FINAL ENVIRONMENTAL IMPACT STATEMENT

Town of Shawangunk
Ulster County, New York

Prepared by:
Kingdom Support Services, Inc.

March 2009

Watchtower Farms Improvements FEIS
Final Environmental Impact Statement (FEIS)

APPLICANT INFORMATION

Project Description

The applicant proposes to construct a three-story multiple dwelling with 300 dwelling units and ancillary uses including a two-story parking garage with 400 spaces, three-story accessory office building, recreation building, technical equipment building, and proposed additions to the existing dining room, dry cleaning, and laundry facilities.

Project Location

The project site is in the Town of Shawangunk, Ulster County, and it is located at 900 Red Mills Road, Wallkill, NY 12589.

Tax Map Identification

Section 99.004, Block 1, Lot 11 (99.4-1-11)

Lead Agency: Town of Shawangunk Planning Board
14 Central Avenue / P.O. Box 247
Wallkill, NY 12589
Tel: (845) 895-3356, Fax: (845) 895-2162
Contact: Kris Pedersen, Planning Board Chairwoman

Project Sponsor: Watchtower Bible and Tract Society of New York, Inc.
900 Red Mills Road
Wallkill, NY 12589, U.S.A
Tel: (845) 744-6000, Fax: (845) 744-1990
Contact: David Kjos

DEIS Preparer: Kingdom Support Services, Inc.
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Project Architect: Enrique Ford, R.A.
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Submittal Date:

FEIS Acceptance Date:	April 7, 2009
FEIS Submittal Date:	January 16, 2009
DEIS Public Comments Accepted Until:	December 12, 2008
DEIS Public Hearing Closed on:	December 2, 2008
DEIS Public Hearing Began on:	November 5, 2008
DEIS Notice of Completion Issued:	October 16, 2008
DEIS Lead Agency Acceptance Date:	October 7, 2008

Project Consultants

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225 Main Street—Suite 205
Northport, New York 11768
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Attn: Michael Bontje

Cultural Resources: Eugene J. Boesch Ph.D., R.P.A.
581 Long Pond Road
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Telephone/Fax: (845) 628-3826

Ecologist—Wetlands: John P. Chitty
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Downers Grove, IL 60516
Tel: (630) 852-0857

Geotechnical: Clough, Harbour and Associates, LLP
III Winners Circle
Albany, New York 12205
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Attn: Rebecca Filkins

Stormwater Management—Surveyor:
Richard Eldred, P.E., P.L.S.
2891 Route 22
Patterson, New York 12563
Tel: (845) 306-1000, Fax: (845) 306-3811

Transportation: John Collins Engineers, P.C.
11 Bradhurst Avenue
Hawthorne, N.Y. 10532
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Attn: Philip J. Greeley

Wastewater Resources: Joseph Dodd, P.E.
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Watchtower Farms Improvements
Final Environmental Impact Statement (FEIS)

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List of Drawings prepared by Watchtower Bible and Tract Society of New York, Inc.

I INTRODUCTION

This Final Environmental Impact Statement (FEIS), prepared pursuant to the State Environmental Quality Review Act (SEQRA), provides responses to agency and public comments received by the lead agency on the Draft Environmental Impact Statement (DEIS) prepared for the Watchtower Farms Improvements Project, Town of Shawangunk, Ulster County, New York. The FEIS has been prepared in accordance with Section 8-0101, et. Seq. of the Environmental Conservation Law and the regulations promulgated by the New York State Department of Environmental Conservation (NYS DEC) thereunder, which appear at 6 NYCRR, Part 617.

The applicant prepared the DEIS in response to a Positive Declaration issued by the Town of Shawangunk Planning Board on December 4, 2007. The Town of Shawangunk Planning Board, acting as lead agency in cooperation with all other involved agencies and interested parties, adopted the DEIS scoping document on February 6, 2008, with an issue date of February 14, 2008. The DEIS was originally submitted to the Town of Shawangunk on May 16, 2008. The document was revised and submitted on September 5, 2008. The document was revised again and submitted on October 8, 2008.

The lead agency reviewed the DEIS with respect to the scoping document for completeness and content for public review. The lead agency issued a notice of completion for the DEIS and a notice of SEQRA Hearing on October 16, 2008. The lead agency conducted a public hearing on November 5, 2008. This public hearing was continued to December 2, 2008, and the open public comment period concluded ten days later, on December 12, 2008.

The FEIS consists of this volume, accompanying drawings, and the DEIS, which is incorporated by reference. Appendix 1 of the DEIS contains the adopted scoping document.

I.A.1 Summary of Proposed Action

The applicant, Watchtower Bible and Tract Society of New York, Inc., proposes the Watchtower Farms Improvements Project to construct a three-story, 300-dwelling-unit residential building and ancillary uses, including a two-story parking garage with 400 spaces; a three-story accessory office building with basement, recreation building, and technical equipment building; and proposed additions to the existing dining room, dry cleaning, and laundry.

The proposed project is located in the Town of Shawangunk, Ulster County, and would occur on a portion of its property located on parcel 99.004, block 1, lot 11 (99.4-1-11). The property consists of approximately 1,141 acres, is commonly known in the community as Watchtower Farms, and has primary frontage on Red Mills Road. The property is wholly owned by the applicant, and all activities conducted thereon support the applicant's religious and charitable purposes. The project site refers to the southwest portion of the property bounded by Steen Road to the north.

This proposed project is based on a review conducted by the applicant in an effort to modernize the facility and identify long-term needs. It is intended to care for the applicant's organizational needs by improving the quality of life for residents, upgrading existing facilities, and providing for modest growth consistent with the zoning regulations and comprehensive plan of the Town of Shawangunk. It reflects the same stable pattern initiated in the early 1970s of integrating agricultural, office, residential, and printery activities, consistent with the property uses that have been in evidence for many decades.

Existing residential housing on the project site has been improved gradually over the years. However, small accommodations and centralized, dormitory-style bathrooms remain common. At the same time, demographics reveal that the average age of residents at Watchtower Farms Facility has increased over the years and people have become accustomed to dwelling units with individual, private bathrooms and more living space. The proposed project incorporates the removal of some modular housing, consolidation of some existing dwelling units, and the construction of a new residence building. The proposed project also includes a new recreation building with exercise/fitness facilities to maintain residents' physical health. These enhancements would improve the quality of life for residents, particularly caring for the needs of older residents while they continue active and productive lives on site.

Utilization of modern technology requires upgrades to existing facilities. Computer servers and telecommunications equipment function best in a climate-controlled environment. Also, garment care must keep pace with industry and textile advances. The proposed technical equipment building and upgrading of the existing central laundry and dry cleaning facilities would improve infrastructure based upon proven technology.

Modest growth provides for flexibility to meet the applicant's organizational needs. The proposed adjustments in existing buildings and elimination of some modular structures would otherwise result in an estimated 25-percent loss in available dwelling units. The proposed new residential building would support a projected net increase of approximately 200 residents on the project site, an increase of approximately 15 percent. Accessory upgrades would include an addition to the central dining room, a new parking garage, utilities, and modernization of office workspace to include a new office building.

The proposed buildings would be clustered on lands already developed within the Watchtower Farms Facility, along with some disturbance of lands currently in agricultural or other use at the periphery of the proposed development area. It would be sited to avoid any disturbance of natural plant communities such as woodlands or wetlands. The proposed building locations and installation of a visual screening berm would be designed to preserve and enhance scenic views of the Shawangunk Mountains.

The area of disturbance for the proposed project would affect a total of 46 previously disturbed acres. This would include the disturbance of 27.1 acres of lawns,

ornamentals, and other landscaping; 5.9 acres of roads, buildings, and other paved surfaces; and 13.0 acres of fenced pasture that has been in agricultural use as seeded pasture. By the conclusion of the proposed project, the disturbed area would contain 0.7 acres of water surface area; 9.4 acres of roads, building, and other paved surfaces; and 35.9 acres of lawns, planting, and landscaping. The applicant's landscaping includes protective vegetative cover of mowed lawn (which provides emergency access for emergency services equipment), ornamental trees, shrubs, and maintained flower gardens, all of which prevent any active soil erosion on these areas.

The proposed project would incorporate exterior architectural features and native vegetation that match existing design themes and blend in with the existing facility. Construction would be in accordance with the requirements of the Stormwater Pollution Prevention Plan (SWPPP) in Appendix 13, located in Volume 2 of the DEIS. The entire project, including all utility services, would be undertaken and maintained at the applicant's expense.

I.A.2 SEQRA Background and DEIS Comments

In accordance with SEQRA, this FEIS provides written responses to substantive and relevant comments on the DEIS received by the lead agency during the public review period, including oral comments made at the Public Hearing. Complete copies of relevant Public Hearings meeting minutes are provided in Appendix 1, and written comments and oral comments received on the DEIS are provided in Appendix 2 of this FEIS.

Table I-1 Letters of Comment Received in Response to DEIS

Letters		
Letter No.	**Author**	**Date**
1	Tim Miller Associates, Inc	12/17/08
2	Hickory Creek Consulting LLC	10/02/08
3	Hilda Borges	11/03/08
4	Joe Mihm (E-mail)	10/31/08
5	NYS Office of Parks, Recreation and Historic Preservation	10/17/08

Table I-2 Public Hearing Substantive Comments

Comments from Town of Shawangunk Planning Board Meeting		
Comment No.	**Commenter(s)**	**Date**
1	Fred Whitaker and Margaret Annastas	11/05/08

The FEIS is arranged in sections, with comment summaries and responses arranged by subject area similar to the DEIS. A comment summary, in some cases, may incorporate more than one individual comment on the same subject, followed by a response to that comment. The sources of each comment are referenced. The format of the comments and the responses is as follows:

Comment No. (source): Comment summary text.

Response No.: Response text.

Comment 1.A-1 (Comment #3 Public Hearing, Town of Shawangunk Planning Board Meeting, November 5, 2008, Fred Whitaker and Margaret Annastas, 3 Whitaker Road): Who is conducting the studies?

Response 1.A-1: *The Applicant Information sheet located at the beginning of the FEIS provides the names and addresses of the preparers and consultants involved in the preparation of the document—See pages i. and ii. at the beginning of this document.*

Comment 1.A-2 (Letter #1, comment #1, Memorandum from Bonnie Franson, AICP, and James Garofalo, AICP. Tim Miller Associates, December 17, 2008): The List of Drawings that constitute the site plan that is referenced in the Table of Contents does not reflect all the sheets that have been submitted as part of the site plan application. A complete set of sheets should be submitted that include all site plan sheets, including the floor plans, list of adjoiners, etc., that have been submitted in support of the site plan application. In addition, the date of revision 1 should be identified. Note that the most recent set of plans that I have in my possession is dated May 2008. The comments in this memo reference the May 2008 site plan.

Response 1.A-2: *The Kingdom Support Services' (KSS) cover sheet drawing C-001 has a drawing index that reflects the drawings included in the KSS drawing package. There are two other drawings that were prepared by Watchtower under the direction of the ecologist (wetlands consultant), drawings C-102 and C-103, which clarify the wetlands and floodplain areas. These drawing numbers are added to the KSS cover sheet stating that they originated with Watchtower and thus are to be included in the submittal package of drawings. A complete set of revised drawings are being released with the submittal of this FEIS.*

II DESCRIPTION OF THE PROPOSED ACTION

II.B Description of the Proposed Action

II.B.1 Detailed Description of Proposed Action

Comment 2.B-1 (Letter #1, comment #1, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): What is the total number of dwelling units on the project site, once the facility is completed? The cumulative development of the site, with the proposed action in place, is not described in the DEIS.

> ***Response 2.B-1:*** *After completion of the proposed project, there would be a total of 972 dwelling units on the property with a total population of approximately 1,558 residents.*

Comment 2.B-2 (Letter #1, comment #2, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): It is noted that the May 2008 site plan does not include a detailed landscaping plan. For example, while areas are shown to be re-seeded, the proposed method is not addressed. A schedule of plantings should be provided and landscaping notes and details included.

> ***Response 2.B-2:*** *A detailed landscaping plan has been prepared. This plan includes areas that are to be reseeded, a schedule of the plantings, and other details associated with the proposed action—See the landscaping drawings L-100, L101, L-102, L-103, and L-501.*

Comment 2.B-3 (Letter #1, comment #3, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): What are "garden-type" dwelling units?

> **Response 2.B-3:** *The dwelling units located at the basement level are described as "garden-type" units since the window is located at grade, providing a view through the landscaped surroundings. There is no other functional or zoning classification difference between these "garden-type" dwelling units and the other dwelling units proposed.*

Comment 2.B-4 (Letter #1, comment #9, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): The applicant has submitted a phasing plan which shows the sequence of construction activities on the project site. However, the phasing plan does not describe the timing of the construction sequences. This should be provided to determine whether, for instance, demolition of the modular housing will occur in association with the overall construction of the new residential building, or sometime after construction.

> ***Response 2.B-4:*** *The phasing of the project would be broken into two categories. The first would be the construction phasing which involves the preparation of the site. In a general description this would include the overall site grading, underground utilities and structures, driveways, and the preparation for the building foundations. The second category would be the phasing of the above-grade erection of the buildings. The construction phasing of the site and the phasing of the erection of the buildings would run congruently. The phasing of the erection of the buildings between themselves would run generally sequentially—that is moving from one trade of construction needed for a building and then moving to the next building. The erection of the buildings would overlap to some degree as the trades moved on and other trades moved in to do their specific portion of their work. The total time sequence of the erection of the buildings would be approximately 42 months. The table below contains a description of the phasing of the erection of the buildings.*

Table II.B-1 Building Erection Phasing

Sequence	Building	Estimated Time Frame of Building Erection	Corresponding Site Construction Phasing
1	TER Building	12 months	Phase 1
2	Pedestrian Tunnel	3 months	Phase 1
3	Utility Tunnel	1 months	Phase 1
4	Fuel Oil	2 months	Phase 1
5	Steam Plant and Chilled Water Plant	16 months	Phase 1
6	Waste Water Treatment Plant	4 months	Phase 1
7	Residence Building (to be broken into three parts, first the south portion and the core, second the west portion, and third the north portion)	18 months	Phase 5 & 6
8	Office Building	12 months	Phase 7
9	Dining Room	6 months	Phase 7
10	Parking Garage	8 months	Phase 8
11	Garage Tunnel	2 months	Phase 8
12	Recreation Building	9 months	Phase 10
13	Laundry	9 months	Phase 11
14	Modular Housing Demolition		The existing modular housing is proposed to be removed during Phases 14 & 15
15	Services Building Renovation	9 months	None
16	“E” Residence Renovation	10 months	None

Comment 2.B-5 (Comment #4, Public Hearing, Town of Shawangunk Planning Board Meeting, November 5, 2008, Fred Whitaker and Margaret Annastas, 3 Whitaker Road): Why not remodel rather than expand?

Response 2.B-5: *The proposed action does include a combination of proposed new buildings and building renovations. The proposed building renovations are intended to update and maximize current usage wherever possible and feasible. The buildings to be renovated include a services building, the dining room, the laundry and older residence buildings.*

II.B.2 Proposed Utilities, Recreation, Open Space, Parking, and Driveways

Comment 2.B-6 (Letter #1, comment #4, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): The total parking demand needs to be calculated to ensure that the requisite parking spaces are being provided as per the zoning law requirements. Although the DEIS describes the capacity of the proposed garage, it does not calculate parking demand based on the component uses of the existing facility or proposed expansion.

Response 2.B-6: *The Town of Shawangunk Zoning Code, effective April 10, 1999, chapter 177-20 specifies the off-street parking requirements in Table 1 based on typical rural community needs where residents use vehicular travel for most daily activities away from the home. A study was formulated to ascertain the parking requirements based on the Zoning Code. In circumstances where the zoning use was unclassified, an attempt to apply the requirements for a similar use or typical requirements were applied based on the Zoning Code. The conclusion, as shown in Table II.B-2, establishes a total of 1,934** spaces are needed to fulfill the requirements.*

Table II.B-2 Parking Analysis

Proposed Buildings	***Zoning Use***	***Zoning Assumption***	***Required Spaces***	***Actual Spaces***	***Remarks***
Residence Building —300 units	*Residential*	*-*	*300*	*338*	*73% of residents + drop-off*
Office Building	*Unclassified*	*Internal Use with Pedestrian Access***	*0*	*10*	*75,572 sq. ft.*
Recreation Building/Area	*Unclassified*	*Country Club*	*101*	*48*	*20,246 sq. ft.*
Technical Equipment Building	*Unclassified*	**25% of building floor area*	*8*	*4*	*6,300 sq. ft.*
Parking Garage —400 cars	*N/A*	*-*			
Dining Room Addition	*Unclassified*	*Internal Use with Pedestrian Access***	*0*	*30*	*220 seats*
Laundry/Dry Cleaning Addition	*Unclassified*	*Internal Use with Pedestrian Access***	*0*	*0*	*20,000 sq. ft., 68 staff*
Existing Buildings/Spaces					
Residence Buildings	*Residential*	*-*	*672*	*763*	*73% of residents + drop-off*
Medical Clinic	*Medical Clinic*	*Internal Use with Pedestrian Access***	*0*	*0*	*62 staff (5 Doctors' Offices, 11 exam rooms, Lab, X-ray, Surgery, Therapy, 8 beds)*
Dental Office	*Dental Office*	*Internal Use with Pedestrian Access***	*0*	*0*	*6 operatories, 6 staff*
Medical Offices	*Medical Offices*	*Internal Use with Pedestrian Access***	*0*	*0*	*Optical (1 exam room) and Chiropractor (2 exam room), 3 staff*
Dining Room/Kitchen	*Unclassified*	*Internal Use with Pedestrian Access***	*0*	*100*	*1,760 seats*
Laundry/Dry Cleaning	*Unclassified*	*Internal Use with Pedestrian Access***	*0*	*0*	*14,500 sq. ft., 46 staff.*
Multi-purpose Rooms	*Unclassified*	*Internal Use with Pedestrian Access (40% of community building requirement for visitor parking)***	*219*	*30*	*10,954 sq. ft.*
Offices	*Unclassified*	*Internal Use with Pedestrian Access***	*0*	*28*	*64,297 sq. ft.*

Proposed Buildings	*Zoning Use*	*Zoning Assumption*	*Required Spaces*	*Actual Spaces*	*Remarks*
Personal Services	*Unclassified*	*Internal Use with Pedestrian Access***	*0*	*0*	*6,536 sq. ft. of shops: Shoe, Barber, Beauty, and Sewing.*
Printery Building	*Unclassified*	*Internal Use with Pedestrian Access (25% of manufacturing requirement for visitor parking)***	*251*	*308*	*802,917 sq. ft.*
Equipment Sheds	*Unclassified*	*Warehouse*	*18*	*18*	*14,674 sq. ft.*
Repair Garage/Shops	*Unclassified*	*1 space/150 sq. ft. of floor area (50% allowed due to internal, scheduled usage)***	*234*	*133*	*70,257 sq. ft.*
Food Warehouse	*Warehouse*	*-*	*70*	*12*	*56,254 sq. ft.*
Recreation	*Unclassified*	*Country Club*	*61*	*27*	*12,267 sq. ft.*
Auditorium	*Church*	*Internal Use with Pedestrian Access (100% of church requirement for visitor parking)***	*0*	*108*	*918 Seats*
Total			1,934	1,957	

** Unclassified assumption based on requirement equal to Industrial-type uses in Town Zoning Code.*
*** Required parking has been adjusted as per meeting with Town of Shawangunk Building Inspector, George Sawyer, on March 5, 2009, due to the unique nature and special use of the Watchtower Farms Facility. Since agricultural, printing, residential, and support activities take place on one site and Watchtower members walk between interconnected buildings by means of tunnels and enclosed walkways the parking needs differ from the intent of the Zoning Code. Actual spaces provided reflect the unique nature of Watchtower activities as well as historical data.*

Due to the unique nature of the Watchtower Farms Facility, where agricultural, printing, residential and support activities take place on one site, the parking needs differ from the intent of the code. The actual number of spaces planned in the proposed action acknowledges this difference and is based on the historical trends, resulting in approximately 40 percent of what might be comparable requirements based on the Town Zoning Code.

In general, the existing and proposed parking spaces within the site fall into the following categories: permanent parking of resident and facility owned vehicles, short-term parking that accommodates temporary uses and guest parking. The existing and proposed parking garages will accommodate the majority of the permanent parking for the vehicles owned by the individual residents, providing 1.2 spaces per dwelling unit (equal to the current analysis of .73 cars per resident). Approximately 188 spaces are provided for the permanent parking of vehicles used for the various facility operations, such as farming, maintenance and service vehicles. In addition to these, 104 parking spaces have been distributed, as needed, for short-term temporary parking as vehicles are used to circulate between areas within the site (i.e., recreation areas, residence drop-off, work shops, etc…). Daily and overnight guest parking makes up the remaining 504 spaces.

Comment 2.B-7 (Letter #3, comment #4, Hilda Borges, 2616 Bruynswick Road, Wallkill, New York, November 3, 2008): Is parking for 400 cars necessary? Are you expecting that much traffic?

Response 2.B-7: *The need for the proposed parking garage is based on the historical trends of facility use as noted above. When the overall parking needs are compared with the Town Zoning Code, the amount of parking provided on-site is less than what could have been required. Because of the unique nature of our facility only 40 percent of these spaces are needed. For a Zoning Code analysis, see the Response 2.B-6 above. The proposed garage would house approximately 400 cars to accommodate the needs of the proposed improvements and offset the loss of 172 existing parking spaces around the site due to the proposed building additions (office, laundry and residence).*

A two-floor parking garage is proposed with four levels of parking instead of surface parking to reduce land coverage by impervious surfaces, thus mitigating impacts from stormwater runoff and reducing the environmental impact.

Comment 2.B-8 (Letter #1, comment #5, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): The dining area capacity is for 1,980 seats. However, the approximate final population of the facility would be 1,550 seats. An additional 430 seats are being provided. Please explain the need for the additional seating.

> ***Response 2.B-8:*** *While the Proposed Action will accommodate approximately 1,558 permanent residents living at the Watchtower Farms Facility, there are occasions and special events where guests are invited to share meals in the dining room. In anticipation of these times, additional space has been allocated for these guests. This occurrence happens approximately 6 times during a year and allows the possibility of up to 430 guests.*

Comment 2.B-9 (Letter #1, comment #6, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Does the site plan illustrate the proposed improvements to accommodate the additional fuel storage tank? According to the DEIS, it is north of the printery. Are any exterior building improvements required for the expanded containment area?

> ***Response 2.B-9:*** *The location of the additional fuel tank is proposed to be placed adjacent to the existing fuel tanks. The existing tanks are not within any buildings and the new tank is not proposed to be in a building. There is an existing containment area associated with the existing fuel tanks that is proposed to be enlarged to accommodate the new tank. The containment area is proposed to consist of a concrete floor and walls with a membrane coating and of sufficient capacity to hold the entire contents of a tank failure.*

Comment 2.B-10 (Letter #1, comment #7, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Does the site plan reflect any exterior improvements required to the central steam plant and the chilled water plant? Are exterior improvements that would affect the footprints of these plants proposed?

> ***Response 2.B-10:*** *The proposed central steam plant improvements and chilled water plant improvements would be entirely within the footprint of the existing buildings. There would not be any exterior improvements affecting the foot print of the buildings.*

II.B.3 Building Elevations of Proposed Development

Comment 2.B-11 (Letter #1, comment #8, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Rooftop mechanical equipment. The building elevations do not illustrate rooftop mechanical equipment. New rooftop mechanical equipment should be screened from view. Has this been accomplished?

Response 2.B-11: *The building elevations of the proposed development as shown in Section II.B.3 have been revised to include the rooftop mechanical equipment and stair and elevator bulkheads as they would be seen in a direct view of the buildings. It should be noted, however, that most of the mechanical equipment would be hidden from view as seen from the typical perspective at ground level. Those remaining mechanical items would be located within a mechanical room or individual equipment housing to screen them from view.*

1 SOUTH ELEVATION – RESIDENCE BUILDING

1"=30'-0"
0" 15' 30' 60'

2 WEST ELEVATION – RESIDENCE BUILDING

1"=30'-0"
0" 15' 30' 60'

KINGDOM SUPPORT SERVICES, INC.

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ISSUE DATE:
15 JAN 09

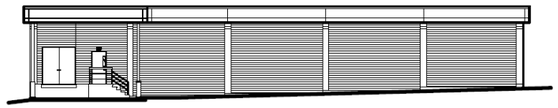
DRAWN BY:
SDG

PROJECT TITLE:
WATCHTOWER FARMS IMPROVEMENTS
EXTERIOR ELEVATIONS
900 RED MILLS ROAD, WALLKILL, NEW YORK

PROJECT No.
DEIS

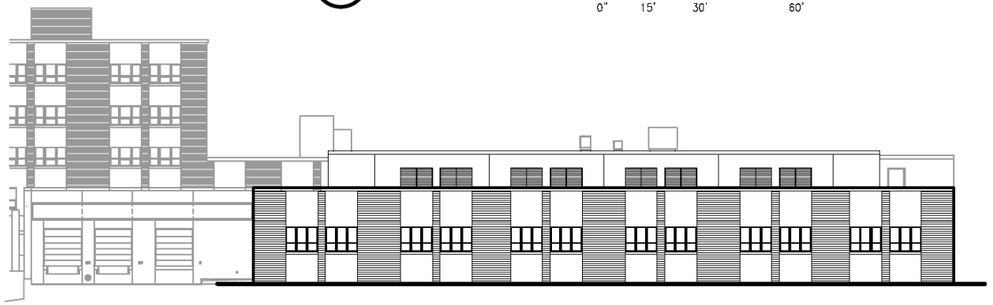
SHEET No.
A1

Figure II.B-1 Exterior Elevations—Residence Building



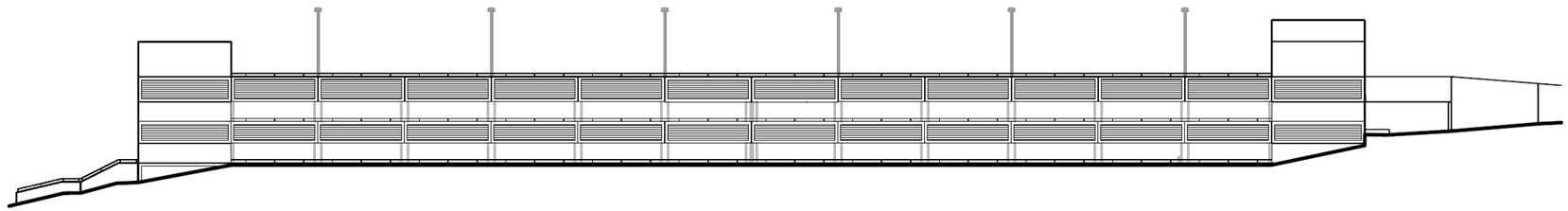
1 SOUTH ELEVATION – TER BUILDING

1"=30'-0"
0" 15' 30' 60'



2 EAST ELEVATION – LAUNDRY ADDITION

1"=30'-0"
0" 15' 30' 60'



3 SOUTHEAST ELEVATION – PARKING GARAGE

1"=30'-0"
0" 15' 30' 60'

KINGDOM SUPPORT SERVICES, INC.

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ISSUE DATE:
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DRAWN BY:
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EXTERIOR ELEVATIONS
900 RED MILLS ROAD, WALLKILL, NEW YORK

PROJECT No.
DEIS

SHEET No.
A2

Figure II.B-2 Exterior Elevations—TER Building, Laundry Addition, and Parking Garage

1 SOUTH ELEVATION – OFFICE BUILDING

1"=30'-0"
0" 15' 30' 60'

2 NORTH ELEVATION – RECREATION BUILDING

1"=30'-0"
0" 15' 30' 60'

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900 RED MILLS ROAD, WALLKILL, NEW YORK

PROJECT No.
DEIS

SHEET No.
A3

Figure II.B-3 Exterior Elevations—Office and Recreation Building

Comment 2.B-12 (Letter #1, comment #10, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Will the applicant be seeking separate certificates of occupancy for the various components of the facility? For example, will the applicant seek to occupy the residential building before the recreational facilities are constructed? This should be discussed.

> ***Response 2.B-12:*** *As noted in response to Comment 2.B-4 above, the applicant proposes a phased construction project and will be seeking separate certificates of occupancy for the various proposed project components. Separate certificates of occupancy would be sought first to ensure controlled infrastructure upgrades such as in the case of the technical equipment room (TER) building. A careful construction sequence has been developed that allows for the safe, continued operation of the existing facilities. Therefore, certificates of occupancy would also be sought as the construction sequence permits substantial completion of the various project components.*

Comment 2.B-13 (Letter #1, comment #11, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): It is unclear how many trees are being removed. A protection measure is proposed (Detail 1 on the site plan) - are the locations where these measures are to be used shown?

> ***Response 2.B-13:*** *A detailed landscaping plan has been prepared. This plan has included in it the protection measures to be taken to protect trees that are near the construction area and has identified other trees to be removed—See the Landscaping drawings L-100, L101, L-102, L-103, and L-501.*

Comment 2.B-14 (Letter #1, comment #12, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Under "Construction related Activities", the DEIS indicates that there are 16 phases. However, the May 2008 site plan illustrates 13 phases only.

> ***Response 2.B-14:*** *The construction of the project would be divided into 16 phases. The "Construction Phasing Plan," CD101, has been updated to reflect this notation.*

Comment 2.B-15 (Letter #1, comment #13, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): It appears that construction of the sewer main may result in road disturbances to Red Mills Road. What approvals, if any, would be required? A description of the duration of the improvement should be described, and whether any road closures would be required.

Response 2.B-15: *The applicant anticipates using trenchless directional boring to install the new sewer main underneath Red Mills Road. No interruption to traffic flow will be required by this method, although boring equipment and work crews will be set up adjacent to the road. If needed, construction zone signage would be installed by the work crews on either side of the construction zone. As has been done in the past by the applicant before other road crossings for underground utilities, the applicant would contact the Town Highway Supervisor to inform him of the work so that, if deemed necessary, emergency services could be contacted and informed of the construction activity. There would always be through access for emergency responders while this work takes place. The duration of this construction work would be expected to be one day or less.*

In the case that trenchless boring cannot be used for this installation, then an open trench would be cut across the road. Past utilities crossings by the applicant underneath Red Mills Road have used this method, with appropriate construction-zone signage installed and flagmen provided. The same notification to the Town Highway Supervisor described above would be used, and one lane of traffic with minimal delays would be provided at all times. If needed, both lanes of traffic, without delays, would be available for emergency responders, as steel road plates would be on hand at the site to span the open trench. The duration of this work would also be expected to be one day or less.

II.C Public Need for Proposed Action

Comment 2.C-1 (Letter #3, Hilda Borges, 2616 Bruynswick Road, Wallkill, New York, November 3, 2008): What would be the purpose of a 300 multiple dwelling? Are the occupants permanent or transient?

> ***Response 2.C-1:*** *As stated in Section III.J.2, "The new residential building would have 300 dwelling units (designated in the Zoning Code as multiple-family dwellings). Of these, approximately 151 dwelling units would replace dwelling units lost in other buildings as a result of this project. The dwelling units that are lost would mainly be due to quality-of-life improvements with the objective of increasing their size to include individual, rather than communal, bathrooms and simple kitchenettes. An example of dwelling units that would be lost is the modular housing north of the new residential building. Also, historically at the site, approximately 15 percent of dwelling units must be allocated for occasional guests, temporary workers (seasonal and otherwise), short-term training, and special needs such as temporarily housing residents whose units are undergoing maintenance or renovation. Thus, another 45 dwelling units would not be available for residents. This figure is also intended to incorporate under-utilization of dwelling units, which are typically designed to house two residents. For example, an older widow or widower may live alone, rather than with a roommate. Subtracting 196 (151 + 45) dwelling units from the 300 total dwelling units in the new residential building generates an estimated increase of 104 dwelling units, or 208 residents."*

Comment 2.C-2 (Comment #1, Public Hearing, Town of Shawangunk Planning Board Meeting, November 5, 2008, Fred Whitaker and Margaret Annastas, 3 Whitaker Road,): How does this project benefit the community?

Response 2.C-2: *Residents of the applicant's property are part of the overall fabric that makes up the Town of Shawangunk. The proposed project would directly benefit these residents by improving the quality of life, upgrading existing facilities, and providing for modest growth consistent with the Town of Shawangunk's zoning regulations and comprehensive plan.*

The principal reason for the work accomplished in the facility is to benefit not only the local community but also the public worldwide. The general public has an interest in the free exercise of religious beliefs. The applicant endeavors to satisfy this interest by providing appropriate organization and religious publications, such as the Bible, in sufficient quantities and languages to meet public demand. This project would allow the applicant to continue to meet this demand and organize its activities in an efficient manner.

As described in Section II.C.2, "Public Need for Proposed Action of the DEIS," the proposed Watchtower Farms Improvements Project also meets local public needs described in the "Town of Shawangunk Comprehensive Plan" (July 2003) and "Ulster Tomorrow—A Sustainable Economic Development Plan for Ulster County, Strategic Implementation Report" (March 2007).

Having compatible non-farm uses improves the applicant's flexibility and stability in the community, and the uses that are included in the proposed project represent a decades-long pattern on the project site. This is anticipated to support the applicant's overall activities, which have a resultant stabilizing effect on the town. The applicant's project supports a facility where the residents are efficiently housed and fed within a clustered building footprint that leaves much of the land in open space, such as agriculture. The residents are productive and walk from their places of residence to work. While the nature and objectives of the facility are unique, it incorporates various features that reflect values highlighted in Ulster County planning documents. This shows that the diverse activities of a facility can fit into the overall regional vision.

In summary, the applicant's current activities support public needs on a local and regional level. In changing and progressive times, the proposed project is expected to help the applicant position itself to support these and similar public needs in the future.

Comment 2.C-3 (Comment #7, Public Hearing, Town of Shawangunk Planning Board Meeting, November 5, 2008, Fred Whitaker and Margaret Annastas, 3 Whitaker Road): Is a technical school relocating to this location?

Response 2.C-3: *There is no accredited technical school currently located within the facility, nor is there any anticipation of providing such a school in the future. For the benefit of maintaining the facility buildings and systems, training and updating of the on-site workers in current maintenance practices within applicable trades does takes place. When instruction is provided, it is generally given to groups of 12 to 16 attendees.*

III ENVIRONMENTAL SETTING, IMPACT, AND MITIGATION

III.A Geology, Soils, and Topography

Comment 3.A-1 (Letter #1, comment #14, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): The DEIS concludes that it is not anticipated that solid rock material will be encountered during construction to necessitate blasting. With regard to Appendix 5, it is unclear whether borings were done in the area of the proposed pedestrian tunnels. How deep are these tunnels and does the potential exist to require blasting to construct them? The site plan should detail the tunnels, e.g., depth below ground, etc.

> ***Response 3.A-1:*** *The Clough Harbor and Associates soil borings findings at borings B5, B6, and B7 indicate stiff clay at elevations below 324, which is 5.5 feet lower then the lowest tunnel elevation, thus the conclusion that blasting is not required. The lowest depth of the tunnels would be at the same depth of the adjacent structures that are served by the tunnels. The tunnels slope slightly to accommodate the difference in the floor levels of the adjacent buildings. The difference in floor elevation between adjacent buildings is about one foot. The existing structure to the east of the new residence building was constructed without blasting. The lowest elevation of the supporting foundation for the tunnel is at elevation 330.5.*

Comment 3.A-2 (Letter #1, comment #15, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): With regard to phasing, will these activities be conducted concurrently or sequentially? The total duration of proposed construction activities should be described. Does the schedule provided in this section include building construction during the applicable time period noted for each phase?

> ***Response 3.A-2:*** *The construction phasing detailed in section III.A.2 Soils and in the SWPPP, addresses phasing as it relates to soil disturbance. The construction of site improvements that involve soil disturbance would be divided into 16 phases for a total of 35 months. These phases would be conducted sequentially to limit soil disturbance to no more than five acres at a time. The total duration of construction activities related to building construction and renovation is detailed in Response 2.B-4.*

Comment 3.A-3 (Letter #1, comment #16, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Based on review of the site plan, it is not clear where the ESCM #2 will be installed.

> ***Response 3.A-3:*** *The Erosion and Sediment Control Plans CE101, CE102, and CE103 have been updated to show where ESCM #2 will be installed.*

Comment 3.A-4 (Letter #1, comment #17, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): There are locations on the site plan that have the designation "M" for mulch. Is this where mulch to is to be stockpiled?

> ***Response 3.A-4:*** *The designation "M" indicates areas where mulch will be applied to stabilize soil while plantings are being established.*

Comment 3.A-5 (Letter #1, comment #18, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): The site plan should indicate the specific seed mixes to be used where seeding is used as an erosion control measure.

> ***Response 3.A-5:*** *Drawing CG505, "The Erosion Control Notes and Details" has been updated to include the seed mixes that would be used as an erosion control measure.*

III.B Surface Water Resources

Comment 3.B-1 (Letter #1, comment #19, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): The DEIS indicates, as a mitigation, that snow stockpiles would not be located adjacent to wetlands streams, or stormwater detention ponds. Existing and proposed locations for snow stockpiles should be shown to verify whether this mitigation measure will be met.

> ***Response 3.B-1:*** *A mixture of 30 percent salt and 70 percent sand is currently applied to the loop driveway to maintain safe conditions, as well as, clear access for police and fire vehicles in the event of an emergency. The proposed relocation of the loop driveway would be similarly maintained. However, snow stockpiles would not be located within 100 feet of wetlands, streams, detention ponds, nor in proposed buffer restoration areas. Snow removed from the loop driveway and access driveways would be stockpiled on the driveway shoulders. Snow from the roof levels of parking garages would be blown off and stockpiled adjacent to the structure. The stockpile for surface parking lots would be located on the southeast side of Red Mills Road east of the wastewater treatment plant. Since some existing parking lots at the modular housing and existing residences and some portions of the existing loop driveway would be removed, it is not anticipated that the amount of stockpiled snow would increase. Please see Figure III.B-1 for snow stockpile locations.*
>
> *As an additional mitigation measure, plants that increase salt uptake would be used in vegetated swales that discharge from stormwater treatment ponds.—See Drawing L-501 Landscaping Details.*

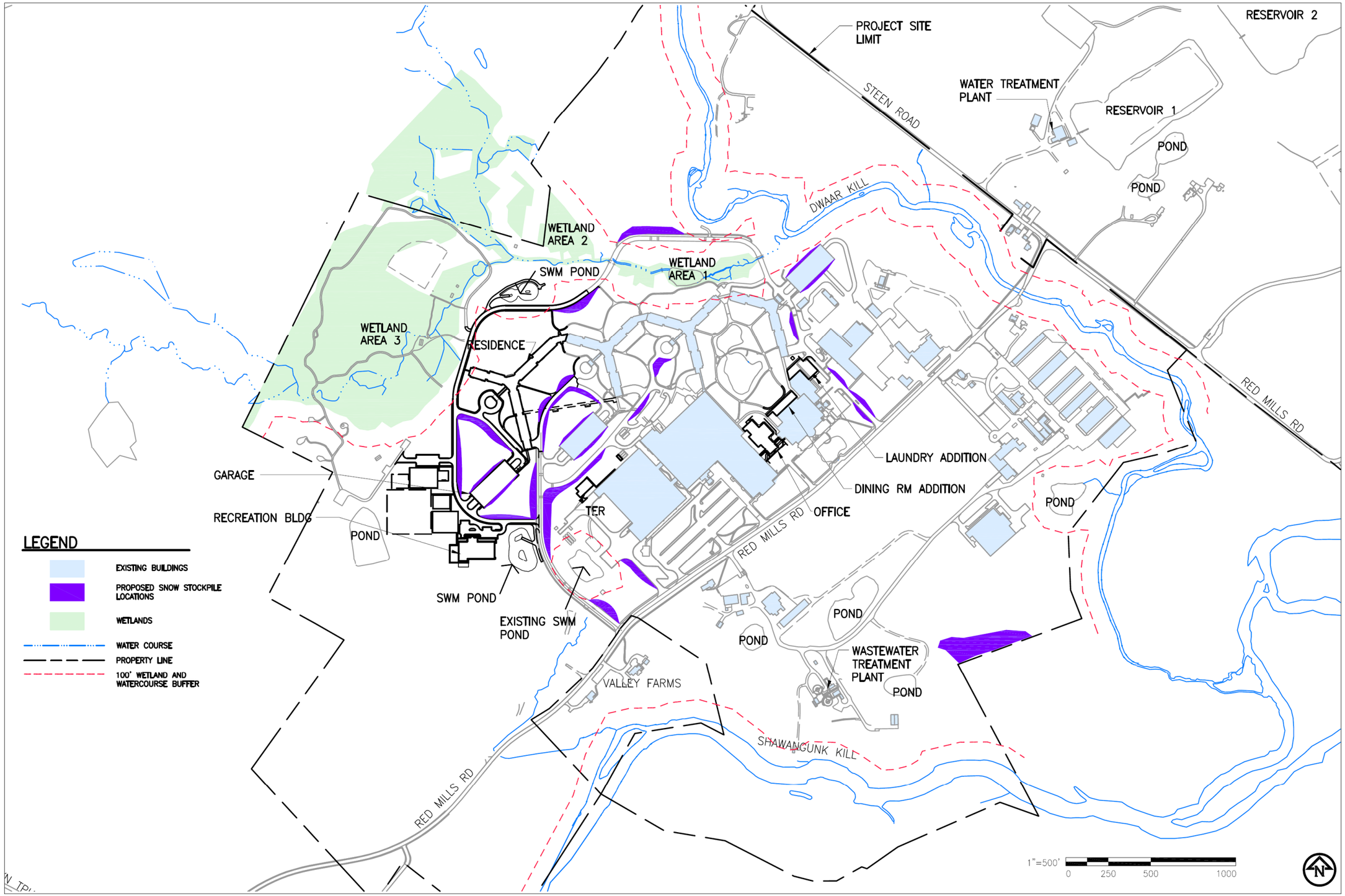

Figure III.B-1 Snow Stockpile

Comment 3.B-2 (Letter #2, comment #1, memorandum from Karen Schneller-McDonald of Hickory Creek Consulting, LLC, October 2, 2008): 1. Shawangunk Kill. It is understood that a permit for water use is in place. However, information on stream flow changes should be included in the DEIS, so that if there are impacts, they can be reviewed. While these issues have been mentioned, the DEIS does not provide specific information on the amount of additional water that would be withdrawn from the Shawangunk Kill, and subsequent impacts on stream flow including during times of drought and considering climate changes factors. This information should be added to the DEIS so that potential impacts on steam biota can be ascertained.

Response 3.B-2: *Currently, the applicant irrigates approximately 42 acres of lawn, landscaped areas, and crops during the months of May through September. A permanent suction line withdraws water from the Shawangunk Kill and the water is pumped into an irrigation pond with a 3 million gallon capacity. Monthly records are maintained to monitor the water usage. The average peak usage during the months of August and September is approximately 3.2 million gallons.*

The proposed improvements are located entirely within a previously developed area with turf-grassed lawn and landscaping. However, a portion of the existing turf grass lawn in the recreation area just west of the loop driveway is not presently irrigated. The proposed improvements would involve extending the irrigation system to include seven additional acres of lawn and landscaping. This would represent a 17-percent increase in irrigated lawn. Therefore, the peak water usage would increase to approximately 3.7 million gallons.

Under an existing NYSDEC permit, the applicant is currently permitted to pump up to 5.8 million gallons per month (0.3 cf/s) from the Shawangunk Kill. The projected increase is well below the amount that the NYSDEC warrants as permissible to maintain adequate flow in the Shawangunk. In addition, the DEC reserves the right to restrict or prohibit usage during periods of low flow, such as during a drought. The applicant would comply with these restrictions. Also, the applicant voluntarily restricts irrigation during drought periods by limiting watering to select crops and light watering of landscaped areas only at night, even without DEC restrictions.

Most of the water used for irrigation is ultimately returned to the watershed and streams by means of surface runoff from irrigated crops and landscaping with only minimal losses due to evapotranspiration. Stormwater runoff from these areas is filtered by natural buffers that remove pollutants and chemicals before returning to the Shawangunk. In addition, the water stored in the unlined irrigation pond is available for groundwater recharge which contributes to base flow in the Shawangunk Kill. Therefore, the applicant does not anticipate significant impacts to stream flow or stream biota in the Shawangunk Kill.

Comment 3.B-3 (Letter #2, comment #2, Memorandum from Karen Schneller-McDonald of Hickory Creek Consulting, LLC, October 2, 2008): 2. Buffers. (Refer also to Vegetation and Wildlife section comments below) Impacts on wetland and steam water quality from stormwater runoff are directly related to the condition and size of buffer areas. While this has been discussed in the DEIS, the information has been scattered among different sections.

To provide a more complete description in the DEIS, and a more detailed look at the information presented in figure III E.7, a full-sized separate buffer map is needed. This map would include: existing buffers and type of vegetation; post-construction buffers and type of vegetation; location of turf grass; and location of management areas beyond the buffers (i.e. 'no chemical amendment' or special mowing areas).

In addition to the map, buffer information in the DEIS should be consolidated from the various sections in which it appears, so that all buffer information is in one place.

> ***Response 3.B-3:*** *Pertinent buffer information was added to sections III.B, "Surface Water Resources," III.E.1, "Vegetation," III.E.2, "Fish & Wildlife," and III.E.3, "Wetlands and Waterbodies" in order to provide a complete response to Karen Schneller-McDonald's comments dated June 26, 2008. Specific comments for each of these sections was addressed and documented accordingly within each section. A summary of the proposed buffer restoration is provided in section III.E.3.f of the DEIS—See page III-115 of DEIS.*
>
> *A full-sized map C-005 Habitat Map and Proposed Buffer Restoration has been included. Existing and post-construction buffers, locations of turf grass, and locations of modified management areas are shown. The map also shows project site wetlands, streams, and habitats, the 100-foot wetland buffer, Bog Turtle conservation Zone 2 (300 feet from wetland boundary), and the contributing drainage area to project site wetlands.*
>
> *Areas indicated on the map as existing natural wetlands and existing natural uplands would be undisturbed. There would be no mowing or application of chemicals within these areas.*
>
> *Areas indicated on the map as "modified management" and areas to undergo "reseeding, planting, or interseeding" would be mowed once a year after August 15 to avoid disrupting the nesting season of grassland birds. An exception to this would be a 20 to 30-foot width on both sides of the loop driveway. More frequent mowing would be required in this area to prevent tall, dry grass from becoming a fire hazard near the main complex.*
>
> *Pesticides and fertilizers would not be applied to areas of "modified management" or areas to undergo "reseeding, planting, or interseeding."*
>
> *Management at the existing recreational field adjacent to wetland area 3 would be modified to the use of 100-percent organic fertilizer. No pesticides would be used in this area.*

III.C Groundwater Resources

Comment 3.C-1 (Letter #2, comment #3, memorandum from Karen Schneller-McDonald of Hickory Creek Consulting, LLC, October 2, 2008): Groundwater Recharge. On page III-61 (III.C.4) of the DEIS, a reduction of groundwater recharge impacts is mentioned. What are these impacts? On page III-60, the DEIS states that there are no groundwater recharge impacts. This appears to be a contradiction in the text, and should be clarified.

> ***Response 3.C-1:*** *The DEIS states in section III.C.2 that there would be no direct or indirect impacts to groundwater recharge of the intermittent stream and wetland areas, because they are not within the drainage area that contributes to the reservoirs and are upstream of the reservoirs.*
>
> *Impacts downstream of the reservoirs at the Dwaarkill and Shawangunk Kill would be minimal. These minimal impacts are further reduced by our water conservation measures described in III.C.4.*

Comment 3.C-2 (Comment #2 Public Hearing, Town of Shawangunk Planning Board Meeting, November 5, 2008, Fred Whitaker and Margaret Annastas, 3 Whitaker Road): Concerns for the water table?

> ***Response 3.C-2:*** *As explained in the DEIS Section 3.C.1, "The water supply system is fed by a watershed that encompasses approximately 180 acres of protected land owned by the applicant. This area receives approximately 230-million gallons of rainfall in an average year. Surface-water runoff is stored in two surface-water reservoirs on the property with a combined capacity of approximately 90-million gallons. Safe yield charts for New England show that a watershed and reservoirs of this size can be counted on to provide 82.1-million gallons per year (225,000 gpd), even through the worst drought expected in a century." Thus, since the applicant does not operate any groundwater wells on the project site and depends entirely on surface-water-filled reservoirs, there would be minimal impact to the water table.*

III.D Wastewater/Sewage Disposal

Comment 3.D-1 (Letter #1, comment #20, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): As per the NYSDEC letter dated January 28, 2008, the letter indicates that the Permittee must submit a brief engineering report summarizing any current and proposed changes in usage at the facility. Has this report been prepared? If not, when will the report be submitted? The submission should be reviewed as part of the SEQRA process.

> ***Response 3.D-1:*** *A brief engineering report has been prepared summarizing current and proposed changes to the uses at the facility as they relate to the wastewater flow and proposed plant adjustments—See Appendix 14 for Improvement of Wastewater Treatment Plant report.*

Comment 3.D-2 (Letter #1, comment #21, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): The DEIS indicates that minor adjustments will be made to the WWTP, including converting the present pretreatment tank into a supplemental flow equalization tank and installing new headworks, variable speed pumps, controls, and aeration blowers. These improvements are not identified on the construction phasing plan (Sheet CD101) - when would these improvements be made?

> ***Response 3.D-2:*** *The adjustments associated with the WWTP would be included in Phase 1. The Construction Phasing Plan CD101 has been revised to show this adjustment.*

Comment 3.D-3 (Letter #1, comment #22, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): With regard to the estimated demand created by the proposed improved facility (Table III.D-2), wastewater generation is assigned entirely to the resident population, except for the flow assigned to food processing. Are there any employees that work at the facility that do not reside at the facility? If so, how does this affect the proposed flow?

> ***Response 3.D-3:*** *There are no "employees" (full-time volunteer workers) that work at the facility that do not reside at the facility. Occasionally, there are some guests that visit the facility and temporary volunteer workers. The previously approved population was 1,350 with extensive food processing operations being carried out. Table III.D-1 (see DEIS page III-60) of the DEIS indicates the combined calculated wastewater flows and loads of 145,500 gallons per day flow and biochemical oxygen demand loading of 508 which was approved and has operated successfully. The calculation used at that time for the biochemical oxygen loading (BOD) was a 0.17-pound-BOD-per-capita-per-day value. A conservative value of 0.20-pound-per-capita-per-day value was used for the proposed improvements to the facility. In addition, Table III.D-2 of the DEIS shows the calculated flows and loads for the proposed improvements of the*

facility. This indicates the gallons per day flow of 124,400 and the biochemical oxygen loading of 362 is still well under the previous calculations, thus indicating the system's size to be sufficient to carry the load.

III.E Terrestrial and Aquatic Ecology

Comment 3.E-1 (Letter #1, comment #23, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): The DEIS states that the NYSDEC will likely request revegetation in the area of the modular removal and planting of buffering vegetation along the proposed access road. The applicant should clearly indicate what the proposed use and remediation will be for this area, with specific plantings noted as this serves as a mitigation. The landscaping plan should include proposed plantings for the buffer mitigation areas shown on Figure III.E-7.

> ***Response 3.E-1:*** *A detailed landscaping plan has been prepared. This plan has addressed the revegetation with proposed plantings of the area where the modular housing is currently located and the buffer vegetation along the access road. See the Landscaping sheets L-100, L101, L-102, L-103, and L-501.*

Comment 3.E-2 (Letter #1, comment #24, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Are the rock outlet protection measures located within the 50-foot regulated area associated with the Dwaar Kill? If so, is a permit required to discharge to the Dwaar Kill in this location?

> ***Response 3.E-2:*** *The proposed stormwater discharge with rock outlet protection is not located within the 50-foot regulated area associated with the Dwaar Kill. The discharge point is located at an unprotected intermittent stream and is over 650 feet away from the bank of the Dwaarkill. Therefore, no permit is required —See attached fax from New York State Department of Environmental Conservation of January 13, 2009, in Appendix 2.*

Comment 3.E-3 (Letter #2, comment #4, memorandum from Karen Schneller-McDonald of Hickory Creek Consulting, LLC, October 2, 2008): 1. Plant Lists. The DEIS refers to the Town's Habitat Assessment Guidelines. These guidelines provide a table of the plants of conservation concern that could be found within the town; this table should be included in the DEIS. The plant table includes information on wetland plants and their status, which is not otherwise provided in the DEIS, and is more specific to the Town than the very long list provided in the DEIS.

> ***Response 3.E-3:*** *Attached is the list of the plants of conservation concern for the Town of Shawangunk.*

Table III.E-1 Plants of Conservation Concern for the Town of Shawangunk

Scientific Name	Common Name	NYS	NYS Natural Heritage Program Ulster County	USFWS Wetland Plant List	Shawan-gunk Ridge	Shawan-gunk Kill
Agastache nepetoides	hyssop, yellow giant	T	Active inventory	FACU		
Agrimonia parviflora	Agrimony, swamp		Watch list	FAC		*
Agrimonia rostella	Agrimony, woodland	T	Active inventory	FACU		
Aplectrum hyemale	Puttyroot	E	Active inventory	FACU		
Arethusa bulbosa	dragon's mouth orchid	T	Active inventory	OBL		
Arisaema dracontium	Green dragon	V		FACW		*
Aristolochia serpentaria	Virginia snakeroot	E	Active inventory	UPL		
Asclepias viridiflora	Green milkweed	T	Active inventory			
Asplenium bradleyi	Spleenwort, Bradley's*	E	Active inventory		*	
Asplenium montanum	Spleenwort, mountain	T	Active inventory		*	
Betula nigra	Birch, river	V	Watch list	FACW		
Bidens bidentoides	Delmarva beggar-ticks	R	Active inventory	FACW		
Bidens laevis	Smooth bur-marigold	T	Active inventory	OBL		
Boechera missouriensis	Green rick-cress	T	Active inventory			
Botrychium oneidense	Fern, blunt-lobe grape	E	Active inventory			
Carex albicans var. emmonsii	Sedge, Emmons					
Carex amphibola	sedge, narrow-leaved	E	Active inventory	FAC		
Carex bushii	Sedge Bush's		Watch list	FACW		
Carex cryptolepis	sedge, northeastern		Watch list	OBL		
Carex cumulata	sedge, clustered	T	Watch list	FAGU	*	
Carex davisii	sedge, Davis's	T	Watch list	FAC		*
Carex frankii	sedge, Franks	E	Watch list	OBL		
Carex glaucodea	sedge, glaucous	E	Watch list			
Carex lupuliformis	sedge, false hop	R	Watch list	FACW+	*	
Carat merritt-fernaldi	sedge, Fernald's	T	Watch list			*
Carex molesta	sedge, troublesome	T	Watch list			
Carex retroflexa	sedge, reflexed	E	Watch list			*
Carex seorsa	sedge, weak stellate	T	Watch list	FACW		
Carex straminea	sedge, straw	E	Watch list	OBL		
Castilleja coccinea	scarlet Indian paintbrush		Watch list			
Celastrus scandens	bittersweet, American		Watch list			
Ceratophullum echinatum	hornwort, prickly	T	Watch list	OBL		
Chamaelirium luteum	fairy wand	T	Watch list	FAC		
Cheilanthes lanosa	fern, wooly-lip	E	Watch list	E		
Chelone glabra	turtlehead	V		OBL	*	
Corema conradii	broom crowberry	E	Watch list		*	
Cornus florida	flowering dogwood	V			*	

Scientific Name	Common Name	NYS	NYS Natural Heritage Program Ulster County	USFWS Wetland Plant List	Shawan-gunk Ridge	Shawan-gunk Kill
Corydalis aurea	golden corydalis	T	Watch list			
Crassula aquatica	Water pigmyweed	E	Watch list	OBL		
Crotalaria sagittalis	rattlebox	E	Watch list			
Cuscuta cephalanthi	dodder, buttonbush	E	Watch list			
Cynoglossum vitgnianum var. boreale	comfrey, northern wild	E	Watch list			
Cyperus erythrorhizos	sedge, red-root		Watch list	FACW		*
Cypripedium acaule	lady's slipper, pink	V		FACU		
Cypriedium parviflorium var. parviflorum	lady's slipper, small yellow	E	Watch list			*
Diarrhena obovata	beakgrass	E	Watch list			*
Dichanthelitan oligosanthes var. otigosanthes	grass, rough panic	E	Watch list	FACU		
Digitaria filiformis	crabgrass, slender	T	Watch list			
Diphasiastrum camplanatum	running-pine, northern	E	Watch list			
Drosera intermedia	sundew, spatulate-leaved	V		OBL		
Drosera rotundfolia	sundew, round-leaved	V		OBL		
Eclipta prostrata	false-daisy	E	Watch list			
Elatine americana	waterwort, American	E	Watch list	OBL		
Eleocharis fallax	spikerush, creeping	E	Watch list	OBL		
Eleocharis obtusa var ovata	spikerush, blunt	E	Watch list	OBL		*
Eleocharis quandrangulata	spikerush, angled	E	Watch list	OBL		
Epigaea repens	trailing arbutus	V			*	
Equisetum pratense	horsetail, meadow	T	Watch list	FACW		
Galearis spectabilis	orchis, showy	V				
Gentiana clausa	gentian, closed	V		FACW	*	*
Gentiana quinquefolia	gentian, stiff	V			*	
Geranium carolinianum var. sphaerospermum	Carolina cranesbill	T	Active inventory		*	
Geum macrophyllum var. macrophyllum	avens, bigleaf yellow		Active inventory	FACW		
Geum vernum	avens, spring	E	Watch list	FACU	*	
Geum virginianum	avens, rough	E	Active inventory	FAC-	*	
Goodyera pubescens	rattlesnake plantain	V		FACU	*	
Hedeoma hispidum	mock-pennyroyal	T	Active inventory			*
Heteranthera renjformis	kidney-leaf mud plantain		Watch list	OBL		
Houstonia purpurea var. calycosa	southern bluet	E	Active inventory			
Huperzia appressa	Appalachian firmoss	T	Active inventory			
Hypericum prolificam	St John's-wort, shrubby	T		FACU	*	
Ilex laevigata	smooth winterberry	V		OBL	*	
Ilex montana	holly, mountain	V			*	
Ilex verticillata	black alder	V		FACW+	*	
Isoetes riparia	quillwort, riverbank	E	Active inventory	OBL	*	
Isotria medeoloides	pognia, whorled	E	Active inventory	FACU	*	
Juglans cinerea	butternut	V	Watch list	FACU+	*	

Scientific Name	Common Name	NYS	NYS Natural Heritage Program Ulster County	USFWS Wetland Plant List	Shawan-gunk Ridge	Shawan-gunk Kill
Juncus subcaudatus	rush, woods	E	Active inventory	OBL	*	
Juncus trifidus	rush, Arctic	T	Active inventory		*	
Kalmia angustifolia *	laurel, sheep	V		FAC	*	
Kalmia latifolia	laurel, mountain	V		FACU	*	
Kalmia polifolia l	laurel, swamp	V		OBL		
Lactuca floridana	lettuce, false	E	Active inventory	FACU		
Lactuca hirsuta	lettuce, downy	E	Active inventory			
Lespedeza repens	bush-clover, trailing	R	Watch list			
Lespedeza stuevei	bush-clover, velvety	T	Active inventory			
Lespedeza violacea	bush-clover, violet	R	Watch list			
Liatris scariosa var. novae-angliae	northern blazing star	T	Active inventory			
Lillian canadense	Canada lily	V		FAC+		
Lilium philadelphicum	woodlily	V		FACU+		
Limosella australis	mudwort	R	Watch list	OBL		
Liparis lilifolia	large twayblade	E	Active inventory	FACU-	*	
Lobelia cardinalis	cardinal flower	V		FACW+		
Lobelia nuttallii	lobelia, Nuttall's	R	Watch list	FACW		
Ludwigia sphaerocarpa	ludwigia, globe-fruited	T	Active inventory	OBL		
Lupinus perennis	lupine, wild		Watch list			
Luzula echinata	woodrush, spiny		Watch list	FACU		
Lycopodium complanatum	Northern running pine	E		FACU-	*	
Mimulus alatus	winged monkeyflower	R	Watch list	OBL		*
Minuartia glabra	Appalachian sandwort	T		UPL	*	
Minuartia groenlandica	sandwort, mountain		Watch list			
Myriophillum farwellii	farwell watermilfoil	T		OBL	*	
Oenothera laciniata	evening primrose, cut-leav					
Orontium aquaticum	golden club	T	Active inventory	OBL		
Oxalis violacea	wood sorrel, vio'et	T	Active inventory		*	
Fanax quinquefolius	ginseng, American	V				
Pedicularis lanceolata	lousewort, swamp	T	Active inventory	FACW		
Persicaria careyi	smartweed, Carey's	E	Active inventory	FACW	*	
Persicaria setacea	smartweed, swamp	E	Active inventory	OBL		
Platanthera hookeri	orchid, Hooker's	E	Active inventory	FAC		
Podostemum ceratophullum	riverweed	T	Active inventory	OBL		*
Pogonia ophioglossoides	pogonia, rose	V		OBL	*	
Polemonium vanbruntiae	Jacob's ladder	R	Active inventory	FACW		
Polygonum erectum	knotweed, erect	E	Watch list	FACU		
Polygonum tenue	knotweed, slender	R	Watch list	FACU		
Populus heterophylla	cottonwood, swamp	T	Active inventory	FACW+		*

Scientific Name	Common Name	NYS	NYS Natural Heritage Program Ulster County	USFWS Wetland Plant List	Shawan -gunk Ridge	Shawan -gunk Kill
Potamogeton pulcher	pondweed, spotted	T	Active inventory	OBL		
Prunus pumila var. pumila	low sand cherry	E				
Ranunculus hispidus var. nitidus	buttercup, swamp	E	Active inventory	FAC		
Ranunculus micranthus	crowfoot, small-flowered	T	Watch list	FACU		
Rhododendron canadense	rhodora	T		FACW	*	
Rhododendron maximum	rhododendron	V			*	
Rhododendron periclmenoides	pinkster	V			*	
Rotala ramosior	tooth-cup	T	Active inventory	OBL		
Sagittaria montevidensis var. spongiosa	arrowhead, spongy	T	Active inventory	OBL		
Sagittaria subulata	arrowhead, strap-leaf		Watch list			
Salvia lyrata	sage, lyre-leaf	E	Active inventory	UBL		
Sarracenia purpurea	pitcher plant	V		OBL		
Scirpus georgianus	bulirush, Georgia	E	Active inventory	OBL	*	
Scutellaria integrfolia	hyssop skullcap	E	Active inventory	FACW	*	
Sphenopholis obtusata	prairie wedgegrass	E	Active inventory	FAC-		
Sphenopholi pensylvanica	swamp oats	E	Active inventory	OBL		
Spiranthes cernua	ladies' tresses, nodding	V		FACW		
Spiranthes gracilis	ladies' tresses, slender	V		FACU-		
Symphyotrichui laeve var concinnum	aster, smooth blue	E	Active inventory			
Thaspium trfoliatum var flavum purple	purple meadow-parsnip		Active inventory		*	
Trichomanes intricatum	Appalachian trichomanes	E	Active inventory			
Trichostema brachiatum	false-pennyroyal		Watch list			
Trillium erectum	trillium, purple	V		FACU-		
Trillium grandiflorum	trillium, white	V				
Trillium undulatum	trillium, painted	V		FACU+		
Triphora trianthophora	pogonia, nodding	E	Active inventory	UPL		
Trollius laxus	globeflower, spreading	R	Active inventory	OBL		
Utricularia juncea	bladderwort, rush	T	Active inventory	OBL		
Verbesina alternifolia	Wingstem	T		FAC		*
Vernonia gigantea spp. Gigantea	ironweed, tall	E	Active inventory			
Veronicastrum virginicum	culver's root	T	Active inventory	FACU		
Viola hirsutula	violet, southern wood	E	Active inventory			
Viola primulifolia	violet, primrose-leaf	T	Active inventory	FAC+	*	
Vittaria appalachiana	fern, Appalachian shoestring	E	Active inventory			
Woodsia alpina	fern, alpine cliff	E	Active inventory	*		

NOTES
The following groups of species are considered to be vulnerable according to NYS Environmental Conservation Law:
1. All native clubmosses
2. All native ferns except bracken (Pteridium aquilinum,), hay-scented (Dennstaedtia punctilobula), and sensitive (Onoclea sensibilis)
3. All native orchids
***N.Y.S. Natural Heritage Program**- Rare Plant Status Lists. Species whose presence in Ulster County is confirmed or probable.*

Several species of Sphagnum are designated as special concern by the N.Y. State Natural Heritage Program: Sphagnum andersonianum, S. agermanicum, S. cuspidatum, S. platyphyllum, S. tenellum, and trinitense

N.Y.S. *lists: Endangered, K; Threatened, T; Rare, R; Exploitably Vulnerable, V.*

USFWS Wetland Plant List *(National List of Plant Species That Occur in Wetlands: 1988 National Summary*
Indicator Categories:
OBL (Obligate Wetland) Plants that occur almost always under natural conditions in wetlands (est. probability greater than 99%)
FACW (Facultative Wetland) Plants that usually occur in wetlands (est. probability 67-99%) but occasionally found in nonwetlands
FAC (Facultative) Plants that are equally likely to occur in nonwetlands or wetlands (est. probability 34-66%)
FACU (Facultative Upland) Plants that usually occur in nonwetlands (est. probability 67-99%) but occasionally found in wetlands (est. probability 1-33%)
UPL (Obligate Upland) Plants that occur in wetlands in another region, but occur almost always (est. probability greater than 99%) under natural conditions in nonwetlands in the region specified (the northeast in this case)
If a plant species does not occur in wetlands in any region, it is not included on the National List. However changes in plant names (synonomy) may warrant additional investigation regarding potential wetland indicator status.

Shawangunk Ridge and Shawangunk Kill *partial lists*

The following list of species of conservation concern is specific to the project site. The list was compiled using the Biodiversity Assessment Manual for the Hudson River Estuary Corridor *by Erik Kiviat and Gretchen Stevens. The Biodiversity Manual includes "species listed as federal Endangered or Threatened species (Federal List), New York State Endangered, Threatened, and Special Concern Species, and New York Natural Heritage Program Rare Elements (State Lists)…and Regionally Rare, Regionally-Scarce, Declining, and Vulnerable (Regional Lists)."*[1]

Table III.E-2 Project Site—Plant Species of Conservation Concern

Project Site—Plant Species of Conservation Concern

Species of Conservation Concern by Habitat Type

Habitat Types on Project Site See Drawing C-005			
Red Maple Hardwood Swamp	National Lists	State Lists	Regional Lists
PLANTS			
swamp cottonwood		X	
ostrich fern			X
Shallow Emergent/Purple Loosestrife Marsh	National Lists	State Lists	Regional Lists
PLANTS			
winged monkey-flower		X	
button bush dodder		X	
spiny coontail		X	
Successional Old Field	National Lists	State Lists	Regional Lists
PLANTS			
stiff-leaf goldenrod		X	
small-flowered agrimony		X	
shrubby St. Johnswort		X	
devil's-bit		X	
Butterflyweed			X
Hemlock-Northern Hardwood Forest	National Lists	State Lists	Regional Lists
PLANTS			
hackberry			X
sweet-gum			X

[1] *Biodiversity Assessment Manual for the Hudson River Estuary Corridor* by Erik Kiviat and Gretchen Stevens, page 82.

Project Site—Plant Species of Conservation Concern

Pastureland	National Lists	State Lists	Regional Lists
PLANTS			
Bush's sedge		X	
Artificial Pond	**National Lists**	**State Lists**	**Regional Lists**
PLANTS			
spiny coontail		X	
Intermittent Stream	**National Lists**	**State Lists**	**Regional Lists**
PLANTS			
goldenseal		X	

Notes:

1. The habitat types listed above from the Drawing C-005, Habitat Map and Proposed Buffer Restoration, have been matched with appropriate habitat types presented in the *Biodiversity Assessment Manual for the Hudson River Estuary Corridor, 2001, Hudsonia Ltd.* The above species list has resulted from the following habitat type matches and species lists of conservation concern from the Habitat Assessment Manual:

Drawing C-005	**Habitat Assessment Manual**
Red Maple Hardwood Swamp	7.15 Nontidal Hardwood Swamp
Shallow Emergent/Purple Loosestrife Marsh	7.20 Nontidal Marsh
Successional Old Field	7.30 Shrubby Old Field
Hemlock-Northern Hardwood Forest	7.28 "Young Woods"
Pastureland	7.31 Upland Meadow
Artificial Pond	7.24 Constructed Ponds and Lakes
Intermittent Stream	7.21 Intermittent Stream

2. There is a discrepancy between hemlock/hardwood forests described in Edinger and the "Young Woods" designation on the habitat map and list.

Although this list is not comprehensive, it is representative and appropriate for the level of development proposed for the Watchtower Farms Improvements Project. The list is a sample of species that might occur in each habitat.

Comment 3.E-4 (Letter #2, comment #5, memorandum from Karen Schneller-McDonald of Hickory Creek Consulting, LLC, October 2, 2008): 2. Protected areas. The DEIS states that "The need for additional field studies is not anticipated because the applicant assumes that such species could exist in these protected natural areas and is committed to the protection of these areas." The DEIS does not identify these 'protected areas', nor does it describe how they are to be protected.

> ***Response 3.E-4:*** *The protected areas mentioned in III.E.1.c Field Survey refer to the on-site wetlands and natural forest adjacent to the wetlands. The wetlands would not be disturbed in any manner other than foot traffic and would be protected by managed buffer areas. The natural forest would also be similarly undisturbed.*

Comment 3.E-5 (Letter #2, comment #6, memorandum from Karen Schneller-McDonald of Hickory Creek Consulting, LLC, October 2, 2008): 3. Buffers and impacts from lawns. Manicured lawn generally requires the regular application of herbicides, pesticides and fertilizers. The effects of these on adjacent wetlands are not yet addressed in the DEIS. What chemicals are being applied to lawns? What are the quantities? How often are they applied? This information is still lacking, and until it is provided, a determination of indirect impacts on wetlands and the plants within them cannot effectively be determined.

> ***Response 3.E-5:*** *Presently, maintained turf-grassed and landscaped areas are located within the loop driveway of the main complex, at the recreation area west of the loop driveway, and at the recreation field adjacent to wetland area 3. Refer to the attached Drawing C-003, "Existing Natural Buffers."*
>
> *The proposed improvements are located entirely within areas that are already developed or maintained as turf-grassed lawn and landscaping. Refer to the attached Drawing C-004, "Proposed Buffer Restoration." The overall area that would be maintained and chemically treated as turf-grassed lawn and landscaping would decrease by approximately 2.8 acres. This is mostly due to the fact that areas previously maintained as turf-grassed lawn and landscaping would be restored as naturally vegetated buffers. No fertilizers, herbicides, or pesticides would be applied to these areas.*
>
> *The applicant currently follows an Integrated Pest Management (IPM) program based on the Cornell University guidelines for turfgrass management. IPM is an effective, yet environmentally sensitive, approach that reduces reliance on chemical pesticides. This management approach would be used on the proposed turf-grassed areas within the loop driveway.*
>
> *The basic principles of IPM applied by the applicant are as follows:*
>
> - *Select plants suitable for site-specific conditions that are proven to be pest resistant.*

- *Test soils regularly to determine turf nutrient needs and use results as a basis for fertilizing. Thus, over-fertilizing or unnecessary fertilizing is avoided.*

- *Mow grass to recommended height for specific grass species to maintain healthy plants that are less reliant on pesticides. Grass cuttings are allowed to fall (instead of bagging). Cuttings contribute nutrients to the soil, thus reducing the amount of fertilizer.*

- *Irrigate turfgrass during stressful periods, typically the summer months, to maintain healthy plants. Proper timing and amount of irrigation strengthens plants and makes them less susceptible to pests and less reliant on pesticides. Also, the applicant staggers irrigation of turf areas to avoid excess runoff.*

Under this approach chemical usage is targeted to specific pests and problem areas that are specifically documented, as opposed to broadcast spraying. The applicant would continue to employ the judicious use of herbicides and pesticides only when appropriate and necessary. Chemical herbicide and pesticide types, as well as, application rates would vary according to the need.

Presently, a fertilizer containing nitrogen and potash is applied to lawn and landscaped areas within the loop driveway at a rate of 122 pounds per acre twice a year—during spring and fall. Existing turf-grassed areas outside the loop driveway are fertilized at the same rate once a year during spring. Fertilizers that contain phosphate are not currently used, nor would they be used on proposed turf-grassed areas.

Landscape management at the existing recreational field adjacent to wetland Area 3 would be modified. A 100-percent organic product would be used for fertilizer and no herbicides or pesticides would be applied to this area.

In addition, the two proposed stormwater ponds would further reduce pollutants from lawn chemicals, as they would treat runoff. Restored buffers and vegetated swales would provide filtering of runoff before drainage into the wetlands and streams.

Comment 3.E-6 (Letter #2, comment #7, memorandum from Karen Schneller-McDonald of Hickory Creek Consulting, LLC, October 2, 2008): 4. A Habitat Map. of the site should be added to the DEIS to provide a picture of the relationship between constructed features and biological resources. It should include wetland, aquatic and upland habitats as described in either of the following resources:

a: Edinger, Gregory J., ed. 2002. Ecological communities of New York State, second edition. New York Natural Heritage Program. Revised and expanded edition of Reschke, Carol. Ecological Communities of New York State, 1990; or

b. Kiviat, Erik, Stevens, Gretchen. 2001. Biodiversity assessment manual for the Hudson River Estuary Corridor. Hudsonia Ltd., Annandale, NY.

> ***Response 3.E-6:*** *A habitat map is attached which shows existing wetlands, and aquatic and upland habitats as described in "Ecological communities of New York State" second edition…Gregory Edinger. The proposed improvements are overlaid on this map to show the relationship between existing habitats and new construction—See Drawing C-005, "Habitat Map & Proposed Buffer Restoration."*

Comment 3.E-7 (Letter #2, comment #8, memorandum from Karen Schneller-McDonald of Hickory Creek Consulting, LLC, October 2, 2008): Species lists. The DEIS refers to the Town's Habitat Assessment Guidelines. These guidelines provide tables of the species of conservation concern that could be found within the town; these tables should be included in the DEIS. The wildlife tables include amphibians, reptiles and birds and are more specific to the Town than the lists provided in the DEIS; they also provide information on the status of each species, which is not found in the DEIS but should be included.

> ***Response 3.E-7:*** *Attached is the list of the wildlife of conservation concern for the Town of Shawangunk.*

Table III.E-3 Wildlife of Conservation Concern for the Town of Shawangunk

Town of Shawangunk: Birds of Conservation Concern

This is a preliminary list, subject to updates as necessary.
Spring 2008

COMMON NAME	SCIENTIFIC NAME	US	NY	BCC	PIF	SG CN	DEV SEN	HAB	NWR
GREBES, WADING BIRDS, DUCKS									
American bittern	*Botaurus lentiginosus*		SC			X	X	OU, MSW	
American black duck	*Anas rubripes*				PIF	X	X	MSW LW	X
Wood duck	*Aix sponsa*				PIF		X		X
Pied billed grebe	*Podilymbus podiceps*		T			X	X	MSW, LC	
DIURNAL RAPTORS									
Bald eagle	*Haliaeetus leucocephalus*	T	T			X		TF, WS, LW	
Golden eagle	*Aquila chrysaeotos*		E			X		OU,TF AM	
Broad-winged hawk	*Buteo platypterus*						X		
Cooper's hawk	*Accipiter cooperii*		Sc			X	X	TF	X
Red-shouldered hawk	*Buteo lineatus*		SC			X	X	TF	X
Sharp-shinned hawk	*Accipiter striatus*		SC			X	X	TF	X
Northern goshawk	*Accipiter gentilis*		SC			X		TF,AM	X
Northern harrier	*Circus cyaneus*		T			X		OU,LW MSW	X
Osprey	*Pandiom haliaetus*		SC			X		OU, BW	
Peregrine falcon	*Falco peregrinus*		E	X	PIF	X	X	OU,AM	X
SHOREBIRDS									
Upland sandpiper	*Bartramia longicauda*		T	X	PIF	X		OU	X
American woodcock	*Scolopax minor*				PIF	X	X	OU,TF	X
CUCKOOS									
Black-billed cuckoo	*Coccyzus erythropthalmus*				PIF	X	X	TF	X
Yellow-billed cuckoo	*Coccyzus americanus*						X		X
OWLS									
Northern saw-whet	*Aegolius acadicus*			X					
Barn Owl	*Tyto alba*					X		OU,TF	X

Town of Shawangunk: Birds of Conservation Concern
This is a preliminary list, subject to updates as necessary.
Spring 2008

COMMON NAME	SCIENTIFIC NAME	US	NY	BCC	PIF	SG CN	DEV SEN	HAB	NWR
Barred Owl	*Strix varia*						X		
Long-eared owl	*Asio otus*		E	X	PIF	X		OU,TF	X
Short-eared owl	*Asio Flammeus*								
GOATSUCKERS AND SWIFTS									
Common nighthawk	*Chordeiles minor*		SC			X		OU	X
Whip-poor-will	*Caprimulgus vociferous*		SC	X	PIF	X		BW	
UPLAND GAME BIRDS									
Ruffed grouse	*Bonasa umbellis*					X		TF	
HUMMINGBIRDS AND SWIFTS									
Chimney swift	*Chaetura pelagica*				PIF				
WOODPECKERS									
Pileated woodpecker	*Dryocopus Pileatus*						X		
Red-headed woodpecker	*Melanerpes erythrocephalus*		SC	X	PIF	X		OU,TF	X
Yellow-bellied sapsucker	*Sphyrapicus varius*			X	PIF				X
TYRANT FLYCATCHERS									
Eastern wood-pewee	*Contopus virens*				PIF		X		X
Acadian flycatcher	*Empidonax virescens*				PIF				
Great crested flycatcher	*Myiarchus crinitus*						X		
SHRIKES AND VIREOS									
Loggerhead shrike	*Lanius ludovicianus*		E	X	PIF	X		OU	X
Yellow-throated vireo	*Vireo flavifrons*						X		
Red-eyed vireo	*Vireo olivaceus*						X		
JAYS AND CROWS									
Common raven	*Corvus corax*						X		
NUTHATCHES									
Red-breasted nuthatch	*Sitta canadensis*								
LARKS									
Horned lark	*Eremophila alpestris*		SC			X		OU	X

Town of Shawangunk: Birds of Conservation Concern
This is a preliminary list, subject to updates as necessary.
Spring 2008

COMMON NAME	SCIENTIFIC NAME	US	NY	BCC	PIF	SG CN	DEV SEN	HAB	NWR
WRENS									
Marsh wren	*Cistothorus palustris*			X			X		
Sedge wren	*Cistothorus platensis*								
OLD WORLD WARBLERS, THRUSHES									
Swainson's thrush	*Catharus ustulatus*						X		
Wood thrush	*Hylocicla mustelina*			X	PIF	X		OU, MSW	
WOOD-WARBLERS									
Ovenbird	*Seiurus aurocapillus*					X			
American redstart	*Setophaga ruticilla*						X		
Bay-breasted warbler	*Dendroica castanea*			X		X		TF	
Black-and-white warbler	*Mniotilta varia*				PIF		X		
Blackburnian warbler	*Denroica fusca*				PIF		X		
Blackpoll warbler	*Dendroica striata*								
Black-throated blue warbler	*Dendroica caerulescens*				PIF	X	X	TF	
Blue-winged warbler	*Vermivora pinus*			X	PIF	X	X	OU	X
Canada warbler	*Wilsonia canadensis*			X	PIF	X	X	TF	
Cape May Warbler	*Dendroica tigrina*					X		TF	
Cerulean warbler	*Dendroica cerulean*		SC	X	PIF	X	X	TF	
Chestnut-sided warbler	*Dendroica pennsylvanica*						X		
Golden-winged warbler	*Vermivora chrysoptera*		SC	X	PIF	X		OU, MSW	
Hooded warbler	*Silsonia citrine*						X		
Magnolia warbler	*Dendroica magnolia*						X		
Northern parula warbler	*Parula americana*						X		
Palm warbler	*Dendroica palmarum*								X
Prairie warbler	*Dendroica discolor*			X	PIF	X	X	TH	
Prothonotary warbler	*Protonotaria citrea*				PIF	X	X	MSW	
Tennessee warbler	*Vermivora peregrina*								

Town of Shawangunk: Birds of Conservation Concern

This is a preliminary list, subject to updates as necessary.
Spring 2008

COMMON NAME	SCIENTIFIC NAME	US	NY	BCC	PIF	SG CN	DEV SEN	HAB	NWR
Worm-eating warbler	*Helmitheros vermivorus*			X	PIF	X	X	TF	
Black-throated green warbler	*Dendroica virens*						X		
Louisiana waterthrush	*Seiurus motacilla*			X	PIF	X	X	TF	
Northern waterthrush	*Seiurus noveboracensis*						X		
Yellow-breasted chat	*Icteria virens*		SC			X	X	OU	X
TANGERS, CARDINALS, AND ALLIES									
Scarlet tanager	*Piranga olivacea*				PIF	X	X	TF	X
Rose-breasted grosbeak	*Pheucticus ludovicianus*						X		
SPARROWS AND ALLIES									
Eastern towhee	*Pipilo erythropthalmus*				PIF		X		X
Field sparrow	*Spizella pusilla*				PIF		X		X
Grasshopper sparrow	*Ammodramus savannrum*		SC		PIF	X		OU	X
Henslow's sparrow	*Ammodramus henslowii*		T	X	PIF	X		OU	X
Savannah sparrow	*Passerculus sandwichensis*						X		X
Vesper sparrow	*Pooecetes gramineus*		SC			X	X	OU	X
ICTERIDS									
Bobolink	*Dolichonyx oryzivorus*					X	x	OU	X
Baltimore oriole	*Icterus galbula*			X	PIF		X		X
Eastern meadowlark	*Strunella magna*					X	X	OU	X

US—Species listed by U.S. Fish and Wildlife Service as threatened or endangered.
NYS—Species listed by N.Y. State as threatened, endangered, or special concern.
SGCN—Species of Greatest Conservation Need, as identified by the N.Y.S Department of Environmental Conservation in "Comprehensive Wildlife Conservation Strategy for New York" 2006.
DEV-SENS—Development-sensitive species, i.e. species whose populations are declining in response to development and sprawl as identified in LaBruna, D.T. and M.W. Klemens. 2007. Norther Wallkill Biodiversity Plan: Balancing Development and Environmental Stewardship in the Hudson River Estuary Watershed, MCA Tech. Paper No. 13, Metropolitan Conservation Alliance, Wildlife Conservation Society, Bronx, NY.
A bland space denotes species not in study areas for this report.
BCC US Fish and Wildlife Service Birds of conservation Concern, 2002.
PIF—Partners in Flight. Birds not listed as threatened or endangered that are at particular risk due to low population size, small range, declining populations, loss of habitat, nest parasitism, and other factors.

HAB—General habitats as listed in the New York State Department of Environmental Conservation's "Comprehensive Wildlife conservation Strategy for New York" 2006.

TF: Terrestrial forested
OU: Open Upland
AM: Alpine meadow
BW: Barrens/woodlands
WS: Warm water stream
MSW: Mineral soil wetland
LW: Warm water lake
LC: Cold water lake

NWR—Shawangunk Grasslands National Wildlife Refuge Trust Species and other species of conservation concern fount at the Refuge.

Town of Shawangunk: Reptiles of Conservation Concern
2008
This is a preliminary list, subject to updates as necessary.

COMMON NAME	SCIENTIFIC NAME	US	NY	SG CN	DEV-SENS	HAB
Spotted turtle	*Clemmys guttata*		SC	X	X	OU, MSW, TF, WF
Wood turtle	*Clemmys insculpta*		SC	X	X	OU, TF, CS
Bog turtle	*Clemmys muhlenbergii*		E	X	X	WP, MSW
Eastern box turtle	*Terrapene Carolina*		SC	X	X	BW
Eastern hognose snake	*Heterodon platirrinos*		SC	X	X	OU, BW
Timber rattlesnake	*Crotalus horridus*		T	X	X	OU, BW
Snapping turtle				X		OU, LW
Northern black racer	*Coluber constrictor*			X	X	OU, TF
Eastern ribbon snake	*BThamnaphis s. sauritus*			X	X	OU, TF, BW
Black rat snake	*Edaphe obsoleta*			X	X	OU, TF
Northern Copperhead	*Agkistrodon contortrix mokasen*			X	X	TF

US—Species listed by U.S. Fish and Wildlife Service as threatened or endangered
NYS—Species listed by N.Y. State as threatened, endangered, or special concern
SGCN—Species of Greatest Conservation Need, as identified by the N.Y.S Department of Environmental Conservation in "Comprehensive Wildlife Conservation Strategy for New York" 2006.
DEV-SENS—Development-sensitive species, i.e. species whose populations are declining in response to development and sprawl as identified in:
LaBruna, D.T. and M.W. Klemens. 2007. Northern Wallkill Biodiversity Plan: Balancing Development and Environmental Stewardship in the Hudson River Estuary Watershed, MCA Tech. Paper No. 13, Metropolitan conservation Alliance, Wildlife Conservation Society, Bronx, N.Y.
HAB—General habitats as listed in the New York State Department of Environmental Conservation's "Comprehensive Wildlife conservation Strategy for New York" 2006.

TF: Terrestrial forested
OU: Open Upland
AM: Alpine meadow
BW: Barrens/woodlands
WS: Warm water stream
CS: Cold water lake
MSW: Mineral soil wetland
LW: Warm water lake
LC: Cold water lake
WP: Peatlands (wetland)

Town of Shawangunk: Amphibians of Conservation Concern*
2008
This is a preliminary list, subject to updates as necessary.

COMMON NAME	SCIENTIFIC NAME	US	NY	SGCN	DEV-SENS	HAB
Marbled salamander	*Acris crepitans*		SC	X	X	**BW, MSW, VP**
Spotted salamander	*Ambystoma maculatum*				X	**MSW, VP**
Jefferson salamander	*Ambystoma jeffersonianum*		SC	X	X	**MSW, VP, TF**
Northern red salamander	*Pseudontriton rubber*			X	X	**CS, MSW**
Northern dusky salamander	*Desmognathus fuscus*			X		
Mountain dusky salamander	*Desmognathus orchrophaeus*			X		
Four-toed salamander	*Hemidactylium scutatum*			X	?	**TF, WP**
Slimy salamander	*Plethodon glutinosus*				X	
Spring salamander	*Grinophilus prophyriticus*				X	
Blue-spotted salamander	*Ambystoma laterale*		SC	X	X	**TF, MSW**
Northern cricket frog	*Ambystoma opacum*		E	X	X	**TF, MSW**
Wood frog	*Rana sylvatica*				X	**VP**
Southern leopard frog	*Rana urticularis sphenocephalis*		SC	X	X	**MSW, TF, OU**
Gray treefrog	*Hyla versicolor*				X	
Fowler's toad	*Bufo Fowleri*			X	?	**MSW**

Notes:
* Many of these species are vulnerable because of their dependence on wetlands (including vernal pools or streams for breeding habitat, and their sensitivity to water contamination
US—Species listed by U.S. Fish and Wildlife Service as threatened or endangered
NYS—Species listed by N.Y. State as threatened, endangered, or special concern
SGCN—Species of Greatest Conservation Need, as identified by the N.Y.S Department of Environmental Conservation in "Comprehensive Wildlife Conservation Strategy for New York" 2006.
DEV-SENS—Development-sensitive species, i.e. species whose populations are declining in response to development and sprawl as identified in:
LaBruna, D.T. and M.W. Klemens. 2007. Northern Wallkill Biodiversity Plan: Balancing Development and Environmental Stewardship in the Hudson River Estuary Watershed, MCA Tech. Paper No. 13, Metropolitan conservation Alliance, Wildlife Conservation Society, Bronx, N.Y.
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WS: Warm water stream
CS: Cold water lake
MSW: Mineral soil wetland
LW: Warm water lake
LC: Cold water lake
WP: Peatlands (wetland)
VP: Vernal Pool breeder

The following list of species of conservation concern is specific to the project site. The list was compiled using the Biodiversity Assessment Manual for the Hudson River Estuary Corridor by Erik Kiviat and Gretchen Stevens. The Biodiversity Manual includes "species listed as federal Endangered or Threatened species (Federal List), New York State Endangered, Threatened, and Special Concern Species, and New York Natural Heritage Program Rare Elements (State Lists)…and Regionally Rare, Regionally-Scarce, Declining, and Vulnerable (Regional Lists)." [2]

Table III.E-4 Project Site—Wildlife Species of Conservation Concern

Project Site—Wildlife Species of Conservation Concern

Species of Conservation Concern by Habitat Type

Habitat Types on Project Site See Drawing C-005			
Red Maple Hardwood Swamp	National Lists	State Lists	Regional Lists
AMPHIBIANS and REPTILES			
blue spotted salamander		X	
four-toed salamander			X
northern leopard frog			X
spotted turtle		X	
wood turtle		X	
bog turtle	X	X	X
BIRDS			
great blue heron			X
wood duck			X
red shouldered hawk	X	X	
American woodcock			X
barred owl			X
white-eyed vireo			X
eastern bluebird			X
prothonotary warbler	X	X	
Canada warbler	X		X

[2] *Biodiversity Assessment Manual for the Hudson River Estuary Corridor* by Erik Kiviat and Gretchen Stevens, page 82.

Project Site—Wildlife Species of Conservation Concern

Shallow Emergent/Purple Loosestrife Marsh	National Lists	State Lists	Regional Lists
AMPHIBIANS and REPTILES			
northern cricket frog		X	
northern leopard frog			X
southern leopard frog		X	
spotted turtle		X	
bog turtle	X	X	X
BIRDS			
American bittern	X	X	
least bittern	X	X	
wood duck			X
American black duck	X		X
northern harrier	X	X	
king rail		X	
Virginia rail			X
sora			X
common moorhen			X
marsh wren			X
Successional Old Field	**National Lists**	**State Lists**	**Regional Lists**
INVERTEBRATES			
aphrodite fritilary			X
dusted skipper		X	
Leonard's skipper			X
cobweb skipper			X
BIRDS			
northern harrier	X	X	
short-eared owl	X	X	
northern saw-whet owl		X	
loggerhead shrike	X	X	
blue-winged warbler	X		
golden-winged warbler	X	X	
prairie warbler	X		
yellow-breasted chat		X	
clay-colored sparrow	X	X	
vesper sparrow		X	
grasshopper sparrow		X	
Henslow's sparrow	X		

Project Site—Wildlife Species of Conservation Concern

Hemlock-Northern Hardwood Forest	National Lists	State Lists	Regional Lists
BIRDS			
Cooper's hawk		X	
American woodcock			X
Pastureland	**National Lists**	**State Lists**	**Regional Lists**
INVERTEBRATES			
aphrodite fritilary			X
dusted skipper		X	
Leonard's skipper			X
swarthy skipper			X
BIRDS			
northern harrier	X	X	
upland sandpiper	X	X	
sedge wren	X	X	
eastern bluebird			X
vesper sparrow		X	
grasshopper sparrow		X	
Henslow's sparrow	X	X	
bobolink	X		
eastern meadowlark			X
Artificial Pond	**National Lists**	**State Lists**	**Regional Lists**
AMPHIBIANS and REPTILES			
spotted turtle		X	
wood turtle		X	
bog turtle	X	X	X
northern cricket frog		X	
BIRDS			
American bittern	X	X	
osprey		X	

Project Site—Wildlife Species of Conservation Concern

Intermittent Stream	National Lists	State Lists	Regional Lists
INVERTEBRATES			
arrowhead spiketail (dragonfly)		X	
mocha emerald (dragonfly)		X	
Marstonia decepta (snail)			X
Pisidium adamsi (fingernail clam)			X
AMPHIBIANS and REPTILES			
mountain dusky salamander			X
northern dusky salamander			X
red salamander			X
spring salamander			X
bog turtle	X	X	X

Notes:

1. The habitat types listed above from the Drawing C-005, Habitat Map and Proposed Buffer Restoration, have been matched with appropriate habitat types presented in the *Biodiversity Assessment Manual for the Hudson River Estuary Corridor, 2001, Hudsonia Ltd*. The above species list has resulted from the following habitat type matches and species lists of conservation concern from the Habitat Assessment Manual:

Drawing C-005	**Habitat Assessment Manual**
Red Maple Hardwood Swamp	7.15 Nontidal Hardwood Swamp
Shallow Emergent/Purple Loosestrife Marsh	7.20 Nontidal Marsh
Successional Old Field	7.30 Shrubby Old Field
Hemlock-Northern Hardwood Forest	7.28 "Young Woods"
Pastureland	7.31 Upland Meadow
Artificial Pond	7.24 Constructed Ponds and Lakes
Intermittent Stream	7.21 Intermittent Stream

2. There is a discrepancy between hemlock/hardwood forests described in Edinger and the "Young Woods" designation on the habitat map and list.

Although this list is not comprehensive, it is representative and appropriate for the level of development proposed for the Watchtower Farms Improvements Project. The list is a sample of species that might occur in each habitat.

Comment 3.E-8 (Letter #2, comment #9, memorandum from Karen Schneller-McDonald of Hickory Creek Consulting, LLC, October 2, 2008): 2. Protected natural areas. While the DEIS states that SGCN species can be assumed to be present (p. III-110) the DEIS refers to such species existing in "adjacent protected natural areas." What areas does this refer to? Which species?

> ***Response 3.E-8:*** *The areas referred to are all the natural areas on Drawing C-005, "Habitat Map" (excluding "Mowed Lawn with Trees" and "Buildings or Pavement") plus the restored buffer and modified landscape management areas. These areas provide a great range of wetland and upland habitats that would allow use by almost all of the species referred to in the SGCN list. The objective of the proposed development is to protect the existing and restored habitats to provide for wildlife use.*

Comment 3.E-9 (Letter #2, comment #10, memorandum from Karen Schneller-McDonald of Hickory Creek Consulting, LLC, October 2, 2008): 3. Bog turtles.

As I noted in my July 2007 report:

"Bog turtle habitat is present in and near wetland area #3 as noted in the Wetland Delineation and Assessment Report. A representative from USFWS or the DEC should review the site and any proposed mitigation measures. A Phase 2 bog turtle survey may be requested, but it could not be started until next year due to seasonal requirements. Or, on the assumption that bog turtles are present, mitigation can be developed and evaluated to fully protect the habitat without requiring an actual field survey. However, personnel from both DEC and USFWS should be contacted, and their comments requested in this matter as soon as possible, as they may have specific requests."

This does not appear to be documented in the DEIS.

Mitigation measures described on page III-111 in reference to bog turtles need to be compared to the specific requirements of the above-mentioned "USFWS Bog Turtle Recovery Plan."

Habitat areas that are suitable for bog turtles should be indicated on a habitat map of the site, and should include both onsite and adjacent site locations (see Habitat Map above).

> ***Response 3.E-9:*** *As stated in the DEIS, the applicant assumes that bog turtles are present and proposes appropriate mitigation measures. Suitable habitat for bog turtles is represented by areas on the Habitat Map labeled as shallow emergent/purple loosestrife marsh, red maple-hardwood swamp, and the existing stream channels and ponds. Although degraded by purple loosestrife, these areas are potentially suitable for the bog turtle.*

The New York State Department of Environmental Conservation (NYSDEC) was contacted, as documented in the DEIS, and the comments received from the NYSDEC were included in the section III.E.2.c, as follows:

"The attached NYSDEC response mentions that the turtle is 'documented within 1 mile' of the general study area and 'animals can move 1 mile or more from documented locations.' Although there are no documented sightings or crossings of the existing perimeter road by turtles, any development area would need to have a perimeter silt fence reinforced with wire mesh to prevent turtles from entering the active construction area. The periodic inspection program would maintain and confirm the integrity of the fencing."

These NYSDEC mitigation measures would be implemented during construction and are documented on the Erosion and Sediment Control plans—See drawings CE101and CE102.

In addition to protective measures to be implemented during construction, other long-term measures would be a part of the proposed improvements. Attached is a comparison of the "Bog Turtle (Clemmys muhlenbergii), Northern Population Recovery Plan"[3] with the proposed protection of natural habitats under the Watchtower Farms Improvements Project:

Part 2 of the "Bog Turtle, Northern Population Recovery Plan" ("Recovery Plan") presents a "Recovery Task Outline" in Table 6 (pages 41-48) and detailed description, pages 48 to 67, of the following nine items:

1. *Protect known extant populations and their habitat using existing regulations.*

2. *Secure long-term protection of bog turtle populations.*

3. *Conduct surveys of known, historical, and potential bog turtle habitat.*

4. *Investigate the genetic variability of the bog turtle throughout its range.*

5. *Reintroduce bog turtles into areas from which they have been extirpated or removed.*

6. *Manage and maintain bog turtle habitat to ensure its continuing suitability for bog turtles.*

7. *Manage bog turtle populations at extant sites, where necessary.*

[3] *Bog Turtle (Clemmys muhlenbergii), Northern Population Recovery Plan,* by U.S. Fish and Wildlife Service, Hadley Massachusetts, prepared by Michael Klemens, Ph.D., Wildlife Conservation Society, Bronx, New York, May 15, 2001.

8. *Conduct an effective law enforcement program to halt illicit take and commercialization of bog turtles.*

9. *Develop and implement an effective outreach and education program about bog turtles.*

The applicant's present development plan provides for the following:

1. *Protection of potential populations and existing habitat by:*
   a. *Identifying wetland and other appropriate bog turtle habitat.*
   b. *Providing buffer areas between existing habitat and existing and proposed development.*

2. *The proposed development plan maintains and stabilizes the aquatic and terrestrial resources of potential habitat areas, thereby securing long-term protection of bog turtle populations.*

3. *Wetland and vegetation surveys were conducted to identify appropriate bog turtle habitat and surrounding natural habitats.*

4. *The proposed development protects the identified habitat areas by providing managed landscape buffers between bog turtle habitat and developed areas, which resemble the conservation zones described in Appendix A of the "Recovery Plan" and explained below.*

5. *Managed buffer areas also provide connection between fragmented parcels of potential bog turtle habitat.*

6. *The proposed development provides for management and maintenance of natural and buffer area.*

7. *Landscape management provides for control of woody plant development by mowing, burning and grazing.*

8. *The plan will provide education for those living and working adjacent to these areas with:*
   a. *Information Material.*
   b. *Signage.*
   c. *Restrictive access other than by foot.*

9. *The proposed development will monitor effectiveness of the habitat management plan.*

In addition, the "Recovery Task Outline," Appendix A of the "Recovery Plan" describes bog turtle conservation zones:

Zone 1 includes wetlands and open water areas that potentially provide bog turtle habitat. The proposed development plan excludes all development and activities indicated to be avoided in this zone, other than foot access, including wetlands and upland natural areas.

Zone 2 includes the immediate area (300 feet) surrounding Zone 1. The proposed development excludes the activities mentioned by the "Recovery Plan" that should be avoided within this zone. Although there is some proposed construction in a previously disturbed area of this zone, there is a net increase of 11.5 acres of restored natural habitat buffer by removing existing buildings and turf-grass and establishing natural vegetative communities, which provide protection connectivity for the existing natural areas. The result provides more homogeneous and protected wildlife habitats. As an additional measure, a "Cape Cod" curb would be used on both sides of the loop driveway within this zone. This curbing would have a sloped face that would allow bog turtles that wander onto the driveway to climb out.

Zone 3, as described in Appendix A, includes "upland, wetland, and riparian areas extending either to the geomorphic edge of the drainage basin or at least one-half mile beyond the boundary of Zone 2." The natural portions of the existing basins are protected under the Watchtower Farms proposed development.

Comment 3.E-10 (Letter #2, comment #11, memorandum from Karen Schneller-McDonald of Hickory Creek Consulting, LLC, October 2, 2008): Buffers Page III-110 provides a confusing paragraph (beginning" Impacts on wildlife could occur ....") about wildlife and use of wetland buffers. Page Ill-ill also refers to Restoration of Buffers and wildlife species. Which wildlife species does this refer to? (Refer to the SGCN list in the Habitat Assessment Guidelines). And what are the specific wetland/buffer needs of those species? How does that match with existing and proposed buffer characteristics and restoration?

Response 3.E-10: *The proposed development would likely reduce any existing impacts on wildlife by providing larger, more homogeneous and more natural buffers surrounding existing natural areas and modifying existing management activities. The protection and buffering of natural habitat from existing and proposed development would reduce disturbance from adjacent human activities. Reduction of human disturbance in these areas would provide the means by which wildlife species can more fully utilize existing natural habitat areas.*

The objective of the proposed development is to protect and maintain existing natural habitat areas in their present state and not to attempt improvements or restorative activities within these natural areas just to provide for habitat needs of

specific wildlife species. Such activities can be high risk, disturb existing wildlife populations and result in adverse impacts not desired by the proposed development. Wildlife species mentioned in the SGCN list have different degrees of mobility as well as seasonal migratory and other habitat needs. Adjacent and migratory wildlife populations will move into these natural habitats, depending on their needs, acceptability of the existing natural habitats, and isolation from human disturbance, which is provided by the proposed development.

Comment 3.E-11 (Letter #2, comment #12, memorandum from Karen Schneller-McDonald of Hickory Creek Consulting, LLC, October 2, 2008): Watershed map

The DEIS does provide information on impervious surfaces. However, the narrative on page III-48 is confusing and requires clarification. The addition of a watershed map would be most helpful to illustrate the relationship between the three wetlands' contributing drainage area, the 352-acre drainage area and the 180-acre watershed described in the DEIS on page III-48, which drains to the two existing on-site water supply reservoirs. These areas, along with all surface water features, should be shown on one map in the DEIS to facilitate review of potential impacts.

Response 3.E-11: *Two figures under section III.B and two full-size drawings, C-102 and C-103 (KSS drawings), were provided in the DEIS. These maps show existing and proposed surface water features on the project site.*

Individual drainage areas and flow paths are delineated on each of these maps for the existing and proposed condition. The existing 352-acre drainage area consists of the areas delineated north of Red Mills Road and west of Steen Road. The 180-acre watershed that contributes to wetland areas 1, 2, and 3 consists of the areas delineated as DA-1A, DA-1B, DA-1C in the proposed condition.

The existing reservoirs are not included in the 352-acre or the 180-acre drainage area. The drainage divide is Steen Road.

III.F Land Use and Zoning

Comment 3.F-1 (Letter #1, comment #25, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Cumulative assessments of the facility should be provided. For example, while the DEIS indicates the number of new garage spaces to be added, or the number of new dwellings to be introduced, the DEIS does not provide a discussion of the cumulative build-out of the property with the proposed action. This is needed to determine the action's consistency with land use and zoning, e.g., residential density. In addition, the DEIS addresses residential density only. However, the DEIS should disclose the minimum acreage requirement for the entire facility, given the various residential and nonresidential uses that occupy the site.

Response 3.F-1: *A cumulative assessment is provided below.*

The minimum lot area required for each single bedroom multiple dwelling unit in a R-Ag 4 zoning district where central water and sewer is provided is 5,000-square-feet minimum per dwelling unit. (Town of Shawangunk Zoning Code, Section 177-18.A(7)). After the proposed project, there would be 968 multiple dwelling units, which would yield a requirement of 112 acres.

In addition to the 968 multiple dwelling units, for a single- or two-family dwelling, the minimum lot area required for each dwelling in the R-Ag 4 zoning district where water and sewer is provided is 2 acres. (Town of Shawangunk Zoning Code, Schedule II). After the proposed project, the existing 4 dwelling units of single- or two-family dwelling units would be retained, which would yield a requirement of 8 acres.

According to the Town of Shawangunk Local Law No. 8 of the Year 2004, a local law entitled "Calculation of Minimum Lot Sizes in all Zoning Districts and Grandfather Clause," net acreage rather than gross acreage is used for density calculations. The property contains 133± acres of land inside the Federal Emergency Management Agency 100-year floodplain for the Dwaarkill and Shawangunk Kill streams, 27± acres of delineated wetlands outside the 100-year floodplain, and 33± acres of natural or constructed waterbodies, including retention and detention basins. This would yield a deduction of 193 acres.

Subtotaling the dwelling unit and net acreage requirements yields a requirement of 313 acres.

Concerning the activities/uses that may be viewed as non-residential on the property, according to the Town of Shawangunk Local Law No. 8 of the Year 2004, "the resultant permissible density based upon the net acreage shall be one dwelling unit per minimum lot size or one commercial, retail or service use per minimum lot size or one industrial use per minimum lot size, as the case may be. All density calculations shall be rounded to the nearest whole number of dwelling units or principal buildings." The non-residential use acreage requirements

following completion of the project would be as follows: Cemetery—2 acres, Infirmary—2 acres, Essential Services—24 acres, Printery—8 acres, Accessory Offices—10 acres, Personnel Support—14 acres, Agricultural/Food Processing —24 acres. This would yield a total acreage requirement of 84 acres for non-residential activities.

Subtotaling the dwelling unit, net acreage, and non-residential use requirements would yield a lot requirement of 397 acres.

The agricultural uses on the property include approximately 714 acres that are cultivated in agriculture, including pasture, alfalfa, hay, woodland, vineyard, apple orchard, sweet corn, and blueberries. This includes some 100-year floodplain and wetland areas.

The cumulative acreage requirement for residential and non-residential uses on the property following completion of the project would be a maximum of 951 acres.

Comment 3.F-2 (Letter #1, comment #26, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Recreation. A supply and demand analysis of the proposed recreation program should be provided. Recreation should be analyzed in terms of the existing facilities found on site and the current resident population, compared with the new population and proposed recreation improvements. A comparison of existing and proposed recreation activities to be conducted on the site should be provided. Do the proposed activities match the demographics anticipated for the facility? There appear to be a significant number of active recreation facilities to be constructed even though the demographics indicate that there would be no children on site, and the population is "becoming older". In a previous narrative submitted by the applicant, it is stated: "Watchtower Farms is in the process of transitioning to improve the quality of life for residents living in existing, dormitory-style housing. Included in this would be the elimination of any temporary housing that had been erected on site. Also, the demographics of the population are becoming older. Improved accommodations will provide a quality way of life for older residents while being cared for on site."

Response 3.F-2: *A supply and demand analysis relates existing and future recreational behavior to existing recreational opportunities. The National Park and Recreation Association recognizes several gross land area standards, including the population ratio method, recreation and open space based on area percentage, and needs determined by user characteristics or demand projections. Aspects of the population ratio method combined with user characteristics and demand projections were used to prepare this supply and demand analysis. A number of studies were consulted for locations whose climates involved seasonal variations reflecting potential for snow and freezing temperatures.*

The current population is 1,350 residents, all adults and no children, with an average age of 37. The proposed project would result in a 15-percent target population increase to 1,558 residents, all adults and no children, with a slightly higher average age. While the average age is increasing, the applicant has observed that physical work at the facility requires the stamina of young adults. Therefore, two key objectives include maintaining walking and other passive activity resources, and providing a combination of both high and low physical intensity indoor facilities, such as court sports and swimming.

Another factor affecting demand is commented on in the "District of West Vancouver Recreation Facilities Master Plan" (David Nairne & Associates, June 1999, p. 4-13): "Fitness to Wellness: Narrow perspectives on health that stress illness care and assume that health is simply a physical issue are losing ground to a broader understanding that stresses prevention and integrated approaches involving mental, physical and spiritual well-being. Leisure will increasingly be seen as the opportunity to pursue balance, to develop and integrate various aspects of the wellness spectrum." In order to provide a variety of opportunities that can contribute to wellness, the applicant makes small plots available for residents to cultivate and grow flowers, fruits, vegetables, and herbs. According to the National Survey on Recreation and the Environment (NSRE 2000) by the USDA Forest Service and NOAA, 29.6 percent of respondents "regularly grow vegetables or fruit in your garden." The combination of increased attention to wellness and awareness of the potential risks of overweight and obesity is anticipated to contribute to continued use of recreational resources by a wide range of the demographic population at the proposed facility. In addition to four libraries with over 5,000 square feet of space, and three rooms that can be used to practice the piano or other musical instruments, four indoor recreational rooms are available for dance, table tennis, and billiards.

The "New York State Strategic Plan for Overweight and Obesity Prevention" (Revised October 2008, p. 9) included the following statement: "To decrease overweight and obesity, community participants identified their top three priorities as: 1) increase the proportion of New Yorkers who are physically active; 2) increase perception of obesity as a public health risk and use of Body Mass Index to improve early recognition, and 3) increase access to healthy food choices, particularly by low-income populations. Participants expressed the most interest in 1) improving access to physical activity opportunities." The applicant's provision of improved, convenient facilities for recreation through the proposed project reflects a similar interest in promoting good health among residents of all ages.

The "New York State Strategic Plan for Overweight and Obesity Prevention" presented another observation (p. 65): "Recent studies suggest that the way we build our communities and transportation systems have a significant effect on physical activity and obesity levels. Places where people can easily and safely walk, for leisure or to destinations such as work, school, or shopping, promote higher levels of physical activity. A national study of 448 metropolitan counties

found that people living in sprawling, low-density counties walk less, weigh more, and are more likely to have high blood pressure than people living in more compact counties (Ewing, et. al., 2003). Residents in highly walkable neighborhoods spent about 70 minutes more per week being physically active than people living in neighborhoods that were less walkable." The applicant's facility design reflects a compact arrangement with pedestrian-friendly features, including sidewalks, walkways, and a 1.2 mile walking trail that is available for cross-country skiing and snowshoeing during the winter months. According to the National Survey on Recreation and the Environment (NSRE 2000) by the USDA Forest Service and NOAA, which targets Americans above the age of 16, 59.7-percent of respondents "regularly take walks in my neighborhood or nearby park." To this effect, approximately ten picnic areas are also provided. The banks of the two large reservoirs are also accessible for walking.

A May 2003 study entitled "Participation in Local Park and Recreation Activities in Maryland," performed by Donald F. Norris and Royce Hanson of the Maryland Institute for Policy Analysis published several observations on pages 26-27 concerning adult households, where the household consisted entirely of adults without children. Various sports were ranked in descending order for various activity categories. For example, a ranking of first would have the highest participation rate. Among field sports, softball and soccer were ranked first and fourth respectively. Among court sports, tennis, basketball, horseshoes, volleyball, and racquetball were ranked first through fifth, respectively. For water sports, swimming at pool was ranked first. Among fitness activities, walking, jogging, running, aerobics/fitness classes, and weight training were ranked first through fifth respectively. According to the National Survey on Recreation and the Environment (NSRE 2000), 47.2 percent of respondents "regularly visit a fitness club or otherwise exercise at least three times per week." The applicant currently provides the following recreational resources:

Field Sports: Softball Field—1, Multipurpose Field—1.

Court Sports: Tennis Courts—3, plus 1 practice wall; Basketball Courts—1 exterior full court, 2 exterior half courts, 1 interior non-regulation court; Horseshoes—3 exterior pairs of pits; Volleyball—2 exterior hard courts, 2 exterior sand courts, 1 interior non-regulation court.

Water Sports: 1 exterior swimming pool.

Fitness Activities: 8 fitness rooms equipped with various aerobic and strength training equipment, including floor space for exercise classes (~10,000 sq. ft.).

Of the recreation resources listed above, a total of approximately 29,000 sq. ft. are indoors. This generates a ratio of 21 sq. ft. per resident. This compares favorably with the ratio of 10 sq. ft. per student for students in the Southeastern Conference (SEC) (as reported in The Auburn Plainsman, "SGA, BOT, students take steps toward new student rec center," September 4, 2008). Several

adjustors should be considered, however. It should be noted that half of the interior space consists of a non-regulation basketball and volleyball court with low ceilings and limited space. Residents at the applicant's facility have taken a vow of poverty and, based upon the rural location, probably have less access to alternative facilities. The climate is also colder in the northeast. With the proposed project, the applicant would increase the potential for indoor recreation. The interest in indoor recreation appears to be very common in areas with colder climates, and this is also reflected in the existing population.

An informal review of recreation records found that approximately 53 percent of residents participate in field and court sports. This harmonizes with what might be expected based on the U.S. Census Bureau, "Statistical Abstract of the United States, Section 26 – Arts, Entertainment, and Recreation, Table 1222. Participation in Various Leisure Activities: 2002." It found that 55.1 percent of persons 18 years old and over participated in an "exercise program" and 30.4 percent participated in "playing sports."

As noted below, the proposed project would improve the cumulative availability of quality indoor recreation. Changes are noted in ***bold italics.***

Field Sports: Softball Field—1, ***replacement multipurpose Field—1.*** *Court Sports:* ***Tennis Courts—3 replacement exterior courts, 1 replacement practice wall****; Basketball Courts—****1 replacement exterior full court****, 2 replacement exterior half courts****, 1 new interior regulation court****; Horseshoes—3 exterior pairs of pits;* ***Volleyball—2 replacement exterior hard courts****, 2 replacement exterior sand courts****, 1 new interior court. Racquetball—2 new interior courts.***

Water Sports: ***1 interior swimming pool.***

Fitness Activities: 8 fitness rooms equipped with various aerobic and strength training equipment, including floor space for exercise classes (~10,000 sq. ft.).

The resulting ratio of residents to indoor recreation space would be 26 sq. ft. per resident, which would be an overall increase and builds in flexibility to meet future needs.

In addition to private, on-site recreational resources that are provided to meet the needs of residents, the applicant also voluntarily assists where possible with community efforts. As noted on page III-224 of the DEIS, in a telephone conversation on March 12, 2008, a representative of the applicant discussed the proposed project with Mr. Adrian M. DeWitt, a Town of Shawangunk Councilperson with (a) Primary Committee Oversights of Liaison To Highway Superintendent, Buildings/Parks and Grounds, Recreation and (b) Secondary Committee Oversights of Liaison to Recreation, Solid Waste and Recycling, Verkeerderkill—Greer Parks. Mr. DeWitt noted that the proposed project includes a recreation building and athletic fields to provide such services on-site, rather

than increasing demands on local community services. He anticipated no significant impact on community recreation services and commented favorably on the applicant's contributions to Garrison Park, Verkeederkill Park, and the Wallkill Rail Trail. The applicant anticipates payment of a recreation fee established by the Town Planning Board that would be commensurate with the proposed project's impacts.

Table III.F-1 Changes to the Recreation Facilities

Existing Recreation Facilities	Proposed Recreation Facilities	Adjustment
Athletic Fields:	**Athletic Fields:**	
Softball field (1)	Softball Field (1)	Existing to Remain
Multipurpose Field (1)	Multipurpose Field (1)	Replacement
Tennis Courts		
Tennis Courts (3)	Tennis Courts (3)	Replacement
Tennis practice wall (1)	Tennis Practice Wall (1)	Replacement
Basketball Courts:	**Basketball Courts:**	
Exterior Full Court (1)	Exterior Full Court (1)	Replacement
Exterior Half Courts (2)	Exterior Half Courts (2)	Replacement
Interior Non-Regulation Basketball Court (1)		Remove
	Interior Regulation Basketball Court (1)	New
Horseshoes:	**Horseshoes:**	
Exterior Pairs of Pits (3)	Exterior Pairs of Pits (3)	Existing to Remain
Volleyball Courts:	**Volleyball Courts:**	
Exterior Hard Courts (2)	Exterior Hard Courts (2)	Replacements
Exterior Sand Courts (2)	Exterior Sand Courts (2)	Replacements
Interior Non-Regulation Court (1)		Remove
	Interior Regulation Volleyball Court (1)	New
	Racquetball: Interior Courts (2)	New
Swimming Pool: 1 exterior pool		Remove
	Interior Swimming Pool	New
Fitness Rooms Eight at 10,000 sq. ft. total	**Fitness Rooms** Eight at 10,000 sq. ft. total	Existing to Remain

As stated in Section III.J.2, "The new residential building would have 300 dwelling units (designated in the Zoning Code as multiple-family dwellings). Of these, approximately 151 dwelling units would replace dwelling units lost in other buildings as a result of this project. Approximately 15 percent of dwelling units must be allocated for occasional guests, temporary workers (seasonal and otherwise), short-term training, and special needs such as temporarily housing residents whose units are undergoing maintenance or renovation. Thus, another

45 dwelling units would not be available for residents. Subtracting 196 (151 + 45) dwelling units from the 300 total dwelling units in the new residential building generates an estimated increase of 104 dwelling units, or 208 residents."

Comment 3.F-3 (Letter #1, comment #27, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Recreation. It is unclear from the documentation what the status is of the existing ballfield - will this be retained?

Response 3.F-3: *The existing ball field would remain in use following completion of the proposed project.*

Comment 3.F-4 (Letter #1, comment #28, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Lighting. The DEIS does not provide sufficient information to support the conclusion that the lighting at the proposed fields will not have an impact or be visible from the project surrounds. Although the DEIS indicates that lighting is designed to avoid "hotspots," information on illumination levels has not been provided. A photometric plan should be provided to assist the Planning Board in determining whether the lights associated with the re-located fields would cause any lighting impacts.

Response 3.F-4: *The lights in the relocated recreation field are proposed to be the same or similar wattage to the current lights with full cut-off devices. There is a regulated time for the usage of the field, see Response 3.F-5—See Site Lighting Plans E-101, E-102, and E-103 for photometric details.*

Comment 3.F-5 (Letter #1, comment #29, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Recreation. The proposed hours of use of the various recreation areas should be indicated. What will be the hours of operation for lighting associated with the outdoor recreation facilities?

Response 3.F-5: *The existing hours of use for lighted outdoor recreation areas are 5:00 a.m. to 10:00 p.m. Lighting is on a timer to automatically shut off outside of those hours, and it must be manually activated to be used.*

Comment 3.F-6 (Letter #1, comment #30, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Lighting. Based on a review of the DEIS and site plan, we question whether all lighting is being shown. No new lighting is shown on the proposed buildings, the recreation building, or the garage. A photometric plan should be provided, illustrating the cumulative effect of all additional lighting to be introduced by the proposed project to ensure that lighting levels are kept to a minimum, given the rural nature of the project surrounds.

> ***Response 3.F-6:*** *A photometric plan has been prepared to show the lighting on the associated building and the surrounding site illustrating the cumulative effect—See Site Lighting Plans E-101, E-102, and E-103 for photometric details.*

Comment 3.F-7 (Letter #1, comment #31, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Off-street parking. An evaluation of supply and demand should be provided to substantiate the need for a new parking garage.

> ***Response 3.F-7:*** *See response to Comment 2.B-7 for supply and demand analysis.*

III.G Transportation

Comment 3.G-1 (Letter #1, comment #38, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Appendix 6, the traffic study, references traffic study appendices. These appendices should be included in the FEIS to establish a complete record. The May 2008 copy was previous supplied to us.

> ***Response 3.G-1:*** *The appendices to the "Traffic Impact Study" have been included in the Appendix 6 of this FEIS. For ease of reference, the "Traffic Impact Study" has also been included in the same appendix.*

III.G.1 Traffic Study

III.G.1.d Analysis of Impacts

Comment 3.G-2 (Letter #3, comment #1, letter from Hilda Borges, 2616 Bruynswick Road, Wallkill, New York, November 3, 2008): I am opposed to such a large scale development, on the grounds that there would be so much more traffic. Also, too much wear and tear on the roads.

> ***Response 3.G-2:*** *As stated in DEIS, Section I.B.7, the 2007 Existing Traffic Volumes were projected to the design year of 2012 to evaluate the potential traffic impacts after the opening and operating of the completed buildings, including the new residence building. The "Traffic Impact Study" summary and conclusion were as follows: "Based on the results of the field inspections of the roadways in the vicinity of the site together with the results of the capacity analysis for the individual intersections, the traffic generated by the expansion of the Watchtower Farms facilities should not result in a significant negative impact on traffic operations in the area."*
>
> *The proposed project does not include production-type facilities for increased industry. Therefore, the applicant does not anticipate that implementing the proposed project will generate a significant increase in truck traffic.*
>
> *Suggested maintenance-related mitigation measures were included in the "Traffic Impact Study," regardless of the proposed action. The applicant is intending to work with the Town, County, and State Transportation Departments to implement the measures determined to be feasible.*

Comment 3.G-3 (Comment #5, Fred Whitaker and Margaret Annastas, Public Hearing, Town of Shawangunk Planning Board, November 5, 2008): Expressed concerns about increased traffic.

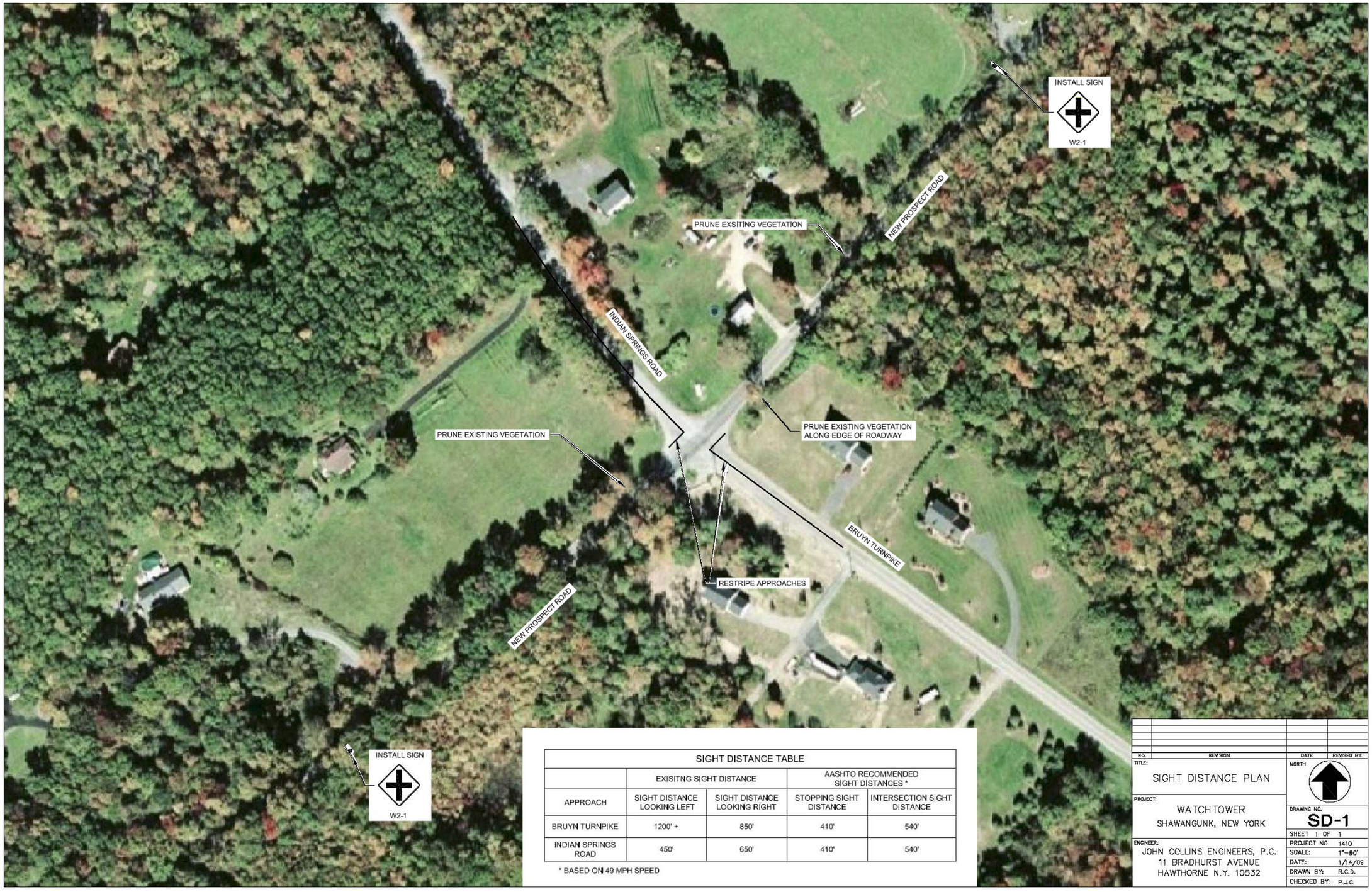
> ***Response 3.G-3:*** *See comments regarding the increase of traffic in Response 3.G-2 above.*

Comment 3.G-4 (Letter #1, comment #39, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): The proposed mitigation measures - signal retiming, vegetation removal to improve sight distance, replacing old signs, repainting worn pavement marking, or correcting a failed slope are maintenance-related. The addition of new signs, stable slope regrading, and new pavement markings are small capital improvements. Although such capital improvements may be needed regardless of the proposed action, the additional site traffic is increasing the need for such implementation. Setting up a fund to pay for implementation of needed new sign and pavements markings would offset potential safety issues from increased roadway utilization.

> ***Response 3.G-4:*** *As noted above, the "Traffic Impact Study" concluded that the proposed action "should not result in a significant negative impact on traffic operations in the area." Therefore, the proposed project does not result in potential safety issues that require mitigation. Nevertheless, in a phone conversation on March 9, 2009, with Marty Hand, the Town of Shawangunk Highway Superintendent, the applicant confirmed its willingness to contribute for the implementation of needed new sign and pavement markings described above as capital improvements as noted in the "Traffic Impact Study."*

Comment 3.G-5 (Letter #1, comment #40, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): A drawing should be provided at the key intersection Bruyn Turnpike and New Prospect Road/Indian Spring Road to indicate the actual sight distances and indicate necessary improvements for sight distance in conjunction with speed studies. This would allow the town to make an informed choice regarding sight distance improvements.

> ***Response 3.G-5:*** *Attached below is the requested "Site Distance Plan" provided by the Traffic Consultant, John Collins Engineers, P.C. (see Appendix 6 of this FEIS for the complete report). Based on a review of the speed data and the design criteria of the American Association of State Highway and Transportation Officials (AASHTO), all of the current sight lines exceed the recommended distances except one. Only when looking north from Indian Springs Road does the sight distance of 410 feet for the 85th percentile fall short of the recommended 540 feet. The consultant establishes that the intersection sight distances can be obtained by reestablishing the "stop" bars on the side road approach and pruning the vegetation as shown on the accompanying plan. Also shown on the plan is a recommendation to install "approaching intersection" signs on New Prospect Road in each direction from the intersection.*



SIGHT DISTANCE TABLE

APPROACH	EXISITNG SIGHT DISTANCE		AASHTO RECOMMENDED SIGHT DISTANCES *	
	SIGHT DISTANCE LOOKING LEFT	SIGHT DISTANCE LOOKING RIGHT	STOPPING SIGHT DISTANCE	INTERSECTION SIGHT DISTANCE
BRUYN TURNPIKE	1200' +	850'	410'	540'
INDIAN SPRINGS ROAD	450'	650'	410'	540'

* BASED ON 49 MPH SPEED

NO.	REVISION	DATE:	REVISED BY:

TITLE: SIGHT DISTANCE PLAN

PROJECT: WATCHTOWER
SHAWANGUNK, NEW YORK

ENGINEER: JOHN COLLINS ENGINEERS, P.C.
11 BRADHURST AVENUE
HAWTHORNE N.Y. 10532

NORTH

DRAWING NO. SD-1

SHEET	1 OF 1
PROJECT NO.	1410
SCALE:	1"=60'
DATE:	1/14/09
DRAWN BY:	R.G.D.
CHECKED BY:	P.J.C.

Figure III.G-1 Sight Distance Plan

Comment 3.G-6 (Letter #4, comment #1, E-mail from Joe Mihm to Kris Pedersen, October 31, 2008: Mircea Catona of the Ulster County Highways and Bridges Department asked Marty Hand and I to meet him today to inspect the intersection of Red Mills Road-Bruynswick Road-Hoagerbrugh Road. His concern is that this is a non-standard intersection that is already prone to accidents and any further increases in traffic by the proposed Watchtower Farms Improvements Project could make the situation worse. The Collins Traffic Study did evaluate this intersection and reports it has a "B" Level of Service.

Response 3.G-6: *The intersection of Red Mills Road, Hoagerburgh Road, and Bruynswick intersection is a non-standard intersection. Several alternatives are possible to better control traffic at this location. These would include the following:*

- *A slight squaring-off of the New Prospect Road approach and creating all-way stop-type intersection separate from Hoagerburgh Road.*
- *Realigning Hoagerburgh Road to create a standard four-way intersection.*
- *As requested by the County, an alternative which includes a roundabout.*

Each of these alternatives are shown below on Figures III.G-2 through III.G-5 (No. IP-l, IP-IA, IP-2 and IP-2A). Note that with the exception of Figure III.G-2 (IP-1), an acquisition would be required to complete such an alignment.

In a phone conversation on February 2, 2009, with Mr. Mircea Catona from the Ulster County Department of Highways and Bridges (UCDHB), the applicant was informed that the UCDHB was following with plans for this intersection and appreciated the applicant's offer to donate a portion of its parcel immediately south of Hoagerburgh Road and east of Red Mills Road to accommodate a traffic circle at this intersection.

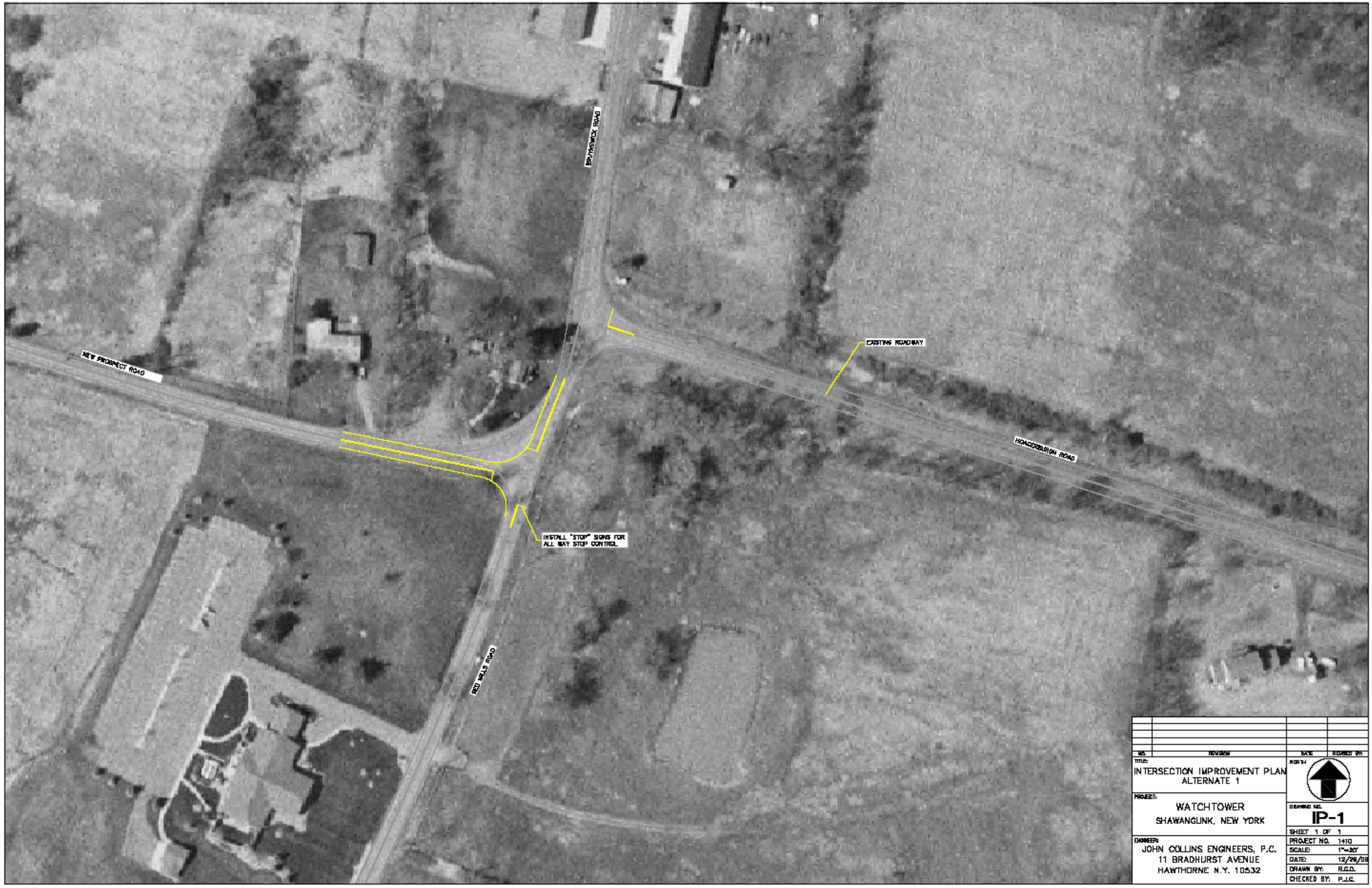


Figure III.G-2 Intersection Improvement Plan Alternate 1 (IP-1)

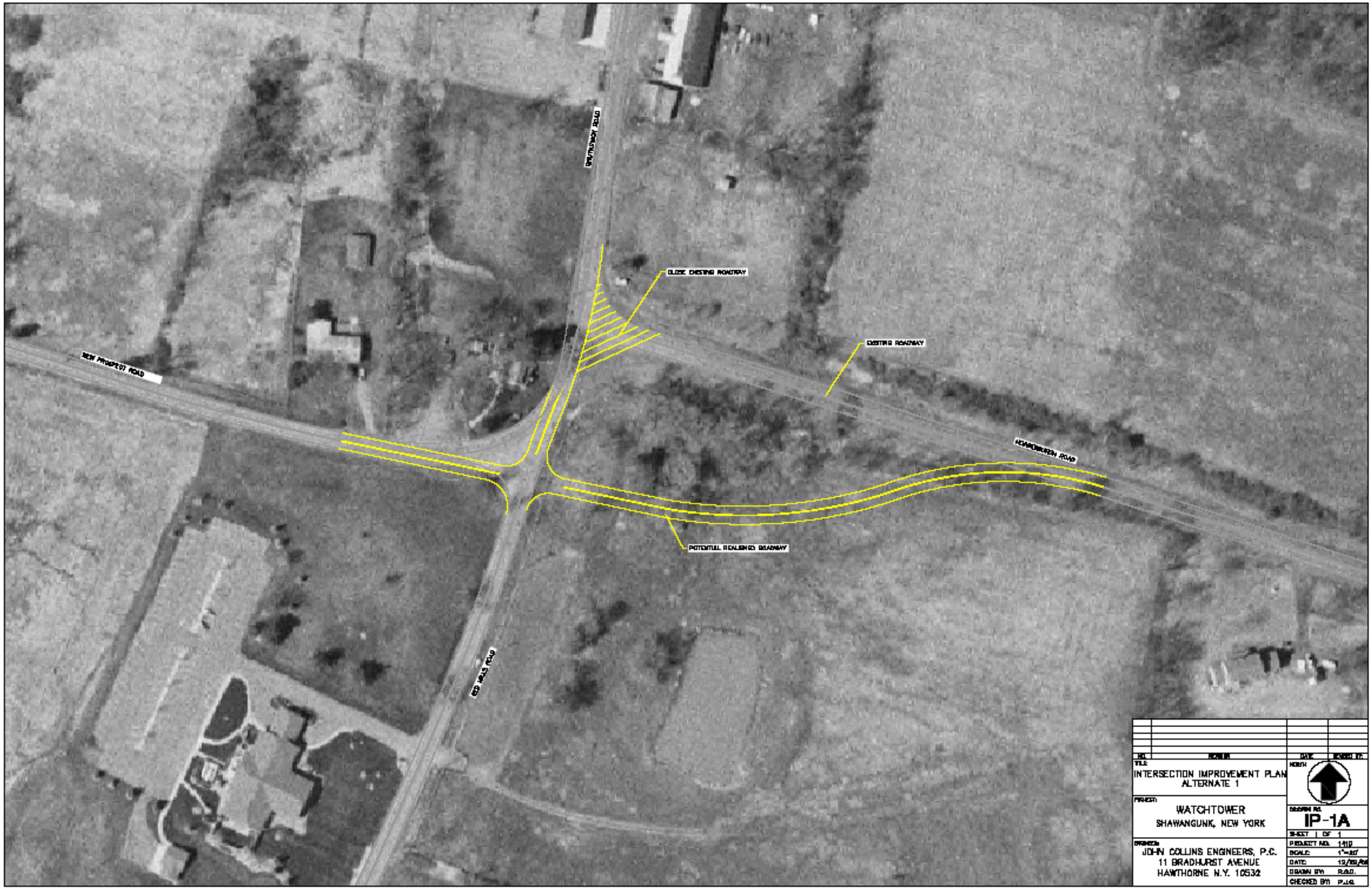


Figure III.G-3 Intersection Improvement Plan Alternate 1A (IP-1A)

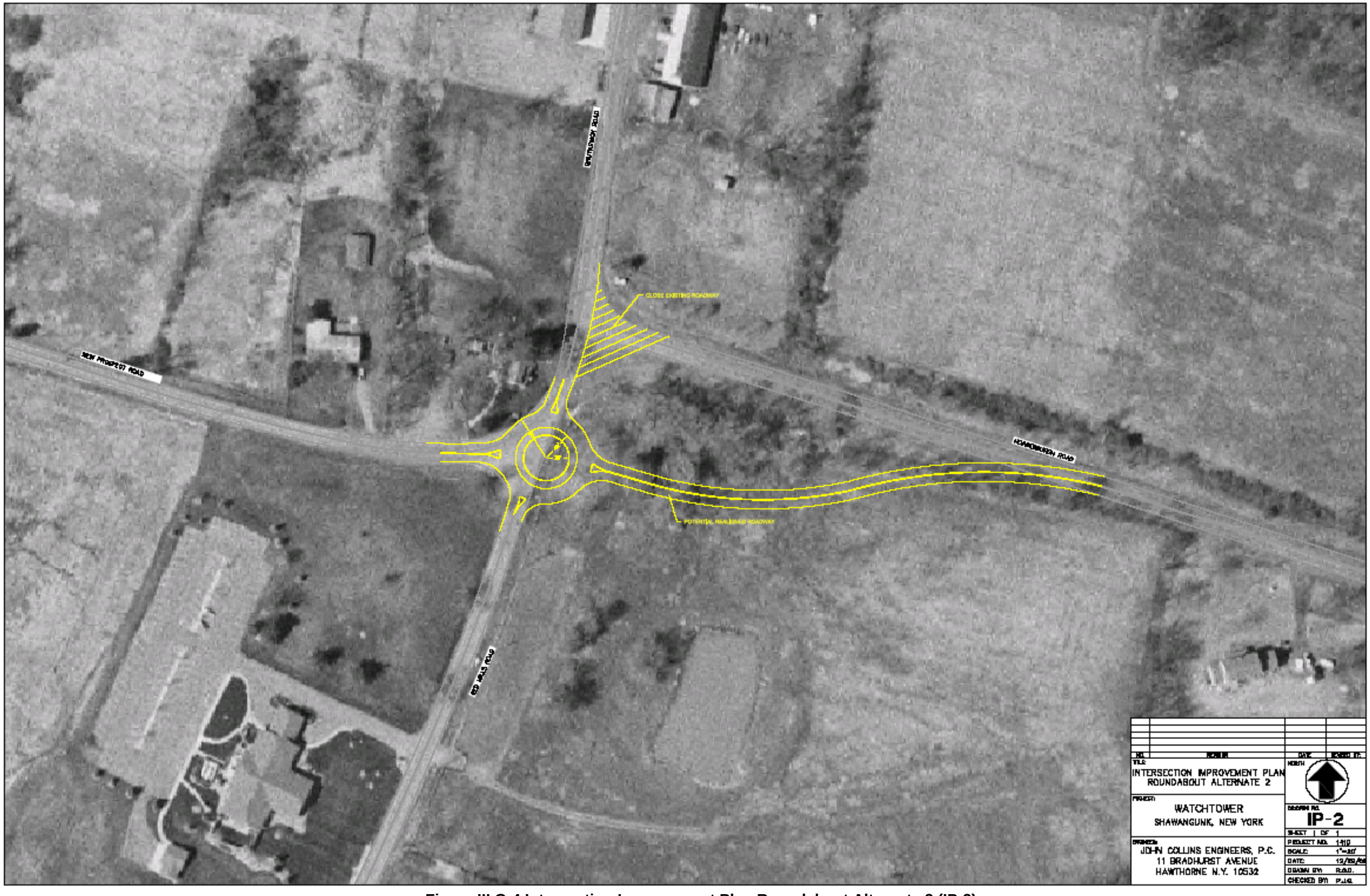


Figure III.G-4 Intersection Improvement Plan Roundabout Alternate 2 (IP-2)

Figure III.G-5 Intersection Improvement Plan Roundabout Alternate 2A (IP-2A)

Comment 3.G-7 (Letter #1, comment #41, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Would the intersection of Red Mill Road with Steen Road and/or the intersection of Hoagerburgh Road with Bruyn Turnpike be candidates for a roundabout? See email from Joe Mihm related to this comment.

Response 3.G-7: *See response to comment 3.G-6 above.*

Comment 3.G-8 (Letter #4, comment #2, e-mail from Joe Mihm to Kris Pedersen, October 31, 2008: To improve this unusual intersection that is really two "T" intersections, Mircea Catona will be suggesting that Watchtower consider an upgrade with traffic circle at this intersection. He is supposed to be generating a letter with his findings/recommendations.

Response 3.G-8: *See response to comment 3.G-6 above.*

Comment 3.G-9 (Letter #1, comment #42, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): A detailed calculation should be provided which explains why a net increase in 200 residents requires a parking garage of 400 spaces.

Response 3.G-9: *See response to Comment 2.B-6 for supply and demand analysis.*

Comment 3.G-10 (Letter #1, comment #43, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): A more detailed plan should be made that described on-site internal circulation for vehicles, especially in relation to bicycle and pedestrian on-site use. The site plan should examine:

- Providing a handicapped accessible pedestrian connection from recreation building to print building.
- Providing lighting outside the recreation building for the building itself and not just the fields. The recreational facility is likely to have its own recreational uses after dark and may provide rest rooms and auxiliary use to the outdoor fields.
- To the extent possible, new walkways should be designed with ramps rather than provided with short stairways.
- Lighting should be provided for areas with steps.
- Fencing should be provided at retaining walls where sidewalk is on top of wall or wherever pedestrian accessible.
- Lighting at building entrances. Proposed building entrances should be marked on lighting plans. E-103 there appears to be no new lighting.
- The reach of the lights to a minimum candle power needed should be indicated on plans to ensure coverage. It is not clear if lighting provided by lower light posts will be directed down so not to interfere with drivers.

- Better use of landscaping to keep people on sidewalks. It is not clear where existing landscaping is being removed.
- Crosswalks should be indicated on the plan.
- Truck pick up and delivery areas should be clearly defined to better consider pedestrian interaction.

Response 3.G-10: *A site plan is provided that describes the proposed internal vehicular circulation as it relates to the existing and proposed facility. At the time that site plan approval is sought, a more detailed plan will be presented that will outline more design specifics. However some of the design features that the applicant intends to incorporate in the proposed site plan are:*

- *Handicap pedestrian access throughout the site, including in compliance with NY State Building Code.*
- *Lighting outside the recreation building for both the building and fields.*
- *Ramps will be used wherever possible instead of stairs as required to meet handicap accessibility requirements and to minimize maintenance.*
- *In all instances where stairs are necessary, they will be lighted as is currently the case with the existing facility.*
- *Pedestrian safeguards will be implemented including fall protection, such as fencing at retaining walls where sidewalk is on top of a wall or pedestrian accessible.*
- *Lighting will be incorporated at building entrances.*
- *The exterior lighting design will be done in such a manner to insure adequate coverage without causing visual interference to drivers. See "Site Lighting Plan," drawings E-101, E-102, and E-103.*
- *The proposed landscaping design will be well integrated with proposed pedestrian circulation. See landscaping drawings L-100, L-101, L-102, L-103, and L-501.*
- *Crosswalks will be indicated on site plan.*
- *The proposed project will not affect existing truck circulation patterns. As a result new pedestrian circulation paths will be coordinated with existing truck circulation on-site to provide for safe interaction with pedestrians.*

Comment 3.G-11 (Letter #1, comment #44, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Prevailing speeds should be determined at Bruyn Turnpike and New Prospect Road/Indian Spring Road and at Red Mill Road east of Steen Road. This second location is recommended for a speed reduction warning sign. The location should be carefully located to provide input as to the existing speeds just prior to or after the turn.

Response 3.G-11 *Attached in Tables III.G-1 and III.G-2 below are the requested "Speed Measurements" conducted by the Traffic Consultant John Collins Engineers, P.C., in the northbound and southbound directions for the New Prospect Road and Bruyn Turnpike/Indian Springs Road intersection. The 85th percentile speed in both directions was determined to be 49 mph and the mean average speed as 42 mph in the northbound direction and 43 mph in the southbound direction. Regarding the second location, the consultant reports: "The section of Red Mills Road east of Steen Road currently has a 35 mph posted speed limit. This section of roadway has no centerline striping and approaching the horizontal curve east of this intersection; the prevailing speeds observed were in the 30 to 35 mph speed range. In consideration of the current sharp horizontal curvature, the installation of advisory speed reduction signs on both approaches in advance of the curve should be considered. Advisory warning sign W1-1A would be appropriate" in the locations shown in Figure III.G-6—See Appendix 6 of this FEIS for the complete report.*

Table III.G-1 Northbound Speed Measurements

JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: WATCHTOWER FARM
LOCATION: SHAWANGUNK, NEW YORK
JCE JOB# 410

Site Code: 141000000777
Station ID:
NEW PROSPECT ROAD (NORTH OF BRUYN TURNPIKE)
Latitude: 0' 0.000 Undefined

NB

Start Time	1 29	30 32	33 35	36 38	39 41	42 44	45 47	48 50	51 53	54 56	57 59	60 62	63 65	66 999	Total	85th Percent	95th Percent
01/13/09	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	1	2	4	7	19	13	8	5	**8**	1	**2**	1	0	0	71	51	53
15:00	**4**	2	6	8	16	9	12	**14**	7	1	0	1	0	0	80	50	52
16:00	4	**3**	**7**	7	16	21	14	10	2	**2**	1	0	0	0	87	48	52
17:00	3	1	3	**16**	**24**	**26**	**18**	12	2	2	0	0	0	**1**	**108**	48	50
18:00	2	0	7	10	15	19	11	4	2	1	0	0	0	1	72	46	50
19:00	3	3	6	5	11	10	14	4	3	0	0	0	0	0	59	47	50
20:00	1	0	1	4	3	8	5	2	0	0	0	0	0	0	24	46	48
21:00	0	0	3	3	5	4	3	1	3	2	0	0	0	0	24	51	54
22:00	3	1	2	5	4	2	7	3	3	0	1	0	0	0	31	49	52
23:00	2	0	0	1	1	3	1	4	0	1	0	0	0	0	13	49	50
Total	23	12	39	66	114	115	93	59	30	10	4	2	0	2	569		
Percent	4.0%	2.1%	6.9%	11.6%	20.0%	20.2%	16.3%	10.4%	5.3%	1.8%	0.7%	0.4%	0.0%	0.4%			
AM Peak																	
Vol.																	
PM Peak	15:00	16:00	16:00	17:00	17:00	17:00	17:00	15:00	14:00	16:00	14:00	14:00		17:00	17:00		
Vol.	4	3	7	16	24	26	18	14	8	2	2	1		1	108		

Table III.G-1 Northbound Speed Measurements (continued)

JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: WATCHTOWER FARM
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Station ID:
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01:00	1	0	0	1	0	1	0	0	0	1	0	0	0	0	4	42	54
02:00	1	0	0	0	1	0	0	0	0	0	1	0	0	0	3	57	57
03:00	1	0	0	1	0	0	1	1	0	0	0	0	0	0	4	47	48
04:00	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	48	48
05:00	0	0	0	1	2	2	3	0	1	1	0	0	0	0	10	47	53
06:00	0	1	2	0	7	4	11	7	2	0	0	0	0	0	34	49	50
07:00	1	1	6	4	4	8	10	6	7	3	0	0	0	0	50	51	53
08:00	0	3	1	6	3	7	12	5	6	3	0	0	0	0	46	51	54
09:00	0	1	2	2	7	6	7	5	4	0	0	0	1	0	35	50	52
10:00	3	4	1	4	4	6	6	5	5	0	0	0	0	0	38	50	52
11:00	6	3	1	7	3	13	7	7	3	1	1	0	0	0	52	49	52
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	13	13	13	27	31	47	57	37	28	9	2	0	1	0	278		
Percent	4.7%	4.7%	4.7%	9.7%	11.2%	16.9%	20.5%	13.3%	10.1%	3.2%	0.7%	0.0%	0.4%	0.0%			
AM Peak	11:00	10:00	07:00	11:00	06:00	11:00	08:00	06:00	07:00	07:00	02:00		09:00		11:00		
Vol.	6	4	6	7	7	13	12	7	7	3	1		1		52		
PM Peak																	
Vol.																	
Grand Total	36	25	52	93	145	162	150	96	58	19	6	2	1	2	847		
Percent	4.3%	3.0%	6.1%	11.0%	17.1%	19.1%	17.7%	11.3%	6.8%	2.2%	0.7%	0.2%	0.1%	0.2%			

15th Percentile :	36 MPH
50th Percentile :	43 MPH
85th Percentile :	49 MPH
95th Percentile :	53 MPH

Statistics	
10 MPH Pace Speed :	39-48 MPH
Number in Pace :	489
Percent in Pace :	57.7%
Number of Vehicles > 55 MPH :	17
Percent of Vehicles > 55 MPH :	2.0%
Mean Speed(Average) :	42 MPH

Table III.G-2 Southbound Speed Measurements

JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: WATCHTOWER FARM
LOCATION: SHAWANGUNK, NEW YORK
JCE JOB# 410

Site Code: 141000000777
Station ID:
NEW PROSPECT ROAD (NORTH OF BRUYN TURNPIKE)
Latitude: 0' 0.000 Undefined

SB

Start Time	1 29	30 32	33 35	36 38	39 41	42 44	45 47	48 50	51 53	54 56	57 59	60 62	63 65	66 999	Total	85th Percent	95th Percent
01/13/09	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	1	**2**	1	7	9	11	7	9	**5**	2	0	0	0	0	54	50	52
15:00	3	2	1	6	4	10	6	**10**	3	0	0	0	0	0	45	49	51
16:00	2	0	5	8	13	**19**	**19**	5	1	**3**	0	0	0	0	**75**	47	50
17:00	**4**	1	**8**	**16**	14	16	6	5	0	0	0	0	0	0	70	44	48
18:00	0	0	6	6	**15**	14	5	4	0	1	0	0	0	0	51	45	48
19:00	3	0	2	4	9	6	3	0	1	0	0	0	0	0	28	44	47
20:00	0	1	1	3	9	7	2	5	1	0	0	0	0	0	29	48	50
21:00	1	0	1	0	3	4	3	3	1	0	0	0	0	0	16	49	50
22:00	0	0	0	2	7	5	1	2	4	0	0	1	0	0	22	51	53
23:00	0	0	0	4	1	1	1	2	0	0	0	0	0	0	9	48	49
Total	14	6	25	56	84	93	53	45	16	6	0	1	0	0	399		
Percent	3.5%	1.5%	6.3%	14.0%	21.1%	23.3%	13.3%	11.3%	4.0%	1.5%	0.0%	0.3%	0.0%	0.0%			
AM Peak																	
Vol.																	
PM Peak	17:00	14:00	17:00	17:00	18:00	16:00	16:00	15:00	14:00	16:00		22:00			16:00		
Vol.	4	2	8	16	15	19	19	10	5	3		1			75		

Table III.G-2 Southbound Speed Measurements (continued)

JOHN COLLINS ENGINEERS, P.C.
11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: WATCHTOWER FARM
LOCATION: SHAWANGUNK, NEW YORK
JCE JOB# 410

Site Code: 141000000777
Station ID:
NEW PROSPECT ROAD (NORTH OF BRUYN TURNPIKE)
Latitude: 0' 0.000 Undefined

SB

Start Time	1 29	30 32	33 35	36 38	39 41	42 44	45 47	48 50	51 53	54 56	57 59	60 62	63 65	66 999	Total	85th Percent	95th Percent
01/14/09	0	0	0	0	1	3	0	0	1	0	0	0	0	0	5	44	51
01:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	39	39
02:00	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	40	40
03:00	0	0	0	0	1	1	0	2	0	0	1	0	0	0	5	49	57
04:00	0	0	0	0	3	1	2	1	1	0	0	0	0	0	8	50	51
05:00	0	0	0	2	4	3	5	3	2	2	0	0	0	0	21	52	54
06:00	0	0	1	6	9	13	15	8	5	2	0	0	0	0	59	49	52
07:00	1	3	0	6	10	23	31	20	9	4	1	0	0	0	108	50	53
08:00	1	0	3	13	9	11	14	14	7	3	0	1	0	0	76	50	53
09:00	0	0	1	2	8	13	8	5	1	3	1	0	0	0	42	49	55
10:00	3	2	0	2	7	9	15	5	2	0	1	0	0	0	46	48	51
11:00	0	0	1	3	6	6	11	5	3	0	0	0	0	0	35	49	51
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	5	5	6	34	61	83	101	63	31	14	4	1	0	0	408		
Percent	1.2%	1.2%	1.5%	8.3%	15.0%	20.3%	24.8%	15.4%	7.6%	3.4%	1.0%	0.2%	0.0%	0.0%			
AM Peak	10:00	07:00	08:00	08:00	07:00	07:00	07:00	07:00	07:00	07:00	03:00	08:00			07:00		
Vol.	3	3	3	13	10	23	31	20	9	4	1	1			108		
PM Peak																	
Vol.																	
Grand Total	19	11	31	90	145	176	154	108	47	20	4	2	0	0	807		
Percent	2.4%	1.4%	3.8%	11.2%	18.0%	21.8%	19.1%	13.4%	5.8%	2.5%	0.5%	0.2%	0.0%	0.0%			

	15th Percentile :	37 MPH
	50th Percentile :	43 MPH
	85th Percentile :	49 MPH
	95th Percentile :	53 MPH
Statistics	10 MPH Pace Speed :	39-48 MPH
	Number in Pace :	511
	Percent in Pace :	63.3%
	Number of Vehicles > 55 MPH :	12
	Percent of Vehicles > 55 MPH :	1.5%
	Mean Speed(Average) :	43 MPH

Figure III.G-6 Advisory Speed Sign Plan

Comment 3.G-12 (Letter #1, comment #45, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): If the machine counts were done on a 15 minute basis, please provide a graph over the day on a fifteen minute basis to indicate the 6:30 a.m. to 6:45 a.m. period was not critical in determining the peak traffic period.

> ***Response 3.G-12:*** *Attached below are the requested graphs over the day on a fifteen-minute basis. These graphs indicate that the 6:30 a.m. to 6:45 a.m. period was not critical in determining the peak traffic period—See Figures III.G-7 through III.G-9.*

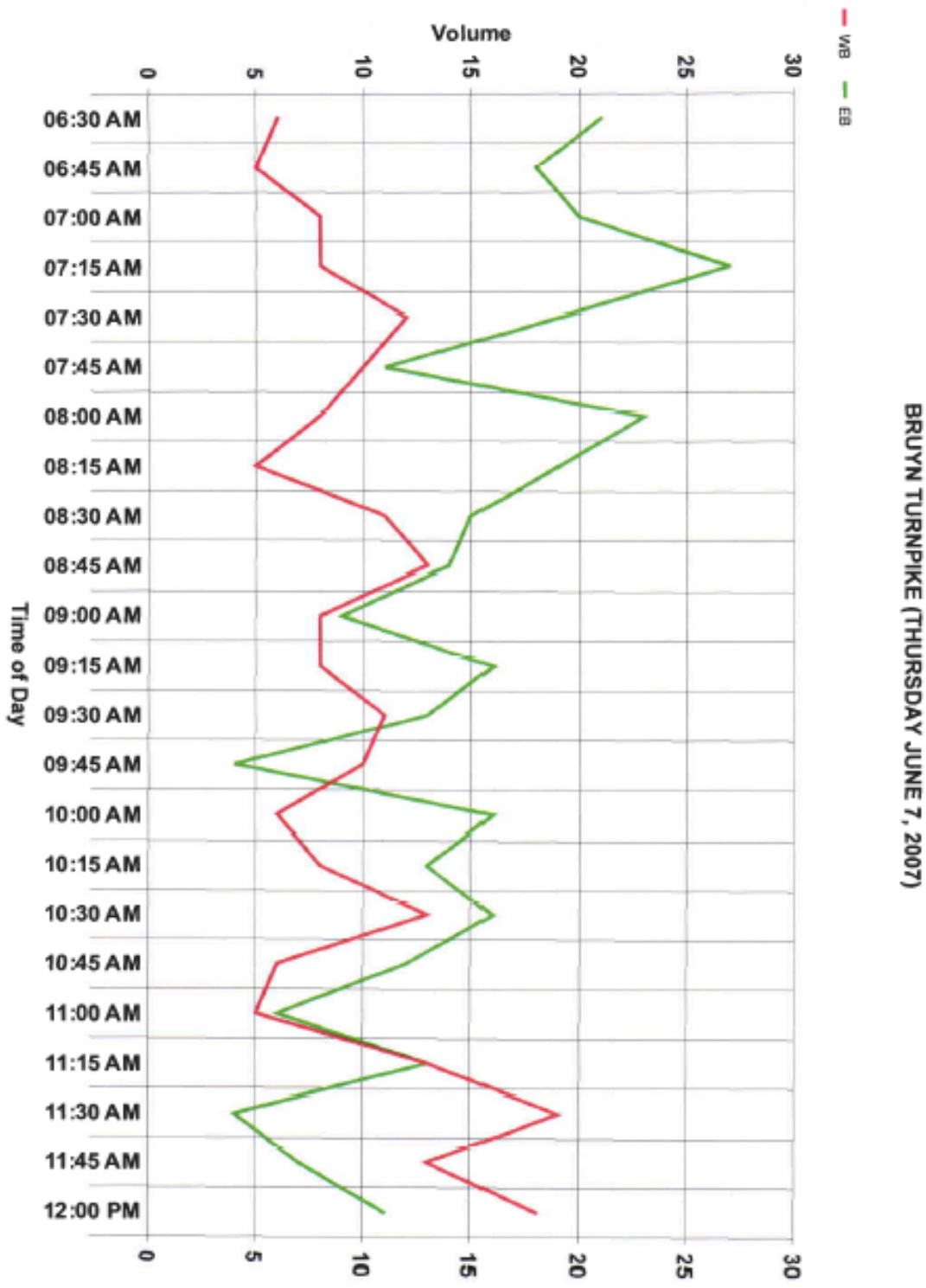

Figure III.G-7 Bruyn Turnpike Traffic Volume for Thursday, June 7, 2007

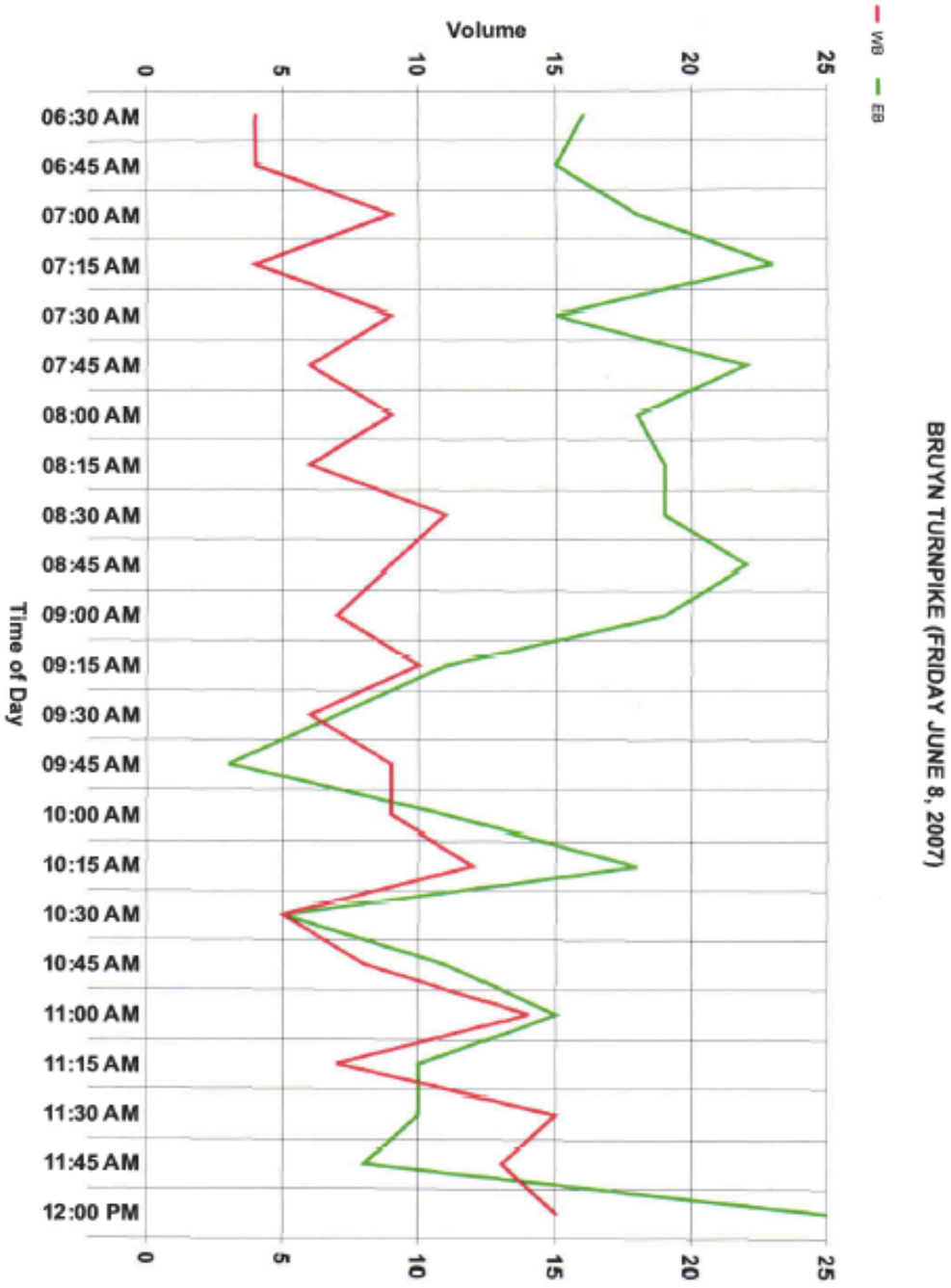

Figure III.G-8 Bruyn Turnpike Traffic Volume for Friday, June 8, 2007

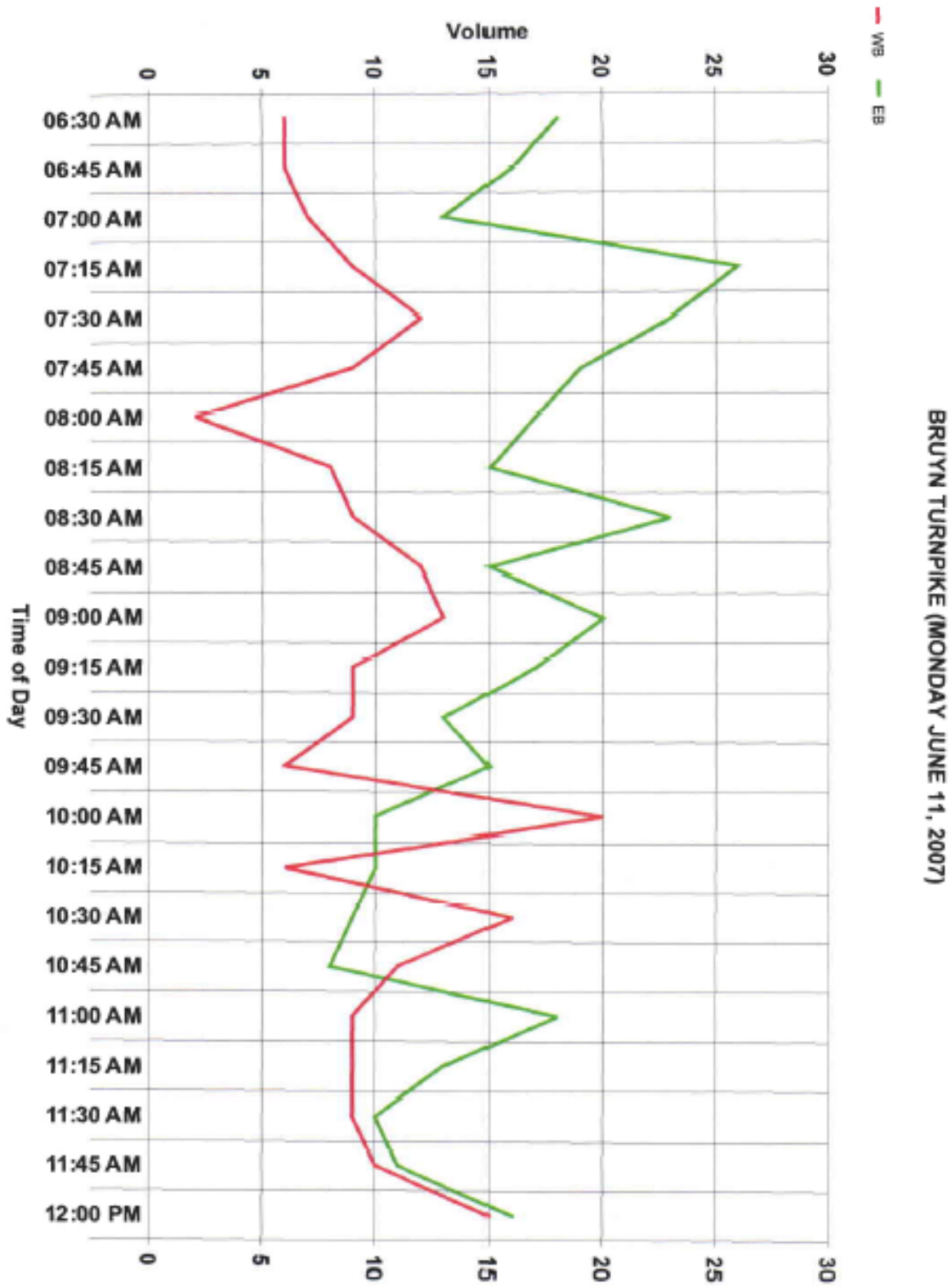

Figure III.G-9 Bruyn Turnpike Traffic Volume for Monday, June 11, 2007

Comment 3.G-13 (Letter #1, comment #46, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Accident information and a discussion appears to be missing from the analysis.

> ***Response 3.G-13:*** *Attached below is the requested "Area Road Accident Report Summary" from New York State Department of Transportation.—See Appendix 6 for the "Accident Location Information" report in its entirety.*

Table III.G-3 Area Road Accident Report Summary

TABLE NO. A

AREA ROAD ACCIDENT REPORT SUMMARY

NODE/LINK	LOCATION	DATE	TIME	TRAFFIC CONTROL	ACCIDENT CLASS *	# OF VEHICLES INJURIES	LIGHT CONDITION	ROAD CONDITION	WEATHER	MANNER OF COLLISION	APPARENT CONTRIBUTING FACTORS
	RED MILLS ROAD										
46 Meters North of Bruyn Tyke		11/15/07	7:12 PM	NONE	PDO	1-0	DARK-ROAD UNLIGHTED	WET	RAIN	OTHER	ANIMAL'S ACTION
		12/23/07	8:12 AM	NONE	PD & I	1-1	DAYLIGHT	WET	RAIN	OTHER	FELL ASLEEP, FAILURE TO KEEP RIGHT
BRUYNSWICK RD & RED MILLS RD											
		09/25/06	12:12 PM	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	LEFT TURN	DRIVER INEXPERIENCE/FAILURE TO YIELD RIGHT OF WAY
		06/12/06	2:12 PM	UNKNOWN	PD & I	1-1	UNKNOWN	UNKNOWN	UNKNOWN	OTHER	UNKNOWN
		09/09/07	12:12 PM	NONE	PD & I	2-1	DAYLIGHT	DRY	CLEAR	LEFT TURN	DRIVER INATTENTION/FAILURE TO YIELD RIGHT OF WAY
		10/10/07	1:12 PM	NONE	PD & I	2-1	DAYLIGHT	WET	RAIN	SIDESWIPE	PAVEMENT SLIPPERY
		10/20/07	4:12 PM	NO PASSING ZONE	PDO	1-0	DAYLIGHT	WET	RAIN	OTHER	PAVEMENT SLIPPERY
	BRUYNSWICK RD										
19.5396 Meters South of Hoagerburgh Rd		12/19/06	4:12 PM	NO PASSING ZONE	PDO	1-0	DARK-ROAD UNLIGHTED	DRY	CLEAR	OTHER	ANIMAL'S ACTION
10.9448 Meters South of Hoagerburgh Rd		07/09/05	10:12 PM	NO PASSING ZONE	I	2-1	DARK-ROAD UNLIGHTED	DRY	CLEAR	HEAD ON	ALCOHOL INVOLVEMENT, FAILURE TO KEEP RIGHT
6 Meters East of Red Mills Rd		06/25/08	7:12 PM	NONE	PDO	1-0	DAYLIGHT	DRY	CLEAR	OTHER	PAVEMENT SLIPPERY
		06/25/08	7:12 PM	NONE	PDO	1-0	DAYLIGHT	DRY	CLEAR	OTHER	PAVEMENT SLIPPERY
		06/25/08	7:12 PM	NONE	PD & I	1-1	DAYLIGHT	OTHER	CLEAR	OTHER	TRAFFIC CONTROL DEVICE IMPROPER/NON-WORKING, PAVEMENT SLIPPERY
BRUYN TPKE & INDIAN SPRINGS RD											
		12/23/05	10:12 AM	STOP SIGN	PD & I	3-3	DAYLIGHT	DRY	CLEAR	OTHER	TRAFFIC CONTROL DEVICES DISREGARDED
		08/19/06	4:12 PM	STOP SIGN	PD & I	2-1	DAYLIGHT	DRY	CLOUDY	RIGHT ANGLE	FAILURE TO YIELD RIGHT OF WAY
BRUYN TPKE & HARDENBURGH RD											
		06/09/07	1:12 AM	NONE	N/A	1-0	DARK-ROAD UNLIGHTED	DRY	CLEAR	OTHER	ANIMAL'S ACTION
	BRUYN TURNPIKE										
169.0011 Meters West of Red Mills Rd		10/01/07	10:12 AM	NO PASSING ZONE	PD & I	1-1	DAYLIGHT	DRY	CLOUDY	OTHER	UNSAFE SPEED/FAILURE TO KEEP RIGHT
353.4978 Meters East of New Prospect Rd		10/21/06	8:12 AM	NONE	PDO	1-0	DAYLIGHT	DRY	CLEAR	OTHER	ANIMAL'S ACTION
		03/22/07	7:12 AM	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	AGGRESSIVE DRIVING/ROAD RAGE
533.0905 Meters West of Hoagerburgh Rd		10/11/06	3:12 PM	HWY WORK AREA	I	1-1	DAYLIGHT	DRY	CLOUDY	OTHER	DRIVER INATTENTION
		10/17/06	7:12 AM	NO PASSING ZONE	PDO	1-0	DAYLIGHT	WET	RAIN	OTHER	ANIMAL'S ACTION
		01/24/07	9:12 AM	NO PASSING ZONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY
		06/28/07	7:12 PM	NO PASSING ZONE	I	1-1	DAYLIGHT	DRY	CLEAR	OTHER	PASSING OR LANE USAGE IMPROPERLY
322 Meters West of Hoagerburgh Rd		05/16/08	1:12 PM	NO PASSING ZONE	PDO	1-0	DAYLIGHT	WET	CLOUDY	OTHER	PAVEMENT SLIPPERY/OBSTRUCTION/DEBRIS
	WALLKILL AVE										
17.6442 Meters East of Whittaker Rd		01/19/06	9:12 PM	NONE	PDO	1-0	DARK-ROAD UNLIGHTED	DRY	CLEAR	OTHER	UNKNOWN
NEW PROSPECT RD & INDIAN SPRINGS RD											
		10/10/07	6:12 AM	NONE	N/A	1-0	DUSK	WET	RAIN	OTHER	ANIMAL'S ACTION
NEW PROSPECT RD & BRUYN TURNPIKE											
		06/13/08	3:12 PM	STOP SIGN	PD & I	2-0	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	TRAFFIC CONTROL DEVICES DISREGARDED

* PDO = PROPERTY DAMAGE ONLY I = INJURY F= FATALITY

Job #410

Table III.G-3 Area Road Accident Report Summary (continued)

TABLE NO. A (CONTINUED)

AREA ROAD ACCIDENT REPORT SUMMARY

NODE/LINK	LOCATION	DATE	TIME	TRAFFIC CONTROL	ACCIDENT CLASS *	# OF VEHICLES - INJURIES	LIGHT CONDITION	ROAD CONDITION	WEATHER	MANNER OF COLLISION	APPARENT CONTRIBUTING FACTORS
NYS ROUTE 52 & SEAS NEW PROSPECT											
52 8602 1211		07/31/06	11:12 AM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	UNKNOWN	BACKING UNSAFELY
52 8602 1211		03/07/07	2:12 PM	TRAFFIC SIGNAL	PD & I	3-4	DAYLIGHT	DRY	CLEAR	OTHER	DRIVER INATTENTION/FOLLOWING TOO CLOSELY
	NYS ROUTE 52										
12.2401 Meters South of Zazversky Rd											
52 8602 1216		11/17/05	7:12 AM	NONE	PDO	1-0	UNKNOWN	DRY	CLEAR	OTHER	N/A
40 Meters East of Zazversky Rd											
52 8602 1216		01/03/08	3:12 PM	NONE	PDO	2-0	DAYLIGHT	SNOW/ICE	CLOUDY	SIDESWIPE	PAVEMENT SLIPPERY
50 Meters North of Zazversky Rd											
52 8602 1216		04/06/08	7:12 AM	NO PASSING ZONE	PD & I	1-2	DAYLIGHT	DRY	CLOUDY	OTHER	DRIVER INATTENTION
	NYS ROUTE 52										
52 8602 1218		08/11/06	3:12 PM	UNKNOWN	PDO	2-0	DAYLIGHT	DRY	CLEAR	LEFT TURN	UNSAFE SPEED/DRIVER INATTENTION/ FAILURE TO YIELD RIGHT OF WAY
	NYS ROUTE 52										
82.4534 Meters East of Riverview Rd											
52 8303 1001		03/28/07	7:12 AM	NO PASSING ZONE	I	2-1	DAYLIGHT	DRY	CLOUDY	REAR END	FOLLOWING TOO CLOSELY
	NYS ROUTE 52										
73.1614 Meters East of Pirog Rd											
52 8602 1211		09/22/05	6:12 AM	NO PASSING ZONE	PDO	1-0	DARK-ROAD UNLIGHTED	DRY	CLEAR	OTHER	UNKNOWN
231.153 Meters East of Pirog Rd											
52 8602 1212		05/31/06	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NYS ROUTE 52 & RECREATIONAL PARK ROAD											
52 8303 1000		01/01/08	12:12 PM	NONE	PDO	1-0	DAYLIGHT	DRY	CLOUDY	OTHER	PAVEMENT SLIPPERY
NYS ROUTE 52 & MAPLE AVENUE											
302 8301 1105		12/06/07	8:12 AM	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	UNKNOWN	FAILURE TO YIELD RIGHT OF WAY/TURNING IMPROPER
302 8301 1105		01/16/08	9:12 AM	TRAFFIC SIGNAL	PD & I	2-1	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	DRIVER INATTENTION/ TRAFFIC CONTROL DEVICES DISREGARDED
	NYS ROUTE 52										
52 8602 1211		02/10/08	10:12 AM	TRAFFIC SIGNAL	PD & I	2-6	DAYLIGHT	WET	CLEAR	REAR END	PAVEMENT SLIPPERY

1) Based on Accident data obtained from the NYSDOT for area roadways for the latest available three years.

*PDO = PROPERTY DAMAGE ONLY I = INJURY F = FATALITY

JOB # 410

Comment 3.G-14 (Letter #1, comment #47, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Please provide the reference land use code used for trip generation.

> ***Response 3.G-14:*** *According to Traffic Consultant, John Collins Engineers, P.C., the trip generation rates used in the traffic analysis are based on Land Use Code 220-Apartment.*

Comment 3.G-15 (Letter #1, comment #48, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): To make the location of the proposed signage and pavement markings evident, a figure showing the existing and proposed signing and markings should be submitted with the FEIS.

> ***Response 3.G-15:*** *The "Existing Lane Geometry, Pavement Markings, and Signing" have been provided in Figure III.G-10 as shown below.*

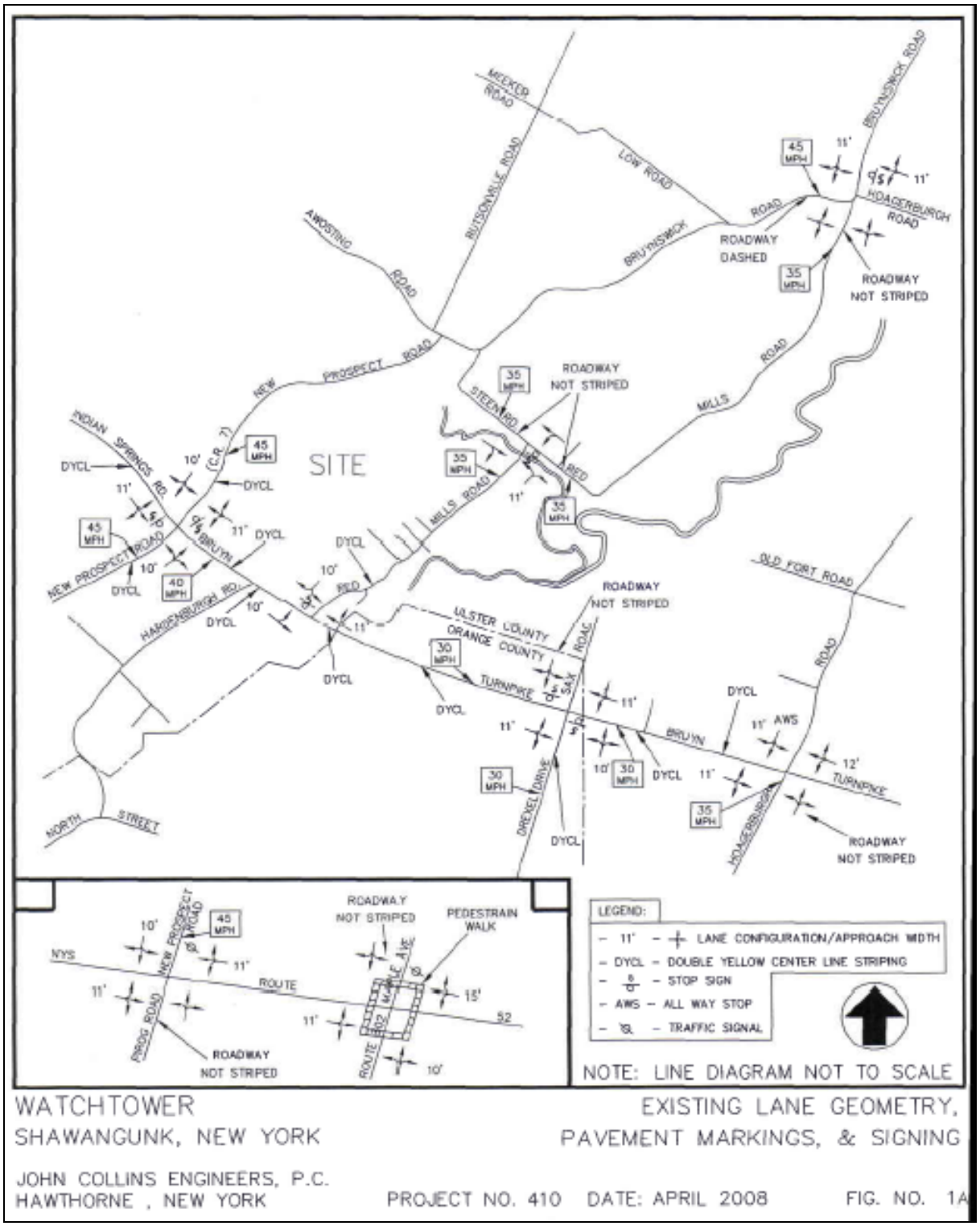

Figure III.G-10 Existing Lane Geometry, Pavement Markings, and Signing

III.H Aesthetic Resources

Comment 3.H-1 (Letter #1, comment #32, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Although the DEIS indicates that the proposed berm would be landscaped with deciduous and evergreen trees, the landscaping plan sheets do not propose any plantings on the berm.

> ***Response 3.H-1:*** *A detailed landscaping plan has been prepared. This plan has addressed the proposed planting on the berm. See the landscaping sheets L-100, L101, L-102, L-103, and L-501.*

Comment 3.H-2 (Letter #1, comment #33, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): The site plan does not appear to illustrate trees that will either be retained or removed.

> ***Response 3.H-2:*** *A detailed landscaping plan has been prepared. This plan has included in it the protection measures to be taken to protect trees that are near the construction area that are to remain and has identified other trees to be removed. See the landscaping sheets L-100, L101, L-102, L-103, and L-501.*

Comment 3.H-3 (Comment #6, Fred Whitaker and Margaret Annastas, Public Hearing, Town of Shawangunk Planning Board, November 5, 2008): They expressed concerns about loss of mountain views.

> ***Response 3.H-3:*** *See DEIS Section 3.H.1.c "Visual Impacts of Proposed Action" (see pages III-193 through III-207). Included in the section are photosimulations of the proposed buildings viewed from several perspectives. As can be seen from these, the applicant proposes to use design and siting strategies such as screening and low profile to minimize impact to any mountain views.*

III.J Community Services and Facilities

Comment 3.J-1 (Letter #1, comment #34, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): The DEIS indicates that the proposed project incorporated the recommendation from the SVFD to install and maintain landscaping that would avoid interfering with firefighting or rescue operations. However, the landscape plan does not detail the location of proposed plantings, so this cannot be confirmed.

> ***Response 3.J-1:*** *A detailed landscaping plan has been prepared. This plan has addressed the issues that the Shawangunk Valley Fire District (SVFD) recommended. The landscaping has been kept to a minimum of 10 feet from the base of the new residence building—See the landscaping sheets L-100, L101, L-102, L-103, and L-501.*

Comment 3.J-2 (Letter #1, comment #35, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Has the SVFD reviewed and commented on the evacuations plans for the facility?

> ***Response 3.J-2:*** *The Shawangunk Valley Fire District (SVFD) has reviewed and approved the "Watchtower Farms Facility Evacuation Plan" as revised January 2009—See Appendix 2 for e-mail from Gerald Pratt, Chief of Commissioners for the SVFD, of January 14, 2009, regarding acceptance of the evacuation plan for the Watchtower Farms Facility.*

Comment 3.J-3 (Letter #1, comment #36, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Full access to the residential buildings are provided via the loop road encircling all buildings. During construction, it appears that the loop road will be disrupted. The construction phasing plan should be reviewed to determine whether reconstruction of the loop road should be accelerated to ensure emergency access to the existing residential buildings during construction. Access to the facility needs to be ensured during all phases of construction.

> ***Response 3.J-3:*** *The construction phasing has been reviewed to see if there would be a disruption of the loop road that would present a difficulty in accessing the residence buildings during emergency situations. The access road has a full loop to it, with an entrance off Red Mills Road to the residential buildings from either the west side or the east side of the facility. The phasing shows that at least one of these access routes would be open at all times. Emergency response personnel would be made aware of which entrance is open during the development of the project. At no time would there be a disruption of the loop road such that emergency access would be totally blocked.*

Comment 3.J-4 (Letter #1, comment #37, memorandum from Bonnie Franson, AICP, and James Garofalo, AICP, Tim Miller Associates, December 17, 2008): Will the proposed ponds be used for fire protection purposes? Or, are they to be used strictly for stormwater management purposes?

> ***Response 3.J-4:*** *The proposed stormwater ponds will be used strictly for stormwater management purposes.*

Comment 3.J-5 (Letter #5, comment #1, letter from Director of New York State Office of Parks, Recreation and Historic Preservation, October 17, 2008): Based on this review, it is the OPRHP's opinion that your project will have No Impact upon cultural resources in or eligible for inclusion in the State and National Register of Historic Places.[1]

> ***Response 3.J-5:*** *Acknowledgment that OPRHP approval relating to the Historic/Cultural resources was determined to have "No Impact." Any other potential environmental impacts to New York State Parkland near the proposed project have been considered pursuant to the SEQRA implementing regulations (6 NYCRR Part 617).*

[1] See Appendix 2 for New York State Office of Parks, Recreation and Historic Preservation letter of October 17, 2008, in its entirety.