

New York State Department of Environmental Conservation

Wolf Road, Albany, NY 12233



~~Robert F. Flacke~~  
Commissioner

Robert F. Flacke

November 30, 1979

Mr. Richard Careaga  
Jason M. Cortell & Associates, Inc.  
396 Orange Street  
New Haven, CT 06511

Re: Application & Draft Environmental Impact Statement for Crossgates Regional Shopping Center - Guilderland, NY  
DEC - 401-09-S002  
UPA - 401-09-0113

Dear Mr. Careaga:

The Department of Environmental Conservation has determined that the revised subject application and Draft Environmental Impact Statement submitted to this Department on November 16, 1979 meets the requirements of 6NYCRR Part 621 entitled Uniform Procedures Act and can be considered a substantially complete application for the purposes of review.

The Department does, however, reserve the right to request additional information from the applicant for clarification purposes if needed.

This office will advise the Hearing Office of our completeness determination and request that they proceed to reconvene the hearing as directed in the Commissioner's decision of August 13, 1979.

Very truly yours,

Terence P. Curran, Director  
Division of Regulatory Affairs

TPC/ERM:scs

cc: W. Dickerson  
M. Pellegrino  
File DEC 401-09-S002  
UPA 401-09-0113

May 31, 1979

DRAFT ENVIRONMENTAL IMPACT STATEMENT

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**CROSSGATES REGIONAL  
SHOPPING CENTER  
GUILDERLAND, N.Y.**

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PYRAMID CROSSGATES COMPANY  
Albany, New York

REVISED: November 16, 1979

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- G Water Resources Report and Storm Water Management Plan
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Article 8, ECL, NYCRR 617.4 (f) sets forth ten specific areas which must be included in a DEIS. They are:

<u>Requirement</u>	<u>Page in this DEIS</u>
1. A concise description of the proposed action, its purpose and need;	1
2. A concise description of the environmental setting of the areas to be affected, sufficient to understand the effects of the proposed action and alternatives;	9
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## READERS GUIDE

This Draft Environmental Impact Statement (DEIS) covers the construction of a regional shopping center in Guilderland, New York, together with improvements to the highway system. These related projects require a variety of local and State of New York reviews, permits, and approvals, many of which have in common requirements for consideration of environmental consequences. This Statement has been prepared to report these consequences.

An earlier Draft Environmental Impact Statement for this project was submitted on May 31, 1979. Shortly before the start of public hearings on the project by the New York State Department of Environmental Conservation in August, 1979, the Applicant was informed by the State University of New York at Albany that it would not allow the construction of certain highway improvements on its land southeast of the intersection of Fuller Road Alternate and Washington Avenue Extension. The Department adjourned the public hearing on August 13, 1979 pending submittal of revised applications and this Statement. The present project differs from the earlier project in provisions made for highway access. The location of the building and parking areas have not changed. The design of the stormwater detention system is substantially the same. Accordingly, the Statement differs from the previous submittal only with respect to details relating to traffic, air quality, and tabulation of acreages affected, which changes as a result of the deletion of two areas offsite and the addition of a small area onsite. Because of a change in 6 NYCRR 203, August 11, 1979, proposed roadway improvements, rather than the parking facilities, are now the subject of the indirect source application mentioned below. No other substantive revisions to the earlier Statement have been made herein.

For purposes of compliance with the State Environmental Quality Review (SEQR) Act (Article 8, Environmental Conservation Law; 6 NYCRR 617.4), this document is a Draft Environmental Impact Statement, as well as part of permit applications to the New York State Department of Environmental Conservation (Article 15, ECL, 6 NYCRR 608, Protection of Waters; Article 19, ECL, 6 NYCRR 203, Indirect Source; and Article 24, ECL, 6 NYCRR 662 and 663, Freshwater Wetlands) and to the Town of Guilderland (Zoning Law; Special Use Permit, Site Plan Approval, and Zoning Permit for Area Variance).

The Statement is divided into three main sections:

- 1.0 Project Description (including alternatives)
- 2.0 Affected Environment
- 3.0 Environmental Consequences

The first section (Section 1.0) contains the rationale for the proposed action, a description of the project and feasible alternatives considered by the Applicant. Section 2.0 describes the human, physical, and biological aspects of the affected areas. Section 3.0 discusses the effects of the proposed action. Several large maps (referred to as "sheets" in the text) are contained in a pocket.

The following tables provide topical guides to SEQR requirements as set forth in the Environmental Conservation Law and to SEQR guidelines as published by the Department of Environmental Conservation. These tables show the page number in this Statement on which discussion of each topic begins. A glossary of key words may be found in Section 4.0. Section 5.0 lists the preparers of the DEIS.

Section 6.0 contains original studies from which much of the data in the Statement derives. These reports, more detailed and more technical than the Statement, are listed in CONTENTS on page ii.

Changes in the Appendices from the previous Statement include revised applications in Appendix A; a new Traffic Impact Study submitted as Appendix C, replacing in its entirety the previous material; a new Air Resources Study submitted as Appendix H, replacing in its entirety the previous material; a new Transportation Improvements Report submitted in Appendix L, replacing in its entirety the previous material; letters from the consultants responsible for the preparation of other appendices which amend or conform to the previously submitted reports; and several of the sheets, as necessary, to show the revised highway improvements.

In copies of the DEIS prepared for distribution to the public, Section 6.0 and the large maps ("sheets") do not appear. Copies of the Statement including Section 6.0 and the sheets are available for public inspection at the following locations:

New York State Department of Environmental Conservation  
Region 4 Headquarters  
50 Wolf Road  
Albany, NY 12223  
(business hours)

New York State Department of Environmental Conservation  
Region 4 Field Office  
Jefferson Road, Route 10  
Stamford, New York 12167  
(business hours)

Town of Guilderland  
Town Hall  
Guilderland, New York 12203  
(business hours)

City of Albany  
City Hall  
Albany, New York 12207  
(business hours)

Crossgates Group  
Executive Tower Park (3rd Floor)  
Albany, New York 12203  
(business hours)

Reserve Room  
State University of New York at Albany Main Library  
1400 Washington Avenue  
Albany, New York 12222  
(business hours, evenings, and weekends)

Guilderland Free Library  
1900 Western Avenue  
Guilderland, New York 12203

## SUMMARY OF ENVIRONMENTAL IMPACTS

The Applicant proposes to construct a regional shopping center in Guilderland, New York on a 169 acre site located between Washington Avenue Extension, Western Avenue, the New York State Thruway and Rapp Road. The center would initially include four department stores and approximately 569 thousand square feet for other retail shops; two more department stores would be added later, subject to a separate review and approval process. Major highway improvements to provide improved shopper access to the site include the construction of a new bridge along Western Avenue over the New York State Thruway and an interchange between Washington Avenue Extension and the center's ringroad. (Part of the center's ringroad would be a dedicated County road.)

The chief effects of the project on the human environment relate to the regional economy, taxes, land use, and environmentally sensitive areas.

The project would create 2,783 full-time equivalent construction jobs and \$34 million in wages and salaries. Permanent employment would increase by 2,505 full-time equivalent jobs over present regional employment. The net increase in regional personal income would be \$19 million per year. The project would generate annual tax revenues of \$2.7 million more than the costs of public services associated with the project.

The project would further the land use goals of the Town of Guilderland, the City of Albany and Albany County. It would provide both formal and informal settings for a variety of community events and social activities.

The availability of a wider range of retail goods, including those of two high-fashion department stores new to the region, would increase consumer choice, reverse the outward flow of retail expenditures from the region and attract new consumers from outside the region.

Together with driveways to the major roadways abutting the site, the proposed major highway improvements to be made by the Applicant would provide for adequate traffic flow of shopper traffic to and from the highway system. The addition of shopper traffic to the improved highway system would not significantly change levels of service. Increased traffic due to the project would not violate air quality standards for CO.

Due to on-site detention of stormwater runoff, replacing 87 acres of existing soils and landforms with building and parking areas would not result in downstream flooding. Runoff detention might ameliorate downstream flooding problems by reducing the rate of peak flood flows. Receiving water quality standards would not be violated because of stormwater runoff. The quantity and quality of groundwater outflow from the site would not be affected.

The site contains a 16 acre wetland which would be filled by construction of the project. Parts of the site provide actual or potential habitat for the worm snake, the hognose snake, the spadefoot toad and Fowler's toad, species which are at or near the northern limits of their continental ranges in the Albany region. Construction of the project would remove at least parts of their habitats. The project plan provides for on-site conservation of a colony of the Karner Blue Butterfly, a species listed as endangered by the Department of Environmental Conservation and as threatened by the U.S. Fish and Wildlife Service. The project would remove 2 acres of pitch pine-scrub oak habitat and 56 acres of potential pitch pine-scrub oak habitat.

The project would affect no site on the National Register of Historic Places. Construction would result in a change of open space to a man-made landscape. Environmental effects are summarized further in Appendix A.

The project is located in the Albany Pine Bush, an environmentally sensitive area noted for its vegetation, wildlife, landforms, groundwater resources, scenic qualities and historic interest. To assist in the permanent preservation of the Albany Pine Bush, the Applicant proposes to dedicate approximately 65 acres of pitch pine-scrub oak habitat in the Old State Road/New Karner Road area to the City of Albany as part of its open space holdings.

### 1.1 Purpose and Need

The Applicant, the Pyramid Crossgates Company, is a partnership registered in the State of New York. Its principal members are experienced in the planning, design, leasing, construction and operation of large retailing facilities.

The Applicant proposes to construct a retailing center of the enclosed-mall type on a site which it controls in Guilderland, New York, in order to change the existing retail market for shoppers goods in the Albany region (Figure 1). To do this, it is necessary to accomplish two related objectives:

Provide shopping opportunities of a type and size to attract consumers who are now either shopping in other areas or who now spend less of their disposable income on shoppers goods than would be expected, based on economic indicators such as household income; and

Provide shopping opportunities of a type and size to attract consumers from outside the region.

A private economic entity, the Applicant intends to realize a return on its investments in expanding the present retail market in the Albany region. If it is successful, there will be both private and public benefits as detailed elsewhere in this Statement. Several social and economic needs would be directly or indirectly met by the proposed project. For the Applicant to attain its objectives, it must provide economic satisfactions of a type and/or quality not now available to consumers in the region. This would increase consumer choice. The return on the Applicant's investment would result in capital formation and sources of new investment. The operation of the project would provide a large number of construction and permanent jobs. The project would attract new businesses to the Albany region, including two major department stores not now represented in New York State. The capital investment and operating returns represented by the project would enlarge total economic activity regionally through the multiplier effect. The facilities of the proposed project would be available for a variety of community events and would serve as a setting for many informal social activities.

The project would broaden the tax bases of a number of jurisdictions through increased assessed valuation and increased ad valorem revenues. Regional sales tax receipts would increase. Proposed transportation improvements would result in substantial net public benefits. By providing a park-and-ride transfer point, bus service stops, and by linking existing routes along Washington Avenue Extension and Western Avenue, public transportation would be encouraged. By reducing the travel of residents of the Albany region to retailing districts outside the region, the project would contribute to energy conservation goals. Additionally, the project would contribute to the implementation of land use goals of Guilderland, the City of Albany and Albany County, including the preservation of 65 acres of environmentally sensitive land in the Albany Pine Bush.



The consumer and business need for, and feasibility of, the proposed project is further documented in Appendix B, "Market Study." Appendix I, "Econometric Study" documents the need for the proposed project in relation to regional economic development. Appendix K, "Fiscal Impact Report" provides the calculation of public revenues and expenditures in relation to the project. Appendix L, "Transportation Improvements Report" contains a public cost-benefit analysis of the proposed highway improvements.

## 1.2 Alternatives

### 1.2.1 Criteria for Meeting Applicant's Objectives

For a major retailing center to both meet latent demand and to increase market size, several requirements must be met:

Location within a primary trade area capable of reaching as many persons as possible;

Location in reasonable proximity to the major existing retail district of Wolf Road;

Location accessible by at least one (preferably two) interstate highways;

Location accessible by one or more major commercial arterial streets;

Proper zoning;

Minimum size of 100 acres (20 acres for central business district sites if there are adjacent parking structures with sufficient capacity);

Adequate public utilities (especially water and sewer);

Workable topographic and soil conditions;

Ownership of the bulk of the site by a single entity;

Land costs in reasonable proportion to overall project costs; and

Adjoining land uses compatible with regional shopping center uses.

The Applicant knows of no other action open to it which can both meet latent demand and increase market size.

## 1.2.2 Proposed Project

The proposed project is located on a 169-acre site in Guilderland and the City of Albany, New York (Figures 1,2,3 and Sheet T-1). It is approximately bounded by the New York State Thruway on the east, Western Avenue on the south, Rapp Road on the west, and Washington Avenue Extension on the north.

The project layout, including transportation improvements, is shown as Figure 4 and Sheet HP-A. The project occupies 87 acres of the 169-acre site. Transportation improvements off-site occupy 3.2 acres in an area totaling 6.6 acres. Table 1 provides a tabulation of project dimensions.

The proposed structure is a 150-store, two level enclosed mall with four major department stores, including two full-line and two high-fashion department stores, and a food service and cinema complex. A representative exterior elevation is shown as Figure 5 and a representative interior view as Figure 6. The building would include 1,293,160 square feet of gross leasable area and would cover approximately 17 acres.

Surface parking would be provided for 7,090 cars in six major areas (three serving the upper levels and three, the lower) separated by landscaped slopes. Each parking level would be divided into smaller parking modules, separated by landscaped berms. The site would be graded (Sheet SP-2) on a balanced cut and fill basis using 1,120,000 cubic yards of on-site material and importing 300,000 cubic yards of coarser, granular material for sub-base construction of roads.

Stormwater draining through and from the site would be detained in several on-site basins (Sheets SP-2, SP-3). The rate at which stormwater would leave these detention basins would be less than the present rate (Appendix G, "Water Resources Report").

Water for the project (including fire protection) would be drawn from a 12-inch main loop connected to existing water mains of the Westmere Water District in Western Avenue (Sheet SP-3). Projected water use would average 100,000 gallons per day. Approximately 80,000 gallons per day of domestic sanitary wastewater would be discharged through a 10-inch sewer service line to a 14-inch Guilderland interceptor sewer that is tributary to the Albany County North Wastewater Treatment Plant (Sheet SP-3).

The project's energy consumption would be approximately 41 million kilowatt hours (kWh) of electricity per year, supplied by Niagara-Mohawk Power Corporation. Up to 3,520 million cubic feet per year of natural gas for space heating, if available, might be substituted for electricity in one of the department stores.

Traffic access to and from the site would be provided by driveways to Western Avenue, Rapp Road, and Washington Avenue Extension. A dedicated public roadway serving entering traffic only would be built to allow exiting

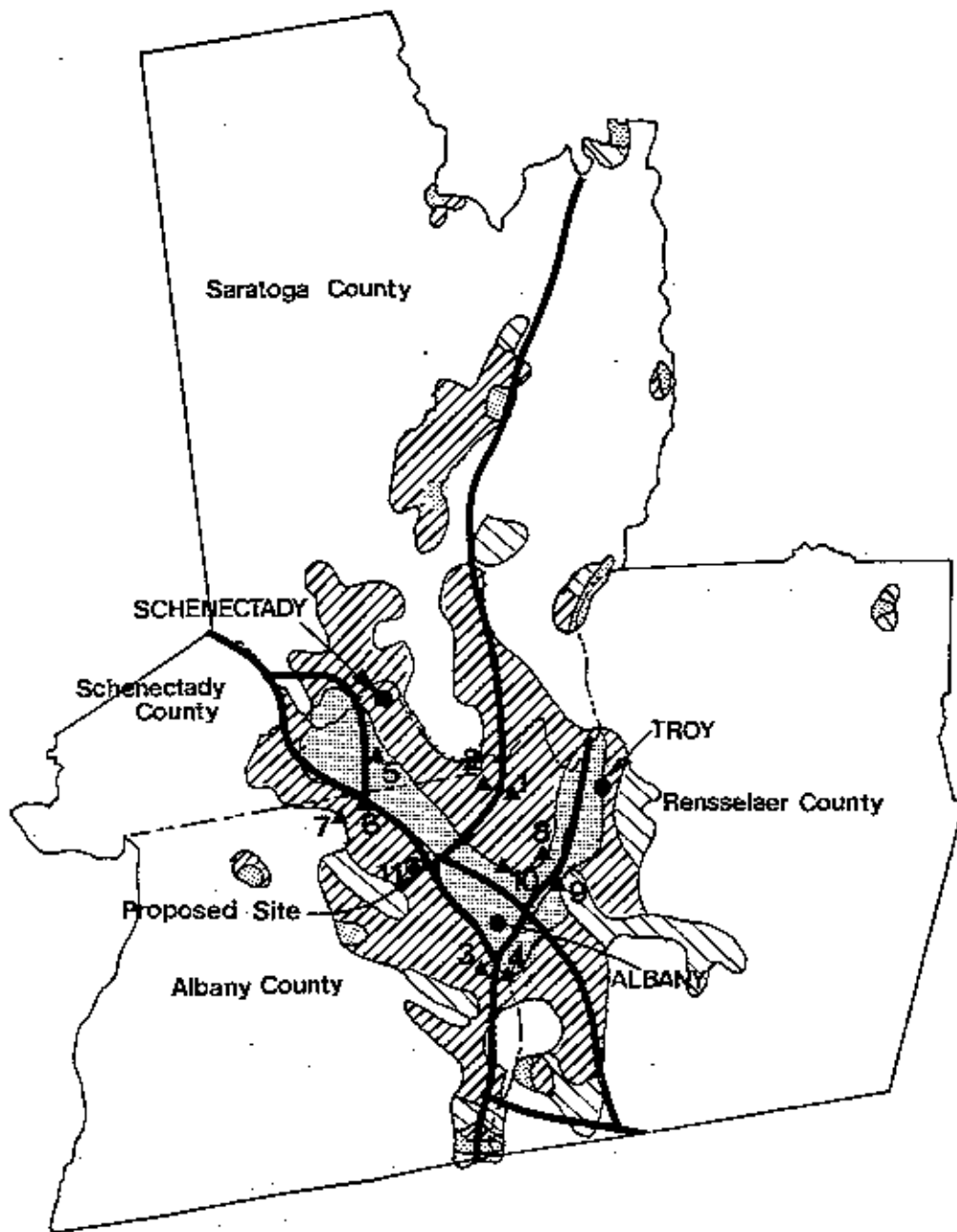
TABLE 1  
PROJECT DIMENSIONS

<u>Dimension</u>	<u>Existing</u>	<u>Proposed</u>
<b>On-site</b>		
Open Space	145.5	27.5
Developed	23.3	141.3
Landscaped	N.C. <sup>1</sup>	31.0
Impervious	N.C. <sup>1</sup>	110.1
Building*	N.C. <sup>1</sup>	17.0
Parking**	N.C. <sup>1</sup>	70.0
Roads	N.C. <sup>1</sup>	23.1
Total Acres	168.8	168.8
<b>Off-site</b>		
Open Space	72.0	68.8
Developed	0.0	3.2
Landscaped	N.C. <sup>1</sup>	2.1
Impervious	N.C. <sup>1</sup>	1.1
Roads		
Total Acres	72.0	72.0
Public	0.0	65.4
<b>Combined</b>		
Open Space	217.5	96.3
Developed	27.3	144.5
Landscaped	N.C. <sup>1</sup>	33.1
Impervious	N.C. <sup>1</sup>	111.2
Building	N.C. <sup>1</sup>	17.0
Parking	N.C. <sup>1</sup>	70.0
Roads	N.C. <sup>1</sup>	23.1
Total acres	240.8	240.8
Public	0.0	65.4
<b>*Building Floor Area</b>		
Department Store A	112,500 square feet	
B	135,000 sf.	
C	97,500 sf.	
D	90,000 sf.	
Mall Tenant Area	568,758 sf.	
Cinema	30,000 sf.	
NET SALES AREA	1,033,758 sf.	
Stockrooms, and tenant non-sales	244,000 sf.	
GROSS LEASABLE AREA	1,293,160 sf.	
Malls, courts and service areas	201,000 sf.	
TOTAL BUILDING FLOOR AREA	1,494,160 sf.	

<sup>1</sup> - N.C. = not calculated

\*\*Parking spaces = 7,090

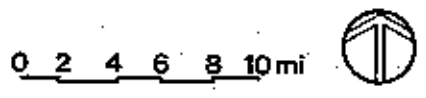
Source: Appendix E, "Vegetation and Wildlife Report" and Appendix N,  
Project Description and Operations Report"

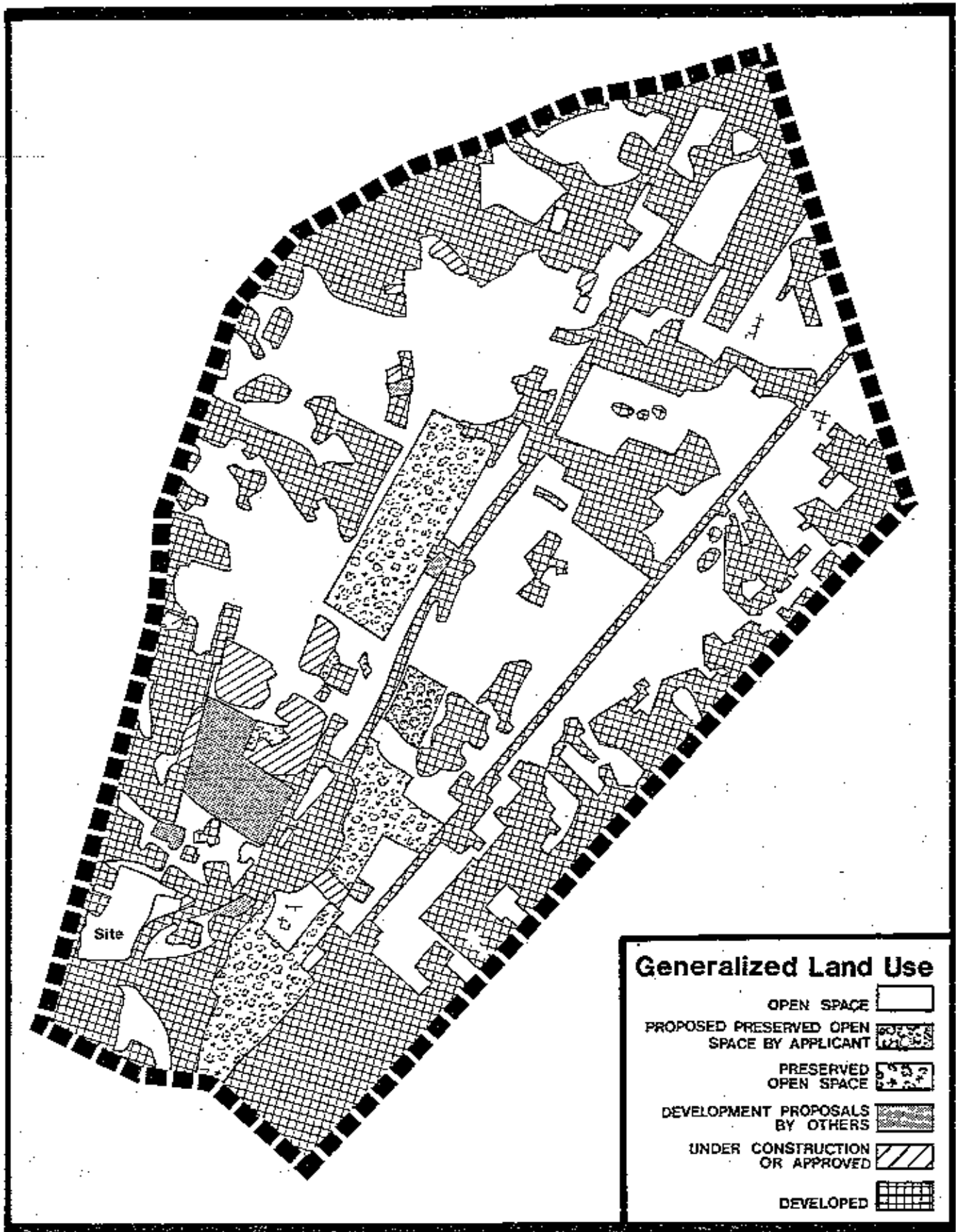


▲6	Alternate Site Locations
	Existing Urban Service Areas 1977
	Short Term Growth Areas 1977-1985
	Long Term Growth Areas 1977-2000

# REGIONAL LOCATION

Figure 1





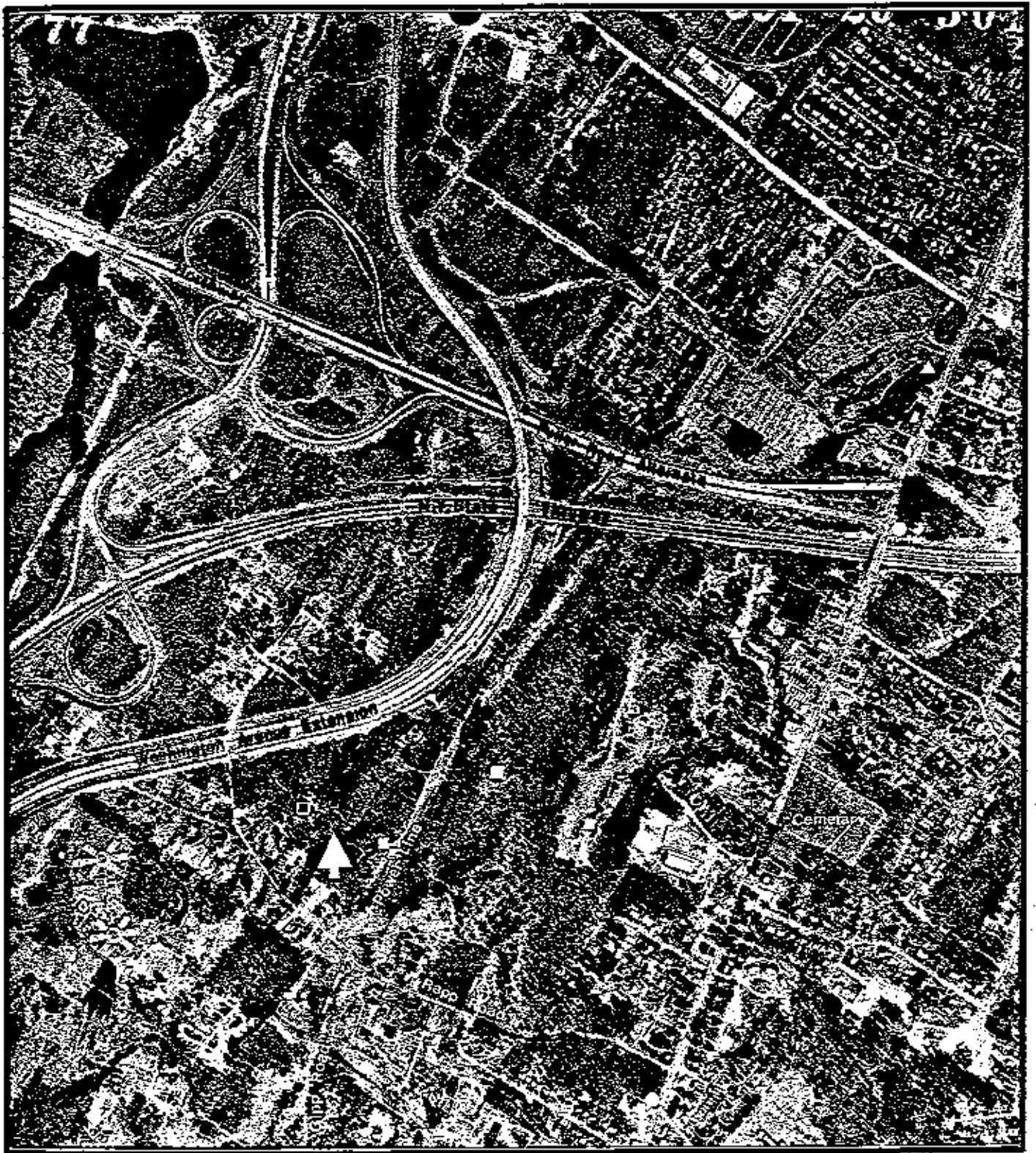
**Albany Pine Bush Land Use Patterns and Project Site Location**

Source: Pinebush Intermunicipal Study

0 1 2 miles



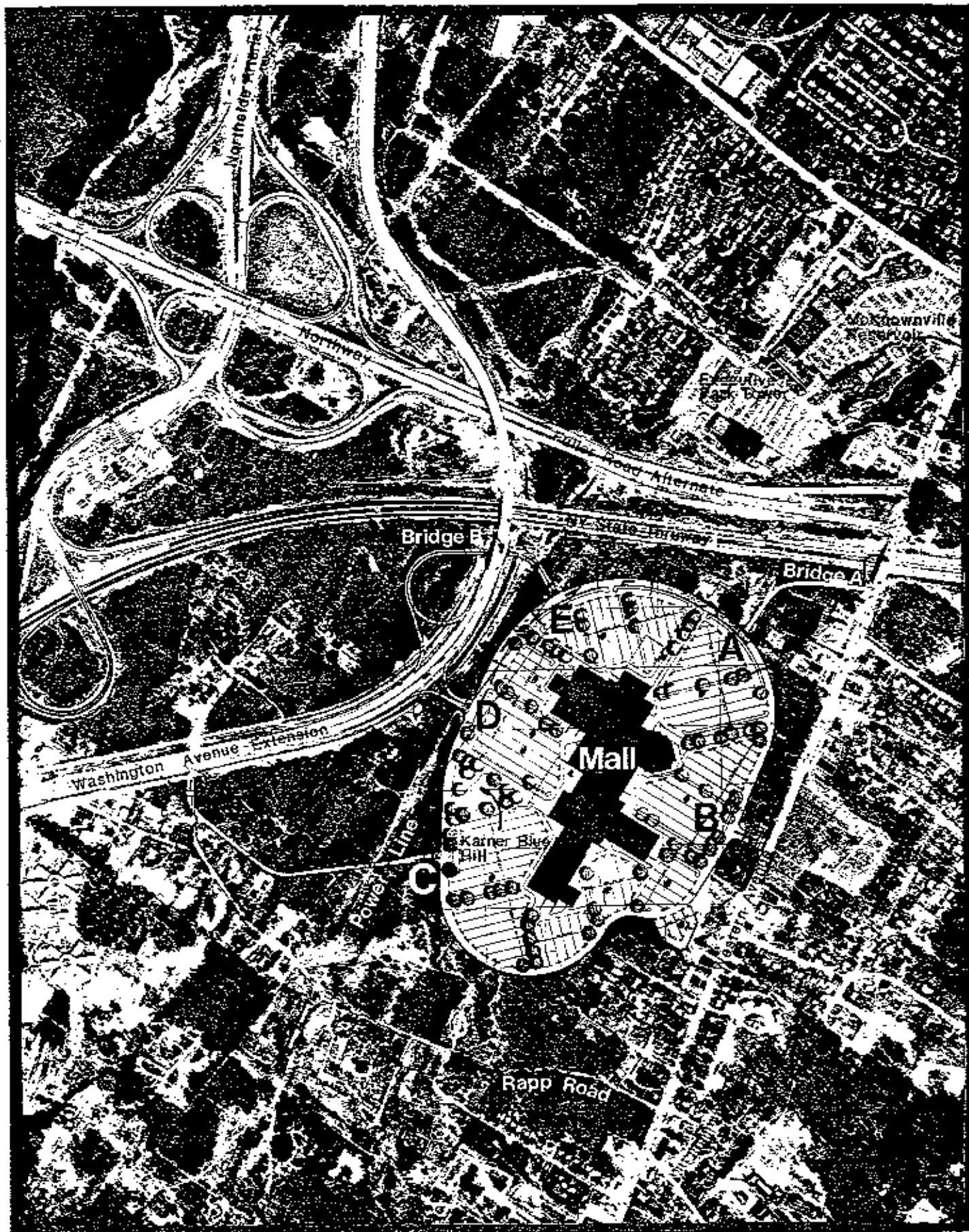
**FIGURE 2**



**Annotated Air Photo of Project Site**

**Figure 3**

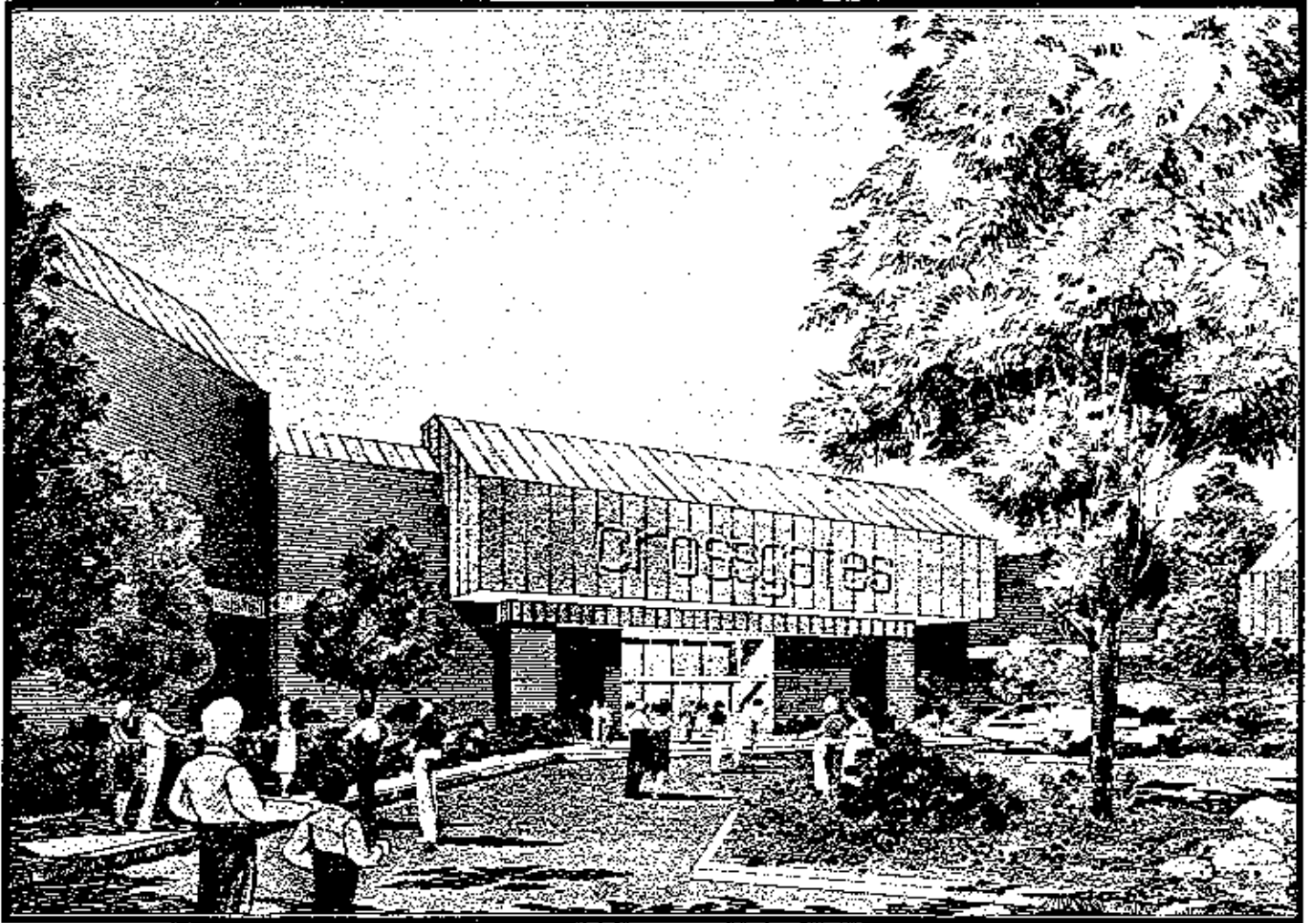
- Air Monitor
- ▲ Water Sampling
- Lupine/Karner Blue Site
- Wellspring House Site
- ▲ Pitch Pine/Shrub Oak Areas



**Annotated Air Photo of Project Site  
with Superimposed Project Site Plan**

**Figure 4**





**Representative Exterior Rendering**

**Figure 5**





**Representitive Interior Rendering**

**Figure 6**

southbound Fuller Road Alternate traffic to reach the site (through Driveway A on Figure 4 and Sheet HP-A) without entering the mainstream of traffic on Western Avenue westbound. This connection, as well as the interchange on Washington Avenue Extension, would be constructed by the Applicant to the specifications of the New York State Department of Transportation (NYSDOT), which would own the completed bridges and ramps. The Applicant would also modify certain other intersections in the vicinity to improve their operation, as discussed in Appendix C.

Although the existing surface transit system of the region is not capable of reaching the entire market to be served by the proposed project, a portion of the travel demand to the center can be satisfied by proposed local improvements to the bus system. In anticipation of extension of existing bus lines along Western Avenue and Washington Avenue Extension, bus stops and shelters would be provided. The demand generated by the project would result in increased transit ridership, thus reinforcing surface transit in the area and improving connections between Western Avenue and Washington Avenue Extension by providing a new transfer point.

A portion of the parking lot would be designated for "park and ride," for carpooling, and for bus transit operations. Such an area would accommodate commuters to downtown Albany who now drive but who would use bus service if available, thus avoiding downtown traffic congestion and parking problems and minimizing commuting expenses. Express bus service in this area may prove to be viable should demand develop. The park-and-ride area could also be a carpool location for Albany-bound commuters living to the west of the project. Since commuting-parking and shopping-parking requirements peak at different times on weekdays, and since commuter-parking demand on Saturday is minimal, the same physical resource could meet both needs.

Areas adjacent to buildings would be landscaped with shade-tolerant plants, while in medians, grade transitions, and in areas outside the ringroad, landscaping plans emphasize native plants. Sheet SP-4 contains the proposed Sedimentation and Erosion Control Plan for the project. Sheet L-1 shows the landscaping plan.

The proposed project is concentrated in the southeastern corner of the site, leaving the western quarter mostly vacant. The Applicant has no definite plans for these areas at present but intends to develop them in the future for uses compatible with the conference/office/research zoning in Guilderland and with the proposed project. In the portion of the site in the City of Albany, future development would be in accordance with obtainable zoning or variances and would be compatible with the proposed project. Such future projects are all subject to the requirements of the State Environmental Quality Review Act (SEQRA), including the preparation of Environmental Impact Statements for projects which the designated lead agency determines to have significant impacts.

Future expansion plans are for the addition of two department stores. No other expansion of the proposed shopping center is contemplated. Timing of additional construction depends on the initial commercial success of the project and upon future economic conditions. Construction of the addition would also require compliance with SEQRA, prior to approval. All analyses contained in the statement are based on a four department store project of slightly less than 1.3 million ft<sup>2</sup> leasible floor area.

### 1.2.3 On-Site Alternatives

Several on-site alternatives have been reviewed. A single-level building of the same size would double the building area coverage. This would create a center of impracticable length. An enclosed mall requires the maximum possible internal pedestrian circulation, evenly distributed.

Multi-level design is possible as long as pedestrian traffic can be evenly distributed between levels. The experience of the Applicant has shown that pedestrian circulation flows more readily from upper to lower levels than the reverse; thus, to achieve balance, shoppers must be encouraged to enter the center on both the upper and lower levels. Further decreasing building area coverage by designing for three or more major levels could be accomplished only by providing an equal number of parking levels. This would require parking garages. Construction costs and customer preference make this an impractical solution.

Four other highway access alternatives connecting the project site to the Northway/Fuller Road Alternate have been considered (Appendix L, "Transportation Improvements Report"). These alternatives differed from the proposed plan principally in providing direct return from the site to the Northway/Fuller Road Alternate. One of these alternatives was rejected because it would have required signalized intersections on the Northway/Fuller Alternate off-ramp and on Washington Avenue Extension. It would also have been incompatible with possible future extension of the Northway. The second alternative, involving a 700-foot bridge to the Northway/Fuller Road Alternate from the proposed dedicated Albany County road, was rejected because construction costs and time requirements would have also been substantially greater than for the proposed alternative. Also, it might be incompatible with the possible Northway extension. The other two alternatives were rejected because of incompatibility with future plans of the State University of New York.

A smaller project (e.g., two department stores and less leasable area for other tenants) could not meet the Applicant's objectives. First, a smaller center would not attract customers from outside the region. Second, a smaller center would not be as effective in reversing outshopping. Third, because of lower revenues, a smaller center could not justify the costs of transportation improvements. Therefore, such a project would have to be served by surface streets exclusively, which would be likely to increase traffic congestion.

Action at a different time would adversely affect the Applicant's ability to consummate leasing arrangements with tenants.

#### 1.2.4 Off-site Alternative

Within the Albany region, there are ten alternative sites (Figure 1) for a major regional shopping center, located at or near the intersection of major arterials with I-87, I-90, I-890, and I-787. A total of eleven sites, including the proposed site, has been identified and evaluated in detail (Appendix D, "Alternative Site Analysis"). The sites were ranked with respect to several weighted factors of location, zoning, size, availability, and potential environmental impacts.

Three sites are not feasible (in accordance with DEC's policy that applicants need not consider sites incompatibly zoned) due to existing zoning. One is near Exit 23 of I-87; one is near Exit 9A of I-890; and one is a site served by an interchange (not open) between Exits 5 and 6 of I-90. All three are zoned for single family residential uses.

Of the remaining eight sites, three lacked adequate acreage to accommodate a major regional shopping center. One is near Exit 23 of I-887; one is near Exit 9A of I-890 and one is near the Menands Exit of I-787. This left five sites to be evaluated on the basis of other factors. The ratios of primary trade zone populations (persons living within a ten-minute drive time) of these sites were estimated as follows:

Exit 6 I-87 (2 sites)	0.61
Exit 7 I-890	0.68
Menands Exit I-787 (second site)	0.70
Proposed Site	1.00

The proposed site, in addition to superior accessibility to a large primary trade zone population, is the only site in reasonable proximity to the existing major retailing district (Colonie Center, Northway Mall, and Twenty Mall). Such proximity is essential if major facilities are to act in mutually supporting ways. The proposed location was the only site identified that is correctly zoned, sufficiently large, available, and capable of meeting the Applicant's objectives of primary trade zone market coverage.

No central business district site could be identified. Any such site would have to be located in the City of Albany in order to attract a regional market (Appendix D, "Alternative Site Analysis"). No site large enough was found in downtown Albany to accommodate a regional shopping center as proposed by the Applicant. Even a site smaller than the 100-acre size required for surface parking could probably only be assembled by a public agency with condemnation powers. This is contrary to local planning policies. Moreover, if such a smaller site were available, it would require a parking structure. Due to the high cost (approximately \$10,000 per stall) of such parking, the Applicant considers it financially unfeasible to develop a central business district site as a private undertaking.

There are approximately 23 acres in the Albany central business district, including the site of the Old Union Station, which are owned, jointly or in part, by the City and the State. This does not represent a feasible site for the proposed project because of its physical limitations. With or without adaptive reuse of the building, the site is potentially feasible for a specialized retailing center with foodstuffs, crafts, specialty clothing, and related lines, geared for the commuter market and for residents of revitalized neighborhoods. Faneuil Hall in Boston is a well-known example of such an "anchorless" mall. Because of concentration on a relatively narrow range of retail goods, this type of project is not directly competitive with, nor comparable to, traditional regional shopping centers.

#### 1.2.5 No Action

For purposes of this Statement, the no-action alternative can be taken to mean the denial of permits necessary to the construction of the project. It should be recognized, however, that the no-action alternative is not equivalent to preservation of the site in its existing state indefinitely. The no-action alternative is not capable of meeting the objectives of the Applicant. The no-action alternative would leave the site available only for low-intensity uses, contrary to the land use planning objectives of Guiderland and Albany County. Low-intensity uses which provide a reasonable economic return on the site exclude agriculture, open space, and recreation. Economically feasible low-intensity uses, such as housing, result in probable environmental impacts of the same type as the proposed project. However, alternative lower-intensity uses would not provide equal environmental control measures, such as runoff detention and habitat protection, as the proposed project. This is especially true were piecemeal development to occur. The no-action alternative would also result in the loss of an immediate opportunity for preservation, under public ownership, of approximately 65 acres in the Albany Pine Bush known as the Old State Road Parcel, a site which the Applicant proposes to dedicate to the City of Albany.

## 2.1 Human Factors

### 2.1.1 Population

The 1980 population within the Capital District Region (excluding Montgomery County) will be 780,000. Projected populations in 1990 and 2000 are 841,000 and 897,000, respectively (Appendix J, "Socioeconomic Report"). The total population equivalent to be served by the proposed project in 1980 would be 166,292, growing to 171,760 by 1985 (Appendix A, "Market Report").

Growth is expected to occur at the greatest rate in the suburban counties, such as Saratoga County. In 1960, Saratoga County had about 14% of the region's population, but by 1975, its share had increased to 19%. By 2000, Saratoga County's share should increase to about 23% of the region. Albany County's share of the regional population, by contrast, has been declining since 1960, when it was 42% of the total. By 1975, the proportion had dropped to 39% and will continue to decline through 2000 when it will reach 37%.

Although Albany County's share of the regional population is growing smaller, the number of persons living in the County will increase at a moderate pace through 2000. Shifts in population distribution have taken place between the cities, villages, and suburban and rural towns in Albany County. The most marked shifts have been from the central cities to the suburbs. In 1960, 60% of the county's population resided in the central cities of Albany, Cohoes, and Watervliet. By 2000, that proportion will decline to 46% and there will be a net population loss of 12,172 compared to 1960. The suburban communities of Bethlehem, Colonie, and Guilderland accounted for 28% of the county's 1960 population, but will have 38% of the population in 2000 and a net population gain of 48,265 over 1960 levels. However, post-1980 growth is expected to be fairly evenly distributed between the central cities and the suburbs. The older municipalities will gain 14,900 residents by 2000, while the suburbs will gain 14,700. The projected trends between 1980-2000 will, accordingly, reverse the substantial outmigration experienced in the central cities between 1960 and the late 1970's.

The 1980 population of Guilderland is estimated at 23,700, a 7.4% increase over the 1976 population. Population is expected to increase by 18.5% between 1980-2000 -- to 25,200 by 1990 and to 28,100 by 2000. Existing population in Guilderland is concentrated along the City of Albany/Town of Guilderland boundary. There is a notable concentration along Western Avenue in the Hamlets of Guilderland Center and Fort Hunter and the Village of Altamont (1976 population of 1,642).

### 2.1.2 Housing

During the past 20 years in Albany County, new housing construction has been concentrated in the suburbs. From 1960-1970, 86% of new home construction occurred in the County's suburban communities. The 1970 housing stock in the County was 98,412 units. An additional 12,546 units were built from 1970-1976; 56% of these units were in the suburbs, 33% in the central cities and 11% in rural communities. In the urban areas, however, there has been a fairly high rate of attrition in the older housing stock. The 1970 housing stock of Guilderland consisted of 6,306 dwelling units of which 83% were single-family units. Average household size in Guilderland was 3.1 persons.

### 2.1.3 Employment and Income

The regional labor area includes Albany, Montgomery, Rensselaer, Saratoga, and Schenectady Counties and had a September, 1978 labor force of over 360,000. More than 80% are employed in the non-manufacturing sectors, such as government, trade, and services (Appendix J, "Socioeconomic Report"). White collar workers make up 58% of the 4-county (Albany, Rensselaer, Saratoga, and Schenectady Counties) work force, reflecting the influence of State government employment. Wholesale and retail trade accounted for 20% of 1978 regional employment.

Unemployment in the regional labor area is lower than the state rate. In September, 1978, unemployment was 5.9%. Albany County unemployment has been lower than the regional rate; unemployment rates in the Guilderland have been lower than either. Retail trade is the single largest category of unemployment in the regional labor area; in May, 1978, more than 16% of unemployment insurance beneficiaries in the regional labor area previously had been employed in retail trade.

Average 1974 per capita income for the regional labor area was \$4,643, which was higher than the national average (\$4,572) but lower than the state average (\$4,903). In the City of Albany per capita income was \$4,748; Colonie had \$4,563 per capita and Guilderland, \$5,896 per capita (Appendix J, "Socioeconomic Report").

### 2.1.4 Business and Industry

The region is a long-established major center of government, finance, transportation, and manufacturing in upstate New York. However, several sectors of the regional economy, notably manufacturing and the construction industry, have declined in recent years. From 1972-1976 manufacturing sector employment dropped 7.5%; during the same period, construction employment dropped 38.3%. It has been growth in the nonmanufacturing sector, particularly state government, which has helped maintain the regional economy. Government is the single largest employer, accounting for nearly 30% of regional employment in 1978. Nationally, government sector employment was 15.1%; in New York State, overall, it was 18.9%.

Wholesale and retail trade is a substantial part of the regional economy. Total retail sales of shoppers goods in 1972 were \$551 million; it is estimated that there is more than \$134 million additional in potential sales available in the marketplace (Appendix I, "Econometric Report"). The location of the trade sector has shifted from the central cities to the suburbs. Between the economic census years 1967 and 1972, the City of Albany, for example, lost 141 retail establishments. From 1958-1972, there was a 75% constant dollar (inflation adjusted) decline in downtown Albany retail sales. Over the same period, retail and wholesale trade has increased in the suburbs.

#### 2.1.5 Land Use

Historically, land use and development in Albany County were strongly shaped by the area's strategic location at the confluence of the Hudson and Mohawk Rivers. The Port of Albany, the only inland deepwater port in the region open year-round, has been only one component of the transportation system which has influenced the growth of Albany County. Urban growth has occurred in a radial pattern outward from the City of Albany along major arterials, (Figure 1).

Albany County is approximately 158 square miles in area and is comprised of the following proportions of land uses:

Residential	8.9%
Commercial and Service	2.1%
Industrial and Extractive	1.5%
Transportation and Utilities	2.1%
Agriculture, Recreation and Open Space	83.6%
Water	1.8%

The Town of Guilderland has an area of approximately 58 square miles in the following proportions of land uses:

Residential	9.4%
Commercial and Services	1.6%
Industrial and Extractive	1.8%
Transportation and Utilities	1.6%
Agriculture, Recreation and Open Space	84.3%
Water	1.3%



Development in Guilderland is concentrated along Western Avenue and Carmen Road (Route 146) in the eastern part of the town. Industrial land uses are concentrated in the Northeast Industrial Park (Skiroule Snowmobiles, Scott Paper, Chrysler Motors, and J.J. Newberry).

The major portion (150 acres) of the project site is in Guilderland. Most of this area is zoned B-2 (general business). Most of the area surrounding the B-2 zoning district is zoned COR (conference/office/research). The 19 acre portion of the site in the City of Albany is within the R-1 (single family residential) zoning district. Relevant land use development plans show uses compatible with existing zoning and include The Town of Guilderland Development Plan, 1969; The City of Albany Overall Development Plan, 1977; The Albany County Land Use and Development Plan, 1978; and The Capital District Regional Development Plan, 1978. There are no known plans of any public agency to acquire land on the site.

The site lies along the southern boundary of a geographic area bounded by Fuller Road, Western Avenue, Carmen Road, the Albany/Schenectady County line and Central Avenue (Figure 2). This area is known as the "Albany Pine Bush" and contains areas which are environmentally sensitive by virtue of sandy soils, regional groundwater recharge areas, pitch pine - scrub oak forest habitats, or by combinations of these factors.

Land use on-site is classified as urban vacant since it is closely associated with two major surface arterial streets and urban development. There are several single family houses and mobile homes on the site. Commercial land uses on the site include a motel and a riding stable. Within a few hundred yards of the site are office buildings, apartment buildings, police and fire stations, a community shopping center, motels, restaurants, gas stations, a nursing home, community centers and social clubs, a construction yard, schools, a cemetery, trailer courts, single-family houses, an electric substation, and a tandem trailer terminal (Figure 3).

The site is bounded on the east by the New York State Thruway, a 4-lane divided Interstate highway. The view of the site from the road is limited by the dense growth of brush and trees along embankments for most of the roadside and by the high speed of traffic passing the site at a right angle. There are approximately 400 lineal feet of visually accessible openings along the Thruway. One is at a point 700 feet south of the Washington Avenue Extension overpass; it is 300 feet wide and penetrates some 400 feet of emergent wetland vegetation (part of a regulated wetland). The other is approximately 700 feet further south and is 100 feet wide, offering a view of approximately 600 feet into the site of 1 acre of emergent vegetation (which is not part of a regulated wetland). At a speed of 55 mph, the first area offers a glimpse of just under 4 seconds and the second area, one of just over 1 second duration. Neither area includes a body of open water.

Roughly parallel to the Thruway on the east is the Northway/Fuller Road Alternate which is a high-speed arterial highway providing access between the I-87/I-90 interchange and Western Avenue. The Northway/Fuller Road Alternate is separated from the Thruway by a 150-500 foot wide median with trees which block the site from view.

East of the Fuller Road Alternate is Executive Park Tower, a 10-story office building from which parts of the site are visible. Next to this building is Stuyvesant Plaza, a community shopping center. This is bordered on the north and east by an established single-family residential area, part of the McKownville neighborhood. To the east is the State University of New York at Albany (SUNYA) and the State Office Campus (SOC). On the south of Western Avenue are more single-family neighborhoods and highway-commercial land uses.

The site is bounded on the south by urban land uses along Western Avenue, presently a four-lane undivided arterial. The New York State Department of Transportation is widening Western Avenue to five lanes (the fifth lane to be used for left turns to and from adjoining properties). It is anticipated that construction will be completed by early 1980. On the north side of Western Avenue are mortuary, a church, highway-related commercial uses, a trailer court, a stable, and two single-family residential areas (Lehner Terrace and Gabriel Terrace). On the south side of Western Avenue are more highway-commercial businesses and a cemetery. Behind these are single-family housing, apartment buildings, a trailer court, an elementary school, and vacant land. Little of the site is visible from Western Avenue.

On the west, Rapp Road, a 2-lane narrow road between Western Avenue and Washington Avenue Extension, contains several residences, vacant land, a stable, and a Niagara-Mohawk power line right-of-way which runs east-west across the site. To the northwest are a nursing home, a high-rise apartment building for the elderly, and vacant land. Portions of the site are visible from Rapp Road but views are limited by topography and vegetation.

As it passes the site on the north Washington Avenue Extension is a 4-lane divided arterial. There is a house trailer on its southern frontage road. On the northern side there are a few houses between the northern service road and the Thruway as it curves to the west. To the west are a police and fire station and community association buildings. The view from Washington Avenue is predominantly of trees, except where the road crosses the Thruway. There, part of the site is visible.

Recreational use of the site is neither expressly permitted or prohibited by current landowners. The main portion of the site has been used for trail bike and horseback riding, target shooting, hiking, and nature observation.

There are no archaeological or historical remains on the site presently listed on the National Register of Historic Places and none are under consideration for nomination by the State Historic Preservation Officer. One structure, at 1 Lehner Terrace, may be eligible and is being studied further by the Applicant's archaeological consultant.

#### 2.1.6 Energy Use

Present consumption of electrical energy in the region is estimated at 9.76 billion kWh per year. Gas and electric service to the site area is provided by Niagara-Mohawk Corporation. Annual consumption of gasoline and other transportation fuels in the region is an estimated 333 million gallons per year. (Appendix M, "Energy Impact Report.")

#### 2.1.7 Transportation and Traffic

Albany County is served by two major Interstate highway systems - I-90 (east/west) and I-87 (north/south). I-90, west of Albany County, and I-87, south of the County, comprise the New York State Thruway. The Thruway south of Albany County provides access to New York City and points south; I-90 west of the County links the region to Buffalo and points west. East of Albany County, I-90 becomes the Berkshire Spur, linking the Thruway to Boston and other points east. The Adirondack Northway (I-87) originates in Guilderland and continues north to Montreal. The project site is immediately adjacent to the interchange of the Northway and the Thruway. Immediate access to the site would logically be developed through those parcels fronting on the local connector roadway system including Washington Avenue Extension, Western Avenue, and Rapp Road.

Existing traffic conditions along Western Avenue in the vicinity of the site are congested during the morning and evening peak commuter rush hours, a situation which the previously mentioned NYSDOT's planned addition of a fifth lane is intended to alleviate. There are also many curb cuts along both sides of Western Avenue; these tend to reduce overall travel speeds. Along Washington Avenue Extension, congestion occurs at the signalized intersection with Fuller Road. Other areas in the area which now experience congestion during peak commuter hours are the I-90/I-87 cloverleaf interchange and the Northway/Fuller Road alternate ramps to western avenue. These traffic operating conditions are influenced by the nearby State Office Campus and the State University of New York at Albany campus and the limited number of routes available for traffic to and from these areas (Appendix C, "Traffic Impact Study").

#### 2.1.8 Community Facilities and Services

Albany County residents are served by five primary health care facilities having a total licensed bed capacity of 1,566. As of April, 1978 there were 1,005 physicians registered in the County including 794 patient-care physicians.

The doctor/patient ratio for the County (one patient care physician per 362 residents) is more than 3 times greater than the recommended minimum standard (Appendix J, "Socioeconomic Report"). Use of the medical/surgical and obstetrical services in some of the County's major primary health care facilities exceed optimum occupancy rates defined by the New York State Health Department. Overutilization is due to the high percentage of physicians practicing in the County relative to surrounding areas. Four neighboring counties are classified by the State as "physician shortage counties."

The project site and its surrounding area are part of the Albany County Sewer District. Wastewater from this area is treated by the Albany County North Wastewater Treatment Plant. Guilderland maintains collector and interceptor sewers. Guilderland's contracted share of system capacity is 1,100,000 gallons per day to the Dillenbeck Pumping Station. Guilderland now uses about 465,000 gpd of its contracted capacity. The flows for unconnected lots, undeveloped land, and the Church Road sewer extension now under construction will total 280,000 gpd. This leaves 355,000 gpd reserve capacity (Appendix J, "Socioeconomic Report").

The Guilderland municipal water supply system consists of five water districts with a system capacity of 3.6 mgd. The project site is within the Westmere Water District which has a 12-inch main along Western Avenue. Current water use is about 67% of design capacity of the District's system. The District is considering additional supplies from Watervliet Reservoir, in the near future, and in the long term from the Hunger Kill (Appendix J, "Socioeconomic Report").

Guilderland owns and operates a sanitary landfill expected to reach capacity in 1982. Solid waste is transported to the landfill by municipal and commercial haulers and by individual residents at a rate of 108 tons per day. In addition to residential and commercial wastes, solid waste from some light industrial facilities is also accepted. Guilderland expects to participate in the ANSWERS project, a resource-recovery solid waste management plan, scheduled to begin operation in 1980 (Appendix J, "Socioeconomic Report").

Guilderland residents and businesses receive police protection primarily from the Guilderland Police Department, which is composed of a chief, two juvenile aid officers, an arson investigator, and six patrol officers. An additional police officer has been authorized. The department operates five patrol cars. The police/population ratio in Guilderland is 0.45 officers per 1,000 residents. The national average is 2.1 and the average for communities in the 10,000-24,999 size range is 2.05. The department does not operate on a 24-hour basis. It provides police services from 8:00 AM to 4:00 AM, Thursday through Sunday, and from 8:00 AM through midnight, Monday through Wednesday. Back-up services are provided by the officers of a New York State Police substation in Guilderland which is staffed by 13 officers with four vehicles. The Albany County Sheriff Department provides lock-up facilities (Appendix J, "Socioeconomic Report").

Most 1977 crimes in Guilderland were against property. Criminal mischief (346 cases) was the most frequently reported offense, followed by petty larceny (258 cases) and burglary (245 cases). Of the 126 arrests made that year, 100 were for violations and misdemeanors. Grand larceny and burglary were the most common felonies. Juvenile delinquency is the major crime control problem in Guilderland; 1977 crime rate was higher among juveniles than in the adult population (Appendix J, "Socioeconomic Report").

The Town of Guilderland receives fire protection from six volunteer fire departments. Fire protection services are generally regarded as excellent. There is one fire fighter for every 22 parcels of land (45.5 fire fighters per 1,000 parcels) which is a ratio in excess of the standard of 2 per 1,000 dwelling units for a suburb or fringe community in the 10,000-30,000 population class. The project site area is within the jurisdiction of the Westmere Volunteer Fire Department, with 55 men and 5 vehicles. The department's fire fighting equipment has a pumping capacity of 4,750 gallons per minute (Appendix J, "Socioeconomic Report").

The Town of Guilderland operates a Town Supervisor/Town Board form of municipal government. The Town Supervisor acts as the chief executive and fiscal officer and works in cooperation with the Town Board in discharging the town's legislative functions. Four councilors serve on the Town Board. Two town justices carry out the town's judicial administration. A Comptroller manages the town's finances. Other elected officials include the Town Clerk, the Receiver of Taxes, and the Highway Superintendent. Non-elected town employees are an additional 80 persons (Appendix J, "Socioeconomic Report").

Student enrollment in the Guilderland Central School District declined 14% between the 1969-1970 and 1978-1979 school years, reflecting nationwide demographic trends. The number of pre-school age children in the school district dropped 30% during the same period. Since 1970, 4 elementary schools in Guilderland have closed. The school district now has a vacancy rate of 8% (Appendix J, "Socioeconomic Report").

The only publicly-owned outdoor recreation facility in Guilderland is Towasentha Park. Its 110 acres can accommodate approximately 760 persons. Additional outdoor recreation is provided by private and commercial facilities offering activities ranging from golf to target-shooting and camping. Indoor recreational facilities are provided by the town's school gymnasiums and meeting halls. All indoor and outdoor recreational facilities receive heavy use, primarily by town residents. Need currently exists for a public swimming pool and skating rink (Appendix J, "Socioeconomic Report").

## 2.2 Physical Factors

### 2.2.1 Geology and Soils

The elevation of bedrock below the site surface ranges from more than 100 ft above sea level on the east to about sea level on the west. This bedrock occurs about 130 to 300 feet below the surface. Regional bedrock types are jointed, fractured, and folded sandstones and shales (Dineen, Robert J, 1975, Geology and Land Uses in the Albany Pine Bush, New York State Geological Survey Bulletin 75; Albany, New York; 23 pp).

A generalized stratigraphic section is shown in Figure 7. The basal unit is glacial till (McKownville till ridge) which is overlain by approximately 60 feet of glacial lake clays. The surface unit over most of the site is a loose to medium compact yellow brown to gray brown fine sand with a trace of some silt and occasional silt lenses. In places, the sand is overlain by up to two feet of peat and organic silt (Appendix F, "Soils Report").

Soil types are shown in Figure 8. Colonie and Elnora soils are deep and excessively-well to moderately-well drained. Granby and Stafford soils are very poorly and somewhat poorly drained, respectively. Colonie and Elnora soils are rapidly permeable, while Granby and Stafford soils are only slowly permeable due to organic matter and to seasonal high water table conditions. All soils, except where peat and organic silts are present, have a similar texture; average grain size is approximately 0.16 mm (Appendix F, "Soils Report", and Appendix G, "Water Resources Report"). All soils on the site are essentially free from rockiness and are potentially viable for pasture use. They are otherwise unsuited to commercial agriculture.

Elevation on the site ranges from less than 234 feet on the southeast corner to over 320 feet on the northwest (Sheet T-1). Slopes range from less than 1% to more than 20%. Landforms consist of sand dunes, sand plains, and wetlands.

Mineral resources on the site consist of fine grained sand suitable for fill. The sandy soils on the site are susceptible to wind and water erosion when bare. Existing levels of erosion are low, due to extensive vegetation, but even bare soils on the site are somewhat resistant to wind erosion due to the presence of a crust-forming silt.

The region has sufficiently low seismic potential that special design consideration of earthquake resistance is limited to major facilities such as nuclear power stations and large dams. There are no known faults on the site or in its vicinity.

## 2.2.2 Hydrology and Water Quality

The site is located within the watershed of the Krum Kill. Figure 3 shows the location of surface water features.

Drainage from the site is generally to the east and leaves the site through culverts beneath the Thruway. In the spring, when water table levels are high, saturated soils conditions occur over parts of the site, particularly in the wetland in the center of the site and in other low-lying areas, such as the former pond at the southeastern corner of the site (Figure 9). The flow of the Krum Kill on the site (Figure 10) is primarily derived from groundwater discharge and is on the order of 1 cubic foot per second (cfs) or 600 thousand gallons per (gpd) day. Stormwater runoff increases the volume of flow temporarily, but due to the small size of the watershed (approximately 314 acres upstream of and including tributary portions of the site) it does not have a great influence on an average annual basis. Table 2 shows discharge for storms of 2-, 5-, 10-, 21- and 100-year recurrence intervals. The site does not contain a flood plain of a major stream.

Surface water samples were taken from the headwaters of the Krum Kill (a "Class A" stream segment) and at McKownville Reservoir in June 1978 and January 1979. Existing water quality characteristics are influenced by groundwater conditions of high alkalinity, iron and manganese content, and by non-point source discharges of urban runoff which contribute relatively high levels of dissolved solids, including chlorides (Table 3).

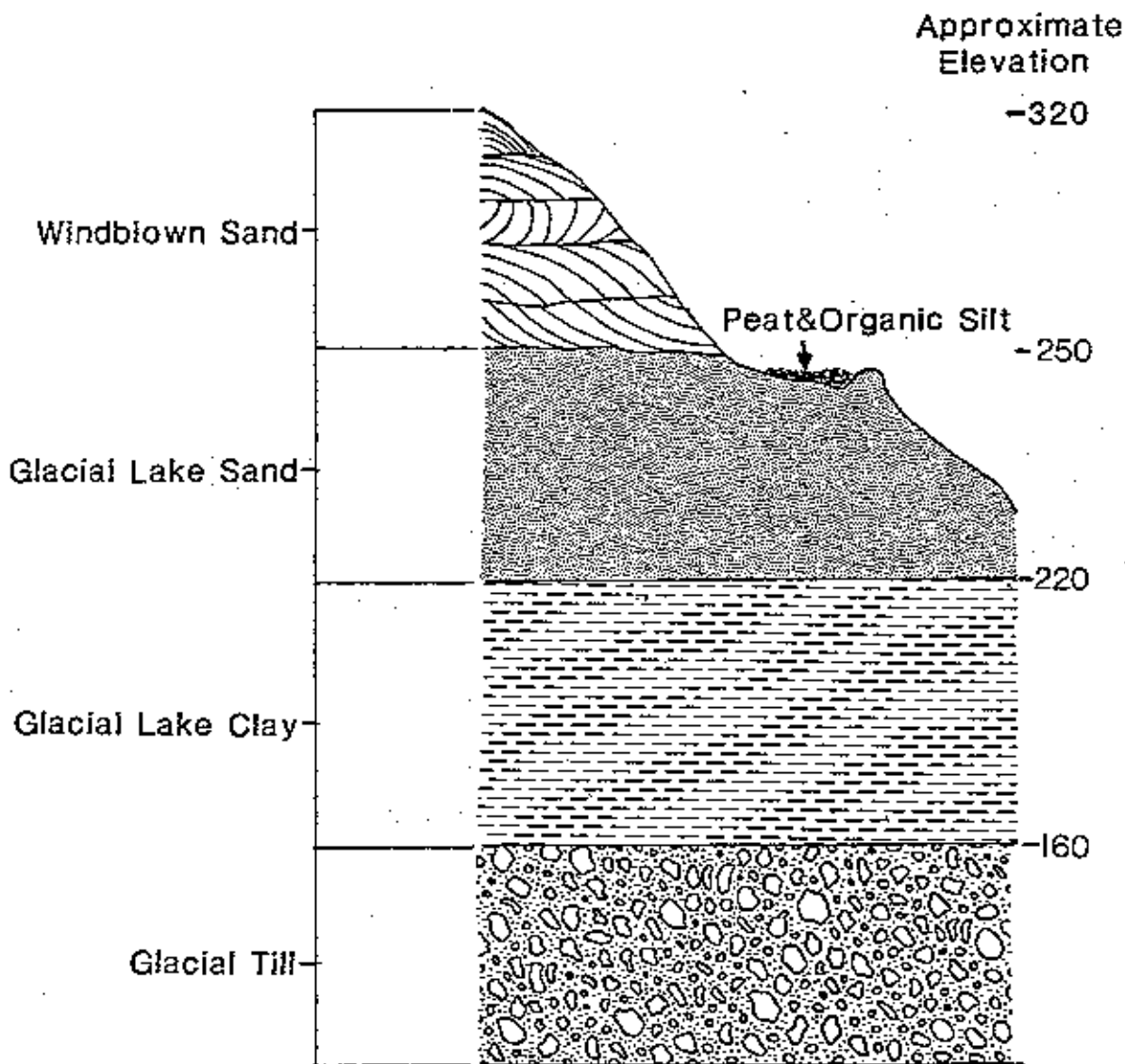
Because of soil and cover characteristics, sediment sources are primarily from urban runoff entering the site. Sediment accumulates from these sources in the marshy area in the southeast corner of the site. Water in the Krum Kill on the site is enriched in nutrients (Appendix G, "Water Resources Report").

The site is in the watershed of the McKownville Reservoir (a "Class A" stream segment), once used by the McKownville Water District as its primary source. The District now purchases Watervliet Reservoir water through the Westmere Water District.

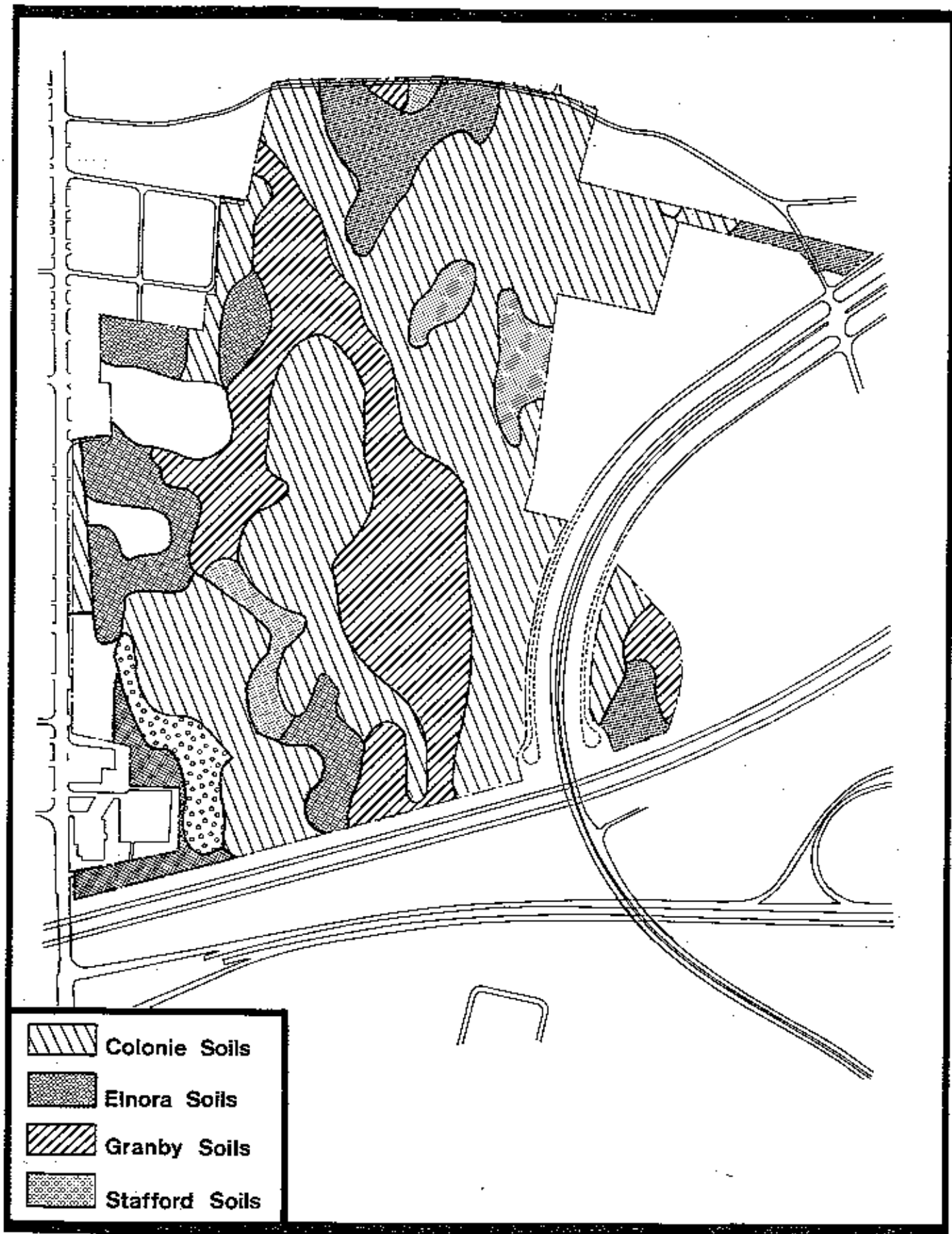
There are no existing discharges of point sources of pollution (outfall sewers) on the site. Some existing houses on the site discharge domestic wastes to groundwater. Urban runoff from a portion of Western Avenue flows in to the headwaters of the Krum Kill on the site.





Precipitation which does not become surface runoff or which is not evaporated or transpired by vegetation is potential groundwater recharge. Based on annual recharge of 8.53" (Appendix G, "Water Resources Report"), and an area of 169 acres, the potential annual average recharge would be about 39 million gallons, or 106 thousand gallons per day. Wetlands and streams on the site are areas of groundwater discharge however. Groundwater which enters the surface water system via springs, wetlands, and small perennial streams becomes surface runoff.

**FIGURE 7**  
**Generalized Geologic Cross Section**  
**Under the Site**







-  Colonie Soils
-  Elnora Soils
-  Granby Soils
-  Stafford Soils

**SOILS**

**FIGURE**

**8**

0 1600 3200ft



TABLE 2

STORM WATER FLOWS FROM THE SITE UNDER  
EXISTING CONDITIONS

<u>Recurrence Interval</u>	<u>Peak Flow Rate*</u>
2 year	39.2
5 year	77.1
10 year	101.2
25 year	138.8
100 year	176.0

\*cubic feet per second (cfs)

Source: Storm Water Management Report  
(Annex A of Appendix G, "Water Resources Report")

TABLE 3

WATER QUALITY ANALYSES OF KROM KILL  
ON SITE AND OF MCKOWNVILLE RESERVOIR

Parameter	Concentration Krom Kill 6/29/78		Concentration Krom Kill 3/12/79		Concentration McKownville 6/29/78		Concentration McKownville 1/10/79	
Temperature	20 °C				22 °C		4 °C	
Color	16	units	4	units	15	units	90	units
Turbidity	12	NTU	24	NTU	3	NTU	16	NTU
Alkalinity								
Phenolphthalein	0	mg/l	0	mg/l	0	mg/l	0	mg/l
Total	132.5	mg/l	146.8	mg/l	133.6	mg/l	160.5	mg/l
Chloride	42.1	mg/l	60.1	mg/l	133.9	mg/l	167.9	mg/l
Cadmium	< 0.006	mg/l	< 0.006	mg/l	< 0.006	mg/l	< 0.006	mg/l
Chromium	0.01	mg/l	0.02	mg/l	0.01	mg/l	< 0.01	mg/l
Copper	< 0.01	mg/l	< 0.01	mg/l	< 0.01	mg/l	< 0.01	mg/l
Iron-total	4.0	mg/l	2.8	mg/l	4.9	mg/l	0.62	mg/l
Lead	0.05	mg/l	0.06	mg/l	0.05	mg/l	0.05	mg/l
Manganese	0.33	mg/l	0.41	mg/l	0.21	mg/l	0.41	mg/l
Mercury	0.02	microg/l	N.A.		0.02	microg/l	N.A.	
Nickel	N.A.		N.A.		N.D.		0.02	mg/l
Sodium	N.A.		N.A.		N.D.		101.2	mg/l
Zinc	0.18	mg/l	0.10	mg/l	1.2	mg/l	2.01	mg/l
Nitrogen								
Ammonia as N	0.36	mg/l	0.28	mg/l	0.01	mg/l	8.30	mg/l
Nitrate as N	0.49	mg/l	1.3	mg/l	0.41	mg/l	1.42	mg/l
Phosphate								
Ortho as P	0.06	mg/l	0.10	mg/l	0.01	mg/l	0.02	mg/l
Total as P	0.08	mg/l	0.36	mg/l	0.02	mg/l	0.03	mg/l
Oil & Grease	N.A.		N.A.		N.A.		< 2.0	mg/l
Phenol	N.A.		N.A.		N.A.		0.012	mg/l
pH	7.6	units	7.7	units	8.1	units	7.6	units
Carbon Dioxide	12.5	mg/l	N.A.		7.5	mg/l	N.A.	
Dissolved Oxygen	12.5	mg/l	N.A.		15	mg/l	N.A.	
BOD	N.A.		N.A.		N.A.		2.5	mg/l
Solids								
Total	298	mg/l	370.9	mg/l	485	mg/l	540.2	mg/l
Suspended	10.0	mg/l	42.9	mg/l	10.0	mg/l	8.2	mg/l
Dissolved	288	mg/l	328	mg/l	475	mg/l	532	mg/l
Conductivity	422	µmhos/cm	470	µmhos/cm	730	µmhos/cm	720	µmhos/cm
Total coliform	1880/100	ml	460/100	ml	220/100	ml	N.A.	
Fecal coliform	N.A.		N.A.		N.A.		760/100	ml

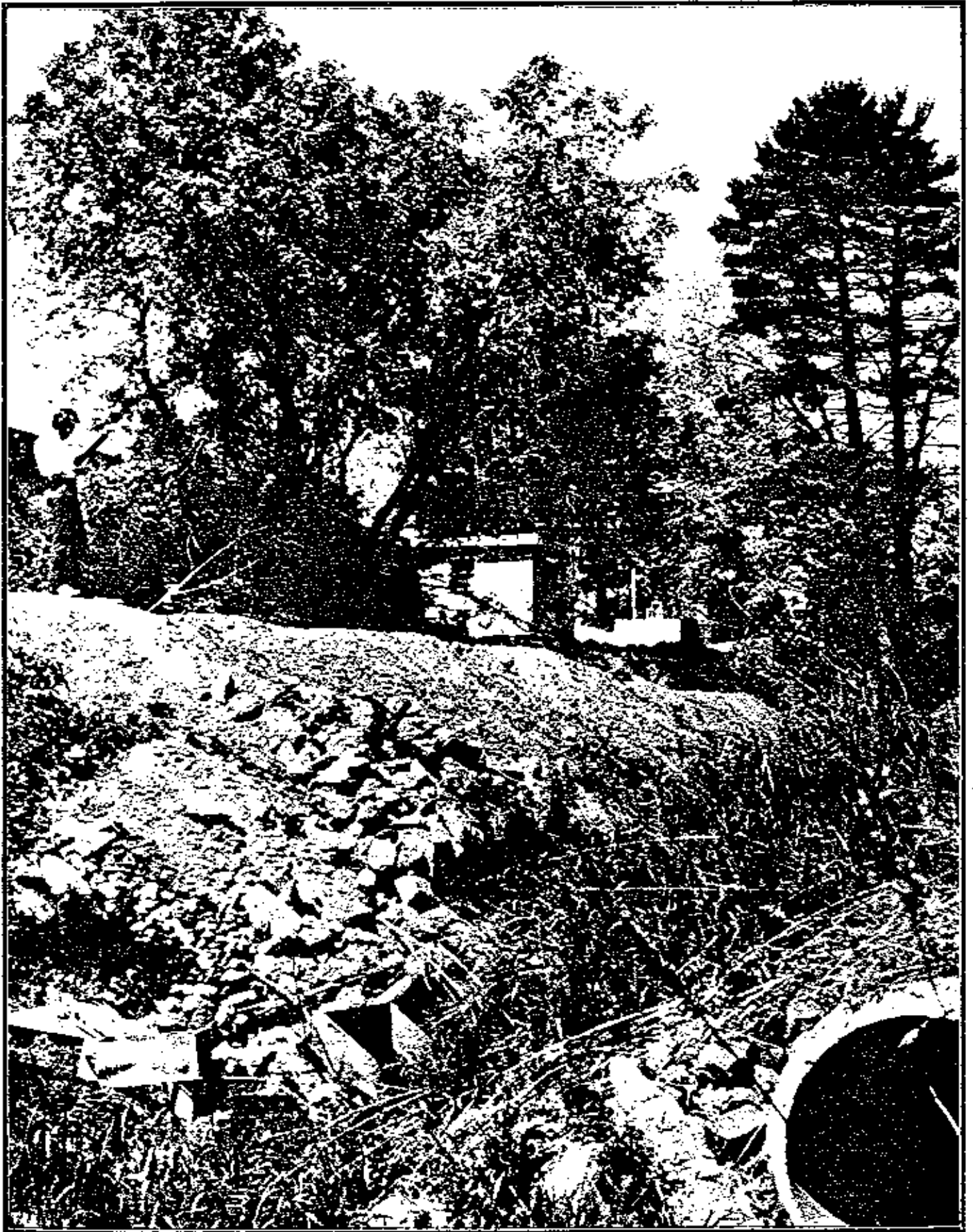
N.A. = not analyzed

Source: Water Quality Laboratory of JASON M. CORTELL and ASSOCIATES INC., Waltham, Massachusetts



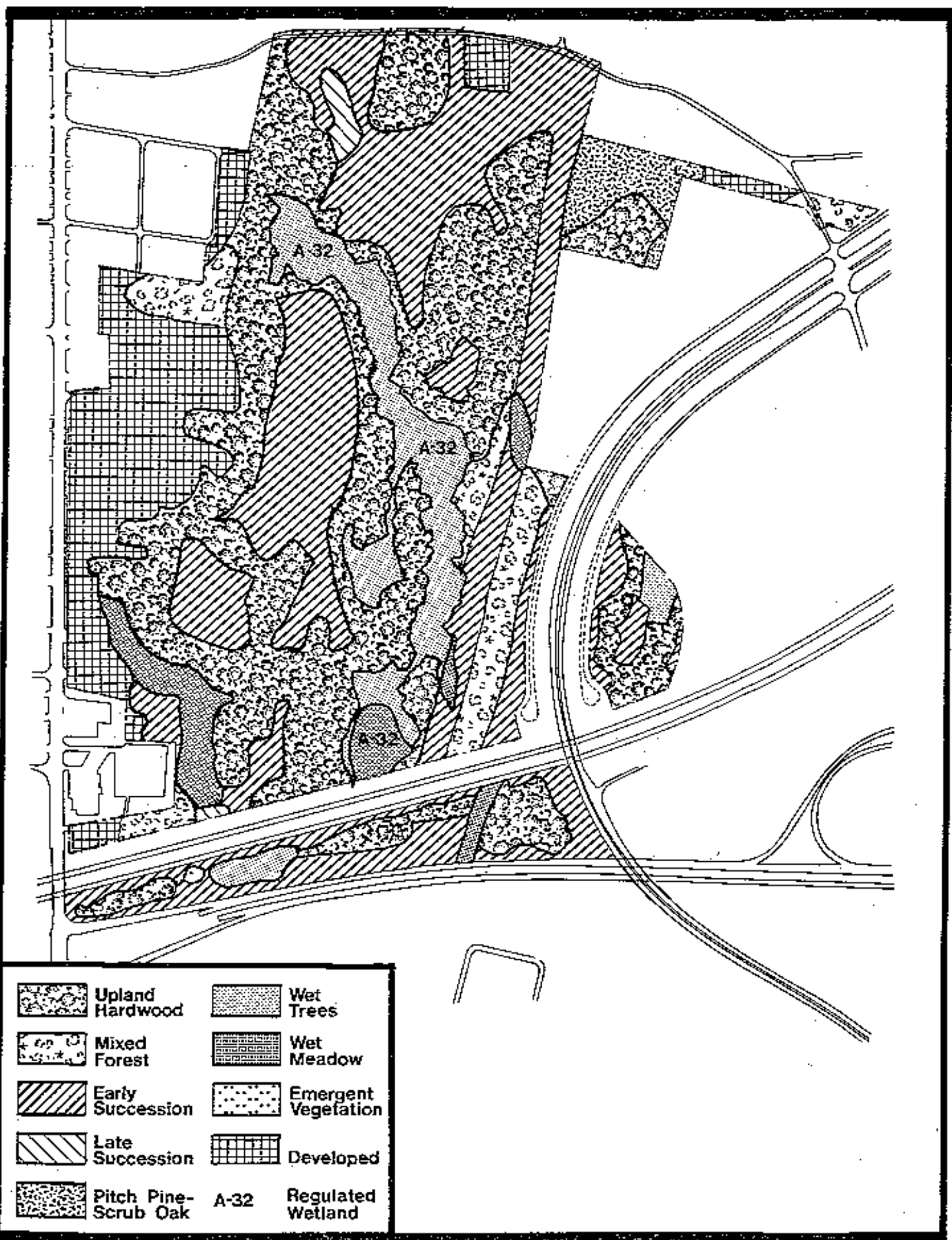
**Segment P257 of the Krum Kill,  
on the Southeastern Corner of the Site**

**Figure 9**



**Krum Kill, Upstream of P257 on the Site**

**Figure 10**



# VEGETATION

Source: JMCA

0 1600 3200



FIGURE

The volume of this groundwater-derived runoff exceeds recharge on site. Therefore, for the site as a whole, there is an effective net discharge of groundwater on an average annual basis. A portion of the water entering the site as groundwater inflow from the northwest traverses the site as underflow and leaves to the south as groundwater outflow. It is estimated that outflow from the site averages 20 million gallons per year compared to inflow of 152 million gallons. The difference is accounted for as runoff and evapotranspiration (Appendix G, "Water Resources Report").

In addition to the groundwater occurring on the site, there is an aquifer in the region (the Elsmere gravel blanket) which consist of sand and gravel (stratified drift) confined by overlying sediments. It occurs to the northeast and southwest of the site and is thin or absent under the site. If the unit were present under the site, it would probably be overlain by more than 50 feet of relatively impermeable glacial lake clays. Its recharge area does not occur within several miles of the site.

There are no known wells on the site or in its immediate vicinity.

Groundwater levels vary seasonally. In July, 1978, a series of water table measurements were taken which found the elevation of groundwater to range from 280 feet above sea level to 226 feet above sea level, at depths from 0-35 feet below the surface. The seasonal high water table occurs in the spring, where most of the site below elevation 270 is saturated and when standing water covers 20 or more acres in the center of the site.

Groundwater quality, based on analyses of a samples from a spring-fed stream on the site, is moderately hard and the water has high levels of iron and manganese (3.9 and 0.16 mg/l, respectively) (Appendix G, "Water Quality Report").

### 2.2.3 Air Resources

The climate in the Albany area is influenced by the region's location in the Hudson Valley and moderating effects on temperatures from the maritime climate of extreme southeastern New York state. Summers are moderate and winters are usually cold. The area's winds have moderate velocities; the strongest winds come from the west and northwest during most months. Normal annual precipitation is 33.36" (Appendix H, "Air Resources Report").

From July 1978 until February 1979, a program of meterological and air quality monitoring was conducted in the vicinity of the proposed project site. Continuous monitoring of carbon monoxide (CO) and wind speed and direction were carried out with a Beckman Model 866 NDIR CO Analyzer and a Climatronics Windmark Model III meteorological station.

Station 1 was located on the northern side of Western Avenue opposite Johnston Road (next to Tina Marie's Market); this station was in operation from July, 1978 until November, 1978. The second station was located on the southern side of Western Avenue opposite the Fuller Road Alternate off-ramps (at the Guilderland Chamber of Commerce building). This station was in operation from November, 1978 until February, 1979. Station locations are shown on Figure 3.

The State and Federal standards for CO require that average 1-hour concentrations do not exceed 35 parts per million (ppm) more than once per year and that average 8-hour concentrations do not exceed 9 ppm. The results of the monitoring indicated no violations of one hour or eight-hour standards.

	<u>Highest</u>		<u>Second Highest</u>	
	<u>1-Hour</u>	<u>8-Hour</u>	<u>1-Hour</u>	<u>8-Hour</u>
Station 1	15.5 ppm	6.6 ppm	14.6 ppm	6.6 ppm
Station 2	20.3 ppm	8.4 ppm	18.5 ppm	7.7 ppm

Statistical analysis, however, showed that the maximum 1978 1 and 8-hour concentrations would be:

	<u>1-Hour</u>	<u>8-Hour</u>
Station 1	20.9 ppm	10.0 ppm
Station 2	23.6 ppm	9.6 ppm

Thus, there might be existing violations of the eight hour standard. Background concentrations of CO were estimated at 1.5 ppm (Appendix H, "Air Resources Report").



## 2.3 Biological Factors

### 2.3.1 Vegetation

As shown in Figure 11, the site contains a variety of vegetative communities. Table 4 gives the acreage and percent coverage of each type.

Upland hardwood forests total 60 acres, are located primarily in the northwest and southeast portions of the site, and are dominated by moderately mature (less than 50 years old) deciduous trees such as black oak, red oak, large-toothed aspen, and red maple.

The four areas of mixed forest on the site total 11.7 acres and are dominated by moderately mature trees, both hardwood and softwood, including white oak, red oak, red maple, grey birch, white pine and pitch pine, and several species of shrubs.

Although there are several patches too small to map, the principal on-site occurrence of the pitch pine-scrub oak community is a 3.9 acre area in the northwest corner of the site. Although this area departs from the expected species composition because of insufficient burning in recent years, it is the only part of the site which closely resembles the classic Albany Pine Bush forest (Appendix E, "Vegetation and Wildlife Report"). Tree species include pitch pine, quaking aspen, large-toothed aspen, black cherry, and red oak. Dominant shrub species include dwarf and scrub oaks, and red cherry.

There are 1.7 acres of immature (late successional) forest, including trees of grey birch, black cherry, red oak, large-toothed and quaking aspen, ash, black locust and pitch pine.

There are 47.2 acres of the site in the early stages of forestation, dominated by non-woody species such as goldenrod, aster, yarrow, bush clover, milkweed, horsetail, vetch, plantain, upland sedges, sow thistle, wild carrot, ragweed, lupine, St. Johnswort, sheep sorrel, and a variety of grasses.

There are 16 acres of regulated wetland (#A-32) on the site which divide the site into two roughly equal portions. There are 14 acres of the wetland dominated by deciduous swamp covertype trees, including red maple, elm, swamp white oak and willow. There are 2 acres of the regulated wetland of the emergent vegetation covertype, containing sedges, boneset, jewelweed, spike rush, scattered highbush blueberry, willow, red maple and quaking aspen. This occurs in two areas, one along the Thruway and one along the power line right-of-way.

In addition to the regulated wetland, there are 5 acres of wet meadow vegetation including the species listed above as representative of the "emergent vegetation" cover type.

No plant species listed as threatened or endangered by the U.S. Office of Endangered Species are present on the site. There are at least seven plant species on the site (butterfly milkweed, American bittersweet, interrupted fern, cinnamon fern, Prince's pine, sheep laurel and winterberry) which may not be removed without owner's consent under Article 9-1503 ECL of New York Statutes.

TABLE 4

THE NUMBER OF ACRES OF EACH VEGETATIVE COMMUNITY  
TYPE LOCATED ON THE PROJECT SITE

Upland Communities	% of Total Site Acreage	Acreage	
Upland Hardwoods	35.5	60.0	
Mixed Forest	6.9	11.7	(Includes 0.7 acres located northwest of Rapp Road)
Pitch Pine - Scrub Oak	2.3	3.9	
Late Succession	1.0	1.7	
Early Succession	28.0	47.2	
Developed	13.8	23.3	
TOTAL	87.5	147.8	
Wetland Communities			
Wetland Trees	8.3	14.0	(includes 14.0 acres regulated by NYDEC)
Wet Meadow	4.0	6.7	(includes 2.0 acres regulated by NYDEC)
Wetland Mixture	0.2	0.3	
TOTAL	12.5	21.0	

Total Number of Acres on the Project Site - 168.8

Source: Appendix E "Vegetation and Wildlife Report"

The site was chiefly pasture as recently as 30 years ago and is now in varying stages of succession. Based on soil and climate alone, the expected long-term trend of succession over the upland part of the site is toward the pitch pine-scrub oak association. There are, however, several factors which have inhibited this trend, including fire suppression and a high water table in parts of the site. In a few early successional areas, the extreme aridity of the soil and effective competition of herbaceous species have retarded growth of a pitch pine-scrub oak community, allowing only a few individual trees to become established. Throughout most of the site, the early success of other species has resulted in adverse shading conditions. This retards the germination and growth of pitch pine-scrub oak association species and is effecting slow but significant changes, both chemical and biological, in the upper soil horizon. These changes perpetuate present trends towards a northern deciduous hardwood-hemlock-white pine forest.

Table 5 presents existing vegetation acreage in the areas of proposed transportation improvements.

Table 5

THE NUMBER OF ACRES OF EACH VEGETATIVE COMMUNITY  
TYPE LOCATED ON THE TRANSPORTATION IMPROVEMENTS AREA

Washington Avenue Extension - West of Thruway

Upland Communities	Acreage
Upland Hardwoods	3.7
Early Succession	2.1
Wetland Communities	
Wetland Trees	0.8
	6.6 TOTAL

Source: Appendix E "Vegetation and Wildlife Report"

### 2.3.2 Wildlife

Species of mammals which have been observed, or for which suitable habitat occurs on the site, include rabbit, chipmunk, muskrat, opossum, star-nosed mole, hairy-tailed mole, field mouse, jumping meadow mouse, deer mouse, white-footed mouse, red-backed vole, raccoon, striped skunk, woodchuck, and red and grey squirrels. White-tailed deer may make transient use of the site.

Birds which have been observed on the site include rufous-sided towhee, common crow, cardinal, red-winged blackbird, Eastern phoebe, and blue jay. Several other species common in the region may also visit or inhabit the site. Due to lack of permanent open water, however, there is little suitable habitat for waterfowl (Appendix E, "Vegetation and Wildlife Report").

The site provides actual or potential habitat for three species of reptiles and eight species of amphibians including spring peeper, bullfrog, green frog, American toad, spotted salamander, dusky salamander, and common gartersnake (Appendix E, "Vegetation and Wildlife Report"). Snapping and painted turtles may use temporary water on the site during parts of the year. Four species at the periphery of their ranges, which occur on the site and elsewhere in the Albany Pine Bush are: Fowler's toad, spadefoot toad, hognose snake, and worm snake.

A variety of insect species occurs on the site. The buck moth may occur in the northwest corner of the site, but the presence of a breeding population could not be confirmed. A colony of the Karner Blue Butterfly occurs on the site.

The Karner Blue Butterfly, listed as threatened by the U. S. Office of Endangered Species, occurs at three locations. The major concentration is on a one-acre hillside (Figure 12); its 1978 second brood population is estimated at 1500 (Appendix E, "Vegetation and Wildlife"). There are two other locations at which the insect has been observed. One is along the western third of the power line (Figure 13); here, the 1978 second brood population is estimated at 50. The second is in the south-central portion of the site where, on the southern side of a dune, (Figure 14) among a few lupine stems, a single individual was identified. Neither of these locations is considered critical habitat for the butterfly (Appendix E, "Vegetation and Wildlife Report"). The Karner Blue Butterfly is also listed as an endangered species by the State of New York and may not be collected without a permit.

The ability of animals to travel to the site from other habitats is strongly affected by urbanization (Figure 3). The site is surrounded by urban development. The principal migration corridor, in which exposure to urban elements is minimized, is to the west along a strip of land a few hundred yards wide between residential and institutional land uses. This connects the site with an open space bounded by Washington Avenue Extension on the north, by Karner Road on the west, and by the Albany/Guilderland boundary on the south.

### 2.3.3 Ecological Relationships

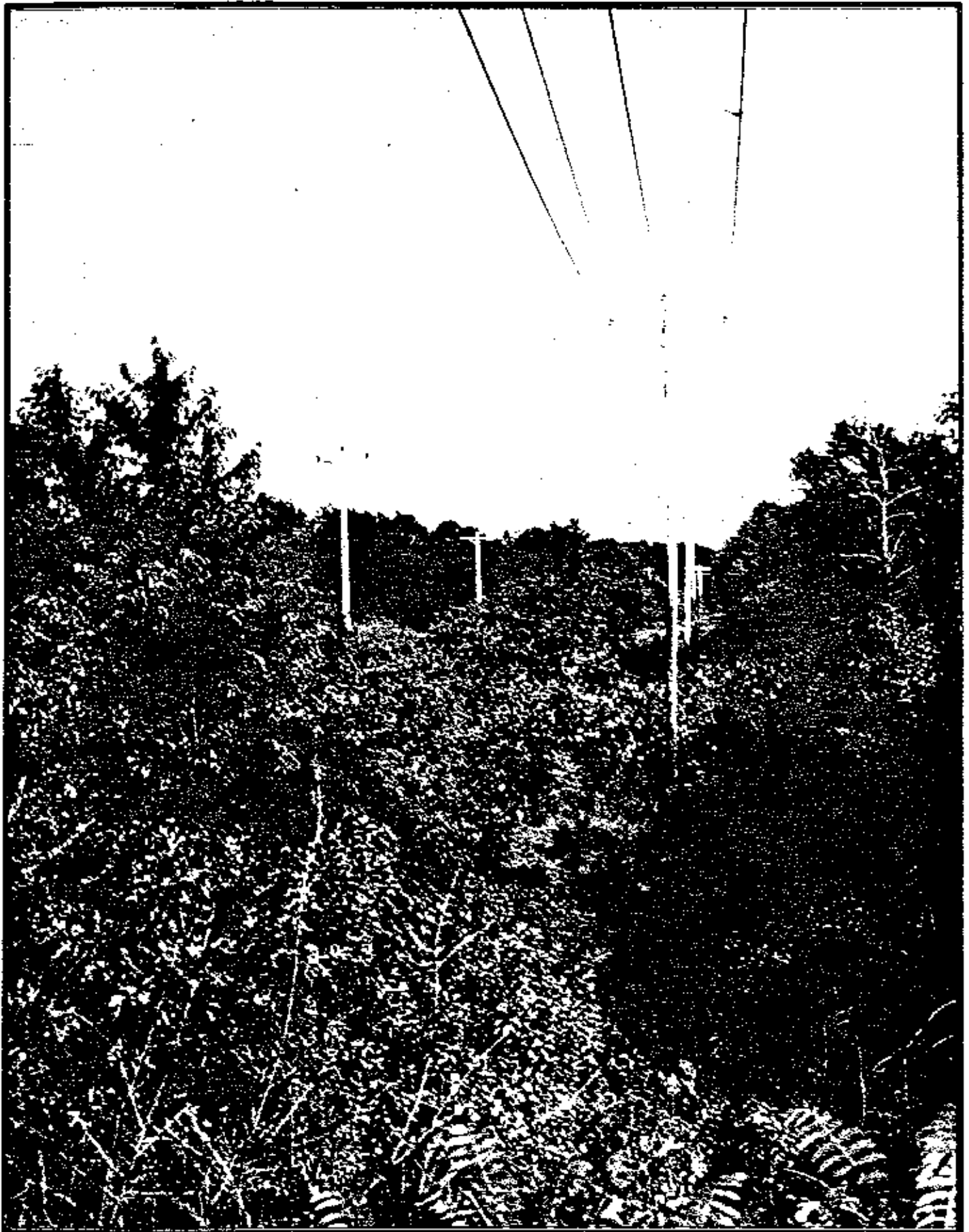
With respect to regional ecosystems, the site exists largely as an island, such that the interaction is limited between the site's vegetation and wildlife and that of the region. No marked transport of plant seed material either into or from the site occurs. Although the site is occasionally used by transient wildlife, this activity is considered minimal (Appendix E, "Vegetation and Wildlife Report"). However, the project site tends to make the region more ecologically diverse, not so much because of its interactions with off-site ecosystems, but because of its location in an urban environment.

As a whole, the project area exhibits a relatively low diversity of plant and animal life (Appendix E, "Vegetation and Wildlife Report"). Because of the limited extent of interactions with off-site ecosystems, the site's food chains and food webs are largely internal.



**On Site Karner Blue Butterfly Habitat**

**Figure 12**



**On Site Powerline Right-of-Way**

**Figure 13**



**Aerial Photo of Old State Road Parcel**

**Figure 15**



**Typical View of Pitch Pine-Scrub Oak Forest  
on Old State Road Parcel**

**Figure 16**



### 3.1 Human Factors

#### 3.1.1 Population

Direct population in-migration to the Town of Guilderland as a result of the project would be limited to management level personnel required by the major retail outlets and the mall shops located in the complex, as these managers are likely to come from outside the region. Approximately 268 new residents would be expected in Guilderland through the inflow of these individuals and their families.

Overall, it is anticipated that there will be little induced growth as a result of the project and, therefore, only a limited discernible impact on the long-term population trends of the region (Appendix J, "Socioeconomic Report").

#### 3.1.2 Employment and Income

The project would have a positive impact on the regional employment outlook. Construction-related employment associated with the project would number 2,783 full time equivalent positions. Net permanent employment resulting from the project is estimated at 2,505 full time equivalent positions and is attributed to the operating requirements of the mall stores. These permanent positions would be primarily in the occupation categories of salesworkers, clerical workers, managers and administrators, and service workers (Appendix I, "Econometric Report").

The employment opportunities generated by the proposed project would result in an immediate increase in personal income in the area -- through wages and salaries earned by relocated labor, formerly unemployed residents, or area residents who change jobs. It is anticipated that the project would produce an \$18.7 million per year increase in permanent wages and salaries over what would occur without the project (Appendix I, "Econometric Report").

#### 3.1.3 Housing

Since population increases associated with the proposed action are expected to be minimal, it is anticipated that there would be no direct impact on current housing trends.

In the long run, expansion of economic activity stimulated by the project would create additional employment opportunities and increase disposable personal income. This, in turn, would increase the demand for higher quality units and the incidence of home rehabilitation. The result would be a better quality housing stock in Guilderland and adjacent communities (Appendix J, "Socioeconomic Report").

### 3.1.4 Business and Industry

The direct and "multiplier" effect of the proposed project would serve to stimulate local and regional business and industry. There would be \$94.7 million dollars per year of increased sales of shoppers goods. The operation of the project would compete with existing retail establishments to the extent of approximately 9% of existing sales. Approximately \$34 million dollars per year would be added to the region's economic value added base. The project would increase the availability of local credit by \$63 million per year for private mortgages and home improvement loans, commercial and industrial working capital loans, personal loans (including automobile and mobile homes) and other categories (Appendix I, "Econometric Report").

### 3.1.5 Community Facilities

The project would result in approximately 127 additional school-age children in the Guilderland Central School District. However, as there is sufficient excess capacity within existing school facilities, the impacts are expected to be negligible. No additional school teachers would be required since the new student should be distributed among several grade levels.

The project would produce an additional \$376,961 in tax revenues to the Guilderland Central School District.

No public recreational facilities would be affected by the proposed project. The project would remove one private recreational facility -- a horse-back riding stable.

The additional tax revenues that would be generated by the project may allow Guilderland to construct needed indoor recreational facilities, such as a swimming pool.

In terms of health care, the project would have no noticeable effect on the ability of existing health facilities to provide services to all residents in need. The proposed traffic improvements would result in fewer accidents.

### 3.1.6 Public Services

In the Town of Guilderland, the proposed project would generate additional tax revenues of \$124,678 and additional expenditures of \$31,531 a net gain of \$93,147. The project would not impair the ability of local government to provide services to its residents. The level of service should be enhanced through the availability of additional funds (Appendix K, "Fiscal Impact Report").

It is anticipated that the proposed project would have some impact on the incidence of crime and police services in the Town of Guilderland. Increases in the rates of criminal activity directly related to shopping malls have been

documented in suburban communities within the Albany/Schenectady/Troy area. Additional police officers may be required, further affecting the existing shortage of manpower in the Guilderland Police Department.

The project would not require any modification to the fire protection services of the Westmere Fire Department. Current manpower and equipment capacities are sufficient to accommodate the additional demand that would be generated by the proposed project. An extensive sprinkler system would be constructed within the mall facility to comply with local, State, Federal, and insurance company specifications. Hydrants would be provided on site. A hydraulic analysis of the Westmere Water District System indicated that the fire flow requirement of 1,500 gallons per minute at a hydraulic gradient of USGS Elevation 400 can be adequately provided. Net additional tax revenues available to the Westmere Fire District would total \$45,793.

The project would be within the capacity of the municipal sewerage system to service. It is anticipated that the sewerage needs of the propose project would be an average daily flow of 80,000 gpd. This would require 23 percent of the excess capacity of Guilderland's portion of the system. The project would generate \$50,972 in net additional tax revenues to the Guilderland Sewer Improvement District.

Given current capacities and present projections, it is expected that sufficient excess capacity would be present in the Westmere Water District to meet the 100,000 gpd water demand that would be introduced by the proposed project. The project would produce \$96,016 in net additional tax revenues to the Westmere Water District.

The project would generate approximately 41 tons of solid waste per week, which would be within the landfill capacity of the Town since it is anticipated that Guilderland will participate in a resource recovery program involving the conversion of solid waste into fuel. Waste would be removed by private commercial operators and would not constitute a strain on local hauling capacity. Due to the project's proximity to the resource recovery plant, solid waste would be hauled directly there when the plant opens in 1980 or 1981 (Appendix J, "Socioeconomic Report" and Appendix K, "Fiscal Impact Report").

### 3.1.7 Land Use

In the Town of Guilderland, the proposed project would result in a 0.43% reduction in open space land uses, representing a minimal impact on the total land resource base of the community. Commercial land use would increase by 23% in the town. Industrial and extractive land uses would be unchanged. Land devoted to transportation purposes would increase slightly. Land devoted to residential uses would decrease slightly. It is anticipated that the project would have little impact on current land use trends in the region encompassing the project site. As a result of the project, the value of adjacent commercial and residential properties should increase.

There would be no change in the agricultural, forest or mineral product extraction on the site, as these activities do not presently occur. The project is consistent with local zoning. It is also compatible with existing land use development plans and represents a continuation of a process of in-filling (Appendix J, "Socioeconomic Report").

Approximately 400 persons in the immediate vicinity of the site who may now participate in outdoor recreation on the site wetland would be required to seek other places. The costs imputed to recreational displacement are on the order of a thousand dollars per year (Appendix E, "Vegetation and Wildlife").

The site will attract considerable leisure use to the interior of the mall, in a variety of formal and informal social events.

The project will not affect any known archaeological or historical sites listed on or nominated to the National Register.

The project requires no changes in political boundaries.

### 3.1.8 Energy Use and Conservation

The net energy effect of the project is estimated at 0.14 trillion Btu's annually, increased electrical use, and 0.18 trillion Btu's per year decreased gasoline consumption (Appendix M, "Energy Impact Report").

### 3.1.9 Transportation and Traffic

The following improvements (Sheets HP-A, HP-B, HP-C and Figure 4) to the roadway system surrounding the project would be made by the Applicant:

1. The site would be provided a connection from the Fuller Road Alternate southbound lanes by the addition of a right turn lane on the Fuller Road Alternate off-ramp leading to a dedicated road which would connect to site Driveway A. To develop this lane and to improve the operation of the Western Avenue/Fuller Road Alternate ramps intersection, a new four-lane bridge would be built immediately south of the existing structure over the New York State Thruway. The existing bridge along Western Avenue over the Thruway would accommodate westbound traffic, while the new structure would accommodate eastbound traffic. This widening of Western Avenue would meet the existing roadway section immediately west and east of the new bridge. The existing bridge would accommodate the new right turn lane towards the site, while at the same time increasing the traffic carrying capacity of the intersection.
2. A new underpass would be provided from the project site to Washington Avenue Extension westbound.

3. An additional westbound through lane along Western Avenue would be provided from the Fuller Road Alternate ramps up to and including proposed Driveway B.
4. Additional intersection improvements in the form of modified signalization or added lanes would be provided, as discussed in Appendix C.
5. Driveways from the project site to the adjacent roadway network would be provided as shown on Sheet HP-A.
6. The Washington Avenue Extension south frontage road would be terminated approximately 1,500 feet east of Rapp Road.
7. Traffic signals would be provided at the following locations:
  - a. Western Avenue/Driveway B
  - b. Washington Avenue Extension/Rapp Road/  
Springstein Road
  - c. Dedicated roadway at Driveway A
8. Improvements already planned by the New York State Department of Transportation along Western Avenue will be completed before the opening of the project, including the following signals:
  - a. Western Avenue/Church Road (new)
  - b. Western Avenue/Fuller Road Alternate ramps  
(new)
  - c. Western Avenue/Johnson Road (modifications)

Transportation benefits associated with the proposed project include:

1. The new bridge to be constructed over the New York State Thruway along Western Avenue would permit greater ease of maintaining traffic at such time as the existing structure is resurfaced and rebuilt.
2. The roadway improvements would ease congestion that would have occurred in the morning, as this commuter hour occurs when the shopping center would not be open.
3. The project would eliminate many existing curb cuts along the north side of Western Avenue and would substitute one signalized intersection at Driveway B.
4. In general, for businesses along Western Avenue, there will be increased opportunity to attract shopper traffic because of exposure to project related traffic. Ingress and egress conditions will not be substantially affected and the above-mentioned elimination of curb cuts will reduce traffic "friction" so that Western Avenue will be able to accommodate the projected traffic flows as well as or better than existing flows.

## 3.2 Physical Factors

### 3.2.1 Geology and Soils

Since 300,000 cubic yards of coarse granular material would be imported from off-site for road sub-base, there would be a slight increase in the average depth to bedrock. Since there are no bedrock outcrops on the site, no outcrop would be affected, nor would any outcrop be created. The project has no effect on bedrock types.

Construction of the project would affect 1,120,000 cubic yards of the sand unit. Approximately 87 acres would have a greatly increased runoff coefficient and would be rendered impermeable. Except for a moderate degree of compaction, the sub-grade soil texture would be unaffected by the project. The sub-grade rockiness of the soil would be unaffected by the project. Approximately 87 acres of the site would be covered and removed from potential agricultural use.

On 117 acres of the site, the existing topography would be changed. The proposed grading is shown on Sheet SP-3. Grades would be less than 7% on parking areas and less than 15% between parking areas. Elevations of the parking areas would range from 248 feet above sea level to 292 feet. Foundation stability would be adequate (Appendix F, "Soils Report"). Approximately 131 acres of sand plains would be graded on the site and in the transportation improvement areas.

### 3.2.2 Hydrology and Water Quality

The project would alter the headwaters of the Krum Kill, removing its natural channel upstream of P-256, the McKownville Reservoir. All on-site watercourses of intermittent nature would be replaced by storm sewers, open channels, and detention basins.

The project is not located in a floodplain and would not result in off-site flooding. Detention basins, (excavated areas and/or earth fill embankments) would be constructed on-site to control stormwater flows, to detain runoff, and to allow discharge at controlled rates. Table 6 provides estimated flow rates leaving the site for 2, 5, 10, 25, and 100-year storm events under post-project conditions. A stormwater management plan is included in Appendix G, "Water Resources Report".

The project may increase the total volume of water into the Krum Kill by reducing vegetation evapotranspiration. Drainage facilities would alter the flow patterns (time-discharge relationships) of the Krum Kill by concentrating a larger volume of runoff over a shorter time. Low-flow conditions would not be appreciably affected by the diversion of on-site groundwater recharge to surface water discharge because under buildings, subdrains would drain directly to the Krum Kill.

There would be no reduction in the volume of groundwater outflow from the site. This volume is limited, by geologic conditions, to no more than 20 million gallons per year, all of which can be supplied by post-project groundwater inflow, estimated at 152 million gallons per year.

Table 6

## STORM WATER FLOWS FROM THE SITE WITH PROJECT CONDITIONS

Recurrence Interval	Peak Flow Rate*	Reduction**
2 year	27.10	12.1
5 year	48.49	28.6
10 year	65.77	35.5
100 year	111.01	65.0

\* cubic feet per second (cfs)

\*\* in cfs from existing conditions (Table 2)

Source: Storm Water Management Report  
(Annex A of Appendix G, "Water Resources Report")

To permit pipe trenches and footing excavations, a construction dewatering system of wellpoints would be necessary to depress groundwater levels temporarily. Following construction, a system of permanently emplaced closely spaced subdrains would be needed to keep the groundwater level below portions of the pavement surface. The seasonal high water table would be depressed by approximately 2 feet in underdrain areas. But, because of the permeability of the sands, the water table elevations would not be depressed much beyond the immediate vicinity of underdrains.

All sanitary wastes would leave by means of a connection to the municipal sewer system, and would be treated at a municipal waste water treatment plant.

Settleable solids from runoff now entering the site would be deposited in detention basins, together with runoff containing de-icing sand and street dust from the project site. Parking lot runoff contains a variety of contaminants due mainly to automobiles. Heavy metals in parking lot runoff include lead, copper, nickel, and zinc. Other heavy metals, such as cadmium and chromium, may also occur, but no loading rate values are available and, in any event, their solubilities in natural waters are low.

The average concentration of each parameter in receiving waters would be as shown in Table 7. Receiving water quality standards would not be violated by project-induced concentrations for lead, zinc, copper, nickel, fecal coliform bacteria, phosphorus, nitrate, nitrogen, total Kjeldahl nitrogen, grease, volatile solids or chemical oxygen demand. For standards for which surface loading rates are unknown (cyanide, ferrocyanide, cadmium, ammonia, phenols, and total dissolved solids), it is considered unlikely that project runoff would cause a violation of receiving water quality standards (Appendix G, "Water Resources Report").

The project does not affect any present municipal or private surface water supply. The project would not result in the discharge of treated or untreated sewage to surface streams or groundwater.

TABLE 7

## WATER QUALITY IMPACTS OF PROJECT

Parameter	Concentration in 2mm runoff (mg/l)	Concentration of Receiving Water (mg/l)	Resulting Concentration (mg/l)	Project Annual Soluble Load (mg)	Resulting Annual Average Concentration (mg/l)
Lead	0.06	0.05	0.05	$5.05 \times 10^6$	0.05
Zinc	1.05	0.18	0.25	$8.87 \times 10^7$	0.25
Copper	0.13	< 0.01	< 0.02	$1.11 \times 10^7$	< 0.02
Nickel	0.26	0.02	0.04	$2.18 \times 10^7$	0.04
COD	461.57	N.A.	> 37.89	$3.91 \times 10^{10}$	> 29.42
Fecal Coliform*	162	760	711	$1.37 \times 10^{13}$	770
Phosphorus	0.69	0.03	0.08	$5.36 \times 10^7$	0.07
Nitrate as N	0.17	0.49	0.46	$1.41 \times 10^7$	0.50
TKN	3.03	N.A.	0.25	$2.57 \times 10^8$	> 0.19
Grease	40.96	< 2.0	< 5.19	$3.46 \times 10^9$	< 4.50
Volatile Solids	470.31	N.A.	> 38.64	$3.98 \times 10^{10}$	> 29.98

\*Based on 5 curb miles for project; units are organisms per 100 ml

N.A. means not analysed

Source: Appendix G, "Water Resources Report"



### 3.2.3 Air Resources

Based on the monitoring program, carbon monoxide (CO) concentrations at each of six intersections were examined and 21 receptors were identified (Table 8). Since there were no receptors at the intersection of Washington Avenue Extension and Fuller Road, detailed estimates of air quality impacts were not made for that intersection. Predicted concentrations were modeled by use of the computer model HIWAY (based on the Gaussian line source equation) and the results are shown in Table 8.

It was found that there are no violation of the 1-hour standard of 35 ppm CO now or at any time in the future. There are existing violations of the 8-hour CO standard of 9 ppm at the second monitoring station location, at the Guilderland Chamber of Commerce building, and at the McKnownville Church, but there would be no violation of the standard in the future (due to the effectiveness of vehicle emission control systems in the new car fleet). Therefore, the maximum effect of the project would be approximately an increase of 6.6 ppm in the 1-hour CO concentration and an increase of about 2.2 ppm in the 8-hour CO concentration. These maximum effects would occur at Church Street and at Gate B (the Western Avenue entrance to the project). The average effect would be a 1.5 ppm increase in the 1-hour and a 1.0 ppm increase in the 8-hour concentration at this location (Appendix H, "Air Resources Report").

Noise effects of the proposed project may be divided into construction and operations sources. During construction, truck traffic to and from the project site and erection and finishing of the building will generate noise. There are no numerical standards in local noise ordinances. There are several locations which will be within 400 feet of construction activity during the grading/paving phases of the project. These include several residences on Washington Avenue Extension near Driveway D; Wellspring House (now under construction); residences along Rapp Road; residences in the Gabriel Terrace neighborhood; and buildings along both sides of Western Avenue from the thruway to Driveway B. Operating noise would consist of traffic on new or existing roads and would affect a residence on Washington Avenue Extension, Wellspring House, the Gabriel Terrace neighborhood, and buildings along Western Avenue, but would not cause noise levels to rise above the 70 dBA level.

Table 8 Summary of Expected Carbon Monoxide Concentrations(ppm)

Intersection	Receptor	Type	Approximate Location	Peak One Hour Conditions			Peak Eight Hour Conditions		
				1978	Mail 1985	Mail 1985	1978	Mail 1985	Mail 1985
1. Western and Fuller	R1	Monitor Site 1	25' South of Western, 30' West of Fuller, Off Ramp	23.6	22.7	--	9.6	6.4	--
	R2	Information Center	60' South of Western, At Fuller, Off Ramp	22.4	--	--	16.8	--	--
2. Western and Church	R1	Church	50' North of Western, 180' East of Church	16.2	11.4	14.2	9.1	5.5	6.9
	R2	Restaurant	60' North of Western, 190' West of Church	14.6	10.2	13.5	7.8	4.1	6.9
	R3	Gas Station	60' South of Western, 00' West of Church	14.0	11.0	12.8	8.2	4.9	7.3
3. Western and Gate "B"	R1	Residence	40' North of Western, 340' East of Gate "B"	16.4	12.0	--	7.9	5.9	--
	R2	Residence	40' North of Western, 300' East of Gate "B"	16.3	11.9	--	7.9	5.9	--
	R3	Residence	70' North of Western, 100' East of Gate "B"	12.0	8.7	--	6.4	4.9	--
	R4	Residence	30' North of Western, 180' West of Gate "B"	16.8	12.1	--	8.2	6.1	--
	R5	Residence	30' North of Western, 260' West of Gate "B"	15.0	10.8	--	7.7	5.0	--
	R6	Restaurant	60' South of Western, 400' West of Gate "B"	13.5	10.5	17.1	7.0	5.6	7.5
4. Western, Johnston, and Rapp	R1	Gas Station	80' South of Western, 70' West of Johnston	18.3	12.8	13.0	7.1	5.1	6.3
	R2	Business	60' South of Western, 90' East of Johnston	16.4	10.1	10.5	6.1	4.0	4.4
	R3	Business	50' South of Western, 60' East of Rapp	17.2	10.5	10.8	5.9	4.2	4.6
	R4	Business	30' South of Western, 100' East of Rapp	19.4	11.7	12.1	6.6	4.6	4.9
	R5	Residence	30' North of Western, 40' East of Rapp	28.8	18.9	19.8	7.9	5.2	6.0
	R6	Business	70' North of Western, 30' East of Johnston	13.3	8.6	9.6	5.9	4.2	4.9
	R7	Monitor Site 1	10' North of Western, 30' East of Johnston	20.9	23.5	24.3	10.0	7.1	7.7
5. Washington and Rapp	R1	Residence	100' North of Rapp, 300' West of Washington	3.8	2.9	4.5	2.0	2.3	3.5
	R2	Residence	200' South of Rapp, 290' West of Washington	4.3	3.2	4.1	2.9	2.4	2.7
	R3	Residence	80' North of Springstown, 300' East of Washington	3.6	2.7	3.2	2.5	2.1	2.9

### 3.3 Biological Factors

#### 3.3.1 Vegetation

As a direct effect of the proposed construction, 128 acres of vegetation on the site and 3.2 acres in connection with off-site transportation improvements would no longer be natural systems.

The vegetative association which would be most greatly affected by construction of the project is the upland hardwoods community. Approximately 55 acres of this association would be removed. About 8 acres of the existing mixed forest on the site would be removed. Only 2 acres of the pitch pine-scrub oak community would be affected directly by the project. The project would remove 2 acres of late successional association. The early successional association would be reduced by 42 acres.

The 14 acres of deciduous swamp covertype regulated wetland, and the 2 acres of the emergent vegetation covertype would be removed by the project. Approximately 4 acres of the nonregulated wet meadow community would be directly removed by the project.

There are no plant species on the Federal endangered species list which would be affected by the project. At least seven plant species on the New York State list of protected plants would be eliminated over much of the site.

The project would interrupt the processes of ecological succession over 131 acres to be graded. Loss of edge habitat and reduction of the interspersion of vegetative communities would affect the residual wildlife value of the remaining undeveloped areas.

#### 3.3.2 Wildlife

Both numbers and variety of mammals using the site would be reduced. Larger mammals, having greater home ranges, would probably change from residents to transients over much of the site. Some of the smaller mammals would remain on undeveloped portions of the site. The numbers and variety of birds using the site would be reduced. Among the reptiles and amphibians, probably only the American toad and the spring peeper would remain close to developed portions of the site (Appendix E, "Vegetation and Wildlife Report"). All species would be reduced in population on the site; however, due to lack of detailed data on the existing population, it is not possible to estimate which species would be absent after the project.

The project would provide conservation of an important habitat of the only endangered species on the site, the Karner Blue Butterfly.

There are no known large-scale migration patterns of animal species, through the site, from one natural area to another. For those species remaining on undeveloped portions of the site, the project would affect the direction and success of migration.

Of the wildlife now on the site, some would be directly impacted by construction activities. Those which are able to leave the site may find adjacent habitats unsuitable or already at carrying capacity (Appendix E, "Vegetation and Wildlife Report").

### 3.3.3 Ecological Relationships

Since abundance and diversity of on-site wildlife would be diminished by construction, the role of the remaining areas relative to undeveloped land to the west, would diminish as well. However, the proposed site plan minimizes the amount of land isolated from surrounding natural systems.

### 3.4 Summary of Adverse Impacts Which Cannot be Avoided

#### 3.4.1 General

An adverse impact is defined as a change in the environment which either represents an increase in the concentration of a pollutant in air, water, or soil, to levels beyond accepted standards, or which constitutes a change in values which may represent a loss or which could be considered to represent a loss. It is entirely possible for the same environmental effect to be viewed as both beneficial and adverse by persons with different values.

#### 3.4.2 Human Factors

The competition with other retail establishments (estimated at 9.2% of the market: Appendix I, "Econometric Report") is unavoidable.

Although the Applicant would provide private security services to the project tenants, because of the retailing nature of the project and the numbers of persons it would attract, it is likely that there would be some incidence of criminal complaints, particularly crimes against property, such as shoplifting. Although initial steps can be taken by private security services, the services of the Guilderland Police Department would be necessary in order to process any formal charges. Since the Guilderland Police Department does not have as high a ratio of police to population as many other similarly-size communities, the processing of criminal complaints associated with project operation may constitute a burden on the Department's staff capacity. This effect would be an unavoidable adverse impact.

The project site is located within the boundaries of the Albany Pine Bush, an environmentally sensitive and controversial area. There is no feasible alternative site which can accomplish the Applicant's objectives (Appendix D, "Alternative Site Analysis").

#### 3.4.3 Physical Factors

Grading of 131 acres of sand plains affects a landform which is relatively uncommon in the State. The extent of this disturbance is at an irreducible minimum.

#### 3.4.4 Biological Factors

The filling of a 16-acre wetland on the site is unavoidable.

The removal of vegetation on the site has been restricted to the minimum necessary to effect the construction of the project.

The removal of 2 acres of pitch pine-scrub oak forest and 56 acres of potential pitch pine-scrub oak habitat cannot be avoided (Appendix E "Vegetation and Wildlife").

The reduction in the numbers and diversity of other wildlife on the site, including the hognose snake, worm snake, Fowler's toad and the spadefoot toad (which are peripheral in the region), is related to vegetation removal and cannot be avoided.

### 3.5 Minimization and Mitigation of Adverse Impacts

#### 3.5.1 On-Site

The 1-acre portion of the site which contains the only critical habitat of the Karner Blue Butterfly (Appendix E, "Vegetation and Wildlife Report") would be retained with a surrounding buffer of trees adequate to prevent accidental dispersal. A proposed conservation plan has been prepared for the management of this area (Appendix E, "Vegetation and Wildlife Report") to maintain a viable Karner Blue Butterfly habitat on the site.

The Applicant is consulting with NYSDEC's forestry staff to determine appropriate harvesting of forest resources (cord and pulp wood), prior to construction.

#### 3.5.2 Off-Site

The Applicant has, under option to purchase, a parcel northwest of the intersection of Karner Road and the Thruway (Figure 15) and proposes to dedicate approximately 65 acres to the City of Albany for preservation purposes, should the project be implemented.

This property is among the finest examples (Figure 16) of pitch pine-scrub oak forest still in private ownership in the Albany Pine Bush. It has been proposed for inclusion in the critical habitat of the Karner Blue Butterfly by the U.S. Office of Endangered Species in 1978 and for presentation by the Nature Conservancy in 1971. It is directly across Karner Road from an existing conservation area (Figure 2) and is connected via the Old State Road overpass across the Thruway to another preservation area (Figure 2). It contains a segment of the King's Highway. The monetary value of the parcel is \$400,000. Table 9 shows the combined effect of the project and the Old State Road Parcel on open space.

The Applicant would limit (insofar as is possible) construction noise at abutting residential property lines to 70 dBA or less (with mitigation) for working hours, not to be exceeded 10% of the time ( $L_{10}$ ). For transportation improvements New York State Department of Transportation guidelines limit noise and would be followed in the design of ramps and other features.

TABLE 9

COMBINED EFFECTS OF PROPOSED PROJECT AND  
 OLD STATE ROAD PARCEL ON ALBANY PINE BUSH  
 OPEN SPACE

Location	Existing Acres	Proposed Acres
<b>Project Site</b>		
Open Space	145.5	27.5
Pitch Pine -		
scrub oak association	3.9	2.0
Potential pitch pine -		
scrub oak association	67.0	12.4
Other associations	74.6	13.1 <sup>1</sup>
Developed	23.3	141.3
<b>Transportation Area</b>		
Open Space	6.6	3.4
Potential pitch pine -		
scrub oak association	5.8	3.2
Other associations	0.8	0.2
Developed	0.0	3.4
Public	0.0	6.6
<b>Old State Road Parcel</b>		
Pitch pine -		
scrub oak association	65.4	65.4
Public	0.0	65.4
<b>Combined</b>		
Open Space	217.5	96.3
Pitch pine -		
scrub oak association	69.3	67.4
Potential pitch pine -		
scrub oak association	72.8	15.6
Other associations	75.4	13.3
Developed	23.3	144.5
TOTAL	240.8	240.8
Total Public	0.0	74.0

<sup>1</sup> = consisting of detention basins which would be a mixture of open water, wet meadow and emergent (wetland) vegetation

### 3.6 Short Term Use Versus Long Term Productivity

The proposed project represents a long-term land use which would have an indefinite useful life. Leases with major tenants, for example, extend 20-30 years. During that time and beyond, the project would be economically and socially productive. The long-term productivity of the site for natural purposes has been already greatly affected by past urbanization. The long-term productivity of the site for natural purposes could be enhanced by deliberate management, if the site were publicly owned.

### 3.7 Irreversible and Irretrievable Commitment of Resources

Energy, labor, and building materials used during construction are permanent commitments. The project represents the permanent conversion of undeveloped land to urban uses. The project permanently changes the natural landscape in a portion of the Albany Pine Bush border area and would preclude existing vegetation patterns from returning to a fire disclimax community over 57 acres of the project site. A wooded swamp regulated wetland would be removed. Approximately 87 acres of potential mineral resources (sand) would be precluded from extraction.



Key WordDefinition

Air Quality: The concentration of carbon monoxide in the atmosphere is the key indicator of air quality used in this Statement.

Albany Pine Bush: A Geographic area bounded by Fuller Road on the east, by Western Avenue and Carmen Road on the south, by the Albany/Schenectady County Line on the west and by Central Avenue on the north.

Alternatives: Other actions open to the Applicant to accomplish its same objectives.

Amphibians: See Wildlife, spadefoot toad; Fowler's toad; peripheral species.

Aquifer: A geologic formation from which water can be drawn for beneficial use in economically sufficient quantities.

Arterial: A major surface street carrying a large volume of traffic (e.g., Western Avenue, Washington Avenue Extension, Central Avenue); also the Northside Arterial (I-90).

Archaeological site: Prehistoric remains providing evidence of the activities of pre-European inhabitants of the area; especially a site so designated on The National Register of Historic Places.

Bedrock: Geologic formations consisting of consolidated rock types, as opposed to surficial deposits.

Birds: See Wildlife.

Buck moth: Hemiluc maia, a species of moth found in pitch pine-scrub oak habitats.

Carbon monoxide: An automobile-related air pollutant.

Central Business District: The downtown commercial area, especially of Albany.

Colonie Center: A regional shopping center of the enclosed mall design located near the proposed project site on Wolf Road and Central Avenue in Colonie, New York.

Competition: See sales displacement.

Critical habitat: As defined by Federal law and regulations, that area which is vital to the conservation of a threatened or endangered species.

Downtown: See Central Business District.

Key Word

Definition

Drainage: The system of natural or controlled routing of rainfall over the surface.

Dunes: Windblown sand deposits having a characteristic looped ridge shape.

Employment: Jobs measured in full-time equivalent positions (40-hour week).

Endangered species: A plant or animal in danger of extinction as determined by New York State or by U.S. Fish and Wildlife Service's Office of Endangered Species. See also: threatened species; Karner Blue Butterfly.

Environmentally sensitive areas: Geographic areas in which natural processes are particularly vulnerable to changes.

Energy: Electricity and gasoline consumption.

Erosion: The water and especially, wind transport of soil.

Evapotranspiration: Loss of water to the atmosphere from standing water and plants.

Eutrophication: The enrichment of a lake, reservoir or pond in nutrients, causing, at times, excessive algae growth and subsequent depletion of oxygen and fish kills.

Fiscal impact: The effect of an action on local government budgets.

Flooding: Runoff which exceeds the capacity of the drainage system transport and results in overbank flow and/or damage to property.

Flood plain: The area on either side of a major stream which is subject to flooding.

Fowler's toad: *Bufo woodhousei fowleri*, an amphibian widely distributed in North America, but at the northern limit of its range in the Albany area.

Freshwater wetland: An area designated by the New York State Department of Environmental Conservation on the basis of characteristic plant species, size, or special features as a regulated wetland.

Fuller Road Alternate: The connection between Western Avenue and the Northway south of the Washington Avenue Extension Bridge.

Gross leasable area: The floor area on which a shopping center tenant pays rent, most of which is used for the sale of merchandise, but some of which is used for stockrooms and other uses and some of which represents a share of the interior mall area in front of each store.

Key Word

Definition

Groundwater: Water which occurs in the saturated zone of geologic formations.

Historic sites: Historic remains providing evidence of the activities of inhabitants of the area since the time of European contact; especially a site so designated on the National Register of Historic Places.

Hognose snake: Heterodon platyrhinos, a reptile widely distributed in North America, but at the northern limit of its range in the Albany area.

Induced growth: Land use changes which would occur in the vicinity of a project as indirect result of the project.

Karner Blue Butterfly: Lycaeides melissa samuelis, a species or subspecies of butterfly listed as endangered by New York State and proposed for listing as threatened by the U.S. Fish and Wildlife Service's Office of Endangered Species.

Interstate highways: I-87, the Adirondack Northway north of Albany or the New York State Thruway south of Albany; I-90, the New York State Thruway west of Albany or the Northside Arterial east of Albany; I-890, an Interstate, and I-787, an Interstate.

Krum Kill: A stream tributary to Normans Kill and classified "A" in the vicinity of the site.

Landscaping: Plants emplaced as part of the proposed project and maintained by the Applicant.

Location criteria: The factors bearing on alternative site selection.

Lupine: Lupinus perennis, the wild blue lupine plant, larval food plant of the Karner Blue Butterfly.

Mammals: See Wildlife.

Market: The population of Albany, Schenectady, Rensselaer and Saratoga Counties and surrounding areas who purchase shoppers goods and related items at retail.

McKownville Reservoir: Water Quality Segment P256 of Krum Kill downstream of the site, owned by the McKownville Water District and formerly used as a public water supply.

Mitigation: An action taken to lessen the severity of an adverse environmental impact which cannot be avoided by means including, but not limited to, dedication of resources in kind, open space preservation, or habitat creation.

Minimization: Action taken to reduce the magnitude of an adverse environmental impact which cannot be avoided by engineering and management means.

Key Word

Definition

Need: The public, social, and economic goals to which an action would contribute; related to, but distinct from, feasibility which is a measure of the effectiveness of a specific action and economic goals. Typically, need encompasses both public and private sectors but is concerned with the extent to which private economic benefits are broadly based.

No Action: The baseline alternative against which environmental consequences of a proposed action are compared. For purposes of a private Applicant, the no action alternative can be taken to mean the denial of permits for which approval is needed to construct a project.

Non-regulated wetlands: Areas containing typical wetland vegetation but which, by virtue of insufficient size or other reason, the New York State Department of Environmental Conservation has not designated as subject to the permit provisions of Article 24 of the Environmental Conservation Law.

Noise: Unwanted sound.

Old State Road Parcel: A tract of land (64.5 acres) located in the Albany Pine Bush northwest of the New York State Thruway and New Karner Road which the Applicant has under option to purchase and would transfer to the ownership of the City of Albany for preservation should the proposed project be implemented.

Open space: Areas of predominantly natural vegetation and processes.

Park and ride: Parking lots serving commuter traffic as meeting points for carpools or for express bus service.

P-256, P-257: Water quality segments of Krum Kill; see Krum Kill and McKownville Reservoir; classified "A" potable water supply.

Peripheral species: Wildlife which, because it is at the limit of its range in the Albany area relative to the continental United States, may be locally rare, or which may represent a relict population (one which has survived from a time in which it was more or less continuously present over a wider area) but which is not necessarily in danger of extinction.

Pine Bush: See Albany Pine Bush.

Pine Bush Inter-Municipal Steering Committee: A joint municipal/NYSDEC study group to coordinate land use in the Albany Pine Bush.

Pitch pine - scrub oak forest (habitat): A vegetative association consisting, typically, of a canopy of pitch pine (*Pinus rigida*) trees, widely scattered, with a continuous understory of scrub oak (*Quercus ilicifolia*, *Q. prinoides* and others) and a ground cover, usually, of low-bush blueberry and other ericaceous vegetation which is characteristic of the Albany Pine Bush sandy soils where fires have occurred frequently enough to suppress competing species.

Key Word

Definition

Public transportation: The services of the Capital District Regional Transit Authority (buses).

Protected species: A species of plant which is regulated by law with respect to harvesting of without the owner's consent.

Public water supply: An operational source (stream, lake, well) for a municipal water supply system.

Purpose of the project: The objectives of the Applicant in relation to need.

Recreation: Leisure activities relevant to permit decisions to be made in connection with this Statement (i.e., outdoor non-consumptive wildlife activities).

Receptor: A home, business, or public place where persons may be exposed to elevated levels of carbon monoxide.

Region: Albany, Schenectady, Rensselaer and Saratoga Counties.

Reptiles: See wildlife species.

Route 5: Central Avenue.

Route 20: Western Avenue.

Route 146: Carmen Road.

Route 155: New Karner Road.

Rapp Road: Western edge of the project site.

Recharge: Water which percolates through the soil and reaches the saturated zone. Recharge depends on the context and local recharge should be distinguished from regional recharge. As used here, recharge is the net addition to an aquifer, after accounting for any loss of groundwater to surface streams.

Retail sales: Sales of shoppers goods at a retail outlet.

Regulated Wetland: See Freshwater Wetland

Stormwater: See drainage.

Standard Metropolitan Statistical Area (SMSA): The region plus Montgomery County.

Spadefoot toad: Scaphiopus holbrooki, an amphibian widely distributed in North America but at the northern limit of its range in the Albany area.

Sand plains: Dunes and interdunal areas.

<u>Key Word</u>	<u>Definition</u>
<u>Special status species:</u>	Species designated as endangered or threatened by either or both the State of New York and/or the U.S. Fish and Wildlife Service Office of Endangered Species.
<u>Solid waste:</u>	Trash.
<u>Salt:</u>	Road salt; sodium or calcium chloride.
<u>Shoppers goods:</u>	Department store type merchandise.
<u>Sales displacement:</u>	The "capture" of sales which would otherwise occur in existing retail outlets. Sales displacement is compared to existing sales volumes (in dollars) as a percentage.
<u>Threatened species:</u>	A species designated by the U.S. Fish and Wildlife Service's Office of Endangered Species as likely to become endangered in the future should present trends continue.
<u>Trip:</u>	A one-way journey, such as from work-to-home, for example.
<u>Transportation improvements:</u>	Interchanges between the Fuller Road Alternate/Northway and a proposed dedicated County Road and between Washington Avenue Extension and the Fuller Road Alternate/Northway.
<u>Utilities:</u>	Water and sewer service, electrical service, etc.
<u>Vegetation:</u>	Natural plant communities.
<u>Washington Avenue Extention:</u>	The northern boundary of the project site.
<u>Western Avenue:</u>	The southern boundary of the project site.
<u>Waterfowl:</u>	Ducks and other birds which require open water.
<u>Water quality:</u>	The chemical, physical and biological constituents of a natural water body.
<u>Water table:</u>	The top of the saturated zone where not confined by an impermeable layer.
<u>Wildlife:</u>	Naturally occurring animals.
<u>Worm snake:</u>	<i>Carpophis amonenus</i> , a reptile widely distributed in North America but at the northern limit of its range in the Albany area.
<u>Zoning:</u>	Classification under the Zoning Laws of Guilderland and Albany.

This Statement was prepared between May, 1978 and October, 1979 by the Pyramid Crossgates Company (the Applicant) and its consultants. The body of the Statement (Sections 1.0 - 5.0) was prepared by the Applicant's environmental consultant, the firm of JASON M. CORTELL and ASSOCIATES, INC. (JMCA) of Waltham, Massachusetts and was based on studies and reports contained in the Appendices to the Statement (Section 6.0) prepared by that firm and other consultants:

Appendix A: Environmental Assessment Form

JMCA

Appendix B: Market Report

Harbridge House, Inc. (HH)  
Boston, Massachusetts

Appendix C: Traffic Impact Study

Raymond Keyes Engineers, PC (RKE)  
Elmsford, New York

Appendix D: Alternative Site Analysis

Pyramid Crossgates Company (PCC)  
Albany, New York

JMCA (Environmental Considerations)

Appendix E: Vegetation and Wildlife Report

JMCA

Appendix F: Soils Report

Museum Rutledge Johnson DeSimone (MRJD)  
New York, New York

Appendix G: Water Resources Report

JMCA

RKE (Annex A: Storm Water Management Report)

Appendix H: Air Resources Report

JMCA

Appendix I: Econometric Report

Center for Resource Management, Inc. (HH)

Appendix J: Socioeconomic Report

HH

Appendix K: Fiscal Impact Report

HH

Appendix L: Transportation Improvements Report

Parsons Brinckerhoff Guade Douglas, Inc. (PBGD)  
New York, New York

Appendix M: Energy Impact Report

JMCA

Appendix N: Project Description and Operations

PCC

In each organization, the principal in responsible charge and key staff members were as follows:

Applicant: Robert Sproul, Managing Partner

JMCA: Jason Cortell, Principal  
Richard Careaga, Project Manager  
Steven Davis, Director of Technical Studies  
Thomas Walker, Ecologist  
Carlton Noyes, Ecologist  
Laura Tessier, Ecologist  
Marshall Dennis, Ecologist  
Dale Schweitzer, Consulting Lepidopterist  
Dirck Benson, Consulting Wildlife Biologist

ADP: Alfred Dal Pos, Principal

HH: Henry Norwood, Principal  
Lawrence Barss, Economist  
Edward Becker, Planner

RKE: John Meyer, PE, Principal  
John Slaker, PE, Site Engineer  
Ken Mackiewicz, PE, Traffic Engineer

MRJD: Peter Edinger, PE, Soils Engineer

PBGD: Richard Duttonhoeffer, PE, Principal  
Bruce Podwal, PE, Highway Engineer