E=mt³
Office Park

Retail
Housing
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PROJECT SPONSORS:

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DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT

FOR THE ROUTE 434 E=MT³ MIXED USE OFFICE PARK PROJECT

Town and Village of Owego,
Tioga County,
New York
September 19, 2005

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List of Abbreviations

SEQRA	State Environmental Quality Review Act
EAF	Environmental Assessment Form
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
GPM	Gallons Per Minute
USACOE	United States Army Corps of Engineers
DEIS	Draft Environmental Impact Statement
GSF	Gross Square Feet
SF	Square Feet
MGD	Million Gallons Per Day
ROW	Right of Way
NAAQS	National Ambient Air Quality Standards
NWI	Nation Wetlands Inventory
PSI	Pounds Per Square Inch
NYSDOT	New York State Department of Transportation
NYSOPRHP	New York State Office of Parks, Recreation & Historic Preservation

1.0 Executive Summary

1.1 INTRODUCTION

The Tioga County Industrial Development Agency (IDA) is proposing a mixed-use office/residential project on an approximately eighty-five (85) acre parcel located on New York State Route 434 in the Village and Town of Owego, Tioga County, New York. The proposed development involves the construction of a mix of light industrial, office, supportive retail, senior housing, a satellite health care facility, multi and single-family residential units; along with a community park complete with walking trails herein referred to as the ("Project"). Due to the multiple uses and intricate environmental review processes required, a Generic Environmental Impact Statement (GEIS), pursuant to SEQRA, was chosen as the vehicle to review the project's potential environmental issues.

1.2 PROJECT DESCRIPTION

The project site is located within the Town and Village of Owego, Tioga County on New York State Route 434. More specifically, the frontage is approximately one-eighth of a mile east of the Court Street Bridge and 1,000 feet east of Apple Blossom Road on NYS Route 434. The Site is accessible from NYS Route 434 as well as from Strong Road, located on the southern boundary of the site. Please see *Figure 1 - Project Location*.

The site is comprised of three parcels totaling approximately 84.91 acres. Recently abandoned agricultural fields with an average slope of 10 percent characterize the northern 26 acres of the Project Site. The central portion of the site, an area of approximately 21 acres, is forested and consists of the steepest slopes of the site, with some greater than 25 percent. The southern portion of the site, comprising an area of approximately 34 acres, is characterized as open fields with slopes ranging from 8 to 20 percent. The Project Site is very characteristic of the local vicinity with rolling terrain and slopes that offer views of the scenic river valley.

As depicted on *Figure 2 – Project Concept*, the Project consists of the construction of a mix of light industrial, office, supportive retail, senior housing, a satellite health care facility, multi and single-family residential units; along with a community park complete with walking trails. In total, the Project proposes 206 residential units, including 26 single-family dwellings, 30 market-rate apartments, 30 townhouses, 70 senior congregate care/independent living units and 50 senior assisted living units.

The Project will have a curvilinear central roadway traversing the site from North to South. Sidewalks will connect most uses within the site, link to parkland trails, and extend into adjacent communities. The site will also have a naturalized creek bed with boulders, ponds, and waterfalls. The creek will play a role in on-site storm water management. Table 1-1 below provides a detailed breakdown of the different project components.

TABLE 1-1. PROJECT PROGRAM

COMPONENT	USES	BUILDING TYPE	UNITS	BUILDING SIZE	ACREAGE
1A	**Office**	Class A Office Buildings	2	2 @ 45,000 GSF; 90,000 GSF total	7 acres
1B	**Light Industrial**	Flex-Tech/Light Industrial Buildings	3	1 @ 60,000 GSF; 2 @ 25,000 GSF; 110,000 SF total	11.5 acres
2	**Retail**	Neighborhood Center with 3 Buildings	3	3 @ 10,000 GSF; 30,000 GSF total	7 acres
		Village Square	N/A	N/A	
3	**Senior Housing Residential**	Congregate Care/Independent Living	70	73,500 GSF total	6.5 acres
		Assisted Living	50	40,000 GSF total	
	Institutional	Satellite Health Care Facility	1	15,000 GSF total	
	Multi-Family Residential	Townhouses	30	12 – 2-Bedrooms @ 1,200 GSF; 18 – 3-Bedrooms @ 1,500 GSF	6 acres
		Market-Rate Rental Apartments	30	12 – 2-Bedrooms @ 1,100 GSF; 18 – 3-Bedrooms @ 1,400 GSF	
	Open Space	Community Park and Woodland Preserve Open Space	1		11 acres
4	**Single-Family Residential**[1]	Established & Luxury Homes	26	26 @ 1 acre each	36 acres
	Park Node	Gazebo; Observation Deck; Basketball Court; Tennis or Volleyball Court	N/A		
TOTAL					85 acres

The Project Site is not currently serviced by public water serviced and is only partially serviced by a municipal wastewater collection service. Therefore, prior to development, a public water system and sanitary system must be extended to the site to provide sufficient capacities for full build-out conditions.

Based on calculations provided in Preliminary Engineering Report (Appendix 6), the existing public water system does not contain ample capacity to provide the necessary daily demands and required fire flows to the project site. Therefore, a new water storage facility will need to be constructed. It is recommended that a water storage facility and booster pump station be constructed. As part of this system, it is also recommended that an additional groundwater supply (water well) be identified and installed on the south side of the river.

Due to site topography, the southern zone of the project will not be capable of discharging sanitary sewage by gravity to the NYS Route 434 system. Therefore it is recommended that a gravity sanitary sewer be installed to service the southern portion of the project site (alternatives discussed in Appendix 6). In addition, the pumps at the Lackawanna Pump Station will need to be upgraded to handle the additional flow.

The DGEIS will address the project phasing, including building and infrastructure construction. While the actual timing for the build out of the individual project components will be closely tied to market conditions, the following build out schedule has been developed for the purposes of conducting the social, economic and environmental impact analyses in the DGEIS:

- Phase 1: 1-3 years for the Office, Light Industrial/Flex Tech and Supportive Retail
- Phase 2: 1-3 years for the single family residential component (with on-site or municipal water and sewer services)
- Phase 3: 3-5 years for the Senior Housing and Apartments.

This build out scenario represents the "worst case scenario" in terms of the sudden increase in density of the site and surrounding area. The site may take longer to fully develop, but not likely to develop quicker than this schedule. The DGEIS will address the need for supplemental environmental analyses if actual project implementation does not occur in accordance with this time schedule.

Job Creation and Population Increase

Employees

For the purposes of the DGEIS analyses it is anticipated that approximately 642 new jobs will be created through the full build out of the proposed project as outlined below.

- The proposed Flex Tech/Light Industrial component is predicted to employ approximately 212 persons: 79 employees in the front office sections and 133 employees for the remainder of the operations (figures derived using Urban Land Institute figures for light industrial operations).
- The Class A Offices are expected to employ approximately 338 persons[2]
- Supportive Retail business are anticipated to create 47 new jobs
- The Senior Housing is expected to generate approximately 30 new jobs

[2] *December 2003 Mixed Use Concept Development and Market Analysis, Saratoga Associates*

> The Institutional Satellite Healthcare Facility is anticipated to create 15 new jobs

Residents

For the purposes of the DGEIS analyses it is anticipated that approximately 429 persons would be residing on the Project Site at full build out as outlined below:

> Senior Housing Independent Living = 70 persons;

> Senior Housing Assisted Living = 50 persons;

> Multi-Family Housing = 216 persons; and

> Single Family Dwellings = 93 persons.

Alternatives

As required by SEQRA, reasonable alternatives to the Project have been considered. The alternatives analyzed by this DGEIS include the Null Alternative, the Southside Square Neighborhood Plan, and the Southside New Urbanism Plan as discussed and analyzed in *DGEIS Section 6 Alternatives*.

Approvals

Under SEQRA, any state, federal or local agency having jurisdiction to issue a permit, certificate or other permission to act as required for the project, or to provide funding, is called an "Involved Agency." The required permit applications will be submitted to the appropriate agencies on an as needed basis, commencing immediately and continuing throughout the construction and occupancy of the Project. Bellow, *Table 1-2 Agency Approvals*, represents an initial listing of the reviews and approvals that are likely to be required. The list also includes those agencies providing funding for the Project. A more detailed determination will be required prior to the submission of each application.

TABLE 1-2, AGENCY APPROVALS

PERMITS AND/OR REVIEWS	AGENCY
NYSDEC SPDES GP-02-01: Stormwater	*NYS Department of Environmental Conservation*
Phase 1B Archeological Review	*Coordination with and project signoff of "no impact" from NYS Office of Parks, Recreation and Historic Preservation.*
Curb Cuts and Highway Work Permits along Route 434	*NYS Department of Transportation.*
Curb Cuts and Highway Work Permits along Strong Road	*Town of Owego Department of Public Works*
Zoning Amendment, Site Plan, potential for Special Use Permit and Subdivision	*Village of Owego.*
Subdivision and Site Plan Review	*Town of Owego*
Nationwide Permit #12 and #14 for wetland disturbances	*U.S. Army Corps of Engineers*

1.3 ENVIRONMENTAL SETTING

The vacant Project Site is located in the southeastern portion of Tioga County and is characterized by open abandoned agricultural fields along Route 434 and along Strong Road, with steeply slopping forested areas in the center of the site. There are two wetlands located in the center of the site the may be subject to the jurisdiction of the U.S. Army Corps of Engineers (Jurisdictional Determination has been submitted). A Phase 1B Archeological Assessment is being completed to rule out the existence of any cultural, historic or archeological resources of significance. A Phase 1 Environmental Site Assessment confirmed that there are no known environmental contaminants on the Project Site.

1.4 IMPACTS AND MITIGATION

Natural Resources

Geology

With this loss of vegetation and an increase in impervious area, the potential exists for the increased erosion of soils, especially on the steep slopes of the Project site. There is also the potential of soil and dust particles becoming stirred during construction, which may adversely affect surrounding residences.

Bedrock may be encountered during excavations and construction of the proposed roads, structures and utilities. The presence of the bedrock is not anticipated to result in significant impacts or obstacles to construction due to the fact that, based upon the bedrock's composition and weathered condition, it should be possible to excavate it with an excavator or with the use of a pneumatic hammer. However, if bedrock removal is required over large areas or to depths of more than a few feet, controlled blasting may be required to achieve its economical removal. If blasting is conducted improperly, structural damage to nearby buildings could result. There also exists the potential for flying debris with blasting without proper covering. Blasting may also result in adverse noise impacts.

Ground vibrations from construction activities very rarely reach the levels that can damage structures, but can achieve the audible and tactile ranges in buildings very close to a site. A possible exception is the case of old, fragile buildings of historical significance where special care must be taken to avoid damage.

Groundwater

Construction activities, if not properly managed, could have a negative impact on groundwater quality.

Although there is an increase in impervious areas, it is considered minimal when compared to the remaining of pervious surfaces on the Project site. A reduction in the amount of groundwater available to surrounding residential properties that use on-site wells for their water source is not anticipated. Therefore, no impacts on groundwater infiltration are anticipated.

The increase in impervious areas associated with roads and driveways may increase the potential for contaminated runoff (i.e. oil, grease, and other petroleum products). There is also the potential for groundwater to be adversely affected after construction, if pesticides, herbicides, or fertilizers are used to maintain lawns and landscaped areas.

Surface Water and Wetlands

Several spring seeps can be found amidst the woodlands, along steep slopes, located in the center of the property. These seeps contribute directly to two Palustrine Forested wetlands, which are also located in the center of the property.

The proposed layout and grading activities will not significantly impact the wetlands. However, the proposed roadway will cross the wetland permanently altering its boundaries. One design for the installation of a water storage tank and associated infrastructure temporary disturbance to the wetlands is expected. In total, it is anticipated that less than one-half an acre of the wetlands will be impacted.

Terrestrial and Aquatic Ecology

The loss of vegetation is mainly attributed to the need for removal during construction periods, some of which will be permanently lost and converted to roads, driveways, parking areas, and structures.

The Project site is currently home to several species of songbirds, game birds, and birds of prey, along with small mammals, deer, and other species have been observed or presumed to exist on the Project site based upon site conditions. The existing terrestrial species could potentially be adversely impacted and, in certain areas, will be forced to relocate. However, these impacts will be temporary in nature and are anticipated to be minimal.

The permanent impacts to the wetlands and tributaries and related aquatic habitat necessary for road construction cannot be avoided. The direct impacts to these small sections of the wetlands and tributaries will be permitted through ACOE NWP #14.

During the proposed crossing of the wetlands and tributaries for both road and utility construction, there exists the potential for adverse impacts to the aquatic species through erosion, sedimentation and stormwater runoff.

Climate and Air Resources

Although the project will result in an increase in automobile traffic resulting in an increase in the use of fossil fuels and other valuable resources, the Project is too small to directly impact the climate. On a global scale, new residential construction that is developed farther away from cities where efficient public

transportation is not available, in areas previously undeveloped, and requiring the removal of vegetation may have a negative impact on the climate.

The air quality on and immediately adjacent to the Project site may experience short-term impacts as a result of construction activities. During construction, airborne particulates will increase as a result of moving construction vehicles, the removal vegetation and the movement of soil for grading and construction activities. This increase is expected to be sporadic and short-term in nature and will be most noticeable in the area immediately adjacent to the construction. The amount of dust generated will not be extensive and any related impacts will be temporary. Additional isolated increases in automobile related pollutants would result from the operation of construction machinery. This impact will also be temporary in nature and isolated to the Project site.

Human Resources

Transportation

The Project, at full development, will result in an increase of traffic. This unavoidable increase is not significant enough to cause major problems as the existing transportation network can adequately accommodate the proposed traffic volumes and resulting impacts.

Land Use and Zoning

The Project will result in the change in the current use of the Project Site from Vacant to Residential. While the Project site is currently not in active agricultural use, it is located within an Agricultural District as defined by the NYS Department of Agriculture and Markets.

General Government

The direct impact of the Project on community services will be relative small. This will translate into an increase in cost associated with maintaining the utilities and roads, and providing recreation resources. Potential impacts on public schools; and fire and police protection are addressed separately.

Education Facilities

The increase in provision of school services anticipated for the Project is expected to be minimal.

Police Protection

The increase in police protection services anticipated for the Project is expected to be minimal.

Fire Protection

The increase in the need for fire protection services anticipated for the Project is expected to be minimal.

Water Supply

The existing public water system does not contain ample capacity to provide the necessary daily demands and required fire flows to the project site. Therefore a new water storage facility will need to be constructed. It is recommended that a water storage facility and booster pump station be constructed. As part of this system, it is also recommended that an additional groundwater supply (water well) be identified and installed on the south side of the river.

Sewage Treatment

There is a projected increase in sewer load associated with this project, but is not anticipated to result in any adverse impacts on the ability of the County-owned wastewater treatment plant to effectively treat waste. The current treatment plant is operating under its maximum treatment capacity and will therefore be able to treat the additional flow. A new gravity sanitary sewer will be installed to service the southern portion of the project site. In addition, the pumps at the Lackawanna Pump Station will need to be upgraded to handle the additional flow.

Solid Waste

Information obtained from the U.S. Environmental Protection Agency (EPA) estimates that on the average each person generates 4.4 pounds of solid waste per day. Based on an estimated population for the proposed Project, this would mean that approximately 70 tons of additional municipal solid waste could be generated each month after full build-out. This information from EPA is provided in *DGEIS Appendix 6 Solid Waste Calculation Reference*. Future limitations on disposal are currently not anticipated.

Housing

It is anticipated that the Project provide a positive net impact on the housing market through: (1) the provision of new housing that is needed but currently either in short supply or unavailable; and (2) an indirect increase in the availability of existing housing, for which there is also demand. The Project facilitates a transition of current residents who have lived in their current homes for a number of years, but now have a different lifestyle or housing need. This transition precedes a step further; older homes are typically more affordable than new construction and will eventually become available for younger families.

This process of transitioning older homes to younger families, while creating new in-demand senior/empty-nester housing avoids developing more of the traditional single family type housing that typically has a greater impact on the environment, community services and public facilities, and promotes the development of new housing types and community plans that are more desirable and fill a greater need.

Economic Impacts

For the purposes of the DGEIS analyses it is anticipated that approximately 642 new jobs will be created through the full build out of the proposed project as outlined below.

- The proposed Flex Tech/Light Industrial component is predicted to employ approximately 212 persons: 79 employees in the front office sections and 133 employees for the remainder of the operations (figures derived using Urban Land Institute figures for light industrial operations).
- The Class A Offices are expected to employ approximately 338 persons[3]
- Supportive Retail business are anticipated to create 47 new jobs
- The Senior Housing is expected to generate approximately 30 new jobs
- The Institutional Satellite Healthcare Facility is anticipated to create 15 new jobs

Using the RIMS II (Regional Input-Output Modeling System) multipliers from the Bureau of Economic Analysis, the 642 new jobs would have a total impact of 773 new jobs in Tioga County. The projected employment impact includes only the direct-effect impact from the proposed uses of the Project and does not include the impact resulting from construction activities, which are discussed below.

The construction activity for the proposed development would generate approximately 290 construction jobs. Using the RIMS II multipliers for the construction industry, these 290 construction jobs would have a direct-effect employment impact of approximately 359 jobs. The 359 jobs to be generated is the total change in employment resulting from the construction jobs generated by the project development. The construction investment of $57,782,500 for the project would result to an increase in earnings by 1.1979 percent, resulting in a total economic impact of $69,217,657 for Tioga County. This is an increase of approximately $11,435,157 in earnings for the County resulting from the construction activity alone.

Cultural Resources

A Phase 1 A was completed and recognized that there will be some impacts to sensitive sites. A phase 1 B will be completed and the results will be included in the FEIS.

[3] *December 2003 Mixed Use Concept Development and Market Analysis, Saratoga Associates*

Visual

The proposed project will ultimately result in a visual change in the landscape. Replacing open fields and woodlands with structures and roadways will bring about a change in character. Those people sensitive to their rural surroundings will be the most impacted. Although, it is not anticipated that the Project will have a significant visual impact, it may be warranted to further analyze whether components (e.g. water tank) of the project will result in a visual impact to the surrounding community or on sensitive resources.

Noise

Construction noise generated as a result of the proposed project may have a significant temporary impact. According to the NYSDEC Program Policy, Assessing and Mitigating Noise Impacts DEP-00-1, dated February 2, 2001, "an increase of 10 dBA deserves consideration of avoidance and mitigation." Based upon this information, it is anticipated that, those homes located adjacent to the project site will experience worst-case sound levels of between 57 and 83 dBA during construction. These levels are likely to be lower due to accepted attenuation by topography and vegetation.

2.0 Description of the Proposed Project

2.1 INTRODUCTION

The Tioga County Industrial Development Agency (IDA) is proposing a mixed-use office/residential project on an approximately eighty-five (85) acre parcel located on New York State Route 434 in the Village and Town of Owego, Tioga County, New York. The proposed development involves the construction of a mix of light industrial, office, supportive retail, senior housing, a satellite health care facility, multi and single-family residential units; along with a community park complete with walking trails herein referred to as the ("Project"). Due to the multiple uses and intricate environmental review processes required, a Generic Environmental Impact Statement (GEIS), pursuant to SEQRA, was chosen as the vehicle to review the project's potential environmental issues.

The GEIS is flexible, allowing for the evaluation of complex conceptual projects on a broad geographic scale. The Final GEIS (FGEIS) will reduce the amount of additional SEQRA reviews that may be required during the implementation of the project components, as the GEIS includes baseline data needed for future reviews and decision-making, and will have already identified and evaluated a majority of the major issues. Finally, the implementation of the proposed project will require specific site inventories, surveys, environmental assessments, and local, regional, state, and possibly federal regulatory reviews and approvals. This GEIS is structured to accommodate all of the necessary reviews and assessments of potentially significant issues such as geology, hydrology, ecology, historic and archeological reviews, environmental conditions analysis, transportation, and several other considerations.

2.2 PROJECT BACKGROUND AND HISTORY

In 2003 the Tioga County Department of Economic Development and Planning hired Saratoga Associates to conduct a market feasibility analysis for the Project Site along Route 434. The analysis helped establish the development objectives, site and community context and expectations, real estate development opportunities, and financial return expectations for the mixed-use development. The analysis culminated in the selection of a preferred alternative that consists of a mix of uses being proposed and reviewed through this GEIS. The property is now under the ownership of the Tioga County Industrial Development Agency, the Lead Agency in the SEQRA review process.

2.3 PUBLIC NEED FOR THE PROJECT & BENEFITS

- Residential Uses

The Project's proposed new housing will directly benefit several underserved residential market segments by providing the following housing options:

> Market-rate single-family homes for Move-up Families, Established Families, and Luxury Families.

> Condominiums for adult singles and young married couples without children.

> Townhouses for young married couples with children, singles with children, empty nesters or never nested, and young active retirees.

> Senior housing will provide active senior housing, assisted living residences as well as congregate care/independent living facilities.

- Office Uses

According to Pyramid Brokerage Company of Binghamton, Inc July 2003, the local demand for office space comes mostly from medical, dental, and other health practitioners, and financial users such as mortgage brokers and insurance companies. Class A office properties with curb appeal and good accessibility to commuter routes and located in an area with a sense of place will provide office uses for these growing industries in the Greater Binghamton area. Other potential leasers include business consultants, suppliers, and others who want the convenience of being near major clients. The construction of the office buildings will be dependent on the availability of tenants with flexible phasing that will accommodate these growing industries as needed.

- Industrial Uses

With economists forecasting that the Binghamton MSA economy will be anchored by small- and medium-sized firms, spatial demand for industrial uses will be concentrated in smaller multi-use spaces instead of larger manufacturing spaces. This will accommodate a public need for this type of multi-use space in vacancies created from severe losses in the electronic industry, Endicott Interconnect Industries (EIT) acquiring the IBM workforce and their under-utilized facilities and space, and from Binghamton University's abundance of space that they would like to develop into R&D facilities. These niche targets for industrial user space will be high-tech in nature in order to benefit a public need for emerging industrial operations in the area.

- Retail Uses

Based on existing parameters for retail characteristics, a neighborhood center is most suited for the convenience needs of residents of the mixed-use development, as well as daytime office workers and residents of adjoining subdivisions and residential areas. Care will be taken not to compete with shopping in Downtown Owego. The Project's neighborhood center will benefit consumer demands with the inclusion of the following identified retail units: deli, coffee shop, restaurant, convenience store, dry cleaner, video store, unisex hair salon, fitness club, and drugstore/pharmacy. A smaller retail area is proposed as a relatively low number of potential residents and the estimated number of office/R&D workers would not support a bigger retail area.

2.3.1 SOCIOECONOMICS

As discussed in greater detail in the November 2003 mixed-use concept development and market analysis of the Project Site, the Project will provide a much needed range of housing choices for individuals and

families in various income and age brackets in the greater Binghamton area. Specifically, the Senior Housing complex will give local seniors opportunities to "age in place," instead of relocating out of the community. New apartments and townhouses will begin to fill an underserved niche for rental housing units. Single-family homes for "move up" families, another underserved niche, will accommodate families looking to take advantage of Owego's convenient location, and quality school system. Beautifully landscaped office space directly off of Route 434 will provide attractive, easily accessible places to work. New businesses moving into the Project's office and retail spaces will create a welcome expansion of the existing job base.

2.3.2 PUBLIC NEED BASED ON COMMUNITY PLANS

The Project is consistent with the *Tioga County 2010 Strategic Plan*, adopted on March 15, 2005 (the "Plan"). Specifically, the Project is in keeping with several of the Plan's Initiatives, as follows:

- Economic Development Initiatives: In an effort to increase the number of basic activity jobs in Tioga County (ED1), the Project will contain "a mix of land uses that include light industry, commercial, and residential for a stronger tax base" (pg. 12), which will increase and diversify the basic activity industry base in Tioga County (ED2), and will "increase the number of basic and non-basic activity jobs in Tioga County" (pg. 27) – consistent with Tioga County's economic development goals of increasing the number of basic activity jobs in the county (ED1).

- Community Issues Initiatives: The Project will develop "stronger alternatives to institutional placement for the elderly and disabled" (pg. 30) in order to improve quality of life and reduce the cost of long term care services (HS1), and "improve access to needed health care professionals, for both Medicaid and non-Medicaid populations, including dentists, ophthalmologists, pediatricians, and pharmacists" (pg. 31) The project will counteract aging and out-migration of population by attracting diverse workforce to new job opportunities (pg. 8);

- Housing Development Initiatives: The Project incorporates "smart growth" principles, as it "strengthens the connection between residence and workplace" (pg. 23) in an effort to prepare Tioga County to more effectively attract commercial, industrial, and residential development at a suitable level…(PL1);

- Recreation Land Use Initiatives: The Project will "increase recreational and cultural opportunities that will provide current and future residents with more significant leisure-time experiences within the County (PL4)" (pg. 16).

The Village of Owego has a Consolidated Master Plan that was adopted in September 2003 with the commitment to update the plan every 5 years thereafter. The Master Plan is intended to guide the direction and character of development, redevelopment and revitalization within the village. Some of the recommendations in the Master Plan that are relevant to the project include strengthening the connection between residence and workplace, protecting natural resources and using public investment to support private investment in accordance with smart growth strategies. In addition, the "Future Land Use" Map calls for a mix of commercial and residential uses on this site, both of which are included in the proposed project.

2.4 PROJECT SITE LOCATION AND DESCRIPTION

The project site is located within the Town and Village of Owego, Tioga County on New York State Route 434. More specifically, the frontage is approximately one-eighth of a mile east of the Court Street Bridge and 1,000 feet east of Apple Blossom Road on NYS Route 434. The Site is accessible from NYS Route 434 as well as from Strong Road, located on the southern boundary of the site. Please see *Figure 1 - Project Location*.

The site is comprised of three parcels totaling approximately 84.91 acres. Recently abandoned agricultural fields with an average slope of 10 percent characterize the northern 26 acres of the Project Site. The central portion of the site, an area of approximately 21 acres, is forested and consists of the steepest slopes of the site, with some greater than 25 percent. The southern portion of the site, comprising an area of approximately 34 acres, is characterized as open fields with slopes ranging from 8 to 20 percent. The Project Site is very characteristic of the local vicinity with rolling terrain and slopes that offer views of the scenic river valley.

2.4.1 SITE ACCESS

The Project Site is easily accessed from New York State Route 434 and Strong Road and is located in close proximity to Interstate 86 (I-86) exits 64 and 65. The primary site access is proposed from NYS Route 434 in the Village of Owego with a minor access proposed to be located off from Strong Road in the Town of Owego. Future connections may be provided into the western portions of the site by extending residential streets including Ruth, Bradley, and Corbin, if additional residential development were to expand in that area. In an effort to provide an alternative access road for emergency and safety concerns should the proposed access roads become compromised, at least one of the nearby residential streets could be extended to provide for alternative means of access for emergency and safety concerns. Future pedestrian access could be developed between the Project Site and the adjacent residential area to the west. These connections could be maintained as greenway trail connections, but also designed to accommodate emergency access on a temporary basis with breakaway gates.

2.4.2 PROJECT DESIGN AND LAYOUT

As depicted on *Figure 2 – Project Concept*, the Project consists of the construction of a mix of light industrial, office, supportive retail, senior housing, a satellite health care facility, multi and single-family residential units; along with a community park complete with walking trails. In total, the Project proposes 206 residential units, including 26 single-family dwellings, 30 market-rate apartments, 30 townhouses, 70 senior congregate care/independent living units and 50 senior assisted living units.

The Project will have a curvilinear central roadway traversing the site from North to South. Sidewalks will connect most uses within the site, link to parkland trails, and extend into adjacent communities. The site will also have a naturalized creek bed with boulders, ponds, and waterfalls. The creek will play a role in on-site storm water management. Table 2-1 below provides a detailed breakdown of the different project components.

TABLE 2-1. PROJECT PROGRAM					
COMPONENT	**USES**	**BUILDING TYPE**	**UNITS**	**BUILDING SIZE**	**ACREAGE**
1A	**Office**	Class A Office Buildings	2	2 @ 45,000 GSF; 90,000 GSF total	7 acres
1B	**Light Industrial**	Flex-Tech/Light Industrial Buildings	3	1 @ 60,000 GSF; 2 @ 25,000 GSF; 110,000 SF total	11.5 acres
2	**Retail**	Neighborhood Center with 3 Buildings	3	3 @ 10,000 GSF; 30,000 GSF total	7 acres
		Village Square	N/A	N/A	
3	**Senior Housing Residential**	Congregate Care/Independent Living	70	73,500 GSF total	6.5 acres
		Assisted Living	50	40,000 GSF total	
	Institutional	Satellite Health Care Facility	1	15,000 GSF total	
	Multi-Family Residential	Townhouses	30	12 – 2-Bedrooms @ 1,200 GSF; 18 – 3-Bedrooms @ 1,500 GSF	6 acres
		Market-Rate Rental Apartments	30	12 – 2-Bedrooms @ 1,100 GSF; 18 – 3-Bedrooms @ 1,400 GSF	
	Open Space	Community Park and Woodland Preserve Open Space	1		11 acres
4	**Single-Family Residential**[1]	Established & Luxury Homes	26	26 @ 1 acre each	36 acres
	Park Node	Gazebo; Observation Deck; Basketball Court; Tennis or Volleyball Court	N/A		
TOTAL					85 acres

The Project Site is not currently serviced by public water serviced and is only partially serviced by a municipal wastewater collection service. Therefore, prior to development, a public water system and sanitary system must be extended to the site to provide sufficient capacities for full build-out conditions.

Based on calculations provided in Preliminary Engineering Report (Appendix 6), the existing public water system does not contain ample capacity to provide the necessary daily demands and required fire flows to the project site. Therefore, a new water storage facility will need to be constructed. It is recommended that a water storage facility and booster pump station be constructed. As part of this system, it is also recommended that an additional groundwater supply (water well) be identified and installed on the south side of the river.

Due to site topography, the southern zone of the project will not be capable of discharging sanitary sewage by gravity to the NYS Route 434 system. Therefore it is recommended that a gravity sanitary sewer be installed to service the southern portion of the project site (alternatives discussed in Appendix 6). In addition, the pumps at the Lackawanna Pump Station will need to be upgraded to handle the additional flow.

2.4.3 CONSTRUCTION PHASING

The DGEIS will address the project phasing, including building and infrastructure construction. While the actual timing for the build out of the individual project components will be closely tied to market conditions, the following build out schedule has been developed for the purposes of conducting the social, economic and environmental impact analyses in the DGEIS:

- Phase 1: 1-3 years for the Office, Light Industrial/Flex Tech and Supportive Retail
- Phase 2: 1-3 years for the single family residential component (with on-site or municipal water and sewer services)
- Phase 3: 3-5 years for the Senior Housing and Apartments.

This build out scenario represents the "worst case scenario" in terms of the sudden increase in density of the site and surrounding area. The site may take longer to fully develop, but not likely to develop quicker than this schedule. The DGEIS will address the need for supplemental environmental analyses if actual project implementation does not occur in accordance with this time schedule.

2.4.4 EMPLOYEE AND POPULATION INCREASE

Employees

For the purposes of the DGEIS analyses it is anticipated that approximately 642 new jobs will be created through the full build out of the proposed project as outlined below.

- The proposed Flex Tech/Light Industrial component is predicted to employ approximately 212 persons: 79 employees in the front office sections and 133 employees for the remainder of the operations (figures derived using Urban Land Institute figures for light industrial operations).
- The Class A Offices are expected to employ approximately 338 persons[2]

[2] *December 2003 Mixed Use Concept Development and Market Analysis, Saratoga Associates*

- Supportive Retail business are anticipated to create 47 new jobs
- The Senior Housing is expected to generate approximately 30 new jobs
- The Institutional Satellite Healthcare Facility is anticipated to create 15 new jobs

Residents

For the purposes of the DGEIS analyses it is anticipated that approximately 429 persons would be residing on the Project Site at full build out as outlined below:

- Senior Housing Independent Living = 70 persons;
- Senior Housing Assisted Living = 50 persons;
- Multi-Family Housing = 216 persons; and
- Single Family Dwellings = 93 persons.

2.4.5 EASEMENTS AND RIGHTS OF WAY

There are no existing right-of-ways or easements on the Project site. It is anticipated that all roads with associated infrastructure will be dedicated to the Town or Village of Owego and United Water of Owego to allow for access and maintenance. All utilities are expected to run within the right-of-ways of the Project site roads.

2.5 ALTERNATIVES

As required by SEQRA, reasonable alternatives to the Project have been considered. The alternatives analyzed by this DGEIS include the Null Alternative, the Southside Square Neighborhood Plan, and the Southside New Urbanism Plan as discussed and analyzed in *DGEIS Section 6 Alternatives*.

2.6 APPROVALS

Under SEQRA, any state, federal or local agency having jurisdiction to issue a permit, certificate or other permission to act as required for the project, or to provide funding, is called an "Involved Agency." The required permit applications will be submitted to the appropriate agencies on an as needed basis, commencing immediately and continuing throughout the construction and occupancy of the Project. Bellow, *Table 2-2 Agency Approvals*, represents an initial listing of the reviews and approvals that are likely to be required. The list also includes those agencies providing funding for the Project. A more detailed determination will be required prior to the submission of each application.

TABLE 2-2 AGENCY APPROVALS

PERMITS AND/OR REVIEWS	AGENCY
NYSDEC SPDES GP-02-01: Stormwater	*NYS Department of Environmental Conservation*
Phase 1B Archeological Review	*Coordination with and project signoff of "no impact" from NYS Office of Parks, Recreation and Historic Preservation.*
Curb Cuts and Highway Work Permits along Route 434	*NYS Department of Transportation.*
Curb Cuts and Highway Work Permits along Strong Road	*Town of Owego Department of Public Works*
Zoning Amendment, Site Plan, potential for Special Use Permit and Subdivision	*Village of Owego.*
Subdivision and Site Plan Review	*Town of Owego*
Nationwide Permit #12 and #14 for wetland disturbances	*U.S. Army Corps of Engineers*

3.0 Existing Conditions

3.1 NATURAL RESOURCES

The proposed Project is located in the southeastern portion of Tioga County, which is part of the Allegheny Plateau section of the Piedmont physiographic province. This area is characterized by rolling terrain and is underlain by metamorphic rocks of various origins.

3.1.1 TOPOGRAPHY

As a whole, the site is comprised of three parcels totaling approximately 84.91 acres. The Project Site is characteristic of surround lands with hilly that offer views of the scenic river valley. Open fields used for agricultural production characterize the recent past and history use of the project site. The northern portion of the site, located on Route 434, is comprised of open fields with average slopes of 10 percent. This area, which comprises approximately 26 acres (30%) of the total site, offers tremendous opportunities for a variety of development styles and land uses, as it is the least sloping portion. Refer to *Figure 3 Slope Breakdown* for additional reference.

The site's central portion is wooded and characterized by steep slopes – some greater than 25 percent. Most of the woodland area in the central portion of the site ranges from 10 to 25 percent and is comprised of approximately 21 acres (25%) of the Project Site. In addition, there are approximately four wooded acres in the central portion of the site that contain slopes in excess of 25 percent and comprise five percent of the project area.

The southern portion of the site is comprised of open fields with slopes ranging from 8 to 20 percent and contrasts with the northern boundary due to the adjacent agricultural, residential, and scenic surroundings. This area covers approximately 34 acres (40%) of the site.

3.1.2 SOILS

Soil information was derived from the *Soil Survey, Tioga County, New York* (June 1953), prepared by the United States Department of Agriculture, Soil Conservation Service, in cooperation with the Cornell University Agricultural Experiment Station. Based on current understanding of the site and adjacent development characteristics, there are no anticipated issues associated with the project area soil characteristics and it is believed that the site is well suited for development. However, the site has a considerable change in elevation, which will require suitable stabilization of exposed soils to prevent erosion. There are also some areas with spring seeps and shallow depth to groundwater, primarily in the areas identified as wetlands discussed below in more detail in *Section 3.1.3 Water Resources*.

As depicted on *Figure 4 Soils*, and according to the soil survey, the soils located on the site are: Canfield (Cdu) gravelly silt loam, undulating phase, 0-8 percent slopes, well-drained soil;

Canfield gravelly silt loam, rolling phase, 9-16 percent slopes, well-drained soil; Canfield gravelly silt loam, hilly phase, 16-30 percent slopes, well-drained soil; Lordstown (Lfv) flaggy silt loam, very steep phase, 46-60 percent slopes, well-drained soil; Mardin (Mcu) channery silt loam undulating phase, 0-8 percent slopes, moderately drained soil; Volusia (Vcs) channery and gravelly silt loams, sloping phases, 9-15 percent slopes, poorly drained soils; Woostern (Wr) gravelly silt loam, rolling phase, 6-15 percent slopes, moderately drained soil; and, Woostern gravelly silt loam, hilly phase, 16-25 percent slopes, well-drained soil.

The Canfield series is characterized as having a 10 to 50 foot depth to bedrock, the Lordstown series has a 20 to 40 inch depth to bedrock, the Mardin series is characterized as having four to ten foot depth to bedrock, and the Volusia series has a greater than ten foot depth to bedrock. The Woostern series description does not mention depth to bedrock.

3.1.3 WATER RESOURCES

3.1.3.1 GROUNDWATER

According to the *Soil Survey, Tioga County, New York,* there is ample groundwater supply on the project site. Many driven and deep dug wells supply water needs to the residents adjacent to the site and in the local vicinity. Private well water sources will not likely be utilized for this site and projected development program and water will be conveyed to the site through public and private water infrastructure. Based upon the soil survey and on-site inspections, certain areas of the Project Site have shallow depth to groundwater, mainly in and around the identified wetlands as described in more detail below.

3.1.3.2 SURFACE WATERS, FLOODPLAINS AND WETLANDS

The Project Site is located south of the North Branch of the Susquehanna River. The hydrology of the site is primarily surface water with several spring seeps in the woodlands on the steeper slopes in the center of the property. The vegetation is predominantly mixed northern hardwoods and conifers in the woodlands and old field successional herbaceous and shrub vegetation in the farm fields.

As shown on Figure 6 Water Resources Map, there are two wetlands located in the center of the property that are associated with spring seeps. These wetlands have been delineated and surveyed as depicted on Figure 6. The delineation was performed using U.S. Army Corps of Engineers Methodology as outlined in the 1987 Manual for Wetland Delineations. The three criteria for wetland status have been met in these wetland areas and corresponding Habitat Data Forms for these wetlands are included in *DGEIS Appendix 2 – Wetlands Report*. A jurisdictional determination request has been submitted to the U.S. Army Corps of Engineers.

3.1.3.4 STORMWATER

A storm water management plan is proposed as part of the long-term infrastructure design for the site area. Such design will need to take into account full build-out of the Project Site. A preliminary stormwater management report has been prepared for the Project and is located in *DGEIS Appendix 1 – Preliminary Stormwater Management Report*. Neither the Town nor Village is located in the Small Municipal Separate Storm Sewer Systems (MS4) Storm Water area and would not fall under new regulations required by the USEPA. Stormwater discharge in the Town and Village are regulated by the NYSDEC.

3.1.4 TERRESTRIAL AND AQUATIC ECOLOGY

3.1.4.1 VEGETATION

The vacant Project Site is characterized by open fields, wooded areas and two wetland communities. The property possess normal terrestrial habitat for vacant and previoulsy farmed property.

Ecological Communities

Palustrine Forested Wetlands
Nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens.

Mesophytic Northern Hardwoods
Transitional areas upland of wetlands that support predominantly mesophytic vegetation (trees, scrub and herbaceous cover). An area where plants grow in moisture and aeration conditions that lie between extremes (plants typically found in habitats with average moisture conditions, not usually dry or wet).

Successional old Field
A meadow dominated by forbs and grasses that occurs on sites that have been cleared and plowed (for farming or development), and then abandoned. Shrubs may be present, but collectively they have less than 50% cover in the community.

Successional shrubland
A shrubland that occurs on sites that have been cleared (for farming, lgging, development, etc.) or otherwise disturbed. This community has at least 50% cover of shrubs.

Protected Habitats and Species

Coordination with NYSDEC is ongoing to ensure no impacts on habitats or species under their jurisdiction will be adversely impacted by the Project.

3.1.4.2 FISH AND WILDLIFE

Protected Habitats and Species

Coordination with NYSDEC is ongoing to ensure no impacts on habitats or species under their jurisdiction will be adversely impacted by the Project.

3.1.5 CLIMATE AND AIR RESOURCES

3.1.5.1 CLIMATE

The Project Site is located in the southeastern portion of Tioga County. The climate is representative of the humid area of the northeastern United States and is continental in type. The site is adjacent to the St. Laurence Valley storm track, and is subject to cold air masses that approach from the west and north. The climate is variable, with characteristic frequent and rapid changes. Winters are usually cold, but not commonly severe.

The annual rainfall is evenly distributed over the year, with greatest average monthly amounts occurring during the growing season, April through September. The average seasonal snowfall is about 50 inches. The months of January and February account for approximately half of the seasonal snowfall, but heavy snows may occur as early as November or as late as April. Due to its location near a river valley with surrounding hills, the area occasionally experiences some foggy conditions.

3.1.5.2 AIR QUALITY

The Project site is located in Tioga County, which is classified by the Environmental Protection Agency as attaining national ambient air quality standards in major pollutants categories. A monitoring station located in Georgetown, NY (approximately 50 miles to the northeast of the Project site), monitors sulfur dioxide. The low-level sulfur dioxide monitoring was terminated in 2001. However, from 1992 to 2001, the station was in compliance with the New York State and National Ambient Air Quality Standards (NAAQS) in this category. The station currently monitors sulfur dioxide levels and is in compliance with the New York State and the NAAQS for annual averages for 2001-2003, 3-hour average for 2003, and 24-hour average for 2003. Georgetown is also the closest station that monitors ozone. It is in compliance with the New York State and the NAAQS for one-hour averages in 2003, and 4th maximum daily 8-hour averages for 2001-2003.

A monitoring station in Binghamton, NY (approximately 15 miles east of the Project site) monitors inhalable particulates. It is in compliance with the New York State and the NAAQS for average of 2001-2003 annual means, and average of the 98th percentile for 2001-2003.

3.2 HUMAN RESOURCES

3.2.1 TRANSPORTATION

The site is located south of NYS Route 17/I-86 and is currently accessible from NYS Route 434 in the Village of Owego, and Strong Road in the Town of Owego. Route 17, which is scheduled to be converted into I-86, is currently a four-lane, limited-access divided highway that provides an east/west connection along the southern tier of New York with an access ramp in close proximity to the site. NYS Route 17/I-86 also provides regional connections to other urban centers including Vestal, Corning, Elmira, and Binghamton. The two exit and entrance ramps that provide access to the Village of Owego and the Project Site are Exit 64, which provide access on the western side of the Village, and Exit 65, located on the Village's eastern side. NYS Route 434, located along the northern boundary of the site, is a two-lane highway that provides two interchanges with Route 17/I-86 at two points in Owego. The western interchange provides access to the site and to the Court Street Bridge, a well-appointed access to Front Street and the central business district.

EXISTING TRAFFIC CONDITIONS

Several roadways are located within the study area, including two highways. The existing traffic on these roadways generally operates at an above average Level of Service (LOS). These roadways/intersections currently operate at a LOS of "A" or "B" with a few "C's" and a "D". For specific roadway/intersection LOS data, please refer to *DGEIS Appendix 4 Traffic Impact Study*. Local roadway speeds and ownership is described below.

NYS Route 434 is owned and maintained by the New York State Department of Transportation (NYSDOT) within the vicinity of the study area. West of Court Street, Southside Drive becomes a county highway and referred to as Southside Drive. The NYSDOT highway segment within the study area is functionally classified as an urban minor arterial type highway with a posted speed limit of 40 mph.

Front Street is a local road connecting Court and Park Streets (Route 96) to the historic downtown area of the Village of Owego. The posted speed limit along Front Street is 30 mph.

Court Street (Route 96) is a local road connecting Front Street (Route 17C) and Southside Drive (Route 434). The posted speed limit along Court Street is 30 mph.

Halstead Avenue and Lackawanna Avenue are local streets under the jurisdiction of the Village of Owego. Strong Road and Montrose Turnpike are local streets under jurisdiction of the Town of Owego. The posted speed limits are 30 mph on Halstead Avenue and Lackawanna Avenue, 45 mph on Montrose Turnpike and 55 mph on Strong Road, respectively.

3.2.2 LAND USE AND ZONING

3.2.2.1 EXISTING LAND USE

The Project Site is currently vacant and formerly used for agricultural crop production. *Figure 8 – Existing Land Use* illustrates the Project Site's and adjacent areas land use.

Adjacent Land Uses

The northeastern portion of the site is located in the Village of Owego and is zoned Single Family Residential. Current land uses in this area are predominantly vacant directly adjacent to the site, with significant residential development nearby. A strip of commercial uses is found further along NYS Route 434, on the northeastern part of the property located in the Town of Owego. These commercial establishments include 84 Lumber, Johnson's Pools and Plaza and American Linen. Growing Years, the biggest day-care provider in the county, has also recently taken an option on a property along this section of Route 434. The adjacent land located along the southeastern portion of the site is located in the Town of Owego and is zoned Agricultural. Current land use in this area is characterized as former agricultural land converting to woodlands.

Adjacent land in the northwestern portion of the site is located in the Village of Owego and is zoned Residential 1 and 2 (single- and two-family). Single-family residential along Route 434 and vacant land south of these residences characterizes the current land use. The adjacent land in the west and southwest is located in the Town of Owego and is zoned Agricultural/Residential. The current land use is agricultural and agricultural converting to woodlands.

Strong Road defines the southern site border. Land located south of Strong Road is located in the Town of Owego and is zoned Agricultural/Residential. The current land use is agricultural. Some residential lots are located adjacent to the site in the southeastern and southwestern corners of the site.

The adjacent land use west of the project site is generally characterized as residential development and an emerging service and commercial center along Route 434 is located between the Court Street Bridge and the project site. The northern and central portions of the site offer great views of the Susquehanna River Valley and the Village of Owego. It is also important to note that the success of the project site is correlated with the successful long-term planning of the Route 434 corridor. As such, design guidelines and well-developed zoning mechanisms should be implemented to protect the overall aesthetic appeal and economic success of this corridor as it relates to the project site.

3.2.2.2 AGRICULTURAL LAND USES

Agricultural practices continue on the northern portion of the Project site. As depicted on Figure 4 Existing Zoning, an 11-acre triangular shaped section of the project site located at the northern tip of the Town of

Owego boundary is designated as a New York State Agricultural District Program and is located within the Owego-Nichols Agricultural District as defined by the NYS Department of Agriculture and Markets.

The portion of the site within in the Agricultural District is forested and is not currently being farmed nor has it been in the recent past. The Agricultural District would not be a regular impediment to developing the site with non-agricultural uses. The county should request to have this piece removed from the Owego-Nichols Agricultural District. In New York State, any Project that is proposed within an agricultural district containing a farm operation or on property with boundaries within 500 feet of a farm operation located within an agricultural district, and that proposes to convert agricultural land to another purpose, must submit an Agricultural Data Statement (ADS.)

The southern half of the site is located in the Town of Owego and is zoned for agricultural and residential land uses and comprises approximately 50 acres or 59 percent of the site. As the current site zoning does not provide for a multi-use planned unit development, there may be a need to work with communities to coordinate and achieve the desired development. Specifically, the site may need to be re-zoned to effectively accommodate a multi-use project.

3.2.2.3 EXISTING ZONING

The project site is comprised of two regulating jurisdictions—the Town of Owego and the Village of Owego. The northern half of the site is located within the Village of Owego, is zoned for business uses, and comprises approximately 35 acres or 41 percent of the project area. Permitted uses include the following: all uses allowable in the Central Business District (CBD), greenhouses, plant nurseries, and tourist cabins or camps.

As shown in *Figure 9 – Existing Zoning*, the permitted uses in the Central Business District include the following: all uses permitted in the R3 District, retail shops, banks, theaters, offices, and restaurants. The following are allowable with special use permits: garages, gas stations, places of public amusement, and places of business. Permitted uses in a R3 District include: all uses in the R2 District, multiple dwelling units, boarding, lodging, tourist accommodations, hotels, and motels. Permitted uses in the R2 District include: all uses permitted in the R1 District, two-family dwellings, and business and professional offices. Permitted uses in the R1 District include: one-family dwelling units, cemeteries, places of worship, schools, parks, playgrounds, recreational areas, libraries, hospitals, utility structures, and philanthropic institutions.

An Empire Zone is located at the northern tip of the project area and is approximately 10.5 acres in size. The southern half of the site is located in the Town of Owego and is zoned for agricultural and residential land uses and comprises approximately 50 acres or 59 percent of the site. As the current site zoning does not provide for a multi-use planned unit development, there may be a need to work with communities to coordinate and achieve the desired development. As mentioned previously, the site would likely need to be re-zoned to effectively accommodate a multi-use project.

3.2.2.4 LAND USE PLANS

The Village of Owego has a Consolidated Master Plan that was adopted in September 2003 with the commitment to update the plan every 5 years thereafter. The Master Plan is intended to guide the direction and character of development, redevelopment and revitalization within the village. Some of the recommendations in the Master Plan that are relevant to the project include strengthening the connection between residence and workplace, protecting natural resources and using public investment to support private investment in accordance with smart growth strategies. In addition, the "Future Land Use" Map calls for a mix of commercial and residential uses on the Project Site, both of which are included in the proposed project.

The Project is also consistent with the *Tioga County 2010 Strategic Plan*, adopted on March 15, 2005 (the "Plan"). Specifically, the Project is in keeping with several of the Plan's Initiatives, as follows:

- Economic Development Initiatives: In an effort to increase the number of basic activity jobs in Tioga County (ED1), the Project will contain "a mix of land uses that include light industry, commercial, and residential for a stronger tax base" (pg. 12), which will increase and diversify the basic activity industry base in Tioga County (ED2), and will "increase the number of basic and non-basic activity jobs in Tioga County" (pg. 27) – consistent with Tioga County's economic development goals of increasing the number of basic activity jobs in the county (ED1).

- Community Issues Initiatives: The Project will develop "stronger alternatives to institutional placement for the elderly and disabled" (pg. 30) in order to improve quality of life and reduce the cost of long term care services (HS1), and "improve access to needed health care professionals, for both Medicaid and non-Medicaid populations, including dentists, ophthalmologists, pediatricians, and pharmacists" (pg. 31) The project will counteract aging and out-migration of population by attracting diverse workforce to new job opportunities (pg. 8);

- Housing Development Initiatives: The Project incorporates "smart growth" principles, as it "strengthens the connection between residence and workplace" (pg. 23) in an effort to prepare Tioga County to more effectively attract commercial, industrial, and residential development at a suitable level…(PL1);

- Recreation Land Use Initiatives: The Project will "increase recreational and cultural opportunities that will provide current and future residents with more significant leisure-time experiences within the County (PL4)" (pg. 16).

3.2.3 COMMUNITY SERVICES

3.2.3.1 GENERAL GOVERNMENT

The Project is located in the Village and Town of Owego in Tioga County, west of the City of Binghamton. The Town of Owego includes the Village of Owego as well as five other villages and a large amount of rural land. The Town Board oversees municipal functions; however, in the Village of Owego, most services are offered by the Village rather than the Town.

The Town has three special districts for lighting, sewer and water. Street lighting is provided by the Town in eleven separate lighting districts within the Town. Further discussion about the sewer and water districts is provided below.

3.2.3.2 EDUCATIONAL FACILITIES

The Project Site is served by the Owego-Apalachin Central School District (CSD). Four schools are located within the district: Owego Elementary School, Apalachin Elementary School, Owego-Apalachin Middle School, and Owego Free Academy. Owego Elementary School is located in a rural community across the Susquehanna River, about 1.5 miles north of the Project Site. Approximately 500 students are currently enrolled in grades Kindergarten (K) through 5. Apalachin Elementary School is located roughly 5 miles southeast of the project site in the Village of Apalachin. Almost 500 children attend classes in grades K through 5. Owego-Apalachin Middle School is located across the Susquehanna River in the Town of Owego, 1 mile north of the site. About 260 students are enrolled in grades 6 through 8. Directly next to Owego Elementary is Owego Free Academy, a local high school with approximately 900 students in grades 9 through 12. This school is home of Owego Free Academy Fitness Center, which operates throughout the school year and is open to students, staff, and residents of Owego-Apalachin CSD.

There are also two private schools in the Project's vicinity: St. Patrick Elementary School and Zion Lutheran School. St. Patrick's is located across the Susquehanna River, about one-half mile north of project site. It is a co-ed school with 126 students in grades Pre-K through 5. Zion Lutheran School is located 1.6 miles west of the site. Approximately 68 students are attending classes Pre-K through 6 in this co-ed school.

Educational opportunities are also provided through Coburn Free Public Library, located next to St. Patrick's Elementary School.

3.2.3.3 FIRE PROTECTION

Owego Fire Department serves the Town of Owego. The department, all members of which are volunteers, provides firefighting, ALS emergency medical service, vehicle rescue (extrication), and search and rescue. The department operates out of four stations: Central Fire Station (0.7 miles northwest of the site, across Susquehanna River), Croton Hose Co. #3 (approximately 1 mile northwest of the site, across Susquehanna), Susquehanna Engine Co. #1, Wave Hose Co. #2, Hiawatha Engine Co.#4, and Ahwaga Ladder Co.#5.

The Fire Coordinator appointed by the Tioga County Legislature coordinates training for firefighters and emergency medical technicians from all 15 of the County's Fire Districts/Fire Departments. .

3.2.3.4 UTILITIES

The Project site is not currently serviced by public water service and is only partially serviced by a municipal wastewater collection system. Therefore, prior to development of the Project Site, a public water system and sanitary system must be extended to provide sufficient capacities for full build-out conditions.

3.2.3.5 WATER SUPPLY

While public water is not available at the project site, public water supply is available to residents in the Village and Town of Owego. The public water system serving the Village of Owego is owned, operated and maintained by a private water company (United Water Owego) that distributes water from three public groundwater supply wells. Potable water is supplied to customers south of the Susquehanna River by a single 8-inch diameter river crossing where the water distribution system is divided into two pressure zones. The lower pressure zone experiences pressures associated with the public water storage facilities located along the north side of the river while pressure within the upper pressure system is created through the Halstead Booster Pump Station. The pump station's average daily discharge (during the years 2000-2004) is approximately 22,000 gallons and the peak day is roughly 43,000 gallons. In 2002, the peak daily discharge equaled nearly 64,000 gallons (or 44 gpm over a 24 hour period), most likely attributed system leakage. Past hydrant flow tests completed at the hydrant located near the intersection of NYS Route 434 and Halstead Avenue have yielded an available flow of 1,272 gpm and a static pressure of nearly 110 psi. Please refer to Figure 10 Existing Utility Mapping for additional information on the utility infrastructure near the Project Site.

United Water Owego has an estimated maximum capacity of 3.2 MGPD. The actual average for 2002 was 1.5 MGD, which is approximately fifty percent (50%) of capacity. The existing water main extends approximately 400 feet east of Halstead Avenue along Route 434. It also extends into the residential development south of Halstead Avenue. The water distributions serving this residential area is a loop system with dead ends located at Bradley Street, Winey Wood, and Apple Blossom Lane.

The Town of Owego water system is comprised of six independently operating water districts. The closest water district, Water District No. 1, is located approximately 6,000 feet from the project site. This district, located north of the Susquehanna River, services the area encompassing Deerfield Drive, Sunnyside Drive, Lisle Road, King Point Circle, Davis Road, etc., and receives its water supply from the Village of Owego. This district contains one 250,000-gallon water storage facility. This service is funded by a fee charged to the properties that benefit this service. Refer to the Draft Preliminary Engineering Report located in *DGEIS Appendix 5 Preliminary Engineering Report* for additional information.

3.2.3.6 SEWAGE TREATMENT

Sanitary sewer collection, while not available on the Project Site is available in other sections of the Village and Town of Owego. Sewer collection within the Village of Owego is collected in an eight-inch diameter PVC pipe located along NYS Route 434, east of Halstead Avenue, along Lackawanna Avenue where it

discharges to a below grade pumping chamber. The chamber consists of two sewage pumps within a circular steel wet well that has an interior diameter of 5.5 feet. The pump station discharges through 2,500 ft. of 4-inch diameter ductile iron pipe to a manhole near the intersection of Halstead Avenue and Ruth Street. Effluent is subsequently conveyed from this point to the Village of Owego Wastewater Treatment Facility through 8-inch diameter PVC sanitary sewer piping. The Lackawanna Avenue Wastewater Pumping Station discharges approximately 30,000 GPD. Please refer to *Figure 10 Existing Utility Mapping* for additional information on the sewage infrastructure near the Project Site.

The Treatment Plant is located south of the Susquehanna River and west of the intersection of NYS Route 434 and NYS Route 96, and is rated for an influent flow rate of 1 MGD. Recent average monthly flows to the Village of Owego's wastewater treatment plant range from 0.307 MGD to 0.913 MGD. The highest average monthly flow was 0.913 MGD, which occurred during April 2003. Currently, the influent flow rate to the WWTP is substantially impacted by excessive infiltration into the system. The majority of the infiltration has been traced to a 3,600 ft. section of concrete sanitary sewer located along the north side of the Susquehanna River and terminates at the William Street wastewater pumping station. The William Street pump station discharges immediately upstream of the WWTP and has no impact on the 8-inch diameter southside interceptor sewer.

The Town of Owego Sewer District (also known as the Town of Owego Route 38 Sewer District) is located approximately 5,000 feet to the northeast of the Project Site. The Town's municipal sanitary sewer collection system is located on the north side of the Susquehanna River and east of the Village of Owego Corporate Limits. The Town of Owego Wastewater Treatment plant is rated for 0.5 MGD, however, influent flow rates range from 0.715 MGD to 0.950 MGD. This district includes the Route 38 Industrial Park, the Tioga County Public Safety Building (including the jail) and the Department of Social Services Buildings. This is funded by a fee charged to properties that benefit from this service. (source: http://www.tiogacountyny.com/pdfs/government/govtoverview.pdf. Refer to *DGEIS Appendix 5 – Draft Preliminary Engineering Report* for additional information.

3.2.3.7 SOLID WASTE DISPOSAL

The Tioga County Solid Waste Department manages the Transfer Station in the Town of Barton. The department also manages the County Recycling Program by contracting this service to Taylor Garbage (Southern Tier Recyclers).

3.2.4 SOCIOECONOMIC CONDITIONS

3.2.4.1 POPULATION AND INCOME

According to the 2000 census, the Town of Owego had a population of 20,365 and the Village of Owego had a population of 3,911. Of the total population in the Town of Owego, approximately 29% are school

aged (19 or under) and 13% are 65 years or older. The population of the Village of Owego is slightly older, with 27% of the population being school aged and 17% are 65 years or older.

Educational attainment in the Town is high, with almost 90% of residents having graduated from high school and 28% possessing a bachelors degree or higher. Corresponding Village of Owego numbers are lower: 81% and 23% have high school education and college or postgraduate education, respectively.

Sixty-five percent of the Town's population and 62% of the Village population participated in the labor force in 2000. Unemployment rates in both municipalities were relatively low: 2.8% in the Town and 4.2% in the Village. Interestingly, the Town and the Village had noticeably different distribution patterns of employed persons through occupational sectors. In the Town, 42% of residents worked in professional occupations, 25% in sales and office occupations, 12% in service and 14% in production or transportation. In the Village 28% of residents worked in professional occupations, 30% in sales and office occupations, 18% in service and 19% in production or transportation. This difference is reflected in median household income of $46,987 in the Town, and $31,742 in the Village. Also, in Town fewer than 5% of families live under poverty level, with 10% in the Village.

Furthermore, median household incomes in the Town of Owego were higher than the County and some surrounding municipalities. The median household income in the Village of Owego was significantly lower than those of County and surrounding municipalities. As shown below in *Table 3-1 Comparative Demographics*, both the Town and Village lost population between the 1990 and 2000 censuses, as did Tioga County as a whole. The most notable loss of 12% occurred in the Town of Tioga.

Table 3-1
Comparative Demographics

Municipality	Population 1990	Population 2000	Population % change	Median Household Income 2000 (in dollars)	Per Capita Income 2000 (in dollars)
Village of Owego	4,442	3,911	-12	31,742	17,068
Town of Owego	21,279	20,365	-4.3	46,987	21,996
Town of Tioga	4,772	4,841	1.4	36,960	17,813
Town of Vestal	26,733	26,535	-0.7	51,098	22,363
Tioga County	52,337	51,784	-1.1	40,266	18,673

Source: 2000 U.S. Census

These data demonstrate that both the Town and Village have not been successful at attracting new families and highly educated persons with above average incomes. This also demonstrates that the Project will be a good fit in the community in that it will provide economic opportunities, and living conditions to attract that category of population.

3.2.4.2 HOUSING

The Town and Village of Owego are primarily residential in character. In 2000, 9,445 households existed within the Town and the Village combined. The average household size was 2.61 persons for the Town, and 2.29 for the Village. Of the 7,733 occupied housing units in the Town of Owego, 6,045 were single-family homes, and the remainder a mix of semi-attached units, small- to medium-sized apartment buildings, and mobile homes. Of the 1,664 occupied units in the Village, 889 were single-family homes. Approximately 26% of the structures in the Town were built prior to 1940, and 18% were constructed between 1940 and 1960. Approximately 7% of the units have been constructed since 1990. The housing stock of the Village appears to be much older. Some 70% of the housing units were constructed prior 1940. Approximately 15% of units were built between 1940 and 1960. Only 3% of units were built after 1990.

The Project can work in two chief ways to help the area address housing issues. New economic opportunities, and amenities within the project, should attract potential new residents to the area surrounding the project. The Project Site will include housing types currently in short supply, such as rental and senior housing, and residences for move-up families. Also, in recognition of the need to attract highly educated, established and affluent families, luxury homes with inclusion of technological amenities could be constructed.

3.2.5 CULTURAL RESOURCES

3.2.5.1 HISTORIC AND ARCHEOLOGICAL RESOURCES

There is a potential for the property to contain historic and archeological resources. A recently completed Phase 1 A (refer to *DGEIS Appendix 7 Phase 1 A Literature Research*) recognized that there are potential sensitive sites and recommended the completion of a limited Phase 1B, currently underway. The findings of the limited Phase 1B will be incorporated into FGEIS.

3.2.5.2 VISUAL RESOURCES

The Project Site is vacant abandoned agricultural land. The change in the use of the Project Site from vacant to developed will undoubtedly result in change of the character of the Project Site. As discussed above in *Adjacent Land Uses*, the adjacent land use west of the project site is generally characterized as suburban residential development along with an emerging service and commercial center along NYS Route 434 between the Court Street Bridge and the Project Site.

3.2.5.3 NOISE

The Project Site is within a setting that could be defined as rural to quiet suburban. As such, sound levels in the area are generally low with a somewhat limited number of sound producers. Sound producers generally can be classified as one of three types; fixed equipment or processes, mobile equipment or

processes, and transport movement of products. The major sound producers in the vicinity of the Project Site are automobile traffic along NYS Route 434 and NYS Route 17/I-86 and along with daily activity from the Montrose Road neighborhood to the west.

Sound pressure levels (SPL) or perceived loudness is expressed in decibels (dB) or A-weighted decibel (dBA) scale that is weighted towards those portions of the frequency spectrum to which the human ear is most sensitive. Decibels can be used to describe the sound environment in a number of ways. The Day Night Average Sound Level (Ldn) is the 24-hour average sound level. The Equivalent Sound level (Leq) is the average sound level for any particular time period under consideration. The time period may be a particular peak hour of sound or typical time periods for sound producers, such as over a given work day or regular period of operation.

As depicted in *Table 3-2* sound levels in the Project area can generally be expected to range from between 43 to 63 dBA depending on their location. The EPA provides typical Ldn sound levels of 40 to 46 dBA (average 43 dBA) for rural residential areas.

Table 3-2
Typical Day-Night Noise Levels Associated With Different Residential Environments (USEPA)

Rural	40-46 dBA
Quite Suburban	46-53 dBA
Suburban	53-63 dBA
Urban, Low-Density Residential	58-63 dBA
Urban, Medium-Density Residential	63-68 dBA
Urban, High-Density Residential	68-78 dBA
Urban, Downtown Business District	74-81 dBA

Source: USEPA

3.2.6 ENVIRONMENTAL CONDITIONS

The Phase 1 Environmental Site Assessment (ESA) conducted by HUNT Engineers (see *DGEIS Appendix 8 Phase 1 Environmental Site Assessment*) identified one location within the assessment area where there were recorded underground gasoline storage tank failures. The South Side Drive Extra Mart located ½ mile northwest of the Project site was listed for two failures where an unknown quantity of gasoline was spilled. Based upon the Phase 1 ESA, there is a diminutive environmental concern with the above mentioned gas spills. Further, there are no other know environmental concerns with the Project Site and surrounding properties.

4.0 Potential Environmental Impacts and Mitigation Measures

This section will provide a detailed accounting of each identified Project – related potential impact on Natural and Human Resources, and whether or not they are considered significant, short or long-term; avoidable, adequately mitigable, and what those proposed mitigation measures include.

4.1 NATURAL RESOURCES

4.1.1 STORMWATER

The Project will result in the addition of residential structures, roads, driveways, parking areas, walkways, landscaping, and areas devoted to stormwater management facilities. Preliminary stormwater runoff calculations have been developed for the Project, and the full Preliminary Stormwater Management Report is provided in DEIS Appendix 1. The purpose of these calculations is to understand the magnitude of the required quality and quantity of treatment facilities and ensure that appropriate locations on the site are designated for these stormwater management facilities.

The runoff calculations are performed for each of the subareas for both the existing and developed conditions utilizing Soil Conservation Service TR-55 methodology and the Eagle Point 2003 Watershed Modeling computer program. The 10 and 100 year, 24 – hour storm events are analyzed, as on-site detention must be provided to limit the developed conditions peak runoff rates from these storms to the existing conditions rates. In addition, Water Quality and Channel Protection Volumes are calculated for each of the subareas and these volumes must be also be treated and detained on-site, in accordance with the NYSDEC Requirements (80% removal of Total Suspended Solids, 40% removal of Total Phosphorus).

DGEIS Appendix 1 Preliminary Stormwater Management Report contains all of the calculated peak runoff rates, required storage volumes and calculation methodology for each of the subareas. These volumes dictate the use of surface treatment/detention basins from both construction feasibility and financial standpoints. Runoff will be conveyed to these basins both as overland flow, in open channels and through newly constructed storm sewer systems. Once treated and detained as required, the runoff will be discharged to the two streams on the Project site.

Stormwater Management

Without proper controls in place, stormwater runoff from developing areas can result in off-site problems including erosion and water quality degradation due to sedimentation and other non-point source pollutants. These impacts are greatest during construction periods when soils are without vegetative cover.

Through the preparation and implementation of this plan, impacts resulting from erosion, sedimentation and stormwater runoff during construction will be mitigated. This plan will include temporary measures

for mitigation of erosion and sediment control during construction, including the use of silt fence, straw bale dikes, sediment traps and other techniques as deemed appropriate. The plan will include permanent measures such as lined channels, rock outlet protection, and detention basins. Erosion and sediment control measurers will be in accordance with the NYS Guidelines for Urban Erosion and Sediment Control. The Plan will also employ techniques to reduce pollutant load in stormwater runoff from the developed areas. These techniques may include filter strips, water quality inlets, infiltration or water quality basins, as appropriate, in accordance with the NYSDEC SPDES General Permit. The SWPPP will be completed prior to the start of construction in accordance with the notification requirements detailed in the General Permit.

4.1.2 GEOLOGY

4.1.2.1 SUBSURFACE GEOLOGY

Potential Impacts – Potentially Unavoidable Vibration and Noise Impacts Related to Removal of Bedrock

Bedrock may be encountered during excavations and construction of the proposed roads, dwellings and utilities. The presence of the bedrock is not anticipated to result in significant impacts or obstacles to construction due to the fact that, based upon the bedrock's composition and weathered condition, it should be possible to excavate or rip it with an excavator. An alternative and quicker method could include the use of a pneumatic hammer. However, if bedrock removal is required over large areas or to depths of more than a few feet, controlled blasting may be required to achieve its economical removal.

If blasting is conducted improperly, structural damage to nearby buildings could result. There also exists the potential for flying debris with blasting without proper covering. Blasting may also result in adverse noise impacts (refer to ***DGEIS Section 4.2.6.3 Noise*** for a discussion on the potential noise impacts). Ground vibrations from construction activities very rarely reach the levels that can damage structures, but can achieve the audible and feelable ranges in buildings very close to a site. A possible exception is the case of old, fragile buildings of historical significance where special care must be taken to avoid damage. The construction activities that typically generate the most severe vibrations are blasting and impact pile driving.

Mitigation

Controlled blasting, if required, will be performed in a manner that limits the maximum peak particle velocity (PPV) to less than two inches per second (ips) at the Project limits. At this level, the likelihood that adverse impacts will result to nearby structures is very low, and the degree of vibration will decrease as distance from the blast site increases. However, depending upon the sensitivity of adjacent properties, more strict vibration criteria may be warranted. In addition, the peak airblast overpressure limit should also be limited to less than 0.014 psi at the nearest adjacent occupied structure. It is proposed that blast vibrations will be monitored at the Project limits and pre-condition surveys may be performed for selected structures within 500 feet of areas proposed for blasting considered at most risk for damage. Further, all

blasting will be conducted in accordance with standard practice and placement of blast mats over the blasting zone will contain flying debris.

Finally, if blasting is required, a blasting plan could be prepared and submitted to the Town, Village and County for review and approval. All blasting and use of pneumatic hammers will occur during daylight hours and all precautions will be taken to ensure public safety is maintained during periods of blasting.

Significance of Impact

Due to the fact that if any vibrations occur, they will be minimal, short in duration, and any related impacts will be mitigated to the maximum extent practicable through the implementation of all the mitigation measures and precautions discussed above, said impacts are not anticipated to be significant.

4.1.2.2 SURFACE GEOLOGY

Potential Impact – Unavoidable Increase in Impervious Areas and Avoidable Impacts Related to Erosion and Siltation of Water Resources, and Dust

With this loss of vegetation and increase in impervious area, the potential exists for the increased erosion of soils as vegetation is cleared for construction, especially on the steep slopes of the Project site.

There also is the potential of soil and dust particles becoming stirred during construction, which may adversely affect surrounding residences.

Mitigation

To mitigate potential impacts from the increase in impervious area, the loss of vegetation, and disturbances to steep slopes, specific stormwater management facilities will be developed and designed as part of the SWPPP. The SWPPP will address the design, implementation and maintenance of both the erosion and sediment control measures to be used during construction and the post-construction stormwater management facilities.

The temporary measures for mitigation of erosion and sediment control during construction may include, but not be limited to, the use of silt fence, straw bale dikes, sediment traps and other techniques as deemed appropriate. The post-construction permanent measures that may be used, include, but not be limited to lined channels, rock outlet protection, and the plan will also employ techniques to reduce the pollutant load in stormwater runoff from developed areas. These techniques may include, but not be limited to, filter strips, water quality inlets, infiltration or detention as appropriate. The SWPPP will be completed prior to the start of construction in accordance with the notification requirements detailed in the NYSDEC General Permit.

Although 19.4 acres will be converted to impervious areas, all other disturbed areas will be covered with mulch as soon as practical to reduce the potential for erosion during rain events, and seeded to re-establish vegetation as soon as it is possible.

Employing the proposed SWPPP will also mitigate any potential impact related to development on slopes. The side slopes for temporary excavations in the indigenous site soils and weathered shale will be inclined no steeper than one vertical on one horizontal as required by the Occupational Safety and Health Association (OSHA) for a Type B soil. All permanent cut and fill slopes will be inclined no steeper than one vertical on three horizontal, and a thick vegetative growth will be promptly established on the final slopes to inhibit erosion. Steeper permanent slopes may be implemented with proper geotechnical evaluation and design.

Mitigation measures to ensure stability of proposed structures and roadways include:

- Foundation designs consider perched water table conditions by providing damp proofing and/or foundation footing drains as appropriate.
- Standard engineering practices for road construction instituted to maintain stable conditions.

To mitigate impacts of soil and dust particles being stirred and impacting surrounding uses, all exposed soils will be covered or sprayed with water or NYSDEC – approved dust palliative to reduce the potential for erosion and the blowing of dust particulates throughout and beyond the Project site.

Significance of Impact

Due to the above-discussed provisions and mitigation measures, the potential impacts on surface geology with respect to an increase in impervious areas, erosion, sedimentation, and dust is expected to be short in duration and minimal, and will be mitigated to the maximum extent practicable. Therefore, potential impacts are not anticipated to be significant.

Environmental Contaminants:
According to the Phase 1 Environmental Site Assessment (refer to *DGEIS Appendix 8*). It is anticipated that environmental contaminants will not be discovered on-site. Therefore mitigation measures are not proposed.

4.1.3 WATER RESOURCES

4.1.3.1 GROUNDWATER

Portions of the site are characterized by spring seeps and shallow depths to groundwater in other areas, primarily in and near the areas identified as wetlands.

Potential Impact – Unavoidable Impact on Groundwater Infiltration and Avoidable Impacts to Groundwater Quality

A. Construction Activities: Construction activities, if not properly managed, could result in groundwater quality impacts.

B. Reduction in Groundwater Infiltration: The project as currently designed is anticipated to result in approximately 19.4± acres of impervious areas made up of buildings and pavement for roads, driveways and sidewalks. This increase in impervious area is considered minimal compared to the remaining acreage of pervious surfaces on the Project site, and a drop in the amount of groundwater available to surrounding residential properties that use on-site wells for their water source is not anticipated. Therefore, no impacts on groundwater infiltration are anticipated.

C. Contaminants in Runoff: The increase in impervious areas particularly associated with roads and driveways may increase the potential for runoff, which could be contaminated with automobile related pollutants such as oil, grease, and other petroleum products. There is also the potential for groundwater to be adversely affected post-construction if pesticides, herbicides, or fertilizers are used to maintain lawns and landscaped areas.

D. Sewage Impacts: Due to the proposed use of municipal sewer services, no adverse impacts to groundwater on the site are anticipated related to sewage disposal.

Mitigation

A. Construction Activities: Through the implementation of the SWPPP and associated mitigation measures as discussed above, it is anticipated that potential adverse impacts to the groundwater related to construction activities and the proposed increase in impervious areas, will be mitigated completely, or to the maximum extent practicable.

B. Potential for a Reduction in Groundwater Infiltration: No impacts on groundwater infiltration are anticipated from the increase in impervious areas, due to the proposed use of stormwater detention and infiltration systems.

C. Contaminants in Runoff: The plan will also employ techniques to reduce the pollutant load in stormwater runoff from developed areas, including petroleum products from automobiles. These techniques may include, but are not limited to filter strips, water quality inlets, infiltration or detention as appropriate.

Significance of Impacts

A. Construction Activities: Due to the fact that any disturbances to the pockets of groundwater during construction will be short in duration, and will be mitigated to the maximum extent practicable

through the above described provisions and mitigation measures, potential impacts are not anticipated to be significant

B. *Reduction in Groundwater Infiltration: No impacts on groundwater infiltration are anticipated from the impervious areas due to the proposed use of stormwater detention and infiltration systems.*

C. *Contaminants in Runoff: The potential impacts related to the proposed increase in impervious areas and related stormwater runoff that may contain automobile pollutants, while considered longer in duration, are not anticipated to result in significant nor permanent adverse impacts to groundwater quality, due to the proposed implementation of the SWPPP, combined with the natural filtration afforded by infiltration through the soil to groundwater on the Project site.*

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4.1.3.2 SURFACE WATER AND WETLANDS

Potential Impacts – Unavoidable Impacts Associated with Minor Filling of Wetlands and Tributaries and Related Water Quality Impacts

A. Proposed Filling of Wetlands and Tributaries:

As depicted on Figure 12 Wetland Impact Map, it is expected that approximately 0.287 acres of wetlands subject to the jurisdiction of the ACOE will be impacted due to the layout of the proposed roadway (7,578 SF) and water utilities (4,925 SF) under one design alternative for the construction of a water storage facility. Disturbance to Waters of the U.S., both wetlands and surface water resources by the construction of the site road would be handled through Nationwide Permit (NWP) #14 Linear Transportation Projects with the ACOE. The disturbance to wetlands by the installation of the waterline would be handled by NWP #12 – Utility Line Activities.

No Protection of Waters Permit is anticipated from the NYSDEC as the wetlands proposed to be disturbed are below NYSDEC jurisdictional threshold of 12.4 acres. A Jurisdictional Determination has been submitted to the ACOE and coordination with the NYSDEC will made simultaneously to confirm jurisdictions. It is anticipated that the results of the Jurisdictional Determination will be available for incorporation into the FGEIS.

B. Indirect Impacts:

This presents the potential for impacts on the wetlands and tributaries by erosion and sedimentation during construction and stormwater runoff, and other indirect impacts post-construction related to the residential uses. More specifically, once residences are established, adverse impacts could result through incremental filling of the wetlands (either voluntary or by accident), through the use of pesticides, herbicides, or fertilizers; dumping of trash; introduction of litter, as well as draining and mowing, all of which could impair the quality and function of the wetlands and tributaries.

Stormwater runoff may impair the water quality of surface waters and/or wetlands through sedimentation and the introduction of vehicle-related contaminants, such as petroleum products.

Mitigation

A. Proposed Filling of Wetlands and Tributaries:

In designing the Project, the first goal was to identify designs that would avoid wetland and surface water impacts. Once it was evident that the wetlands and tributaries could not be completely avoided, every attempt was made to minimize impact.

The intended direct impacts to the wetlands and tributaries will be minimized, and the chance for unintended impacts will be mitigated through the use of proper construction techniques employed during the construction of the proposed crossings in accordance with industry standards and Best Management Practices (BMP). Construction will take place during periods of low flow to decrease potential sedimentation impacts. Further, stream filters (silt fences) will be installed downstream of the disturbed areas for the duration of the construction to collect disturbed sediments. These stream filters will be inspected and cleaned out in accordance with NYSDEC requirements.

B. Filling and Indirect Impacts:

To further mitigate both direct impacts related to the tributary crossings and indirect impacts related to construction and post-construction activities, the SWPPP will be strictly implemented in accordance with NYSDEC requirements.

Significance of Impacts

A. Direct Impacts:
While less than ½ of an acre of wetlands may be permanently filled, the impact will be fully mitigated through compensatory mitigation measures, and as a result, impacts not anticipated to be significant.

B. Indirect Impacts:
The potential for indirect impacts related to the temporary disturbances to wetlands and tributaries during the installation of the utility crossings, and the permanent filling of wetlands and tributaries during the construction of the Project site road will be mitigated to the maximum extent practicable through compliance with NWP #12 and #14 respectively and therefore, the direct and potential indirect impacts are not anticipated to be significant.

The potential for erosion and sedimentation during construction (a short-term impact), the increase in stormwater runoff from impervious surfaces and the potential for this runoff to introduce petroleum and other contaminants (a potential long-term impact) would minimally impact the Project sites or off-site surface waterbodies or wetlands due to the proposed implementation and compliance with the SWPPP

and associated provisions and mitigation measures; and due to the indirect nature of the discharge and the distance the runoff must travel before reaching these waterbodies. Therefore, such impacts are not anticipated to be significant.

4.1.3.3 FLOODPLAIN

Potential Impact – Avoidable Indirect Impacts Related to Construction and Stormwater Runoff

There does exist the potential for indirect adverse impacts related to erosion and sedimentation during construction and stormwater runoff, post-construction.

Mitigation

Mitigation measures will include construction of detention and/or retention basins to limit peak runoff from the Project to pre-development rates; and construction of wet ponds, grass-lined ditches or other water quality protection measures to mitigate impacts on the quality of stormwater runoff. Further, proper construction techniques will be employed during construction and in accordance with industry standards and BMP, and the SWPPP will be fully implemented and complied with.

Significance of Impacts

No significant impacts are expected.

4.1.4 TERRESTRIAL AND AQUATIC ECOLOGY

4.1.4.1 VEGETATION

Potential Impacts – Unavoidable Temporary and Permanent Loss of Vegetation

The loss of vegetation is mainly attributed to the need for removal during construction periods. Approximately 19.5± acres will be permanently lost and converted to roads, driveways, parking areas, and structures.

While there will be a permanent loss of vegetation; approximately 65.8 acres will ultimately remain vegetated. Site Plan review will be required prior to the construction of each development site, and all conditions with respect to vegetative clearing and re-planting will need to be complied with.

Mitigation

To mitigate the permanent loss of vegetation, and prevent additional losses all disturbed areas will be re-vegetated as appropriate.

Significance of Impacts

Revegetation, whether ornamental plantings or lawned areas, will deter increased stormwater flows generated during construction. Post-construction stormwater runoff will also increase due to increased impervious surface areas. Since significant areas of the site will remain vegetated and other areas will be revegetated, (and stormwater detention basins will be constructed), the impact of these increased flows are expected to be minor, short in duration, and not anticipated to be significant

4.1.4.2 FISH AND WILDLIFE

4.1.4.2.1 Terrestrial Species

Potential Impacts – Unavoidable Permanent Loss of Habitat

The Project site is currently home to several species of songbirds, game birds, and birds of prey, along with small mammals, deer, and other species have been observed or are presumed to exist on the Project site based upon site conditions. The existing terrestrial species could potentially be adversely impacted and, in certain areas, will be forced to relocate.

These impacts will be temporary in nature and are anticipated to be minimal due to the fact that after completion of the proposed development, the site will still remain a healthy habitat for common species, even more so than the surrounding suburban style development that has retained minimal large tracts of unbroken forests and open fields in which, common terrestrial species thrive. Further, because residential areas exhibit prime habitat for small mammals and songbirds, by increasing the amount of lawned and landscaped areas, the Project site may ultimately support more of these and other terrestrial species after completion of the development than what it currently supports.

Mitigation

To mitigate the permanent loss and unnecessary disturbance of vegetation and terrestrial habitats that remain, all areas, that are not proposed to be disturbed, will be protected by construction fencing or other appropriate meansto restrict access by machinery and reduce the potential for the accidental removal or disturbance of vegetation and habitats. In addition, all disturbed areas will be revegetated as appropriate, and all cleared areas not proposed to be constructed upon will also be revegetated and landscaped. The majority of the preserved areas will consist of large, unbroken expanses of forest and/or open fields, will effectively be contiguous, and as such, will provide wildlife corridors.

Significance of Impacts

As a result of the mitigation measures and provisions described above, the potential impact on terrestrial species due to the permanent loss of vegetation is expected to be temporary and minimal as a result of the cluster design of the Project along with the proposed increase in landscaping and lawned areas which

will ultimately result in additional areas for terrestrial species typical to suburban areas, a potential positive impact for terrestrial species.

4.1.4.2.2 Aquatic Species

Potential Impacts –Permanent, Temporary and Indirect Impacts to Habitat

Unavoidable Permanent Impacts: The permanent impacts to the wetlands and tributaries and related aquatic habitat necessary for road construction cannot be avoided. The direct impacts to these small sections of the wetlands and tributaries will be permitted.

Unavoidable Temporary Impacts: The proposed temporary impacts to the wetlands and streams related to the construction of the roadways under NWP #14, while unavoidable, will be fully mitigated through complete restoration of the sites back to their pre-construction conditions.

Avoidable Indirect Impacts: During the proposed crossing of the wetlands and tributaries for both road and utility construction, there exists the potential for adverse impacts to the aquatic species through erosion, sedimentation and stormwater runoff, although these impacts can be avoided through proper mitigation techniques as discussed below.

Mitigation

Unavoidable Permanent Impacts: The permanent impacts to the wetlands and streams related to the construction of the roadway, while unavoidable, will be fully mitigated pursuant to the requirements of NWP #12 and #14.

Unavoidable Temporary Impacts: The initial impacts to the wetlands and streams related to the construction of the roadway, while unavoidable, will be fully mitigated through complete restoration of the sites back to their pre-construction conditions, pursuant to the requirements of NWP #14.

Avoidable Indirect Impacts: The potential for adverse impacts to the aquatic species through erosion, sedimentation and stormwater runoff during and after the proposed wetland and tributary crossings are avoidable and will be mitigated through the use of proper construction techniques, BMP, and implementation and compliance with the SWPPP.

Significance of Impacts

Unavoidable Permanent Impacts: Through full compliance with NWP #14 and the implementation of the compensatory mitigation strategies resulting in, the adverse impacts to the aquatic habitats of the disturbed wetlands and tributaries is not anticipated to be significant.

Unavoidable Temporary Impacts: The temporary impacts related to the road crossings are not anticipated to be significant due to the fact that each crossing will be restored back to its pre-construction condition pursuant to the requirements of NWP #14.

Avoidable Indirect Impacts: Due to the fact that the potential adverse impacts to the aquatic species through erosion, sedimentation and stormwater runoff will be mitigated to the maximum extent practicable through the use of proper construction techniques, best management practices, and implementation and compliance with the SWPPP, any related adverse impacts are not anticipated to be significant, if they occur at all.

4.1.4.3 PROTECTED HABITATS

Coordination with the NYSDEC is ongoing to ensure no impacts on habitats or species under their jurisdiction will be adversely impacted by the Project. Further analysis, including potential impacts and mitigation (if appropriate) will be provided in the FEIS.

4.1.5 CLIMATE AND AIR RESOURCES

4.1.5.1 CLIMATE

The Project involves the development of, and although it will result in an increase in automobile traffic to the area (discussed below), and an increase in the use of fossil fuels and other valuable resources, the Project is too small to directly impact the climate. Cumulatively, new residential construction on a global scale that is developed farther away from cities where efficient public transportation is not available, in areas previously undeveloped, and requiring the removal of vegetation may be contributing to adverse impacts on the climate.

When feasible the new structures will be oriented to take advantage of southern exposure to conserve energy by supplementing lighting and winter heating requirements. In addition, all practical measures to conserve energy including the utilization of energy-efficient building materials and techniques will be taken into consideration. In addition, residents of the single-family homes will have the option of incorporating solar technology and other energy conservation measures to lessen their impact on the environment.

4.1.5.2 AIR QUALITY

Potential Impacts

A. Unavoidable Minor Localized Automobile-Related Increase in Carbon Monoxide (CO), Ozone (O_3), Nitrogen Dioxide (NO_2), and Fine Particulate Matter ($PM_{2.5}$) (automobile – related Pollutants): Based upon the assessment, the Project may result in minor localized increases in the levels of these automobile related pollutants due to the anticipated increase in automobile traffic. However, these increased levels generated by increased traffic are not expected to exceed regional standards.

B. Unavoidable Minor Temporary Air Quality Impacts During Construction Phases: The air quality on and immediately adjacent to the Project site may experience short-term impacts as a result of construction activities. During construction, airborne particulates will increase as a result of moving construction vehicles, the removal vegetation and the movement of soil for grading and construction activities. This increase is expected to be sporadic and short-term in nature and will be most noticeable in the area immediately adjacent to the construction. Most dust will fall out within a few feet of construction activities, although some dust may travel further and extend beyond the Project site boundaries. The amount of dust generated will not be extensive and any related impacts will be temporary. Additional isolated increases in automobile related pollutants would result from the operation of construction machinery. This impact will also be temporary in nature and isolated to the Project site.

Mitigation

A. Unavoidable Minor Localized Automobile-Related Increase in Automobile Related Pollutants: The anticipated minor and localized increase in automobile related pollutants would be unavoidable. There is however, the ability for future residents of the Project to utilize available public transportation, car pool, along with more energy-efficient automobiles, all of which will aid in reducing the amount of additional CO levels associated with the Project.

B. Unavoidable Minor Temporary Air Quality Impacts During Construction Phases: The potential for air quality impacts related to dust and other particulate matter may be mitigated by the following:

> Through the use of water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this could include wetting down such areas in the late morning and after work is competed for the day. Increased watering frequency should be required whenever the wind speed exceeds 15 mph. Reclaimed water should be used whenever possible;

> Use of dust inhibitors, such as calcium chloride and other dust-control provisions found in the NYSDOT Standard Specifications for construction;

> The amount of disturbed area Minimization, and on site vehicle speeds will be kept low;

> Gravel pads will be installed at all access points to prevent tracking of mud on to public roads;

> Soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the site will be tarped from the point of origin;

> After clearing, grading, earth moving or excavation is completed, all areas will be treated by watering, or revegetating, or by spreading soil binders until the area is paved or otherwise developed so hat dust generation will not occur; and

> The preservation of the natural vegetation buffer along the perimeter of the Project site will also provide additional protection in reducing any possible off-site impacts.

The temporary increases in automobile related pollutants related to the operation of construction vehicles and equipment may be mitigated by the following measures:

- Ensuring that all equipment will meet state and federal requirements for exhaust and pollution control;
- Limiting the number of construction equipment operating simultaneously through efficient management practices to ensure that the smallest practical number is operating at any one time;
- Ensuring construction equipment is maintained and tuned per the manufacturer's specifications;
- If feasible, all combustion engines will have catalytic converters;
- Diesel powered equipment will be replaced by electric equipment whenever possible; and
- Construction worker trips will be kept to a minimum by encouraging carpooling.

Significance of Impacts

With the implementation of the proposed mitigation measures and the fact that the air impacts related to increased automobiles will be localized, the air impacts associated with construction will be temporary, and neither form of air impacts are presumed to exceed regional air quality standard. Therefore, these impacts are not anticipated to be significant.

4.2 HUMAN RESOURCES

4.2.1 TRANSPORTATION

The study area, as discussed in Appendix 4, includes the following six (6) intersections:

- Southside Drive/Lackawanna-Halstead Avenues;
- Southside Drive/Court Street;
- Court-Park Streets/Front Street;
- Montrose Turnpike/Strong Road;
- Southside Drive/Proposed Site Driveway; and
- Strong Road/Proposed Site Driveway.

For the purpose of this analysis, it was assumed that the project would be fully developed by the year 2010. Proposed intersection capacity analysis was completed for 2008 (completion of Phase 1) and 2010 (full development). The existing 2005 traffic volumes were adjusted based on an analysis of projected generated traffic volumes based on the proposed uses of the project.

The resulting 2010 projected traffic volumes were used to analyze the Level of Service (LOS) for each of the studied intersections and to develop potential mitigation measures. With very few exceptions, the LOS of the analyzed intersections is acceptable.

Sight Distance Evaluation

The Traffic Study also analyzed the sight distances for the proposed driveways on Southside Drive and Strong Road, as well as the existing intersection of Montrose Turnpike/Strong Road. The analysis concluded that all sight distance measurements exceed the AASHTO desirable sight distances for the 45 and 60 – mph design speed along Southside Drive and Strong Road, respectively. With the exception of the sight distance to the south of the Strong Road/Montrose intersection, available sight distances exceed the desirable requirements or are not critically limited.

Potential Impacts - Unavoidable Increase in Traffic Volumes

As a result of the full development of the proposed project, the Traffic Study projected a maximum increase of 371 trips during peak evening hour volumes. However, the Study indicated that the existing transportation network could adequately accommodate the proposed traffic volumes and resulting impacts to the study area intersections. Findings show that site distances (ingress and egress) for both site driveways are adequate.

Although there are no significant impacts, the Study does demonstrate that as a result of full development, some turning movements at the Southside Drive/Lackawanna-Halstead Avenues (i.e. northbound left – Halstead Avenue and southbound Lackawanna Avenue) intersection will achieve a Level of Service of "F" during peak hours. In addition, the sight distance to the south of the Strong Road/Montrose Intersection is less than desirable for the design services.

Mitigation:

Although the proposed project will not result in significant impacts, the completed Traffic Study identified eight (8) mitigation recommendations. The following list of recommendations should be considered as a result of the project:

- Provide two (2) new full access driveways to the site. One (1) driveway will access at Southside Drive (Route 434) and the other will access at Strong Road;
- Construct the main site driveway along Route 434 with two (2) exiting lanes and one (1) entering lane;
- Construct the secondary site driveway at Strong Road with one exiting lane and one entering lane;
- Both driveways shall be stop controlled at their intersections with the adjacent street;
- The Town should remove vegetation along Montrose Turnpike that currently obstructs sight distance at the Strong Road intersection;
- A southbound right turn lane and a northbound left turn lane are recommended at the main site driveway intersection with Route 434 prior to completion of the Phase 1 development;
- Site amenities (i.e. signs and landscaping) should be located so as not to interfere with sight distance at the site driveways. Any existing vegetation that blocks sight distance from the Route 434 site driveway should be cleared to the extent practicable.

Significance of Impacts:

Significant impacts are not anticipated due to the increased traffic volumes resulting from this Project.

4.2.2 LAND USE, ZONING AND COMPLIANCE WIITH THE COMPREHENSIVE PLAN

Potential Impact – Unavoidable Change in Land Use From Vacant to Developed and Need to Amend Zoning in the Village of Owego

The Project will result in the unavoidable change in the current use of the Project Site from Vacant to developed and, the Village of Owego Zoning Ordinance will need to be amended to allow for the proposed light industrial uses and offices associated with the project.

Mitigation

The first method of mitigation involves the Project design itself were purposely clustered in a way as to minimize the amount of land and vegetation that would need to be disturbed. Therefore, the Project design will result in a reduction in the area of disturbance, will result in more open and undisturbed areas on the Project site, and aid in the overall mitigation of the potential impacts associated with the change in land use. The new zoning district could include design standards or guidelines along with special use permit criteria to protect the character of the Village and the surrounding area.

Significance of Impacts

Although the Project will result in a permanent change in land use, since the proposed Project will be implemented over a period of time, any noticeable change in community character should be gradual. Further, with the zoning amendment and inclusion of design standards or guidelines and review criteria, along with the fact that the surrounding uses are suburban and commercial in nature, the Project is not anticipated to result in a significant adverse impact on surrounding land uses.

4.2.3 AGRICULTURAL LAND USES

Potential Impacts – Unavoidable Loss of Vacant Land Within an Agricultural District

As depicted in *Figure 4 Existing Zoning*, a portion of the Project Site is located within an Agricultural District as defined by the NYS Department of Agriculture and Markets. This portion of the site is not currently under active agricultural use, nor is there evidence in the recent past that this was the case.

Mitigation

No mitigation is proposed due to the fact that the portion of the site within the Agricultural District is not currently being used for agricultural purposes; the site's topographic features may prevent productive farming, and due to the fact that the current Town zoning for the site is Residential and not Agriculture.

Significance of Impacts

Due to the fact that the portion of the site within the Agricultural District is not currently being used for agricultural purposes, the fact that the site's topographic features may prevent productive farming, and the fact the current Town zoning for the site is Residential and not Agriculture, this loss of land within the Agricultural District is not anticipated to be significant.

4.2.4 COMMUNITY SERVICES

4.2.4.1 GENERAL GOVERNMENT

Potential Impacts – Unavoidable Increased Need for Town and Village Services (Sewer, Water and Road Infrastructure Maintenance; and Recreational Resources:

The direct impact of the Project on community services may be relatively small. This will translate into an increase in cost associated with maintaining the utilities and roads, and providing recreation resources. Potential impacts on public schools; and fire and police protection are addressed separately.

Mitigation

While the impact of the Project on community services for the will not be substantial, there will inevitably be some increase in cost of service provisions. These costs may be mitigated by the expected increase in overall economic activity in the Town and Village associated with the increase in residents (as discussed in more detail below) as well as through property taxes and the sewer and water user fees to be collected from the new residences. The phasing of the Project will also allow the community time to plan appropriate adjustments to public service capacity.

Further, the Project will include a number of on-site amenities and facilities for residents to minimize the impact on existing Town and Village recreational facilities.

Significance of Impacts

Due to the expected increase in overall economic activity in the Town and Village associated with the increase in residents (as discussed in more detail below) as well as the additional property taxes and the sewer and water user fees to be collected from the new residences, combined with the phasing of the Project, any impact associated with an increase in community services as they relate to road and utility maintenance on the Project Site.

4.2.4.2 EDUCATIONAL FACILITIES

Potential Impacts – Positive Impact on School Districts:

The increase in provision of school services anticipated for the Project is expected to be minimal.

Mitigation

Due to the fact that no adverse impacts are anticipated, and positive impacts are projected, no mitigation measures are proposed.

Significance of Impacts

No adverse impacts are anticipated, while there exists the potential for positive impacts on the School Districts.

4.2.4.3 POLICE PROTECTION

Potential Impacts – Unavoidable Increase Demand for Police Protection

The increase in police protection services anticipated for the Project is expected to be minimal. Coordination with the local authorities is ongoing with resolution expected for inclusion in the FGEIS.

Mitigation

Due to the fact that no adverse impacts are anticipated, and positive impacts are projected, no mitigation measures are proposed.

Significance of Impacts

Any impact associated with the increase need for police protection associated with the Project is not anticipated to be significant

4.2.4.4 FIRE PROTECTION

Potential Impacts – Unavoidable Increase in Demand for Fire Protection Services

The increase in the need for fire protection services anticipated for the Project is expected to be minimal. Coordination with the local authorities is ongoing with resolution expected for inclusion in the FGEIS.

Mitigation

Construction materials used on site will be selected to minimize the fire hazard.

Significance of Impacts

With the use of appropriate materials for all proposed, along with the fact that the existing water supply system has adequate capacity to provide water to the proposed Project for domestic and fire fighting purposes, any impact associated with the increase demand for fire protection is not anticipated to be significant.

4.2.4.5 UTILITIES (ELECTRIC, GAS, CABLE, AND TELECOMMUNICATIONS)

Potential Impact – Unavoidable Increased Demand for Utilities:

The private utility companies providing electric, gas, cable and telecommunications to the Project Site have been contacted to determine if sufficient capacity exists to serve the Project.

4.2.4.6 WATER SUPPLY

Potential Impact – Long – Term Unavoidable Increased Water Demand:

Based on calculations provided in Preliminary Engineering Report (Appendix 6), the existing public water system does not contain ample capacity to provide the necessary daily demands and required fire flows to the project site. Therefore, a new water storage facility will need to be constructed. It is recommended that a water storage facility and booster pump station be constructed. As part of this system, it is also recommended that an additional groundwater supply (water well) be identified and installed on the south side of the river. Refer to DGEIS Figures 14, 15 and 16 for the proposed water infrastructure routes.

Mitigation:

Mitigation of the new water storage facility involves the Project water service design itself. The preferred option was selected due to its lower cost and higher quality provision of water.

The construction of a water storage facility at higher ground elevations would require additional lands to be secured. The construction of an elevated water storage facility would result in a massive structure nearly 85 ft. in height. These alternatives would have construction and cost implications, as well as aesthetic concerns. Once a site has been identified, it would need an additional SEQRA review.

If a new well were not installed on the south side of the river, an additional river crossing beneath the Susquehanna River or a new river crossing using a suspended watermain along the NYS Route 96 Bridge would be needed. Both of these alternatives would have construction and cost implications.

Significance of Impacts

Although the increased need for water will require a new water supply system, impacts associated with the Project are not anticipated to be significant. If an additional river crossing and/or water tank is required, further reviews to determine the impact will be needed. Specifically, there is a potential visual impact caused by the placement and height of the tower. This should be considered and further reviewed during the selection and design of the structure.

During construction of the water facility and associated water lines, there is a potential for soil disturbance and erosion. This would be a temporary impact, at best, and is not considered a significant or adverse impact. If additional lines were needed for adjacent properties, further reviews would be needed.

4.2.4.7 SEWAGE TREATMENT

Potential Impacts – Long – Term Unavoidable Increase in Sewer Load:

Effluent from the development will ultimately be received; therefore the projected increased sewer load associated with this project alone is not anticipated to result in any adverse impacts on the ability of the Village-owned wastewater treatment plant to effectively treat waste. Currently, the wastewater treatment plant handles approximately .63 MGD of effluent. With proposed repairs (see DGEIS Appendix 5) to the current conveyance system and with the increase of effluent caused by the proposed project, it is expected that the treatment plant will need to handle approximately 0.5 MGD of effluent.

Due to site topography, the southern zone of the project will not be capable of discharging sanitary sewage by gravity to the NYS Route 434 system. Therefore it is recommended that a gravity sanitary sewer be installed to service the southern portion of the project site (alternatives discussed in DGEIS Appendix 5). In addition, the pumps at the Lackawanna Pump Station will need to be upgraded to handle the additional flow. Refer to DGEIS Figure 17 Proposed Sewer Lines for the routes of the site sewer infrastructures.

Mitigation

No impacts related to the ability of the Village-owned wastewater treatment plant to effectively treat waste associated with this Project alone are anticipated. Therefore, no mitigation is proposed.

Significance of Impacts

Significant impacts are not anticipated relating to the ability of the Village-owned wastewater treatment plant to effectively treat waste associated with this Project, the construction of a new gravity sanitary sewer, and upgrades to the Lackawanna Pump Station.

During construction of the sewer lines, there is a potential for soil disturbance and erosion. This would be a temporary impact, at best, and is not considered a significant or adverse impact. If additional lines are needed for adjacent properties, further reviews would be needed.

4.2.4.8 SOLID WASTE DISPOSAL

Potential Impact – Long – Term Unavoidable Increase in Solid Waste Generation:

Information obtained from the U.S. Environmental Protection Agency (EPA) estimates that on the average each person generates 4.4 pounds of solid waste per day. Based on an estimated population for the proposed Project, this would mean that approximately 70 tons of additional municipal solid waste could be generated each month after full build-out. This information from EPA is provided in *DGEIS Appendix 6 Solid Waste Calculation Reference*.

Future limitations on disposal are currently not anticipated.

Mitigation:

No mitigation is proposed, as the projected increase in solid waste generation is not anticipated to result in impacts on the ability to properly dispose of solid waste.

Significance of Impacts

No impacts are anticipated as a result of the project increase in solid waste generation.

4.2.5 SOCIOECONOMIC CONDITIONS

4.2.5.1 HOUSING

Potential Impact: - Positive Impact Associated With an Increase in Needed Housing Choices

The net impact on the housing market is that the Project is anticipated to: (1) provide new housing that is needed but is currently either in short supply or unavailable (i.e.: rental housing for seniors and townhomes homes for empty nesters); and (2) indirectly increase the availability of existing housing that is also in demand (i.e., single family homes). The Project thus facilitates a transition of current residents

that have lived in their current homes for a number of years, but now have a different lifestyle or housing need, to a more appropriate and desirable living arrangement that is still within their home community. The transition precedes a step further, with these older homes (which are typically more affordable than new construction) becoming available for younger families.

This dynamic of transitioning older homes to younger families, while creating new in-demand senior/empty-nester housing avoids developing more of the traditional single family type housing that typically has a greater impact on the environment, community services and public facilities, and promotes the development of new housing types and community plans that are more desirable and fill a greater need. In meeting the housing and lifestyle needs of seniors and empty nesters, the Project allows these residents to remain within the Town and Village with their wisdom, wealth, social contributions and economic impact, when they would otherwise have needed to move to another community.

4.2.5.2 ECONOMIC IMPACTS

4.2.5.2.1 JOB GROWTH

Potential Impacts – Positive Impacts Related to Projected Increases in Temporary and Permanent Jobs:

The Project is expected to result in economic benefits to the Town and Village of Owego, and Tioga County as outlined below.

Employees

For the purposes of the DGEIS analyses it is anticipated that approximately 642 new jobs will be created through the full build out of the proposed project as outlined below.

- The proposed Flex Tech/Light Industrial component is predicted to employ approximately 212 persons: 79 employees in the front office sections and 133 employees for the remainder of the operations (figures derived using Urban Land Institute figures for light industrial operations).
- The Class A Offices are expected to employ approximately 338 persons[1]
- Supportive Retail business are anticipated to create 47 new jobs
- The Senior Housing is expected to generate approximately 30 new jobs
- The Institutional Satellite Healthcare Facility is anticipated to create 15 new jobs

Using the RIMS II (Regional Input-Output Modeling System) multipliers from the Bureau of Economic Analysis, the 642 new jobs would have a total impact of 773 new jobs in Tioga County. The projected

[1] *December 2003 Mixed Use Concept Development and Market Analysis, Saratoga Associates*

employment impact includes only the direct-effect impact from the proposed uses of the Project and does not include the impact resulting from construction activities, which are discussed below.

- The construction activity for the proposed development would generate approximately 290 construction jobs. Using the RIMS II multipliers for the construction industry, these 290 construction jobs would have a direct-effect employment impact of approximately 359 jobs. The 359 jobs to be generated is the total change in employment resulting from the construction jobs generated by the project development. The construction investment of $57,782,500 for the project would result to an increase in earnings by 1.1979 percent, resulting in a total economic impact of $69,217,657 for Tioga County. This is an increase of approximately $11,435,157 in earnings for the County resulting from the construction activity alone.

4.2.6 CULTURAL RESOURCES

4.2.6.1 HISTORIC AND ARCHEOLOGICAL RESOURCES

Potential Impacts – Disturbance to Historic and Archeological Resources:

A Phase 1 A (*DGEIS Appendix 7*) was completed and recognized that there will be some impacts to sensitive sites. A limited Phase 1 B will be completed and the results will be included in the FEIS.

Mitigation

Mitigation will be recommended, if necessary, at the conclusion of the Phase 1 B and will be included in the FEIS.

Significance of Impacts

The significance on any impacts cannot be determined until all archeological and historical evaluations are completed.

4.2.6.2 VISUAL RESOURCES

Potential Impact – Unavoidable Long – Term Views of the Project From Off-Site Locations:

The proposed project will ultimately result in a visual change in the landscape. The change in character will be brought about by replacing open fields and woodlands with structures and roadways. Those people sensitive to their rural surroundings will be the most impacted.

Mitigation

The proposed development will be stepped into the hillside and appropriate architecture, colors and materials will be utilized to soften any potential visual impact of the project.

Significance of Impacts

Significant, long term significant visual impacts are not anticipated. However, it may be warranted to further analyze whether components (e.g. water tank) of the project will result in a visual impact to the surrounding community or on sensitive resources.

4.2.6.3 NOISE

Potential Impacts – Unavoidable Short – Term Increases in Noise Associated With Construction:

According to the NYSDEC Program Policy, *Assessing and Mitigating Noise Impacts DEP-00-1, dated February 2, 2001,* sound sources increasing the ambient sound level by 6 dBA may cause complaints, but in some instances, increases of greater than 6 dBA may be acceptable. The NYSDEC policy document states, "an increase of 10 dBA deserves consideration of avoidance and mitigation." Based upon this information, construction related increases in ambient sound level of 10 dBA or more (very noticeable) may signal a potentially significant temporary noise impact that requires further consideration and possible mitigation.

Based upon USEPA noise data, typical construction equipment is expected to result in approximately 83 dBA at zero (0) ft from the noise source, and 57 dBA at 500 ft. from the noise source, due to noise level attenuation based on level open terrain. Therefore, homes located adjacent to the Project site will experience worst-case sound levels of between 57 and 83 dBA during construction. These levels are likely to be lower due to accepted attenuation by topography and vegetation. Site preparation and construction is anticipated to occur between the hours of 7:00 am and 7:00 pm, 7-days a week.

It is anticipated that temporary construction noise impacts greater than 10 dBA may occur during portions of the access road construction. All other construction is estimated to result in temporary increases in sound level of less than 10 dBA and probably on the order of 4 dBA, which indicates insignificant noise impacts that do not require mitigation in this context.

Table 4-1 Noise Level Comparison depicts how typical noise levels related to construction operations are attenuated, or diminished by distance and as a result of intervening vegetation. The chart identifies the worst-case scenario from the operation of heavy equipment being 92 dBA, when measured zero feet from the source. A dBA of 83 is expected from typical construction noise related to soil removal and site preparation when measured at zero feet from the source.

Based on a review of these table, the resulting noise level at the property line both during construction and upon completion of the development due to the proposed vegetative buffer to be provided between the property boundary and areas of disturbance, should be at or below 43 dBa and in the accepted range for a rural residential situation.

Table 4-1
Noise Level Comparison

Distance From Source	Land Use or Cover[4]	Maximum[1] Noise Level (dBA)	Typical[2] Construction Noise Level (dBA)	Noise[3] Levels (attenuation) (dBA)
0	Residential	92	83	83
500	Residential	66	57	50
1,000	Residential	60	51	43[5]

Source: U.S. EPA

[1] Expected maximum noise level generated by heavy equipment. This number is intended to show the worst-case scenario.

[2] Expected noise levels of construction equipment generated during soil removal or to prepare a site for development. The attenuation with distance for source of sound assumes a level open terrain and does not permit attenuation due to vegetation or topography.

[3] Assumes noise level attenuation at property line due to vegetative cover.

[4] Current land cover or use in that area.

[5] It is assumed that background noise levels will not be lower than approximately 43 dBA. Average for Day-Night Noise Levels associated with rural residential environments see Table 3-5.

Mitigation:

Site preparation and construction is anticipated to occur between the hours of 7:00 am and 7:00 pm, 7-days a week. Construction vehicles entering and existing the site are expected only between the hours of 7:00 am and 7:00 pm, seven days a week. Noise generated on site as a result of construction and development activities will be effectively attenuated by distance and for the majority of the adjacent land uses.

Significance of Impacts

As a result of the anticipated noise attenuation and the proposed hours of construction, any noise generated from the site is not anticipated to result in significant adverse impacts.

4.2.7 ENVIRONMENTAL CONDITIONS

Potential Impacts – No Impact:

The Phase 1 Environmental Site Assessment (ESA) (DGEIS Appendix 7) and related site inspections did not reveal any impacts to soil or groundwater quality. No environmental concerns are present in this area.

Mitigation:

No mitigation is necessary.
Significance of Impacts:

No adverse impacts related to environmental conditions are anticipated.

4.2.8 CUMULATIVE IMPACTS

Cumulative Impacts are impacts on the environment that result from the incremental or increased impact of an action when the impacts of that action are added to other past, present, and reasonably foreseeable future actions.[2] Cumulative impacts must be addressed "when actions are proposed to or will foreseeably take place simultaneously or sequentially in a way that their combined impacts may be significant"[3]. Further, cumulative impact assessment must be done under the circumstances where: "one action is an interdependent part of a larger action or included as part of any long range plan; one action is likely to be undertaken as a result of the proposed action or will likely be triggered by the proposed action; and, one action cannot or will not proceed unless another action is taken or one action is dependent on another"[4]. In addition, cumulative impacts must be addressed if the impacts of related or unrelated actions may be incrementally significant and the impacts themselves are related, as well as those that are sufficiently close geographically.

The NYSDEC provides no further direction concerning the geographical boundary of the cumulative impacts to be analyzed. For this Project, the "reasonably worst case approach" for all analyses was chosen for the assessment of cumulative impacts to assure significant adverse impacts are revealed and minimized. Therefore, areas within the Town and Village of Owego were analyzed for projects that have recently been approved, close to approval, or under construction.

The following projects that will be built or implemented regardless of the selection of any of the project alternatives include are as follows:

[2] The SEQR Handbook, November 1992, NYS Department of Environmental Conservation
[3] Ibid
[4] Ibid

- Fine Line Homes – 9 single family homes, located in the Village of Owego at Apple Blossom and Winey Wood Roads;
- Lockheed Martin – a new 176,000 SF facility to build Presidential Helicopters, located in the Town of Owego;
- Hampton Inn – a new 66 room hotel, located along Route 17C in the Town of Owego;
- Marshland Road Subdivision – a 9 lot residential subdivision, located in the Town of Owego; and
- Tioga Park – a harness track and VLT, located in the Town of Nichols.

Traffic Impacts:

There will be an increase in traffic, but it is not expected that these projects will cause a significant impact on the existing network.

Sewage Treatment:

There will be an increase in flow, but it is not expected that these projects will cause a significant impact on the County owned treatment plant and existing infrastructure.

Water Demand

There will be an increase water demand, but it is not expected that these projects will cause a significant impact on the groundwater supply and existing infrastructure.

Solid Waste

There will be an increase in waste, but it is not expected that these projects will cause a significant impact.

Utilities

There will be an increase, but it is not expected that these projects will cause a significant impact on the existing network.

Governmental Services

It is not expected that these projects will cause a significant impact on existing services.

Schools

It is not expected that these projects will cause a significant impact on the existing school system.

5.0 ADVERSE ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

This section provides an overview of the Project-related adverse environmental impacts that cannot be avoided or adequately mitigated if the Project is implemented. Specifically, the Project-related unavoidable impacts are mainly associated with construction, and may result from disturbance to soils, vegetation, streams, wetlands, and other resources. Other identified unavoidable impacts include the loss of vegetation, and related increases in impervious areas. These impacts are anticipated to be neither major in magnitude nor significant in relative terms.

5.1 NATURAL RESOURCES

5.2 GEOLOGY

5.2.1 SUBSURFACE

Potentially Unavoidable Vibration and Noise Impacts Related to Removal of Bedrock:

Due to the fact that if any vibrations occur, they will be minimal, short in duration, and any related impacts will be mitigated to the maximum extent practicable through the implementation of all the mitigation measures and precautions previously discussed, said impacts are not anticipated to be significant.

5.2.2 SURFACE

Unavoidable Long-Term Increase in Impervious Areas and Avoidable Short-Term Impacts Related to Erosion and Siltation of Water Resources, and Dust:

Due to the previously discussed provisions and mitigation measures including the proposed clustering design, the potential impacts related to an increase in impervious areas, erosion, sedimentation, and dust are expected to be short in duration, minimal, and are not anticipated to be significant.

5.2.3 WATER RESOURCES

5.2.3.1 GROUNDWATER

Unavoidable Long-Term Impacts on Groundwater Infiltration and Avoidable Short and Long-Term Impacts to Water Quality:

Construction Activities: Construction activities, if not properly managed, could result in minor groundwater quality impacts. Due to the fact that any disturbances to the pockets of groundwater during construction will be short in duration, and will be mitigated to the maximum extent practicable through

the above-described provisions and mitigation measures, potential impacts are not anticipated to be significant

Reduction in Groundwater Infiltration: Other threats to groundwater quality include the proposed increase of impervious areas by approximately 19.2 acres thus reducing the amount of groundwater infiltration. This permanent increase in impervious areas, however, is considered minimal compared to the remaining 65.8 acresof pervious surfaces on the Project site, and a drop in the amount of groundwater available to surrounding residential properties that use on-site wells for their water source is not anticipated, and therefore, no impacts on groundwater infiltration are anticipated.

No impacts on groundwater infiltration are anticipated from the increase in impervious areas due to the proposed use of stormwater detention, which will promote infiltration into the soil.

Contaminants in Runoff: The increase in impervious areas particularly associated with roads and driveways may increase the potential for runoff contaminated with automobile-related pollutants such as oil, grease, and other petroleum products. This could be a long-term impact. There is also the potential for groundwater to be adversely affected post-construction if pesticides, herbicides, or fertilizers are used to maintain lawns and landscaped areas.

The potential impacts related to the proposed increase in impervious areas and related stormwater runoff that may contain automobile pollutants, while considered longer in duration, are not anticipated to result in significant nor permanent adverse impacts to groundwater quality, , combined with the natural filtration provided as surface water infiltrates through the soil to the groundwater.

5.2.3.2 SURFACE WATER AND WETLANDS

Avoidable Indirect Impacts Related to Proposed Filling of Wetlands and Tributaries:

The potential for indirect impacts related to the temporary disturbances to wetlands and tributaries during the installation of the utility crossings, and the permanent filling of wetlands and tributaries during the construction of the Project site roads will be mitigated to the maximum extent practicable through the Project design. The direct and potential indirect impacts are not anticipated to be significant.

Unavoidable Increase in Impervious Areas and Related Runoff:

The potential for erosion and sedimentation during construction (a short-term impact), the increase in stormwater runoff from impervious surfaces and the potential for this runoff to introduce petroleum and other contaminants (a potential long-term impact) would minimally impact the Project sites or off-site surface waterbodies or wetlands due to the proposed Project design, implementation and compliance with and associated provisions and mitigation measures; and Therefore, such impacts are not anticipated to be significant.

5.2.3.3 Floodplain

Although there is a potential for indirect adverse impacts related to erosion and sedimentation during construction and stormwater runoff, post-construction. Mitigation measures will include construction of detention and/or retention basins to limit peak runoff from the Project to pre-development rates; and construction of wet ponds, grass-lined ditches or other water quality protection measures to mitigate impacts on the quality of stormwater runoff. Further, proper construction techniques will be employed during construction and in accordance with industry standards and BMP, and the SWPPP will be fully implemented and complied with. Therefore, potential impacts are not expected to be significant.

5.2.4 TERRESTRIAL AND AQUATIC ECOLOGY

5.2.4.1 VEGETATION

Unavoidable Temporary and Permanent Loss of Vegetation:

The Project design will preserve approximately 65.8 acres of the site's vegetation and therefore remain pervious. The permanent loss of approximately 19.4 acres of vegetation is not anticipated to be a significant impact. Revegetation, whether ornamental plantings or lawned areas, will deter increased stormwater flows generated during construction. Post-construction stormwater runoff will also increase due to increased impervious surface areas. Since significant areas of the site will remain vegetated, due in large part to the clustering design, and other areas will be revegetated, and stormwater detention basins will be constructed, the impact of these increased flows are expected to be minor, short in duration, and not anticipated to be significant.

5.2.4.2 FISH AND WILDLIFE

5.2.4.2.1 TERRESTRIAL SPECIES

Unavoidable Permanent Loss of Terrestrial Habitat a Temporary Impact:

As a result of the mitigation measures and provisions described in the potential impact on terrestrial species due to the permanent loss of vegetation is expected to be temporary and minimal as a result of the cluster design of the Project, along with the proposed increase in landscaping and lawn areas that will ultimately result in additional areas and a potential positive impact for terrestrial species typical to suburban areas.

5.2.4.2.2 AQUATIC SPECIES

Unavoidable Permanent Impacts Related to Wetland and Stream Crossings:

The permanent impacts to the wetlands and tributaries and related aquatic habitat necessary for road construction cannot be avoided. While the direct impacts to these small sections of the wetlands and tributaries will be permanent, the Project design, which includes clustering, will result in the least amount of impact necessary.

Unavoidable Temporary Impacts Related to Wetland and Stream Crossings:

The proposed temporary impacts to the wetlands and streams related to the construction of the utilities, while unavoidable, will be fully mitigated through complete restoration of the disturbed areas back to their pre-construction conditions.

Avoidable Impacts Related to Wetland and Stream Crossings

During the proposed crossing of the wetlands and tributaries for both road and utility construction, there exists the potential for short-term adverse impacts to the aquatic species through erosion, sedimentation and stormwater runoff. However, these potential impacts are avoidable through the use of proper construction techniques, BMP, and implementation and compliance with the SWPPP.

5.2.5 CLIMATE AND AIR RESOURCES

5.2.5.1 CLIMATE

No impacts on the climate are anticipated.

5.2.5.2 AIR RESOURCES

Unavoidable Minor Long-Term Localized Automobile-Related Increases in Carbon Monoxide (CO), Ozone (O_3), Nitrogen Dioxide (NO_2), and Fine Particulate Matter ($PM_{2.5}$) (automobile-related Pollutants):

The projected increase in traffic is anticipated to cause a minor, long-term localized increase in the levels of automobile-related pollutants. However, the increased pollutant levels generated by increased traffic is not expected to exceed regional standards, and is therefore, not considered to be significant.

Unavoidable Minor Temporary Air Quality Impacts During Construction Phases:

The air quality within the Project area may experience short-term adverse impacts as a result of airborne particulates including dust raised by construction vehicles in motion. This increase is expected to be sporadic and short-term in nature and will be most noticeable in the area immediately adjacent to the construction.

The impacts will be minimized by the use of dust inhibitors, such as calcium chloride and other dust-control provisions found in the NYSDOT Standard Specifications for construction. Therefore, they are not anticipated to be significant.

5.3 HUMAN RESOURCES

5.3.1 TRANSPORTATION

Unavoidable Impacts to Traffic Flow:

The Traffic Study indicated that the existing transportation network can adequately accommodate the proposed traffic volumes and resulting impacts to the study area intersections. The Study analyzed six (6) intersections, including:

- Southside Drive/Lackawanna-Halstead Avenues;
- Southside Drive/Court Street;
- Court-Park Streets/Front Street;
- Montrose Turnpike/Strong Road;
- Southside Drive/Proposed Site Driveway; and
- Strong Road/Proposed Site Driveway.

The Study also states that site distances (ingress and egress) for both proposed site driveways are adequate.

There are no long term adverse impacts anticipated.

5.3.2 LAND USE, ZONING AND COMPLIANCE WIITH THE COMPREHENSIVE PLAN

Unavoidable Change From Vacant to Residential:

The Project will result in the unavoidable change in the current use of the Project site from vacant to residential. While this change in use will be long-term and considered permanent, it is not anticipated to result in a significant adverse impact on the Site, nor the surrounding land usesIn addition, the existing zoning currently allows for residential development. Therefore, the Project is not in conflict with the existing Zoning Ordinance, the Comprehensive Plan, or the vision of the regarding this particular site.

5.3.3 AGRICULTURAL LAND USES

Unavoidable Loss of Land Within an Agricultural District:

While the Project site is currently not an active agricultural use, it is located within an Agricultural District as defined by the New York State Department of Agriculture and Markets. At one time, the Project site and surrounding area was predominantly agricultural.

While the Project will result in the unavoidable loss of land in an Agricultural District, the Site is not currently an active agricultural use, and the steep slopes prevalent in certain areas of the Site do not lend itself to productive agricultural uses. As a result, the permanent loss of land in an Agricultural District associated with this Project is not anticipated to be significant.

5.3.4 COMMUNITY SERVICES

5.3.4.1 GENERAL GOVERNMENT

Long-Term Unavoidable Increased Need For Government Services – Minimal to No Impact Related to General Government Services:

It is anticipated that the increased need for general government services associated with the Project as they relate to road and utility maintenance, along with the need for providing recreational activities, will be sufficiently offset by:

- The positive benefits related to the overall economic activity in the Town associated with the increase in residents (as discussed in more detail below);
- The additional property taxes and the sewer and water user fees to be collected from the new residences;
- The incremental phasing of the Project; and
- The on-site recreational and community service provisions through the homeowners association.

Therefore, the Project is not anticipated to result in adverse impacts related to an increased need for general government services.

5.3.4.2 EDUCATIONAL FACILITIES

Positive Impacts on School Districts

No adverse impacts are anticipated. While there exists the potential for positive impacts on the School Districts due to the fact that the Project is expected to generate a comparably small amount of school-age children, resulting in no measurable increases in demand on the local school districts, while at the same time generating additional school tax revenue.

5.3.4.3 POLICE AND FIRE PROTECTION

Long-Term Unavoidable Increase in Demand for Police and Fire Protection Services:

With the use of appropriate materials for all proposed structures along with the fact that the existing water supply system has adequate capacity to provide water to the proposed Project for domestic and fire fighting

purposes, any impact associated with the increased demand for fire protection is anticipated to be neither adverse nor significant.

5.3.4.4 UTILITIES

Long-Term Unavoidable Increased Demand for Utilities:

It is anticipated that the private utilities have adequate capacity to serve the Project site, and that no related adverse impacts are anticipated.

5.3.4.5 WATER SUPPLY

Long-Term Unavoidable Increased Water Demand:

The existing public water system infrastructure will need to be upgraded to supply water to the proposed development for domestic and firefighting purposes. Impacts associated with the project are anticipated to be neither adverse nor significant.

Long-term impacts are not expected as additional local water resources are readily available that can handle the increased demand, therefore existing wells will not dry. While the installation of the new infrastructure may cause some initial concerns (e.g. erosion), ultimately all disturbed areas will be re-established leaving little evidence of construction activities. Final selection of above ground structures should be further evaluated to determine its potential visual impact on the community.

5.3.4.6 SEWAGE TREATMENT

Long-Term Unavoidable Increase in Sewer Load:

Although the sanitary conveyance system will need to be upgraded, the wastewater treatment plant currently has adequate capacity to handle the increased flow. Therefore, there are no adverse impacts anticipated related to the ability of the County-owned wastewater treatment plant to effectively treat wastewater associated with this Project.

Installation of the new infrastructure may cause some initial concerns (e.g. erosion); ultimately all disturbed areas will be re-established leaving little evidence of construction activities.

5.3.4.7 SOLID WASTE DISPOSAL

Long-Term Unavoidable Increase in Solid Waste Generation:

No impacts are anticipated as a result of the Project increase in solid waste generation.

5.3.5 SOCIOECONOMIC CONDITIONS

5.3.5.1 HOUSING

Positive Impact Associated With an Increase in the Availability of Needed Housing Choices:

The Project is anticipated to result in an overall positive impact associated with an increase in the availability of needed housing choices. Specifically, the net impact on the housing market is that the Project is anticipated to: (1) provide new housing that is needed, but is currently either in short supply or unavailable (i.e.: rental housing for seniors); and (2) indirectly increase the availability of existing housing that is also in demand (i.e., affordable single family homes). The Project thus facilitates a transition of current residents that have lived in their current homes for a number of years, but now have a different lifestyle or housing need, to a more appropriate and desirable living arrangement that is still within their home community. The transition precedes a step further, with these older homes (which are typically more affordable than new construction) becoming available for younger families.

5.3.5.2 SUPPORT FACILITIES

Minimal Long-Term to No Impacts Anticipated Related to the Provision of Recreational and Community Facilities:

The Project will include a number of on-site amenities and facilities for residents that will minimize the impact on existing Town Facilities.

5.3.5.3 ECONOMIC IMPACTS

Positive Long-Term Economic Impacts:

The Project is anticipated to result in positive impacts related to an increase in sales and property tax revenue, along with the benefits associated with the projected increase in temporary and permanent jobs.

5.3.6 CULTURAL RESOURCES

5.3.6.1 HISTORIC AND ARCHEOLOGICAL RESOURCES

Disturbance to Historic and Archeological Resources:

The significance of any impacts cannot be determined until all historic and archeological evaluations are completed.

5.3.6.2 VISUAL RESOURCES

Unavoidable Long-Term Views of the Project From Off-Site Locations:

The project will result in a permanent change in the visual character of the area. Views will most likely be sporadic and minimal, however those that live adjacent to the property will be exposed to the project for long periods of time and will therefore be affected the most. A visual impact assessment should be considered prior to implementing the final design to ensure the Project will result in significant adverse visual impacts.

5.3.6.3 NOISE

Unavoidable Short-Term Increases in Noise Associated With Construction:

While the Project will result in unavoidable increases in noise levels on and immediately adjacent to the site related to construction activities, they would be short-term in duration, and due to anticipated noise attenuation and the proposed hours of construction, any noise generated from the Site is not anticipated to result in significant adverse impacts.

5.3.7 ENVIRONMENTAL CONDITIONS

The Phase I Environmental Site Assessment (ESA) and related site inspections did not reveal any impacts to soil or groundwater quality. No environmental concerns are present in this area.

5.3.8 CUMULATIVE IMPACTS

No adverse cumulative impacts are anticipated that cannot be mitigated.

6.0 Alternatives

This section of the DGEIS will discuss three potential project alternatives. The potential impacts of the Preferred Alternative will be compared to the potential impacts of the Southside Square Neighborhood Plan Alternative, the Southside New Urbanism Plan Alternative, and the No Action Alternative.

6.1.1 Southside Square Neighborhood Plan Alternative

The Southside Square Neighborhood Plan is predominantly residential in character and would provide highly landscaped gateways that distinguish the development along the Route 434 corridor. The plan includes a central boulevard, a Village Park/Square, office complex, retail shops, townhouses, the congregate care/assisted living facilities, and single-family residential neighborhoods.

6.1.2 Southside New Urbanism Plan Alternative

The Southside New Urbanism Plan features many of the same boulevard and streetscape elements as the Southside Square Neighborhood Plan. This alternative includes a village square and park nodes that would be organized utilizing neo-traditional or new urbanism theme. Grid streetscape layouts and small residential lots are characterized by dwellings located close to the curb with connecting sidewalk and porches. Although this is predominately a residential alternative, the plan would also include retail shops.

6.1.3 No Action Alternative

> Under the No Action Alternative, the Project would not be implemented, and the site would remain undeveloped until another project is proposed. Specifically, no change in land use would occur, the vegetation would remain, no change in impervious areas would occur, and the local economy would not be positively affected. Conversely, the Preferred Alternative is anticipated to have positive economic implications on the local economy and the fiscal conditions of the Town and Village of Owego

Under the No Action Alternative, these positive economic impacts would not occur.

6.2.1 Potential Impact Comparison

6.2.1.1 Land Disturbance Impacts

While the Preferred Alternative will alter the character of the existing land, it is anticipated that it will only result in approximately 19.2 acres of impervious land. Specifically, the Preferred Alternative design carefully takes into consideration the need to cluster units in areas of the Site that could support a higher density, leaving the sensitive sections of the site untouched or minimally impacted. The Preferred Alternative also addresses a compendium of housing needs in the Town and Village. The Preferred Alternative is also consistent with the Tioga County 2010 Strategic Plan (adopted on March 15, 2005).

The Southside Square Neighborhood Plan will most likely disturb the same amount of land as the Preferred Alternative.

The Southside New Urbanism Plan will most likely disturb the same amount of land as the Preferred Alternative.

The No Action Alternative will allow the Site to remain the same and is not consistent with the Tioga County 2010 Strategic Plan.

6.2.1.2 POPULATION RELATED IMPACTS

For the purposes of the DGEIS analyses it is anticipated that approximately 429 persons would be residing on the Project Site at full build out as outlined below:

- Senior Housing Independent Living = 70 persons;
- Senior Housing Assisted Living = 50 persons;
- Multi-Family Housing = 216 persons; and
- Single Family Dwellings = 93 persons

The Southside Square Neighborhood Plan is predominately residential and will therefore have a higher number of residential units, as well as potential residents, when compared to the Preferred Alternative.

The Southside New Urbanism Plan will have a higher number of residential units, as well as potential residents, when compared to the Preferred Alternative.

The No Action Alternative will not provide additional housing options.

Sewer and Water

The population projection figures for the Preferred Alternative would result in a higher population density, which would translate into an additional sewer load and an additional water demand. While modifications may be needed for the Preferred Alternative it would not be a significant strain on the existing facilities.

The Southside Square Neighborhood Plan will have an increase demand for sewer and water when compared to the Preferred Alternative. This is attributed to the increase of residential units and potential occupants.

The Southside New Urbanism Plan will have an increase demand for sewer and water when compared to the Preferred Alternative. This demand is not as severe as the Southside Square Neighborhood Plan, but the potential residential units and potential occupants are higher than the Preferred Alternative.

The No Action Alternative will not require needed improvements.

Solid Waste

The Preferred Alternative will result in additional solid waste.

The Southside Square Neighborhood Plan will have a higher increase in additional solid waste when compared to the Preferred Alternative.

The Southside New Urbanism Plan will have a higher increase in additional solid waste when compared to the Preferred Alternative.

The No Action Alternative will not result in additional waste.

School District Impacts

The Preferred Alternative will potentially result in additional students attending local schools.

The Southside Square Neighborhood Plan will potentially result in additional students attending local schools.

The Southside New Urbanism Plan will potentially result in additional students attending local schools.

The No Action Alternative will not attract potential students.

Transportation

The Preferred Alternative will result in additional daily trips.

The Southside Square Neighborhood Plan will result in additional daily trips.

The Southside New Urbanism Plan will result in additional daily trips.

The No Action Alternative will not result in increased traffic.

General Government

The Preferred Alternative will include a number of on-site amenities and facilities for residents to minimize the impact on existing Town recreational facilities. Specifically, the Preferred Alternative will include a clubhouse and will be open and available for all residents of the Preferred Alternative. The community building will include exercise facilities, a lap pool, a game and billiard room, library, a media/data center, wellness center, and community room. Outdoor features will include a variety of pedestrian paths and natural preserve areas.

Both the Southside Square Neighborhood Plan and the Southside New Urbanism Plan will result in similar on-site amenities and facilities as the Preferred Alternative.

The No Action Alternative will provide these additional amenities.

Housing

The Preferred Alternative provides an array of housing choices. The net impact on the housing market is that the Preferred Alternative is anticipated to: (1) provide new housing that is needed, but is currently either in short supply or unavailable (i.e.: rental housing for seniors and townhouses for empty nesters); and (2) indirectly increase the availability of existing housing that is also in demand (i.e., affordable single family homes). The Preferred Alternative thus facilitates a transition of current residents that have lived in their current homes for a number of years, but now have a different lifestyle or housing need, to a more appropriate and desirable living arrangement that is still within their home community. The transition progresses a step further, with these older homes (that are typically more affordable than new construction) becoming available for younger families.

Both the Southside Square Neighborhood Plan and the Southside New Urbanism Plan will result in similar housing options as the Preferred Alternative. These two alternatives will result in a higher number of residential units.

The No Action Alternative does not offer housing options.

6.3 CURRENT ZONING ALLOWANCES

6.3.1 ALLOWED DENSITIES AND USES

The project site is comprised of two regulating jurisdictions—the Town of Owego and the Village of Owego. The northern half of the site is located within the Village of Owego, is zoned for business uses. Permitted uses include the following: all uses allowable in the Central Business District (CBD), greenhouses, plant nurseries, and tourist cabins or camps.

As shown in *Figure 9 – Existing Zoning*, the permitted uses in the Central Business District include the following: all uses permitted in the R3 District, retail shops, banks, theaters, offices, and restaurants. The following are allowable with special use permits: garages, gas stations, places of public amusement, and

places of business. Permitted uses in a R3 District include: all uses in the R2 District, multiple dwelling units, boarding, lodging, tourist accommodations, hotels, and motels. Permitted uses in the R2 District include: all uses permitted in the R1 District, two-family dwellings, and business and professional offices. Permitted uses in the R1 District include: one-family dwelling units, cemeteries, places of worship, schools, parks, playgrounds, recreational areas, libraries, hospitals, utility structures, and philanthropic institutions.

An Empire Zone is located at the northern tip of the project area and is approximately 10.5 acres in size. A triangular shaped section, located at the northern tip of the Town of Owego boundary, is designated as a New York State Agricultural District Program and is approximately 11 acres in size. The county should request to have this piece removed from the Owego-Nichols Agricultural District. The southern half of the site is located in the Town of Owego and is zoned for agricultural and residential land uses and comprises approximately 50 acres or 59 percent of the site. As the current site zoning does not provide for a multi-use planned unit development, there may be a need to work with communities to coordinate and achieve the desired development. As mentioned previously, the site would likely need to be re-zoned to effectively accommodate a multi-use project.

6.3.2 IMPACT COMPARISON TO PROPOSED PROJECT

The Preferred Alternative will be developed as a PDD, allowing for a more flexible design, that will result in development concentrated in specific areas which will allow for the protection of more open space and the preservation of rural character. This alternative offers the correct blend of housing, commercial and industrial uses.

The Southside Square Neighborhood Plan will predominately be a residential land-use. This alternative will result in an increase in infrastructure and will result in an increase of municipal expenditures. With an increase in population, additional funds will be needed for public services (e.g. police and fire protection, and schools). This alternative does not offer a significant variation in land-uses.

Similarly to the Southside Square Neighborhood Plan, the Southside New Urbanism Plan will result in an increase in infrastructure, municipal expenditures, and funding for public services (e.g. police and fire protection, and schools). In addition, the new urbanism theme is based on a grid pattern and will not be sensitive to a sloping terrain.

The No Action Alternative will allow the land to remain in its current state.

7.0 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

7.1 Open Space, Community Character, and Zoning

The Project, like any development project, involves a trade-off between open space – with the environmental aesthetic benefits it provides – and development. The Project, as documented above, will provide a much-needed variety of housing for various income brackets, office space, and recreation space along with construction-related and long-term employment, and addition revenue from taxes. The Project may also result in increased local spending during construction, by new residents, employees, and out of town construction contractors.

The change in character of the Project site itself may be the most prominent irreversible commitment of resources. While not fundamentally irreversible in terms of physical science, development of this site effectively alters its character permanently. The use of a Planned Development District process and clustering, would allow this site to be planned and developed in a manner that preserves the existing rural character as well as the natural and physical resources of the Site and the surrounding areas to the maximum extent practicable.

The current zoning of the Project site allows for business, agricultural and residential uses. The site would likely need to be rezoned to accommodate this proposed multi-use project. The proposed project is consistent with the approved Tioga County 2010 Strategic Plan and the Village of Owego Comprehensive Plan as the project will strengthen the connection between residence and workplace, protecting natural resources and using public investment to support private investment in accordance with smart growth strategies. In addition, the "Future Land Use" Map calls for a mix of commercial and residential uses on this site, both of which are included in the proposed project.

Appropriate and adequate mitigation measures have been proposed to prevent the degradation of the surrounding land use from its current rural residential/suburban character.

7.2 Vegetation, Habitats, and Topography

While approximately 19.4 acres of vegetation will be permanently lost as part of the Project and converted to impervious surfaces, the remaining 65.8 acres will remain pervious in one form or another. Further, all disturbed areas will be revegetated, and numerous precautions, provisions, and mitigation measures will be employed to minimize the potential for additional impacts related to the removal of vegetation.

The Project, through the removal of vegetation and alteration of the existing forms of vegetation, including the conversion of wooded areas to lawns and landscaped areas, will result in the permanent alteration of habitat for the resident species of deer, birds, and small mammals. This loss of habitat is considered to be minimal and the impact short-term due to the proposed construction of lawns and landscaped areas that are anticipated to result in an increase in the population of songbirds and small mammals, and not an overall decrease in animal populations.

The Project will also alter the topography of the Site. While all efforts will be made to avoid altering steep slopes to the extent practical, re-grading will be required to implement the Project as designed. The mitigation measures to be included in the SWPPP, combined with proper construction techniques and Best Management Practices (BMPs), will all work to mitigate potential adverse impacts related to slope disturbances.

7.3 Water Resources

The Project proposes permanent disturbances to wetlands and tributaries will be required to comply with NWP #14, which may require compensatory mitigation strategies; and temporary disturbances will be handled through NWP #12.

The proposed disturbances to tributaries and wetland related to the utility crossings will require compliance with NWP #12 and, therefore, these areas will be fully restored to pre-disturbance conditions. The proposed restoration, combined with the use of proper construction techniques, BMPs, and compliance with NWP #14 and the SWPPP, the potential for permanent losses to these resources will be mitigated to the maximum extent practicable.

7.4 Commitment of Energy and Construction Materials

The development of the Project will also require a commitment of energy and construction materials. Construction materials include concrete, steel and other related materials and equipment. This commitment of resources will span the proposed five-year implementation period. The increased need for and utilization of building materials for the Project is not anticipated to result in any adverse impacts by itself.

Energy resources will also be utilized during construction. These impacts are discussed below in *DEIS Section 8 - Effects on the Use and Conservation of Energy*.

8.0 EFFECTS ON THE USE AND CONSERVATION OF ENERGY

8.1 PROPOSED ENERGY SOURCES AND ALTERNATIVES

Energy usage in conjunction with the proposed Project will be related to short-term and long-term development activities. Short-term energy usage is a function of construction activity and will coincide with general site development. Since full build-out of the Project is expected to take approximately five-years, the short-term energy uses shall exist on a variable basis during that five-year periods. Essentially, energy use shall require fossil fuels (i.e., gasoline and diesel) for the operation of all types of construction equipment, including generators for temporary on-site power during construction.

Long-term energy use is a function of the operations of the commercial and industrial enterprises, as well as the individual residences, including building support functions (lighting, power, mechanical systems). Support functions will generally require low voltage (120 volts) for office, safety lighting, power outlets and mechanical equipment. Additional power requirements will vary between the commercial and industrial uses, and the different sized residences that are proposed.

Natural gas is the main anticipated heating source for project, which is anticipated to be supplied by New York State Electric and Gas. Additional fossil fuels such as propane may be desired for cooking and operating other appliances. Local companies will supply required fuels.

When the topography and vegetation allows, residences will take full advantage of southern exposure, to assist in heating and lighting needs. Furthermore, each homeowner will have the ability to incorporate the use of solar technology for electricity needs.

8.2 INDIRECT EFFECTS OF ENERGY CONSUMPTION

Market costs for energy constitute the greatest potential effect on energy consumption patterns. It is difficult to estimate how energy costs will change in relation to each other. Typically, as prices shift, industry in general studies the feasibility of incorporating duel fuel systems, cogeneration capabilities and use of off-peak power capacities. In the future, industries should continue to assess energy costs and changes in fuel types. Pollution regulations and future changes will affect the types and amounts of energy used as it relates to emissions.