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FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT FOR THE ROUTE 434 E=mt³ MIXED USE OFFICE PARK PROJECT

Town and Village of Owego,
Tioga County,
New York
August 2006

LEAD AGENCY
Tioga County Industrial Development Agency
56 Main Street, Owego, NY 13827
Contact:
Aaron Gowan, Chairman
Ph.: 607-687-8259

Prepared by

SARATOGA
ASSOCIATES

443 Broadway, Saratoga Springs, New York, 12866
Contact: Daniel Sitler, ASLA
518.587.2550

DATE OF ACCEPTANCE BY LEAD AGENCY October 4, 2006

FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT
Route 434 Mixed Use Office Park Project

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Section 1 Introduction and Project Summary

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1.1 DESCRIPTION OF THE FGEIS

This is a Final Generic Environmental Impact Statement (FGEIS) prepared pursuant to and as required by the provisions of the New York State Environmental Quality Review Act (SEQRA). The FGEIS provides responses to all substantive comments received on the Draft Generic Environmental Impact Statement (DGEIS) prepared for the proposed Tioga County Route 434 Mixed Use Office Park Project, a Type 1 Action pursuant to SEQRA. The Tioga County Industrial Development Agency (TCIDA) directed the preparation of the DGEIS. The DGEIS is included in the FGEIS by reference.

1.2 PROJECT REVIEW HISTORY

The TCIDA is also the Lead Agency for environmental review of the proposed action under SEQRA. The Lead Agency passed a Resolution and issued a Positive Declaration requiring the preparation of a DGEIS for the Project and the initiation of a Public Scoping Process. A draft Scoping Document was prepared and distributed to involved agencies and other interested parties, and made available to the public. Agency and public comments received during the comment period were considered and incorporated, as appropriate, into a final Scoping Outline. The DGEIS was prepared based on the final Scoping Outline, as was accepted as complete by the Lead Agency.

A public hearing were held on October 19, 2005 and the Lead Agency accepted written comments on the DGEIS until November 4, 2005. Copies of the transcripts from the public hearing and written comments received by the Lead Agency are included as Appendix C and D respectively. Responses to these comments comprise Section 2.0 of this FGEIS.

1.3 SUMMARY OF PROPOSED ACTION

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"). The site is located 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, and is accessible from NYS Route 434 as well as from Strong Road, located on the southern boundary of the site.

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.

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.

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

1.4 Summary of the 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. For the most part, these impacts will be permanent, as the habitat on the site will be permanently altered. The species that will be displaced will be replaced by different species that adapt to the developed setting.

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 anticipated to cause major problems as the existing transportation network can adequately accommodate the proposed traffic volumes and resulting impacts. Responses to comments from the NYS Department of Transportation are provided below.

Land Use and Zoning

The Project will result in the change in the current use of the Project Site from Vacant to Residential. The Project site was formerly located within an Agricultural District as defined by the NYS Department of Agriculture and Markets. The Site was officially removed from the District in April 2006.

General Government

The direct impact of the Project on community services will 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.

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

At full build-out of the Proposed Project, the existing community water system (United Water) would not contain ample **capacity** to provide the necessary daily demands and required fire flows to the Project Site. Refer to FGEIS Section 3.2 for further clarification of the required improvements and at which stage of the project build out improvements would be necessary.

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 Village-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. At full build out, the pumps at the Lackawanna Pump Station should be replaced or upgraded to handle the additional flow. Refer to FGEIS Section 3.3 for further clarification on the need for the pump replacement or upgrade.

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 persons¹
- > 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

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

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. The results of the Phase 1 B are included below in this FGEIS.

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.

Section 2 Response to Public and Agency Comments

Section 2 Response to Public and Agency Comments

The following represents the responses to comments that were received on the DGEIS for the proposed Tioga County Route 434 Mixed Use Office Park development.

No comments were received during the Public Hearing, and the Lead Agency only received comments from the NYS Department of Transportation (NYSDOT) on the DGEIS. Responses to comments from NYSDOT are provided below along with the related Traffic Impact Study appendices referred to in the response to NYSDOT's comments.

The results of the Phase 1B Archeological Assessment has been completed, and the results are also provided in this FGEIS.

2.1 TRAFFIC

2.1.1 COMMENTS FROM NYS DEPARTMENT OF TRANSPORTATION DATED NOVEMBER 15, 2006

(COMMENTS ARE KEYED TO THE APPROPRIATE SECTION IN THE TRAFFIC IMPACT STUDY)

COMMENT 1:

Page V: #2: The driveway onto 434 should be nominal 24' width commercial, one lane in, one lane out

RESPONSE:

There will be 177 left turns and 64 right turns exiting the driveway after completion of Phase 1 and 234 left turns and 93 right turns at full development. The driveway is projected to operate at LOS "C" for Phase 1 and "D" under full development conditions. Provision of two exiting lanes will allow right turn movements to exit the site unimpeded by vehicle waiting to turn left.

COMMENT 2:

Page V: #7: What is meant by the "timing" of the turn lanes?

RESPONSE:

The development is currently in the planning stages and definitive users have not been identified yet. As such, one 45,000 s.f. office building can be constructed on the site without constructing the recommended right and left turn lanes. After the office building is in operation, the developer may have a better idea as to future users and timing of additional development within the development. However, the left and right turn lanes on

Route 434 at the site driveway will be installed during construction of the first office building.

COMMENT 3:

Page V: #8: Removal of vegetation along Rt. 434 should be included in the Highway Work Permit application to NYSDOT.

RESPONSE:

Removal of vegetation along Route 434 will be included in the Highway Work Permit application.

COMMENT 4:

Page 3: (C.): The 1% growth is acceptable. However, the pending projects listed in the second paragraph need to be clarified, and associated traffic volumes included in the No Build scenario.

RESPONSE:

Traffic volumes associated with the pending projects listed in the second paragraph were included in the background conditions as shown in Appendix A2.

COMMENT 5:

Page 4: (A.): Mitigation for both phases (full build) needs to be included in the original NYSDOT Permit.

RESPONSE:

Mitigation for both phases has been recommended in the TIS as follows:

- ◆ Provide two new full access driveways to the site. One driveway will access at Southside Drive (Route 434) for Phase 1 and the other will access at Strong Road (the secondary driveway will be constructed when the residential portion of the site is developed).
- ◆ Construct the main site driveway along Route 434 with two exiting lanes (one left turn lane and one right turn lane) and one 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 any 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 I development.

◆The applicant should conduct an interim traffic assessment after the first office building (approximately 45,000 s.f.) is constructed and in operation to determine the timing of the recommended right and left turn lanes. (This recommendation is no longer applicable because the left and right turn lanes on Route 434 at the site driveway will be installed during construction of the first office building.)

◆It is imperative that site amenities such as signs and landscaping be located so as not to interfere with sight distance at the site driveways. In addition, any existing vegetation that blocks sight distance from the Route 434 site driveway should be cleared to the extent practicable

COMMENT 6:

The trip generation calculations – Appendix A2 – was not included in the copy of our Traffic Impact Study; please forward A2 to our office

RESPONSE:

The TIS appendix, including A2, is attached for your use.

COMMENT 7:

Our Traffic Impact Study copy stops at Figure 8B. Please provide Figures 9A and 9B (full development volumes).

RESPONSE:

There was a typographical error in the Draft Report. There are no figures 9A and 9B so you have all of the figures.

COMMENT 8:

Please provide electronic copies (CD) of all HCM analyses

RESPONSE:

A CD with all of the Synchro files is attached for your use.

COMMENT 9:

Page 7-9: How does the developer propose to mitigate the LOS impacts? Specifically, the PM peak impacts to the 434 @ Halstead/Lackawanna (LOSF) are unacceptable to this Department.

RESPONSE:

Impacts at the Route 434 intersection with Lackawanna-Halstead can be mitigated by either installing a traffic signal or a roundabout. However, the uses within the proposed development have not been concretely identified. Once the uses are identified, demand management in the form of altered work hours may be possible. Certain uses may not impact the peak hours and the impacts identified at this intersection may be much less than projected. For these reasons, a post-study is recommended to identify future impacts and mitigation needs.

COMMENT 10:

Page 10: Turn Lanes: Both the eastbound right and westbound left turn lanes will be required in the original NYSDOT Permit.

RESPONSE:

The left and right turn lanes on Route 434 at the site driveway will be installed during construction of the first office building.

COMMENT 11:

Page 11: What impedes the sight distance to the “Right” of the new driveway?

RESPONSE:

The sight distance to the right on Route 434 is impeded by the horizontal curvature of Route 434 and the topography and vegetation along the south side of Route 434 in this area. The TIS documented a sight distance to the right along Route 434 that exceeds the desirable intersection sight distance as well as the required stopping sight distance.

COMMENT 12:

Page 12: Full build impacts need to be addressed now, not on nebulous future after-studies.

RESPONSE:

Full build impacts have been addressed and identified given the assumed site uses. The left and right turn lanes on Route 434 at the site driveway will be installed during construction of the first office building. We continue to recommend that additional traffic studies (i.e. snapshots) be completed prior to each new development on the project site to ensure accurate findings and mitigation.

COMMENT 13:

General: This Traffic Impact Study needs to be revised ; it is unacceptable to this Department in present form.

RESPONSE:

Responses to each item raised by NYSDOT, which includes the above referenced Appendix A, have been provided in lieu of a revised Traffic Impact Study.

Section 3 Additional Studies and Clarification

Section 2 Additional Studies and Clarifications

3.1 ARCHEOLOGICAL

A Phase IB report was prepared for the section of the Project Site wherein the Phase 1A Offices are proposed as described in the DGEIS. Fieldwork included the excavation of screened shovel tests on a 50-foot grid over the 8.25 acres that are proposed for the first phase of development (Phase 1A Offices) within the 85 acre Project Site. No historic Sites were found. One chert flake was retrieved, but no further precontact artifacts, features, or deposits were noted in eight close-interval confirmation tests. Based upon these results no further investigation in the Phase 1A (8.25 acres) section of the 85-acre project site is recommended. The full Phase IB Report is attached to this FGEIS as Appendix B. It is important to note that prior to any development of the remaining phases, OPRHP must be consulted to determine the extent of any further Phase IB analyses.

3.2 WATER ANALYSIS

Lack of Required Fire Flows at Full Build-Out

As indicated in DGEIS Appendix 5 Preliminary Engineering Report – Water and Sewer, at full build-out of the Proposed Project, the existing community water system (United Water) would not contain ample capacity to provide the necessary operating pressures, peak demands and required fire flows to the Project Site, consequently, extension of the existing system alone would not be adequate. Therefore, water storage improvements must be completed to provided the required operating pressures and fire flows at full build-out.

If the existing system were simply extended to the proposed development (i.e. extension of the existing 8-inch diameter watermain from the intersection of NYS Route 434 and Halstead Street to the proposed project site) supply only daily demands at minimum operating pressures and would not be capable of supplying the required fire flows. Fire Flows are commonly provided by a water storage facility. Therefore, to provide adequate fire flows, a water storage facility is required to be placed at the project site so that all facilities are provided with the Insurance Services Office required fire flows.

Extension of United Water's water system to the project site, as previously described, would not allow for filling of a water storage facility without the aide of a booster pump station. However, incorporation of a booster pump station at the project site designed specifically to fill a proposed water storage facility could potentially isolate the proposed water storage facility from other potential water users (i.e. Halstead Subdivision) that would aide in the turnover of said storage facility without additional water system improvements. If adequate turnovers within a constructed water storage

facility are not obtained, significant maintenance and health issues could result. Therefore, interconnection of the existing upper service zone (Halstead) with the proposed project water improvements would allow for existing water users to benefit from the introduction of proposed water storage facilities.

As discussed in more detail in DGEIS Appendix 5 Preliminary Engineering Report – Water and Sewer, the booster pump station that currently serves the United Water upper service zone (Halstead subdivision) is capable of producing nearly 1,272 gpm for fire flow purposes. Therefore, the existing Halstead Booster Pump Station could potentially provide the needed capacity to fill a proposed water storage facility on the 85-acre project site. The existing Halstead booster pump station is aging and lacks sufficient backup generation, therefore, it is recommended in the DGEIS Appendix 5 Preliminary Engineering Report that for reliability purposes, the existing Halstead booster pumps should be replaced and an adequate backup generation unit should be installed. Furthermore, final selection of the proposed water storage facility at the project site may play a role in the sizing of the Halstead booster pump station replacement pumps.

Need for System Redundancy

The water distribution system located south of the Susquehanna River relies solely upon a single 8-inch diameter river crossing for a water supply. In the event that the existing river crossing fails, the southern portion of the river would be without a water supply. To ensure a reliable water supply, improvements including the construction of a new groundwater supply well south of the Susquehanna River or the installation of a redundant river crossing should be pursued.

Refer to *DGEIS Appendix F – Preliminary Engineering Report – Water and Sewer* for more detailed information on the necessary water system improvements.

3.3 SEWER ANALYSIS

Lackawanna Pump Station

In order to determine the anticipated discharge to the Lackawanna lift station from the proposed development, the NYSDEC's expected hydraulic loading rates were used. It was estimated that at full build out, an estimated average flow rate of 87 +/- gpm would be discharged to the existing Lackawanna lift station. This is in addition to the existing flow rates that are currently discharged to the pump station (estimated to be roughly 6.35 gpm +/-). Consequently, the total anticipated average flow rate discharged to the Lackawanna pump station is 93.35 gpm (87 gpm + 6.35 gpm). However, the pump station should be designed to convey at least the peak hour and not the average daily demand. The peak hourly flow rate were estimated to be approximately 2.7x the average daily flow rates. This resulted in an estimated peak hourly flow rate of nearly 252 gpm.

Each pump within the duplex pump station should be capable on conveying the peak hourly flow rate. The operating point of each existing pump was estimated to be 102 gpm at 126 ft TDH. This was predicted using USGS elevations and provided pump models/pump curves. Based upon this analysis, each pump cannot pump the peak hourly flow rate and therefore said pumps are recommended to be replaced to accommodate full build out of the Proposed Project.

To clarify, the existing pumps are constant speed pumps and should be replaced with variable speed pumps that will better handle the potentially varying flow rates that will be experienced throughout the proposed development. When contemplating replacement of the existing pumps, the design engineers should also evaluate the capacity of the wet well as well as the capacity of the suction piping. Furthermore, the design engineer should consult Mr. Ron Horton of the Village of Owego to discuss the condition of the existing pump station (i.e. pumps, controls & pump removal system) in evaluating whether the pump station should be rehabilitated or upgraded. In completing the preliminary engineering report, Mr. Horton indicated to Hunt Engineers, that there had been maintenance issues with the existing pump station.

Appendices

Appendix A Traffic Impact Analysis Data

Appendix B Phase IB Archeology Report

Appendix C Public Hearing Transcripts

Appendix D Written Comments