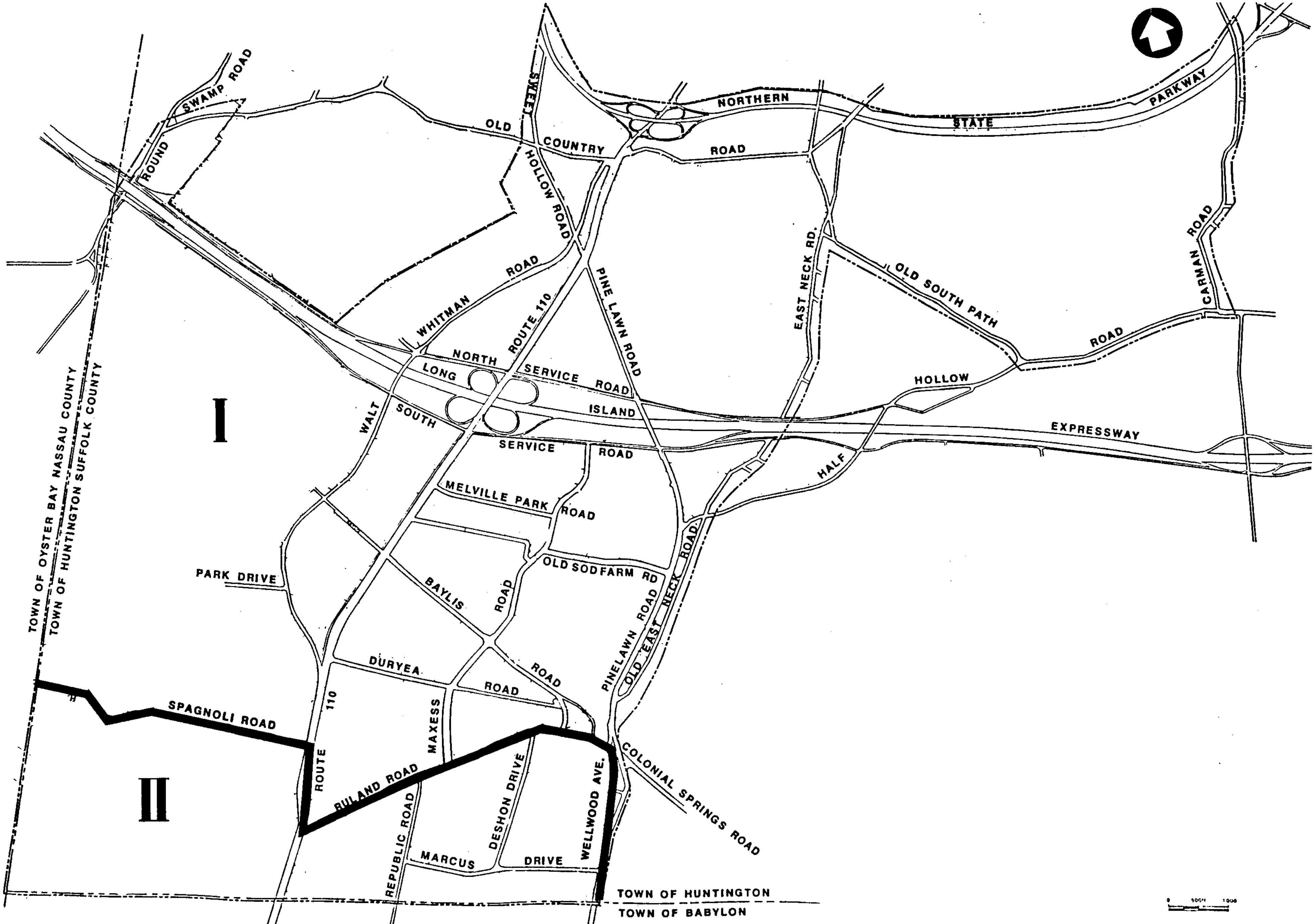

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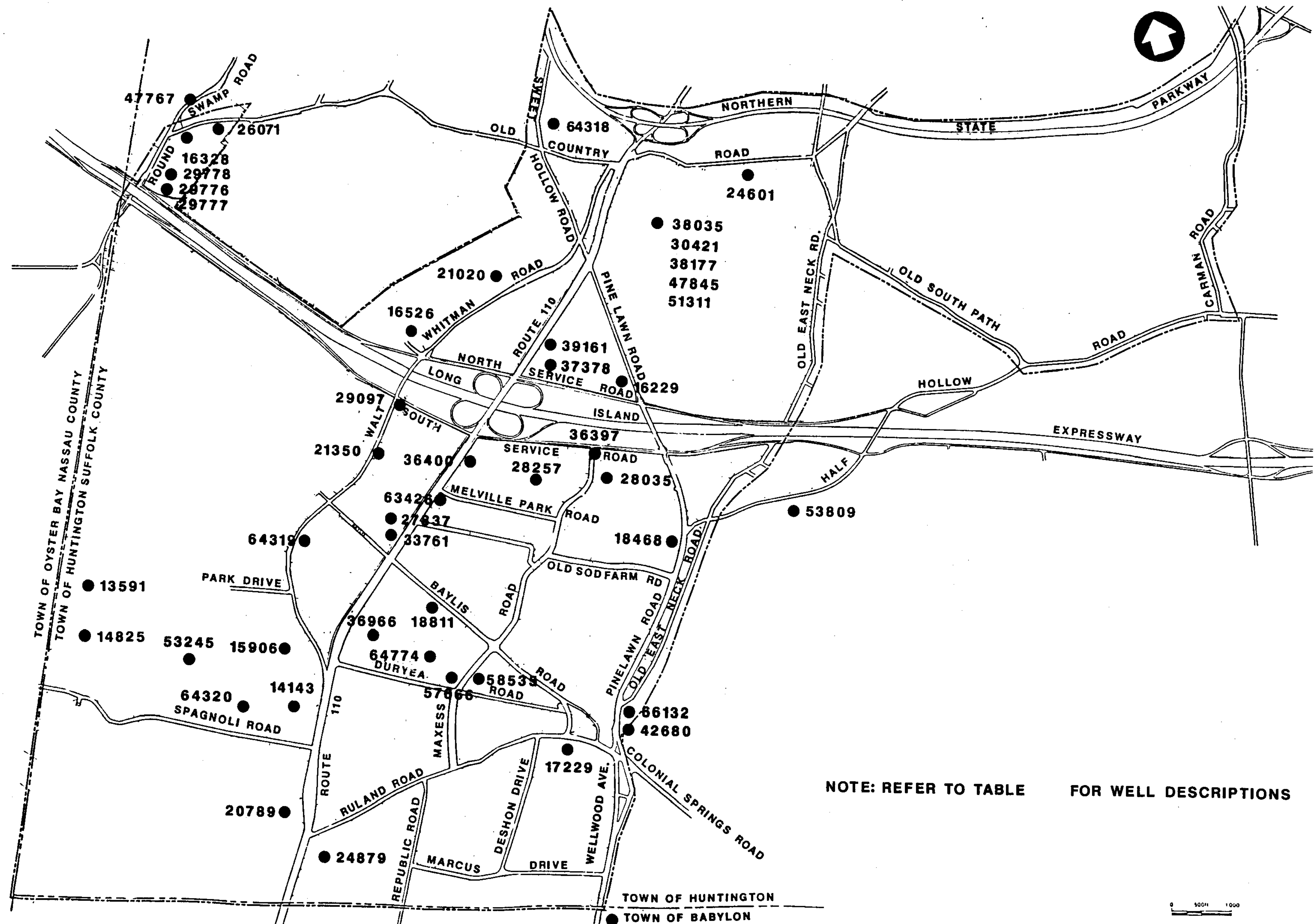
FIGURE 2-6

GROUNDWATER MANAGEMENT ZONES



NOTE: REFER TO TABLE FOR WELL DESCRIPTIONS

FIGURE 2-7

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NON-PUBLIC SUPPLY WELLS IN STUDY AREA

TABLE 2-1

WATER SUPPLY WELLS

Well No.	Type [1]	Owner [2]	Year Drilled	Depth (feet)
12079	M	S. Huntington WD	1976	445
13591	W	Broad Hollow Estates	1955	292
14143	W	Colonial Sand & Gravel	1955	169
14825	P	Consolidated Sand & Gravel	1957	188
15906	C,P	Northeastern Labs	1957	81
16229	C	Intl. Brotherhood of Electrical Workers	1958	202
16328	Ir	Meyer	1959	226
16526	C	Airborne Instruments	1956	265
17229	Ir	Klein	1959	81
18468	Ir	McGovern	1960	100
18811	C	Lambda Electronics	1960	177
20789	C	Marcpiere Inc.	1962	201
21020	C	Underwriters Lab	1962	215
21350	C	General Builders Union	1963	173
21362	G	L.I. Developmental Center		500+
22015	M	S. Huntington WD		659
22451	G	L.I. Developmental Center		500+
24601	Ir	Brigati	1965	148
24879	Ir	Marydale Camp	1965	212
26071	M	S. Huntington WD	1975	333
26248	M	S. Huntington WD	1966	552
27837	Ir	Lear, Inc.	1966	186
28035	C	Estee Lauder	1966	326
28267	C	NY Twist Drill	1967	114
29097	Ir,G	Emerson Electric	1967	177
29776	Obs	USGS	1967	721
29777	Obs	USGS	1967	397
29778	Obs	USGS	1967	174
30007	M	S. Huntington WD	1967	595
30421	C	Security National Bank	1967	272
33761	C	Paragon Equities	1968	265
36397	C	Estee Lauder	1970	312
36400	C	110 Expressway Co.	1969	274
36966	C	Pentagon Plastics	1970	197
37378	Ir	Huntington Towers	1971	199
38035	--	Security National Bank	1971	245
38177	--	Security National Bank	1971	245

Table 2-1 (Continued)

Well No.	Type[1]	Owner[2]	Year Drilled	Depth (Feet)
39161	C	Huntington Towers	1971	337
39709	M	E. Farmingdale WD	1972	712
42680	Obs	USGS	1972	57
43811	Obs	NYSDEC	1972	90
47767	Ir	Meyer	1973	230
47845D	--	Security National Bank	1973	310
51311	C	Security National Bank	1974	332
53245	P	Rasan Asphalt	1974	72
53809	Ir	Muller	1975	135
57666	C	We're Associates	1976	270
58535	C	We're Associates	1977	270
63426	C	Melville Industries	1978	295
64318	Obs	SCDHS	1978	60
64319	Obs	SCDHS	1978	45
64320	Obs	SCDHS	1978	
64774	C	We're Associates	1978	258
66132	Obs	SCDHS	1979	100

[1] Type of Well

Ir - Irrigation
C - Cooling
G - General
M - Municipal
Obs - Observation
P - Processing
W - Washing

[2] Owner

NYSDEC - New York State Department of Environmental Conservation
SCDHS - Suffolk County Department of Health Services
USGS - U.S. Geological Survey
WD - Water District

Over the years, SCDHS has established public and private drinking water well testing programs that have resulted in the development of an extensive water quality data base. Public water supply wells are continually monitored by the SCDHS to assure compliance with the requirements of Part 5 of the New York State Sanitary Code and related health standards and guidelines.

In the Melville-Route 110 Area, the majority of the residents are served by public drinking water. This water is pumped from five South Huntington Water District wells. Two State wells are located at the Long Island Developmental Center to service that facility. These wells are listed in Table 2-2 and located as shown on Figure 2-8. There are a small number of residents in the Melville-Route 110 Area that used private domestic wells as a primary source of drinking water. There had been six shallow private water supply wells in the vicinity of Bedell Place. Five of these were found to be contaminated with an organic compound, 1,1,2 dichloropropane. All six wells were closed and public water supply has been extended to these residents.

Review of SCDHS water quality data for the wells listed in Table 2-1, and discussions with department staff, indicate no other existing private well contamination in the area with the exception of the Long Island Developmental Center wells. These wells have some nitrate contamination.

Although the SCDHS data suggest limited groundwater contamination, this information only reflects water quality conditions near and at the depths of those wells sampled and does not indicate groundwater quality conditions throughout the Melville-Route 110 Area. Groundwater contamination on Long Island is well documented and has resulted from a long

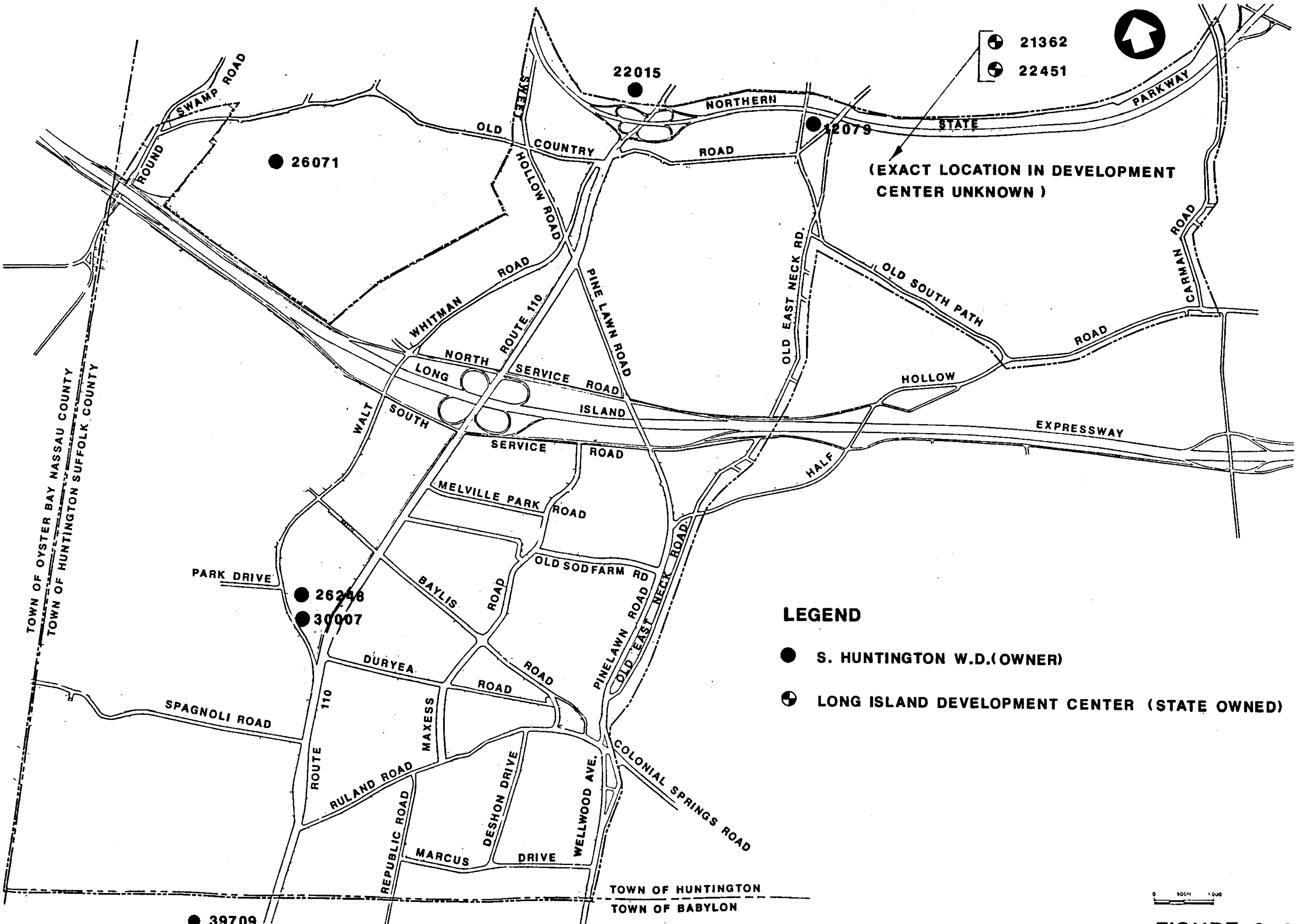

FIGURE 2-8

LKB/RPPW

PUBLIC WATER SUPPLY WELLS IN STUDY AREA

TABLE 2-2

PUBLIC DRINKING WATER WELLS

Well No.	Owner	Depth (feet below grade)
12079	S. Huntington WD	445
22015	S. Huntington WD	659
26071	S. Huntington WD	333
26248	S. Huntington WD	552
30007	S. Huntington WD	595
21362	LI Developmental Center	500+
22451	LI Developmental Center	500+

period of commercial, industrial, agricultural and residential development on the land surface (NYSDEC, 1986). Based on this, it can be assumed that some level of groundwater contamination exists beneath the Melville-Route 110 Area.

In an effort to control groundwater contamination, Suffolk County has adopted legislation that safeguards the water resources of the County from discharges of sewage, industrial wastes and hazardous material. Suffolk County Sanitary Code, Article 3 prohibits construction of on-site sanitary systems in sewered areas for the purpose of reducing nitrate contaminant loadings. On-site sewage systems are known significant contributors to nitrate contamination of groundwater. Similarly, Suffolk County Sanitary Code, Article 6 was adopted for the purpose of reducing nitrate contamination through controlling the density of on-site sanitary systems in new developments, where sewers are not available. Where development occurs at higher densities, approved community or public sewage treatment systems are required. The minimum lot requirement for new homes with septic systems, for all areas outside Hydrologic Zones III and VI, is 20,000 square feet. This requirement could change based on the Long Island Regional Planning Board recommendation that Suffolk County amend Article 6 to require a 40,000 square foot minimum lot requirement (LIRPB, 1984).

art 3

art 6

Another important provision of Article 6 (Section 605, Regulation 82) requires proposed commercial, apartments, shopping centers, and office and industrial building developments to provide treatment for the removal of nitrates, if the density equivalent of these properties exceeds comparable allowable residential densities (i.e., if the estimated yearly effluent loading for the development exceeds that produced by an equivalent residential development with a density of one unit per one-half acre).

Similarlly, the Long Island Regional Planning Board recommends that County health departments evaluate the total predicted potential nitrate and organic loadings to groundwater for proposed major developments. Whenever the total anticipated nitrate loading exceeds 6 milligrams per liter (mg/l), restrictions should be placed on the amount of lawn area, and, in unsewered deep aquifer recharge areas, treatment systems with nitrate removal should be required, if deemed necessary.

Article 7 of the Sanitary Code controls the discharge of industrial, toxic or hazardous materials to the groundwater or to a disposal system. This legislation prevents discharges of such material unless such discharge is specifically in accordance with a State Pollution Discharge Elimination System (SPDES) Permit. Article 7 also specifies additional restrictions and prohibitions for the deep recharge areas of Suffolk County. In these areas, it is unlawful for a person to discharge restricted toxic or hazardous material or to discharge industrial wastes from processes containing restricted toxic or hazardous materials to the groundwaters, the surface of the ground, beneath the surface to a disposal system, or to a municipal or commercial sewage system, unless the municipal or commercial sewage system discharges to marine waters. The Article 7 provision may place some limitations on industrial development in the Melville-Route 110 Area because it is located in a deep recharge zone and has some unsewered undeveloped areas. This is discussed in detail in Section 2.7.1.

2.2.2 Hazardous Waste Sites

If not properly handled, hazardous wastes may pose a threat to groundwater quality. Therefore, the status of hazardous waste sites in and near the study area was reviewed. There are currently two facilities listed by the

NYSDEC hazardous waste sites in the study area. The 52-acre 110 Sand Company Clean Fill Disposal Site is currently operating in the study area. This site which is contained in a portion of the 127 acres owned and operated by 110 Sand Company is located approximately one mile north of Spagnoli Road, and is bounded on the west by the Nassau-Suffolk border. Since 1985, fill operations have been conducted in the lined portion of the site which collects and disposes of leachate in accordance with (NYSDEC's) Part 360 requirement. Approximately eight acres of the site that were not lined, were utilized as a construction and demolition debris disposal site, and consequently were listed as a Type 2a inactive hazardous waste site, (NYSDEC December 1983). Since this eight acre site is classified as "2a", the applicant is currently preparing a Phase II Plan of Investigation for the eight acre site in accordance with NYSDEC requirements (Wolfert, Geraghty and Miller, G&M, February 27, 1987). The results of this investigation will determine whether the site needs remediation or can be delisted as a hazardous waste site.

Also located within the study area is the I.W. Industries site, located at 35 Melville Park Road, which is classified as a Type 2 inactive hazardous waste site due to a chemical spill which occurred on the property (NYSDEC, March 4, 1985). Because the site is classified as Type 2, the site requires priority action to investigate and rectify contamination. Currently monitoring wells are being installed to investigate discharges of lead and dichloroethone to groundwater (Pim, SCDHS, December 16, 1986). Other than at I.W. Industries, there have been no major spills in the study area requiring long term corrective action (Pim, SCDHS, December 16, 1986).

The Town of Oyster Bay Old Bethpage landfill is an EPA Superfund inactive hazardous waste site that is located outside the southwestern corner of the study area. Groundwater contamination from this site is in the process of being remediated. The contamination from this landfill is not expected to affect groundwater in the study area due to the southeasterly direction of groundwater flow.

2.2.3 Surface Water

The Melville-Route 110 Area does not contain any significant natural surface water bodies. The only surface waters include occasional standing water in man-made recharge basins, ponds at the Bethpage State Park Golf Course, and water lagoons utilized for operations at the 110 Sand Company.

Existing drainage of unpaved sections of the study area takes place by direct percolation into the ground. In paved areas, storm water runoff is collected by storm drains and directed to recharge basins for seepage into the ground, or collected in catch basins which allow seepage directly into the ground. In the vicinity of recharge basins, surface runoff is generally directed toward the basins by downslopes.

The absence of natural drainage deficiences and flood prone areas in the Melville-Route 110 Area was discussed in Section 2.1.1. Occasionally, flooding occurs at some roadway intersections due to poor roadway drainage characteristics. However, this does not represent a serious flooding problem throughout the study area.

2.3 Terrestrial Ecology

The Melville-Route 110 Area contains a mix of land use types that have retained some natural vegetation areas and have established new landscaped vegetation. Much of the study area is densely developed with buildings, roadways, and parking lots. There are only a few undeveloped parcels which contain hardwood forest vegetation. As discussed in Section 2.2.2, there are only a few small artificial surface water bodies existing in this area, which support some minor areas of wetlands vegetation. Wildlife habitat is composed of urban, suburban and natural wooded ecological settings which have allowed for some diversity in species composition. Due to the limited amount of surface water and wetland habitat areas, aquatic ecology is not an important component of the area-wide ecology. The following discussions describe the characteristics of the vegetation and wildlife of the Melville area.

2.3.1 Vegetation

Existing Vegetation Cover Types

The vegetated lands within the Melville-Route 110 Area include some natural woodlands, agricultural fields, and lawn and landscaped areas surrounding developed areas. Agricultural, commercial and indusrial development in Melville has removed much of the natural vegetation throughout the study area. Some natural vegetation is found along several roadways, vacant lots, and the edges of farm fields and residential developments. Several agricultural fields are located in the study area, which are used to raise a variety of crops. Vegetation on developed properties is limited to lawns, trees, and other landscaped areas surrounding residential, commercial and industrial buildings, and parking lots. Major areas of different vegetation cover types throughout the Melville-Route 110 Area are shown in Figure 2-9. Landscaped areas surrounding buildings are generally found throughout the developed parcels in the study area, and are not specifically identified in Figure 2-9.

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The major natural woodlands within the study area include one large parcel, several smaller vacant properties, and areas at the edges of residential developments and farm fields. The largest wooded area is located to the south of the Long Island Expressway (LIE) South Service Road, bounded by residences along Round Swamp Road to the west, the 110 Sand Company to the south, and residences along Drexel Avenue and farm fields to the east (Figure 2-9). The woodlands within and surrounding the developed residential land in the northwest corner of the study area comprise the second largest forested area. This area is bounded by the Long Island Expressway to the south, Old Country Road to the north, and commercial development along Walt Whitman Road to the east (Figure 2-9). Smaller vacant woodland areas are located throughout the study area. Narrow strips of woodlands also exist along several roadways and along the edges of commercially developed properties.

The woodlands throughout the study area are generally oak-dominated forests with other hardwoods, such as maples, and occasionally pitch pines mixed in. Understory species and ground cover in these forests include vines, shrubs and perennial weeds. A list of vegetation species existing within the study area is shown in Appendix A.

The Melville-Route 110 Area was extensively farmed in the early and mid-1900's. Much of the farmland has been converted into office and industrial parks. Farmlands still exist in several sections of the study area, primarily in two areas cotaining large fields, as well as a number of smaller fields. One large field area is located to the southwest of the intersection of Walt Whitman Road and the LIE South Service Road. The other large area of farm fields (the McGovern Sod Farm) is located between Pinelawn Road and Old East Neck Road, north of the LIE. Additional farm fields are located along Ruland Road and within the SUNY Farmingdale campus.

The agricultural use of lands within the study area is limited primarily to sod and vegetable crops, and nursery business. There are seven different farms located within the study area, with approximately 450 acres being actively farmed. Many of these farms are presently targeted for future development as commercial or residential projects. Crops and vegetation planted on these fields provide temporary forage and habitat areas for wildlife in the study area. In addition, these farms provide some aesthetic benefits as open space area.

Areas of planted and maintained vegetation are found throughout the study area. The areas surrounding many commercial and industrial buildings, as well as residential developments, are extensively landscaped with lawns and vegetation. The area within the LIE right-of-way is similarly landscaped.

Drainage collection areas and recharge basins located near major roadways and residential developments provide limited aquatic and wetland habitats in the study area. Standing water and wet soil conditions at these basins are present only intermittently during the growing season, which prohibits the establishment of substantial aquatic or wetland habitats. The New York State Department of Environmental Conservation Draft Freshwater Wetland Maps for Suffolk County indicate no freshwater wetlands within the study area.

Special Natural Areas

The Melville-Route 110 Area contains no established botanical preserves or nature parks. The large undeveloped wooded land area that includes Pineridge Park, located south of the LIE and west of Walt Whitman Road, could be considered as the only remaining area of special natural significance within the Melville-Route 110 Area. Several parks are located in the vicinity of the study area, and are discussed in Section 2.12.5. These parks are used extensively for active and passive recreational activities, are well-vegetated with natural and landscaped vegetation, and provide some wildlife habitat.

2.3.2 Wildlife

Existing Wildlife Habitat and Species

Wildlife habitat within the Melville-Route 110 Area is varied including natural woodlands, landscaped areas around residences and businesses, agricultural fields, and densely developed commercial and industrial lands. There are only a few aquatic and wetland vegetation habitats, located primarily at the edges of recharge and detention basins. The wildlife species that exist within these different habitat areas are mammals and birds that are generally less tolerant of human disturbance. A list of wildlife species expected to occur in the study area is included in Appendix A.

Natural woodlands, as previously discussed, provide the most valuable wildlife habitat within the study area. Although there are a number of parks located outside the study area, there are few large undisturbed woodlands within the Melville area. The existing woodlands, particularly the larger parcels, provide habitat for the greatest diversity of wildlife species. The wildlife species that occur within the woodland areas include the mammals and birds listed in Appendix A. Especially noticeable wildlife species are mammals such as the Eastern Cottontail, and the Common Grey Squirrel, and birds such as the Common Crow, Song Sparrow and the Mourning Dove. Oppossum and Raccoon are less common mammals that are found on the larger undeveloped woodland parcels.

Agricultural fields also provide wildlife habitat for a smaller number of mammals and bird species. During summer and fall seasons, crops in these fields provide some forage area for wildlife species, but the lack of natural vegetation cover in agricultural fields provides only limited wildlife habitat value. Large turf areas in sod farms are occasionally used as resting and feeding areas for large flocks of Canada Geese (Branta Canadensis) during the fall and winter migration periods.

Landscaped areas surrounding residential developments and commercial and industrial buildings also provide some limited wildlife habitat. Ornamental trees and shrubs and lawn areas are presently inhabited by those wildlife species which are not particularly sensitive to human activities, especially birds such as warblers and sparrows.

Wetland vegetation existing in a few recharge basins in the area provides foraging and resting areas for some local bird species. As discussed in Section 2.3.1, significant freshwater wetland areas are not found within the study area, and wildlife species associated with wetland areas are not common to Melville. In addition, there are no open water areas, besides the recharge basins, which could allow for aquatic wildlife communities to exist in the study area.

Endangered, Threatened or Special Concern Species

There is no record of any significant habitat for endangered, threatened or special concern species in the study area (Scheibel, NYSDEC, December 5, 1986). Wildlife species are generally limited to birds and small mammals which are common to urban and suburban areas on Long Island. It is possible that some bird species which are listed as Special Concern Species in New York State could visit the study area for resting and feeding during migratory flights (Appendix B). Farm fields and wooded lands are the most likely areas which could be visited by these bird species.

The NYSDEC has records of a significant habitat for the Eastern Tiger Salamander (Ambystonia tigrinum) at a location outside the study area near the northern boundary of the West Hills County Park (Scheibel, NYSDEC, February 5, 1987). A series of small vernal ponds are located in this wooded area which provide necessary breeding habitat for this New York State Endangered Species. It is unlikely that this species exists within the study area because of a lack of these vernal ponds.

Special Wildlife Habitats and Preserves

There are no wildlife preserves established in the study area. Parklands which contain some natural vegetation habitat partly adjacent to and within the study area are discussed in Section 2.13.5. The large wooded land area located south of the LIE and west of Old Walt Whitman Road could be considered the most significant wildlife habitat in the Melville-Route 110 Area.

2.4 Transportation and Traffic

The Melville-Route 110 Area is served by an extensive local and regional transportation system. This system is comprised of: a roadway network, including an expressway, parkway, state, county and town roads; a mass transit system, including bus and rail service; and a nearby general aviation airport.

The roadway network providing access to and from the study area consists of the Long Island Expressway (Route I-495), Northern State Parkway, NYS Route 110 (Broad Hollow Road), Ruland Road (Suffolk County Route 5), and Pinelawn Road (Suffolk County Route 3). In addition, key local roadways include: Walt Whitman Road, Spagnoli Road, Baylis Road, Maxess Road, Old Country Road, New York Avenue, Old South Path and Half Hollow Road. This roadway system is depicted in Figure 2-10.

2.4.1 Existing Roadway System

Characteristics of the principal roadways within the study area are described as follows:

Long Island Expressway (Route I-495)

The Long Island Expressway (LIE) is the major east-west freeway running the entire length of Long Island from the Queens Midtown Tunnel to Riverhead. This roadway is a 55 mph six-lane, divided, limited access freeway, that was built in the early 1960's. The LIE has two interchanges within the study area located at Exits 48 and 49 (Figure 2-10). LIE Exit 48 is a diamond interchange with Round Swamp Road, serving the western portion of the study area. LIE Exit 49 is a clover-leaf interchange with NYS Route 110, serving the heart of the study area. These exits are connected by eastbound and westbound two-lane service roads that provide direct con-

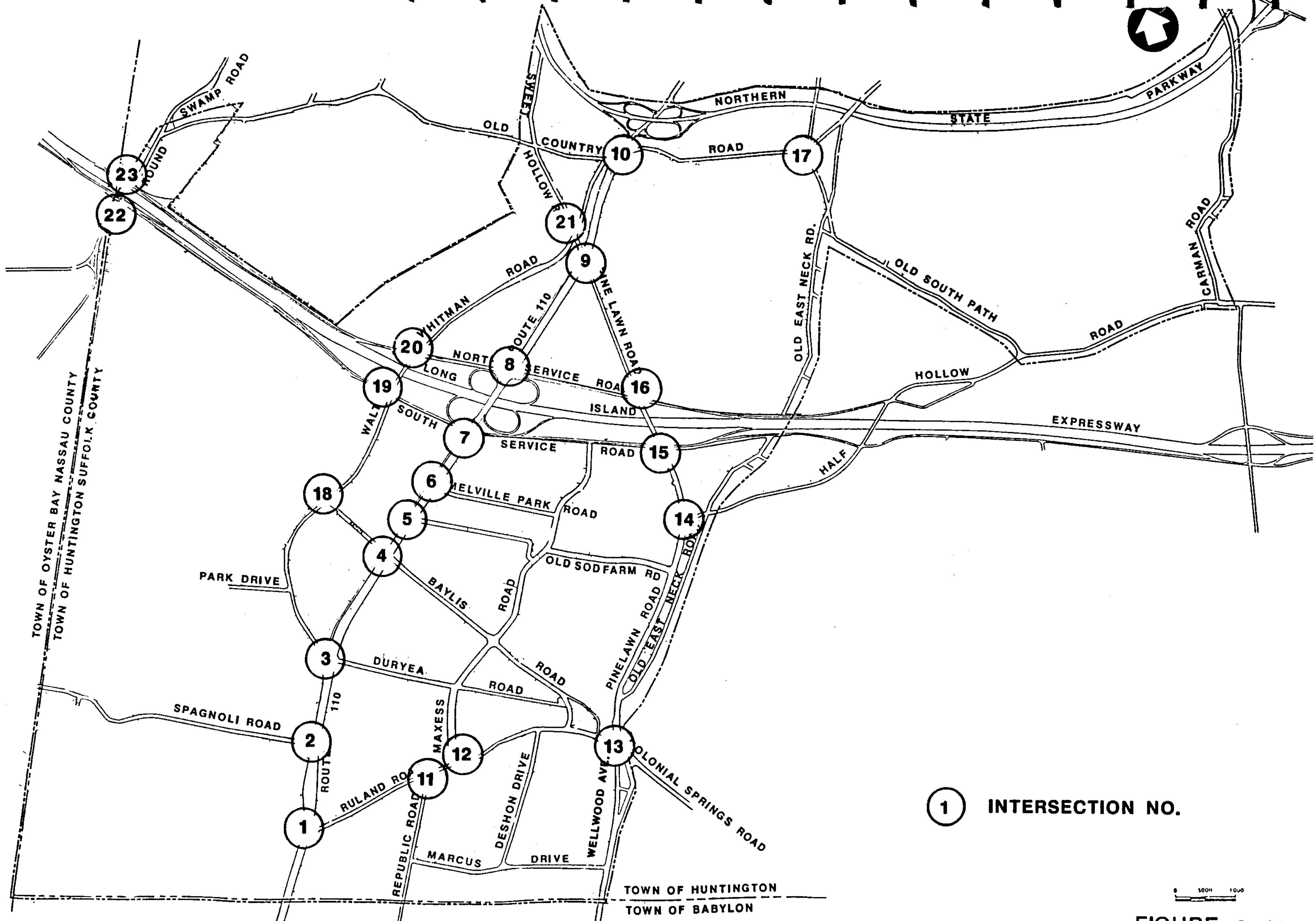

FIGURE 2-10

KEY ROADWAY & INTERSECTIONS

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nections to Walt Whitman Road and Pinelawn Road. The LIE is also the major carrier of truck traffic throughout Long Island.

Northern State Parkway

The Northern State Parkway (NSP) is a 55 mph, four-lane divided, limited access facility. It extends in an east-west direction along the northern portion of Long Island from the boundary of New York City and Nassau County to NYS Route 454 in Hauppauge. The NSP, built in 1947, acts as the northern boundary of the study area and interchanges with NYS Route 110 (NSP Exit 40). It is characterized by inadequate acceleration and deceleration lanes, substandard ramp geometrics, and is restricted to passenger vehicles. The bridge structure over NYS Route 110 is approximately 48 feet wide (abutment to abutment), and allows for only four travel lanes (two lanes per direction) along Route 110.

NYS Route 110 (Broad Hollow Road)

NYS Route 110 runs in a north-south direction from the south shore of Long Island (Merrick Road in Amityville) to the north shore (Main Street in Huntington). It is the major arterial serving the study area. Originally constructed in 1954 as a four-lane highway providing direct access to the adjacent properties, it has been, and currently is being reconstructed. Due to traffic demands, Route 110 was reconstructed to a six-lane arterial from Baylis Road to the LIE (North Service Road) in 1978. The reconstruction also included intersection improvements such as left turn storage lanes and signal timing adjustments. The portion of Route 110 between Conklin Avenue (in Farmingdale) and Baylis Road has been reconstructed to provide six lanes plus left turn storage lanes, median barriers and upgraded signalization. The posted speed limit along this section of Route 110 is 45 mph.

NYS Route 110 north of the LIE remains a four-lane arterial, within a 130-foot right-of-way, providing direct access to adjacent land uses. It is signalized at the intersections of Pinelawn Road and Old Country Road with left turn storage lanes at both intersections. North of the study area, Route 110 continues as a four-lane highway until it intersects with Jericho Turnpike.

Ruland Road (Suffolk County Route 5)

Ruland Road is an east-west County road connecting Route 110 to Pinelawn Road in the southeastern section of the study area. It is a two-lane (32-foot asphalt pavement) rural roadway in poor condition with a 30 mph posted speed limit. Its intersections with Route 110, Republic Road, Baylis Road, and Pinelawn Road are signalized. The "T" intersections at Maxess Road and Deshon Drive is controlled by stop and yield signs, respectively.

Pinelawn Road (Suffolk County Route 3)

Pinelawn Road is a north-south County road running along the eastern portion of the study area. It is a four-lane highway with left turn storage lanes and signalization control at all major intersections. It serves the office developments along the eastern section of the study area and acts as an alternate north-south route for Route 110. Pinelawn Road has an asphalt surface and a posted speed limit of 40 mph.

Walt Whitman Road

Walt Whitman Road, originally constructed in 1929 (as Amityville-Huntington Road), is a north-south route between Duryea Road and Old Country Road. It has retained its original characteristics of a two-lane (20-foot wide concrete pavement) rural road with substandard horizontal curvature and a posted speed limit of 30 mph. Its intersections with the northbound and southbound LIE service roads have been widened to accommodate left turn storage lanes. Also, the Walt Whitman Road/Route 110/Duryea Road intersection has been improved to provide a through southbound movement from Walt Whitman Road to Route 110. Its intersections with Baylis Road and Sweet Hollow Road are controlled by traffic signals.

Spagnoli Road

Spagnoli Road has a variable width from Round Swamp Road (Nassau County) to Route 110. It services offices, industries and a landfill operation in the southwestern section of the study area. It has an asphalt surface in poor condition due primarily to the heavy volume of truck traffic. The posted speed limit is 30 mph.

Baylis Road

Baylis Road, an east-west local roadway, is a two-lane road west of Route 110, serving office developments between Walt Whitman Road and Route 110. Baylis Road, east of Route 110, is a four-lane roadway intersecting Maxess Road and terminating at Ruland Road. It has an asphaltic surface in good condition and a 30 mph speed limit.

Maxess Road

Maxess Road is a north-south route between Ruland Road and the south service road of the LIE. It is a four-lane roadway designed to service the adjacent office developments. Its intersections with Baylis Road and Old Sod Farm Road are signalized. The intersections with Ruland Road, Duryea Road, Melville Park Road, and LIE South Service Road are all stop controlled.

Old Country Road

Old Country Road is an east-west road at the northern end of the study area, located between Sweet Hollow Road and New York Avenue. It is a two-lane roadway that serves primarily commuter traffic to and from Nassau County. The intersections at Sweet Hollow Road, Route 110, and New York Avenue are all signalized. It has an asphalt pavement and a 30 mph speed limit.

New York Avenue, Old South Path Road, Half Hollow Road

New York Avenue, Old South Path Road, and Half Hollow Road are major collector town roads providing access for residential communities in the northeastern portion of the study area. They are two-lane, asphalt roadways with a 30 mph speed limits.

2.4.2 Existing Traffic Characteristics

The existing traffic characteristics discussed in this section are based on data from various sources. This report utilizes documentation and record information contained in previously prepared Environmental Impact Statements (EIS's) and supporting traffic studies. Data provided by the New York State Department of Transportation (NYSDOT), Suffolk County Department of Public Works (SCDPW), and Town of Huntington Traffic Department were utilized extensively. To supplement this data, an extensive data collection effort was undertaken to obtain current information on traffic characteristics. The type of data available included: peak hour turning movement counts, 24-hour average annual daily traffic counts, average travel speed and delay runs, signal timing, roadway geometric information, accidents and transit information.

Traffic volumes within the study area can be expressed in terms of Average Annual Daily Traffic (AADT). The volumes obtained from NYSDOT and SCDPW were adjusted to reflect existing conditions. To provide a comparison of the relative magnitude of traffic on each major highway, existing AADT's are shown in Figure 2-11. This figure shows the heaviest volume of traffic (58,000 AADT) along Route 110 south of Spagnoli Road. The volume decreases along Route 110 north of the LIE (38,100 AADT). Pinelawn Road and Walt Whitman Road AADT volumes range from 16,000-41,300 and 9,400-19,800 respectively.

Previous EIS's and traffic studies for projects such as: OMNI 110, In-Law Realty, We're Associates, Belwin Mills, LI Savings Bank, HMCC Associates, and others provided AM and PM peak hour turning movement counts for selected intersections within the study area, during the period 1983-1986. The volumes presented in these earlier studies were determined to be acceptable. They were expanded to reflect 1987 conditions by using a growth rate of 1.5 percent annually. This growth rate was determined by a comparative analysis at selected intersections for which data were obtained during recent years. In addition, this rate correlates closely with that used in previous EIS's.

The existing highway network previously described operates under varying traffic characteristics. The Northern State Parkway and LIE are considered to be uninterrupted flow facilities while Route 110, Pinelawn Road and Old Walt Whitman Road are interrupted flow facilities that have traffic signalized intersections. The operating characteristics of the existing highway network in the study area can be described using a measure of traffic flow conditions termed Level of Service (LOS). According to the Highway Capacity Manual (Transportation Research Board, 1985), the

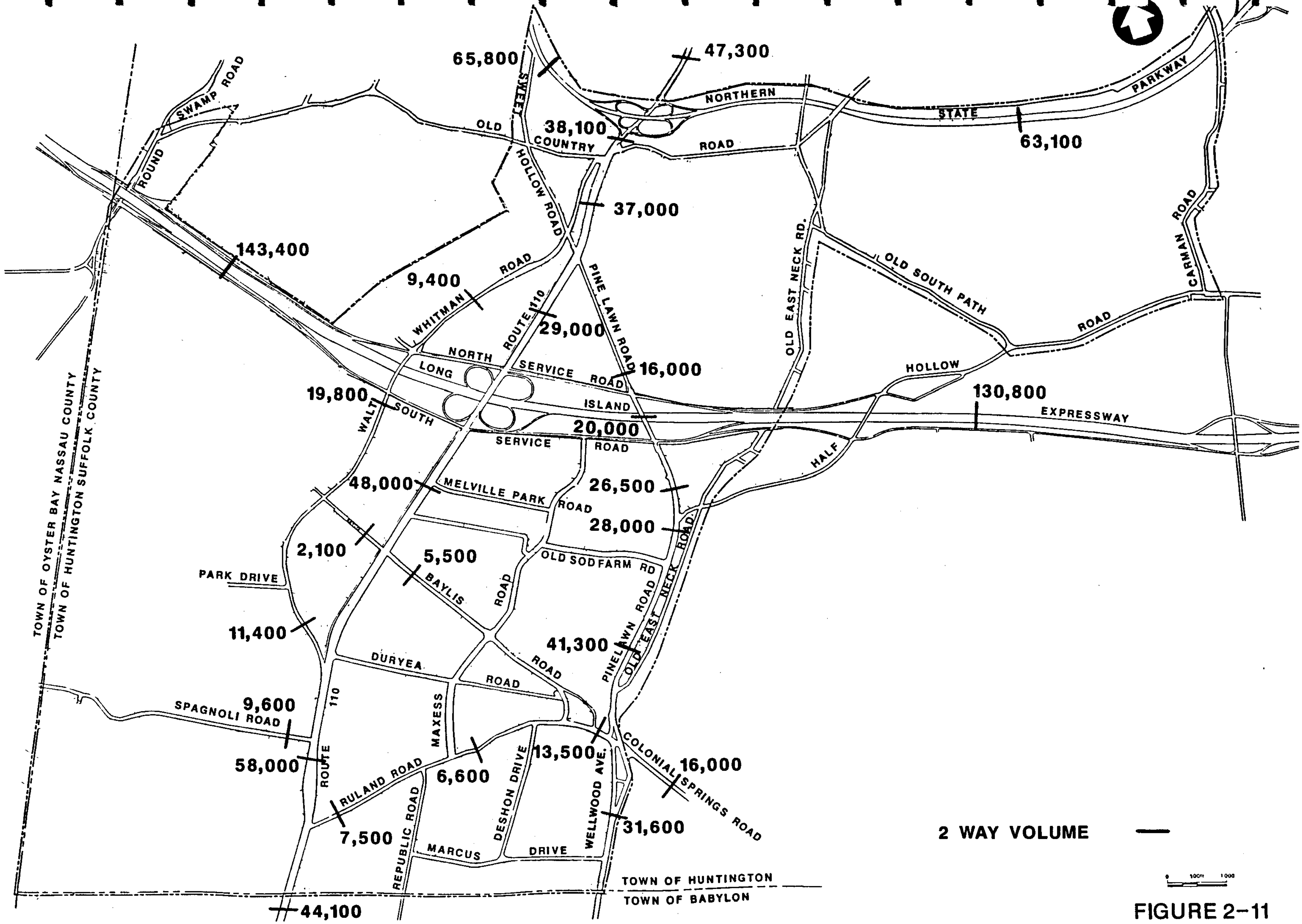

FIGURE 2–11

EXISTING AADT VOLUME

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concept of Level of Service is defined as a qualitative measure describing operational conditions within a traffic stream, and the perception by motorists and/or passengers. For uninterrupted flow facilities (i.e., expressways and parkways), a LOS of A represents free flow, a LOS of E represents operating conditions at or near the capacity level, and LOS of F is defined as forced or breakdown flow. For interrupted flow facilities (i.e., traffic signalized intersections), a LOS of A describes operations with very low delay (less than 5 seconds per vehicle), a LOS of E is considered the limit of acceptable delay (less than 60 sec/veh), and LOS of F is considered an unacceptable delay (greater than 60 sec/veh).

The LIE traffic volumes are characterized by a westbound commuter flow in the morning and an eastbound return in the evening. The peak flow direction LOS on the LIE ranges from D to F, depending on the specific roadway segment. Similarly, for the NSP, peak traffic volumes are westbound in the AM peak and eastbound in the PM peak, with the peak direction LOS ranging from D to F. These facilities are regional highways and local traffic conditions on these routes are highly influenced by vehicles added from development occurring outside this study area.

Within the study area, key arterials distribute the traffic to and from the regional highways. The limiting factor for traffic movement along these arterials are the signalized intersections. Within the study area boundaries there are 45 intersections of which 30 are controlled by signalization. To obtain a comprehensive traffic flow pattern, 23 key intersections were selected for analysis. These intersections are identified in Table 2-3. Existing traffic volume data are included in Appendix B.

To supplement existing information, turning movement counts were taken at selected intersections during December 1986 for the AM peak (7 AM to 9 AM),

TABLE 2-3

KEY INTERSECTIONS

1. Route 110/Ruland Road*
2. Route 110/Spagnoli Road*
3. Route 110/Duryea Road*
4. Route 110/Baylis Road*
5. Route 110/Huntington Quadrangle*
6. Route 110/Melville Park Road*
7. Route 110/LIE South Service Road*
8. Route 110/LIE North Service Road*
9. Route 110/Pinelawn Road*
10. Route 110/Old Country Road*
11. Ruland Road/Republic Road
12. Ruland Road/Maxess Road
13. Pinelawn Road/Colonial Springs Road
14. Pinelawn Road/Half Hollow Road*
15. Pinelawn Road/LIE South Service Road
16. Pinelawn Road/LIE North Service Road
17. Old Country Road/New York Avenue
18. Walt Whitman Road/Baylis Road*
19. Walt Whitman Road/LIE South Service Road
20. Walt Whitman Road/LIE North Service Road
21. Walt Whitman Road/Sweet Hollow Road
22. Round Swamp Road/LIE South Service Road*
23. Round Swamp Road/LIE North Service Road*

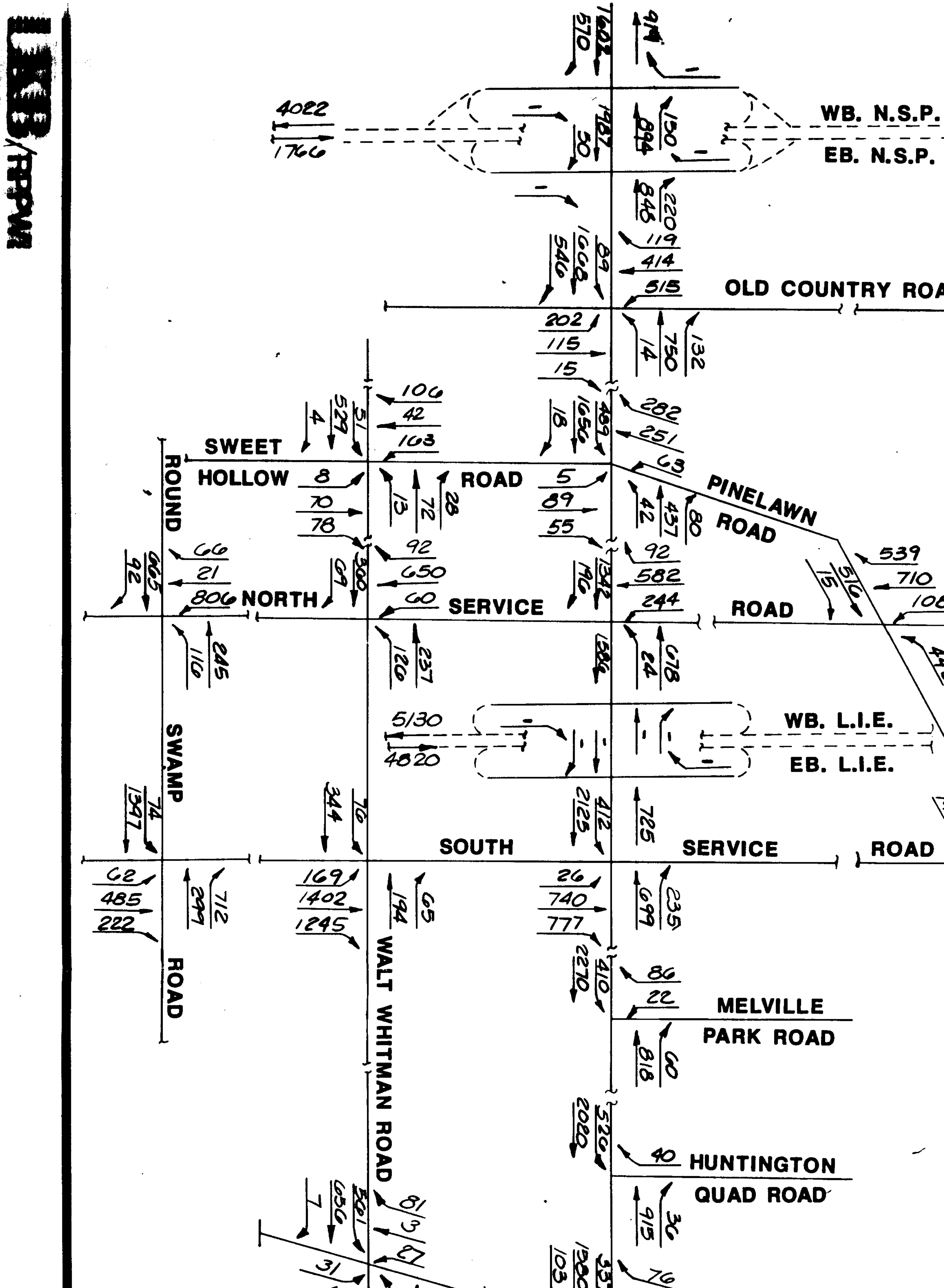
* Intersection at which turning movement counts were collected.

MD (mid-day) peak (11 AM to 1 PM), and PM peak (4 PM to 6 PM) periods. These time periods were used for traffic analyses because they represent the most critical periods for operations and capacity requirements of the roadway network. Based on the data collected, the peak hours for this study area consist of an AM peak from 7:30 to 8:30 AM, a MD peak from 12 to 1 PM, and a PM peak from 4:30 to 5:30 PM. The intersections at which field counts were taken are identified in Table 2-3.

The present traffic volumes for these intersections are shown in Figures 2-12 and 2-13. Route 110 carries the highest volume of traffic, with approach volumes ranging from approximately 1500 vehicles per hour (vph) to 2500 vph. The next most heavily traveled road is Pinelawn Road, with peak hour approach volumes ranging from 500 vph to 1800 vph. Walt Whitman Road handles between 400 and 1300 peak hour approach volumes.

The vehicle composition of traffic at several intersections indicated significant truck traffic. At intersections 1, 2 and 3, the percentage of trucks, during the peak hours, ranged from 8 percent to 16 percent of the total approach volume. This is due primarily to Route 110's direct access to the LIE, a large proportion of industrial land uses along Route 110 (south of the LIE), and the location of the 110 Sand Company (off Spagnoli Road).

A LOS analysis was performed on the key intersections. The peak hour LOS for each intersection analyzed is presented in Table 2-4 and shown on Figure 2-14. The generally lowest acceptable LOS's by NYSDOT are LOS C or D. This analysis indicated that the intersections along Route 110, south of the LIE, are operating at acceptable LOS's; whereas the intersections along Route 110, north of the LIE, are functioning well below standards.


WB. N.S.P.
EB. N.S.P.
OLD COUNTRY ROAD
SWEET HOLLOW ROAD
PINELAWN ROAD
ROUND SWAMP ROAD
NORTH SERVICE ROAD
WB. L.I.E.
EB. L.I.E.
SOUTH SERVICE ROAD
WALT WHITMAN ROAD
MELVILLE PARK ROAD
HUNTINGTON QUAD ROAD

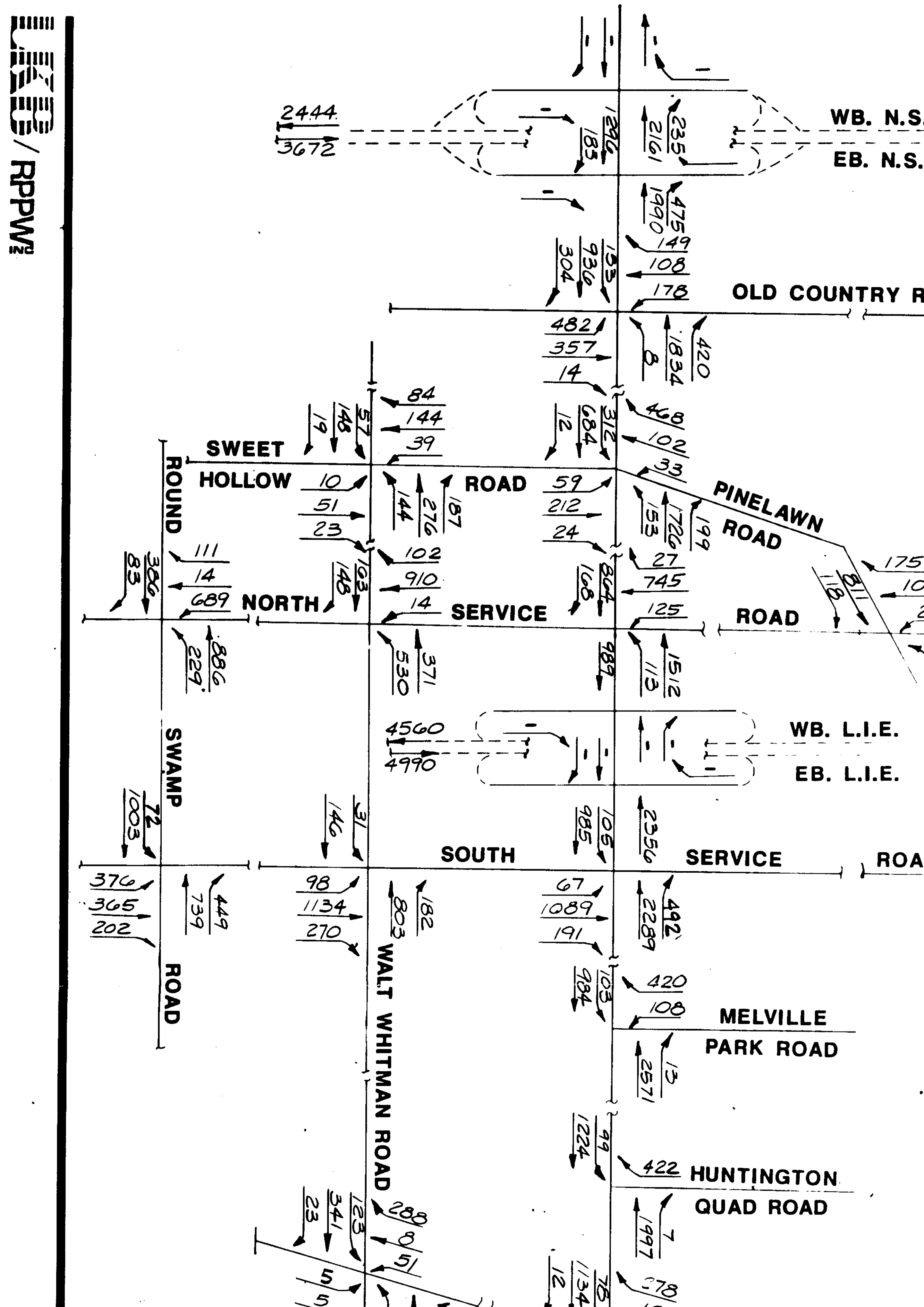

RPPW
WB. N.S.
EB. N.S.
2444
3672
OLD COUNTRY R
SWEET HOLLOW ROAD
PINELAWN ROAD
ROUND SWAMP ROAD
NORTH SERVICE ROAD
WB. L.I.E.
EB. L.I.E.
4560
4990
SOUTH SERVICE ROAD
WALT WHITMAN ROAD
MELVILLE PARK ROAD
HUNTINGTON QUAD ROAD
1296
183
2161
235
1990
475
149
108
178
304
936
133
482
357
14
8
1834
420
84
144
39
19
148
57
10
51
23
144
276
187
12
684
312
468
102
33
59
212
24
153
1726
199
111
14
689
83
386
102
910
14
148
163
168
864
27
745
125
118
811
229
886
530
371
989
113
1512
1003
72
146
31
985
105
2356
376
365
202
739
449
98
1134
270
803
182
67
1089
191
2289
492
984
103
420
108
2571
13
1224
99
422
1997
7
23
341
123
288
8
51
5
12
134
78

TABLE 2-4

LEVEL OF SERVICE

Intersection		Existing AM	Existing MD	Existing PM
1	Rt. 110/Ruland Rd.	C	B	C
2	Rt. 110/Spagnoli Rd.	D	D	D
3	Rt. 110/Duryea Rd.	C	C	D
4	Rt. 110/Baylis Rd.	D	D	E
5	Rt. 110/Hunt. Quad.	C	B	C
6	Rt. 110/Melville Pk.Rd.	C	C	E
7	Rt. 110/S.Ser.Rd.(LIE)	D	B	E
8	Rt. 110/N.Ser.Rd.(LIE)	C	C	C
9	Rt. 110/Pinelawn Rd.	D	E	F
10	Rt. 110/O.Ctry. Rd.	D	D	F
11	Ruland Rd/Republic Rd.	D	-	F
12	Ruland Rd/Maxess Rd.	C	-	D
13	Pinelawn/Colonial Spgs.	D	-	F
14	Pinelawn/Half Hollow	D	-	D
15	Pinelawn/S.Ser.Rd.(LIE)	C	-	F
16	Pinelawn/N.Ser.Rd.(LIE)	F	-	B
17	Old Ctry.Rd/N.Y. Ave.	F	-	F
18	Walt Whit/Baylis	D	-	D
19	Walt Whit/S.Ser.Rd.	C	-	E
20	Walt Whit/N.Ser.Rd.	B	-	D
21	Walt Whit/Swt.Hollow	B	-	D
22	Rnd.Swp.Rd/S.Ser.Rd(LIE)	E	-	D
23	Rnd.Swp.Rd/N.Ser.Rd(LIE)	D	-	D

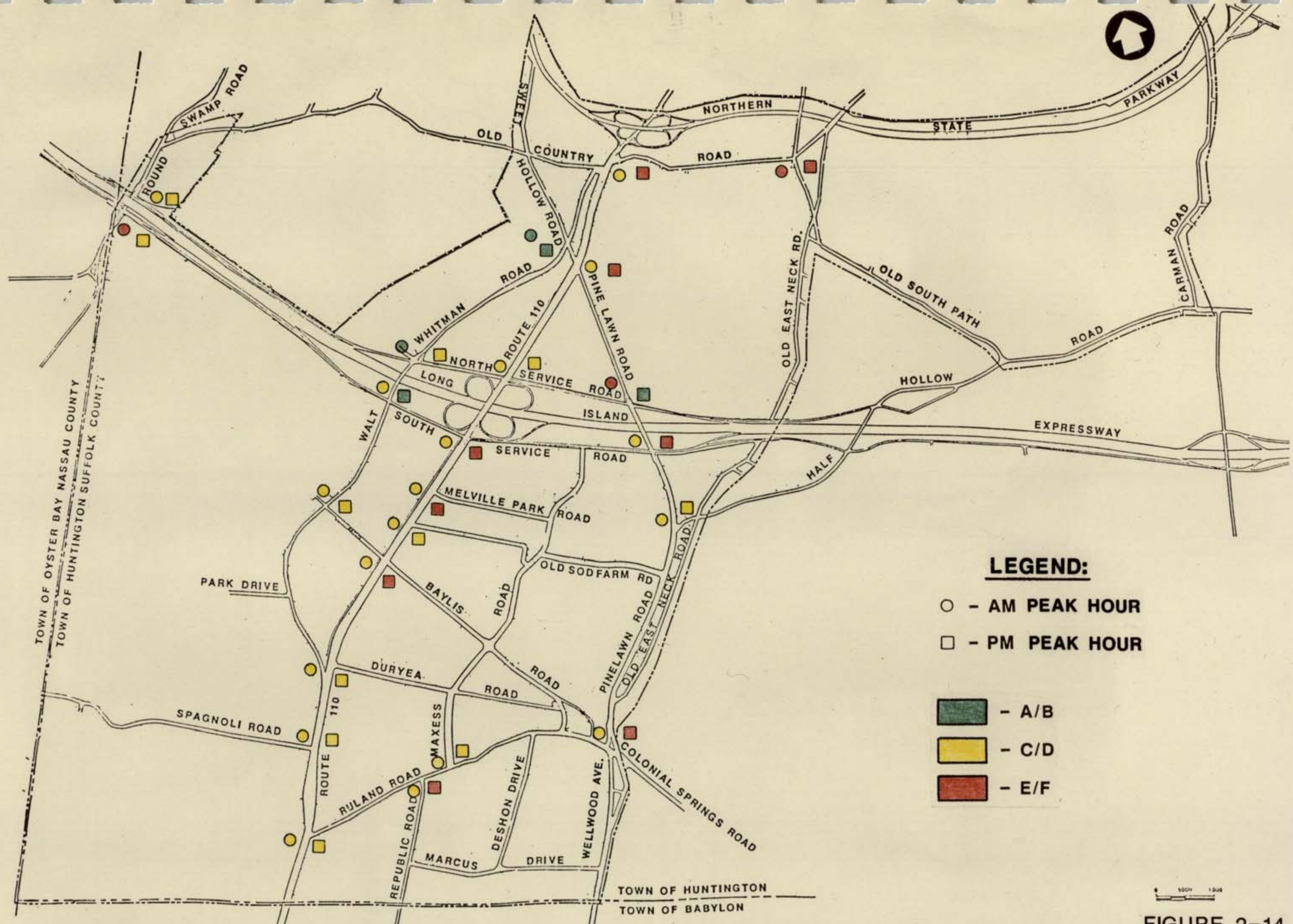


FIGURE 2-14

LEVEL OF SERVICE - EXISTING CONDITIONS

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Specific intersections functioning below standards are described in the following discussion. The Route 110/Pinelawn Road and Route 110/Old Country Road intersections operate at LOS F during the PM peak. Also, significant back-ups in the northbound direction from Pinelawn Road to Old Country Road were observed during the field count program. The Route 110/Baylis Road intersection experiences poor LOS for the left turn movement due to the conflict with a large through movement along Route 110. However, the through movement along Route 110 experiences an acceptable LOS (C/D) during the peak hours. Other intersections within the study area that are operating at an unacceptable LOS are:

- Pinelawn Road/Colonial Springs Road, PM peak
- Pinelawn Road/LIE South Service Road, PM peak
- Pinelawn Road/LIE North Service Road, AM peak
- Old Country Road/New York Avenue, AM and PM peak

The existing characteristics of these intersections indicate the already congested nature of the roadway network. Further increases in traffic volume will worsen this situation.

In addition to peak hour analyses of key intersections, a speed and delay analysis was performed. Three routes were selected between the Route 110/Old Country Road intersection and the Route 110/Ruland intersection:

- Route 110
- Pine Lawn Road - Ruland Road
- Walt Whitman Road

The average travel speed, intersection delay and total travel time were recorded during the peak hours along these three routes.

This analysis indicated an average travel time along Route 110 during the AM and MD periods to be approximately 5.5 minutes between intersections 1 and 10 (in either direction southbound or northbound). However, during the PM period, the average travel time northbound along Route 110 was approximately eight minutes due to significant delays at the Route 110/Pinelawn Road and Route 110/Old Country Road intersections.

Average travel speeds between these intersections are less than 13 mph, which indicates a poor operating level of service. Delays at these intersections are also related to the Northern State Parkway bridge over Route 110, which allows only two northbound through lanes. For the Pinelawn Road/Ruland Road route, the average travel time was approximately eight minutes for AM and MD peaks. The northbound PM period route had an approximate 12-minute average travel time due to delays at the intersections of Route 110/Pinelawn Road and Route 110/Old Country Road. The Walt Whitman Road route indicated an average travel time of eight minutes (between intersections 1 and 10) during the AM, MD and PM peak hours.

The arterial LOS was determined by comparing average travel speeds as defined by the 1985 Highway Capacity Manual. For a major arterial the LOS range is LOS A (average travel speed over 35 mph) to a LOS F (average travel speed under 13 mph). For a minor arterial the LOS range is LOS A (average travel speed over 30 mph) to LOS F (average travel speed under 10 mph). The arterial speeds, delays and LOS are presented in Table 2-5.

Vehicle accident rates also depict a critical traffic characterization. The data obtained from NYSDOT and Suffolk County DPW is presented in Table 2-6. This tabulation indicates that the majority of accidents occurring along Route 110 are north of the LIE, particularly at the Route 110/Pinelawn Road and Route 110/Old Country Road intersections.

TABLE 2-5a

ARTERIAL LOS
AVERAGE TRAVEL SPEED
ROUTE 1: ROUTE 110

		AM PEAK				PM PEAK			
	Dist.	Southbound		Northbound		Southbound		Northbound	
Cross Street	(Mi.)	Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS
Old Country Rd.									
	.4	25	C	33	B	29	B	11	F
Pinelawn Rd.									
	.4	41	A	32	B	40	A	18	D
N. Service Rd.									
	.2	18	D	19	D	40	A	36	A
S. Service Rd.									
	.2	36	A	18	D	34	A	13	F
Melville Pk.Rd.									
	.1	34	B	16	E	33	A	38	A
Hunt. Quad. Rd.									
	.1	18	D	31	B	13	F	38	A
Baylis Rd.									
	.4	26	C	28	B	21	D	27	C
Duryea Rd.									
	.3	34	B	33	B	24	C	25	C
Spagnoli Rd.									
	.3	28	C	24	C	35	A	18	D
Ruland Rd.									

TABLE 2-5b

ARTERIAL LOS
AVERAGE TRAVEL SPEED
ROUTE 2: WALT WHITMAN ROAD

		AM PEAK				PM PEAK			
		Southbound		Northbound		Southbound		Northbound	
Cross Street	Dist. (Mi.)	Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS
Old Country Rd.									
	.05	27	B	3	F	6	F	3	F
Walt Whit. Rd.									
	.3	21	C	19	C	20	C	13	E
Sweet Hollow Rd.									
	.9	50	A	41	A	40	A	46	A
N. Service Rd.									
	.2	11	E	12	E	31	A	9	F
S. Service Rd.									
	.4	26	B	25	B	36	A	22	C
Baylis Rd.									
	.7	29	B	31	A	35	A	35	A
Route 110									
	.2	13	E	11	F	30	B	12	F
Spagnoli Rd.									
	.3	21	D	24	C	27	C	21	D
Ruland Rd.									

TABLE 2-5c

ARTERIAL LOS
AVERAGE TRAVEL SPEED
ROUTE 3: PINELAWN ROAD

		AM PEAK				PM PEAK			
		Southbound		Northbound		Southbound		Northbound	
Cross Street	Dist. (Mi.	Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS
Old Country Rd.									
	.4	22	C	25	C	23	C	15	E
Pinelawn Rd.									
	.5	21	D	15	E	27	C	11	F
N. Service Rd.									
	.2	28	C	31	B	28	C	31	B
S. Service Rd.									
	.3	25	C	16	E	43	A	17	E
Half Hollow Rd.									
	.2	18	D	23	C	22	C	26	C
Old Sod Farm									
	.2	34	B	43	A	24	C	19	D
Estee Ldr. Dr.									
	.1	38	A	47	A	35	B	35	B
Greenway Pl. Dr.									
	.3	24	C	38	A	32	B	34	B
Ruland Rd.									
	.1	25	B	17	D	13	E	8	F
Baylis Rd.									
	.5	30	A	30	A	22	C	15	C
Republic Rd.									
	.5	22	C	32	A	21	C	26	B
Route 110									

TABLE 2-6

ACCIDENT DATA

Intersection Location	1983	1984	1985	Total	Percentage of Total
Rt.110/Ruland Rd.	12	16	15	43	4
Rt.110/Spagnoli Rd.	24	25	22	71	7
Rt.110/Duryea Rd.	32	40	60	132	12
Rt.110/Baylis Rd.	17	28	33	78	7
Rt.110/Melville Pk. Rd.	12	5	11	28	3
Rt.110/LIE(S.Service Rd.)	36	30	51	117	11
Rt.110/LIE(S.Service Rd. to No. Service Rd.)	23	20	21	64	6
Rt.110/LIE (N.Service Rd.)	27	41	26	94	9
Rt.110/Pinelawn Rd.	45	46	65	156	15
Rt.110/Old Country Rd.	34	42	46	122	11
Rt.110/NSP (E-B Ramps)	34	36	36	106	10
Rt.110/NSP (W-B Ramps)	17	20	13	50	5
	313	349	399	1061	100

Source: New York State Department of Transportation

2.4.3 Public Transportation

Public transportation to the study area is limited. Mass transit service (bus and rail) is provided by the Long Island Rail Road, Suffolk County Transit, and the HART (Huntington Area Rapid Transit) bus system. According to 1980 statistics, a very small percentage of workers in the Melville area use public transportation as a means of travel to their place of employment. Approximately 97.4 percent of the study area workers travel by auto, 1.1 percent use public transportation (0.2 percent rail, 0.9 percent bus), and 1.6 percent use other means such as walking, bicycling, or motorcycling (LIRPB, 1984).

Rail Service

There are no railroad stations located within the study area boundaries. The nearest stations are the Huntington railroad station for the LIRR Port Jefferson line (approximately 5 miles north of the LIE), and the Republic railroad station (approximately 3 miles south of the LIE). The Republic station has recently been closed and the next closest stations for the LIRR Hicksville-Bethpage line are located at Farmingdale and Pinelawn. As reported by the LIRPB (1980), rail transportation use by Long Island commuters travelling to Long Island businesses is limited by the proximity of their work place to train stations. The small number of rail commuters to Melville is the result of most jobs not being located near the train station and the scheduled service being biased towards New York City. Therefore, the railroad plays a negligible role in providing access to employment places within the study area.

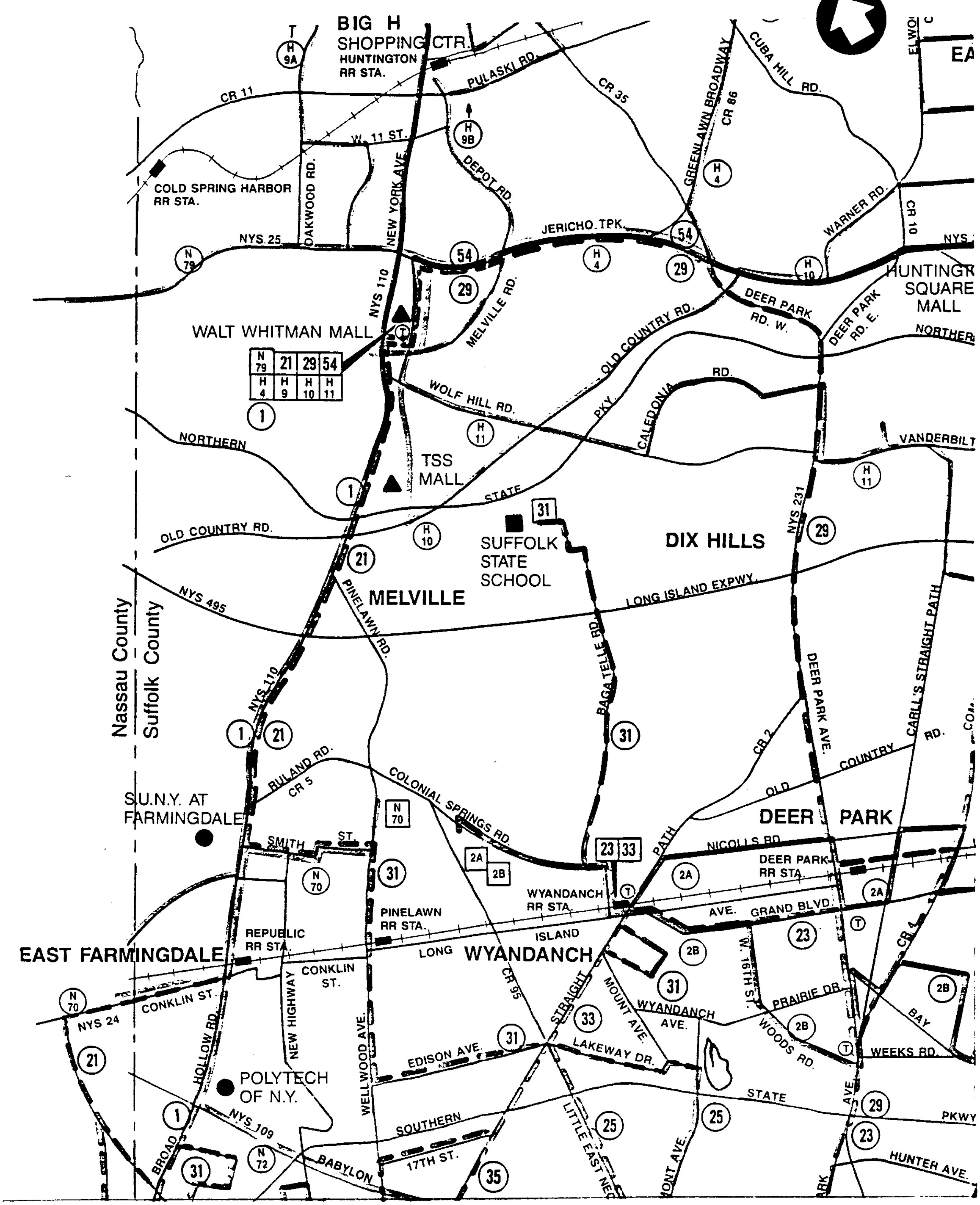
Bus Service

Suffolk County Transit is the major supplier of bus transportion throughout Suffolk County, and within the study area (Figure 2-16). In addition, the HART bus system provides limited service. Its only route within the study area operates along Old Country Road, on Saturdays, to the Walt Whitman Shopping Mall. Suffolk County Transit operates two routes within the study area: S-1 and S-31. The S-31 route operates between Montauk Highway in Copiague, to the Suffolk State School, in the northeast section of the study area. It services the local residential areas of Wyandanch, North Babylon, Amityville, and Copiague.

The S-1 route is the only viable transit service to the study area (Figure 2-15). This line runs between the Amityville railroad station along Route 110 to Halesite in North Huntington. Its only regular stop in the study area is the Huntington Quadrangle. However, the bus will stop at any corner if a passenger desires to board or to depart. The timetable (for Huntington Quadrange) indicates 27 runs per day between 6 AM and 8 PM, with 30 minute headways both northbound and southbound. Travel time from either the Amityville railroad station or the Huntington railroad station to the Huntington Quadrangle is approximately 30 minutes. During the peak hour (either AM, MD or PM) only two buses northbound and two buses southbound arrive at the Huntington Quadrangle.

The bus system plays a minor role as a means of travel to the study area. The lack of use of the bus system is due to several reasons; specifically:

- there are no east-west bus routes into the study area;



SOURCE: SUFFOLK COUNTY TRANSIT

FIGURE 2-15

SUFFOLK COUNTY TRANSIT ROUTES

LKB /RPPW INC

- traffic congestion results in increased travel time for bus passengers;
- there is no direct bus service to most of the existing industrial or office parks;
- the frequency of service, during peak hours is minimal;
- service to and from the railroad stations is limited; and
- the lack of sidewalks to accommodate pedestrians to and from bus stops.

Air Service

The study area is serviced by the major New York City airports (Kennedy and La Guardia) and by local airports (Islip MacArthur and Republic). Republic Airport, closest to the study area, is located four miles south of the LIE on Route 110. It is a general aviation (GA) airport with commuter service. In addition, this facility houses a heliport which can provide helicopter service to the local business communities of Babylon and Huntington.

A recent master plan for Republic Airport (Republic Airport Master Plan Update, April 1986) indicates that it will continue to function as a general aviation facility. It is anticipated that GA operations will grow at approximately two percent per year. Also indicated is that there will be no heavy air carrier jet operations at Republic. All such activity will remain at Kennedy, La Guardia and Mac Arthur. Commuter service is limited by the current operating restriction that prohibits aircraft in excess of 60,000 pounds or more than 30 seats to operate on a regularly scheduled basis. Therefore, it was estimated that peak hour enplanements per day would increase from the present 98 to 135 in the year 1990, and to 218 in the year 2005.

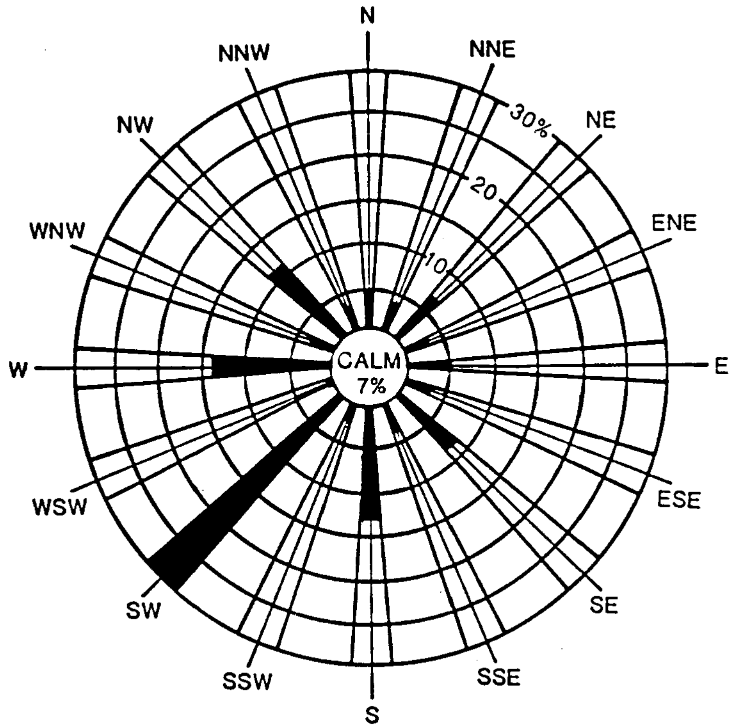
2.5 Air Resources

2.5.1 Climate

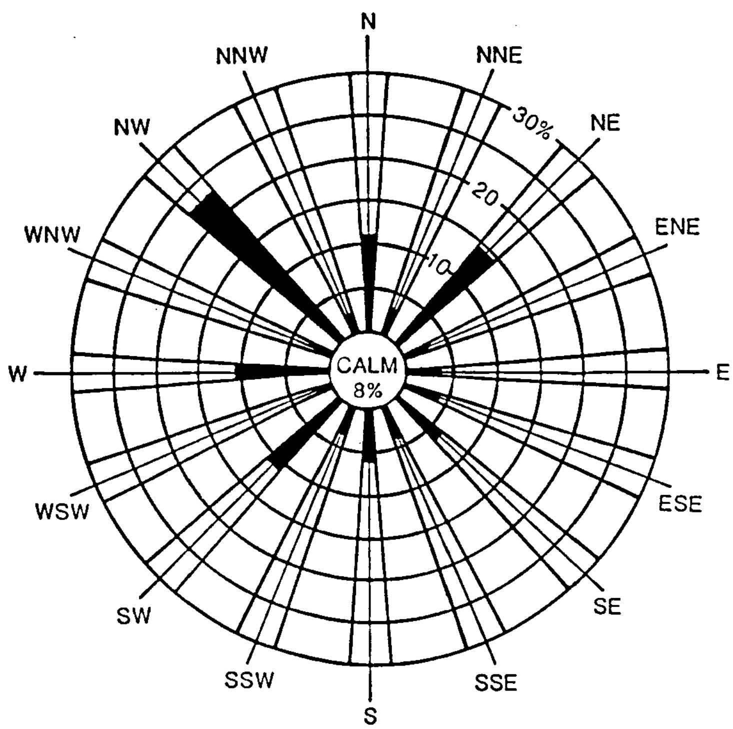
The climate of the Melville-Route 110 Area is generally mild and humid, typical of the continental, maritime-modified climate of the northeastern seaboard. National Weather Service data for the 30-year period from 1951 to 1980, as monitored at LaGuardia Airport approximately 30 miles to the west, reflect the climate in the study area. The annual temperature averaged 54 degrees F, with a winter (January) monthly temperature of 32 degrees F and a summer (July) monthly temperature of 76 degrees F. Precipitation data for that period showed an annual average of 43 inches, with a low of 3.1 inches in February and a high of 4.3 inches in August. Snowfall averaged 26 inches per year. The average annual wind speed was 12.3 mph, with prevailing winter winds out of the northwest, and summer winds out of the southwest. These seasonal wind conditions are illustrated by the Brookhaven National Laboratory wind roses shown in Figure 2-16 (Nagle, 1978).

2.5.2 Air Quality

The air pollutants of concern in evaluating air quality in the study area are classified as criteria pollutants. Criteria pollutants are those for which ambient air quality standards have been set. These pollutants include: sulfur dioxide (SO2), carbon monoxide (CO), ozone (O3), hydrocarbons (HC), nitrogen dioxide (NO2), total suspended particulates (TSP), and lead (Pb). The National Ambient Air Quality Standards (NAAQS) and the New York State Standards for these criteria pollutants are shown in Table 2-7. The primary standards listed in Table 2-7 are intended to protect human health and the secondary standards are designed to protect public welfare (e.g., plant and animal life, materials).



SUMMER WIND DIRECTION ROSE, 37 FT. LEVEL (JULY)



WINTER WIND DIRECTION ROSE, 37 FT. LEVEL (FEB.)

SOURCE: BROOKHAVEN NATIONAL LABORATORY

FIGURE 2-16

LKB/RPPW

WINTER AND SUMMER WIND ROSES

TABLE 2-7

AMBIENT AIR QUALITY STANDARDS

Contaminant (1)	Averaging Period	New York State Standards				CORRESPONDING Federal Standards					
						PRIMARY			SECONDARY		
		Level	Conc.	Units	Statistic (2)	Conc.	Units (5)	Stat.	Conc.	Units	Stat.
SULFUR DIOXIDE SO_2	12 Consecutive Months	ALL	0.03	PPM	A.M. (Arith. Mean of 24hr. avg. concen.)	80	μg/m³	A.M.			
	24-HR.	ALL	0.14 (3)	"	MAX. (2)	365	μg/m³	MAX (2)	-		
	3-HR.	ALL	0.50 (4)	"	MAX.				1300	μg/m³	MAX.
CARBON MONOXIDE CO	8-HR.	ALL	9	"	MAX.	10	mg/m³	MAX.	10	mg/m³	MAX.
	1-HR.	ALL	35	"	MAX.	40	mg/m³	MAX.	40	mg/m³	MAX.
OZONE (PHOTOCHEMICAL OXIDANTS)	1-HR.	ALL (8)	0.12	"	MAX.	235	μg/m³	MAX.	235	μg/m³	MAX.
HYDROCARBONS (NON-METHANE)	3-HR. (6-9 A.M.)	ALL	0.24	"	MAX.						
NITROGEN DIOXIDE	12 Consecutive Months	ALL	0.05	"	A.M.	100	μg/m³	A.M.	100	μg/m³	A.M.
PARTICULATES (State standard is for total suspended particulates - TSP. Federal Standard is for fine particulate matter <10 microns in diameter. - PM10.)	12 Consecutive Mos.	IV	75	μg/m³	G.M. (Geometric mean of 24hr. average concentrations)	50	μg/m³	G.M.	50 (6)	μg/m³	G.M.
		III	65	"							
		II	55	"							
		I	45	"							
	24 HR	ALL	250	"	MAXIMUM	150	μg/m	MAX.	150	μg/m	MAX.
	30 DAYS (7)	IV	135	"	A. M.						
		III	115	"	"						
		II	100	"	"						
		I	80	"	"						
	60 DAYS (7)	IV	115	"	A. M.						
		III	95	"	"						
		II	85	"	"						
		I	70	"	"						
	90 DAYS (7)	IV	105	"	A. M.						
		III	90	"	"						
		II	80	"	"						
		I	65	"	"						
LEAD	3 Consecutive Mos.	(9)				1.5	μg/m³	MAX.			

(1) N.Y.S. also has standards for Beryllium, Fluorides, Hydrogen Sulfide and Settleable Particulates (Dustfall).

(2) All maximum values are values not to be exceeded more than once a year (Ozone std. not to be exceeded during more than one day per year)

(3) Also during any 12 consecutive months, 99% of the values shall not exceed 0.10 ppm (not necessary to address this standard when predicting future concentrations)

(4) Also during any 12 consecutive months 99% of the values shall not exceed 0.25 ppm (see above)

(5) Gaseous concentrations are corrected to a reference temperature of 25° C and to a reference pressure of 760 millimeters of Mercury

(6) As a guide to be used in assessing implementation plans to achieve 24-hour standard

(7) For enforcement only, monitoring to be done only when required by N.Y.S., (not necessary to address this standard when predicting future concentrations

(8) Existing N.Y.S. standard for Photochemical Oxidants (Ozone) of 0.08 ppm not yet officially revised via regulatory process to coincide with new Federal standard of 0.12 ppm which is currently being applied to determine compliance status.

(9) New Federal standard for Lead not yet officially adopted by N.Y.S. but is currently being applied to determine compliance status

SOURCE: NYSDEC, 1986

Particulates and SO_2 are pollutants primarily associated with fossil fuel combustion in stationary sources, whereas CO and Pb are mainly produced by motor vehicles. Nitrogen dioxide and HC are attributed to both mobile and stationary sources. Ozone is not emitted directly to the atmosphere, but is produced photochemically by the interactions of HC, NO_2 and sunlight. (Note: the New York State Standard and the now rescinded NAAQS for HC were designed to protect against excessive O_3 formation).

The Melville-Route 110 Area is located within the New York-New Jersey-Connecticut Interstate Air Quality Control Region (AQCR). In the New York portion of the AQCR, ambient air quality is monitored by the New York State Department of Environmental Conservation (NYSDEC) at many sampling stations, including several located on Long Island. The stations located closest to the study area are the Eisenhower Park Station, eight miles to the west, and the Babylon Station, on Gazza Boulevard near the intersection of Route 110 less than a mile to the south). The Long Island Lighting Company (LILCO) also operates SO_2 monitoring stations, one of which is in the Village of Huntington (on Union Place, 5.5 miles north of the study area). A LILCO monitoring station in Melville (on Old Country Road east of Wolf Hill Road, less than 1/2 mile north of the study area ceased operation in July 1984.

The most recent calendar year of data from the NYSDEC monitoring stations is for 1985 (Table 2-8). A comparison of the monitored ambient levels in this table with the corresponding standards reveals that only the O_3 standard was exceeded. Pollutant concentrations measured at the LILCO Huntington and (1984) Melville stations were well below the SO_2 standards.

With respect to O_3, the contravention of the standard reflects the fact that the study area (as well as all of Long Island and much of the Northeast) has been designated as a nonattainment area by the U.S. Environmental Protection Agency (USEPA). There is a CO nonattainment area ex-

TABLE 2-8

AMBIENT AIR QUALITY DATA (1985)

Contaminant	Averaging Time	NYS Standard*	Eisenhower Park Highest	Eisenhower Park 2nd High	Babylon Highest	Babylon 2nd High
SO_2 (ppm)	12 mos.	0.03	0.006	---	0.011	---
	24 hrs.	0.14	0.032	0.031	0.048	0.047
	3 hrs.	0.50	0.058	0.054	0.090	0.089
CO (ppm)	8 hrs.	9	8.6	8.0	N/A**	
	1 hr.	35	13.5	11.4	N/A	
O_3 (ppm)	1 hr.	0.12	N/A		0.138***	0.137***
NO_2 (ppm)	12 mos.	0.05	0.034	---	N/A	
TSP (ug/m^3)	12 mos.	65	48	---	44	---
	24 hrs.	250	116	108	103	86
Pb (ug/m^3)	3 mos.	1.5	0.45	---	N/A	

NOTES:

* Except for TSP, the NYS and Federal Ambient Standards are equivalent (see previous table).

** Not available. Contaminant data not collected at this site.

*** Contravention of NYS/Federal Ambient Air Quality Standard. The ozone standard is based on values measured during 1983 and 1984 averaged together with the 1985 data.

LILCO Sites

Contaminant	Averaging Time	NYS Standard	Huntington Highest	Huntington 2nd High	Melville (1984)* Highest	Melville (1984)* 2nd High
SO_2 (ppm)	12 mos.	0.03	0.005	---	0.003	---
	24 hrs.	0.14	0.039	0.026	0.033	0.022
	3 hrs.	0.50	0.128	0.113	0.057	0.052

* This site ceased operation in July 1984.

tending from New York City into Nassau County as far east as the Seaford Oyster Bay Expressway (NYS Route 135), but not into Suffolk County which is unclassified with respect to CO. The County is in an attainment area, or unclassified area, with respect to the other criteria pollutants.

The major air quality issue associated with any future development of the Melville-Route 110 Area is the potential impact of traffic-generated CO emissions. A future increase in the level of traffic congestion in the study area could lead to a corresponding increase in CO emissions and ambient CO concentrations. Therefore, particular attention has been focused on the future impacts of traffic-generated CO emissions.

Pollutants (TSP, SO2) associated with major point sources are not anticipated to be a concern because heavy industry is not expected to locate in the study area. Any future industrial growth would likely be medium to smaller industries, as currently found in the area. Potential major point sources would also be strictly controlled by existing regulations, such as Prevention of Significant Deterioration (PSD) requirements. These regulations will also apply to the Town of Oyster Bay's proposed resource recovery facility planned for the Old Bethpage Solid Waste Disposal Complex site, one-half mile to the west of the study area.

Because O3 forms several hours and usually several miles downwind of where its precursors (HC and NO2) are emitted, it is of concern on a larger scale, more regional basis than the Melville-Route 110 Area. There are several industries (printing, coating) that typically emit quantities of volatile organic compounds (VOC's, a form of HC). Several such industries are currently in the study area. Any future major sources of VOC emissions would come under the control of NYSDEC's New Source Review (NSR) program. Regional strategies to reduce mobile source HC emissions are part of the New York State Air Quality Implementation Plan for Control of Carbon Monoxide and Hydrocarbons (NYSDEC, 1984).

Lead and NO2 measurements have shown that ambient levels of these two pollutants have been well below ambient standards. As such, Pb and NO2 are not a major concern in evaluating the air quality impacts of future development alternatives in the Melville-Route 110 Area.

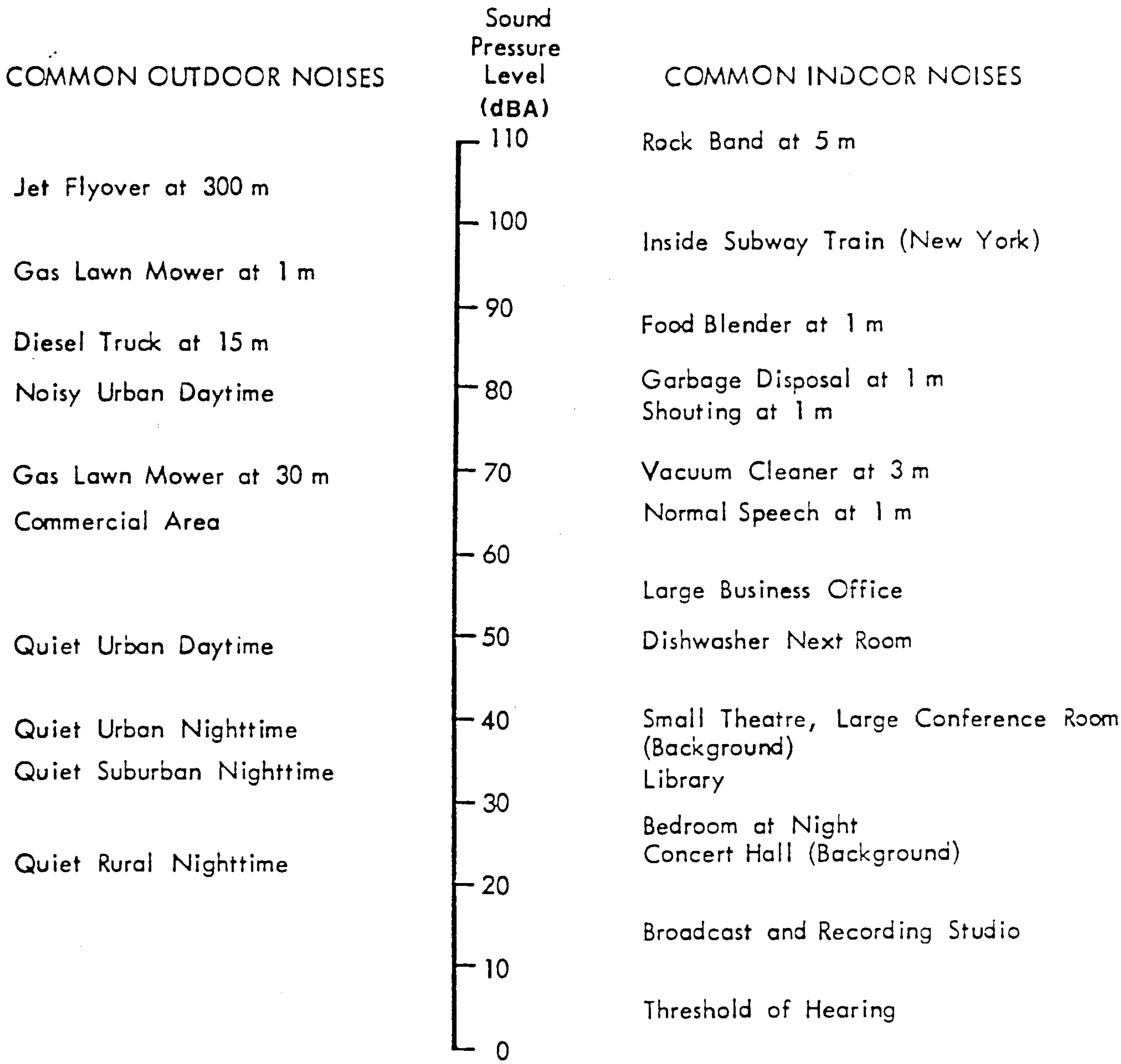
2.6 Noise

2.6.1 Noise Measurement and Guidelines

Noise is commonly measured in units called A-weighted decibels (dBA). The A weighting refers to the favoring of certain sound frequencies over other frequencies in order to simulate the sensitivity of the human ear to sounds of various frequencies. The decibel scale is logarithmic, and is designed such that a 10-fold increase in sound pressure results in an increase of 20 dBA, and a doubling of the noise source results in an increase of 3 dBA. In environmental noise analysis, a change in noise level must be at least 3 dBA in order to be considered noticeable. Some typical noise levels expressed in dBA are shown in Figure 2-17.

Several parameters are available to evaluate environmental noise impact. A common parameter used in noise analysis is the equivalent sound level (Leq) which is measured in dBA's. Most types of noise produced over a period of time would not maintain the same constant noise (energy) level, but would fluctuate throughout the time period. The Leq for that time period represents the same energy content as the fluctuating noise, and can be thought of as resembling the average noise level over the time period.

Another common parameter is the day-night average sound level (Ldn). This parameter is calculated from 24 successive hourly Leq's, with a 10 dBA penalty (addition) to the Leq's occurring between 10 PM and 7AM to account for the more intrusive nature of nighttime noise.



SOURCE: HIGHWAY NOISE FUNDAMENTALS,
U.S. DEPARTMENT OF TRANSPORTATION,
FEDERAL HIGHWAY ADMINISTRATION, SEPTEMBER 1980.

FIGURE 2-17

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TYPICAL NOISE LEVELS

The Leq and Ldn noise descriptors have been used by several federal agencies in establishing noise guidelines. The Federal Highway Administration (FHWA) has promulgated Noise Abatement Criteria (FHWA, 1982) for use in evaluating federal and state highway projects. Hourly maximum Leq sound levels have been set for serene, sensitive lands (57 dBA), residential, recreational, and institutional lands (67 dBA), and industrial and commercial lands (72 dBA). The Department of Housing and Urban Development (HUD) has issued Sound Level Acceptability Standards (24 CFR Part 51) for assessing the noise impact on prospective HUD sites. An Ldn not exceeding 65 dBA is considered acceptable; an Ldn between 65 dBA and 75 dBA is normally unacceptable; and an Ldn above 75 dBA is unacceptable. For planning purposes, the Federal Aviation Administration (FAA) also uses the Ldn in evaluating the compatibility of an airport with various adjacent land uses (Federal Aviation Regulations Part 150). Those areas where airport activity results in an Ldn below 65 dBA are considered to be compatible. Areas 65 dBA and above may be compatible with the airport depending on the noise level, the land use and the implementation of measures to reduce the impact of outdoor noise on indoor noise levels.

The Town of Huntington Zoning Code contains a section regulating noise emissions from stationary sources. The regulations apply to noise emissions measured at or beyond the property line of the use generating the noise. Maximum decibel limits were established by frequency band, so these regulations are more complex than the federal guidelines discussed above.

2.6.2 Existing Noise Levels

In order to determine existing noise levels in the Melville-Route 110 Area, a monitoring program was conducted on February 5, 1987. The program focused on existing and potential residential areas where future noise levels are expected to have the greatest impact. In terms of noise sources, highway traffic predominates. There are no heavy industries in the study area, so stationary sources of noise are few. Air traffic generated by Republic Airport does create some noise, but a recent study of existing and future aircraft noise levels (PRC Engineering, 1986) indicated that Ldn noise levels are (and will continue to be) below 65 dBA everywhere in the study area.

Six receptor sites were selected to monitor existing noise levels in the study area (Figure 2-18). Site 1 was located along Old Country Road in a residential area. This portion of Old Country Road is moderately traveled, but could possibly experience an increase in traffic, depending on future development scenarios. Site 2 was located in the only residential area adjacent to Route 110 south of Old Country Road. Site 3 was also located along Old Country Road adjacent to a tract of agricultural land. This site could be residentially developed and additional traffic will be generated when office sites on Old Country Road, currently under construction, are completed. Site 4 was on Old East Neck Road, which runs through a residential area in the northeast section of the study area. The road is lightly traveled, so this site is representative of relatively quite locations. Site 5 was on Pinelawn Road, a much traveled arterial, providing direct access to the office complexes on the east side of the road. Site 6, located along Walt Whitman Road, is in an area with adjacent to commercial, industrial, and residential developments.

Noise levels at the six sites were measured using a Metrosonics dB-301 Metrologger and a dB-306 Metrologger. Other Metrosonics equipment included microphones, a dB-651 Metroreader to interpret the data recorded by the dB-301's, and a calibrator for performing initial and final calibration checks. Noise levels were measured during the AM Peak (8:00-9:00 AM), MD Peak (11:30-1:00 PM), and the PM Peak (4:30-6:00 PM) periods. A 10 to 15 minute sampling time was found to be adequate to assure that the measured levels would be representative of hourly conditions.

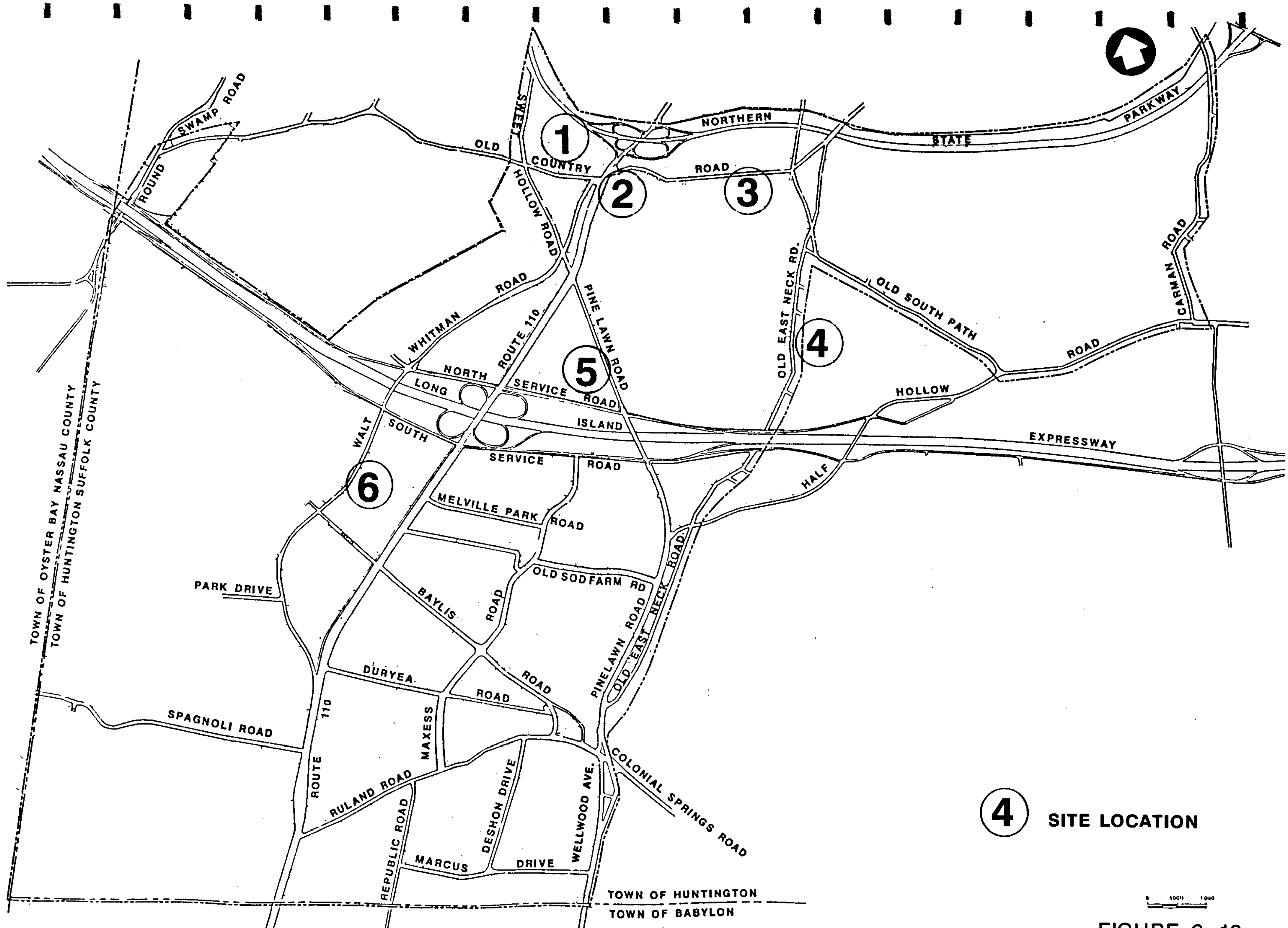

FIGURE 2–18

LKB/RPPW INC

NOISE MONITORING SITES

The results of the monitoring program are shown in Table 2-9. The upper portion of the table represents the noise levels as measured at each monitoring site. In conducting the monitoring program, the distance from the edge of the road to the noise meter varied from site to site, ranging from three to 24 feet. In order to offset the effect of varying distances and provide a uniform comparison of noise levels, the measured noise levels were conservatively adjusted to reflect a 50-foot distance from the road at each site. This distance is generally representative of the location of the nearest houses to a roadway. The noise levels as a result of the distance adjustment are shown in the lower portion of Table 2-9.

In evaluating the existing (adjusted) noise levels, 65 dBA was used as a guideline for a reasonable maximum Leq. This value is consistent with HUD and FAA criteria and is slightly more conservative than the FHWA criterion for residential land. Two of the locations (Sites 2 and 4) were at or below the 65 dBA maximum during all monitoring periods. Site 2 was located adjacent to Route 110, but the lack of significant heavy-duty truck traffic (as compared to locations south of the LIE) was probably instrumental in the relatively lower noise levels. In addition, Route 110 is a wide roadway adjacent to the site (with two through lanes each way plus separate left-turn and right-turn lanes at the northbound approach to the intersection at Old Country Road). This serves to spread out the noise sources, putting southbound traffic over 100 feet from the receptor (located 50 feet from the edge of the northbound Route 110). For comparison purposes, a MD noise level was taken near the center of the residential area containing Site 2. This noise level, 55 dBA, is representative of the minimum noise level during the daytime period (7 AM-7 PM).

Sites 1 and 3 were located on Old Country Road on opposite sides of Route 110. Both were slightly above 65 dBA during the morning peak, and at .E Site 1, during the afternoon peak period. The sites were at or below this

TABLE 2-9

EXISTING NOISE LEVELS

Measured at Monitoring Site

Site	Distance (1) From Road (ft)	Leq Noise Level (dBA) Morning	Mid-Day	Afternoon
1	3	74	71	72
2	20	67	67	66
3	6/40 (2)	74	64	64
4	10	68	63	64
5	6	74	75	75
6	24	74	72	72

Adjusted to 50 Feet from Road (3)

Site	Distance From Road (ft)	Leq Noise Level (dBA) Morning	Mid-Day	Afternoon
1	50	68	65	66
2	50	65	65	64
3	50	68	63	63
4	50	63	58	59
5	50	70	71	71
6	50	72	70	70

NOTES:

1. The distance between the monitoring site and the edge of the pavement.
2. At mid-day, site was relocated to the east to avoid noise from an idling lunch truck. The relocated site was retained for afternoon measurement.
3. Adjusted noise levels are based on an attenuation rate of 3dBA per distance doubling.

maximum during the MD peak period.

Sites 5 and 6 were above the 65 dBA maximum during all three monitoring periods. Site 5 has a fairly high volume of traffic traveling at moderately high speeds. Site 6 experiences a relatively large amount of heavy-duty truck traffic that probably accounts for the high readings at this site.

2.7 Utility Systems

2.7.1 Wastewater Disposal

Wastewater is generated by residential, commercial and industrial land uses existing in the Melville-Route 110 Area. Wastewater disposal methods currently being utilized in the study area include: on-site, subsurface sewage disposal; modified on-site, subsurface sewage disposal (also referred to as denitrification systems); communal sewage systems discharging to groundwater (also referred to as "package plants"); and sanitary sewers connected to the Southwest Sewer District (SWSD), which discharges to the Atlantic Ocean from the Bergen Point Treatment Plant in Babylon.

According to the Suffolk County Sanitary Code, Article 5, on-site subsurface disposal systems are allowed and are utilized in the project area for single-family residences. Typically, these systems consist of a septic tank and cesspools.

Sewage generated by commercial establishments, office buildings, and industries may also be disposed of through subsurface disposal systems, provided a facility's design flow does not exceed 300 gallons per day (gpd) per acre (and in the case of an industry, the waste must be nonhazardous). If the flow from these facilities exceeds 300 gpd/acre, but is less than 15,000 gpd/acre, a modified subsurface disposal system (which includes denitrification facilities) is permitted. Typically, a modified subsurface disposal system consists of a septic tank, filter bed, denitrification reactor, and leaching pool. One such facility recently permitted and constructed is the Melville Expressway Associates office building.

For multi-family residential, commercial, office, and non-hazardous industrial flows greater than 15,000 gpd/acre, or flows from residential subdivisions with a lot size of less than one-half acre, Article 6 of the Sanitary Code would apply, as discussed in Section 2.2.1. According to Article 6, communal sewage systems that treat sewage and discharge to the groundwater may be allowed in the study area. Such systems can be installed provided the sites are not in a sewer district, and it is proved to the Suffolk County Sewer Agency (SCSA) that a developer cannot reasonably connect to the SWSD system. Recently, two condominium projects in the study area were required to connect to the SWSD system rather than construct package plants.

Prior to the passage of Article 6, package plants for industrial, office building and commercial discharges were constructed in the study area and granted State Pollution Discharge Elimination System (SPDES) permits. The Melville Industrial Sewer District Feasibility Study (H2M, May, 1984) recommended the creation of the Melville Industrial Sewer District (MISD), which in turn, would connect to the SWSD system. The study also stated that of the 11 firms with SPDES permits that treat industrial wastes, many were not filing monitoring data and reports with SCDHS. In addition, regulatory agencies do not have adequate resources to ensure compliance with permit conditions. Therefore, industries that violate permit standards continue to degrade the groundwater quality. As discussed in Section 2.2.1, the passage of Article 7 to the Sanitary Code in 1985 permitted industrial discharges only in the study area if the discharge is conveyed to a sewer system which, in turn, is treated and discharged to the Atlantic Ocean. Treatment in this case, involves the Bergen Point Sewage Treatment Plant and discharge to the Atlantic Ocean.

The Town of Huntington has prepared and submitted for review to the New York State Department of Audit and Control (NYSDAC), the enabling legislation for the MISD. The proposed district boundaries, shown on Figure 2-19, encompass 2,065 acres, and comprise 53 percent of the study area. While the NYSDAC review process continues, the SCSA has contracted with two condominium projects, a hotel, and office building to connect to the sewer system. The existing sewer areas are shown on Figure 2-19.

The SCSA and NYSDEC must approve connection of the MISD to the SWSD. Due to violations of the SWSD Bergen Point SPDES permit, the NYSDEC has prevented further connections to the SWSD, such as the proposed Newsday building expansion (S. Rizzo, SCDPW, February 25, 1988), and has required the SWSD to perform corrective action to meet SPDES limitations by December 1987. The SWSD has met the December 1987 deadline by achieving the SPDES limitations in September and October of 1987, and intends to petition the NYSDEC to eliminate the sewer connection restrictions (C. Bartha, SCDPW, October 28, 1987).

The MISD has been allocated a design flow of 2.6 mgd by the SWSD. Utilizing the SCDH sewage disposal standards in Article 5, and a selected reference (Metcalf and Eddy, 1981), the sewage generation rates are estimated to be 0.060 gpd/ft^2 for offices, 0.15 gpd/ft^2 for industrial, 0.072 gpd/ft^2 for commercial, and 87 gpd/person for residential. Based on the square footages in Table 2-10, and previously calculated residential density, it is estimated that approximately 1.3 mgd of waste water is generated in the study area. Considering a design flow of 2.6 mgd, this allows approximately 1.3 mgd for future growth in the area both within and beyond the MISD, since the sewer district boundaries could be expanded beyond those presently proposed (Mortin, Town of Huntington, February 11, 1987).

Good TO Know

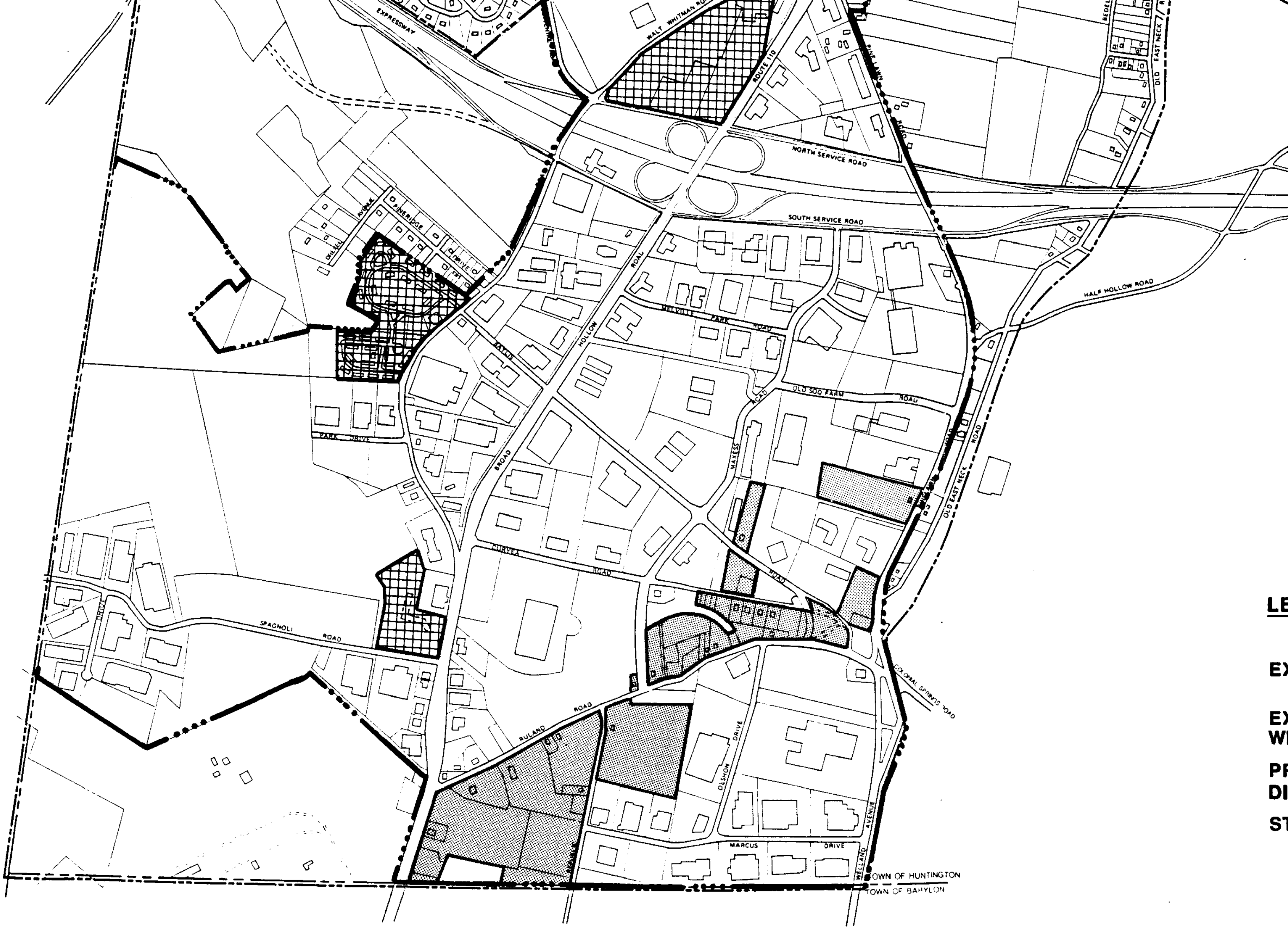

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TABLE 2-10

EXISTING DEVELOPMENT

BLOCK	OFFICE			INDUSTRY			COMMERCIAL			TOTAL		
	AREA ACREAGE	FLOOR AREA 1000 SQ FEET	PARKING NUMBER	AREA ACREAGE	FLOOR AREA 1000 SQ FEET	PARKING NUMBER	AREA ACREAGE	FLOOR AREA 1000 SQ FEET	PARKING NUMBER	AREA ACREAGE	FLOOR AREA 1000 SQ FEET	PARKING NUMBER
1	8	107	451	6	101	114	0	0	0	14	208	565
2	122	1219	4790	6	85	190	0	0	0	128	1303	4980
3	54	679	2713	53	673	1483	2	6	115	109	1358	4311
4	141	2159	9046	86	983	2566	0	0	0	227	3142	11612
5	73	941	3791	79	896	2109	0	0	0	152	1837	5900
6	6	54	229	105	1340	3084	0	0	0	111	1394	3313
7	41	71	263	2	283	814	3	23	50	46	377	1127
8	9	107	286	131	1153	3300	3	40	50	143	1300	3636
TOTAL	454	5336	21569	468	5514	13660	8	69	215	930	10919	35444

2.7.2 Electric, Gas and Communication Utilities

Adequate electric, gas, and communication utilities exist in the study area. The Long Island Lighting Company (LILCO) is the sole supplier of electricity and gas in the area. The need for electricity in the study area has increased in recent years. Although the supply is adequate, LILCO has scheduled to expand the Ruland Road Substation in 1988 to insure a continued, reliable supply of electricity (Albinus, LILCO, November 6, 1987). Natural gas transmission mains are also in the area, and these gas mains can be extended as needed. Communication facilities provided by New York Telephone (NYT) are readily available in the project area, especially for major customers, such as financial institutions. Utilization of a fiberoptics station located at the intersection of Duryea Road and Route 110, has enabled NYT to provide adequate service to existing customers. In addition, there is ample excess capacity to provide for future growth (Okpyck, NYT, December, 9, 1986).

2.7.3 Water Supply

The public water supply utility which serves the Melville-Route 110 Area is the South Huntington Water District (SHWD). As shown on Figure 2-20, the SHWD encompasses the entire study area with the exception of the Long Island Developmental Center and 400 undeveloped acres along the Nassau/Suffolk border. This undeveloped area represents a potential expansion for the water district. The Melville Expressway Associates office building, which is located in this area, has contracted for services from the SHWD. In addition, there are a few privately owned agricultural wells along the eastern border of the study area.

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SPAGNOLI ROAD
RULAND ROAD
BROAD HOLLOW ROAD
WALT WHITMAN ROAD
REPUBLIC
DESHON DRIVE
MARCUS DRIVE
WELLAND AVENUE
MAXESS ROAD
OLD SOD FARM ROAD
MELVILLE PARK ROAD
SOUTH SERVICE ROAD
NORTH SERVICE ROAD
EXPRESSWAY
COLONIAL ROAD
ROUTE 110
PINELAWN ROAD
PINE LAWN ROAD
OLD EAST NECK ROAD
HALF HOLLOW ROAD
TOWN OF HUNTINGTON
TOWN OF BABYLON

water supply

The Melville-Route 110 Area makes up approximately 31 percent of the SHWD. Based on a review of water supply records for a five year period and building use square footages, it is estimated that office, industrial, and commercial water supply is 0.14 gpd/ft^2, 0.18 gpd/ft^2, and 0.09 gpd/ft^2, respectively. Residential water supply is estimated to be 109 gpd/person (Metcalf and Eddy, 1981). Utilizing the building square footages in Table 2-10, and residential population of 1900 people on an average day, the study area is supplied with approximately 1.98 mgd of water, which represents approximately 27 percent of the SHWD average daily pumpage. According to the SHWD, peak pumping rates occur during the summer months, as a result of lawn irrigation and air conditioning requirements. In order to avoid excessive withdrawl of water from the supply aquifer for the study area, a key groundwater supply parameter called the permissive sustained yield (psy) has been determined. The psy is defined as the maximum rate at which water can be consumed perenially without bringing about aquifer drawdown. The psy for the study area based on natural recharge has been determined to be approximately 0.0114 mgd/acre (H2M, 1970). Since the study area is 3340 acres (this does not include the Long Island Development Center property), the psy is approximately 3.8 mgd. Approximately 80 percent of the 1.98 mgd supplied is currently recharged to the ground via cesspools, package plants, lawn irrigation and air conditioning systems, therefore, the net amount of water actually consumed is approximately 0.40 mgd. Since the psy is greater than the net water consumption, existing water demand in the area is at an acceptable level. However, the formation of the MISD and subsequent sewering of 53 percent of the study area will reduce the amount of water recharged to the study area.

As discussed in Section 2.2.1, the quality of the municipal water supply is basically good. However, there has been an increase in nitrates observed in SHWD Well 7-1 and some organic contamination of private wells. The nitrate level in Well No. 7-1 is well below drinking water standards (H2M, October 1982). The contaminated residential wells are no longer utilized for drinking water since the residences are now served by the SHWD. With the advent of Articles 7 and 12 (Toxic and Hazardous Materials Storage and Handling Control), and the sewering of a large portion of the area, water quality should continue to remain acceptable.

The existing water supply system elements include groundwater wells, elevated storage tanks, standpipes, booster pumps, fire hydrants, and water mains ranging in size from six to 16 inches. An efficient storage and distribution system can provide average water supply flows, as well as peak flows, and adequate pressure for fire fighting purposes. A study of the SHWD (H2M, October 1982) pointed out several system deficiencies regarding pressure, flow distribution, and pumping capacity, and recommended various improvement projects to correct these deficiencies. As a result, numerous construction projects, including installation of water mains and supply wells, were completed by the SHWD since 1982. Several more water supply system improvement projects are currently underway (Crimaudo, November 24, 1986).

2.7.4 Solid Waste Disposal

Solid waste generated in the study area consists primarily of garbage from residences and paper and cardboard products from offices and commercial establishments. The residential waste generation rate for the study area was calculated to be approximately six tons per day. This is based on the number of residents within the study area and a town-wide generation rate of 6.36 lb/capita/day (Dvirka & Bartilucci, 1984). Office, commercial and industrial establishments are estimated to produce a total of approximately 42 tons per day based on the estimated generation rates of: 1 lb/day/100 square feet (office), 2.2 lbs/person/ day (commercial), and 1.98 lbs/person/day (industrial) (Savato, 1972; Peavy, 1975). Total existing waste generation in the study area is 48 tons per day and is approximately 10 percent of the 518 tons/day total average daily waste flow for 1987 (Dvirka & Bartilucci), in the Town of Huntington.

Solid waste that is generated in the study area is collected exclusively by private carters licensed by the Town (Dvirka & Bartilucci, May 1986). The waste is transported to the Town of Huntington Solid Waste Disposal Complex for disposal through incineration, and landfilling.

There is no mandatory recycling in the project area, however, the Town has instituted a mandatory pilot source separation program for newspapers and corrugated, which encompasses 13,000 homes and 4,500 businesses in Huntington Station. Town wide voluntary glass and paper recovery has been practiced since 1972 and there is a recovery center at 641 New York Avenue.

Recently, waste-to-energy facilities, called resource recovery facilities, have been replacing landfills for municipal solid waste disposal. In October 1987, the Town selected a vendor to construct and operate a resource recovery facility as well as perform recycling operations. The resource recovery facility is scheduled for completion by 1990.

2.8 Land Use and Zoning

2.8.1 Existing Land Use

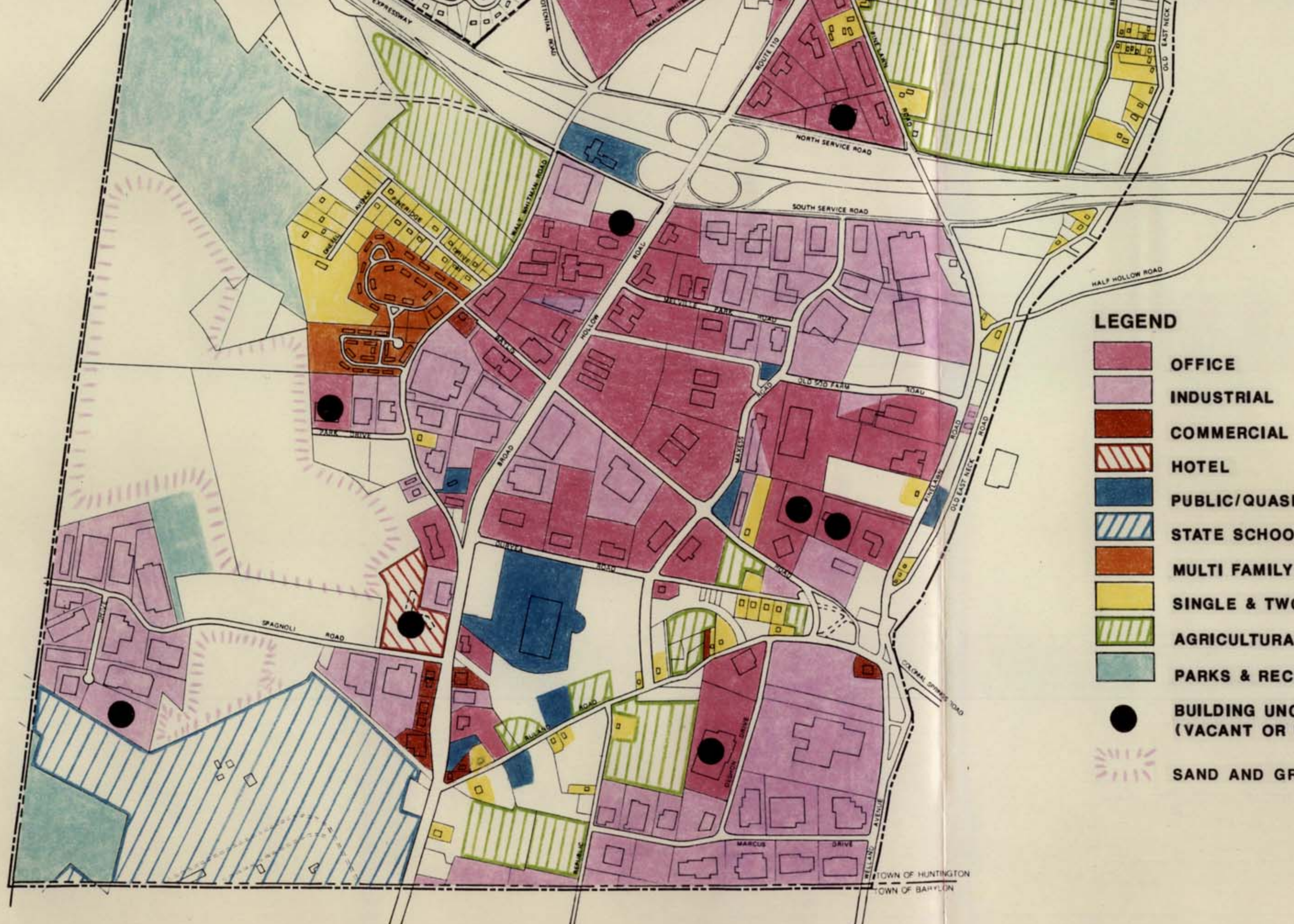
Office and industrial uses make up the largest developed section of the study area. These uses are concentrated in the central region of the study area with Route 110 as their spine. In addition, small commercial sections along Route 110 are located in the northern and southern sections of the study area. Existing land use in the study area is shown in Figure 2-21.

Office

Tenants of office buildings along Route 110 and adjacent areas include: banks, insurance companies, real estate firms, corporate headquarters. A large regional U.S. Postal Service Processing Center is also located in this office-industrial core. Office building heights range between one and four stories. Most of the parking for the office workers is provided on surface lots, but a few developments include underground parking. The appearance of the buildings is enhanced by landscaped setbacks. Landscaping also exists around the perimeter of parking areas. Beyond the Route 110 corridor is a single, isolated office building off Round Swamp Road at the LIE.

Industrial

Industrial building types in the Melville-Route 110 Area range from one-story single use buildings to warehouses and two-story, mixed office/industrial buildings. Most industrial buildings are occupied by a single tenant. Tenants include: electronics, appliance, equipment, machinery and chemical manufacturers. Newsday, the daily newspaper, also has its production and distribution center in the study area. In addition to these industrial uses, the 110 Sand Company's mine and clean fill disposal


LEGEND
OFFICE
INDUSTRIAL
COMMERCIAL
HOTEL
PUBLIC/QUASI
STATE SCHOOL
MULTI FAMILY
SINGLE & TWO
AGRICULTURAL
PARKS & RECR
BUILDING UNO
(VACANT OR U
SAND AND GRA
SPAGNOLI ROAD
BROAD HOLLOW ROAD
SOUTH SERVICE ROAD
NORTH SERVICE ROAD
ROUTE 110
HALF HOLLOW ROAD
OLD SOUTH FARM ROAD
MAXESS ROAD
PINELAWN ROAD
OLD EAST NECK ROAD
COLONIAL SPRINGS ROAD
MARCUS DRIVE
WELLAND AVENUE
PARK DRIVE
WALT WHITMAN ROAD
EXPRESSWAY
TOWN OF HUNTINGTON
TOWN OF BABYLON

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site, located off Spagnoli Road, occupies a large percentage of the industrial area. All of these industrial uses maintain surface level parking for their employees.

Commercial

Two small areas abutting Route 110, one in the northern section and one in the southern section of the study area, are predominantly commercial in use. Current uses include: restaurants, small offices, auto-related establishments, banks and general retail. Building heights in these areas range from one to four stories.

Residential

Residential developments can be found in a number of locations. Single-family residential areas are located south of the Northern State Parkway, both east and west of Route 110. These areas are made up of older homes, as well as a more recent subdivision. Other residential areas include a strip of single-family homes further to the east of Route 110 along Old East Neck Road, and a cluster of older single-family and newer townhouse units located further to the west of Route 110, off Old Walt Whitman Road.

Institutional

Institutional uses within the study area are mainly concentrated around the area of Walt Whitman Road and Route 110. These public facilities include: a fire house, a local post office, an elementary school, and a library. Other public uses within the study area include two churches, two cemetaries, the Long Island Developmental Center (a State residential facility for developmentally disabled adults), and the New York State Agricultural School (SUNY Farmingdale).

Other Uses

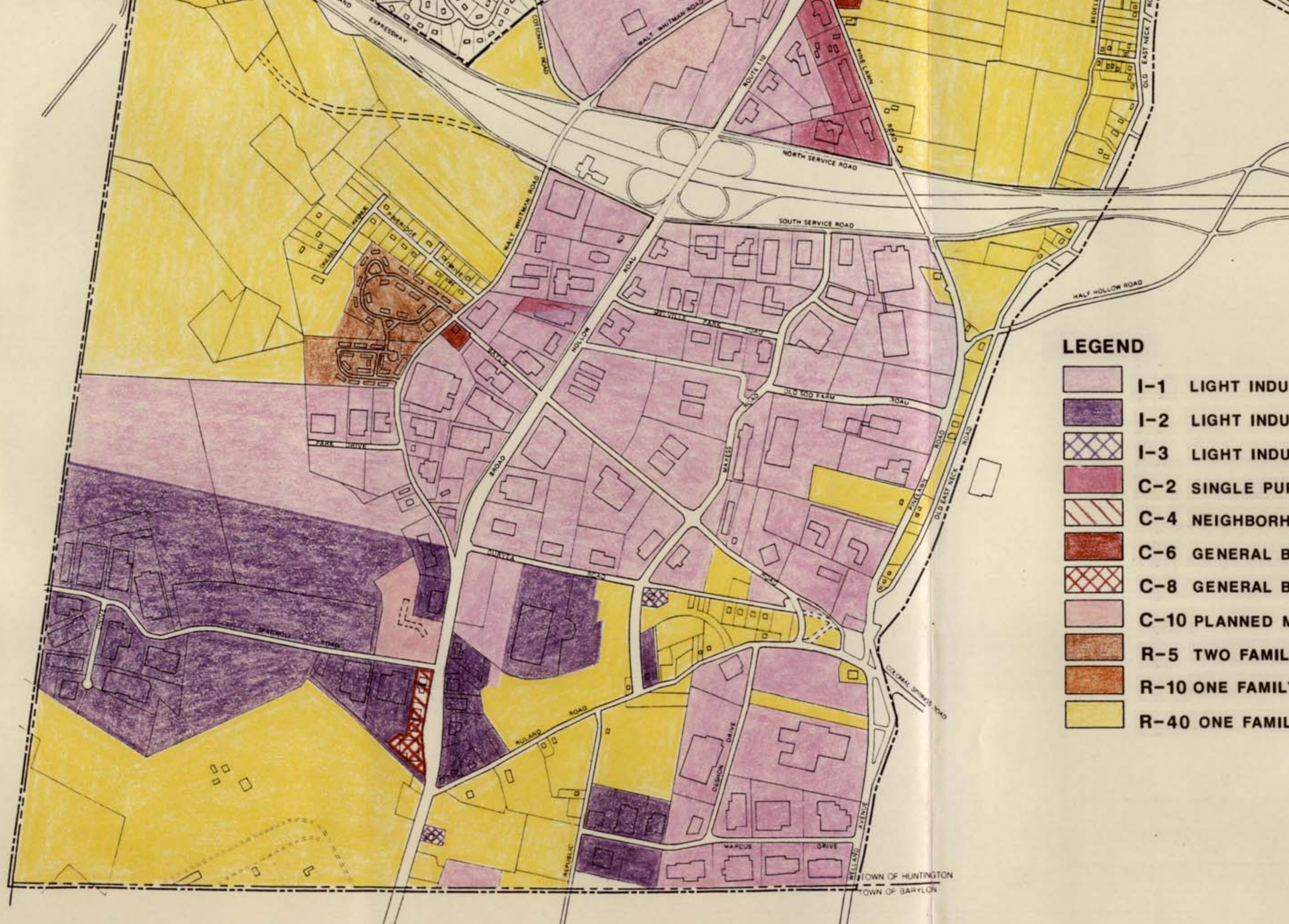
Other types of land use existing within the study area include: scattered agricultural uses, retail uses in industrial areas, various utility and NYSDOT facilities, and a health club off Wellwood Avenue. In addition, several large wooded and vacant parcels exist in the northwestern portion of the study area as well as in the southern section off Route 110 and Republic Road.

2.8.2 Existing Zoning

Existing zoning in the study area is shown in Figure 2-22. The following descriptions of the zoning districts are summarized from information contained in the Zoning Ordinance (Code of the Town of Huntington, Chapter 198, Zoning).

Commercial

Two areas abutting Route 110, are zoned commercial. One commercial area, a C-6 General Business District, which extends from the intersection of Route 110/Old Country Road to the intersection of Route 110/Sweet Hollow Road, permits a variety of uses, including; churches, hospitals, public uses, professional and medical offices, retail sales, personal service establishments, and restaurants. Maximum building height in this district is three stories or 45 feet. The second commercial area, which consists of a section of land along Route 110 south of Spagnoli Road, is zoned as a C-4 Neighborhood Business District in its northern half and as a C-8 General Business A District in its southern half. These districts generally allow the same uses, including: single-family dwellings, retail stores, personal service shops, restaurants, and business and professional offices, funeral parlors, and florists. Maximum lot coverage by a building in these zones


EXPRESSWAY
WALT WHITMAN ROAD
COTTONWOOD ROAD
ROUTE 110
PINE LAWN ROAD
NORTH SERVICE ROAD
SOUTH SERVICE ROAD
HALF HOLLOW ROAD
BROAD HOLLOW ROAD
MELVILLE PARK ROAD
OLD SOD FARM ROAD
MAXESS ROAD
PINELAWN ROAD
OLD EAST NECK ROAD
PARK DRIVE
DUSHON DRIVE
MARCUS DRIVE
WELLAND AVENUE
REPUBLIC
RULAND ROAD
COLONIAL SPRINGS ROAD
TOWN OF HUNTINGTON
TOWN OF BABYLON
LEGEND
I-1 LIGHT INDU
I-2 LIGHT INDU
I-3 LIGHT INDU
C-2 SINGLE PU
C-4 NEIGHBORH
C-6 GENERAL B
C-8 GENERAL B
C-10 PLANNED M
R-5 TWO FAMIL
R-10 ONE FAMIL
R-40 ONE FAMIL

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is 40 percent and 50 percent, respectively. Maximum building height is 2-1/2 stories in both districts, and two stories for uses other than dwelling units in the C-4 district.

Office

Scattered C-2 single purpose office districts are located between the LIE and the Northern State Parkway. The minimum lot size within the C-2 district is three acres while the maximum lot coverage by a building is 25 percent. Uses permitted in this zone include: single purpose office buildings, institutions engaged in electrical or mechanical research, banks, and accessory use buildings. Maximum building height in this single purpose office district is two stories or 30 feet.

Industrial

The majority of the land abutting Route 110 from Sweet Hollow Road to Duryea Road is zoned as a Light Industry I-1 District, which requires a minimum lot area of six acres and permits a maximum lot coverage of 30 percent. The area abutting Route 110 south of Duryea Road and off Spagnoli Road is zoned as an I-2 Light Industry district, which requires a minimum lot area of three acres and a maximum lot coverage of 33-1/3 percent. In addition, two smaller parcels off of Route 110 and Duryea Road are zoned as an I-3 Light Industy District. This zone, which also requires a minimum lot size of three acres, has a maximum coverage of 40 percent. Uses permitted under these districts include: farming, nurseries, laboratories, office buildings, banks, cold storage plants, warehousing, distribution, light industrial uses (e.g., manufacturing, publishing, compounding, storage), and Town uses which are permitted in a residential district. Maximum building height permitted in all three of these light-industry districts is 45 feet.

Hotel/Motel

C-10 Planned Motel Districts are located at the northwest corner of the intersection between Spagnoli Road and Route 110, and at the northeast corner of the North Service Road and Walt Whitman Road. This district permits motel, hotel, restaurant, and accessory uses. The maximum permitted lot coverage by a building is 25 percent and the minimum lot area is three to five acres. The maximum building height in this Planned Motel District is two stories or 35 feet, but with additional building setbacks, the zoning allows four stories or 45 feet height.

Residential

Several R-40 Residence Districts are found near the perimeter of the study area. These districts permit single-family detached dwellings on a minimum lot size of one acre. A small R-10 Residence District, which requires single-family homes with a minimum lot size of 10,000 square feet, is also found off Old Country Road. In addition, two higher density R-5 Residence Districts are located off Walt Whitman Road between Park Drive and Pineridge Drive, and at the corner of Walt Whitman Road and Old Country Road. These districts require a minimum lot size of 5,000 square feet per dwelling unit, and permits two-family dwellings on 10,000 square foot lots. The maximum building height permitted in all of the residential districts is 2-1/2 stories or 35 feet.

Parking

Off-street parking requirements within these zoning districts vary depending on use. Office buildings generally require one space per 250 square feet of floor area, but engineering data processing and administration offices require one space per 300 square feet of floor area. Industrial buildings (manufacturing, distribution and warehouse uses) require one space per 500 square feet of floor area or three spaces for every every four employees on a work shift, whichever is greater. Retail uses generally require one space per 200 square feet of floor area, but this requirement may vary with the type of retail use. Parking requirements within all the residential districts is one space per unit. Conventional restaurants and fast food establishments require one parking space per 75 and 45 square feet of floor area, respectively.

2.8.3 Land Use Plans

Land development patterns in the Melville-Route 110 Area have mainly been controlled by two documents, the Comprehensive Plan of 1965 and its amendment of 1966, and the Town of Huntington Zoning Ordinance. The basic goals of the 1966 Plan are: (a) to keep the residential character of the Town, supported by necessary services and social and cultural institutions, (b) to broaden the tax base and widen the range of employment opportunities, and (c) to maintain the scale of commercial trade activity to meet the needs of residents. As a matter of practice, the Zoning Ordinance did not automatically follow the Comprehensive Plan (Figure 2-23). Many undeveloped areas within the Comprehensive Plan's office/industrial districts are zoned residential, but rezoning applications for office/industrial uses were favorably treated within these areas. Thus, the Comprehensive Plan has been followed in a piecemeal, but planned, manner.

There are a number of development proposals for many of the vacant, underutilized, and agricultural parcels. These proposals are primarily for office buildings, but also include some industrial, hotel, and condominium uses. Proposals have been submitted for the development of approximately 200 acres of land. In addition, many existing buildings are being enlarged and a number of new buildings are currently under construction.

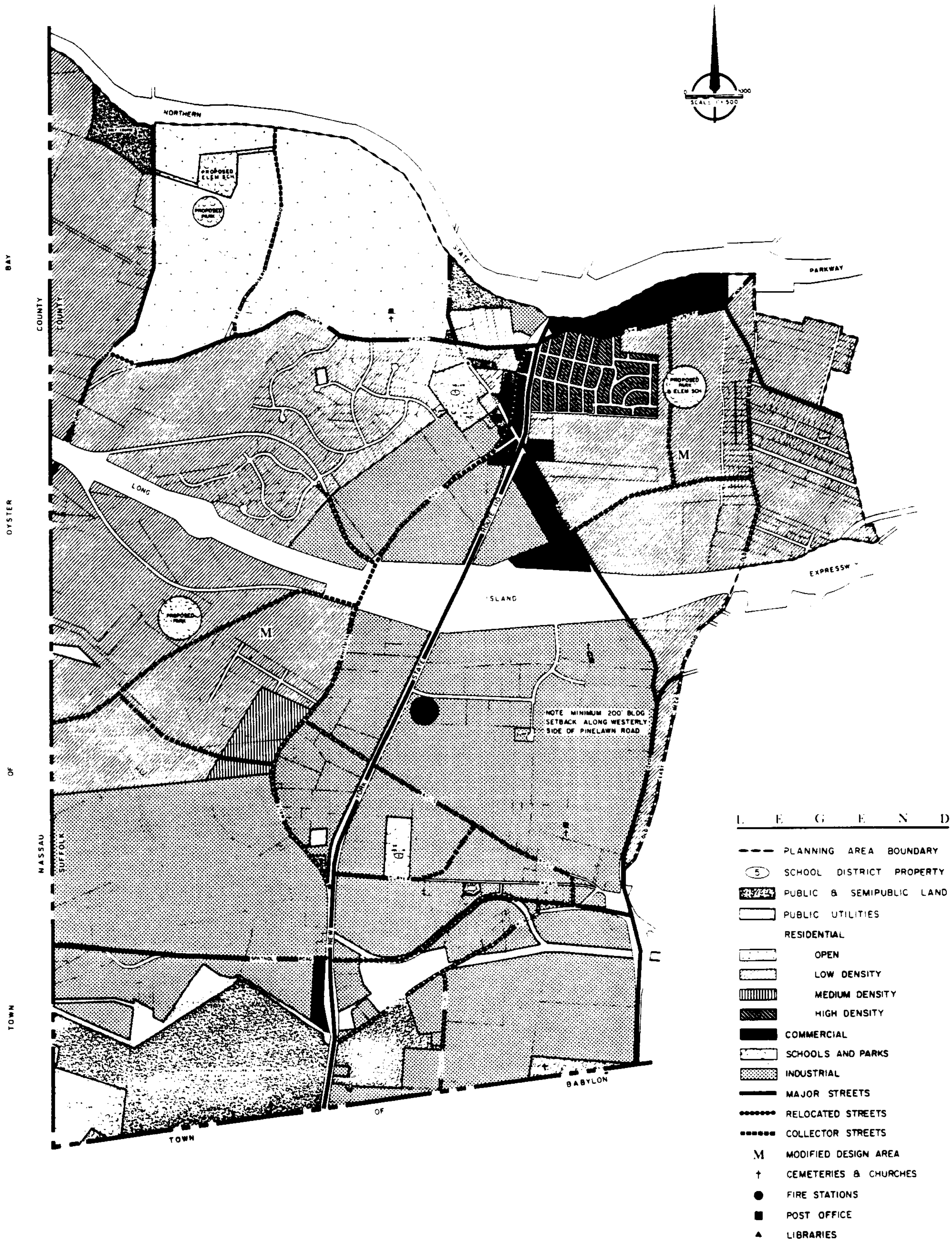

FIGURE 2-23

THE 1966 COMPREHENSIVE PLAN

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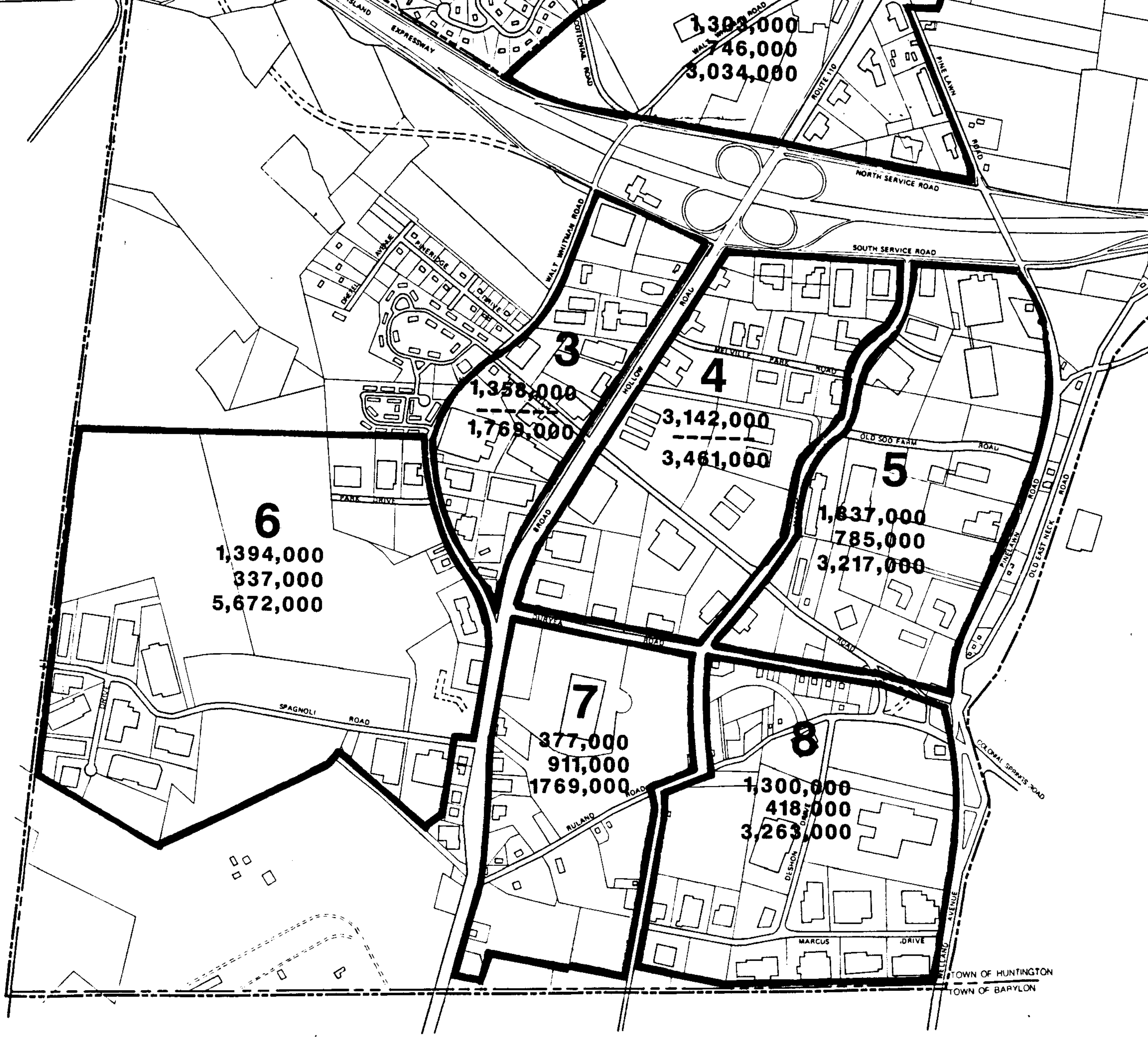
At present, there are over 11 million square feet of office, industrial, warehousing and commercial floor space in use within the study area. More than 3.5 million square feet of similar type floor space is either proposed, is under construction, or is presently vacant. In addition, there are about 358 acres of vacant land within the study area that are either zoned for office/industrial use or designated for office/industrial use by the Comprehensive Plan.

Office development densities within the study area depend on zoning regulations and market forces. The Zoning Ordinance limits building footprints to 30, 33-1/2, and 40 percent in Zones I-1, I-2, and I-3, respectively. The maximum height of 45 feet allows four-story buildings. Built to the allowed maximum density, the floor area ratios (FAR's) in the three industrial zones could be as great as 1.2, 1.3, and 1.6, respectively. To achieve this density, parking would have to be placed in garages. Construction of parking structures for a long while was prohibitively expensive. Development densities, therefore, were governed by the financial necessity of providing parking in surface lots. During the past few years, however, the demand for office space allowed developers to provide a portion of the required parking spaces in underground garages.

To establish the office development potential of this area, a detailed study was conducted of the magnitude of existing and projected development. For the purpose of this study, all areas indicated for non-residential use by the Comprehensive Plan were included. Excluded from the study area were two small commercial strips along Route 110 and Old Walt Whitman Road. Figure 2-24 shows this area, divided into eight large blocks for purposes of detailed analysis.



AREAS 1-8 TOTAL

10,919,000 S/F EXIS

3,526,000 S/F UND

22,778,000 S/F PRO

LKB RPPW INC

EXIST

Table 2-10 shows approximate acreages, square footage and the numbers of parking spaces presently in use within the Eight Block Area (EBA). There are 10.9 million square feet of floor area in use on 930 acres of land. The average FAR is 0.27, but the FAR's vary widely, with some of the recent developments exceeding a ratio of 0.50.

As previously indicated, the amount of building floor area within the EBA that is presently proposed, under construction, or vacant is 3.5 million square feet (Table 2-11). These figures include proposed extensions to existing buildings. There has been a tendency to convert some of the industrial space to office space.

There are 1,494 acres of land (exclusive of rights-of-way and utility uses) within the EBA. Tables 2-12, through 2-16 show the development potential of the EBA assuming five different FAR's varying from 0.35 to 1.20. Considering the present trend of increased FAR, and given the existing zoning regulations, it is assumed that the minimum average FAR would be at least 0.35. Table 2-12 shows that with an average FAR of 0.35, the ultimate development would be approximately 23 million square feet. This is more than double the amount of existing floor area. It is possible, however, that without additional controls, the average FAR would increase to 0.50. In that case, the total floor area in the EBA would be 32.5 million square feet (Table 2-14). The theoretical maximum development in the EBA, with an average 30 percent coverage and four-story height, would be an unrealistic 78.1 million square feet. ?

TABLE 2-11

DEVELOPMENTS UNDER CONSTRUCTION, PROPOSED, AND COMPLETED BUT PRESENTLY VACANT

	OFFICE			INDUSTRY			COMMERCIAL			TOTAL		
BLOCK	AREA ACREAGE	FLOOR AREA 1000 SQ FEET	PARKING NUMBER	AREA ACREAGE	FLOOR AREA 1000 SQ FEET	PARKING NUMBER	AREA ACREAGE	FLOOR AREA 1000 SQ FEET	PARKING NUMBER	AREA ACREAGE	FLOOR AREA 1000 SQ FEET	PARKING NUMBER
1	21	329	1334	0	0	0	0	0	0	21	329	1334
2	37	596	2368	0	0	0	13	150	650	50	746	3018
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	40	754	3040	0	31	75	0	0	0	40	785	3115
6	8	89	358	9	73	160	12	175	610	29	337	1128
7	47	736	2944	0	175	150	0	0	0	47	911	3094
8	19	207	854	0	211	0	0	0	0	19	418	854
TOTAL	172	2711	10898	9	490	385	25	325	1260	206	3526	12543

TABLE 2-12

DEVELOPMENT PROJECTION WITH FLOOR AREA RATIO OF .35

BLOCK	PRESENTLY IN USE			UNDER CONSTRUCTION, PROPOSED, AND VACANT BUILDINGS			VACANT,FARM,RESIDENTIAL			TOTAL		
	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET
1	14	610	213	21	915	320	4	174	61	39	1699	595
2	128	5576	1951	50	2178	762	21	915	320	199	8668	3034
3	109	4748	1662	0	0	0	7	305	107	116	5053	1769
4	227	9888	3461	0	0	0	0	0	0	227	9888	3461
5	152	6621	2317	40	1742	610	19	828	290	211	9191	3217
6	111	4835	1692	29	1263	442	232	10106	3537	372	16204	5672
7	46	2004	701	47	2047	717	23	1002	351	116	5053	1769
8	143	6229	2180	19	828	290	52	2265	793	214	9322	3263
TOTAL	930	40511	14179	206	8973	3141	358	15594	5458	1494	65079	22778

TABLE 2-13

DEVELOPMENT PROJECTION WITH FLOOR AREA RATIO OF .40

BLOCK	PRESENTLY IN USE			UNDER CONSTRUCTION, PROPOSED, AND VACANT BUILDINGS			VACANT, FARM, RESIDENTIAL			TOTAL		
	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET
1	14	610	244	21	915	366	4	174	70	39	1699	680
2	128	5576	2230	50	2178	871	21	915	366	199	8668	3467
3	109	4748	1899	0	0	0	7	305	122	116	5053	2021
4	227	9888	3955	0	0	0	0	0	0	227	9888	3955
5	152	6621	2648	40	1742	697	19	828	331	211	9191	3676
6	111	4835	1934	29	1263	505	232	10106	4042	372	16204	6482
7	46	2004	802	47	2047	819	23	1002	401	116	5053	2021
8	143	6229	2492	19	828	331	52	2265	906	214	9322	3729
TOTAL	930	40511	16204	206	8973	3589	358	15594	6238	1494	65079	26031

TABLE 2-14

DEVELOPMENT PROJECTION WITH FLOOR AREA RATIO OF .50

	PRESENTLY IN USE			UNDER CONSTRUCTION. PROPOSED. AND VACANT BUILDINGS			VACANT,FARM,RESIDENTIAL			TOTAL		
BLOCK	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET
1	14	610	305	21	915	457	4	174	87	37	1699	849
2	128	5576	2788	50	2178	1089	21	915	457	199	8668	4334
3	109	4748	2374	0	0	0	7	305	152	116	5053	2526
4	227	9888	4944	0	0	0	0	0	0	227	9888	4944
5	152	6621	3311	40	1742	871	19	828	414	211	9191	4596
6	111	4835	2418	29	1263	632	232	10106	5053	372	16204	8102
7	46	2004	1002	47	2047	1024	23	1002	501	116	5053	2526
8	143	6229	3115	19	828	414	52	2265	1133	214	9322	4661
TOTAL	930	40511	20255	206	8973	4487	358	15594	7797	1494	65079	32539

TABLE 2-15

DEVELOPMENT PROJECTION WITH FLOOR AREA RATIO OF .60

BLOCK	PRESENTLY IN USE			UNDER CONSTRUCTION, PROPOSED, AND VACANT BUILDINGS			VACANT, FARM, RESIDENTIAL			TOTAL		
	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET
1	14	610	366	21	915	549	4	174	105	39	1699	1019
2	128	5576	3345	50	2178	1307	21	915	549	199	8668	5201
3	109	4748	2849	0	0	0	7	305	183	116	5053	3032
4	227	9888	5933	0	0	0	0	0	0	227	9888	5933
5	152	6621	3973	40	1742	1045	19	828	497	211	9191	5515
6	111	4835	2901	29	1263	758	232	10106	6064	372	16204	9723
7	46	2004	1202	47	2047	1228	23	1002	601	116	5053	3032
8	143	6229	3737	19	828	497	52	2265	1359	214	9322	5593
TOTAL	930	40511	24306	206	8973	5384	358	15594	9357	1494	65079	39047

TABLE 2-16

DEVELOPMENT PROJECTION WITH FLOOR AREA RATIO OF 1.20

BLOCK	PRESENTLY IN USE			UNDER CONSTRUCTION. PROPOSED, AND VACANT BUILDINGS			VACANT,FARM,RESIDENTIAL			TOTAL		
	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET	AREA ACREAGE	AREA 1000 SQ FEET	ULTIMATE FL AREA 1000 SQ FEET
1	14	610	732	21	915	1098	4	174	209	39	1699	2039
2	128	5576	6691	50	2178	2614	21	915	1098	199	8668	10402
3	109	4748	5698	0	0	0	7	305	366	116	5053	6064
4	227	9888	11866	0	0	0	0	0	0	227	9888	11866
5	152	6621	7945	40	1742	2091	19	828	993	211	9191	11029
6	111	4835	5802	29	1263	1516	232	10106	12127	372	16204	19445
7	46	2004	2405	47	2047	2457	23	1002	1202	116	5053	6064
8	143	6229	7475	19	828	993	52	2265	2718	214	9322	11186
TOTAL	930	40511	48613	206	8973	10768	358	15594	18713	1494	65079	78094

2.8.4 Surrounding Land Use and Zoning

Existing land use to the north of the study area, being consistent with its zoning classification, is predominantly residential. In addition, Mount Misery Town Park and West Hills County Park lie directly north of the study area. Zoning to the east of the study area is also predominantly residential. Existing land use in this section of the Town of Huntington is residential with some scattered agricultural uses and vacant parcels. Three adjoining cemeteries, the Long Island National Cemetery, Pinelawn Cemetery, and Saint Charles Cemetery are located southeast of the study area.

Adjacent to the southern boundary of the study area is the Town of Babylon. Zoning in this area is predominantly industrial/office along the Route 110 corridor with adjacent residential districts surrounding this core. Existing land uses in this area are primarily industrial and office related and form a continuation of the office-industrial center of the study area. Scattered commercial uses are found along Route 110 and Conklin Street. To the south of this industrial/commercial district is Republic Airport. The largest institutional use in this area is SUNY Farmingdale (New York State Agricultural School) which is located on a residentially zoned parcel, part of which is in the southwestern corner of the project area.

Adjacent to the western border of the project area is the Town of Oyster Bay, Nassau County. This area is zoned predominantly residential with some industrial/office districts along Bethpage-Sweethollow Road, the western extension of Spagnoli Road. Bethpage State Park and the Old Bethpage Village Restoration (Nassau County) abut the project area. Commercial and industrial uses are also found adjacent to the LIE.

In general, the surrounding zoning regulations and land uses complement the existing land use and zoning pattern within the study area (Figure 2-25). A great portion of Long Island's major office-industrial center is located in the study area, extending beyond its borders into Babylon and to a lesser degree into Oyster Bay. The office-industrial center is served by small retail strips and is surrounded by residential, recreational and institutional uses.

2.9 Demography

2.9.1 Population

The population of the Town of Huntington grew dramatically from 1950 to 1960, resulting in a 166 percent increase in population during the decade (Table 2-17). From 1960 to 1970, there was a 59 percent increase in population, followed by a sharp decline in the rate of growth to 0.7 percent in the 1970 to 1980 period. This decrease in the growth rate for the Town was based upon a very low birth rate combined with a continued reduction of in-migration. The population of the Town of Huntington in 1980 was 201,512.

A change in enumeration districts and the establishment of a new census designated place (CDP) boundary for Melville makes population comparisons to earlier years (i.e., before 1970) difficult. However, figures for the most recent period, 1970 to 1980, show that the area experienced a 20 percent increase in population, resulting in a total population of 8,139 persons. According to the 1980 Census, Melville contains more population than any of the four incorporated Villages within the Town. However, of the total 14 CDP's within the Town, it ranks ninth in population.

FIGURE 2-25

LKB / RPPW INC

GENERALIZED ZONING SURROUNDING THE STUDY AREA

TABLE 2-17

POPULATION OF THE TOWN OF HUNTINGTON AND THE MELVILLE AREA
1950-1980

Year	Town of Huntington	Melville
1950	47,506	N/A
1960	126,221	5,400
1970	200,172	6,756[1]
1980	201,512	8,139[2]

Source: Historical Population of Long Island Communities 1970-1980, Long Island Regional Planning Board Decennial Census Data, August, 1982.

[1] Reflects revision in the community boundaries for 1980 Census

[2] New CDP boundary in 1980

The Melville CDP is comprised of Census Tracts 1122.06 and 1122.07. The Melville-Route 110 study area is located within a portion of the CDP, namely, Block Groups 2 and 3 of Census Tract 1122.06 and a portion of Block Group 1 of Census Tract 1122.07. In addition, the study area also includes two other tracts outside of the CDP. Census Tract 1122.05 is comprised of that portion of the State University of Farmingdale that is located within the Town of Huntington. There are no population statistics available for it. Census Tract 1122.08 is comprised of the Long Island Developmental Center. According to the 1980 Census, this tract contained a total population of 2,241 persons.

The 1980 population for the study area, excluding the two institutions, was estimated to be 1,350 persons. Population for Census Tract 1122.06, Block Groups 2 and 3 totals 1,220 persons, and the population of the portion of Census Tract 1122.07, Block Group 1 which falls within the study area was estimated at 130. The study area represents approximately 17 percent of the total population of Melville. It should be noted, however, that since the 1980 Census, two high density townhouse developments were constructed in the study area, increasing the population by over 500 persons.

The total number of households within the Town of Huntington, according to 1980 Census data, was 60,142. This represented a 15 percent increase from the 1970 Census figure of 52,306 households. At the same time, the average household size decreased from 3.7 persons in 1970 to 3.3 persons in 1980. The median age was 31.9 years, with 30.5 years being the median age for males, and 33.0 years being the median age for females.

The total number of households within Melville, according to the 1980 Census data, was 2,264, which was a 45.4 percent increase over the 1970 Census figure of 1,557 households. The average household size decreased for this area to 3.6 persons per household in 1980. The median age was 30.7 years, with 28.8 years being the median age for males, and 31.9 years being the median age for females.

Population projections on a block or block group level are not available for Melville. However, population projections prepared by the New York State Department of Environmental Conservation and the New York State Department of Commerce in September, 1985, estimate that the Town of Huntington will increase in population by six percent between 1980 and 1990, resulting in a total population of 213,700 persons.

2.9.2 Housing

At the time of the 1980 Census, there were 61,269 year-round housing units within the Town of Huntington. Of this total, 51,267 (84 percent) were owner occupied, 8,875 (14 percent) were renter occupied, and 1,127 (two percent) were vacant. Statistics for the Melville CDP are very similar to the Town relative to the percent of occupied housing units by tenure type. Of the total 2,292 year-round unts, 2,017 (88 percent) were owner occupied, 247 (11 percent) were renter occupied, and 28 (one percent) were vacant.

The median value of housing for the Melville area during the time of the 1980 Census was approximately $85,000. The median value in Census Tracts 1122.06 and 1122.07 were $66,900 and $108,200, respectively. Recently the "Huntington Annual" (Long Island Business , 1986) listed the average 1985 home selling price in the Town of Huntington as $195,315. The rapidly increasing cost of housing and the Melville area's low vacancy rate both point to an absence of low and moderately priced housing within the study area.

2.10 Economics

2.10.1 Regional Economic Base

The location of the Melville-Route 110 Area near the Nassau-Suffolk border subjects it to the various pulls of the bi-county economy. The pace of development within the study area is a function of economic trends in Nassau County as well as in Suffolk County. Therefore, in examining the economic forces at work in Melville, and in evaluating the area's competitive position within the Long Island real estate market, it is necessary to maintain a regional perspective.

The distribution of non-farm employment in Nassau-Suffolk is shown in Table 2-18 and compared with the national distribution. Long Island's economy is less dependent on manufacturing than is the country as a whole, and shows a greater concentration of jobs in services and retail and wholesale trade. Thus, the region is ahead of national trends which have shown a shift from a manufacturing to a service-based economy.

These and other employment trends are detailed in Tables 2-19 and 2-20. Between 1983 and 1990, the United States Department of Commerce, Bureau of Economic Analysis projects that job growth on Long Island will increase at an average annual rate of 3.0 percent, as compared with a national average of 2.2 percent. On Long Island, the fastest growing sector will be finance, insurance and real estate (FIRE) which generates mostly white collar jobs. Services, also a major generator of office employment, will also show strong growth. In fact, one-third of all jobs added on Long Island are expected to be in services. These trends generally reflect the national outlook, although the region projects significantly better performance in FIRE and wholesale trade.

TABLE 2-18

NON-FARM EMPLOYMENT DISTRIBUTION
BY INDUSTRY, 1983

Employment (%)

Industry	Nassau-Suffolk	United States
Construction	4.7	5.0
Manufacturing	16.0	18.3
Transportation and Public Utilities	4.5	5.2
Wholesale Trade	7.5	5.4
Retail Trade	18.4	16.8
Finance, Insurance, Real Estate	6.0	6.0
Services	25.9	23.5
Government	15.8	18.2
Other	1.1	1.8
TOTAL	99.9*	100.2*

* Does not add to 100.0 due to rounding.

Source: U.S. Department of Commerce, Bureau of Economic Analysis; compiled by RPPW.

TABLE 2-19

NON-FARM EMPLOYMENT TRENDS, 1983-1995
NASSAU/SUFFOLK

Employment (thousands)

Industry	1983	(1990)	Average Annual Change 1983-1990 Number	Average Annual Change 1983-1990 Percent	(1995)	Average Annual Change 1990-1995 Number	Average Annual Change 1990-1995 Percent
Construction	52.1	67.7	2.2	4.3	71.6	0.8	1.1
Manufacturing	175.4	219.7	6.3	3.6	231.1	2.3	1.0
Transportation and Public Utilities	49.7	64.4	2.1	4.2	71.2	1.4	2.1
Wholesale Trade	82.8	107.6	3.5	4.3	118.4	2.2	2.0
Retail Trade	202.1	233.4	4.5	2.2	250.9	3.5	1.5
Finance, Insurance, Real Estate	66.0	89.7	3.4	5.1	102.2	2.5	2.8
Services	284.0	363.8	11.4	4.0	411.8	9.6	2.7
Government	173.3	169.9	(0.5)	(0.3)	170.8	0.2	0.1
Other	11.6	14.8	0.5	3.9	16.8	0.4	2.7
TOTAL	1097.0	1331.0	33.4	3.0	1444.8	22.8	1.8

Source: U.S. Department of Commerce, Bureau of Economic Analysis; compiled by RPPW.

TABLE 2-20

NON-FARM EMPLOYMENT TRENDS, 1983-1995
UNITED STATES

Employment (thousands)

Industry	1983	1990 (Proj)	Average Annual Change 1983-1990 Number	Average Annual Change 1983-1990 Percent	1995 (Proj)	Average Annual Change 1990-1995 Number	Average Annual Change 1990-1995 Percent
Construction	5,098.0	6,325.0	175.3	3.4	6,670.0	69.0	1.1
Manufacturing	18,822.0	21,837.0	430.7	2.3	22,704.0	173.4	0.8
Transportation & Public Utilities	5,313.0	6,110.0	113.9	2.1	6,561.0	90.2	1.5
Wholesale Trade	5,610.0	6,467.0	122.4	2.2	6,850.0	76.6	1.2
Retail Trade	17,284.0	20,211.0	418.1	2.4	21,930.0	343.8	1.7
Finance, Ins., Real Estate	6,169.0	7,485.0	188.0	3.0	8,265.0	156.0	2.1
Services	24,164.0	29,465.0	757.3	3.1	32,930.0	693.0	2.4
Government	18,718.0	19,062.0	49.1	0.3	19,348.0	57.2	0.3
Other	1,809.0	2,239.0	61.4	3.4	2,486.0	49.4	2.2
TOTAL	102,987.0	119,201.0	2,316.2	2.2	127,744.0	1,708.6	1.4

Source: U.S. Department of Commerce, Bureau of Economic Analysis

From 1990 to 1995, the Department of Commerce anticipates a slowing, both of the national and regional economies, although Long Island should continue to add jobs at a rate faster than the country as a whole. During that period, the FIRE and service sectors should continue their strong showings at both levels.

Despite the well-publicized difficulties experienced by American manufacturing, that sector is expected to outperform the overall economy, on both a regional and national basis, during the 1983-1990 period. What is significant, particularly for Long Island and Melville, are the shifts among different types of manufacturing operations and the geographic movement of industry within the bi-county region.

On Long Island, manufacturing has traditionally been dominated by the aerospace industry. In recent years, however, the industry has undergone a shift on the Island from the manufacture of aircraft to the production of electronic parts and components. As a result, the aerospace industry has gone from one dominated by a few major companies, such as Grumman and Fairchild Republic, to a diverse collection of 1,500 related firms (Bernstein, December 28, 1986).

While aerospace employs over 100,000 people on Long Island, (10 percent of the total work force), the outlook is clouded due to the difficulties experienced by Fairchild Republic. Already down to 3,400 employees, the company is in the process of phasing out its Long Island operations. Fairchild's location, just south of Melville, has been an important factor in the growth of the Route 110 office/industrial corrider.

The distribution of manufacturing employment in Nassau-Suffolk is shown in Table 2-21. Reflecting the discussion above, electronic equipment and instruments dominates the sector. With the high costs of doing business on Long Island (e.g., land values, wages, transportation, energy), the manufacturing of high value electronics components is better suited to thrive than are operations requiring less expensive production factors.

2.10.2 Distribution of Economic Activity

Within the bi-county region, economic activity is not distributed evenly. Long Island's geography, with New York City to the west and a "dead end" at the east, creates significant differences among locations. When combined with regional transportation networks, demographic patterns and environmental factors, the geography creates locational advantages and disadvantages for various types of businesses.

Utilizing journey to work data from the 1980 U.S. Census, the Long Island Regional Planning Board analyzed the location of employment at 32 major centers throughout Nassau-Suffolk (LIRPB 1984). Among these, Melville was third in total employment with 30,515 jobs, trailing only the Garden City area (36,119 jobs) and Hicksville-Jericho area (33,549 jobs). However, Melville far outstripped all other areas in employment growth from 1970 to 1980, gaining 19,103 jobs, a nearly 200 percent increase.

Among these major centers, the distribution of jobs by industry varied widely. For example, while industrial employment made up only 2.0 percent of the total in Stony Brook, it accounted for 70.9 percent of the jobs in Bethpage. For Melville, the distribution is shown in Table 2-22. In 1980, Melville's proportion of industrial jobs (38.9 percent) was the seventh

TABLE 2-21

MANUFACTURING EMPLOYMENT
NASSAU/SUFFOLK
OCTOBER 1986

	Employment (thousands)		Percent	
Durable Goods	130.6		71.6	
Fabricated Metal Products		14.4		7.9
Electronic Equipment and Instruments		62.8		34.4
Transportation Equipment		29.3		16.1
Other Durable Goods		24.0		13.2
Nondurable Goods	51.7		28.4	
Food and Finished Products		5.2		2.9
Textile Mill Products		1.9		1.0
Apparel and other Textile Products		5.2		2.9
Printing and Publishing		19.6		10.8
Other Nondurable Goods		19.8		10.9
Total		182.3		100.1*

*Does not add to 100.0 due to rounding

Source: New York State Department of Labor, Labor Area Survey, December 1986

TABLE 2-22

PERSONS WORKING IN MELVILLE BY INDUSTRY OF EMPLOYMENT - 1980

	Number	Percent
Industrial	11,859	38.9
Retail and Personal Services	2,811	9.2
Finance-Business-Professional	12,840	42.1
Public Administration	738	2.4
Transportation - Public Utilities	1,433	4.7
Construction	484	1.6
All Other	350	1.1
TOTAL	30,515	100.0

Source: Long Island Regional Planning Board highest among the major employment centers. Although there are no current statistics to document this, it is apparent from all trends that this situation has changed as Melville emerged as Long Island's largest office center (See Section 2.11).

As discussed previously, the characteristics of Long Island's industrial sector have changed in recent years. This reflects not only conditions within those industries, but also specific cost factors on Long Island. With land in the Melville area becoming highly desirable as a prestigious office location, industry has been forced to look for cheaper sites, either eastward to areas such as the Town of Brookhaven, or else off Long Island altogether. In some cases, such as with New York Twist Drill, which moved its manufacturing operation off Long Island from the Route 110 area, administrative functions have remained (Ferguson, New York Twist Drill, January 1987).

2.10.3 Labor Force

Analysis of an area's economy must consider not only the availability of jobs, but also the availability of workers to fill them. This is particularly important on Long Island where a shortage of workers, rather than a shortage of jobs, serves as a brake on economic growth. The problem is more acute in those areas where the availability of affordable housing is low.

The condition is summarized in the prevailing unemployment figures as shown in Table 2-23. In both Nassau and Suffolk Counties, the rate of unemployment is significantly below that of the State, and has been dropping.

TABLE 2-23

UNEMPLOYMENT RATES

Area	Rate of Unemployment (%) October 1985	October 1986
New York State	6.6	5.5
Nassau County	4.7	3.8
Suffolk County	4.6	3.8

Source: New York State Department of Labor

Sewer?

In 1983, the Long Island Regional Planning Board made projections of trends in the regional labor force. As shown in Table 2-24, the Long Island resident labor force was projected to increase from 1,229,922 workers in 1980 to 1,277,715 workers in 1990. This represents an increase of 47,793 workers (4 percent), much less than the nearly 300,000 workers added during the 1970's. When compared with the projected employment growth for Long Island (Table 2-19), the labor force growth of the 1980's would cover less than 1-1/2 years of job expansion.

The impact on economic growth relates to the ability of business to fill job openings. On Long Island, projected openings are shown in Table 2-25. The largest number of openings will be in the clerical, professional/technical and service categories. The first and last of these occupational groups include lower paying jobs which are difficult to fill in areas such as Long Island, where housing is expensive and public transportation is limited. Melville, will feel this strain as its employment base expands, because access to the area is almost wholly by automobile, and its surrounding residential areas are generally expensive.

2.10.4 Tax Base

The Melville-Route 110 Area generates tax revenues for the Town of Huntington, Suffolk County, and the Melville and Dix Hills School Districts. Taxes paid to the Town include revenues for a number of special purpose districts, including: fire protection, water service, light service, sewer service, ? and refuse disposal. Current 1986-87 tax rates (per $100 of assessed value) which are applicable to the study area are shown in Table 2-26. Information regarding tax assessment procedure was obtained through a telephone conversation with the Town's Tax Assessor (Charles Crump, (1986)

TABLE 2-24

LABOR FORCE PROJECTIONS
NASSAU/SUFFOLK

	1970(a)	1980(a)	1985(b)	1990(b)	Percent Growth 1970-80	Percent Growth 1980-90
Males	587,880	725,790	716,119	740,817	23.5	2.1
Females	344,134	504,132	525,303	536,358	46.5	6.4
TOTAL	943,014	1,229,922	1,241,422	1,277,175	32.0	3.9

(a) actual

(b) projected

Source: Long Island Regional Planning Board

TABLE 2-25

OCCUPATIONAL PROJECTIONS, 1987-1989
NASSAU/SUFFOLK

Occupational Group	Employment 1987	Employment 1989	Total Annual Openings
Professional & Technical	255,043	270,071	30,279
Managers & Officials	126,909	135,325	17,358
Sales Workers	95,784	101,314	15,438
Clerical Workers	279,348	297,887	38,636
Craft & Kindred	127,675	136,305	14,680
Operatives	118,483	123,383	13,101
Service Workers	205,006	216,481	25,373
Laborers	59,827	63,531	8,622
Farm Workers	14,402	13,463	1,232
All Occupations	1,282,477	1,357,760	164,720

Source: NYS Department of Labor

Sewer?

TABLE 2-26

PROPERTY TAX RATES

Tax Rate per $100.00 of Assessed Value

School District	$52.64
Library District	2.34
County	7.32
Outside Inc. Villages	3.76
County Police District	13.77
Highway	4.62
Fire District	2.46
Light District	.65
Refuse District	3.15
Water District	1.79
Wastewater District	.14
	$92.64

Not Sewer serviced

Note: Tax rates have been rounded off to two decimal places

Generalized Taxes

Office Building	3.50/square foot
Commercial	3.00/square foot
Industrial	2.50-3.00/square foot

Generalized assessment procedures used by the Assessor for residential, office, commercial and industrial uses are also shown in Table 2-26

2.11 Market Conditions

2.11.1 Office Market

Melville's Competitive Position

The Melville area currently boasts the largest concentration of office space on Long Island. In evaluating Melville's competitive position relative to other office areas on Long Island, a number of factors should be considered:

- Melville offers a central location on Long Island, being within easy reach of both Nassau and Suffolk Counties. Melville's accessibility makes the area more desirable than other competitive office markets. In comparison, Mitchell Field is distant from major east-west highways; Hauppauge and Islandia are located too far to the east.

- Melville has prestige as a corporate headquarters. The Route 110 corridor has a long history as a center for industry and back offices (i.e., internal support divisions of companies, including data processing and clerical operations), with corporate headquarters and Class A office buildings moving in over the past 15 years. The Melville address is nationally known as a financial and communications center. Although Mitchell Field is the second largest office development on Long Island, that area is still too new to have the prestigious corporate name. Moreover, Mitchell Field, Garden City and Hempstead are known more as educational centers. Mineola, Hauppauge and Yaphank have reputations as government centers.

- Leasing costs in Melville are generally below those in Nassau County's office and commercial centers. According to Crain's New York Business (October 6, 1986; p. 12), the average office space in Melville, both older and newer, rents for $18.64 per square foot. Prices farther west on Long Island are much higher: Great Neck ($23.84/sf), Lake Success ($23.51/sf), Manhasset ($20.61/sf), Garden City and Mineola ($20.66/sf), Mitchel Field ($22.87/sf) and Jericho ($21.37/sf). Additionally, conversions of industrial space into office space are typically more economical than new construction. Melville offers many opportunities for such conversions.

- There is a high quality labor force on Long Island and Melville's location makes it convenient for both Nassau and Suffolk County workers. Given the tight labor market, accessability for employees is important.

- Melville has been able to grow as a major corporate center under the present master plan and zoning ordinance. The Route 110 corridor was identified for industrial/office development in the 1965 Comprehensive Plan. The existing zoning ordinance allows industrial structures to be converted into office buildings without rezoning.

- Nassau County is currently having difficulties meeting the federal air quality standards at its largest office center, Mitchel Field. Unless these standards are met, the County faces cut-offs of funding for roads and other projects. This air quality problem is jeopardizing the fate of a second major office tower at the European American Bank (EAB) complex at Mitchel Field. EAB I is about 1.1 million square feet in size; this complex now exceeds the density standards recently set by Nassau County in an effort to control air pollution. In so doing, EAB II is jeopardized and the second tower may never be realized. Consequently, there may be additional pressure on the Melville area for corporate office space that might have otherwise located in EAB II.

Development of the Melville Office Market

The development of large-scale office buildings (i.e., those over 15,000 square feet) has been prevalent in Melville only since the early 1970's. Prior to that time, Melville's largest office structures consisted of the seven projects built between 1960 and 1968 (Table 2-27). These buildings, basically concentrated in one small portion of Melville, often contained both office and industrial functions (e.g., warehousing and distributing) under one roof. It was not until the latter half of the 1970's that front-office, corporate headquarters moved into the area. The history of this office development is described below and summarized in Table 2-28.

The six earliest office structures, built from 1957 to 1962, were single purpose office buildings. Three of the six were union halls, the remaining three were small, low intensity office buildings. Four of the six office buildings had a floor area ratio (FAR) of less than 0.10. Two of these structures have since been enlarged, and an application for the enlargement of a third building, the Allstate Building, was approved in 1986.

From 1963 to 1971 office development in Melville increased. During this period, 12 new buildings were constructed and one industrial building was converted to office use. Together, these buildings added nearly 1.79 million square feet of gross floor area to Melville's office market, with a median gross floor area of approximately 100,000 square feet and a median FAR of 0.39. The four new buildings listed as approved in 1971 include the

TABLE 2-27

Melville's Largest Office Structures - Pre 1970

Name	Address	Fl. Space (Sq. Ft.)
Paragon Enterprises Bldg.	60 Broad Hollow Road	12,960
Paragon Enterprises Bldg. (Second Bldg.)	20 Broad Hollow Road	26,400
110 Colonial Center	150 Broad Hollow Road	57,530
Paragon Office Bldg.	534 Broad Hollow Road	92,980
Allstate Bldg. (presently known as Merganthaler)	201 Old Country Road	74,620
BENCO Union Hall	Pinelawn Road	40,000
Republic Lodge	Broad Hollow Road	11,380
G.B.L. Sheet Metal Workers Union Hall	Walt Whitman Road	15,318
Security Natl. Bank (presently known as Chemical Bank)	115 Broad Hollow Road	20,147*
Melville Ind. Office Plaza	425 Broad Hollow Road	107,000

* Building was later expanded to 93,077 sq. ft.

Source: Fine, Town of Huntington

TABLE 2-28

HISTORY OF OFFICE DEVELOPMENT IN MELVILLE

Year	No. New Bldgs.	No. New Additions	New Sq. Ft.	Sq. Ft. Additions	New Acres Developed
1957	1	-	40,000	-	4.99
1958	1	-	74,620	-	15.66
1959	2	-	15,122	1	9.00
1960	1	-	20,147	-	9.80
1961	-	-	-	-	-
1962	1	-	15,318	-	4.37
SUBTOTAL	6	-	165,207	-	43.82
1963	1	-	12,960	-	0.43
1964	-	-	-	-	-
1965	2	1	95,909	-	6.42
1966	1	-	57,530	31,094	2.74
1967	-	-	-	-	-
1968	1	1	92,984	33,200	6.00
1969	3	-	267,118	-	15.71
1970	1	1	65,000	72,930	3.08
1971	4	-	1,196,037	-	77.81
SUBTOTAL	13*	3	1,787,538	137,224	112.19
1972	-	-	-	-	-
1973	-	-	-	-	-
1974	-	-	-	-	-
1975	-	-	-	-	-
SUBTOTAL	-	-	-	-	-
1976	2	-	273,401	-	19.67
1977	2	-	332,520	-	18.97
1978	3	-	282,447	-	23.69
1979	3	-	223,888	-	15.37
1980	3	-	147,740	-	16.54
1981	4	-	496,297	-	29.82
1982	1	-	87,304	-	16.19
1983	2	2	287,491	61,222	18.18
1984	6	2	425,762	182,111	28.13
1985	4	1	359,214	6,472	27.46
SUBTOTAL	30	5	2,943,064	249,805	214.02
TOTALS	49	8	4,895,809	387,029	370.03

Total Gross Floor Area - 1957-1985: 5,282,838

Note: *Includes 12 new buildings and one conversion

Source: Fine, Town of Huntington, Melville-1986 Survey and Recommendations three large structures, each with more than 365,000 square feet, comprising Huntington Quadrangle. Built on the northeast corner of Route 110 and Baylis Road by We're Associates, Huntington Quadrangle represented the first prime office complex in Melville. However, the project was caught in the recession which plagued real estate development over the next four years, and leasing was very slow. Between 1963 and 1971, three buildings, one of which was also built during this period, were expanded, adding another 137,224 square feet of office space. From 1972 to 1975, no new construction or building expansion occurred in the Melville area due to the economic recession.

The golden age of office development in Melville was ushered in the following year of 1976, and has continued up to the present day. From 1976 to 1985, 30 new office structures were approved for construction. When all are complete, these buildings will add almost three million square feet of office space on more than 214 acres. The largest of these structures is 110 Office Plaza, with more than one quarter million square feet and a parking deck. Fifteen of the 30 new buildings contain more than 100,000 square feet of gross floor area.

The median FAR during this 1976 to 1985 period was 0.35. The drop in FAR from the earlier years may be related to a short lived trend toward the sprawling, one-story business campus. A second factor influencing the lower office FAR was the trend toward the conversion of industrial properties for office use. These industrial structures typically had been built at a lower density than office properties in Melville. Finally, the FAR drop may be the result of the higher parking ratio (one space per 200 square feet of office space) imposed by the lending institutions financing the business campuses; the Town's parking requirements for these offices is one space per 250 square feet of office space (Fine, 1986).

Parking decks were built with six of the structures approved during the 1976 to 1985 period. Prior to this time, it was not economically feasible to build parking structures. In order to meet the parking requirements of the Town, high intensity office complexes must provide parking decks.

Current Melville Office Market

Melville's Route 110 corridor is presently the most concentrated office market on Long Island. Over five million square feet of office space have been built or is in some phase of the approval/construction process. Land prices in the study area can average 800,000 dollars per acre for suitable office sites. However, if Mitchel Field were to be fully developed, it would surpass Melville in gross floor area. If EAB Plaza II is constructed at Mitchel Field, that office complex will be the largest such development on Long Island. EAB II is expected to add another 1.5 million square feet to the existing plaza. The largest office markets on Long Island are shown in Table 2-29.

Melville has become a community of office complexes, housing corporate headquarters. These firms specialize in banking, finance, insurance, computers, aerospace and other high technology industries. The Route 110 corridor has become an "address with a stamp of prestige", with a long list of nationally known firms, including 11 of Long Island's top 50 publicly held companies (Long Island Business, November 20, 1985).

Table 2-30 identifies several of Melville's office complexes along with data on rents, amenities, tenants, and so forth. Current asking rents in prime buildings average \$23-25 per square foot, although it was reported that one new complex presently under construction may lease for as high as \$29 per square foot. Some rents may be as low as \$17-23 per square foot, depending on the type (Class A or B) of space and location relating to Route 110 (Giamo, January 21, 1987). Others have found that properties without Route 110 frontage are not as marketable as prime sites with Route 110 frontage, (Yorio, January 21, 1987).

\$18.64 on pp. 2-65

All of the new structures and most of the converted buildings provide some amenities for their tenants, including: restaurants, gardens, atriums and

TABLE 2-29

LARGEST OFFICE MARKETS ON LONG ISLAND

Office Markets

Name	Existing Sq. Ft. (Million)
Melville - Route 110	3.9
Garden City/Mineola	3.7
Woodbury/Syosset/Plainview	3.3
Lake Success	2.9
Mitchel Field	2.3
Jericho/E. Westbury	2.2
Great Neck	1.5
Misc. Central Nassau	1.2
Hauppauge, Smithtown	1.1
Misc. Western Suffolk	1.0
Misc. Eastern Nassau	0.9
Manhasset/Port Washington/Roslyn	0.9
Roosevelt Field/Carle Place	0.7
Misc. Western Nassau	0.6
Eastern Suffolk	0.1

Office Complexes

Rank	Complex	Location	No. Bldgs.	Sq. Ft.
1	Triad Office Center	Lake Success	6	1,780,000
2	Nassau Crossways Int'l. Plaza/Gateways Exec. Mall	Woodbury	3	1,653,070
3	EAB Plaza	Mitchel Field	2	1,512,000
4	Huntington Quadrangle/ Corporate Headquarters	Melville	6	1,440,000
5	Lake Success Quadrangle	Lake Success	10	1,100,000
6	Nassau West Corp. Center	Mitchel Field	3	870,000
7	Jericho Quadrangle	Jericho	3	855,000
8	American Park	Syosset	4	616,000
9	Jericho Plaza	Jericho	2	605,000
10	Garden City Plaza	Roosevelt Field	4	559,000
11	Corporate Center	Melville	4	430,000
12	Melville Office Plaza	Melville	3	427,000

Source: "Commercial Development Analyses", Long Island Regional Planning Board, 1982.

						Ready in '87 Bldg. #3 - Not Begun	- Standard Chartered Bank - Met Life Insurance - Lend Lease	
Evans Corporate Plaza Rt. 110 & Baylis Road	177,150	-	1	"Healthy"		Completed	Grumman's took entire building	
LIE Expressway Plaza #401 Expressway Plaza	190,000 Another 100,000 planned	3-4	1 (3 planned)			To be completed Summer '87	Not in yet	Minimum rental is 25
Reliance Office Complex/Omni LIE & Rt. 110	630,000 (Plans to add 223,000)	5	1 (Plans to add 2 more)			Under construction	360 room hotel with 3 office buildings	Norstar Bank is plann 208,000 s.f. for its as new Long Island he
Royce-Carlin Hotel Rt. 110 & Bethpage-Spagnoli Rd.		1				Under construction to open late summer '87	308 room hotel	
Citicorp Quarter III #135 Citicorp Office 88 Duryea Road						Completed	Citicorp (13,000 s.f.)	
Expressway Corporation Center LIE & Round Swamp Road	130,000	4	1		Health Club Restaurant Computer Cable Hook Ups		- Equitable Life Insurance - Fireman's Fund	
Racanelli Office & Industrial Site 1895 Walt Whitman Road	55,000		1			Under construction	Tektronics	
Axxin/GE Site LIE South Service Road	43,000 (now) To be razed for 101,444	1 (now) To be razed for 3	1	$25	Atrium in center of Bldg Parking for 409 cars Park in front and back	Old bldg. to be razed soon		- Site alone worth mor $5 million - Present industrial r - Project will cost ab - Reconstruction
Delco Development Corp. Melville Park Road	60,000 (now) 30,000 to be added	1 (now) 2nd story added	1	$25	Atrium added	Under construction		Reconstruction
Huntington Quadrangle/ Corporate Quarters Rt. 110 & Baylis Road	1.4 million	2-4	6					- Quadrangle has 3 4-s - Corp. quarters has 3
Corporation Center Rt. 110 & Pinelawn Rd.	430,000	2-4	4	$23-26		Completed		
Melville Office Plaza Melville Park Road	427,000	3-4	3			Completed		

Source: RPPW

health clubs. In addition, some of the larger complexes offer computer cable hook-ups for each office. These buildings are usually filled with large space users (i.e, tenants inhabiting 50,000 square feet or more). Information on selected office complexes in competing areas is contained in Table 2-31.

Until recently, office structures in Melville were built on speculation. Now, the demand is so high that substantial portions of the buildings are often rented prior to completion. Vacancy rates in Melville's office complexes are low. One report estimated the vacancy rate at four to five percent (The Real Estate Newsletter , July 7, 1986). The vacancy rate is expected to continue to decline as the office market contracts due to scarce land, higher prices and a recent slow-down in construction.

Office condominiums are scarce in the Melville area, although such developments are being built elsewhere in Nassau and Suffolk Counties, such as in Great Neck, Glen Cove, Hempstead, Huntington and Hauppauge (Yorio, November 15, 1984). One office condominium on Route 110 and Old Country Road in Melville has units selling for close to $200 per square foot. By comparison, similar office condo space in Great Neck sells for in excess of $230 per square foot.

Absorption of Office Space

Over the 29 year period between 1957 and 1986, an average of 182,000 square feet of gross leasable office space per year was developed in Melville (Table 2-28). Yet, this period includes seven years where no building occurred at all (1961, 1962, 1964, 1972-75), and another year (1971) where construction activities reached almost 1.2 million square feet. From 1961 to 1970, the average absorption rates (based on a five year running average) were relatively low, ranging from about 25,000 to 110,000 square feet per year. By 1971, the average absorption rate soared to 325,000 square

Table 2-31

Selected Office Complexes in Competing Areas

Project Name/Address	Total Sq. Ft.	Number of Stories	Number of Bldgs.	Asking Rent/S.F.	Amenities	Availability	Tenants	Other
Mitchel Field EAB Plaza	1.1 million	15	2	$25/s.f.	- 2 towers w/glass enclosed atrium with waterfall - Marble/granite lobby - Outdoor plaza - Sophisticated heating, lighting & surveillance systems - Plans include construction of movie theaters, restaurants & 2,800-space parking garage - EAB has large cafeteria - Cafe in lobby		- EAB Bank Office - General Motors Acceptance Corporation - United Aviation Services - IBM - Federal Express - Fugazay Travel	- EAB I already built a - EAB II construction h Nassau County's effor air quality standards that bldgs. should no footage of lot. EAB already exceeds size
Atria Complex Stewart Avenue	246,000 and 187,000	6	2	$25/s.f.	- 20 acres on parklike setting	Under construction		- Only major space comi at Mitchel Field over few years
Nassau West Corp. Center	870,000	2-10	3		- Includes 2 office bldgs. and Nassau Omni	Omni not done yet		
Meadowbrook Plaza	325,000	1-5	3		- Only 1 bldg. (15,000) is completed	Under construction		
Travelers Financial Center	240,000	9	1			Complete		
Mitchel Field Corp. Center	220,000	6	1			Complete		
Ronkonkoma Kulka Building 5th Avenue & Peconic St.	40,000				- Cost $1.5 million - 16 tenants with 2,500 s.f. each	Ready for occupancy		
Lake Success/Garden City Triad Office Center	1.7 million	2	6	$25-29	- 4 of 6 buildings already constructed			
Franklin Ave. Office Center	400,000	3-5	4	$25-27		Complete		
The Commerce 711 Stewart Avenue	300,000	2	1					
Woodbury/Jericho/Syosset Nassau Crossways Int'l Plaza Gateway Exec. Mall	1,653,070	1-4	3	$25-29		Complete		
Jericho Quadrangle	855,000	3	3	$25-29		Complete		
North Shore Atrium	310,000	2-3	2			Complete		

Source: RPPW

feet, and stayed at 300,000 square feet for the next two years before falling to a low of 50,000 square feet by 1976. Over the next five years, the absorption rate climbed continuously, reaching 310,000 square feet by 1981, dropping slightly in 1982 and 1983, and then rising again to 375,000 square feet in 1985. The average absorption rate during this time was about 181,000 square feet; however, since 1980, the annual absorption rate has been about 375,000 square feet.

It is estimated that there are more than two million square feet of office space under construction or approved for development. Assuming all of this space is constructed, it will take over five years to absorb this planned space at the higher absorption rate of 375,000 square feet per year (Fine, 1986).

Realtors in the Melville area have offered both more conservative and more liberal estimates. One report stated that Melville's annual absorption rate for the 1980 to 1984 period was 200,000 square feet per year, and that this rate would remain as such in the near future (Yorio, August, 1984). Another reported that the Melville annual absorption rate is over 500,000 square feet per year (Agin, January 21, 1987).

2.11.2 Industrial Market

Historically, industrial development has been found along the Route 110 corridor, although it has only been chronicled by the Town since 1957. This development has been subdivided into four periods, each of which is discussed below. Table 2-32 summarizes this development.

The years from 1957 to 1963 represent the beginning of recorded industrial development in Melville. During this time, the Town of Huntington approved eight projects, six manufacturing plants, one distributing plant, and one research and development establishment. These projects were all located

TABLE 2-32

HISTORY OF INDUSTRIAL DEVELOPMENT IN MELVILLE

Year	New Buildings Number	New Buildings Sq. Ft.	Building Additions Number	Building Additions Sq. Ft.	Total Sq. Ft	Total Acres
1957	1	35,026	-	-	35,026	4.60
1958	-	-	-	-	-	-
1959	2	218,931	-	-	218,931	56.98
1960	1	76,500	-	-	76,500	14.01
1961	1	19,600	1	32,760	52,360	2.38
1962	1	92,750	1	14,000	106,750	13.05
1963	2	201,704	-	-	201,704	16.75
SUBTOTAL	8	644,511	2	46,760	691,271	107.77
1964	8	399,710	-	-	399,710	48.95
1965	7	366,441	2	14,175	400,616	41.93
1966	7	448,416	3	64,326	512,742	51.10
1967	4	287,331	2	68,667	355,998	32.06
SUBTOTAL	26	1,521,898	7	147,168	1,669,066	174.04
1968	1	60,000	2	52,888	112,888	5.00
1969	3	159,079	1	143,860	302,939	17.71
1970	2	153,644	1	66,752	220,396	19.00
1971	2	268,073	-	-	268,073	26.00
	-1*	-101,125	-	-	-101,125	-10.49
1972	2	96,260	-	-	96,260	6.67
1973	3	317,003	2	21,693	338,696	24.31
1974	6	541,850	1	40,000	581,850	43.24
1975	-	-	-	-	-	-
SUBTOTAL	19	1,595,909	7	325,193	1,921,102	141.93
	-1*	-101,125	-	-	-101,125	-10.49

TABLE 2-32 (Continued)

Year	New Buildings Number	New Buildings Sq. Ft.	Building Additions Number	Building Additions Sq. Ft.	Total Sq. Ft.	Total Acres
1976	-	-	3	117,753	117,753	-
1977	3	495,000	4	111,746	606,746	45.40
1978	4	340,397	2	41,652	382,049	35.59
1979	4	230,677	1	17,700	248,377	25.99
	-1*	-54,495	-	-	-54,495	-5.90
1980	1	132,000	3	120,233	252,233	24.62
1981	3	300,181	2	50,516	350,697	31.63
	-1*	-51,840	-	-	-51,840	-9.79
1982	1	32,650	-	-	32,650	5.00
1983	1	43,683	2	17,446	61,129	3.60
1984	1	45,450	1	20,000	65,450	2.79
1985	2	304,500	5	227,129	531,629	66.65
	-2*	-127,703	-	-	-127,703	-12.00
SUBTOTAL	20	1,924,538	23	724,175	2,648,713	239.27
	-4*	-234,038		-	-234,038	-27.69
TOTALS	73	5,585,731	39	1,243,296	6,930,152	652.52
	-5*	-335,163	-	-	-335,163	-38.18
Average per year**				Net	6,594,989 238,970.75	614.34

Note: *Indicates conversion of an existing industrial building to an office use. The minus sign indicates loss of industrial space and acreage, and is therefore included on a separate line for each year's tally.

**Including conversions and expansions.

Source: Fine, Town of Huntington, <u>Update 1986 - Survey and Recommendations.</u>

along Route 110, or just off Route 110, on Walt Whitman Road. In total, nearly 645,000 square feet of industrial buildings were added during this period.

The Long Island Expressway reached Melville in 1962, and this event ushered in a major industrial boom for the Route 110 corridor. During the period from 1964 to 1967, more than 1.5 million square feet of new industrial space was added in the form of 26 projects. Twenty of these buildings were manufacturing plants with the remaining being mixeduse and warehousing establishments. Seven building expansions were completed during these four years, adding another 147,000 square feet of industrial space.

From 1968 to 1975 another 1.6 million square feet of new industrial space was added to Melville by 19 projects. However, the trend toward diminished manufacturing was first evident in the composition of these new projects. Ten were distribution and warehousing establishments; four were mixed-used structures, and only five were manufacturing plants. Seven facilities expanded during these years, adding 325,000 square feet of industrial space.

From 1976 to 1985, industrial development in Melville comprised over 700,000 square feet of expansions plus 20 new buildings containing 1.9 million square feet. The new industrial construction was dominated by warehouses and distribution facilities. Of the 20 new industrial structures built, 14 were for warehousing or distribution, amounting to nearly 1.2 million square feet of space. Three new mixed use establishments were built, including the Newsday plant. Only three new manufacturing facilities were constructed during this period.

The Route 110 corridor is less than three miles long from the Northern State Parkway south to the Babylon border. As the limited amount of Route 110 frontage has been developed, industry has been forced to locations with frontage on adjacent roadways. The southern sections of Melville developed earliest, especially along Ruland Road, Walt Whitman Road, Baylis Road, and the Long Island Expressway. The most recent developments have occurred along Spagnoli Road, Marcus Drive, Deshon Drive, Maxess Road and Pinelawn Road.

Table 2-33 identifies the 25 largest industrial parks on Long Island. Melville has three entries on the list, Melville Industrial Park, Marcus Industrial Park and Spagnoli Road; none of which is among the ten largest. Hauppauge claims the most and the largest industrial parks, evidence that Long Island's industrial development has moved eastward in search of greater expanses of land and cheaper land costs, rents and utilities. In addition to Hauppauge, Yaphank, Islandia (a new office/industrial development center located near the intersection of the LIE and Veterans Memorial Highway), and Islip are beginning to emerge as industrial centers in their own right. Some experts believe that Hauppauge, will be the "new Melville", the new prestigious corporate headquarters area, and once again force industrial development further east (Shaman, January 8, 1987).

Industrial properties in Melville rent for $8-9 per square foot. Land prices can reach $500,000-800,000 per acre for a buildable site; however, the high land values are for an industrial site which can either be converted or razed and redeveloped as an office property.

The vacancy rate for Melville's industrial space is low (estimated to be below two percent), which is indicative of the heavy demand for industrial space. There are approximately 5.3 million square feet of industrial space presently available for lease in both Nassau and Suffolk Counties. This figure is up 0.5 percent since March, 1986, but down about 12 percent since March, 1984 (Long Island Business ,) July 9, 1986).

During the 1970's, many of Melville's industrial projects were developed through the Industrial Development Bond (IDA) program, allowing up to 100 percent financing. Because of the great expense involved in developing in-

TABLE 2-33

LARGEST INDUSTRIAL PARKS ON LONG ISLAND

Rank	Name	Location	Acres	Sq. Ft. Completed
1	Vanderbilt Ind'l Park	Hauppauge	400	3,600,000
2	Heartland Exec. Park	Hauppauge	232	3,500,000
3	Mitchel Field	Uniondale/ Garden City	1,265	3,500,000
4	Crossways/Gateways	Woodbury	217	3,025,000
5	Sylvester Street	Hicksville	55	2,000,000
6	Marcus Blvd.	Farmingdale	150	1,800,000
7	Racanelli Ind'l Park	Hauppauge	140	1,600,000
8	Roslyn North Ind'l Park	Roslyn	132	1,500,000
9	Freeport Ind'l Park	Freeport	44	1,454,000
10	Price Parkway	Farmingdale	70	1,360,000
11	Melville Ind'l Park	Melville	24	1,300,000
12	Airport Int'l Plaza	Bohemia	200	1,100,000
13	Americana Ind'l Park	Hicksville	25	1,000,000
14	Marcus Ind'l Park	Melville	100	1,000,000
15	Marcus Ind'l Park	Hauppauge	100	1,000,000
16	Motor Parkway	Central Islip	60	800,000
17	Marcus Ind'l Park	Deer Park	52	800,000
18	Grand Blvd.	Deer Park	110	800,000
19	Bethpage-Spagnoli Rd.	Melville	55	770,000
20	Inwood Ind'l Park	Inwood	30	750,000
21	New Horizons Ind'l Park	Amityville	123	700,000
22	Equi-Park Ind'l Mall	Islip	60	576,000
23	Manorhaven Ind'l Park	Yaphank	90	565,000
24	Cardinal Ind'l Park	Hauppauge	19	555,000
25	Heartland Exec. Park-part	Hauppauge	31	549,000

Source: Long Island Business , July 9, 1986. Compiled by RPPW.

dustrial projects, many project sponsors cannot afford to do without IDA help. However, recent tax law changes have virtually eliminated the local IDA market and, hence, contributed to a slowing of industrial development.

Due to the strength of the Route 110 office market, industrial uses, which typically require less expansive land, are being forced to look elsewhere for sites. Areas around MacArthur Airport and in the Town of Brookhaven have been attracting large amounts of industrial development which, in the past, might have settled in Melville. Moreover, Long Island in general has lost industrial businesses to other parts of the country where costs are lower.

2.11.3 Hotel Market

As discussed in Section 2.10, the Long Island economy has recorded significant growth in recent years. Yet, while the work force has been growing, the amount and type of available lodgings for visiting executives has not kept pace. There are 6,305 hotel/motel rooms on Long Island, as reported in a recent Laventhol & Horwath study (Long Island Business , December 19, 1986). Nassau County has nine chain hotels and 15 independent facilities while Suffolk County has nine chain hotels and 67 independent facilities. Many of Suffolk County's hotels are seasonal. In Nassau County, there are 1,700 hotel rooms under construction, proposed or planned, while Suffolk has 2,580 rooms in these stages of development (Long Island Business , December 10, 1986).

As of February 1988, there were no hotels or motels to service approximately 5 million square feet of office space in the Route 110 corridor. While there has been a great flurry of building activity in Melville, very little of this has been for hotel space. In fact, the Omni complex (described below) included a hotel only at the insistence of the Town of Huntington. Hotels, while in demand, are not as economically advantageous as office structures. The development of a hotel or motel in the Town of Huntington's C-10 Planned Motel District requires not just approval of a site plan, but also a rezoning and, occasionally, a subdivision of the site.

Plans to increase the number of hotel units in Melville include the following:

- Omni Hotel - The Reliance Group plans to build a 372-room, four-story hotel at the intersection of the LIE and Old Walt Whitman Road. As part of this complex, three office buildings will also be constructed on the former drive-in movie site, totaling approximately 430,000 S.F. Construction permits have not yet been obtained, but the site has been rezoned to accommodate the proposed hotel-office complex.

- Royce-Carlin Hotel - Presently under construction is the 308-room Royce-Carlin Hotel at the intersection of BethpageSpagnoli Road/Route 110. This all-suites hotel will contain meeting rooms and banquet facilities which will accommodate up to 1,000 people. The Royce-Carlin will also contain two restaurants, a nightclub, tennis courts and a health club. The hotel is expected to open in the late spring of 1988, and rooms will rent for about $100 per night on weekdays.

Rezoning application for a Marriott Hotel was denied by the Huntington Town Board in 1984. A proposal for the construction of a Hilton Hotel resulted in litigation.

The Long Island Regional Planning Board (LIRPB) in 1982 identified all of the hotels and motels with over 100 rooms (existing, under construction and proposed). Some of these hotels are located within a reasonable drive to the Route 110 area. The names and locations of these hotels and motels are included in Table 2-34. Within the Town of Huntington, the LIRPB inventory indicates eight establishments with 292 rooms, as shown in Table 2-35.

TABLE 2-34

HOTELS AND MOTELS ON LONG ISLAND WITH OVER 100 UNITS

Hotel/Motel	Location	No. of Rooms
Mariott	Mitchel Field	391
Colonie Hill Galeria	Hauppauge	350 (proposed)
Garden City Hotel	Garden City	280
Huntington Hilton	Melville	250 (proposed-never built)
Westhampton Beach and Tennis Club (seasonal)	Westhampton	250
Smithtown Sheraton	Hauppauge	212
Island Inn	Westbury	204
Old Mill Inn	Ronkonkoma	194
Howard Johnson's	Plainview	183
Holiday Inn	Hempstead	182
Ramada Inn	East Farmingdale	162 (proposed)
Holiday Inn	Carle Place	150
Harrison Conference Center	Glen Cove	133
Gurneys Inn	Montauk	125
Holiday Inn	Hauppauge	120
Holiday Inn	Plainview	119
Panoramic	Montauk	115 (seasonal)
Ramada Inn	Hauppauge	110 (proposed addition)
Coliseum Inn	East Meadow	110
North Fork Motel	Southold	106 (seasonal)
Howard Johnson's	Commack	105
Ramada Inn	Woodbury	104
Holiday Inn	Rockville Centre	100
Holiday Inn	Riverhead	100
Glen Cove	Glen Cove	100 (proposed)

Source: "Commercial Development Analyses", Long Island Regional Planning Board, 1982.

TABLE 2-35

HOTELS AND MOTELS WITHIN THE TOWN OF HUNTINGTON

Place	No. of Establishments	No. of Rooms	Capacity
Centerport	1	30	120
Cold Spring Harbor	1	28	44
Commack	1	55	78
Huntington	3	72	164
Huntington Station	2	107	306
Total	8	292	712

Source: "Commercial Development Analysis", Long Island Regional Planning Board, 1982, Appendix G.

Several more recent hotel projects arising after the LIRPB survey are of significance. Proposed are the 350-room Hilton Hotel in Woodbury and an all-suites hotel at Republic Airport in Farmingdale. There are two hotels presently under construction in the Village of Islandia. The 277-room Islandia Hilton will be 10 stories high with a seven-story atrium, a 250-seat restaurant and a banquet hall accommodating 500 people. The 122-room Hampton Inn is being built south of the LIE. It is anticipated that the presence of these two hotels will help attract corporate tenants to Islandia.

There is some concern that too many hotels and motels are being planned for Long Island and that the supply will soon outreach the demand. The developer of the new Royce-Carlin hotel described the possibility of over-building, which he called the "Stamford Syndrome", stating that "when development began in Stamford several years ago, the same thing happened and now the hotels in Stamford are doing 52 percent occupancy," (The Real Estate Newsletter ,) August 25, 1986). However, the currrent Melville hotel situation is far from overbuilding, and realtors from Coldwell Banker and Generation Realty agree that the area is in dire need of these lodgings.

It is clear that the demand for hotel space beyond the Melville-Route 110 study area is also great, and that the demand exceeds the supply. According to the Laventhol & Horwath study (Long Island Business, December 19, 1986), other areas of hotel demand are in Medford, Stony Brook, Yaphank, Brookhaven and Hauppauge. In Hauppauge, it is estimated that the demand exceeds 232,100 guests per year. Approximately 66 percent of these guests are business people, and this number is rising annually(Long Island Business , December 10, 1986).

2.11.4 Residential Market

Although the Route 110 corridor has a reputation as a concentrated high-tech office market, there are two small pockets of residential development amidst the commercial structures (Figure 2-21). The older of the two is the neighborhood located north of the LIE and east of Route 110, consisting of post-war suburban houses (e.g., split levels, ranches, colonials) set on relatively small lots. Average housing prices in this neighborhood are in the $200,000 range.

The second pocket of residential development is the adjacent condominium developments off Walt Whitman Road. These contemporary townhouse-style units were constructed along a loop road. One of the subdivisions offers a man-made pond on the common open space. Average prices for three-bedroom condominiums as of 1986 were in the $225,000 range. The condominium communities sold out within a few weeks after they were offered on the market. Many of the middle and upper-management executives working in the Route 110 corridor purchased these condominium units (Agin, January 21, 1987).

2.12 Community Facilities and Services

There are several types of community services located in and adjacent to the study area which are provided for both the resident and the working population within the Melville-Route 110 Area. These services include: fire protection and ambulance service, police protection, public libraries, parklands and playgrounds, and hospitals. This section presents a description of these various community services.

2.12.1 Fire Protection and Ambulance Service

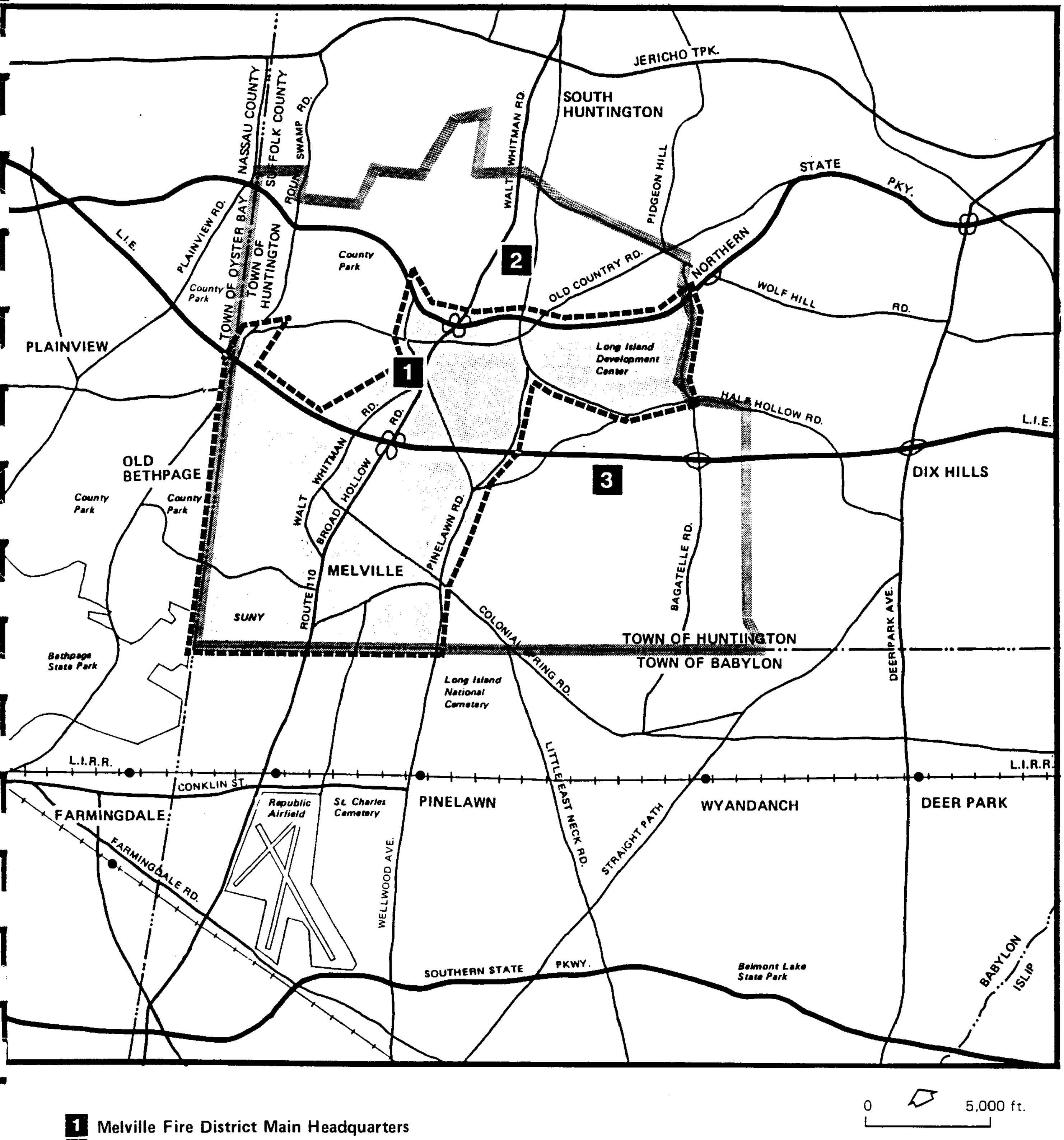
The study area is served by the Melville Fire District, one of Huntington's twelve fire districts. The Melville Fire District encompasses an area of approximately sixteen square miles. Within the district there is a main fire headquarters, located on the corner of Sweet Hollow Road and Old Walt Whitman Road, and two substations. Substation No. 1 is located on Amityville Road and Substation No. 2 is located on the South Service Road (Figure 2-26).

The main fire headquarters houses all the paid fire personnel which include: the district superintendent, two fire prevention officers, a mechanic, a maintenance person, the head dispatcher, four full-time dispatchers and six part-time dispatchers. The substations are not manned.

There are 115 volunteer personnel within the Melville Fire District and they are led by a chief officer; three assistant officers and an assistant chief medical officer, who is a doctor within the district.

Equipment for the district includes the following:

1 - 100 ft. ladder tower;
1 - 85 ft. snorkel;
2 - 1,750 gpm pumpers;
1 - 1,500 gpm pumper;
2 - 1,000 gpm pumpers;
1 - 750 gpm pumper;
1 - 250 gpm pumper;
3 - ambulances



1 Melville Fire District Main Headquarters

2 Substation No1

3 Substation No2

Melville Fire District Boundary

FIGURE 2-26

FIRE PROTECTION

LKB / RPPW INC

Ambulance service, which includes emergency medical service and transportation, is also provided through the Melville Fire District. The Melville Fire District Rescue Squad is one of two rescue squads within the Town to operate mobile cardiac care units as part of the county-wide advanced life support network.

The fire district does not have a current need for any additional facilities or equipment (Reiser, Melville Fire District, 1987). There is a need, however, for additional fire fighting personnel. While a national trend of difficulties in getting fire volunteers exists, the Melville/Dix Hills area is having a problem not only in recruiting new volunteers, but also in keeping volunteers for an extended period of time. The department has a high turnover rate with the average length of service around five years. The reason for this turnover rate is because the fire district covers an affluent area of expensive homes generally inhabited by a white collar work force. White collar residential areas traditionally provide fewer fire department volunteers than blue collar residential areas.

According to fire district officials (Reiser, Melville Fire District, 1987), due to the commercial and industrial nature of the area, particularly the Route 110 corridor, the district was forced to purchase equipment they would not have needed if the area had been developed for residential use. For example, two years ago the district purchased a 100-foot ladder tower in order to be able to reach the tops of the higher buildings and they have recently purchased two additional pumpers. Also purchased was special fire fighting chemicals in order to be equipped to service the industrial businesses.

Most of the office and industrial buildings in the study area are modern facilities containing companies concerned with the safety and well-being of their employees (Reiser, Melville Fire District, 1987). The number of fire calls received from these facilities is very small. The burden which the daytime population puts on the district is related to the number of ambulance calls. It is estimated that the district receives twice as many ambulance calls as fire calls and this number is growing.

The response time for fire fighting and emergency medical services within the district is hampered due to traffic congestion especially during morning, lunchtime or afternoon rush hours. This becomes a critical factor in the ambulance response time due to the size of the district and the area to be covered. The district has been rated as a Class 1 system, meaning that there is ample water pressure and an adequate number of fire hydrants.

2.12.2 Police Protection

The Second Precinct of the Suffolk County Police Department covers the entire Town of Huntington. The precinct is divided into geographic sections called sectors; there are 21 sectors within the Town. The study area is contained within two sectors. The Second Precinct force numbers 180 officers and 25 sergeants. There are 21 patrol cars which are assigned to the Second Precinct, with one patrol car assigned to each sector. The Second Precinct station is located at 1071 Park Avenue.

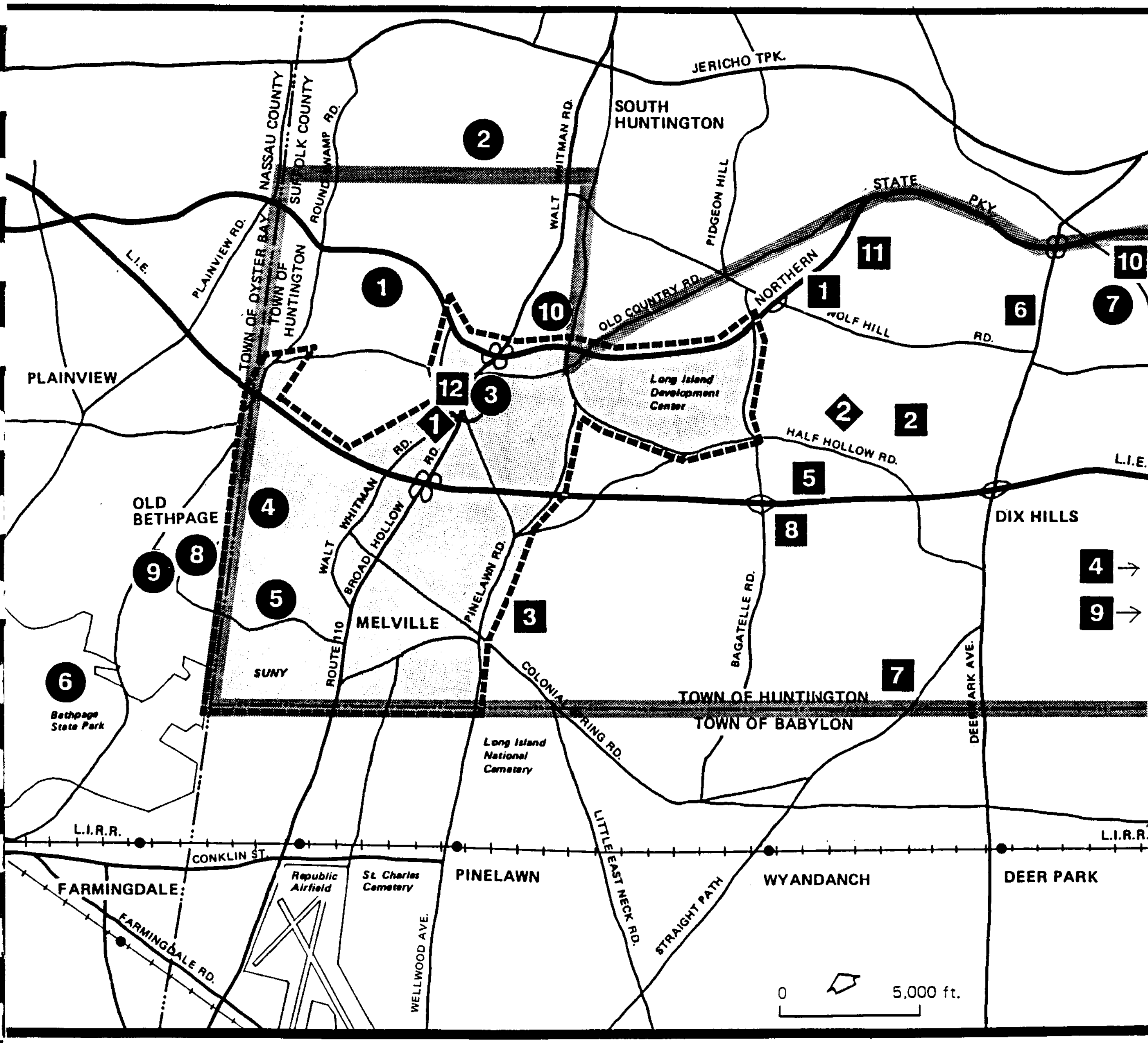
According to Lt. William Kiley, Public Information Officer of the Suffolk County Police Department, traffic congestion within the study area is the chief concern of the department. He also noted that the increase in traffic within the Melville-Route 110 study area can be attributed, to a large extent, to an increase in office and commercial development.

2.12.3 Schools

The study area is located within School District No. 5, the Half Hollow Hills Central School District. It is one of eight school districts serving the Town of Huntington. Within the district, there are two high schools, three junior high schools and seven elementary schools. The district's central offices are in the former Manasquan School located on the same property as the Half Hollow Hills High School East. This school was scheduled for use as an alternative learning program center for dropouts beginning in January 1987. Another former elementary school, the Hills School, located on Hart Place, will shortly be sold to a private developer. The Sunquam Elementary School is the only school located within the boundaries of the study area.

A list of the schools located within the Half Hollow Hills Central School District (Figure 2-27) and their enrollment as of December 23, 1986 is as shown in Table 2-36. The total enrollment by type of school and their maximum rated capacity, which the District calls functional capacity, is presented in Table 2-37.

According to district officials (Ryvicker, Half Hollow Central School District, 1987), enrollment for the district has been steadily decreasing since 1975, when it peaked at 13,000 pupils. While there appears to be significant capacity in the existing system, the district cautioned against using the capacity number as a true measure since the number changes according to the requirements of the State's educational programs. For example, some of the State's special education programs place very strict requirements on school districts in terms of the types of facilities and staff necessary to meet the needs of students who fall into special



Schools Within School District 5
Half Hollow Hills Central School District

1 Half Hollow Hills High School West
2 Half Hollow Hills High School East
3 West Hollow Junior High School
4 Candlewood Junior High School (off map)
5 Burr's Lane Junior High School
6 Vanderbilt
7 Paumanok
8 Chestnut Hill
9 Otsego (off map)
10 Forest Park
11 Signal Hill
12 Sunquam

Parks

1 County Park—Mt. Misery
2 County Park—West Hills
3 Town Park—Melville Park
4 Town Park—Pineridge
5 Town Park—Melville Rifle - Pistol Range
6 State Park—Bethpage State Park
7 Town Park—Dix Hills Park
8 Nassau County Park—Old Bethpage Village Restoration
9 Nassau County Park—Battle Row Campground
10 Town Park—**Walt Whitman Park**

Libraries

1 Melville Branch Library
2 Melville Main Library

Central School District 5 Boundary

FIGURE 2-27

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PARKS, SCHOOLS AND LIBRARIES

TABLE-36

SCHOOLS IN THE HALF HOLLOW HILLS CENTRAL SCHOOL DISTRICT

Secondary	Enrollment
Half Hollow Hills High School West 375 Wolf Hill Road	1,103
Half Hollow Hills High School East 59 Vanderbilt Parkway	1,610
West Hollow Junior High School 250 Old East Neck Road	858
Candlewood Junior High School 1200 Carll's Straight Path	651
Burr's Lane Junior High School 25 Burr's Lane	562
Elementary	
Vanderbilt 350 Deer Park Avenue	642
Paumanok 1 Seaman Neck Road	583
Chestnut Hill 600 South Service Road	572
Otsego 55 Otsego Street	529
Forest Park 30 DeForest Road	510
Signal Hill 670 Caledonia Road	463
Sunquam 515 Sweet Hollow Road	418

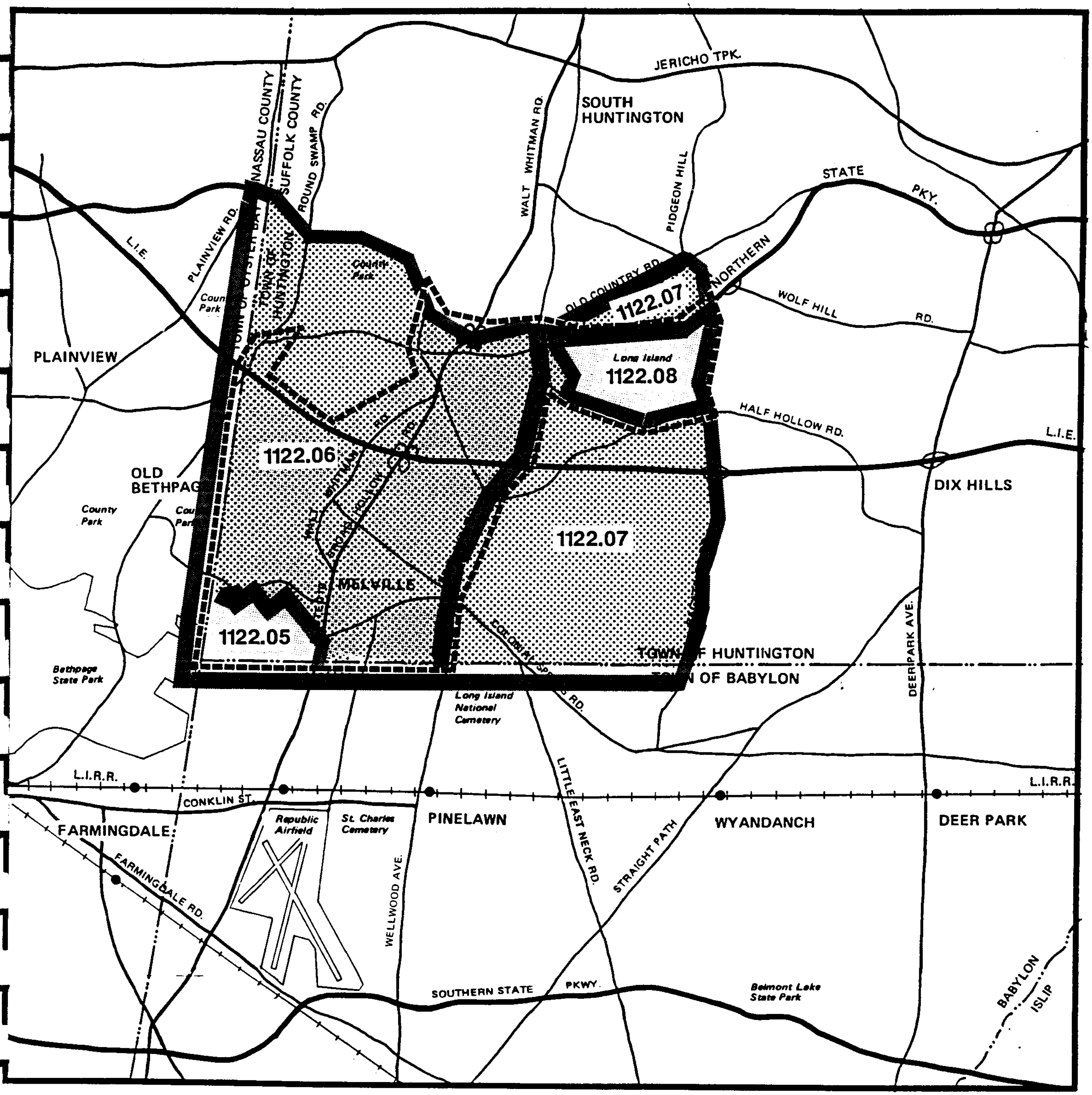
Source: Dr. Allen Ryvicker, Associate Business Administrator,
Half Hollow Hills Central School District.

TABLE 2-37

TOTAL SCHOOL ENROLLMENT AND CAPACITY

	Current Enrollment	Capacity
(7) Elementary Schools	3,717	4,673
(3) Junior High Schools	2,071	2,450
(2) High Schools	2,713	2,800
	8,501	9,923

Source: Dr. Allen Ryvicker, Associate Business Administrator, Half Hollow Hills Central School District



Census Tract Boundary

0 5,000 ft.

FIGURE 2-28

LKB/RPPW INC

1980 CENSUS TRACTS DESIGNATIONS

categories. Therefore, as categories are created that require special facilities, it is quite possible that a school could reach its functional capacity with the addition of very few students.

District officials noted that there are no special problems within the district as far as facility needs (Ryvicker, 1987). The Half Hollow Hills High School East has an auditorium which can seat nearly 2,000 people and is equipped with special stage features. On the grounds of the Half Hollow Hills High School West there is a pool facility which is open to the community. Both of these facilities are less than one mile from the eastern boundary of the study area. The only special concern of the district is the severe traffic problems created by the LIE and Route 110. These major roadways are frequently congested and often delay the transport of school children to and from schools.

2.12.4 Libraries

There are two public libraries which serve the study area: the Half Hollow Hills Public Library, located at 55 Vanderbilt Parkway in Dix Hills, and a branch of this library, located at 510 Sweet Hollow Road in Melville (Figure 2-27). The main library has a floor area of 24,250 square feet and contains 190,000 volumes. The branch library has a floor area of 3,900 square feet and contains 60,000 volumes. The libraries are widely used citing 30,000 card holders within the district out of a potential 40,000 (Nichols, Huntington Public Libraries, 1987).

Since neither library adequately meets the needs of the area, the Town is in the midst of a building campaign. A referendum on the expenditure of $4.95 million is anticipated. If approved, this will allow for the expansion of both libraries with the main library being enlarged to 51,000 square feet and the branch to 8,100 square feet. In addition, more parking spaces will be provided.

The branch library in Melville, which is located in an historic school building, also serves as a community center for the area (Nichols, Huntington Public Libraries, 1987). This library is widely utilized at lunch time by office workers. The expansion will greatly increase the size of its meeting room and create a small neighborhood park on a parcel of land owned by the library and located directly behind the building.

2.12.5 Recreational Facilities

Within the boundaries of this study area, there are two Town parks and one rifle-pistol range (Figure 2-27). Melville Park, located off Sweet Hollow Roads, is a five-acre site comprised of two ballfields, a picnic area, a playground and restroom facilities. Pineridge Park, located south of the Long Island Expressway, is a 135-acre site with no facilities. It is used for passive recreation. The Melville Rifle-Pistol Range, located on Spagnoli Road, is a 23-acre site equipped to accommodate both large bore, and small bore firearms. This range is open to the public and offers a variety of activities including trap shooting, archery, air rifles, rifle and pistol practice. Restroom facilities are also available.

Other parks and facilities which serve the residents of the study area are shown in Figure 2-27 and are described below.

- Bethpage State Park - Located off Bethpage Parkway in Nassau County, but extending into the southwesterly corner of the study area, this

1,475-acre facility contains: picnic areas, playgrounds, recreational programs including performing arts, hiking, biking, golf and club house facilities, tennis courts, ski slopes, cross country skiing trails, sled slopes, parking, restrooms and food concessions.

- Mount Misery Road Park - This is a 179-acre County park located north of Old Country Road. This park contains no facilities.

- West Hills County Park - This is a 854-acre County park located north of the LIE, off Sweet Hollow Road. The park contains Long Island's highest peak (the 401.5-foot Jaynes Hill), as well as groomed nature trails, picnic areas, a livery stable which rents horses for use on the bridle paths and provides lessons, and six campgrounds for use by organized youth groups. The park also contains Sweet Hollow Hall, a former Presbyterian Church, which is used as a general meeting hall and conference center by non-profit organizations.

- Dix Hills Park - This is a 149-acre Town owned facility located off DeForest Road. The park contains a playground, picnic area, nine-hole golf course, band shell, ice skating rink and outdoor pool.

- Old Bethpage Village Restoration - This is a Nassau County living history museum covering approximately 200 acres, located north of Bethpage-Sweethollow Road along the Nassau-Suffolk border. The museum contains over 12 restored homes and stores, as well as a working 20th century farm. This Village restoration is open six days a week and receives over 180,000 visitors a year.

- Battle Row Park - This is a 45-acre campground operated by Nassau County. It is located at the southeast corner of Bethpage-Sweethollow and Round Swamp Roads in the Town of Oyster Bay. The campground contains a total of 59 individual camp sites, consisting of: 31 sites with electric hook-up, 20 sites with water available, and eight tent sites. There are also two rally fields to accommodate larger groups. The campground is open to the public between April and October of each year.

2.12.6 Hospitals

Huntington Hospital, located at 270 Park Avenue, approximately six miles from the northern boundary of the study area, is the facility that would be used by residents of the study area. For treatment and emergency situations, Central General and Brunswick Hospitals are also available. Huntington Hospital is a voluntary, non-profit hospital which provides a wide range of services and health facilities for the Huntington area. According to the hospital's most recent annual report for 1985, during an average day, the occupancy rate for the 424 adult and pediatric beds was 86 percent.

The hospital recently completed an expansion program which resulted in the addition of a new four-story northeast wing. The wing provided increased space for the current services offered by the Hospital, but did not result in any additional beds. It created a new ground floor emergency department, which handled 43,000 patients last year. The expansion also resulted in a new maternity and nursery area, separate coronary care and intensive care units, and a nuclear medicine department.

Huntington Hospital gets over 85 percent of its patients from the Town of Huntington (Osley, Huntington Hospital, 1987). Town residents not utilizing the hospital are primarily from the Dix Hills area. These residents utilize Good Samaritan Hospital in West Islip due to its proximity.

2.13 Visual Resources

Visually the Melville-Route 110 study area is characterized by a range of images (Appendix C). From the major routes through the area, there is the image of a growing suburban industrial/office complex, interspersed with wooded areas, farm lands, attractive residential subdivisions and older residential neighborhoods, as well as several older commercial complexes (Figure 2-29). Wooded undeveloped land, farms and properties developed at low intensity represent the visual elements that are experiencing change or are likely to change. Recent and proposed future developments are represented by dense suburban style office and industrial buildings, and single or multifamily subdivisions. There are also two major institutional uses, the SUNY campus at Farmingdale and the Long Island Development Center which are relatively non-intensive land uses.

The major visual features of the study area are the office and industrial developments along Route 110. While controlled by a combination of the Town's Comprehensive Plan and Zoning Ordinance, the office and industrial development of the study area, representing a major employment center of Long Island, does not have the urban appearance or focus of a central business district.

The office and industrial buildings have a controlled, pleasant appearance, featuring large parking lots and various amounts of landscaping. While some of the architecture is striking and attractive, there is no distinguishing pattern or style. There are no particular foci or important spaces. The visual image is one of an office/industrial park, rather than an urban business center.


Wooded Area
Residential
Farmland
Residential
Excavation-Unsightly View.
Farmland
Concentration of office and
NORTH SERVICE ROAD
SOUTH SERVICE ROAD
HALF HOLLOW ROAD
SPAGNOLI ROAD
OLD EAST NECK ROAD
TOWN OF HUNTINGTON
TOWN OF BABYLON

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The narrow strip of commercial land between Route 110 and Walt Whitman Road, north of Sweet Hollow Road, contains smaller, older buildings without significant aesthetic appeal. This area, adjacent to an historic district, a park and a school, includes a fire station, post office and commercial establishments. This is the area that most resembles a small downtown business district, but as such could undergo some refurbishing to improve the visual quality of the area.

Approximately 300 acres of land off Spagnoli Road is used as a sand mine, and as a clean fill disposal site. An asphalt plant is also located on this site. Typically, such uses are visually unappealing, but a portion of this site is not visible from the road. The vacant wooded land north of the site visually buffers it from the LIE.

Other major visual influences in the study area are the Long Island Expressway, Northern State Parkway and Route 110. Most views of the study area are from the perspective of motorists traveling through the area on these and other roadways. The limited access Expressway and Parkway also create major visual barriers. The width of Route 110 does not allow an aesthetic development that would have an intimate effect. As the major artery that connects the area with the limited access highways, Route 110 has a major effect on the visual image of the whole office/industrial center. The appearance of the Route 110 corridor is well established, but the development of undeveloped lands along this highway, and especially along the expressways, will further impact the study area's visual image in the future.

2.14 Historic and Archaeological Resources

2.14.1 Historic Resources

There are 23 sites of historic significance within the Melville-Route 110 Area (Figure 2-30) which are listed in Table 2-38. All 23 sites are listed on the New York State inventory of historic places (prepared by the New York State Department of Parks, Recreation and Historic Preservation). Two of these sites, the Manse and Everit Houses (Sites 4 and 8 in Figure 2-30 and Table 2-38), are listed on the National Register of Historic Places in the United States. All sites listed on the State Inventory are eligible for local registration. Most of the sites in the study area are of local significance (R. Langhans, Town of Huntington, December, 1986). These sites date back to the early 1800's and include two cemeteries, a church, a parsonage and three schools.

The first 14 sites of historic significance shown on Figure 2-30 are within the Sweet Hollow Historic District, located in the north-central section of the study area. This municipally designated historic district provides a certain degree of control over facade and structural improvements to existing buildings and new structure development within the district.

2.14.2 Archaeological Resources

The archaeological files for the Melville-Route 110 Area contain information on two sites of significance containing prehistoric American Indian artifacts (Wyatt, Nassau County Museum, January, 1987). The first site is located on Old East Neck Road (Figure 2-31). The bulk of the artifacts,

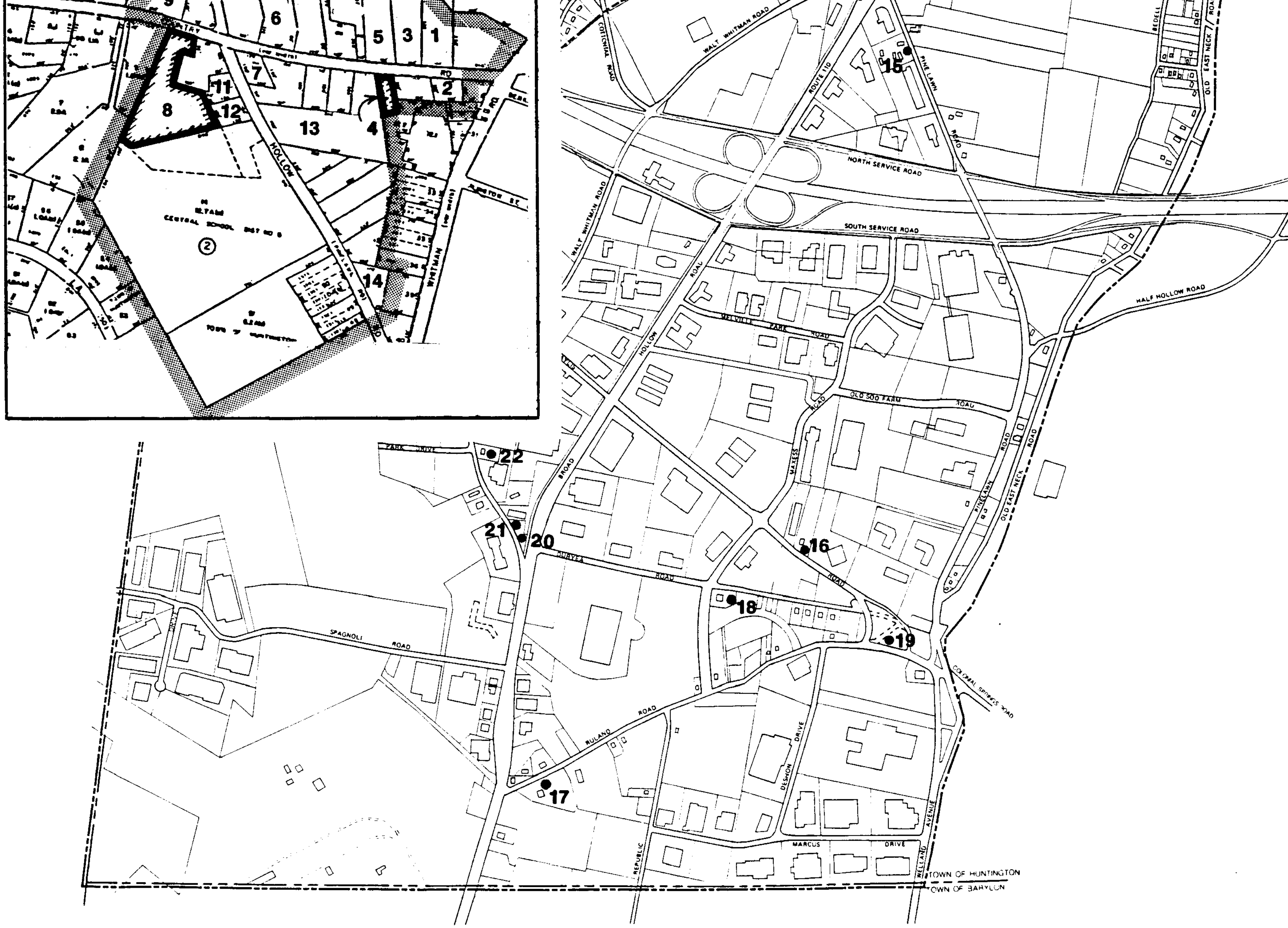

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TABLE 2-38

HISTORIC SITES IN MELVILLE-ROUTE 110 STUDY AREA

1. Baylis House circa 1852

   155 Old Country Road
   - good condition
   - site of first Melville Post Office
   - the Baylis family were among the first settlers of Sweet Hollow

2. Pape-Friedank House circa 1865

   156 Old Country Road
   - good condition

3. J.E. Baylis House circa 1865

   153 Old Country Road
   - good condition

4. Sweet Hollow Presbyterian Church Parsonage (Manse House) circa 1836

   152 Old Country Road
   - excellent condition
   - built for the first minister of the Sweet Hollow Presbyterian Church

5. Baylis House circa 1858

   151 Old Country Road
   - good condition
   - original center of Sweet Hollow community

6. Structure - no name circa 1908

   141 Old Country Road
   - excellent condition
   - suspected site of earlier Baylis House

7. Baylis House circa 1860

   136 Old Country Road
   - excellent condition
   - occupies key corner in the community

TABLE 2-38 (Continued)

8. John Everit House circa 1830

130 Old Country Road
- o excellent condition
- o one of the first homes in the community

9. Humedieu House circa 1825

127 Old Country Road
- o good condition
- o built around an early 19th century one-story, 2 room house

10. Sweet Hollow District Cemetery circa 1811

Sweet Hollow Road
- o 10 acres, still in use today
- o oldest grave dates to 1812

11. Structure - no name circa 1910

503 Sweet Hollow Road
- o good condition
- o occupies site of original Baylis House (O. Baylis)

12. Structure - no name circa 1850

507 Sweet Hollow Road
- o good condition

13. Half Hollow Hills Community Library circa 1872

515 Sweet Hollow Road
- o good condition
- o built in 1923 to replace school house
- o school moved to Walt Whitman Road

14. Woolsey House/Ketchum Buffet circa 1800

530 Sweet Hollow Road
- o good condition
- o very early house, well-preserved

TABLE 2-38 (Continued)

15. Jarvis House circa pre-1858

25 Pinelawn Road
- o good condition
- o used as first Melville Polling Place

16. S. Pedrick House & Farm circa pre-1873

Ruland Road/Baylis Road
- o good condition
- o one of the few historic structures still in agricultural use in this area of the Town

17. St. Rose School for Girls circa 1907

20 Ruland Road
- o good condition
- o original school for girls run by Dominican Sisters

18. Melville School (Half Hollow Hills Youth Development Center)

100 Duryea Road circa 1910
- o good condition
- o original school in this area of the Town

19. Pedrick House circa pre-1873

Baylis Road
- o good condition

20. Methodist Church circa 1845

Walt Whitman Road (at Route 110)
- o good condition
- o original church for this area

21. Walt Whitman Road Cemetery circa pre-1850

Walt Whitman Road
- o contains 70 graves
- o historically associated with the Methodist Church

TABLE 2-38 (Continued)

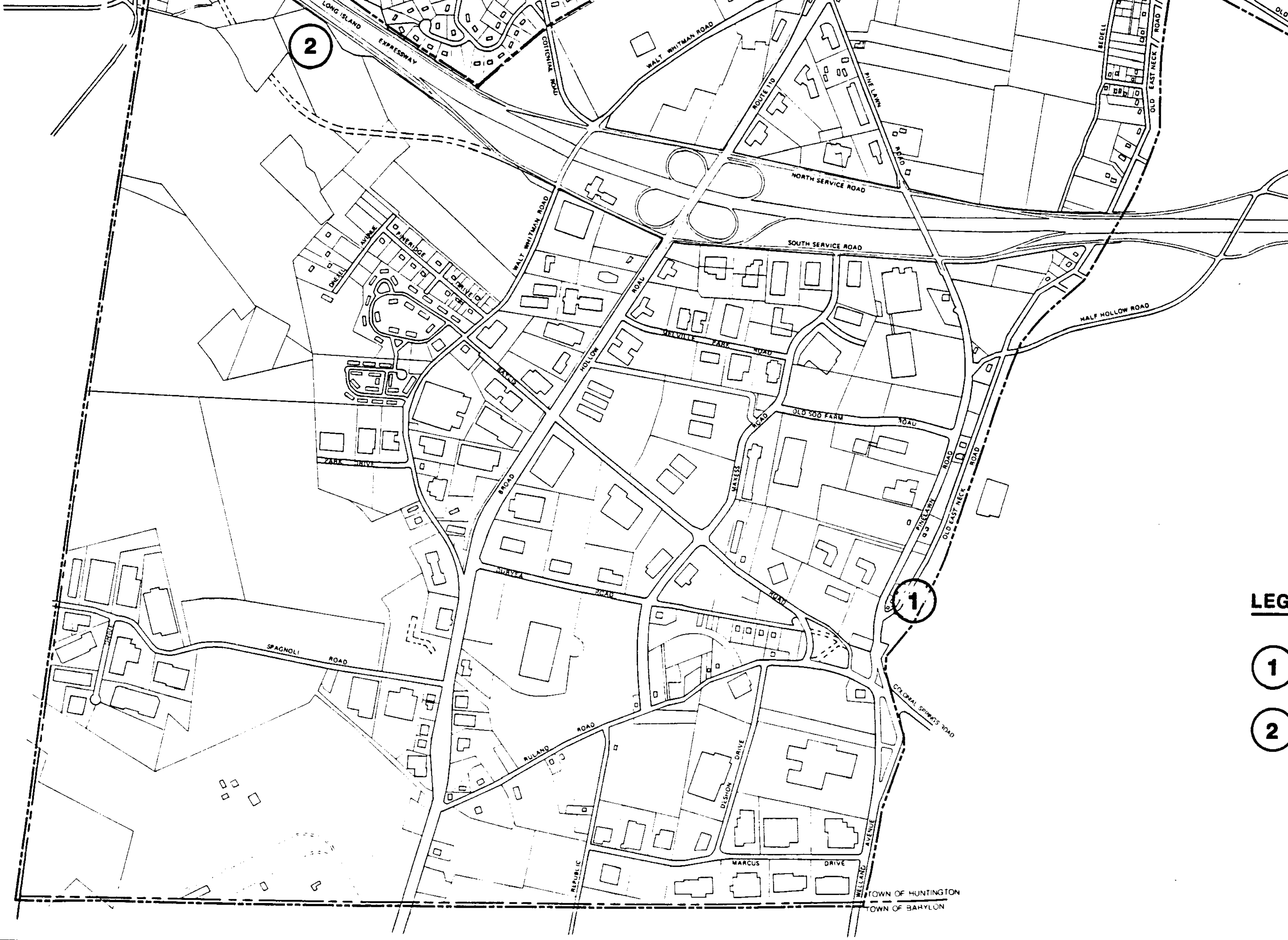
22. Whitson House circa 1894

1840 Walt Whitman Road
- good condition

23. W.H. Conklin House circa pre-1837

284 Half Hollow Road
- good condition
- one of the oldest surviving homes in this area of the Town

Source: Rufus Langhans, Historian, Town of Huntington, December 1986.



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primarily stone projectile points and chipping debris, were found in the planting fields of the Woodborne Nurseries. Although a portion of the nursery is within the study area, the artifact-producing areas are actually outside the study area, extending approximately 1000 feet east of Old East Neck Road. Several distinct concentrations of cultural material were noted suggesting two or more sites of long occupation, rather than one large Indian station. The current status of the Woodborne Nurseries property is unknown.

The second prehistoric Indian station is known as the Pumpkin Site. It is situated approximately 2500 feet east of the Nassau/ Suffolk boundary on the Schmidt Brothers' pumpkin farm (Figure 2-31). This site is characterized by a light scattering of lithic artifacts over ten acres. The files do not show the current status of this site; however, this land is proposed to become parkland. Additional prehistoric or historic-period American Indian sites may exist within the study area. At present, no thorough archaeological survey of this site has been conducted.

SECTION 3

SECTION 3

PREFERRED PLAN FOR DEVELOPMENT OF THE MELVILLE-ROUTE 110 AREA

3.1 Formulation of the Preferred Plan

The Preferred Plan for development of the Melville-Route 110 Area was formulated based on: the Town's planning goals as reflected in the 1966 Comprehensive Plan, sound land use principles, existing development conditions, environmental constraints, and limitations of the existing and projected infrastructure system.

The basic goals of the Town's 1966 Comprehensive Plan are to: (a) keep the essential residential character of the Town, supported by necessary services and social and cultural institutions, (b) broaden the tax base and widen the range of employment opportunities, and (c) maintain the scale of commercial trade activity to meet the needs of its citizens.

A considerable portion of the study area, approximately 1500 acres or 50 percent of the study area, is allocated by the existing 1966 Comprehensive Plan for an office/industrial center, served by small commercial areas. This land use policy of the Comprehensive Plan resulted in the development of a major office/industrial center at a prime location, where the Long Island Expressway and the Northern State Parkway cross N.Y. Route 110. The existing Plan does not provide policy guidance on density or mix of development, particularly as it relates to the infrastructure such as roadways, utilities, community services, and to the environment.

old comp plan

The Town's Building Zoning Ordinance has not placed a specific floor area limitation on the non-residential development. The zoning regulations which do regulate building areas, coverage, height and setback requirements, were effective as long as the economics of development limited parking to surface lots. With the recent increase of land values and the demand for office space, it has become economically feasible to provide parking in underground garages. This condition has increased the density of development to a level that has severely burdened the infrastructure. The Town recently passed an interim measure banning underground parking (1987).

Analysis and evaluation of the existing and projected infrastructure capacity (roadways, water, sewer, schools, community services) has indicated that the primary determining factor of desirable maximum growth within the study area is the capacity of the roadway network. At present, the road system is overburdened to the extent that several intersections fail to meet minimum criteria during either the morning or the afternoon peak hour (see Section 2.4). When the buildings presently under construction and under conversion (from industry to office) will be in operation, traffic operations will deteriorate to unacceptable levels.

The extent of problems created by the high volume of traffic in the Route 110 corridor and adjoining roads indicates that until the road system is upgraded, no additional non-residential development can be accommodated within the Melville-Route 110 study area. Due to the road system's capacity, any future development plan is limited to the extent that the future road system can support such development.

To determine what could be the maximum future development for the study area, the future road system had to be established. Proposed roadway improvements, such as those contained in the Nassau-Suffolk Transportation Improvement Program (TIP), and improvements that are necessary to serve the existing and already committed developments, are assumed to be completed for this evaluation. It was assumed that additional improvements that would be required within the 20 year period between 1987 and year 2007, would also be completed.

In the formulation of the Preferred Plan, several alternative development scenarios were tested. These alternatives included: (a) a total ban on all non-residential development beyond committed projects; (b) development to the level of the minimum average development density that is likely to occur under present trends (FAR 0.35) (Trend Plan); and (c) maximum development of the study area under existing zoning (FAR 0.50). A detailed discussion of comparison of the various alternatives is included in Section 10.

A total ban on all non-residential development would unfairly restrict the future growth of land presently designated for office, industrial or commercial land uses. This alternative would recommend residential land use on all remaining vacant or undeveloped lands, and would not allow future conversion of industrial facilities to office use or change of zone for non-residential development purposes. Roadway improvements would still be required under this alternative because of: (1) present congestion; (2) increased traffic due to opening of new offices presently under construction; and (3) regional growth.

If development is allowed to continue in a land use pattern according to the 1966 Comprehensive Plan and current trend (Trend Plan) the office/industrial center is expected to develop to an average floor area ratio (FAR) of at least 0.35. This pattern of development would result in a total floor space of more than 23 million square feet of office, commercial and industrial space, or approximately twice the existing non-residential floor area. Given trends and market conditions, most of the new development would consist of offices and many existing industrial buildings would be converted to office use. Extensive roadway improvements would be required to accommodate office/commercial/industrial development at this level, beyond those proposed through year 2007.

Development of the study area under existing trends but, at FAR 0.50 would create over 30 million square feet of total office, commercial and industrial floor space. This level of development could not be accommodated by proposed improvements to the infrastructure by year 2007. The roadway system with improvements already included in the TIP would be unable to accomodate future traffic volumes in an acceptable manner. It is mandatory, therefore, that additional traffic improvements be made to the roadway system, and future development be reduced to a level which the improved road system is able to serve in an acceptable manner.

There are several kinds of land use actions that could be taken to considerably reduce the future vehicular movements within the study area. These actions include:

- replan a portion of the study area which is indicated on the Comprehensive Plan for office/industrial use for residential use;
- limit non-residential development to light industrial uses within a large portion of the study area, where presently office use is also permitted (since office uses typically generate twice as many vehicular trips during peak hours than industrial uses);
- establish a maximum Floor Area Ratio (FAR) to limit the density of all non-residential development; and
- introduce new non-residential uses that generate less peak hour traffic such as retail, service, hotel, conference and entertainment uses.

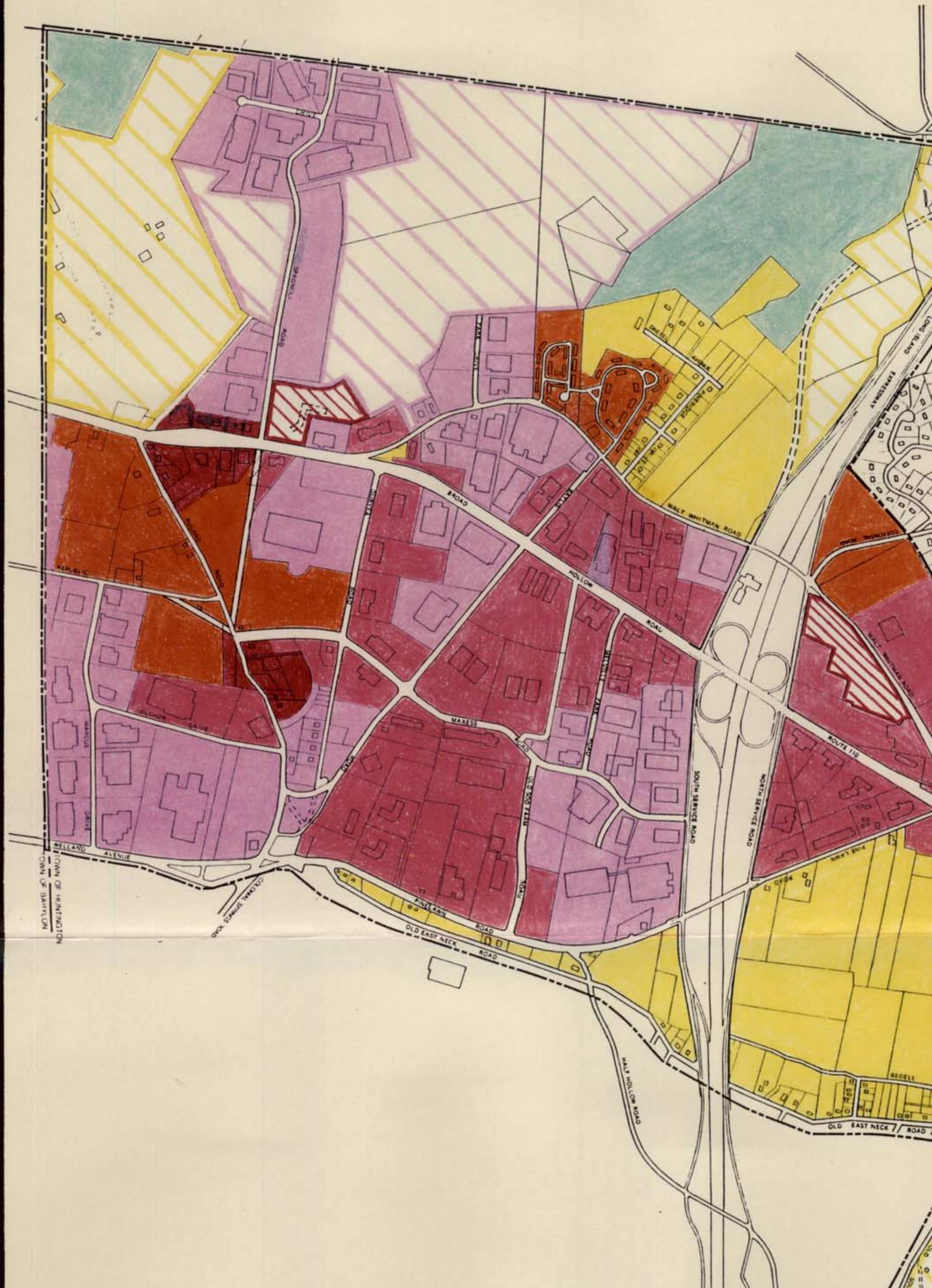
Utilizing these land use actions, a Preferred Plan for development of the Melville-Route 110 Area was formulated with recommendations for future land use which could be accommodated with reasonably forseeable infrastructure improvements.

3.2 Description of the Preferred Plan

The Preferred Plan for development is shown on Figure 3-1. The Plan generally follows the sound land planning principles of the 1966 Comprehensive Plan, but proposes changes to reduce the burden on the future infrastructure, especially on the roadway system. The Preferred Plan reduces the potential non-residential development within the area so designated by the 1966 Comprehensive Plan and does not allow additional non-residential development outside those areas. Another change in the land use plan within the existing office/ industrial area is the designation of industrial areas where office buildings would be limited. The present industrial uses, located north of Old Sod Farm Road, along Marcus Drive, Spagnoli Road and Park Drive, would have to remain in that category.

The land use plan provides a commercial-service area along Ruland Road. Retail, service, and public uses would serve the workers of office and industrial buildings as well as the new residential communities south of the Long Island Expressway. This commercial service area would be available to many persons without having to cross the Long Island Expressway or travel on Route 110.

For all office and industrial uses, a maximum FAR of 0.30 is proposed. This limitation imposed through zoning would reduce the projected development density of all vacant and underutilized or partially utilized parcels built at less than the proposed FAR parcels. In areas designated for industrial use, offices would be allowed, but at a reduced density to en-


BROAD
HOLLOW
ROAD
WALT WHITMAN ROAD
ROUTE 110
MAXESS
ROAD
PINELAWN
ROAD
OLD EAST NECK
ROAD
SOUTH SERVICE ROAD
NORTH SERVICE ROAD
HALF HOLLOW ROAD
WELLAND
AVENUE
TOWN OF HUNTINGTON
TOWN OF BABYLON
REPUBLIC
BEDELL
OLD EAST NECK
ROAD

sure vehicular trip rates that are not greater than those generated by industrial development. A maximum FAR of 0.15 would thus have to be imposed for offices in industrial zones.

The proposed changes would ensure that the total non-residential development along Route 110 in the study area would be limited to approximately 17 million square feet, with industrial use representing about one-half of all non-residential floor space. It is the intention of the Preferred Plan to reduce rather than increase the rate of growth of non-residential development. Therefore, no tax incentives should be provided for office and industrial developments.

The Preferred Plan indicates three kinds of residential densities: low, medium-high, and high. The lands occupied by state facilities remain designated for low density residential development. At the northwestern part of the study area, two areas are designated for low density (one acre) residential development. The first area is located south of the Long Island Expressway and is a sensitive area with steep slopes. The second area is located north of the Long Island Expressway which is a 20 acre parcel of land adjacent to an existing low density, high quality residential subdivision.

Undeveloped areas adjacent to the office industrial uses would be designated either for medium-high or high density residential use. Medium-high density residential development could yield a maximum density of four dwelling units per acre, while high density residential development could yield a maximum density of six dwelling units per acre provided steep slope areas are not encountered. The area along Spagnoli Road, which is presently a sand mine, clean fill disposal site, and asphalt plant, would be allowed to remain as such. Its eventual development, however, would be limited to residential use at medium-high density.

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The recommended increase in residential land use density at some locations in the study area would provide needed housing in the future. In addition, residential development at the proposed densities would generate fewer vehicle trips during existing peak hours than would industrial or office buildings development. An increase in the existing allowed density is reasonable considering the surrounding land uses and the density of more recent residential development within the area. Furthermore, this increased density is desirable because it will provide an additional supply of a maximum of 3100 dwelling units near places of employment. Of the 3100 dwelling units, 1200 would be located at the present sand mine/asphalt plant, and these probably would not be built in the foreseeable future. To achieve the purpose of providing housing that is affordable for at least a portion of the employees within the area, a maximum floor area restriction should be placed on a portion of the proposed dwelling units. This restriction would insure the construction of smaller, more affordable units. Another option would be to place a floor area ratio restriction on residential development, with bonus floor area provided in exchange for a portion of the housing units to be set aside for moderate income households.

No new regional recreational facilities are proposed in the Preferred Plan. It is recommended that new residential areas include development of private and public playgrounds and active recreational areas, such as tennis and basketball courts and baseball and soccer fields. Locations and sizes of these recreational areas will be determined during the subdivision approval process.

The Long Island Development Center and the New York State Agricultural School are not major users of the infrastructure. It is assumed in the Preferred Plan that the Agricultural School will basically retain its character and use. Should either of these facilities wish to sell a portion of its land for development, that development would have to follow the basic goals and principles of the Preferred Plan and should not place an excessive burden on the study area's infrastructure. Because the Long Island Development Center is located apart from the main section of the study area, an increase in traffic volumes due to development at the Center would not significantly affect the critical intersections and roadways of the study area. A specific development proposal for the Long Island Development Center site would have to be evaluated separately.

An important goal of the Preferred Plan is to create a pleasant visual environment that will preserve as much of the existing natural features as possible. It is intended that new development will provide buildings with appealing architectural qualities and properties with extensive landscaping. The Plan recommends the reduction of non-residential areas and introduces floor area limitations to help achieve this goal. In addition, zoning regulations and architectural review of developments should ensure that the new developments will enhance the study area.

Future development of the study area under the Preferred Plan is predicated on future improvements to the roadway network. Should the proposed improvements outlined herein not be accomplished, a further reduction in development would be required. This goal could be achieved by placing a more stringent limitation on non-residential floor areas and/or by reducing the area of non-residential use and increasing the area of residential use. Should major changes occur that would alter the feasbility of road improvements either in a favorable or unfavorable direction, the recommendations of the Preferred Plan should be re-evaluated. Therefore, an on-going monitoring program of the Plan should be adopted.

3.3 Proposed Roadway Improvements

The Preferred Plan will function acceptably provided the road network is in place to support the development. The road network consists of three categories; existing facilities, including those under construction; proposed road improvement projects in the current Nassau-Suffolk Transportation Improvements Program (TIP), as described in Section 4.4, and recommended roadway improvements in conjunction with the Preferred Plan. The recommended roadway improvements could be staged in over time as developments take place. As part of the improvements, signalization timing and coordination will also be upgraded throughout the study area. A sequence of road improvements for specific development years is proposed as follows.

To relieve the existing (year 1987) traffic congestion, two key improvements are needed:

- Reconstruction of Route 110 (between the Long Island Expressway and Northern State Parkway) to six lanes; and

- Reconstruction of the Northern State Parkway/Route 110 interchange to provide for six lanes and, in the future (year 2007), eight lanes on Route 110.

STATE DOT

These are recommended improvements that are presently not planned for by State or local transportation agencies.

For the projected (year 1992) traffic generated by development that is under construction, planned, or involving the conversion of vacant buildings, additional roadway improvements will be needed. Basically these should be:

- Reconstruction of Route 110 (Long Island Expressway to Ruland Road) to eight lanes plus additional turning lanes at key intersections; and STATE DOT

- Reconstruction of Pinelawn Road to six lanes between Route 110 to Ruland Road. COUNTY P.W

For future development (year 2007) in compliance with the Preferred Plan, other roadways will need to be upgraded. These improvements will satisfy the long range traffic needs for the study area. These recommended improvements include:

- Reconstruction of Route 110 to eight lanes, between the Long Island Expressway and the Northern State Parkway; STATE DOT

- Reconstruction of the Long Island Expressway service roads (north and south) to three lanes between Walt Whitman Road and Pinelawn Road; STATE DOT

- Widening of Walt Whitman Road to three lanes between the Long Island Expressway and Old Country Road; TOWN

- Widening of Old Country Road to four lanes between Route 110 and New York Avenue; TOWN

- Widening of Baylis Road to four lanes between Route 110 and Walt Whitman Road; and TOWN

- Consider widening Route 110 to eight lanes in the section north of the Northern State Parkway and south of Ruland Road. STATE DOT

Road North & South Through Pine Ridge

These roadway improvements are less extensive than the maximum roadway network as analyzed under the Trend Plan alternative (FAR 0.35). This analysis is described in Section 10.3.4.

Other proposed roadways, identified in a case study for the Melville Industrial Corridor (Industrial Location Analysis, 1980), were considered. A new north-south route, connecting the Long Island Expressway south service road to the SUNY at Farmingdale campus was determined impractible due to the existing development along the alignment, significant construction and right-of-way costs, the lack of a westbound connection to the Long Island Expressway, and the close proximity to existing Long Island Expressway interchanges at Round Swamp Road and Walt Whitman Road. The extension of Baylis Road west of Walt Whitman Road was determined not viable due to the existing residential development at the intersection of Walt Whitman Road and Baylis Road. The construction of a bridge over the Long Island Expressway connecting Old East Neck Road is not currently planned by NYSDOT. These additional roadways were not included in the Preferred PLan.

Topography a major impediment. New Road may cause development along its route

3.4 Summary of the Preferred Plan

The Preferred Plan for development of the Melville-Route 110 Area was formulated based on the examination of several alternative development scenarios. These alternatives range from a complete ban on non-residential development to maximum development of the study area under existing zoning. The evaluation of existing conditions in the study area identified the need for roadway improvements to accommodate current and near future traffic volumes. The level of future development of the study area will depend primarily on the extent of roadway improvements. Preferred Plan for development was formulated based on limited future non-residential development, consistent with the areas designated for such land use in the 1966 Comprehensive Plan. Residential developments, which generates less peak hour vehicle movements than office or industrial facilities, were proposed to be established in compliance with the 1966 Comprehensive Plan, with some increase in residential density. Along with the residential development, a reduction of the allowable density for non-residential development to a Floor Area Ratio (FAR) of 0.30 was determined to be a satisfactory level at which future vehicle movements could potentially be accommodated by the improved roadway system through year 2007. Impacts of the Preferred Plan are assessed in the following section.

SECTION 4

SECTION 4

POTENTIAL ENVIRONMENTAL IMPACTS

This section of the GEIS presents a discussion of the potential environmental impacts which may result from the implementation of the Preferred Plan for development of the Melville-Route 110 Area. Utilizing information regarding existing environmental conditions, which are described in Section 2, the potential impacts of the future development activities are assessed for generalized site specific and cummulative area wide affects. Beneficial and adverse impacts are considered for each of the various environmental factors.

4.1 Topography/Geology

The impact of development on topography in the Melville area will generally be minor except in areas where the slopes exceed 10 percent (Figure 2-3). According to the Huntington Zoning Ordinance, Article X, any parcel that has a natural slope of 10 percent or greater shall be considered to be in a hillside development area. If this is the case, certain provisions, outlined in Article X, must be provided. These provisions include controls for runoff in the final project design, and controlling storm runoff water prior to and during construction. Additional provisions are necessary regarding lot size for hillside development areas. If the slopes are steep, density and bulk criteria are superceded, and the lot size is determined by calculating the natural average slope percentage and applying the lot yield factor, as shown in Article X. Final determination of slope and lot size will be made by the Town Planning Board.

Impacts on topography in steep slope areas that are to be developed for residential purposes include regrading of the slope and a subsequent increase in the potential for erosion. Modification of slopes will be necessary for grading at building sites, construction of roadway beds, excavation of recharge basins, construction of recreational fields and installation of utilities.

what about cluster?

The provisions in Article X for storm runoff water control are important because the potential for soil erosion is greatly increased during regrading of the slopes prior to development. While the disturbed area is unvegetated significant erosion can occur due to soil transport by rainfall and subsequent stormwater runoff. Erosion can also result from excavations for drainage, sanitary facilities and foundations. In addition, stripping and stockpiling of soil and dust raised by vehicular traffic also increases soil movement and subsequent soil erosion.

No impacts on subsurface geology are expected to result from development of the study area under the Preferred Plan. Excavations for any proposed developments or construction will be limited in depth and will only affect the upper surface soils. The main impacts on surface geology or soils is related to the removal of vegetation and regrading prior to any development, resulting in similar impacts as discussed in topography.

4.2 Water Resources

4.2.1 Groundwater Quality

Potential point sources of groundwater contamination associated with urban development include on-site sewage disposal systems, fertilizers, road salting, and potential leaks from underground pipes and storage tanks. The

Density/Dwelling

N_2 = indicator

primary contaminant associated with on-site disposal systems and fertilizers is nitrogen. Road salting contribute mainly chlorides. Contaminants resulting from spills and leaks include organics generally associated with fuel products.

Generally the greatest source of nitrate contamination are residential septic systems. The residential septic or on-site sewage system usually consists of a cesspool or a septic tank and leaching field. These systems represent the highest ranking source of wastewater directly discharged to the groundwater. If the septic system is properly sited and designed, it can reduce influent nitrogen levels by 60 percent (Andreoli, 1987). The reduction of influent nitrogen is important since studies have shown that effluent nitrogen concentrations directly underlying on-site disposal systems average 30 mg/l (Pye, Patrick and Quarlis, 1983).

The increase in residential units for the Preferred Plan is approximately 3100 units. This total will be distributed between high, medium and low density areas. Approximately 165 acres of the study area will be high density residential development. The density equivalent for these areas is approximately .16 acres per dwelling unit. A total of 510 acres is proposed medium density residential where the density equivalent is .25 acres per dwelling unit. The proposed 750 acres of low density presently includes the Long Island Development Center. The density equivalent for low density is approximately 1 acre per dwelling unit.

high .16 = 7000 sq ft

med. .25 = 10000 ft

low 1 / acre

Although future plans include development of a sewer district in the study area, the majority of proposed residential units would have on-site disposal systems consisting of a septic tank and leaching field. According to Suffolk County Sanitary Code, Article 6, the minimum lot size requirement is 20,000 sq. ft. for new homes built in Hydrogeologic Zones I and II.

This minimum lot size requirement is not met in the proposed medium and high density residential developments. Although obtaining a variance to this lot requirement is an option, it is not recommended since the proposed lot sizes are substantially smaller than the recommended 20,000 sq. ft. and the impact of nitrogen on the groundwater could be substantial. However, the SCDA would require the high and medium density developments install either an on-site denitrification or package plant to treat and dispose of the wastewater or connect to an existing sewer district. A further discussion of this is included in the mitigation section.

In addition to residential units, wastewater flows are also generated by institutional, commercial and industrial sources. If these proposed establishments are able to hook up to sewers, then no impact on groundwater water quality will result. If sewer hook-up is not available on-site, disposal of wastewater to the ground will be required. The provisions in Article 6 (Section 605, Regulation 82) require that these types of developments provide treatment for the removal of nitrates if the density equivalent of these properties exceeds comparable allowable residential densities, i.e. minimum lot requirement of 20,000 sq. ft. for on-site disposal per dwelling unit.

Each industrial or commercial development must be individually assessed as to whether the effluent they generate exceeds the nitrate loading limit of 6 mg/l. Providing these standards are met by each development project, a FAR of 0.3 should not cause excessive nitrate loading to the groundwater.

Fertilizers are the other main source of nitrogen loading to the groundwater. The SCDEC has estimated that the typical household applies 2.2 pounds of nitrogen, in the form of fertilizer, per 1000 sq. ft. of lawn. This application rate also applies to the rate of fertilizer application

Typo

for lawn areas around commercial and office buildings. The amount of nitrogen loading from fertilizers can also vary seasonally and can fluctuate due to a number of variables. The impact of nitrogen from fertilizers on groundwater depends on amount of lawn and landscaped areas. Development as outlined in the Preferred Plans will distribute the lawn and landscaped terrain over a wide area. This, in addition to the proposed development being long-term, will help to minimize impacts from fertilizers. In order to further minimize impacts, individual developments, both residential and non-residential, should be individually assessed with regard to nitrogen loading and the mitigation measures outlines in Section 5 should be implemented. Cluster development of residential projects will allow for larger reas to be left natural resulting in less cultivated area and, therefore, using less fertilization and groundwater.

The recommended development of the study area and the associated roadway improvements will result in an increased application of salt in deicing materials of approximately 30,690 lbs. annually. This is based on an increase in roadway length of 17.2 lane miles and an average application rate of 1800 lbs./lane mile. The increased application of deicing materials is estimated to result in an increase in concentration of chloride in the groundwater underlying the study area of 1.7 mg/l (Appendix D). This estimated increase in groundwater chloride concentration is not expected to represent a significant adverse impact on groundwater quality. Cluster development of Residential project ~~the~~ usually Results in Shorter Roads ∴ using less Salt.

Additional sources of contamination discussed earlier, such as leakage from storage tanks and accidential spills can have little impact if the potential sources of contamination are properly designed and managed. The proper management techniques to reduce potential impacts are discussed under mitigation.

4.2.2 Groundwater Quantity

Impacts on groundwater quantity, which relates to water supply for the study area, are discussed in detail in Section 4.7.3. The New York State Department of Environmental Conservation (NYSDEC) is recently concerned with the consumption of groundwater in developed areas of Long Island. In Nassau County, including the adjacent Town of Oyster Bay, the NYSDEC has established water supply caps which limits future development. The NYSDEC is not expected to establish similar water caps in the Town of Huntington in the forseeable future. Adequate quantities of groundwater are available in the underlying aquifer to supply the future level of development recommended by the Preferred Plan without creating adverse effect on groundwater supply for the area.

4.2.3 Hazardous Waste Sites

Existing sites of hazardous waste disposal or generation in the study area are presently being regulated, cleaned up, and monitored. Industrial generation of hazardous wastes are recommended to comply with storage and transport regulations, which will be overseen by the NYSDEC and the Town of Huntington.

Presently, a groundwater investigation is being conducted at 110 Sand Company Clean Fill Disposal site to determine if the site should remain classified as an inactive hazardous waste site. If groundwater contamination is found, than this could have some impact on surrounding development.

The only other hazardous waste site is I.W. Industries. The listing of this site as an inactive hazardous waste site is due to a chemical spill which occurred a few years ago. The site will not be impacted by development, however, any surrounding development may be impacted by the spill that occurred. Future plans include remediating this spill. Once this is completed, the impact from this site on surrounding development will be minimal.

New industrial generations of hazardous wastes are not encouraged to become established in the study area under the Preferred Plan. The impact of hazardous wastes will not be significant if recommended procedures for waste management are followed at industrial facilities existing or to be developed in the study area.

4.2.4 Surface Water

The limited extent of surface water bodies in the study area poses little potential for significant adverse surface water quality impacts. Recharge basins that hold runoff waters are not expected to be adversely affected by future development under the Preferred Plan. Ornamental ponds may be created at new office/industrial facilities or residential developments, which will create a beneficial impact by establishing new surface water areas, including aesthetic and, possibly, habitat values.

4.3 Terrestrial Ecology

The potential impact of the proposed plan on the terrestrial ecology of the study area is based on the isolated site-specific impacts of land development, and the cumulative effect of habitat loss throughout the study area. Terrestrial ecology components, as described in Section 2.3, are not extensive in the densely developed section of the study area. Vegetation and wildlife species are more abundant and diverse in the few uncleared wooded parcels remaining. Three types of habitats will remain following development of the study area under the preferred plan including:

- areas affected by large scale land clearing for intensive office, industrial or commercial or high density residential development, which will destroy most of the land's existing habitat value; (Should that development Not be clustered)

- areas affected by moderate amounts of land clearing for High, medium and lower density residential development, which will retain some of these land's existing habitat qualities as a result of cluster residential development and a policy of open space or park preserve dedication (Chapter 159(2)(3)(4)).

- areas that are planned to be preserved without development activities, retaining the existing habitat intact.

For the largest part of the study area, the proposed plan calls for the development of presently undeveloped lands. This development will result in the loss of most larger available habitat areas within the study area, consisting primarily of oak forest and associated understory species. Most open field areas will also be developed under the Preferred Plan. The most common habitat type that will exist following full development of the study area will be landscape vegetation areas surrounding residences and office/industrial buildings.

Areas which are planned for intensive development that are presently undeveloped include:

- lands located north and south of Cottontail Road, off Walt Whitman Road, which are proposed for high density residential development, and

- individual wooded and open field parcels along Ruland Road and Duryea Road which are proposed for high density residential development and industrial development.

The expected loss of vegetation on these sites will reduce the availability of small habitat areas in the most densely developed section of the study area. The impact of this vegetation loss is not expected to be substantial, however, because these sites are generally affected by the surrounding development, roadways and human activities. The few wildlife species existing on these parcels could migrate to some adjacent wooded buffer areas. Food or territory limitations could preclude their relocation. Birds are the most common wildlife species on these sites, and they will be displaced to other landscaped or wooded areas during site construction. The population of some species will be diminished until a new habitat is established. Revegatation of these intensive development sites should include substantial landscape vegetation which may allow re-establishment of some original habitat quality, and the return of some displaced wildlife species. Large buffers on residential, industrial and commercial development will insure that some species will repopulate the area.

Presently undeveloped areas that are planned for moderate levels of residential development (medium-high to low density) include:

- lands west of Bedell Street, including woodlands and active sod farm lands which are proposed for medium density residential use;

- lands west of Walt Whitman Road, including farm fields and woodlands which are proposed for medium density residential use;

- areas to the south of the Long Island Expressway south service road in the western section of the study area, which are proposed for low density residential development; and a small area located at the northeastern corner of the interchange of the Long Island Expressway and Round Swamp Road.

Preserve
preserve

Vegetation loss in these areas will not be as severe as for the more intensive development areas for office/industrial buildings and high density residential sites. Preservation of existing woodland vegetation is expected along the edges of single-family residence parcels, especially in the low density residential zones (R-40) and cluster designed residential development. Open space dedication will result in preservation of habitat for wildlife preservation. Loss of the large sod farm field areas will remove most of the seasonal resting and feeding areas commonly utilized by Canada Geese. Wildlife will not be significantly affected by the moderate development plans in these areas.

Only one large area is proposed for preservation without any development or clearing affects. A large wooded parcel, previously described in Section 2.3 as the most sensitive natural area within the study area, is proposed to be preserved as a Town parkland. There will be a beneficial impact on wildlife in the study area under the proposed plan, because this preserved land area will attract the most sensitive wildlife species. This preserved parcel consists of approximately 250 acres of woodlands at the highest elevation sections of the study area. Ecological and aesthetic benefits will result from this preservation plan.

The terestrial ecology of existing parks at Bethpage State Park and Sweethollow Road will not be adversely affected by area development under the Preferred Plan.

4.4 Transportation and Traffic

A traffic impact analysis was conducted for the study area considering the existing roadway network, traffic volume, and intersection control conditions. To analyze future conditions, the existing traffic volume was adjusted to reflect future regional traffic growth over a 20 year period plus the increase in traffic resulting from future development under the Preferred Plan. The analysis of future conditions also considered an adjusted roadway network to reflect the Nassau-Suffolk Transportation Improvement Program (TIP) improvements, and recommended roadway improvements, as described in Section 3.3. The results of these analyses are described in following paragraphs.

Trip Generation

The existing traffic volumes were projected to the year 1992 using a growth rate of 1.5 percent per year. This rate reflects an increase in travel generated by local existing development as well as the predicted regional growth. The growth rate utilized in this analysis is consistent with factors that have been used previously in the traffic impact analysis of other recent development projects within the study area.

In addition to background regional growth, this analysis included vehicle movement which will result from a number of new development projects which are currently under construction or are proposed for the study area. Residential, commercial, industrial, and office development all have different vehicle trip generation characteristics. For the analyses, traffic generation factors utilized for each type of development were obtained from the Trip Generation Report (Institute of Transportation Engineers (1982). They reflect traffic characteristics for specific land uses during peak hours of the adjacent street system. The AM peak hour entering trip rates averaged 2.0 trips/1,000 square feet for office development, 1.0 trips/1,000 square feet for light industry and 0.1 trips/dwelling unit for residential development. The PM peak hour existing trip rates averaged 2.0 trips/1,000 square feet for office, 0.8 trips/1,000 square feet for light industry and 0.2 trips/dwelling unit for residential development.

Trip Distribution

The generated traffic volumes were assigned to the roadway network within the study area. The office and industrial traffic was distributed to the street system based on data presented in The Journey to Work to Major Employment Centers - 1984 (Long Island Regional Planning Board, October, 1984). In this report, several employment centers within Nassau and Suffolk County were evaluated, including the Melville area. A geographical distribution of study area employees was prepared in this report. A distribution pattern to the Melville study area was established based upon the most direct and convenient access routes that motorists could use. The distribution patttern showed arrivals by percentage, including: 18 percent from the west, 8 percent from the north, 35 percent from the east, and 39 percent from the south.

These "overall" percentages were refined for specific sites to reflect shifts in location within the study area itself. The projects for which traffic volume was estimated are described below.

Traffic Characteristics

The total amount of traffic evaluated for the GEIS reflects known or proposed development plus complete development of the study area under the implemented Preferred Plan. Committed or proposed development projects as of October 1987 were considered under the Plan as being in place by year 1992.

The committed and/or proposed development projects considered for this analysis include:

Long Island Savings Bank (209,000 SF)
Omni Office/Hotel complex (433,000 SF/370 rooms)
GE/Hotpoint Building (98,500 SF)
Hewlett-Packard Building (57,600 SF)
Greenway Plaza (203,700 SF)
In-law Realty (95,000 SF)
Zirinsky Building (87,000 SF)
Royce-Carlin Hotel (308 Rooms)
Marchon Eyewear Industry (55,500 SF)
U.S. Postal Facility (175,000 SF)
BDG Ruland Associates (20,000 SF)
Newsday Facility (211,000 SF)
Belwin Mills (187,000 SF)

The trips generated by these development projects, plus the additional trips anticipated by future development under the Preferred Plan, represent the cumulative traffic effect of the Preferred Plan. The AM and PM Peak Hour traffic volumes increases over existing conditions are summarized in the following table.

	AM Peak Vehicle Trips		PM Peak Vehicle Trips	
	Entering	Exiting	Entering	Exiting
1992 Sites (committed or proposed)	3,600	600	800	3,300
Preferred Plan	4,400	1,200	1,900	4,300
TOTAL	8,000	1,800	2,700	7,600

Approach volumes along Route 110 will average 3500 veh/hr/approach during both the AM and PM peak hours (Figures 4-1 and 4-2). The average annual increase in peak hour volume over existing (year 1987) volume is assumed to be approximately four percent to the year 2007.

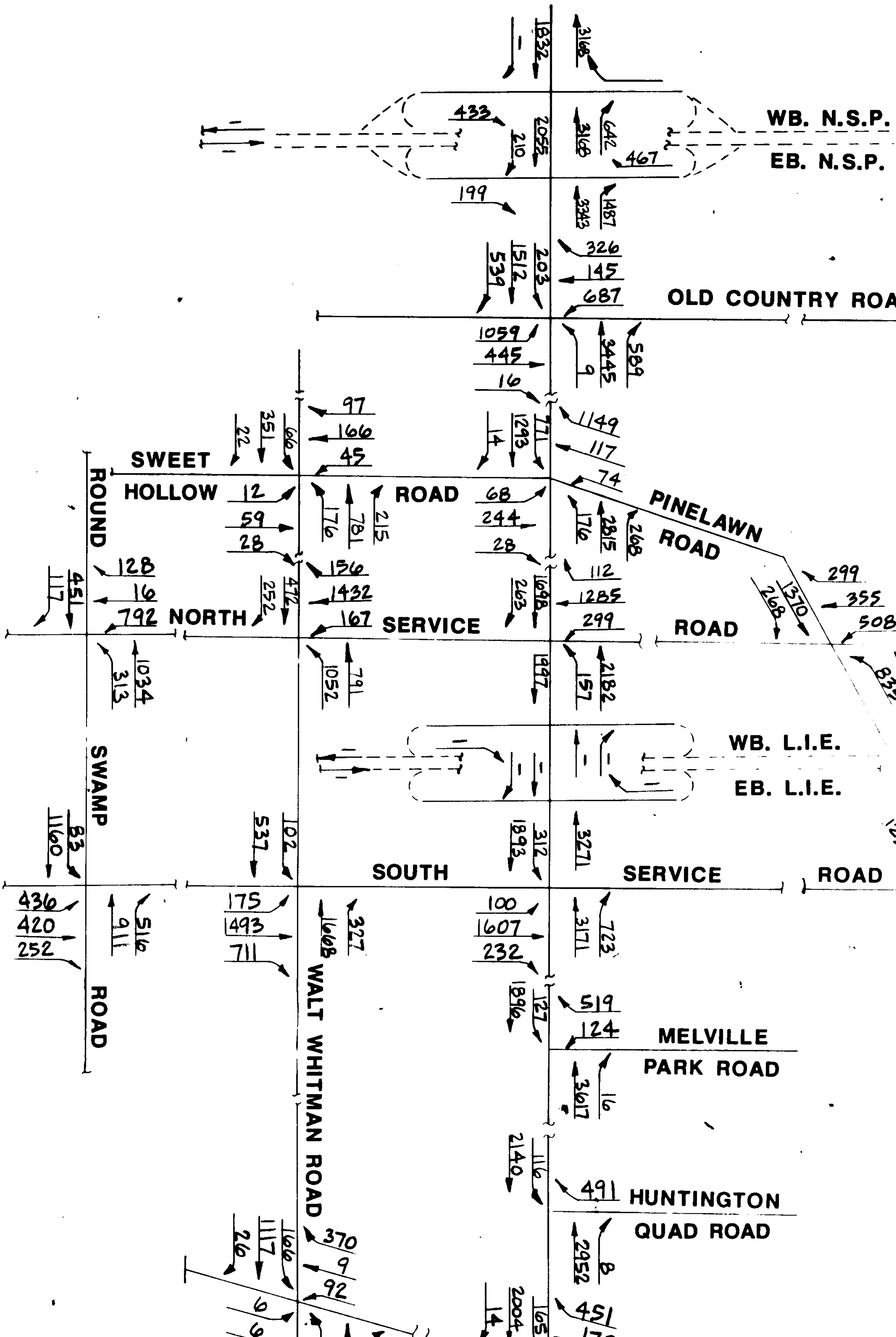
Roadway Network

The study area roadway network utilized for the analysis of future traffic conditions consists of the existing roadway system, in addition to TIP improvements and recommended improvements, as described in Section 3.3. Several roadway improvements are currently being constructed, designed or planned for the study area. The governing agencies (State, County and Town) have identified these projects in the current Nassau-Suffolk Transportation Improvement Program (January 7, 1987). In addition, the Town of Huntington is also undertaking several road improvement projects. A list of these State, County and Town projects follows.

1. Long Island Expressway Service Roads (Exit 49 to Exit 52) PIN 0227.86, Construction 11/88 - Construct service roads, ramps, improve signs and signals.

LKB/RPPW

FUTURE TRAFFIC



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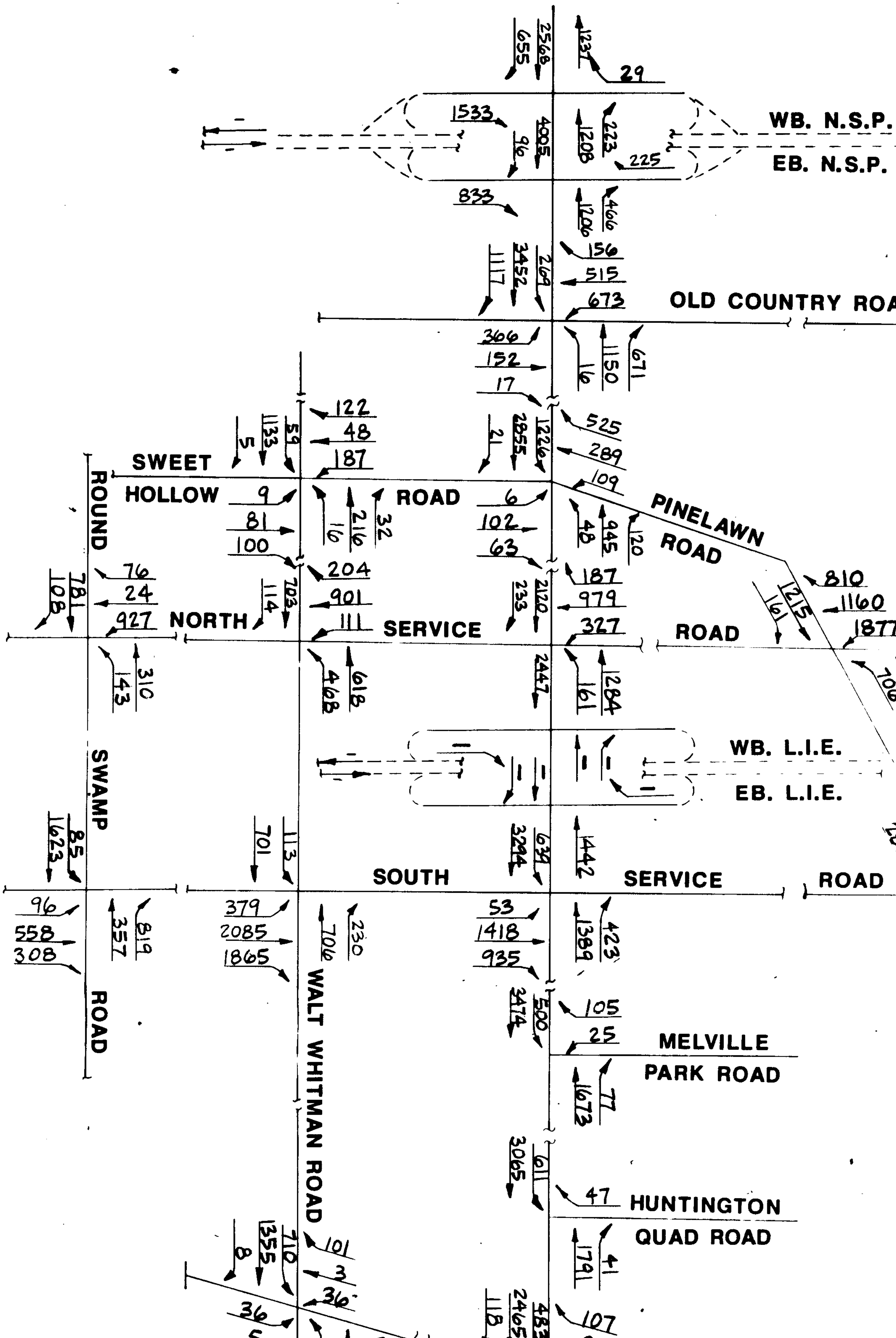


FUTURE TRAFFIC

2. Long Island Expressway (Fourth lane N.Y.C. line to Exit 63) ARN 1.56/BRN 1.56, Construction P0/92 - Preliminary Report, October 1986, Fourth Lane Study.

3a. Route 110 (Ruland Road to Conklin Road) - Reconstruction to 6 lanes plus turn lanes, completed.

3b. Route 110 (Conklin Road to Route 109) PIN 0112.38 Reconstruction 4/87 - Construction for 6 lanes plus turn lanes, improve drainage and signals.

4. Route 110 (Long Island Expressway to Northern State Parkway) TRN 1.31, Reconditioning and Preservation 11/89 - Traffic Study, NYSDOT, November 1985, minor rehabilitation plus turning lanes, drainage and signal improvements.

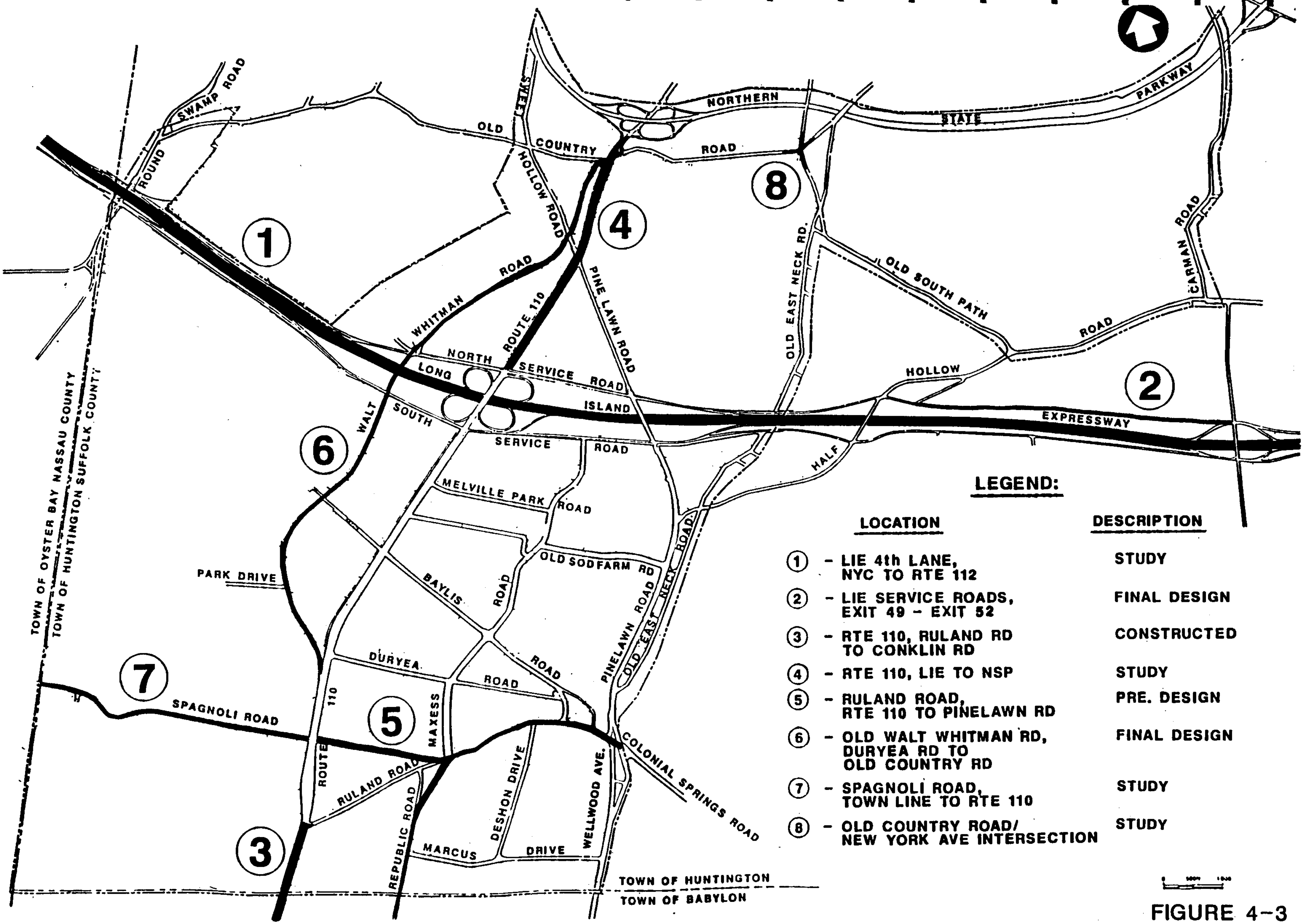
5. Ruland Road (Route 110 to Colonial Springs Road) PIN 0754.85, Reconstruction 3/90 - Project Initiation Report, May 1985, reconstruction to 4 lanes plus realignment of Route 110 w/Bethpage-Spagnoli Road.

6. Walt Whitman Road - Preliminary Plans for reconstruction from Duryea Road to Old Country Road.

7. Spagnoli Road (Nassau County line to Route 110) TRN 1.35, Reconditioning and Preservation P0/92 - preliminary study for reconstruction.

8. Old Country Road/New York Avenue Intersection - Proposed intersection widening and channelization, Town of Huntington, Design Report, 1985.

These roadway improvements were incorporated into the highway network for analysis purposes and are shown in Figures 4-3 and 4-4.



LEGEND:

LOCATION	DESCRIPTION
① - LIE 4th LANE, NYC TO RTE 112	STUDY
② - LIE SERVICE ROADS, EXIT 49 - EXIT 52	FINAL DESIGN
③ - RTE 110, RULAND RD TO CONKLIN RD	CONSTRUCTED
④ - RTE 110, LIE TO NSP	STUDY
⑤ - RULAND ROAD, RTE 110 TO PINELAWN RD	PRE. DESIGN
⑥ - OLD WALT WHITMAN RD, DURYEA RD TO OLD COUNTRY RD	FINAL DESIGN
⑦ - SPAGNOLI ROAD, TOWN LINE TO RTE 110	STUDY
⑧ - OLD COUNTRY ROAD/ NEW YORK AVE INTERSECTION	STUDY

FIGURE 4-3

LKB / RPPW INC

NASSAU-SUFFOLK TRANSPORTATION IMPROVEMENT PROGRAM ROADWAY IMPROVEMENTS

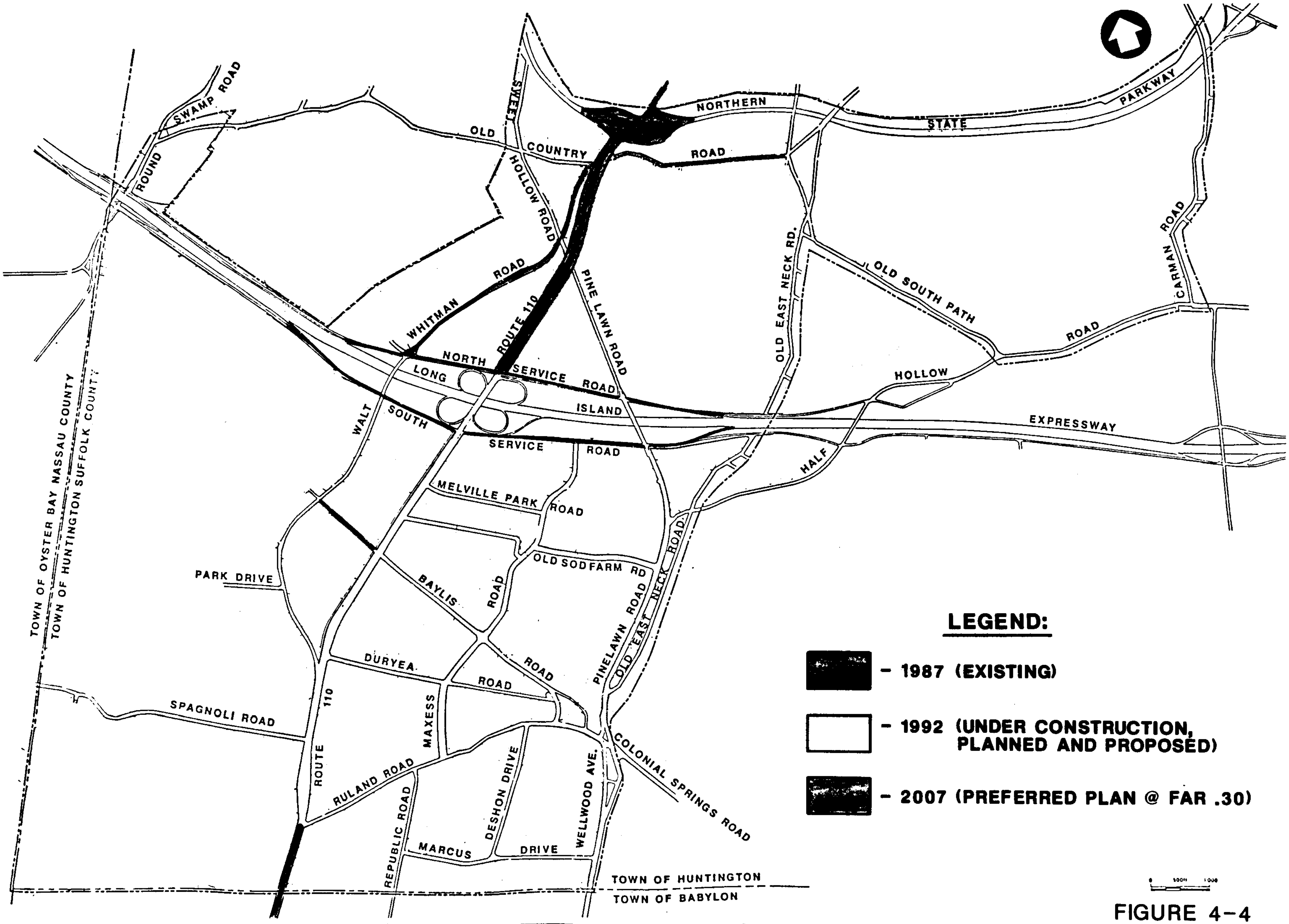


FIGURE 4-4

LKB/RPPW INC

RECOMMENDED ROADWAY IMPROVEMENTS FOR DEVELOPMENT YEARS

Operating Characteristics

The operating characteristics of the roadways in the study area under the Preferred Plan will be intolerable unless the recommended improvements are implemented. Assuming completion of the recommended improvements, the operating characteristics of this study over roadway intersections were analyzed for the future year 2007. The key intersections under the Preferred Plan are expected to operate in the range of Level of Service (LOS) C to LOS E (Table 4-1). However, the Pinelawn Road/Long Island Expressway (North Service Road) Intersection will operate at LOS F during the AM peak due to the large volume of westbound to southbound left turn movements. Most of the intersections along Route 110 can be expected to operate at a somewhat improved level of service as compared to the existing conditions.

The Route 110/Old Country Road and Route 110/Pinelawn Road intersections will operate at LOS D provided a 10 percent traffic demand reduction is achieved. Extensive mitigation measures are recommended for key intersections, as discussed in Section 5.4.

The increase in residential development area as proposed by this Preferred Plan will reduce the magnitude of vehicle trips and will alter the directional flow of vehicle trips in the study area. Therefore, an improved operating level of service is obtained. The future operating characteristics of the roadway system under the Preferred Plan are expected to be satisfactory, assuming the recommended infrastructre improvements are completed.

4.5 Air Resources

The major air quality issue with respect to evaluating the implementation of the Preferred Plan is the potential impact of traffic-generated carbon

TABLE 4-1
LEVEL OF SERVICE

PREFERRED PLAN

Intersection		Existing 1987 AM	Existing 1987 MD	Existing 1987 PM	Preferred Plan 2007* AM	Preferred Plan 2007* PM
1	Rt. 110/Ruland Rd. [1]	C	B	C	B	C
2	Rt. 110/Spag. Rd. [1]	D	D	D	E	E
3	Rt. 110/Duryea Rd. [1]	C	C	D	C	D
4	Rt. 110/Baylis Rd. [1]	D	D	E	C	D
5	Rt. 110/Hunt. Quad. [1]	C	B	C	B	C
6	Rt. 110/Melville Pk.Rd. [1]	C	C	E	B	D
7	Rt. 110/S.Ser.Rd.(LIE) [1 & 3]	D	B	E	D	D
8	Rt. 110/N.Ser.Rd.(LIE) [1]	C	C	C	B	C
9	Rt. 110/Pinelawn Rd. [1]	D	E	F	D	D**
10	Rt. 110/O.Ctry. Rd. [1]	D	D	F	D	D**
11	Ruland Rd/Republic Rd.	D	-	F	-	-
12	Ruland Rd/Maxess Rd. [2]	C	-	D	D	D
13	Pinelawn/Colonial Spgs. [3]	D	-	F	C	D
14	Pinelawn/Half Hollow [5]	D	-	D	E	B
15	Pinelawn/S.Ser.Rd.(LIE) [3 & 5]	C	-	F	C	E
16	Pinelawn/N.Ser.Rd.(LIE) [4 & 5]	F	-	B	F	C
17	Old Ctry.Rd/N.Y. Ave.	F	-	F	C	C
18	Walt Whit/Baylis	D	-	D	C	D
19	Walt Whit/S.Ser.Rd. [3]	C	-	E	C	E
20	Walt Whit/N.Ser.Rd. [6]	B	-	D	C	D
21	Walt Whit/Swt.Hollow [6]	B	-	D	B	B
22	Rnd.Swp.Rd/S.Ser.Rd(LIE)	E	-	D	D	C
23	Rnd.Swp.Rd/N.Ser.Rd(LIE)	D	-	D	E	E

* 2007 Development Year - Non-residential at FAR .30
Highway Network - Existing road network, proposed TIP improvements, and recommended improvements

** Assumed a 10% volume reduction with Transportation Systems Management Measures (i.e., flextime, increased transit, ride sharing, car pooling, etc.).

[1] - Route 110 at 4 lanes/direction
[2] - New Ruland Road at 2 lanes/direction
[3] - LIE (South Service Road) at 3 lanes/direction
[4] - LIE (North Service Road) at 3 lanes/direction
[5] - Pinelawn Road at 3 lanes/direction
[6] - Walt Whitman Road (north of LIE) at 2 lanes/direction

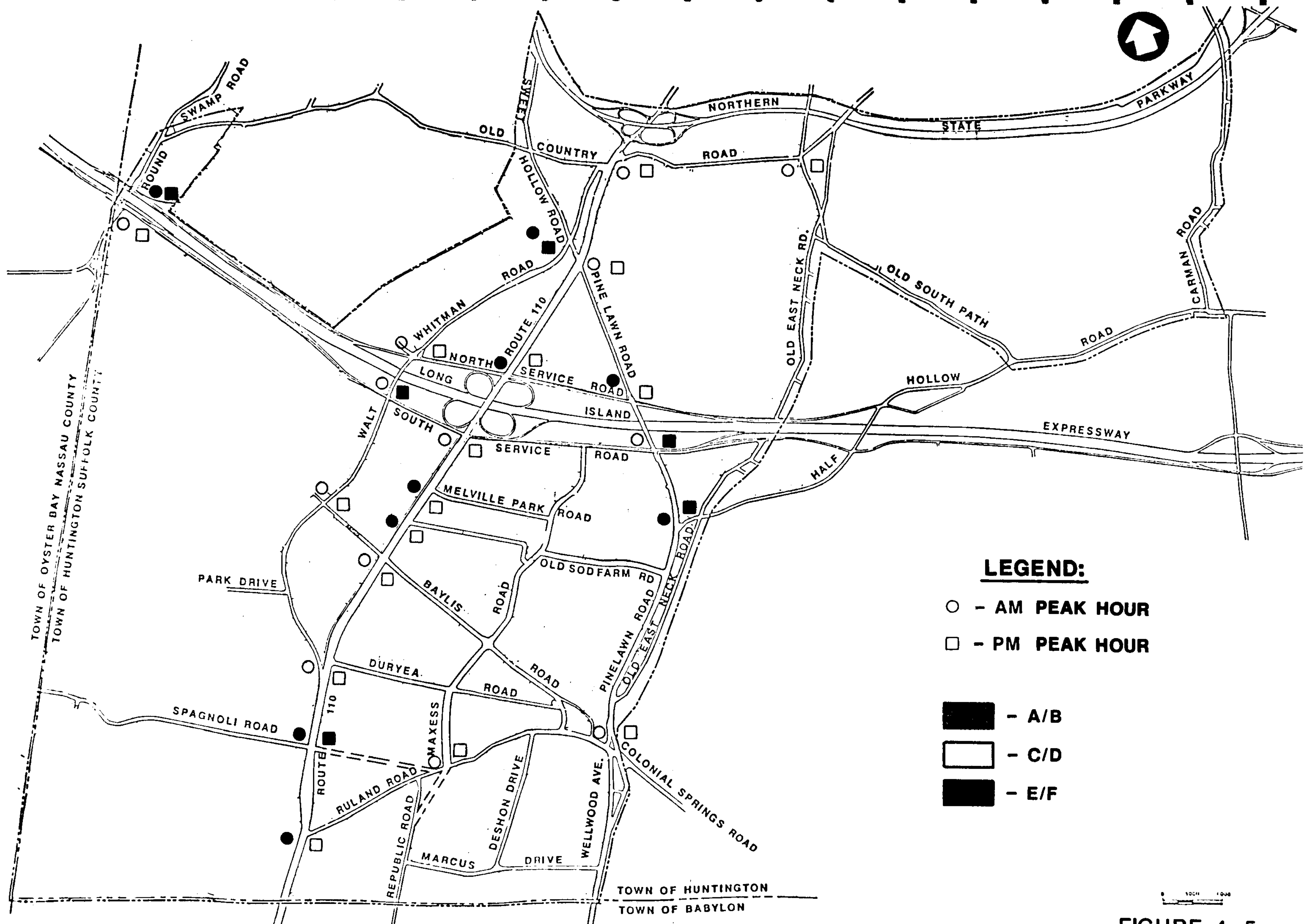


FIGURE 4-5

LKB /RPPW INC

LEVEL OF SERVICE - PREFERRED PLAN W/RECOMMENDED IMPROVEMENTS

monoxide (CO) levels, as discussed in Section 2.5.2. This section describes the microscale analysis used to predict maximum one-hour and eight-hour CO levels. The analysis methodology and results are presented in the following subsections.

4.5.1 Methodology

The methodology generally follows the Level II Procedure described in the New York State Department of Transportation's (NYSDOT's) Project Environmental Guideline, Transmittal #42 (PEG#42), entitled Air Quality Analysis Procedures, dated February 21, 1986, and revised April, 8, 1986. This procedure is also similar to the Level III Procedure presented in New York State Department of Environmental Conservation (NYSDEC's) Air Guide-23, entitled Indirect Sources of Air Contamination.

Receptor Locations

Receptor sites at which future CO levels were predicted (Figure 4-6) are located in existing and proposed residential areas and at commercial buildings frequented by the general public. Receptor sites were selected due to their proximity to key intersections along major arterial streets in the study area. The five sites were representative of locations expected to experience the highest CO levels as a result of the future traffic associated with the development of the area under the Preferred Plan (Table 4-2). A receptor height of five feet (1.5 meters) was assumed for modeling purposes.

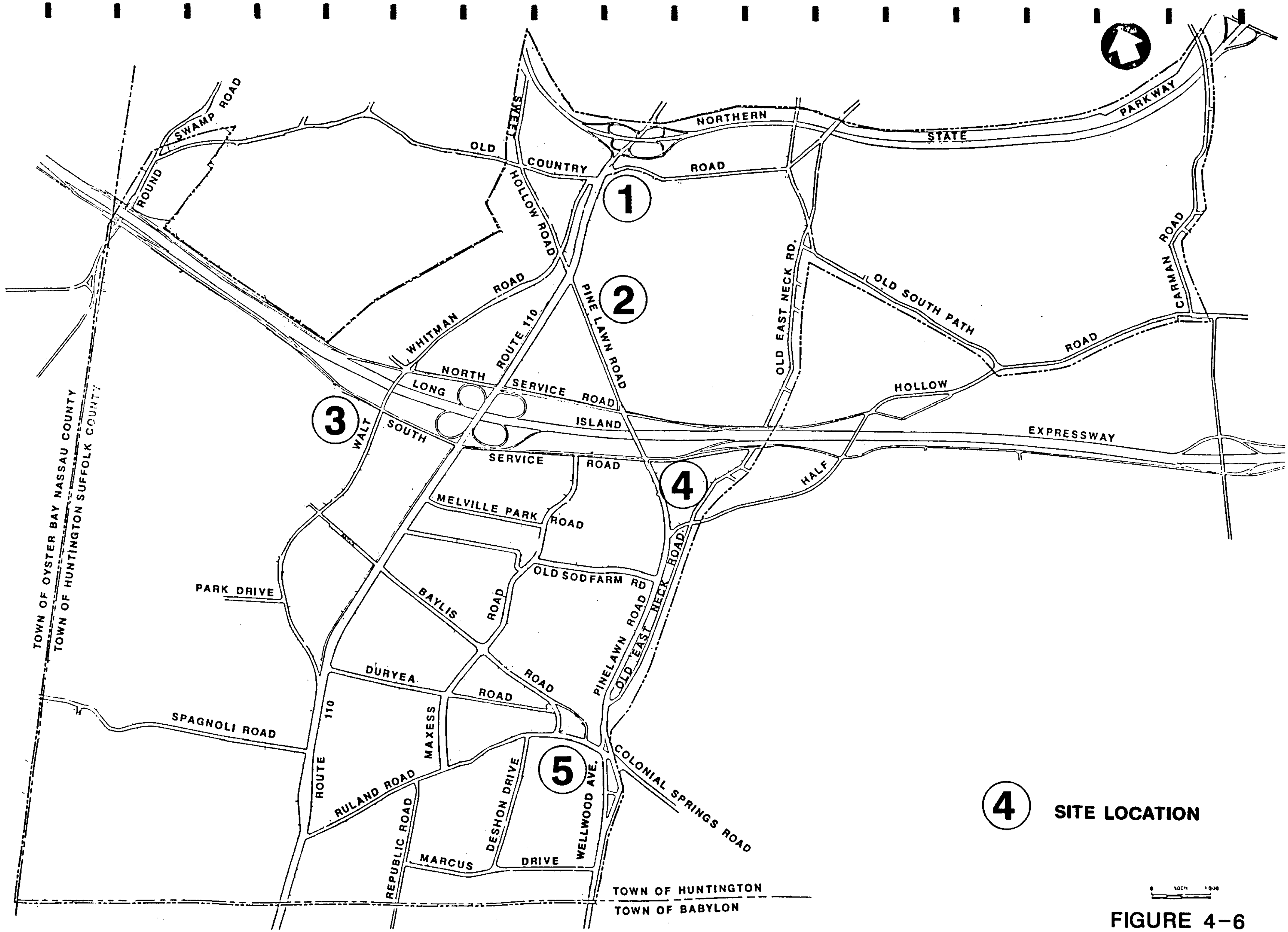


FIGURE 4-6

AIR QUALITY RECEPTOR SITES

LKB / RPPW INC

TABLE 4-2

Carbon Monoxide Emission Sources

Receptor	Primary Intersection	Secondary Intersection	Other Roadways
1	Route 110 & Old Country Rd.		NSP
2	Rte. 110 & Pinelawn Rd/Sweet Hollow Rd.	Walt Whitman Rd. & Sweet Hollow Rd.	---
3	Walt Whitman Rd. & the LIE South Service Rd.	Walt Whitman Rd. & the LIE North Service Rd.	LIE
4	Pinelawn Rd. & the LIE South Service Rd.	Pinelawn Rd. & the LIE North Service Rd.	LIE
5	Pinelawn Rd/Wellwood Ave. & Colonial Springs Rd/ Ruland Rd.	---	---

Dispersion Model

A computerized dispersion model was used to predict maximum peak hour project-generated CO levels at the receptor sites for the analysis of year 2007. The Intersection Midblock Model (IMM), as revised by the NYSDOT (December, 1982 and January, 1985), was designed for the analysis of intersections, where interruptions to the traffic flow result in vehicle queuing at red lights.

The five intersections which would be most affected by increased future traffic volumes are:

- Route 110 and Old Country Road;
- Route 110 and Pinelawn Road/Sweet Hollow Road;
- Walt Whitman Road and the LIE South Service Road;
- Pinelawn Road and the LIE South Service Road; and
- Pinelawn Road/Wellwood Avenue and Colonial Springs Road/ Ruland Road.

IMM was used to predict one-hour CO concentrations at the receptor sites adjacent to these intersections.

The IMM results were adjusted by a calibration factor (PEG #42) that accounts for the background CO level, therefore, the background CO level was not added to the IMM results. The eight-hour average concentrations were determined by applying a persistence factor to the corresponding peak hour concentrations.

Three types of input data are required to operate the IMM: roadway and receptor geometrics, traffic data, and meteorological data. These data, as well as the persistence factor, are described in the following subsections.

Roadway Geometry

The roadways were represented schematically as a series of links superimposed on a coordinate system. The end-point coordinates of each link were then recorded. Other roadway data required as model input were also noted, such as the roadway width and the number of lanes. Receptor locations were also determined with respect to the coordinate system.

Traffic Data

A review of the previously developed traffic data revealed that CO emissions would be greatest during the evening peak hour. Therefore, the PM peak hour traffic conditions were used as input to the IMM.

The U.S. Environmental Protection Agency (USEPA's) MOBILE3 model, used to calculate traffic emission factors, is incorporated into the IMM subroutines. Accordingly, the IMM computer program requires as input various vehicle operating conditions and ambient temperature, which are used used as input in order to calculate emission factors in grams of CO per vehicle-mile. The MOBILE3-related input data used in the analysis are described below.

Peak hour vehicle cruising speeds were based onexisting speeds projected for future year conditions. Existing A.M. and P.M. peak hour speeds were monitored using the floating car technique, during surveys conducted in January 1987.

Vehicle classification was based on data conducted as part of the Traffic Analysis, and on information contained in PEG #42.

Hot and cold start percentages (i.e., the percentage of vehicles operating with engines recently started after being shut off for less than an hour for a hot start, or for more than an hour for a cold start) were those listed in PEG #42: 50 percent cold start and 10 percent hot start.

Several other traffic-related parameters were required for the determination of vehicle emission factors. These included data defining the vehicle inspection and maintenance program of the nine-county New York City Metropolitan Area and the state-wide engine anti-tampering program. The ambient temperature was also required and was set at 20 degrees Fahrenheit, in accordance with PEG #42.

Additional traffic input data for the IMM program included traffic volumes, traffic signal phasing, and intersection approach capacities. These data were all developed as part of the Traffic Analysis (Section 4.4).

Meterological Data

The three meteorological parameters required for the dispersion portion of the IMM were the wind speed, the wind direction and the atmospheric stability. The values of these parameters were representative of worst case conditions as specified in PEG #42.

Because the CO concentration is inversely related to wind speed, worst case conditions dictated a low wind speed of one meter per second. Atmospheric stability is indicative of the ability of the atmosphere to disperse pollutants. Six stability classes are available, ranging from Class A, for the most unstable conditions, to Class F, for the most stable conditions. Because pollutants disperse less rapidly under more stable atmospheric conditions, Class F stability was selected for model input.

The wind direction producing the highest CO level depended on the location of the individual receptor site with respect to the roadway system. Therefore, a wind scan at five degree intervals was used to determine the maximum CO concentration at each receptor. Each model run began with an initial wind direction, which was increased by five degrees for each successive model iteration. The highest concentration at each receptor location was subsequently selected as the maximum one-hour CO level.

Calibration Factor

The NYSDOT has developed a calibration factor or equation to adjust IMM predicted one-hour CO concentrations to more realistically represent expected future conditions (PEG #42). The factor was derived from an NYSDOT study of the relationship of IMM predicted concentrations with corresponding measured concentrations. Since the study was conducted using 1982 conditions, the calibration factor must first be applied to modeled conditions using 1982 traffic volumes, and then the results are used to adjust modeled future year conditions. The calibration equation is thus:

$$Ca = Cm \times 1.65 \times (C82) - 0.45$$

where:

Ca = adjusted future year concentration

Cm = modeled future year concentration

C82 = 1982 modeled concentration

Note all concentration in parts per million (ppm).

The 1982 PM peak hour traffic volumes were determined from 1987 volumes (Figure 2-13) by assuming an annual growth rate of 1.5 percent. Then IMM was rerun with the 1982 volumes for the worst case wind direction at each site. The resulting 1982 concentrations (C82) were used in the above equation to convert modeled concentrations for the 2007 analysis year (Cm) into adjusted concentrations (Ca).

Persistence Factor

In order to determine the maximum eight-hour average CO concentration at each receptor site, the maximum one-hour CO concentration was multiplied by a persistence factor of 0.54 (PEG #42). This factor accounts for the variations in traffic emissions and meterological conditions over the peak eight-hour period.

4.5.2 Results

The purpose of the microscale analysis was to determine the maximum one-hour and eight-hour CO concentrations for year 2007 at the five receptor sites that will result from implementation of the Preferred Plan. The results of the microscale analysis (Table 4-3) show the highest one-hour and eight-hour concentrations would occur at Receptor Site. A maximum one-hour concentration of 13.6 ppm was predicted to occur at this site during the PM peak hour. The maximum eight-hour concentration at this site was predicted to be 7.3 ppm. Both of the concentrations are below the corresponding ambient standards of 35 ppm for one hour and 9 ppm for eight hours. Therefore, implementation of the Preferred Plan will not result in a significant impact on air quality.

TABLE 4-3

MICROSCALE ANALYSIS RESULTS

Receptor	PM Peak-Hour Wind Dir.(deg.)	PM Peak-Hour CO (ppm)	8-Hour CO (ppm)
1	355	13.6	7.3
2	320	9.8	5.3
3	45	9.3	5.0
4	40	13.5	7.3
5	350	11.5	6.2

NOTES:

1. Peak 8-hour concentration is based on the PM peak hour concentration multiplied by a persistence factor of 0.54.

2. The federal and state ambient standards for carbon monoxide are 35 ppm for one hour and 9 ppm for eight hours.

4.6 Noise

4.6.1 Noise Prediction Methodology

As noted in Section 2.6.1, measurement of noise on the A-weighted decibel (dBA) scale is logarithmic, such that a doubling of the noise source strength produces an increase of 3 dBA. This relationship can be expressed mathematically in an equation, and can be used to predict future noise levels. By comparing the future noise source(s) relative to existing conditions, the incremental change in noise level can be determined, and the corresponding existing (monitored) noise levels can be adjusted to reflect future conditions.

The potential noise impact of the Preferred Plan was evaluated at the six receptor sites described in Section 2.6.2, and their locations are shown in Figure 2-18. At each of these sites, the dominant source of noise was from vehicular traffic on the adjacent roadway system. Traffic will also be the dominant source of noise under the Preferred Plan; however, future industrial noise sources would be subject to the Town of Huntington Zoning Code. Therefore, future (year 2007) noise levels were predicted on the basis of the ratio of future traffic volumes to existing traffic volumes.

For example, if the traffic volume on the street adjacent to the receptor site was expected to double between year 1987 and year 2007, the ratio of these volumes is two, and the future noise level would be 3 dBA greater than the level measured in year 1987.

This methodology is based on the assumption that all other factors affecting traffic noise emission (e.g., vehicle speed, vehicle types, location of the roadway), remain similar to year 1987 conditions. Based on a review of year 2007 traffic data, it is expected that future traffic volumes will increase; however, speeds will be at or below year 1987 levels. Lower speeds generally result in lower noise emissions. By assuming speeds do not decrease, a measure of conservatism is added to future noise predictions.

The percentages of medium-duty and heavy-duty trucks on the roadway system are expected to remain similar to that of year 1987. The introduction of vast tracts of residential land in the Preferred Plan could, however, result in an increase in the percentages of automobiles and light-duty trucks. Again, by assuming no decrease in the percentages of the relatively noisier medium-duty and heavy-duty trucks, the predicted future noise levels are conservative.

The only major relocation of a roadway is the proposed "New" Ruland Road between Deshon Drive and Route 110. This alignment did not affect the prediction of future noise levels at any of the six receptor sites. All sites are well removed from the proposed Ruland Road route relocation. In summary, it can be assumed that future noise levels will primarily be affected only by changes in traffic volume.

4.6.2 Future Noise Levels

Future (year 2007) noise levels, predicted using the above methodology, are shown in Table 4-4. Future noise levels at four of the receptor locations,

TABLE 4-4

FUTURE NOISE LEVELS

Site	Location	Peak Hour	Existing (1987) Traffic Volume	Existing (1987) Leq (dBA)	Preferred Development (2007) Traffic Vol.	Preferred Development (2007) Leq (dBA)
1	Old Country Rd.	AM	1306	68	2183	70
		PM	1273	66	2213	68
2	Route 110	AM	3094	65	5979	68
		PM	3390	64	6258	67
3	Old Country Rd.	AM	1439	68	2127	70
		PM	1270	63	1923	65
4	Old East Neck Rd.*	AM	583	63	670	64
		PM	864	59	994	60
5	Pinelawn Rd.	AM	1434	70	2696	73
		PM	1458	71	2867	74
6.	Walt Whitman Rd.	AM	1658	72	3239	75
		PM	1247	70	2992	74

* Based on traffic volumes for New York Avenue, south of Old Country Road.

Sites 1, 2, 5 and 6, are predicted to exceed the 65 dBA guideline level during both the morning and afternoon peak periods. Site 3 would exceed 65 dBA only during the morning peak period, and Site 4 would be below 65 dBA at all times.

The 65 dBA guideline is based on HUD and FAA criteria, but it is not a day-night average (Ldn), as used by those agencies. HUD building sites with noise levels exceeding 65 dBA, but less than 75 dBA, are not precluded from development. However, such projects usually require double-glazed windows and air conditioning to mitigate outside noise levels. The six receptor sites are all expected to be at or below 75 dBA at all times. In addition, nighttime noise levels would be significantly reduced such that the Ldn values for these sites would be below the peak hour levels shown in Table 4-4.

In addition, the receptor sites are representative of conditions approximately 50 feet from the edge of the adjacent roadway. Further away from the roadway, the noise level would decrease, as illustrated by the noise measurement taken near the center of the residential development containing Site 2, which was 10 dBA below the noise level at Site 2 (Section 2.6.2). Therefore, the noise levels presented in Table 4-4 are worst case values that would be representative of the relatively few houses close to a major road. Most lots in a typical development are some distance from the major roadway, so noise levels would be reduced.

The expected increases in future noise levels over corresponding existing levels at the six sites, ranged from 1 dBA at Site 4, to 4 dBA at Site 6 during the afternoon peak hour. Increases below 5 dBA are considered to be minor. Increases of 3 dBA or less are generally imperceptible. Therefore, the noise impact of the Preferred Plan would be minor in comparison to existing conditions.

4.7 Utility Systems

The electrical, gas and communications utilities can adequately support future development under the Preferred Plan. The water and sewage utilities can also support this level of development provided that mitigation measures are instituted. It is estimated that a future water supply rate of approximately 3.85 mgd will be required for the study area for the year 2007. The South Huntington Water District (SHWD) can supply this water and has planned for future development in the area by installing several 12-inch water mains, and has anticipated adding two wells to serve the Melville area (H2M, May 1982). Limitations associated with sewage disposal, rather than capital improvements by the SHWD, will require water use restrictions to limit the amount of sewage generation.

Development of the study area under the Preferred Plan through year 2007 will result in the generation of approximately 2.7 mgd of sewage. Because a sewage generation rate of 2.6 mgd was alloted by the Suffolk County Sewer Agency (SCSA) for the Melville Industrial Sewer District (MISD), future sewage generation should be reduced by approximately four percent. The mitigating measures required to reduce sewage generation are discussed in Section 5.7.

H_2O loss due to sewering Not an impct.

Groundwater will be consumed at all commercial and industrial facilities operating in the study area, part of which will be lost to sewering and not recharged. The water loss due to sewering would not adversely impact groundwater quantity, because the total permissive sustained yield (psy) would be greater than the water loss due to sewering. The following calculations were made to determine this water loss. Natural recharge in the study area is 3.8 mgd (Section 2.7.3). Artificial recharge of the public supply water will occur via air conditioning and lawn irrigation, which represents the difference between the water supplied, consumed, and wastewater generated. Assuming 20 percent water consumption, and adding the 2.7 mgd sewage flow, the total water loss for the study area due to sewering would be 3.47 mgd. Therefore, the amount of water artificially recharged is 3.85 mgd minus 3.47 mgd or 0.38 mgd. Consequently, the total psy for the project area is 3.8 mgd plus 0.38 mgd, or 4.23 mgd. This yield is greater than 3.47, which is the water loss due to sewering.

Solid waste generation will increase primarily as a result of paper usage in office and industrial buildings. Approximately 100 tons per day of additional solid waste will be generated by future development under the Preferred Plan. This represents approximately 16 percent of the 620 ton/day average waste generated by the Town in 2007 (Dvirka & Bartilucci, 1984). Because recycling is mandated as part of the Town's solid waste disposal efforts, the waste load from other industrial buildings is expected to be substantially decreased.

Regarding electrical supply, LILCO has scheduled the expansion of the Ruland Road station in year 1988 to accommodate increased electrical demands. The gas supply in the area is also plentiful because transmission mains and regulator stations are within the area, and no customer has been refused over the past 5 to 10 years (Rickbrand, LILCO, November 6, 1987).

The communications improvements previously discussed in Section 2.7.2 can also accommodate the growth under this alternative.

4.8 Land Use and Zoning

Implementation of the Preferred Plan will change the use of farmland and undeveloped land in the study area. The Plan recognizes the rights of landowners to develop their properties, but at the same time intends to maintain the present character of the area as much as possible.

Office floor area will be increased by about three million square feet. Most of this development will occur in areas that are already used for offices but are undeveloped or in areas where the land is being prepared for the construction of office buildings. For these reasons, while the three million square feet of office floor area represents significant developments, the effect on the use of land will not be in proportion with the magnitude of development.

Industrial floor area will be increased by about 2,200,000 square feet. Similarly to the office developments, industrial developments will not drastically change the use of land because they will predominantly occur on presently undeveloped industrial land and on vacant properties within industrial areas.

Commercial-service-hotel developments will increase the floor area by about 500,000 square feet. This increase will be taking place at a number of locations, as shown in Figure 3-1. On two of these sites, construction of hotels is already taking place, therefore, no significant effect is caused by the Plan. The third commercial-service area, located along Ruland Road will represent a change to the existing use of land.

Residential developments will represent the most significant effect within the study area, since they will occur on large parcels of lands that are undeveloped or used for farming. While the loss of these undeveloped and farmlands is a significant change, the fact that the development will be residential will lessen the effect. Well landscaped residential subdivisions should preserve the appearance of the area to a greater extent than non-residential developments would. The large scale medium/high and high density residential development will be clustered to allow for open spaces. Low density residential developments will be clustered where steep slopes exist to protect areas with severe topography. Clustering new developments will also help preserve and establish wildlife habitat.

Changing the area which is presently used for sand mining, clean fill disposal and an asphalt plant into a residential community will ultimately have a significant beneficial effect. The presently barren land will be replaced by attractive, landscaped residential developments with appropriate park and open space density.

There will be an increased demand on the institutions located within the study area. The effect of this demand is analyzed at the appropriate sections dealing with those institutions. However, should a need rise for additional institutional facilities, they could be located in the new commercial-service centers along Ruland Road.

The land use change will take place over a period of decades. Factors that will influence the speed of development include: (1) market force, (2) government policy decisions, (3) infrastructure improvements and (4) landowners actions. Of the last category, the length of operation of the sand mine will be an important factor. It is possible that the sand mine will remain in operation for 20-30 years.

AC56 Reduce traffic from outside

SMALLER HOUSING units

4.9 Demography

Implementation of the Preferred Plan will result in a significant increase in the population of the study area. The 1980 estimated population is approximately 1350 persons, as discussed in Section 2.9. An increase of 3100 dwelling units should result in a population growth of 8,000 to 10,000 people, depending on the type and size of residential units. More than a third of this growth is anticipated on the sand mine property after it ceases operations. The average household size in Huntington 1980 was 3.6 persons per household. (The 1980 census indicated that attached dwellings in the Town typically housed 2.6 persons and conventional single family detached would typically house 3.9 persons). Since most of the proposed residential densities of the Preferred Plan are higher than that of the average residential areas in Huntington (4 to 6 units/acre), it is estimated that the average household size of the new residential areas will be smaller, about 3 persons per household. The smaller households will be the result of higher desnities that result in smaller housing units.

The increase in office, industrial, and commercial floor space under the Preferred Plan could result in about 16,000 new jobs within the study area. The new residential units could provide for 4,000 to 5,000 thousand workers. Even if most of the people of the new residential areas in Melville work here, a majority of the new employees will have to come from areas outside the study area.

At present, there is a shortage of housing that is affordable for low, moderate and middle income people. Although the implementation of the Preferred Plan will increase the housing shortage, it will be to a lesser extent than if no housing were planned for. By providing for some of the housing, the amount of traffic entering from outside the area will be reduced.

4.10 Economics

A significant number of new jobs will be created by the implementation of the Preferred Plan. Approximately 16,000 new employment opportunities will result from an increase in office, industrial, commercial, and service businesses. In addition, an increase in construction jobs will exist during construction periods from the implementation of the Plan. The number of jobs created annually depends on the economy and the rate of public and private investments.

The new developments will represent a significant increase in the tax base. The total increased assessment will yield, according to 1987 tax rates, a total tax of $32,620,00 (Table 4-5). Distribution of this tax among the Town, County, School, and other districts would be made according to the present tax structure, as shown on Table 2-26. This proportion can change as the need of different services changes.

Distribution of the projected $32,620,000 increase in total tax revenues among the various tax districts, based on 1987 taxes, is shown in Table 4-6. The projected increase of $18,593,400 in school tax revenues would result in a $12,277 annual revenue for each additional school child from kindergarten through 12th grade. Increased property tax revenues exclusive of school taxes would be $1,507 for each additional resident.

The increase in taxes will be more than sufficient to offset the increase in operating costs. The increased revenues will also be in reasonable proportion to the needs of additional initial investments that result from projected growth, with the exception of the required investments in improving the roadway system.

TABLE 4-5

Projected Increase of Property Taxes
Preferred Plan

Office	3,000,000 sq. ft.	@ $	3.50/sq. ft.	=	$ 10,500,000
Industry	2,200,000 sq. ft.	@ $	2.75/sq. ft.	=	6,050,000
Commercial	500,000 sq. ft.	@ $	3.00/sq. ft.	=	1,500,000
Dwelling Unit	3,100 units	@ $	4,700.00/each	=	14,570,000
TOTAL YEARLY TAXES:					$ 32,620,000

TABLE 4-6

Projected Increased Yearly Property Taxes
Preferred Plan
(Based on 1987 Tax Rates)

School District	$ 18,593,400
Library District	652,400
County	2,609,600
Town	1,304,800
County Police District	4,893,000
Highway	1,631,000
Fire District	978,600
Light District	326,200
Refuse District	978,600
Water and Wastewater Districts	652,400
TOTAL	$ 32,620,000

4.11 Market Conditions

The market for office/industrial and residential uses under the Preferred Plan is expected to be strong and would likely exceed the available land under present trends. The plan will reduce the capacity for office uses, and thereby absorb less of the market. This will force the demand for office development to other areas.

On the other hand, the plan will be able to absorb somewhat more of the industrial and residential market than the area would absorb under the existing zoning and development trend. This will likely result in the Route 110 corridor development, reducing some demand for industrial and residential uses outside of the study area.

4.12 Community Facilities and Services

4.12.1 Fire Protection and Ambulance Service

Implementation of the Preferred Plan will increase in the number of dwelling units and new non-residential floor areas and place a higher demand on the fire protection and ambulance services than presently exists. At present, the fire district (Figure 2-26) receives about twice as many ambulance calls as fire calls. The new non-residential buildings will be modern facilities built to comply with the fire code, thus they should not put a greatly increased burden on the Fire District. The 3100 new dwelling units and 16,000 additional employees, however, are expected to have a significant effect on the required fire fighting and ambulance services. At present, the Fire District has difficulty obtaining volunteer fire fighters.

4.12.2 Police Protection

The Second Precinct of the Suffolk County Police Department, which covers the entire Town of Huntington, will have an increased workload as a result of future development of the study area. Both crime and traffic related work will increase. The additional workload, however, will be the direct result of growth and the Preferred Plan accommodates some of the growth. Infrastructure improvements for the roadways are expected to ease some traffic accident related work. The Precinct will be directly affected and, in response to the increased workload, they will have to increase their workforce.

4.12.3 Schools

At present, School District No. 5, the Half Hollow Hills Central School District has a surplus capacity for more than 1400 students. The number of school age children generated by the new residential developments over the next 10 to 15 years could be between 1,000 and 2,200, depending on the type and size of dwelling units. Single family houses are expected to provide the largest number of students, an average of 0.847 students per dwelling unit. Town houses and garden apartments provide, on average, 0.383 and 0.186 school child per dwelling unit, respectively. The number of school children per dwelling unit also depends on the size of the residential unit, primarily on the number of bedrooms (Table 4-7).

Assuming 1,000 single family homes (two to five bedrooms), 1,600 fee simple or condominium town houses (one to three bedrooms), and 500 condominium garden apartments (one to three bedrooms), the estimated total number of school children would be 1,515, exceeding the present additional capacity

TABLE 4-7

Regional and National Demographic Multipliers for Common Configurations of Standard HOusing Types for

SCHOOL-AGE CHILDREN

-By Housing Type and Number of Bedrooms-
(For housing built during 1975-1980 and monitored in 1980)

	SINGLE FAMILY Blended (All Brm.)	GARDEN APARTMENTS Blended (All Brm.)	TOWNHOUSE Blended (All Brm.)
NORTHEAST REGION	.845	.175	.377
New England	.840	.155	.348
Middle Atlantic	.847	.186	.381

Source: Burchell Listokim and Dolphin, 1985
<u>School Children Generated by a Residential Project</u>

of 1400 students. If future residential development of this magnitude and type occurs as a result of the implementation of the Preferred Plan, a significant effect on the school system will result. The impact on the schools near the study area will be much greater than in other parts of the District and additional classroom facilities may be required to accommodate the addition of over 1500 new students in the school system.

4.12.4 Libraries

The two libraries that serve the study area, (Half Hollow Hills Public Library in Dix Hills and its Melville Branch), do not meet the current needs of the area. Implementation of the Preferred Plan will further increase the need for additional facilities or expansions of the existing library facilities.

4.12.5 Recreational Facilities

The regional recreational facilities that serve the study area are presently underutilized and appear to be adequate for levels of use. These facilities are adequate to serve an increased population resulting from the implementation of the Preferred Plan. An additional need will exist for new playgrounds and active recreational areas, such as tennis and basketball courts and baseball and soccer fields. These smaller recreational areas should be developed at locations which are accessible to and, possibly, within walking distance of the prospective participants. These new facilities should be located within the new residential areas to be constructed in the study area with public access available.

4.12.6 Hospitals

The increased population and employment of the study area due to implementation of the Preferred Plan create a greater demand for the services of hospitals. At present, however, there is a surplus capacity of hospital beds in Long Island. For this reason, and because of the recent trend to reduce the length of hospitalization, the present capacity (424 beds, 86 percent average occupancy rate) of Huntington Hospital is expected to be sufficient to provide satisfactory service for the proposed growth of the study area. The estimated population growth of the study area will represent less than a five percent population growth for the Town, which is the area served by Huntington Hospital.

4.13 Visual Resources

Implementation of the Preferred Plan will result in a change in the image of the study area as a growing industrial/office complex interspersed with wooded areas, farm lands and residential neighborhoods. This image will be replaced with views of a built-up community. The major visual features of the study area in the future will be the office and industrial developments, which currently predominate views along the LIE and Route 110. However, new office and industrial buildings will be less dense and less massive than some of the buildings which have been recently been constructed. The Floor Area Ratio restriction will reduce the size of new buildings and will eliminate the need for parking garages. Furthermore, new developments will be surrounded by more open space and landscaped areas. New development is planned along the less developed sections of the study area, including Pinelawn Road, Spagnoli Road and parts of Duryea Road, Ruland Road and Walt Whitman Road. Construction of office, commercial and residential buildings in these areas will add to the existing condition of buildings which dominate the views in these areas. Office buildings in the center of the office/industrial core of the study area will be visible for several miles along the Long Island Expressway.

The commercial area between Route 110 and Walt Whitman Road, north of Sweet Hollow Road will be improved and will create the image of a visual and functional focal point more so than it does at present. Along Ruland Road, the new commercial center will create a desirable change in the use of land, it will be a focal point at the meeting of office, industrial and residential uses.

Further residential development will adversely affect visual quality by removing sections of open sod farm fields, and the wooded areas located south of the Long Island Expressway in the western central portion of the study area. Residential development is proposed for the large sod farm properties, which will include the largest undeveloped lands in the study area. The visual impact resulting from residential subdivision of this agricultural land is expected to be significant. Open views across the field will be eliminated by this development. The level of development in these residential areas will allow for a suburban residential appearance. Landscaping in these residential areas is expected to create a pleasant visual character.

Another significant visual change will be caused by the widening of major roadways. Most apparent would be the change on Route 110, between the Long Island Expressway and Northern State Parkway.

Transforming the area presently used for sand mining clean fill disposal and asphalt production, into a residential community will also have a significant positive visual effect. A well landscaped residential community will be a great improvement to the existing site.

4.14 Historic and Archeological Resources

4.14.1 Historic Resources

There are historic resources that exist in the study area which are currently either listed by the National Register of Historic Places, New York State Inventory of Historic Places, or located within the Sweet Hollow Historic District. The Preferred Plan recommends the continuation of existing residential land use patterns at some sites where historic structures presently exist. Other sites are zoned for office and industrial development. Some locally important structures, which are not protected by Federal, State or local regulations, but are historically significant, may not be preserved by the present owners. There is the greatest potential for this change to occur at properties proposed for office development use.

Development of office/industrial uses is proposed for the sites of the S. Pedrick House and Farm (Baylis Road), the Melville School (Duryea Road), the Pedrick House (Baylis and Ruland Road), the Jarvis House (Pinelawn Road), and the Whitson House (Walt Whitman Road). The St. Rose School (Ruland Road), the Methodist Church (Walt Whitman Road), and the Walt Whitman Cemetary (Walt Whitman Road) are proposed for residential development. Future interest to develop these properties for their designated allowable land use will force private owners of these historic properties to consider their sale and subsequent development to office/industrial or residential uses. Under the plan, the potential for development of these properties will depend on the desires of individual property owners. It is likely that several of these locally significant historic properties will become developed. However, the most significant National and State-listed structures are expected to remain and be maintained.

4.14.2 Archeological Resources

The few archeological resources which are known to exist within the study area are located at the Schmidts Brothers' pumpkin farm, approximately 2500 feet east of the County border and south of the Long Island Expressway south service road. A portion of this site is proposed for low density residential development. Excavations on this site could possibly uncover some remaining areas containing lithic artifacts. Another portion of this area is proposed to become parkland. The impact of development in this area on any remaining archeological resources is expected to be minimal. A thorough archeological survey should be conducted in this area prior to development in order to document any significant remains.

SECTION 5

SECTION 5
MITIGATION MEASURES TO MINIMIZE ENVIRONMENTAL IMPACT

This section describes mitigation measures which are recommended to minimize the environmental impacts expected to result from implementation of the Preferred Plan for development of the Melville-Route 110 Area. Recommended mitigation measures are presented for potential impacts to soils, groundwater, terrestrial ecology, transportation and traffic, air resources, noise, utility systems, land use and zoning, demography, community services, and visual resources. Mitigation measures are recommended to minimize site-specific and area-wide impacts resulting from future development of the study are. Those impacts which cannot be fully mitigated are described in Section 6 as unavoidable adverse environmental impacts.

5.1 Erosion of Soils

Soil erosion during construction at development sites in the study should be minimized by: disrupting soils only where necessary, revegetating disturbed areas, utilizing mulch or other erosion control measures wherever necessary, and implementing effective stormwater control measures. Periodic inspections of the construction site should be conducted to detect erosion problems which require remedial action.

Previous mining and farming activities on some sites have resulted in the removal of soils and vegetation. During development, soils will be redistributed as necessary, and revegetation of disturbed areas will be conducted. After development, stormwater runoff and resulting soil erosion should be controlled on the site by the establishment of stormwater retention basins, grassy swales, and extensive revegetation with ground cover vegetation, shrubs and trees. Cluster housing will minimize intrusion into steep slope areas by roadways and other construction during development of the land.

SALT/SAND

5.2 Water Resources

Several measures can be implemented to minimize impacts from proposed development on the quality of the groundwater. The most effective method of reducing nitrate loading from individual sewage systems is to provide sewer hookups to the local sewer district. If that measure is not feasible, then certain design measures should be included in the individual sewage disposal systems. The septic tank leaching field should be of sufficient size to allow proper leaching of the material. The provisions outlined in Suffolk County Sanitary Code, Article 6, regarding minimum lot sizes of 20,000 sq.ft. for new homes with septic systems should be adhered to. Variances to this requirement should be kept to a minimum, and denitrification systems or sewage treatment plants should be required when wastewater generation of new developments exceed the density equivalent.

To reduce nitrogen loading from fertilizers the Plan recommends the use of low maintenance grass and, in place of lawn in some areas, restoring the land to their natural state by planting native shrubs and trees. This is most practical in buffer areas, especially for residential developments. Guidelines for planting low maintenance vegetation are outlined in the Long Island Comprehensive Waste Water Treatment Plan (L.I. Regional Planning Board, 1978). Cluster housing will be constructed in some parts of the study area, which will minimize lawn area and fertilizer useage. These measures are expected to reduce the quantity of fertilizer that will be applied within the study area and consequently will reduce the nitrate loading to the groundwater.

In order to reduce the impact of chlorides from road salting operations on the groundwater, sand should be mixed with the salt. In addition, all salt piles should be covered to prevent leaching into groundwater. Cluster housing developed in some sections of the study area will minimize salt application due to less roadway length for application.

To reduce the potential impacts from accidental spills and leakage from storage tanks, a periodic leak testing program should be mandated.

5.3 Terrestrial Ecology

Mitigation measures are recommended to restore disturbed terrestrial ecological habitat areas within the study area resulting from the development of new office, industrial and commercial buildings; residential developments and roadway expansion projects. Expedient revegetation of cleared areas on development sites which are not used for buildings or site features should be conducted. Buffer areas should be created whenever possible, and utilize native vegetation species. Wildlife species such as songbirds and small mammals are expected to be attracted to new landscaped areas, especially those areas containing dense shrubs and trees. New residential areas should be required to establish and maintain natural vegetation buffers. Cluster developments will require less land clearing and smaller turf areas.

Development of new surface water areas is another mitigating measure which would create new habitat area, including aquatic habitat. Ornamental ponds could be established as stormwater detention areas and also include plantings with upland vegetation and moisture tolerant wetland vegetation species. These areas could be designed and established as residential or office/industrial development sites.

5.4 Transportation and Traffic

The roadway improvements described in Section 3.3 are a critical part of the Preferred Plan. However, several other measures are recommended to reduce and control the impact of additional traffic, particularly during the peak hours. These measures include consideration of transit improvements, transportation systems management, and transportation control regulations. During the early period of the Preferred Plan implementation, these measures should be evaluated for their appropriateness in controlling additional traffic. The timing and degree of implementation should be considered in the preparation of site specific environmental statements. The recommended mitigation measures and other considerations for mitigating traffic impacts are included below.

Roadway Improvements Necessary to Implement The Preferred Plan

- Reconstruction of the Northern State Parkway/Route 110 Interchange (Agency: NYSDOT)

  This improvement would increase the roadway capacity of Route 110, improve the travel time and operating level of service, and correct substandard geometrics for parkway ramps. This reconstruction project would meet existing traffic needs (year 1987) and accommodate future land development (year 2000).

- Reconstruction of Route 110 to six lanes between LIE to Northern State (Agency: NYSDOT)

  This reconstruction would increase the roadway capacity of Route 110, and improve the level of service at Route 110 intersections with Walt Whitman Road and Pinelawn Road. This project is required to meet present (year 1987).

- Reconstruction of Route 110 to eight lanes between the LIE and Ruland Road (Agency: NYSDOT)

  This project would increase the roadway capacity of Route 110, improve future travel time and the future level of service on this roadway section. Future traffic predicted for year 1992 and year 2007 development would be satisfied by this improvement.

- Reconstruction of Pinelawn Road to six lanes from Ruland Road to Route 110 (Agency: Suffolk County Department of Public Works)

  The roadway capacity of Pinelawn Road would be increased by this reconstruction, along with improvement of future level of service. This measure would satisfy development for year 2007, and would provide an alternative north/south route instead of Route 110 and Republic Road/Maxess Road.

- Reconstruction of Route 110 to eight lanes between the LIE and Northern State Parkway (Agency: NYSDOT)

  To accommodate future Year 2007 development, this improvement would be a follow up to the six lane widening required for Year 1992 development. This project would further increase the roadway capacity, and improve travel time and level of service on Route 110.

- Reconstruction of LIE north and south service roads to three lanes (Agency: NYSDOT)

- Reconstruction of Baylis Road to four lanes, west of Route 110 (Agency: Town of Huntington)

- Reconstruction of Old Walt Whitman Road to four lanes, north of LIE (Agency: Town of Huntington)

- Reconstruction of Old Country Road to three lanes, east of Route 110 (Agency: Town of Huntington)

These last four recommended improvements are required to accommodate future development to Year 2007. They will increase the roadway capacity and improve travel time with signalization improvements, and improve the level of service.

Transit Improvements

- Increased service on Bus Route S-1 during peak hours.
(Agency: Suffolk County, Suffolk County Transit System)

  Increased service will provide more frequent availability, offer non-captive riders an alternative transportation mode, and reduce vehicle movements.

- Establish a Melville Office Park Transit Service.
(Agencies: Suffolk County, Suffolk County Transit System and Town of Huntington, Huntington Area Rapid Transit System)

  This transit service will provide exclusive service throughout the area, with terminal points at shopping centers, LIE park and ride lots, and LIRR stations. Vehicle movements would be reduced by this measure.

- Provide Transit Amenities.
(Agencies: NYSDOT, Suffolk County Department of Public Works, Town of Huntington)

  Bus shelters, benches, turn out lanes, sidewalks, and designated bus stops would provide convenience for transit riders and encourage transit use.

Business Community Participate

Transportation System Management

- Establish a Melville Transportation Management Association (TMA)

  The Melville TMA would provide a private/public forum for solving suburban mobility problems. A computerized ride sharing matching system could be devised. Cars and vans could be provided for employee car/van pools. Internal shuttle services and park and ride circulators could be managed. Financing for area-wide roadway improvements could be acquired and managed. Lobbying for suburban political transportation interests could be conducted.

- Establish or increase ride sharing programs

  The ride sharing program would regulate travel demand, reduce area-wide traffic, and reduce parking construction cost to developers. There is the potential for establishing a 25 percent employer ride-share participation rate, such as that conducted at the Meadowlands in New Jersey.

- Modify work schedules

  Flex-time, staggered work hours and a four day work week are schedule considerations to reduce traffic volumes. Peak hour vehicle movements could be reduced. It represents a low cost strategy and encourages car pooling. These measures are typically implemented by surburban employers or TMA's as previously identified. Encouragement to alter work schedules can be accomplished through regulations and incentives by governing agencies as described below. However, a limitation to modifying work schedules would be firms whose functions require set schedules, i.e., brokerage firms.

Regulations

- Trip Reduction Ordinances

Legislation forcing developers to reduce traffic below the expected volume generated based on ITE rates. This would require legal agreements with the developers to implement Transportation System Management (TSM) programs. The orderly growth of the area could occur under this program, and alternative modes of transportation are encouraged.

One example of a trip reduction ordinance was implemented in Placer County, California. "In 1981, County supervisors passed legislation requiring developers to reduce vehicular traffic produced by their projects 20 percent below the volume that would normally be expected based on Institute of Transportation Engineer's (ITE) trip generation rates. As a precondition to subdivision and permit approval, developers must enter into a legally binding agreement to implement associated TSM programs, such as car pools and preferential car pool parking." (Cervers, 1986).

Some limitation to this type of ordinance are: the difficulty in actual enforcement of compliance, the accurate measurement of trip reduction, and the arbitrary standards for the amount of trip reduction.

- Traffic Impact Fee Ordinances

These ordinances would provide for the collection of funds to finance area-wide roadway improvements. An Impact Fee District could be created, with contributions based on the projected traffic generated.

TAX ACCORDING TO # PARKING SPACES ?

The problem causing sources would pay the greatest fees. Orderly growth is encouraged by these ordinances and current inequities in local roadway tax financing could be balanced.

Examples of municipalities that impose traffic impact fees include Fairfax County, Virginia, which plans to impose a $2.65 per square foot fee on new developments to finance highway improvements. Another would be San Diego County, California which requires developers to pay fees as a precondition to subdivision approval with funds earmarked for local road improvement. Some limitations to this form of ordinance would be: the equitable distribution of charges among existing and new developments, the accurate measurement of the cost per peak hour trip generated, and the mismatch between when fees are collected and improvements actually made.

- Incentive Ordinances

Developers would be allowed to reduce parking requirements in return for initiating ride sharing programs. However, there may be difficulties in enforcement by municipalities with these ordinances.

Maintenance and Protection of Traffic During Roadway Construction

- Traffic flow during the construction of roadway improvements will be temporarily adversely affected. Mitigation measures recommended to minimize these short term adverse effects on traffic flow include measures for maintenance and protection of traffic during roadway construction periods, as described below.

- In accordance with NYS Department of Transportation requirements, the minimum number of travel lanes should be maintained.

- All vehicle movements should be rerouted to accommodate traffic flow with proper signage and pavement markings.

- Roadway construction activities should be timed during off-peak traffic hours, accounting for the direction of traffic flow.

- Roadway construction should be sequenced over a period of time to minimize delays to motorists.

- Temporary traffic control devices should be utilized to direct traffic flow, including cones, barrels, lights, flashers, concrete lane dividers, and traffic control personnel.

5.5 Air Resources

As a result of future development under the Preferred Plan, air quality impacts are not expected to be adverse. Mitigating measures recommended to reduce the minimal air quality effects include the completion of the roadway improvements recommended for implementation of the Preferred Plan. Carbon monoxide (CO) emission amounts are inversely related to travel speeds of vehicles. Increased capacity and improved level of service at intersections and roadway section will minimize future CO emissions.

5.6 Noise

Future noise conditions are not expected to worsen at sensitive receptors within the study area, however, new development of residences along major roadways could include installation of noise attenuation structures, property designed earthen berms and timber walls, in association with dense vegetation, provide an effective noise barrier. These structures could be constructed to reduce residential area noise levels in the future, especially along the LIE. Installation of double pane windows is also an effective noise reducing construction measure.

5.7 Utility Systems

The sewage generated by implementation of the Preferred Plan is 2.7 mgd. Since the MISD is allotted 2.6 mgd, sewage flow should be reduced for new construction projects by approximately 0.1 mgd or 4 percent. This level of reduction is small and easily attainable since wastewater reduction devices are currently available to reduce flows from 9 to 25 percent. For example, pressure reducing valves on residential water supplies can reduce wastewater flow by 25 percent (Metcalf & Eddy, 1979). Approximately 974,000 gpd of wastewater will be generated by residential development under the Preferred Plan. A 25 percent reduction of this amount (244,000 gpd) will lower the total sewage to 2.45 mgd. This is below the 2.6 mgd allotment for the MISD. In addition, batch flush generated by Plan implementation in office buildings can reduce flows from office buildings by 11 percent, and industries should be encouraged to recycle and reuse wastewater where practical.

5.8 Land Use and Zoning

Residential subdivisions will replace the presently undeveloped land and farm areas within the study areas. The effect of this change should be mitigated by providing generous landscaping and buffer areas at the new residential subdivisions, both on private property and along the rights-of-way.

Medium-high and high density (4 to 6 dwelling units/acre) residential subdivisions should be developed with substantial landscaping. In addition, cluster developments and planned unit developments should provide separate larger landscaped areas, including open spaces with undisturbed vegetation. While the large open spaces of farms will disappear, a richer landscaping will lessen the effect of man-made structures on these lands.

Low density residential subdivisions are proposed for the environmentally more sensitive wooded, hilly properties. Low density development of these areas will ensure that a large portion of the existing vegetation can be saved and other sensitive environmental features will be protected. Planned unit developments and cluster developments could save large tracts of land in their natural state.

The effect of the Long Island Expressway and Service Roads on adjoining residential developments should be mitigated by: (1) constructing sound barriers (walls, fences, berms) along the widened service road; (2) using reverse frontage lots; and (3) building planned unit developments that will provide wide buffers along the service road.

Delete

5.9 Demography

The increase in the shortage of affordable housing that will occur because of the large number of employment opportunities created by implementation of the Preferred Plan could be mitigated by ensuring that a number of the new dwelling units will be available for low and/or middle income households.

incentive

To provide housing that is affordable for at least some of the employees within the area, a floor area restriction could be placed on the proposed dwelling units or in a portion of them. Another way to achieve affordable housing could be to provide a density incentive. A larger number of dwelling units or a greater Floor Area Ratio could be exchanged for constructing a portion of the housing units for moderate income households at a lower than market rate purchase price or rental.

5.10 Community Facilities and Services

5.10.1 Fire Protection and Ambulance Service

Should the new development require a new station for fire protection and ambulance service it should be located in the new commercial service center along Ruland Road. Additional revenues from the new developments should be used towards the construction of a new station, if it is needed, and for new fire fighting equipment. A new station would also mitigate the difficulty of providing emergency vehicle access to the southerly portion of the study area. Because the district is experiencing difficulties with finding volunteers, the additional workload might demand the future hiring of paid personnel. Also, efforts to generate volunteers among employees can be condition of future approval.

5.10.2 Police Protection

As increase in the residential and non-residential development will require additional personnel and equipment for the Second Precinct of the Suffolk County Police Department that covers the entire town.

5.10.3 Schools

Additional bus service will have to be provided to satisfy the needs of the increased number of school children. To mitigate the effect of such a large number of school children in one geographic area, the specific areas served by individual schools may have to be reapportioned. To avoid busing for unreasonable distances, some capital investments such as expansion of nearby schools might be required. The need for capital improvements can be mitigated by controlling the type and size of new dwelling units. There is a direct relationship between the number of school children per dwelling unit and the type and size of the dwelling unit as shown on Table 4-4. With coordination between the Town and the School District, a mix of dwelling units can be planned for the study area that will generate a number of school children that can be accommodated by the School District with reasonable improvements.

5.10.4 Libraries

Both of the libraries that serve the study area need enlargements to meet the present need. The planned enlargements will have to take into consideration the additional need and additional revenues (library tax) created by the implementation of the Preferred Plan.

5.10.5 Recreational Facilities

Small parks and playfields will have to be provided to satisfy the need created by the new residential developments. The extent of need will largely depend on the type of subdivisions. Planned unit developments at medium-high or higher densities usually provide recreational activities such as swimming pools, small playgrounds and tennis courts. In case of newly constructed conventional subdivision, land will have to be set aside for public recreational use. The Town will continue its present policy of requiring new subdivisions to donate recreational areas or payments in lieu of land, with which the Town can purchase and improve property for recreational use.

5.11 Visual Resources

Implementation of the Preferred Plan will have to include mitigation measures to compensate for the loss of certain visual resources such as undeveloped wooded areas and farmland. Proper development will save a substantial portion of the vegetation in presently wooded areas and the loss of farmland could be compensated by new landscape vegetation plantings. The negative effect caused by road widenings should also be mitigated by landscaping such as trees and shrubs planted along the roadways and center medians to lessen the visual effect of wide roadways.

Mitigation measures to ensure a pleasant visual effect can be achieved through the Subdivision Regulations, Zoning Ordinance, and Architectural Review Process. Subdivision Regulations, for example, will ensure that residential subdivisions will have well designed street systems. The Zoning Ordinance will achieve the provision of amenities such as sufficient set backs, buffering, and landscaped areas. The Architectural Review Process will improve site planning and architectural treatments. To achieve visually pleasing development, aesthetic requirements should be just as strictly enforced as are limitations of floor areas or requirements for parking spaces.

SECTION 6

SECTION 6

UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

The implementation of the Preferred Plan is expected to generate environmental impacts which are assessed in Section 4. Mitigation measures are recommended in Section 5 to minimize the adverse effects resulting from future development of the Melville-Route 110 Area under the Preferred Plan. Despite mitigation measures recommended for the site-specific and area-wide development of the study are, certain adverse environmental impacts will be unavoidable. These unavoidable adverse effects will result from short-term construction activities and during the long-term operation of the facilities within the study area. Unavoidable adverse environmental impacts are discussed below.

6.1 Unavoidable Adverse Short-Term Environmental Impacts

The future development of the Melville-Route 110 Area under the Preferred Plan will likely generate several short-term adverse impacts at specific development sites and surrounding areas. These impacts will be associated with: site clearing and grading; excavation of foundation areas and detention basins; installation of utilities; construction of roadways; construction of office, commercial industrial, institutional, and residential buildings; and construction of recreational facilities. Although these impacts are considered short-term in nature, they will occur at various locations throughout the study area over the next 20 years at each new construction site.

Those adverse short-term impacts which cannot be fully mitigated are identified below:

- Soils will be disturbed on construction sites by grading, excavation and mounding activities in site construction.

- Temporary increases in soil erosion will also result from construction site operations, and minor amounts of soil will be carried off-site in surface runoff waters.

- On-site vegetation will be removed to allow for building and roadway construction, including grasses, weeds, shrubs and trees.

- Wildlife utilizing sites for construction projects and the immediate adjacent areas will be temporarily displaced by construction activities onto adjacent or remote wooded open space areas. Construction operations will discourage wildlife from feeding or resting at the site or migrating through the site.

- Operation of construction equipment and trucks, and worker vehicles may temporarily impede traffic in the area of the site during construction periods. The various roadway reconstruction projects will adversely affect vehicle movements during the construction period.

- Minor release of air contaminants will occur from construction equipment and worker vehicles during construction periods. Emissions of fugitive dust will occur during dry periods as a result of construction operations. Vehicle delays caused by roadway reconstruction projects will also generate additional exhaust emission during construction periods.

- Slight increases in noise levels will occur during the construction of buildings and roadways in the study area. Noise from construction equipment travelling on roadways will be noticeable during the construction periods.

- Additional Suffolk County Police protection at the various building construction sites may temporarily be required during construction periods to discourage the vandalism of construction materials, equipment, and partially completed structures on sites.

- Construction activities, equipment operations and disturbed lands at development sites and roadway reconstruction projects will be visible during the construction periods.

6.2 Unavoidable Adverse Long-Term Environmental Impacts

Several adverse long-term impacts are likely to be associated with the implementation of the Preferred Plan for development of the Melville-Route 110 Area. Adverse long-term impacts will include: effects on groundwater due to sanitary system effluent, fertilizer application, reduced recharge due to sewering, and road salt application; traffic generated by vehicles from new developments; air resources degraded by automobile emissions; loss of agricultural land from the region.

- The groundwater aquifers underlying the study area will receive small contributions of nitrate and chloride contaminants. These contaminants will be generated from individual septic system and sewage treatment plant effluents, dissolved fertilizer nitrogen and road salt chlorides resulting from seasonal applications to new area roadways. The projected amounts of these contaminants which will be contributed to the underlying groundwater aquifer are considered to be insignificant.

Unavoidable
Traffic

Groundwater quantity will be affected insignificantly by the small reduction of recharge water resulting from sewer system collection from new developments.

- Vehicles added to the study area roadways as a result of the operation of new commercial, office, industrial and residential development will create an adverse effect on traffic flow in the study area. The intersections of Pinelawn Road/LIE North Service Road, Route 110/Old Country Road and Route 110/Pinelawn Road will be affected by the additional vehicle trips added to the roadways by Year 2007. Even with the recommended roadway improvements completed, future traffic conditions will continue to experience delays and occasional periods of oversaturation.

SECTION 7

SECTION 7

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Development of the study area under the Preferred Plan would involve the commitment of resources for agricultural soils, groundwater, vacant/undeveloped lands, farmlands, energy sources and construction materials.

Agricultural Soils

Areas within the study area which are currently utilized for agriculture are generally planned to become developed for low and medium density residential subdivisions. The soils within the lands are considered to be agricultural soils in Suffolk County. Mainly sod and some other vegetable crops are raised on these lands. Development of these lands will preclude their future utilization for crop cultivation. Soils which are suitable for agriculture will be committed to residential development. The impact of development on the geology and soils within the study area is described in Section 4.1.

Groundwater

Water supply for new residential, office and industrial development will place additional demands on the groundwater resources underlying the study area. As described in Section 4.2 and 4.7.3, ground water utilization will be varied according to the type of development. Although there is projected to be adequate quantities of groundwater available, the new development will commit additional water quantities.

Vacant/Undeveloped Lands

Development of the study area as recommended by the preferred plan will commit the few remaining vacant and undeveloped land areas. Farmlands will be committed to residential development in most cases, as described above large wooded parcel along the western boundary of the study area is owned by the Town of Huntington, which is the one major vacant area that will not be developed.

Energy Resources

The use and conservation of energy resources is discussed in Section 9.0. Fuels will be committed by construction vehicles operating during development of the residential areas and office/industrial buildings and roadway construction. Operation of residences, offices and industrial facilities will commit natural gas and electricity reserves. Use of these energy resources is not expected to deplete existing and protected reserves of these fuels and energy sources.

Construction Materials

Development of residences and office/industrial buildings will utilize available construction materials. Roadway construction will also involve commitment of construction materials such as sand and gravel.

SECTION 8

SECTION 8

GROWTH INDUCING ASPECTS

Growth inducement is expected to occur as a result of the implementation of the Preferred Plan for development of the study area. Improvement of utilities such as water supply and sewage collection, along with improvements to the transportation system, will contribute to growth inducing factions. Additional 8,000 to 10,000 residents and 16,000 workers in the study area will increase the demand for support facilities.

Municipal water supply will be extended to service newly developed sections of the study area. The availability of this utility will enhance the potential for new development in areas which are presently vacant or farmland. New residential development is expected to be encouraged by the availability of water supply. New sites for office/industrial facilities are, in most cases, located along roadways presently serviced with public water.

Sewage collection in the newly created Melville Industrial District (MISD) will be extended to service most newly developed office/industrial facilities in the area south of the LIE. The MISD may be extended northward to service residential developments to be constructed on land which is presently farm fields. Extension of the sewer system is considered to be a potential growth inducing factor.

The transportation system that presently services the study area is the limiting factor to new growth of office/industrial facilities and residential development. Improvements to the system that have been proposed will increase the capacity for vehicles and trucks, allowing new growth to occur. Transportation improvements will enhance growth throughout the study area.

Growth inducement of commercial services is expected to occur in the study area due to the increases in the residential and worker population. Support facilities such as new retail and service businesses are likely to be introduced to the community to service this increased population.

Growth of the residential population in the study area may induce the growth of community services necessary to service this expanded population. The educational services requirements of this new population may require expansion of school facilities to accomodate the expected 1515 new school children added to the Half Hollow Hills Central School District. It should be noted, however, that residential development in the sand mine property may not take place for decades. Therefore, expansion of the school facilities due to the Preferred Plan will not be required within the foreseeable future. Additional fire fighting capabilities and ambulance service will also be required to serve the 3,100 new dwelling units. The area will also require additional police protection services.

SECTION 9

SECTION 9

EFFECTS ON THE USE AND CONSERVATION OF ENERGY RESOURCES

Energy usage will increase in the study area as a result of implementation of the Preferred Plan. Expanded development of residential, office and light industrial buildings and their subsequent operation, will increase the utilization of natural gas, fuel oil and electricity, as compared to present levels of utilization. Energy resources such as gasoline and diesel fuel will also be expended during the construction of new facilities in the study area. The increased development and improvement of roadways will also expend energy resources during their construction. Expanded vehicle utilization as a result of development in the study area will increase gasoline and diesel fuel consumption. Use of these energy sources is not expected to create an unusual burden upon local and regional reserves of these resources.

The development of the study area will also include measures to conserve energy. Projects that will be designed should include an energyefficient layout, especially for multi-family residential projects where residences could take advantage of common walls. Wherever possible, the use of insulation and other measures specified in the New York State Energy Conservation Construction Code to reduce fuel consumption in buildings.

Highway improvements which are proposed for the study area are expected to reduce delays in vehicle movements. These improvements will result in some conservation of gasoline and diesel fuels.

SECTION 10

SECTION 10

ALTERNATIVES

Several alternative future development scenarios were evaluated in the formulation of the Preferred Plan for development of the Melville-Route 110 Area. A future road system was established to evaluate each of the alternative future development scenarios. These included both planned improvements (Nassau-Suffolk Transportation Improvement Program - TIP) and other additional recommended roadway improvements. Land use actions to reduce vehicular movements were also considered in the evaluation of alternative plans, including: replanning office/industrial areas for residential use; limiting new non-residential land use to industrial development; establishing a maximum Floor Area Ratio (FAR) to limit development density; and allow other non-residential uses which generate less traffic, such as retail, service and hotel uses.

Three alternative development scenarios were formulated. One of these plans was selected as the Preferred Plan for future development of the study area and is described in Section 3. The two alternative plans were determined to be infeasible plans for future development of the study area based on the evaluation described in this section. The first alternative plan would establish a total ban on all future non-residential developments beyond committed projects as of Year 1992. A second alternative plan represents the no action alternative, which would allow future development of the study area following the minimum average density that would be likely to occur under present trends, approximately FAR 0.35. An evaluation of these two alternative future development plans is described in this section, including a comparison of their environmental impacts relative to the Preferred Plan.

10.1 Plan Based on No Further Non-Residential Development

Survey and analyses of the traffic conditions indicated that the areas' roadway system presently cannot accommodate the traffic flow at an acceptable level. Development projects that are presently under construction, have been approved or vacant buildings will add approximately two million square feet of non-residential floor space to the building inventory of the study area. This increase of nearly 20 percent in the non-residential floor space will lead to a further deterioration of traffic flow. Levels of service which are already at unacceptable levels will continue to be so, even with planned TIP improvements. For this reason, no further non-residential development would be allowed in this alternative scheme. In addition, all undeveloped land would be allocated for low density residential use. This alternative plan is based on no additional non-residential development and new residential development at low densities, and is a reasonable solution for the short term. However, this plan is unreasonable for long term planning of future development in the study area. It does not provide for existing market pressures, Comprehensive Plan objectives, future area needs, and unfairly limits future land use. As such, it is not based on sound land use planning principles.

10.1.1 Geology and Topography

This alternative plan would create less adverse effects on soils and topography than the Preferred Plan because less development would occur. There will be fewer new residences and office/industrial buildings constructed in the study area under this plan.

10.1.2 Water Resources

Groundwater quality would be affected by sanitary system effluent, fertilizer application and roadway salt application. The amount of nitrates and chlorides added to the groundwater underlying the study area would be less under this plan, as compared to the Preferred Plan. Both plans would be expected to contribute insignificant amounts of these contaminants to groundwater. Groundwater recharge is also reduced by a minimal amount due to sewering under this alternative.

10.1.3 Terrestrial Ecology

Since only low density residential projects would be developed under this plan large areas of existing vegetation and habitat would be retained. As such, impacts on the terrestrial ecology would be minimal and less than that associated with the Preferred Plan.

10.1.4 Transportation and Traffic

A five year time period was established as a reasonable time frame to evaluate the impact of current (as of October 1986) development, either under construction or proposed. This time frame was agreed to by the Town of Huntington and the Year 1992 was set as the year of study. The traffic generated by this plan was established by utilizing the trip rates, described in Section 4.4. The distribution of these trips was assumed to be the same as previously developed, and are as follows: 18 percent from the West; 8 percent from the North; 35 percent from the East; and 39 percent from the South. These "overall" percentages were refined for specific sites to reflect shifts in location within the study area itself.

Project sites either under construction, proposed or vacant with future plans, were obtained from the Town of Huntington at the initiation of this study in October 1986. The project sites considered for the analysis of future traffic volumes include:

1.	Long Island Savings Bank	134,705 SF office, bldg. addition
2.	Citicorp Headquarters	30,443 SF office, 2nd floor expansion
3.	Osiecki and Fine	89,000 SF office, proposed bldg.
4.	Omni Development	433,000 SF office, 360 room hotel, proposed complex
5.	HMCC/Reckson	163,000 SF office, proposed bldg.
6.	G.E. Building	98,500 SF office conversion from 43,600 SF industry
7.	Hewlett Packard	57,604 SF office, proposed bldg.
8.	NEC	120,000 SF office, proposed bldg.
9.	Greenway Plaza	203,754 SF office, proposed 2 bldg.
10.	In-Law Realty	105,000 SF office, proposed bldg.
11.	International Components	30,546 SF industrial expansion of existing building
12.	Estee Lauder	175,000 SF office, proposed bldg.
13.	Zirinsky Building	89,000 SF office, proposed bldg.
14.	N.A. TRAD	18,000 SF industry, expansion of existing building
15.	Royce-Carlin Hotel	308 room hotel, under construction
16.	Marchon Eye Ware	55,500 SF industry, proposed bldg.
17.	U.S. Post Office	175,090 SF industry, proposed bldg. expansion
18.	Racanelli Associates	48,000 SF office, proposed bldg.
19.	HMCC	165,500 SF office, proposed bldg.
20.	HMCC	149,840 SF office, proposed bldg.

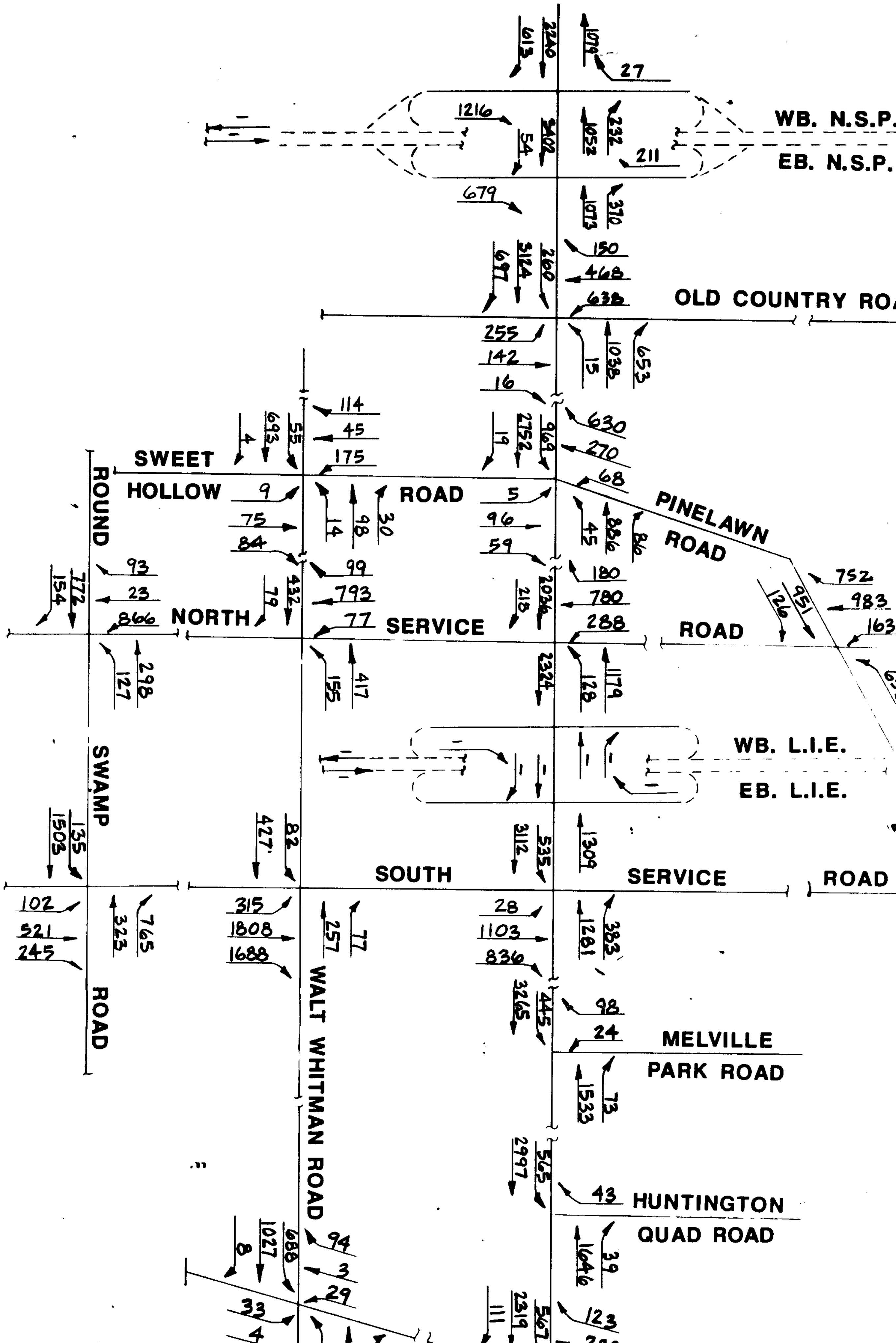
21. Reckson	357,000 SF office, proposed bldg.
22. BDG Ruland Associates	20,000 SF office, proposed bldg.
23. Newsday	211,000 SF industry, expansion of existing building
24. Belwin Mills	187,000 SF office conversion from 187,000 SF industry
Residential Developments	Various locations within the study area

If all the above developments were fully occupied by 1992, the analysis year, traffic generated by these developments to and from the study area would be:

AM PEAK Vehicle Trips		PM PEAK Vehicle Trips	
Entering	Exiting	Entering	Exiting
5,900	1,100	1,500	5,600

The total traffic volume for year 1992, AM and PM peak hours is presented on Figures 10-1 and 10-2. These figures present the total traffic generated by the above listed site developments plus local and regional traffic growth within the study area. Generally, Route 110 would receive the largest increase in traffic because it functions as a main artery. Traffic volume along Route 110 would rise to approximately 3,000 to 3,500 VEH/hr/approach during both the AM and PM peak hours.

Several traffic impact analyses were performed to accurately define the related traffic impact from this alternative. The key roadways and intersections examined in this analysis are the same as those considered in Section 2.4 of this report. Initially, the existing roadway system was analyzed to determine if it would adequately accommodate the projected



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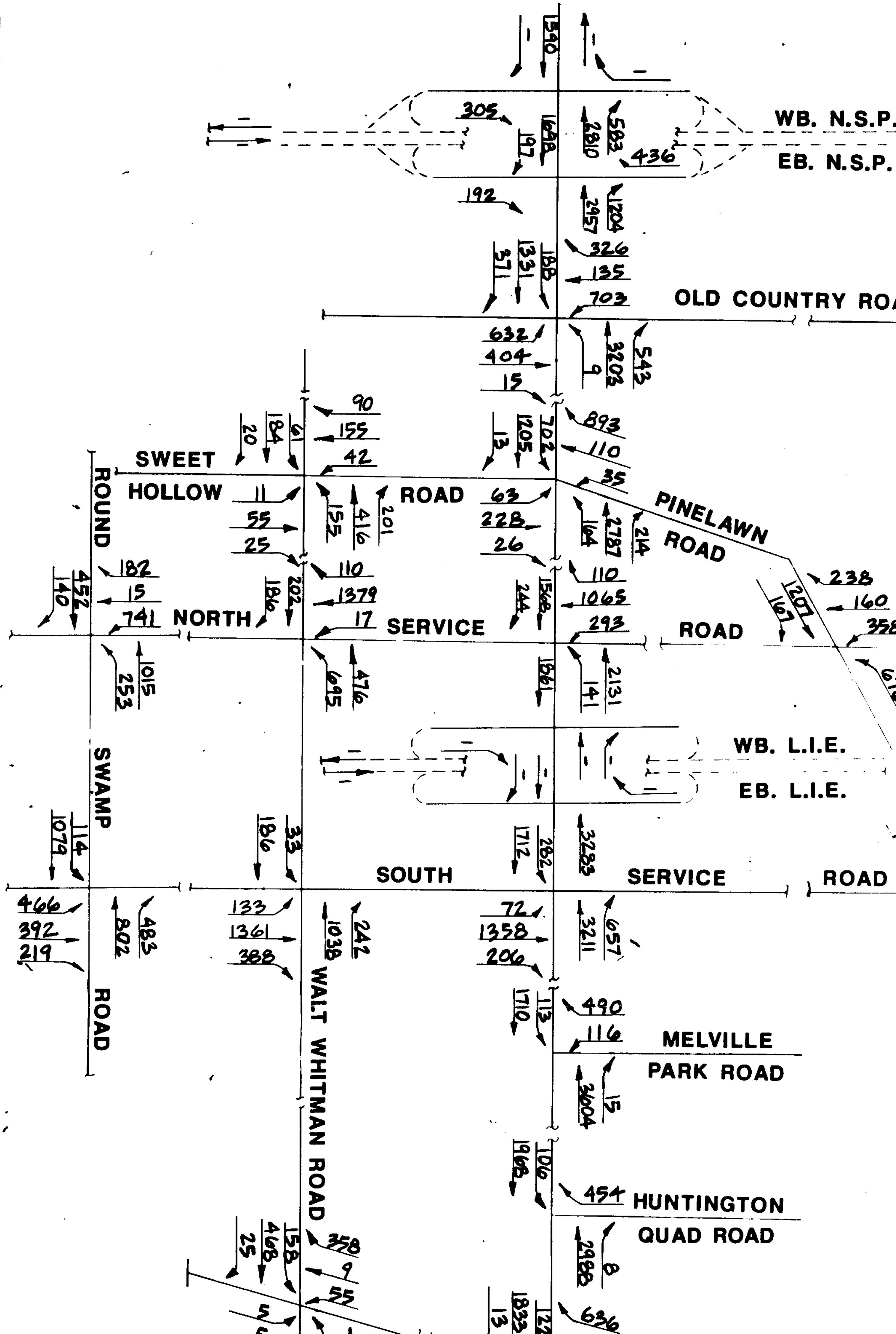

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increase in traffic volume. The analysis showed that 75 percent of the intersections studied would deteriorate from their existing Level of Service (LOS). Generally, every intersection along Route 110 will be operating at a poor level of service (LOS F) in the year 1992 without roadway improvements. Several intersections along Pinelawn Road and Walt Whitman Road would also be operating at a poor level of service (LOS E or worse).

A second analysis utilizing a roadway network that included the planned TIP improvements, as described in Section 4.4, was also carried out for this plan. The projected year 1992 traffic volume was re-analyzed with these improvements in place. The results showed that more than one half of the intersections studied will be improved by the TIP projects. The level of service results for this analysis are shown in Table 10-1.

The results indicate that due to the large increase in volume generated by the above listed development projects, the planned roadway improvements (TIP) would not be satisfactory to accommodate the traffic. Of the 11 intersections affected by roadway improvements, approximately 60 percent would be operating at LOS F. The intersections at Ruland Road/Maxess Road (LOS D), Old Country Road/New York Avenue (LOS C), and Walt Whitman Road/Baylis Road (LOS C) would be operating at acceptable levels of service.

10.1.5 Air Resources

Under this alternative no commercial or industrial growth would occur after 1992. Since the traffic volumes for this alternative are less than those for the Preferred Plan, the resulting carbon monoxide (CO) levels would also be less. Generally, the difference in the CO levels between this alternative and the Preferred Plan would be in approximate proportion to the

TABLE 10-1

LEVEL OF SERVICE

Plan Based on No Further Non-residential Development

Intersection		Existing 1987 AM	Existing 1987 MD	Existing 1987 PM	Development 1992* AM	Development 1992* PM
1	Rt. 110/Ruland Rd.	C	B	C	F	F
2	Rt. 110/Spagnoli Rd.	D	D	D	E	F
3	Rt. 110/Duryea Rd.	C	C	D	F	F
4	Rt. 110/Baylis Rd.	D	D	E	F	F
5	Rt. 110/Hunt. Quad.	C	B	C	C	C
6	Rt. 110/Melville Pk.Rd.	C	C	E	F	F
7	Rt. 110/S.Ser.Rd.(LIE)	D	B	E	F	F
8	Rt. 110/N.Ser.Rd.(LIE)	C	C	C	F	F
9	Rt. 110/Pinelawn Rd.	D	E	F	F	F
10	Rt. 110/O.Ctry. Rd.	D	D	F	F	F
11	Ruland Rd/Republic Rd.	D	-	F	-	-
12	Ruland Rd/Maxess Rd.	C	-	D	C	D
13	Pinelawn/Colonial Spgs.	D	-	F	F	F
14	Pinelawn/Half Hollow	D	-	D	F	F
15	Pinelawn/S.Ser.Rd.(LIE)	C	-	F	F	F
16	Pinelawn/N.Ser.Rd.(LIE)	F	-	B	F	F
17	Old Ctry.Rd/N.Y. Ave.	F	-	F	C	C
18	Walt Whit/Baylis	D	-	D	C	C
19	Walt Whit/S.Ser.Rd.	C	-	E	F	D
20	Walt Whit/N.Ser.Rd.	B	-	D	C	F
21	Walt Whit/Swt.Hollow	B	-	D	B	B
22	Rnd.Swp.Rd/S.Ser.Rd(LIE)	E	-	D	F	F
23	Rnd.Swp.Rd/N.Ser.Rd(LIE)	D	-	D	F	F

* 1992 Development Yr. - Proposed, Under Construction or Vacant (as of Oct.'86)
Highway Network - Existing Road Network Plus Proposed TIP Improvements

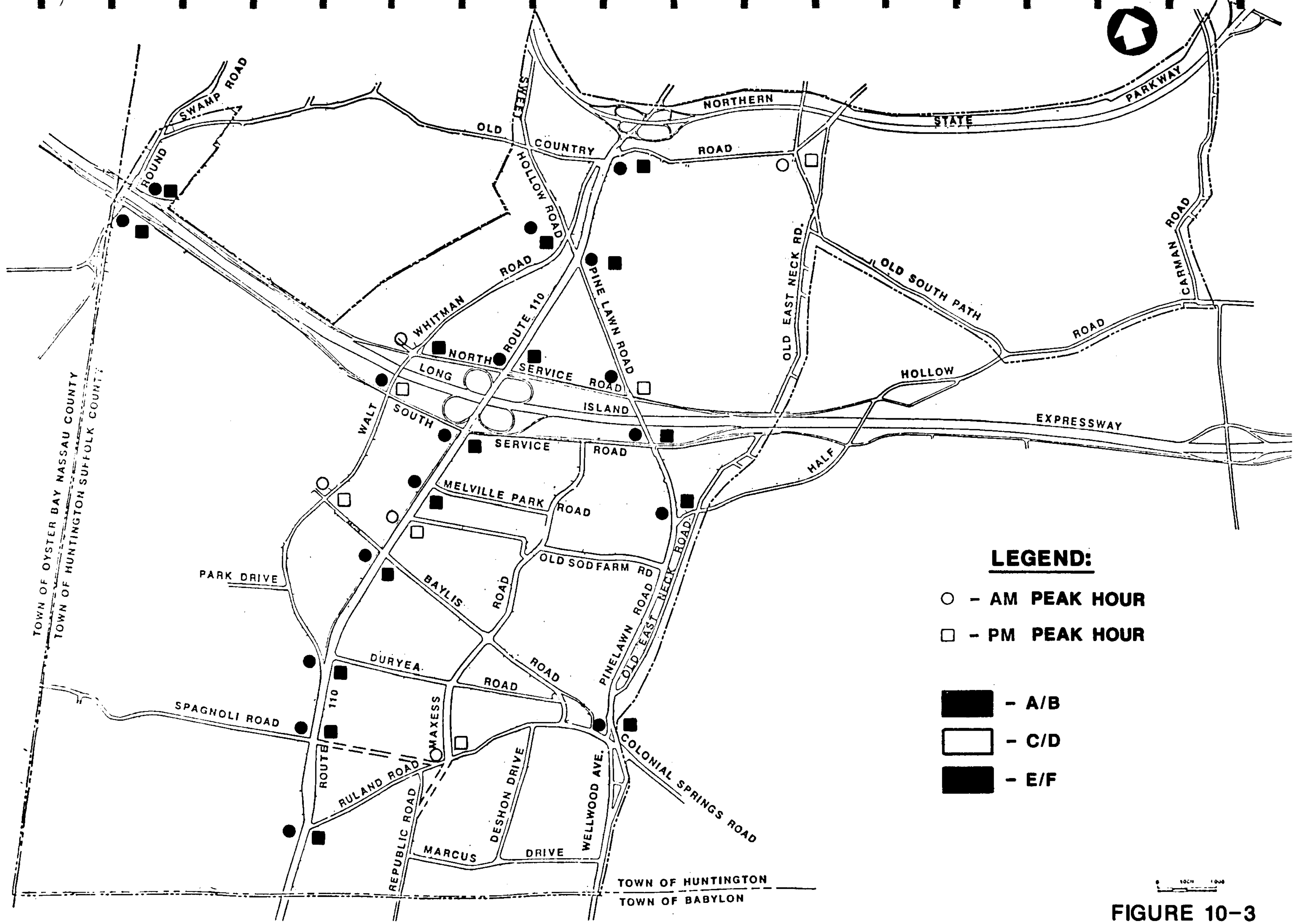

FIGURE 10-3

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LEVEL OF SERVICE - NO FURTHER DEVELOPMENT PLAN 1992 YR. W/TIP IMPROVEMENTS

difference in traffic volume. The Preferred Plan would not have a significant impact on air quality, therefore, this alternative would also not have a significant impact on air quality.

10.1.6 Noise

As demonstrated in Section 4.6, noise levels change with respect to traffic volume, but a large change in traffic volume results in a relatively small change in noise levels. There is not a significant change expected in noise levels between existing conditions and those under the Preferred Plan. Noise levels for this alternative would be between existing levels and future levels generated by the Preferred Plan.

10.1.7 Utility Systems

Water, wastewater, electrical, gas and communications utilities can adequately support this alternative. Utilizing the water supply rates discussed in Section 2.7.3, and the square footages from Tables 2-10 and 2-11, it is estimated that a water supply rate of approximately 2.6 mgd would be required for the study area. This would be substantially less than that required for the Preferred Plan (3.85 mgd). Since the SHWD has planned for future development in the area by installing several 12-inch water mains, and has anticipated adding two wells to serve the Melville area (H2M, May 1982), adequate water supply would be available. Less water would be utilized under this alternative plan.

The Melville Industrial Sewer District (MISD) would accommodate the anticipated 1.7 mgd of wastewater flow from the study area. Approximately 2.6 mgd has been alloted by the Suffolk County Sewer Agency (SCSA) for the MISD. This wastewater generation rate would be lower than the 2.7 mgd generated by development under the Preferred Plan. The loss of water due to sewering was checked against the total permissive sustained yield (psy) of the project area. The natural recharge of this area is 3.8 mgd. Artificial recharge would occur through the recharge of air conditioning and lawn irrigation waters. Assuming that 20 percent of the water supplied is consumed (0.5 mgd), and that the 1.7 mgd sewage flow is lost, the total water loss for the study area would be 2.2 mgd. The amount of water that would be artificially recharged would be 0.4 mgd (difference between water supplled and water lost from system, 2.2 mgd). The total psy for the study area would be 4.2 mgd (natural recharge, 3.8 mgd plus artificial recharge, .4 mgd). Since the loss of water from the study area (2.2 mgd) is less than the psy (4.2 mgd), sewering would not adversely affect the quantity of water in the study area under this alternative plan.

Solid waste generation would increase under this plan, primarily as a result of an increase in paper usage at new office and industrial buildings. Utilizing the solid waste generation rates described in Section 2.7.4, it is estimated that 66 tons of solid waste would be generated in the study area daily. This would represent approximately 11 percent of the waste stream and would be accommodated by the Resource Recovery Facility. The amount of paper generated by the Preferred Plan is approximately 100 tons per day. In addition, because recycling is mandated as part of the Town's solid waste disposal efforts, the waste load would be substantially decreased by office paper recycling.

Electricity supply and natural gas supply would be adequate for development of the study area under this alternative. Less electricity and gas would be utilized than that which would be utilized under the Preferred Plan. Regarding electrical supply, LILCO has scheduled the expansion of the Ruland Road station in 1988 to accommodate increased electrical demands. The gas supply in the area is also plentiful since transmission mains and regulator stations are within the area, and no customer has been refused over the past 5 to 10 years (Rickbrand, LILCO, November 6, 1987). The communications improvements previously discussed in 2.7.2 would also accommodate the growth under this alternative.

10.1.8 Land Use and Zoning

No further non-residential development would be allowed under this alternative plan. All presently undeveloped land in the study area would be allocated for low density residential use. Development of residences on lots of one acre in area would occur, which would be a less intensive type of residential development than recommended under the Preferred Plan. Commercial, office and industrial development in the study area would only occur to Year 1992. This plan for land use would unfairly limit the future use of lands which are presently zoned for commercial, office or industrial development. This plan does not follow the Comprehensive Plan of 1966. In addition, the current housing shortage would continue under this alternative plan.

10.1.9 Demography

This alternative plan would result in the construction of 450 additional dwelling units. Assuming an occupancy rate of 3.6 residents per dwelling unit, the population increase would be 1620 people. The projected increase in school age children would be 381 people, as shown in Table 4-4. This increase in the population would be approximately 15 to 20 percent of the population increse expected under the Preferred Plan.

10.1.10 Economics

Property taxes generated by development resulting from implementation of this alternative plan are shown in Table 10-2. The amount of tax revenues generated by this alternative would be significantly less than those tax revenues which are expected to be generated by development under the Preferred Plan.

10.1.11 Market Conditions

This alternative plan would eliminate the market for office, commercial and industrial property due to the ban on non-residential development. The residential property market would be substantially improved because it would be the only type of development allowed in the study area. The actual value of buildable residential lots would rise because only one acre lot areas would be allowed under low density residential areas.

10.1.12 Community Facilities and Services

The alternative plan for development will place some new demands on community services such as fire protection, ambulance service, police protection, schools, libraries, recreational facilities, and hospitals. Some additional service would be required for fire and police protection, ambulance service and hospitals, however, no new facilities would be required. The increase in school children would be accommodated by existing educational facilities. Expansion of library facilities is presently needed and would be required for this alternative plan. New recreational facilities would have to be developed to support new residential developments.

TABLE 10-2

Projected Increased Yearly Property Taxes
Plan Based on No Further
Non-Residential Development
(Based on 1987 Tax Rates)

School District	$ 5,700,000
Library District	200,000
County	800,000
Town	400,000
County Police District	1,500,000
Highway	500,000
Fire District	300,000
Light District	100,000
Refuse District	300,000
Water and Wastewater Districts	200,000
TOTAL	$ 10,000,000

10.1.13 Visual Resources

Development of the study area under the alternative plan would create some affects on visual quality, mainly during construction periods. Low density residential developments would be more aesthetically pleasing than the higher density development planned under the Preferred Plan. No new office or industrial facilities would be constructed after 1992. Therefore, no new buildings would enter the visual character of the area.

10.1.14 Historic and Archeological Resources

The alternative plan would not affect historic and archeological resources as greatly as is expected to result from development under the Preferred Plan. Historic structures on land presently zoned for office/industrial development would only be utilized for residential development. It is likely that more historic structures would be preserved under this plan.

The low density residential development of presently undeveloped areas of the study area under this alternative plan would cause fewer excavations in areas where archeological resources exist. Fewer archeological resources would be disturbed under this plan, however, disturbance of these resources is also not expected to be significant for the Preferred Plan.

10.2 Plan Based on the Recent Trends in Development: No-Action (FAR 0.35)

The Trend Plan is based on the assumption that land use development of the study area will continue according to the guidelines of the 1966 Comprehensive Plan, using the standards of the existing zoning ordinance that has no Floor Area Ratio restrictions. If development is allowed to continue according to the Comprehensive Plan, the office/industrial center is expected to develop to an average Floor Area Ratio of at least 0.35, resulting in an increase of 11.7 million square feet and a total non-residential development of more than 23 million square feet. Most of the new developments would consist of offices and many existing industrial buildings would be converted to office use. The environmental impacts resulting from the implementation of the Trend Plan are described below, along with a comparison to the Preferred Plan.

10.2.1 Geology and Topography

The overall impacts on soil and topography resulting from development of the study area to a FAR 0.35 would be slightly greater than those effects predicted to result from the Preferred Plan. Under the Trend Plan, there would be an increase in office and industrial development and a decrease in commercial and residential units relative to the Preferred Plan. The Trend Plan would generally involve more extensive grading to develop larger office and industrial buildings. The number of residential units constructed under the Trend Plan would be less, which could possibly result in fewer foundation excavations and subsequent soil erosion.

10.2.2 Water Resources

The impact on water resources would be less for the Trend Plan than that resulting from development under the Preferred Plan. There would be fewer residential units constructed under the Trend Plan, and the potential impacts from nitrates produced by individual septic systems leachate would be less. The increase in office and industrial units will would also reduce the potential impacts from nitrogen loading due to the provisions in Article 6 (Section 605, Regulation 82) requiring that this type of development provide treatment for removal of nitrates, if the density equivalent of these properties exceeds comparable allowable residential densities. The potential nitrogen loading impacts from fertilizer will be relatively similar for the Trend Plan because the amount of lawn area resulting from the development of residences and commercial, office and industrial buildings is expected to be nearly equivalent.

There would be a slight increase of chloride loading to groundwater under the Trend Plan, because there is a proposed 10 percent increase in road surface for development at FAR 0.35. This increase in chloride from road salting would be minimal, and not represent a significant deterioration in groundwater quality.

There would be the potential for impacts of organic contaminants introduced into the groundwater from leaking underground pipelines and fuel storage tanks to increase. Non-residential buildings use and store greater amounts of fuel for energy uses, and the number of non-residential buildings would be greatest under this plan. There would be additional potential for leaking underground pipes and tanks under this plan.

10.2.3 Terrestrial Ecology

Implementation of the Trend Plan would create a reduction in existing vegetation and wildlife habitat areas. This impact on ecology factors would be approximately the same as expected to result from the implementation of the Preferred Plan. Less dense residential development expected under the Trend Plan could preserve slightly greater amounts of existing vegetation areas.

10.2.4 Transportation and Traffic

The Trend Plan (FAR 0.35) identifies blocks (Blocks 1 thru 8) within the study area to be developed into office, light industry, or residential land uses. For analysis purposes, it was assumed that this development would occur over the next 20 years.

Traffic Characteristics

The traffic that would be generated by this development was established using similar trip generation rates as described in Section 4.4. The cumulative effect on traffic that would result from this additional development, beyond that which was considered for Year 1992 would be an increase of approximately 9,400 AM peak hour vehicle trips and 9,000 PM peak hour vehicle trips entering and exiting the study area.

	AM Peak Vehicle Trips		PM Peak Vehicle Trips	
	Entering	Existing	Entering	Exiting
1992 Sites	5,900	1,100	1,500	5,600
Trend Plan	9,400	1,900	2,900	9,000
Total Study Area	15,300	3,000	4,400	14,600

These vehicle trips were similarly distributed over the study area road network. It was assumed that the directional distribution percentages would remain constant over time. General assumptions for access points within each block were made to complete the trip distributions.

Roadway Characteristics

The roadway network assumed for the evaluation of the Trend Plan includes the existing system, the TIP improvements and the maximum roadway improvements that could be implemented by Year 2007. This system would include several major roadway upgradings, as described in Section 4.4, such as:

- Reconstruction of Route 110 Ruland Road to Northern State Parkway to eight lanes throughout the study area;
- Reconstruction of Pinelawn Road to six lanes between Colonial Springs Road and Route 110;
- Reconstruction of Walt Whitman Road to six lanes between Duryea Road and the Long Island Expressway;
- Reconstruction of "New" Ruland Road consisting of six lanes from Pinelawn Road to Route 110;
- Reconstruction of Spagnoli Road to six lanes between the Nassau County line to Route 110;
- Reconstruction of Baylis Road to four lanes between Route 110 to Walt Whitman Road; and
- Reconstruction of the Long Island Expressway North Service Road and South Service Road to three lanes between Round Swamp Road to Old East Neck Road.

These additional improvements would provide for a network upgrading for the entire study area. This network was used for analysis purposes to test the maximum capabilities for handling the traffic that would be generated by development under the Trend Plan.

Impact Analysis

Analysis of the Trend Plan (Year 2007) over the assumed network indicated that traffic conditions in the study area would become intolerable. The single approach volumes for several intersections along Route 110 would be approximately 4,000 to 5,000 vehicle/hr/approach during the peak hours. The level of service for 90 percent of the intersections along Route 110 would become LOS F for both the AM and PM peak hours. Similarly, Pinelawn Road and Old Walt Whitman Road intersections would be operating above capacity. The calculated level of service for each key intersection is presented in Table 10-3.

10.2.5 Air Resources

The air quality impact of development under the Trend Plan alternative would be slightly higher than that for the Preferred Plan, due to the higher FAR and resulting increased traffic generated. The eight-hour CO levels for this alternative would possible approach the ambient standard of 9 ppm.

10.2.6 Noise

Noise levels for this alternative would be only slightly higher than those for the Preferred Plan. Therefore, the noise impact of this alternative can be considered equivalent to that expected to result from implementation of the Preferred Plan.

TABLE 10-3
LEVEL OF SERVICE

Plan Based on Recent Trends (FAR .35)

Inter-Section		Existing 1987 AM	Existing 1987 PM	Development 1992 AM	Development 1992 PM	Trend 2007* AM	Trend 2007* PM
1	Rt. 110/Ruland Rd.	C	C	F	F	E	F
2	Rt. 110/Spagnoli Rd.	D	D	E	F	F	F
3	Rt. 110/Duryea Rd.	C	D	F	F	F	F
4	Rt. 110/Baylis Rd.	D	E	F	F	F	F
5	Rt. 110/Hunt. Quad.	C	C	C	C	B	C
6	Rt. 110/Melville Pk.Rd.	C	E	F	F	F	F
7	Rt. 110/S.Ser.Rd.(LIE)	D	E	F	F	F	F
8	Rt. 110/N.Ser.Rd.(LIE)	C	C	F	F	E	F
9	Rt. 110/Pinelawn Rd.	D	F	F	F	F	F
10	Rt. 110/O.Ctry. Rd.	D	F	F	F	F	F
11	Ruland Rd/Republic Rd.	D	F	-	-	-	-
12	Ruland Rd/Maxess Rd.	C	D	C	D	D	D
13	Pinelawn/Colonial Spgs.	D	F	F	F	D	E
14	Pinelawn/Half Hollow	D	D	F	F	F	F
15	Pinelawn/S.Ser.Rd.(LIE)	C	F	F	F	F	F
16	Pinelawn/N.Ser.Rd.(LIE)	F	B	F	F	F	F
17	Old Ctry.Rd/N.Y. Ave.	F	F	C	C	C	C
18	Walt Whit/Baylis	D	D	C	C	D	D
19	Walt Whit/S.Ser.Rd.	C	E	F	D	D	F
20	Walt Whit/N.Ser.Rd.	B	D	C	F	D	F
21	Walt Whit/Swt.Hollow	B	D	B	B	C	B
22	Rnd.Swp.Rd/S.Ser.Rd(LIE)	E	D	F	F	F	F
23	Rnd.Swp.Rd/N.Ser.Rd(LIE)	D	D	F	F	F	F

* 2007 Development Year - Non-residential @ FAR .35
Highway Network - Existing Road Network, Proposed TIP Improvements and Maximum Improvements

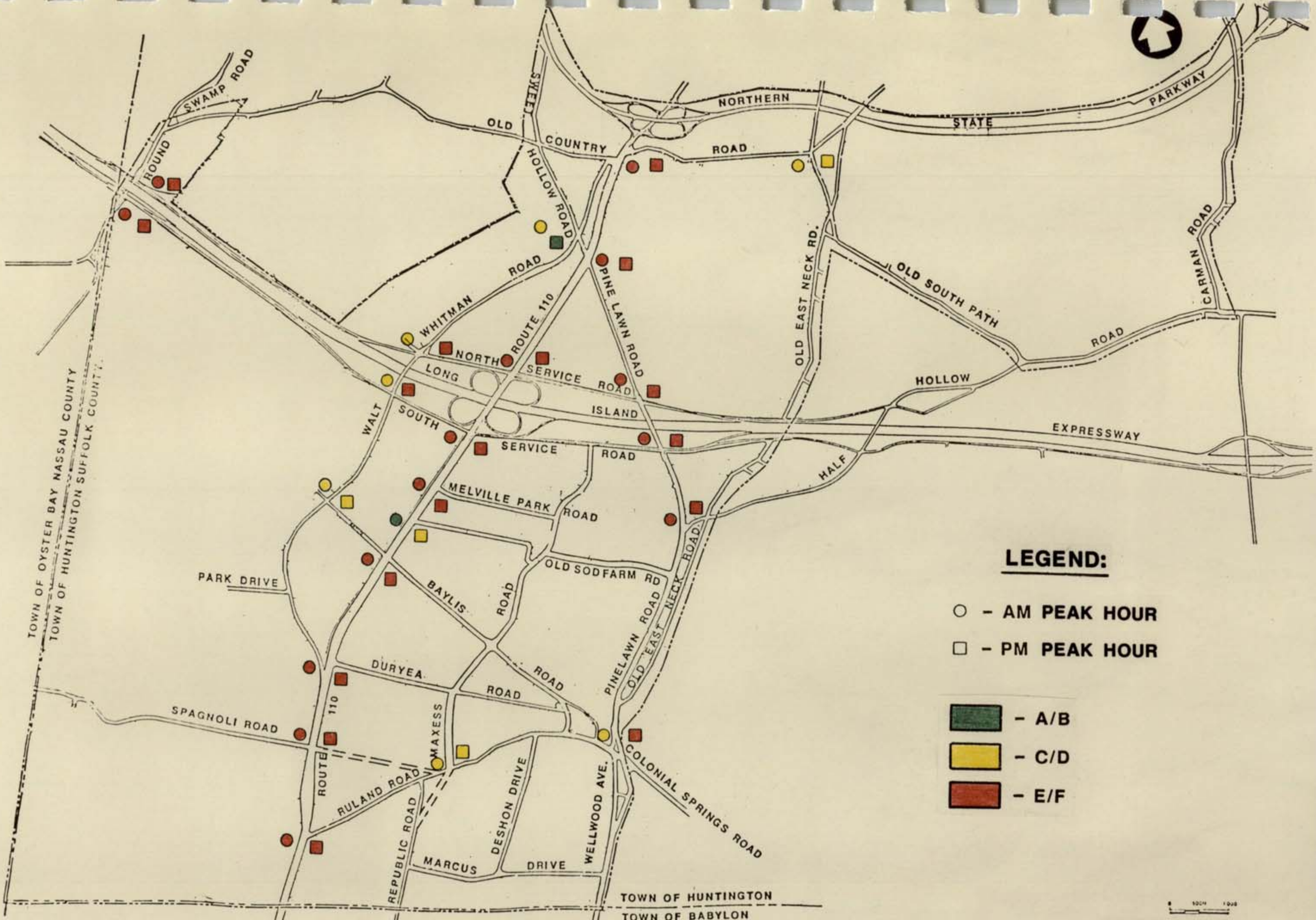

FIGURE 10-4

LKB/RPPW INC

LEVEL OF SERVICE - TREND PLAN (FAR .35)
2007 YR. W/MAXIMUM ROAD IMPROVEMENTS

10.2.7 Utility Systems

Electrical, gas and communications utilities would adequately support the Trend Plan alternative. Water and wastewater utilities would accommodate this level of development provided that the recommended mitigating measures are instituted. Utilizing the water supply rates discussed in Section 2.7.3, and the square footages listed in Table 10-4, it is estimated that approximately 4.05 mgd would be required to support the study area. This is slightly higher than the water supply required under the Preferred Plan (3.85 mgd). Since the South Huntington Water District has planned for future development in the area by installing several 12-inch water mains, and has anticipated adding two wells to serve the Melville area (H2M, May 1982), adequate water supply would be available. Small water use restrictions to limit sewage generation, as discussed in Section 5.7 would be implemented under the Trend Plan.

Utilizing wastewater generation rates from Section 2.7.1, and square footages listed in Table 10-4, approximately 2.72 mgd of wastewater would be generated by development resulting from the Trend Plan. This rate would be equivalent to the wastewater generated by the development under the Preferred Plan. Since 2.6 mgd was allotted by the Suffolk County Sewer Agency for the Melville Industrial Sewer District, similar mitigating measures discussed for the Preferred Plan would need to be implemented. Applying the same water loss and total permissive substained yield (psy) calculation procedures discussed in 4.7 to this scenario, the total water loss for the project area due to sewering would be 3.53 mgd, and the total psy for the project area would be 4.32 mgd. Therefore, sewering would not adversely affect the quantity of water in the project area under the Trend Plan.

TABLE 10-4

PLAN PROJECTION VS. USE

Land Use	Existing	Preferred (.30 FAR)	No Further Non-Residental Development	Trend (.35 FAR)
*Office	5,336,000	8,336,000	7,856,000	11,326,000
Industrial	5,514,000	7,714,000	5,773,000	11,068,000
Commercial	450,000	950,000	775,000	606,000
TOTAL FT^2	11,300,000	17,000,000	14,404,000	23,000,000
Residential	1,900 pers.	11,200 pers.	3,500 pers.	3,900 pers.

* All building ft^2 rounded to nearest 1,000.
All pers. rounded to nearest 100.

Solid waste generation would increase as a result of development under the Trend Plan, primarily as a result of paper usage in new office and industrial buildings. Utilizing the solid waste generation rates described in Section 2.7.4, it is estimated that 100 tons per day will be generated. Under the Trend Plan, solid waste generation would be equivalent to the Preferred Plan. This represents approximately 17 percent of the waste stream and would be accommodated by the Resource Recovery Facility. In addition, recycling is mandated as part of the Town's solid waste disposal efforts, and the waste load would be substantially decreased by office paper recycling.

Electricity and natural gas supply would accommodate development under the Trend Plan. Approximately similar consumption rates would occur, as compared to the Preferred Plan. Regarding electrical supply, LILCO has scheduled the expansion of the Ruland Road station in 1988 to accommodate increased electrical demands. The gas supply in the area is also plentiful since transmission mains and regulator stations are within the area, and no customer has been refused over the past 5 to 10 years (Rickbrand, LILCO, November 6, 1987). The communications improvements, previously discussed in 2.7.2, would also accommodate the growth under this alternative.

10.2.8 Land Use and Zoning

Development of the study are under the Trend Plan assumes that future land use would occur according to the guidelines set forth in the 1966 Comprehensive Plan. The standards of the existing zoning ordinance has no Floor Area Ratio restrictions, therefore, future development would follow current trends at FAR 0.35. The increase in floor space would be 11.7 million square feet, with a study area total of over 23 million square feet. It is also estimated that approximately 600 additional dwelling units would be constructed, including 410 single family homes and 200 town houses.

Conceptually, the land use pattern of the Trend Plan would not be unreasonable. Considering the increase in office/industrial floor space, however, the development would place an undue burden on the study area infrastructure. The Trend Plan has the additional disadvantage because it would create a great imbalance between the amount of non-residential and residential development in the study area.

10.2.9 Demography

Implementation of the Trend Plan would result in the construction of approximately 600 additional dwelling units, including 400 single family homes and 200 town houses. Assuming an average occupancy of 3.4 people per dwelling unit, the population increase would be 2,040 people. An additional 415 school age children would result from this residential development, as shown in Table 4-7. This increase in the population would represent approximately 20 to 25 percent of the population increase expected under the Preferred Plan.

10.2.10 Economics

Property taxes generated by the development resulting from implementation of the Trend Plan are shown in Table 10-5. The amount of tax revenues generated by this alternative would be slightly greater than those tax revenues which are expected to be generated by development under the Preferred Plan.

TABLE 10-5

Projected Increased Yearly Property Taxes
Plan Based on Recent Trends
(Based on 1987 Tax Rates)

School District	$ 23,940,000
Library District	840,000
County	3,360,000
Town	1,680,000
County Police District	6,300,000
Highway	2,100,000
Fire District	1,260,000
Light District	420,000
Refuse District	1,260,000
Water and Wastewater Districts	840,000
TOTAL	$ 42,000,000

10.2.11 Market Conditions

Property to be developed for office, commercial and light industrial uses would be valued highly under the implemented Trend Plan. Future development would generally proceed following current trends, property values would consistently rise for residential land uses as well. Occupancy of light industrial space would continue to decline, as expected under the Preferred Plan, as businesses continue to seek less expensive industrial space.

10.2.12 Community Facilities and Services

Under the Trend Plan development, new demands would be placed on community services. Additional services would be required similarly to the development under the Preferred Plan. Expanded service for fire and police protection and ambulance services would be required. Additional library services would be required. The school system would be able to accommodate the additional 415 school children. New recreational facilities would also be required to be developed within the new residential area.

10.2.13 Visual Resources

Development of the study area under the Trend Plan would create slightly greater visual impacts than expected to result under the Preferred Plan. Construction activity would be visible throughout the future development period. More extensive office/industrial development would be less aesthetically pleasing than a balance of residential and office building views, as expected under the Preferred Plan.

10.2.14 Historic and Archeological Resources

Under the Trend Plan, historic and archeological resources would be affected similarly as under the Preferred Plan. The Trend Plan would expand office/industrial development into areas that are planned for residential development under the Preferred Plan. Some historic structures would be eliminated under the Trend Plan, to make way for new office/industrial buildings. Archeological resources would be affected as well, but this effect would not be significant.

TABLE 10-6

Effects of the Preferred Plan and the Alternative Development Plans

	Preferred Plan	Plan Based on No Further Non-Res. Development	Plan Based on Recent Trends
Additional Non-resident Floor Area (sq.ft.)	5,700,000	2,000,000	11,700,000
Additional No. of Dwelling Units	3,100	450	600
Additional No. of Jobs	16,000	6,600	40,000
Additional No. of Residents	9,300	1,620	2,040
Additional No. of School Children (K-12)	1,515	381	415
Additional Property Tax Revenues ($)	32,620,000	10,000,000	42,000,000
Additional School Tax Revenues Per School Child ($)	12,273	14,961	57,687
Additional Tax Revenues Other Then School Taxes Per Additional Resident ($)			
Library	70	123	412
County	281	494	1,647
Town	140	247	824
County Police	526	926	3,088
Highway	175	309	1,029
Fire	105	185	618
Light	35	62	206
Refuse	105	185	618
Water & Wastewater	70	123	412
TOTAL	1,507	2,654	8,854

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REFERENCES

Agin, Herb, January 14, 1987.
Telephone Conversation between Herb Agin, Reavan Sutton & Edwards and Marjorie Samuels, RPPW.

Albins, Fred. (Oral Communication) November 6, 1987.
Conversation between Fred Albins, Division Manager Area Planning, LILCO and Paul Lappano, Senior Environmental Engineer, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

Angell, R. (Oral Communication) December 22, 1986.
Conversation between Robert Angell IMIS Operation Section, New York State Department of Transportation and Richard Malec, Senior Transportation Engineer, Lockwood, Kessler & Bartlett, Inc., Syosset, New York.

Bartha, Charles (Oral Communication) October 28, 1987.
Coversation between Charles Bartha, Deputy Commissioner, Suffolk County Department of Public Works and Paul Lappano, Senior Environmental Engineer, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

Benesh, Frank, 1978
Carbon Monoxide Hot Spot Guidelines, Volume V: User's Manual for Intersection - Midblock Model, prepared by GCA Corporation for the U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Report No. EPA-450/3-78-037, Research Triangle Park, N.C.

Bernstein, James, December 28, 1986
"AM.2 - Course Corection," Newsday .

Bernstein, Phyllis. November 10, 1986.
Off-price Malls on Target on Long Island. Crain's New York Business. p.6.

Black's Guide, Fall, 1985.
Office Leasing Guide. Connecticut/Long Island/Westchester.

Burchell, Listokin and Dolphin, 1985.
School Children Generated by a Residential Project.

Crain's New York Business, October 6, 1986.
Long Island Up close. A special report.

Crimaudo, Vincent (Oral Communication) November 24, 1986.
Conversation between Vincent Crimaudo, Superintendent, South Huntington Water District and Paul Lappano, P.E., Senior Environmental Engineer, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

"Developers Compete for Dwindling Supply of Big Office Space Users in Nassau/Suffolk." July 7, 1986. The Real Estate Newsletter. Volume 17. No. 34. p. 1.

Draft EIS for Panamouk Hills Subdivision, Melville, N.Y., June 1986. Prepared by Ethan Elder Associates.

Draft EIS, Lower Melville Change of Zone and Office Development, Melville, N.Y., May 1987, JAC Planning Corp.

Dvirka & Bortilucci May 1986. Huntington Resource Recovery Project Draft Environmental Impact Statement

Dvirka & Bortilucci December 1984. Solid Waste Qualifications and Characterization For the Town of Huntington.

Fergusun, Bruce (Oral Communication) January 15, 1987. Conversation between Bruce Ferguson, Suffolk County Industrial Developmental Agency and David B. Schiff, Vice President, RPPW, Inc.

Fine, Kenneth D. Melville - Update 1986. Survey and Recommendations.

Fischer, Klaus P. Fall 1986. "The Nation: What Else is Needed?" Hofstra University Business Review. Volume 3. No. 1. pp.1-8.

Giamo, Kathy. January 21, 1987 Telephone Conversation between Kathy Giamo, Director of Sales and Marketing, Reckson Associates, and Marjorie Samuels, RPPW, Inc.

H2M, October 1982. Engineering Master Water Plan Update for the South Huntington Water District.

H.M.C.C. Associates. July 1985 Revised March 1986. Traffic Impact Analysis Proposed Office Building Lower Melville, N.Y. Prepared by Edward Sharsky Consulting Engineers.

"Industrial Users Hesitate to Buy Space with Impending Tax Law Bite: Leasing Market Strengthens." October 13, 1986. The Real Estate Newsletter. Volume 17. No. 48. pp. 1-3.

In-law Realty, 1986. Final EIS Pinelawn Road Office Building/In-law Realty, Melville, N.Y. Prepared by Nelson & Pope Consulting Engineers. Traffic Impact Report, In-law Facility, Pinelawn Road, Melville, N.Y. Prepared by Vincent Donnelly, October 1985.

Institute of Transportation Engineers, 1982.
Trip Generation Rate-An Informational Report .
Third Edition, Washington, D.C.

Kramer, Pearl (Oral Commication). January 15, 1987.
Conversation between Dr. Pearl Kramer, Chief Economist, Long Island Regional Planning Board and David B. Schiff, Vice President, RPPW, Inc.

Letter of September 29, 1986, Underwriters Laboratories, Inc. to Town of Huntington, Department of Environmental Control.

Levine, Martin. January 27, 1986.
"A Whole New Market to Tap." Newsday, Part III, p.11.

Lipper, Bob. November 20, 1985.
"Long Island's Route 110 Corridor Planning Study Terms Corridor L.I. Office Capital." Long Island Business, p. 1R.

Long Island Business. 1984-1985
Guide to Long Island Leaders.

Long Island Business. August 20, 1986.
Long Island Economic Trendcarer. "Long Island Jobs at Record Level." p. 30.

Long Island Business. August 27, 1986.
"Demand Exceeds Supply for Huntington Hotels." p. 5T.

Long Island Business. December 10, 1986.
"Hotels Out of Pace With Long Island Development."

Long Island Regional Planning Board, 1980.
Industrial Location Analysis.

Long Island Regional Planning Board. 1982
Commercial Development Analyses.

Long Island Regional Planning Board. September 1983.
Labor Force and Jobs Analyses

Long Island Regional Planning Board. October 1984.
The Journey to Work to Major Employment Centers

Long Island Savings Bank, December 1985.
DEIS for Long Island Savings Bank. Prepared by Ethan Elder Associates.

"Long Island's Top Industrial Projects Under Construction.", January 8, 1986.
Long Island Business. Section R.

"Long Island Values Set New Record", October 22, 1986.
Long Island Business Key Bank's Long Island Realty Report. p. 31.

Lutz, Phillip. September 15, 1986.
"Uncertainty Over Moratorium Quiets Route 110 Building Boom."
The New York Times.

Lutz, Phillip. February 1, 1987.
"New Rules Imperil Hempstead Projects".
The New York Times p. L.I. 1.

Machtay, R. (Oral Communication), September 26, 1986.
Conversation between Richard Machtay, Environmental Control Department Town of Huntington and Richard Malec, Transportation Engineer, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

Mazzola, T. (Oral Communication), December 16, 1986.
Conversation between Thomas Mazzola, Director, Department of Transportation and Traffic Safety, Town of Huntington and Richard Malec, Transportation Engineer, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

McGrellis, J. (Oral Communication), October 21, 1986.
Coversation between John McGrellis, Design Group C, New York State Department of Transportation (Region 10), and Richard Malec, Transportation Engineer, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

Metcalf and Eddy 1981. -
Westchester Engineering. MacGraw Hill Book Company, New York, N.Y.

Meunkle R. (Oral Communication), October 23, 1986.
Conversation between Robert Meunkle, Traffic Division, Suffolk County Department of Public Works and Richard Malec, Transportation Enginee;r, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

Mortin, Daniel (Written Communication), February 11, 1987.
From Daniel Mortin, Deputy Town Attorney, Town Attorney to Gregory T. Greene, Project Manager, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

Nagle, C.N., 1978
Climatology of Brookhaven National Laboratory, 1949-1973.
BNL 50466, Brookhaven National Laboratory, Upton, N.Y.

Nauss, C. (Oral Communication), October 21, 1986.
Conversation between Charles Nauss, Transportation Division, LIRPB and Richard Malec, Transportation Engineer, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

New York State of Environmental Conservation, January 1984.
<u>New York State Air Quality Implementation Plan for Control of Carbon Monoxide and Hydrocarbons in the New York City Metropolitan Area</u> ,Albany, N.Y.

New York State Department of Environmental Conservation, January 1985.
<u>Air-Guide-23, Indirect Sources of Air Contamination,</u> Albany, N.Y.

New York State Department of Environmental Conservation, 1986.
<u>New York State Air Quality Report, Ambient Air Monitoring System, Annual 1985,</u> Albany, N.Y.

New York State Department of Labor, December 1986.
<u>Labor Area Summary</u>

New York State Department of Transportation, July 1982.
Final Design Report/Finding of No Significant Impact for Route 110, Southern State Parkway to Baylis Road.

New York State Department of Transportation, December, 1982.
<u>Intersection Midblock Model - User's Guide,</u> Interim Project Development Guideline, Transmittal #37, prepared by the Environmental Analysis Bureau, Albany, N.Y.

New York State Department of Transportation, April 1984.
Rebuilding New York Statewide Master Plan for Transportation.

New York State Department of Transportation, January 1985.
<u>Intersection Midblock Model - User's Guide,</u>
Interim Project Development Guideline, Transmittal #37, Supplement #1, Prepared by the Environmental Analysis Bureau, Albany, N.Y.

New York State Department of Transportation, May 1985.
Design Constract #D251588, Reconstruction of Route 110: Ruland Road to Baylis Avenue.

New York State Department of Transportation, 1985.
Design Contract #D500248, Reconstruction of Route 110: Conklin Avenue to Ruland Road.

New York State Department of Transportation, April 1985.
DR/EA Long Island Expressway Service Roads, Half Hollow Road to Commack Road.

New York State Department of Transportation, April 1985.
Technical Appendices, DR/EA Long Island Expressway Service Roads, Half Hollow Road to Commack Road.

New York State Department of Transportation, May 1985.
Project Initiation Request, Reconstruction of Ruland Road/Colonial Springs Road (CR5) from Route 110 to Little East Neck Road.

New York State of Transportation, November 1985.
Route 110 Traffic Study, North Service Road (LIE) to Northern State Parkway

New York State Department of Transportation, February 1986.
Air Quality Analysis Procedures, Project Environmental Guideline, Transmittal #42, prepared by the Environmental Analysis Bureau, Albany, N.Y.

New York State Department of Transportation, August 1986.
Republic Airport, Part 150. Study Phase One Report.

New York State Department of Transportation, September 1986.
Republic Airport Master Plan, Update Final Draft.

New York State Department of Transportation, April 1986, revised September 1986. Republic Airport Master Plan Update, Working Paper No. 2.

New York State Department of Transportation, October 1986.
Preliminary Report, Long Island Expressway: Fourth Lane.

New York State Department of Transportation, November 1986.
Republic Airport Master Plan Update, Working Papers Nos. 1, 3 & 4. Inventory, Demand Capacity, Facility Requirements.

Okpyck, Jeffrey (Oral Communication), December 9, 1986.
Conversation between Jeffrey Okpyck, Engineer, New York Telephone Co. and Paul Lappano, Senior Environmental Scientist, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

Peavy, Howard, 1972.
Environmental Engineering 1985. MacGraw Hill Book Company.

Quinn, W. (Oral Communication), October 30, 1986.
Conversation between William Quinn, Planning & Development, New York Department of Transportation (Region 10), and Richard Malec, Senior Transportation Engineer, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

Rickbrand, Herbert (Oral Communication), November 6, 1987.
Conversation between Herbert Rickbrand, Manager, Gas Systems, LILCO and Paul Lappano, P.E., Senior Environmental Engineer, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

Rizzo, Joseph (Oral Communication). February 25, 1988.
Conversation between Joseph Rizzo, Suffolk County Department of Public Works and Paul Lappano, P.E., Senior Enviromental Engineer, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

Rothschild, R. (Oral Communication). October 21, 1986.
Conversation between Robert Rothschild, Design Group A, New York State Department of Transportation (Region 10), and Richard Malec, Senior Transportation Engineer, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

Sauato, Joseph A, 1972. Environmental Engineering and Sanitation. Wiley-Interscience, John Wiley & Sons, Inc., N.Y.

Schapfel, F. (Oral Communication). October 21, 1986.
Conversation between Frank Schapfel, Planning and Development, New York State Department of Transportation (Region 10), and Richard Malec, Senior Transportation Engineer, Lockwood, Kessler & Bartlett, Inc. Syosset, N.Y.

Scheffer, C. (Oral Communication). October 21, 1986.
Conversation between C.P. Scheffer, Design Group C, New York State Department of Transportation (Region 10), and Richard Malec, Transportation Engineer, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

Schreiber, Paul, December 29, 1986.
"More Than the Sum of its Parts," Newsday.

Shaman, Diana, January 8, 1987. Telephone Conversation between Diana Shama, L.I. Writer for The New York Times, and Marjorie Samuels, RPPW, Inc.

Shaman, Diana, February 1, 1987. "Towns Put Planning on the Front Burner". The New York Times. p. 10 R.L.I.

Shaman, Diana, February 8, 1987.
"Office Development Bustling in Islandia" The New York Times p. 10R.

Sosa, E. (Oral Communication). December 27, 1986.
Conversation between Emileo Sosa, Traffic and Safety Division, New York State Department of Transportation (Region 10), and Richard Malec, Senior Transportation Engineer, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

Steinberg, Carol, February 1, 1987.
"A City Under Glass". The New York Times p. L.I.1.

Suburban Gridlock, Robert Cervero, 1986.

Suffolk County Transit, 1984.
Suffolk County Bus Route Map.

The Nassau-Suffolk Transportation Coordinating Committee, January 7, 1987.
Nassau-Suffolk Transportation Improvement Program,
State Fiscal Year 1987-1992.

Thornwell, W. (Oral Communication). October 6, 1987 and October 21, 1986.
Conversation between William Thornwell, Planning and Development, New York State Department of Transportation (Region 10), and Richard Malec, Senior Transportation Engineer, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

Town of Huntington, September 1986.
Transcripts from the GEIS Public Scoping Sessions.

Traffic Impact Analysis, Proposed OMNI 110 Corporate Center Park,
Melville, Long Island, August 1984.
Prepared by E. Sharsky Consulting Engineers.

Traffic Impact Study for Belwin Mills Publishing Corp.
"Amended Site Plan", Deshan Drive, Melville, N.Y.
Prepared by Vincent Donnelly, July 1986.

Transportation Research Board, 1985.
Highway Capacity Manual, Special Report, 209,
National Research Council, Washington, D.C.

U.S. Department of Commerce, Bureau of Economic Analysis, 1985.
1985 OBERS BEA Regional Projections , Washington, D.C.

U.S. Department of Transportation, Federal Highway Administration,
September 1980. Highway Noise Fundamentals, Washington, D.C.

U.S. Environmental Protection Agency, 1984.
User's Guide to MOBILE3 (Mobile Source Emissions Model),
Report No. EPA 460/3-84-002, Motor Vehicle Emissions Laboratory,
Ann Arbor, MI.

Vora, A. (Oral Communication). October 23, 1986.
Conversation between Arvand Vora, Traffic Division, Suffolk County Department of Public Works, and Richard Malec, Senior Transportation Engineer, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

We're Associates/November, December 1985, Revised April 1986.
DEIS for We're Associates/NEC Corporate Sites. Prepared by Nelson & Pope Consulting Engineers. Traffic Impact Report, NEC Facility.
Prepared by Vincent Donnelly, August 1985.

Wolfert, Michael (Oral Communication). February 27, 1987.
Conversation between Michael Wolfert, Associate. Geraghty & Miller, Plainview, N.Y. and Paul Lappano, P.E., Senior Environmental Engineer, Lockwood, Kessler & Bartlett, Inc., Syosset, N.Y.

Yorio's Report, November 15, 1984.
Prepared by William T. Yorio, Vice-Prsident, Cushman & Wakefield of Long Island, Inc., Garden City, N.Y.

Yorio, William, January 21, 1987.
Telephone Conversation betwen William Yorio, Realtor, Cushman & Wakefield Long Island, Inc., and Marjorie Samuels, RPPW, Inc.

SECTION 12

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DEFINITIONS

AADT	Average Annual Daily Traffic
AQCR	Air Quality Control Region
CDP	Census Designated Place
CO	Carbon Monoxide
dBA	A-Weighted Decibel (Noise Measurement Unit)
EAB	European American Bank
EBA	Eight Block Area
EIS	Environmental Impact Statement
F	Fahrenheit
FAA	Federal Aviation Administration
FAR	Floor Area Ratio
FHWA	Federal Highway Administration
FIRE	Finance, Real Estate and Insurance
GA	General Aviation
GEIS	Generic Environmental Impact Statement
gpd	Gallons per Day
gpm	Gallons per Minute
HC	Hydrocarbons
HUD	United States Department of Housing and Urban Development
IDA	Industrial Development Agency
Ldn	Day-Night Average Sound Level
Leq	Equivalent Sound Level
LIE	Long Island Expressway
LILCO	Long Island Lighting Company
LIRPB	Long Island Regional Planning Board
LOS	Level of Service
MD	Mid-day
mgd	Million Gallons per Day
mg/l	Milligrams per Liter
MISD	Melville Industrial Sewer District
MPH	Miles per Hour

MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NO2	Nitrogen Dioxide
NSP	Northern State Parkway
NSR	New Source Review
NYSDAC	New York State Department of Audit and Control
NYSDEC	New York State Department of Environmental Conservation
NYSDOT	New York State Department of Transportation
NYT	New York Telephone
03	Ozone
Pb	Lead
PSD	Prevention of Significant Deterioration
PSY	Permissive Sustained Yield
RFP	Request for Proposal
ROW	Right-of-Way
SCDHS	Suffolk County Department of Health Services
SCDPW	Suffolk County Department of Public Works
SEQRA	State Environmental Quality Review Act
SHWD	South Huntington Water District
SO2	Sulfur Dioxide
SPDES	State Pollution Discharge Elimination System
sf	Square Feet
SWSD	Southwest Sewer District
TOH	Town of Huntington
TSP	Total Suspended Particulates
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VOC	Volatile Organic Compound
VPH	Vehicles per Hour