Troutbeck

Adaptive Reuse Plan & Phase 1 Site Plan

Project Narrative
&
SEQR Documentation

PROJECT: **Troutbeck – Adaptive Reuse Plan**

Tax Map I.D. Number: 132000-7267-00-227675

APPLICANT: **Troutbeck Holdings LP**
12-26 Troutbeck Lane
Amenia, NY 12501

LOCATION: **515 Leedsville Road**
Town of Amenia
Dutchess County, New York

DATE: **8/29/2022**

REVISED: **10/10/2022**
11/28/2022
01/09/2023
02/03/2023
02/15/2023

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- Troutbeck Inn - Conservation Findings, dated 2/9/2022 – DRAFT

APPENDIX B – HABITAT STUDIES AND AGENCY CORRESPONDENCE

- Threatened and Endangered Species Habitat Suitability Assessment Report, by Michael Nowicki, dated October 19, 2021
- NYSDEC – Notice of Incomplete Application, dated June 30,2022
- RED Response to NYSDEC Notice of Incomplete Application, dated October 5, 2022
- Ecological Solutions, LLC – Response to Hudsonia (Public) Comments, dated 1/6/2023
- NYSDEC – Notice of Incomplete Application (Threatened and Endangered Species Habitat Absence Acknowledgement), dated January 17, 2023
- Bog Turtle Education and Encounter Plan – January 2022
- Guidelines for Reviewing Projects for Potential Impacts to the Timber Rattlesnake

APPENDIX C - ARCHEAOLOGICAL STUDIES AND AGENCY CORRESPONDENCES

- SHPO Correspondence – Phase 1A/1B Archaeological Survey Recommendation, dated 3/15/2022
- OPRHP Correspondence – Historic/Cultural Resources Submission Request, dated May 13, 2022
- Phase 1 Archaeological Investigation for the Proposed Troutbeck Inn Adaptive Reuse, by TRACKER Archaeology, Inc.– Alfred Cammisa, M.A., dated June 2022, revised October 2022
- Troutbeck Inn – Adaptive Reuse OPRHP Submission Documents, 6/30/2022
- OPRHP Correspondence – Historic/Cultural Resources Submission Additional Information Request, dated July 22, 2022
- Troutbeck Inn – Adaptive Reuse OPRHP Resubmission Documents, 9/19/2022
- OPRHP Correspondence – Historic/Cultural Resources Submission Request, dated 10/18/2022
- SHPO Correspondence – Avoidance Plan Recommendation, dated 11/10/2022
- Troutbeck – Archaeological Site Avoidance Plan
- SHPO Correspondence – Phase 1A/1B Archaeological Survey/Avoidance Plan Approval, dated 11/10/2022
- OPRHP Correspondence – Historic/Cultural Resources Conditional Approval, dated December 8, 2022
- Amenia Historical Society – “Why Amenia”, Elizabeth C. Strauss, 2017

APPENDIX D – TRAFFIC IMPACT ASSESSMENT

- Traffic Assessment, Troutbeck Development, 515 Leedsville Road, Town of Amenia, Dutchess County, New York, CM Project 121-19, by Creighton Manning

Engineering, LLP, dated October 3, 2022 (included w/ 10/05/2022 Planning Board Submission)
- Troutbeck – Vehicle Circulation Exhibit, dated 1/9/2023
- Traffic Generation Update, Troutbeck Development, 515 Leedsville Road, Town of Amenia, Dutchess County, New York; CM Project 121-191, dated 1/23/23

APPENDIX E – VISUAL IMPACT ANALYSIS

- Troutbeck – Adaptive Reuse – Visual Impact Analysis, dated 1/9/2023, revised 2/15/2023

APPENDIX F – ZONING COMPLIANCE/ADDITIONAL SUPPORTING DOCUMENTS

- Special Use Permit Criteria Compliance Analysis, dated 1/9/2023
- Engineering Report for Troutbeck Adaptive Reuse Plan - Flood Assessment, dated 1/6/2023
- Aquifer Overlay District – Aquifer Net Recharge Calculations
- Amenia Fire Company – Reconfirmation of Fire Safety Measures Correspondence, dated 1/9/2023

APPENDIX G – SITE UTILITY REPORTS AND SUPPORTING DOCUMENTS

- Troutbeck – Water Supply and Treatment System Engineers Report, dated 1/9/2023, revised 2/15/2023
- Troutbeck – Adaptive Reuse Buildout Subsurface Sewage Disposal System Engineering Report w/ Percolation and Deep Testing Data, dated 1/9/2022, revised 2/15/2023

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- Troutbeck – Hydrogeological Assessment, prepared by WSP USA Inc., dated 2/15/2023

APPENDIX I – ADAPTIVE REUSE PLAN (Provided Separately)

- Troutbeck – Adaptive Reuse Plan, sheets 0-6, dated 9/15/2021, revised 1/9/2023
- Troutbeck – Phase 1 Site Plan Set, sheets 0-7, dated 8/29/2022, revised 1/9/2023
- Troutbeck – Adaptive Reuse Conceptual Building Elevations, dated 8/29/2022

REFERENCE DOCUMENTS

- Troutbeck Inn – Historic Preservation & Conservation Analysis, dated 9/15/2022, revised 2/16/2022
- Troutbeck - Stormwater Pollution Prevention Plan, dated 10/10/2022, revised 2/3/2023
- Troutbeck - Adaptive Reuse – Deed of Conservation Easement, dated 1/9/2023
- Troutbeck Inn – (Existing) Water Treatment System – PWS ID#1330035, dated 8/12/2016, revised 12/2/2016

1.0 INTRODUCTION

1.1 Project Overview

The site is currently used for conferences, dining, special events, lodging, retreats, and weddings. The facilities contain typical hospitality industry related amenities such as tennis courts, a pool, wellness center, walking trails, and other outdoor activities. The applicant is proposing to expand on the site's existing use by developing an Adaptive Reuse Plan (also referred to as a Master Plan) under the town's Historic Preservation Overlay District regulations, which will outline the proposed uses for the site and how the sites existing historic resources will be preserved.

The proposed Adaptive Reuse Plan outlines 8 separate phases for the site ranging from overnight guest cabins and lodging facilities, to administration buildings and existing structure improvements. While the project is divided into 8 separate phases on the Adaptive Reuse Plan, only Phase 1 is in front of the Amenia Planning Board for Site Plan approval, while phase 2-8 will appear before the Board at a later date.

Overall, the proposed improvements focus primarily on expanding the site's existing lodging capacity and will elevate the guest experience by providing a number of additional amenities such as, additional food & beverage options, additional wellness options, additional onsite outdoor activities, and formal garden areas. A new event space will replace an existing ballroom located in the Manor House to provide more flexibility and access for events.

The application proposes a conservation easement over 50% of the site and within that area, management plans to protect and restore riparian ways. Additional landscape plans include the installation of orchards and large-scale installation of native plants, grasses and trees. The application seeks to protect all significant trees present on the site, all of those of which are located in the proposed areas of improvement have been properly documented and surveyed.

Circulation. parking and way-finding improvements are proposed and designed for their beneficial impact to the surrounding public roads in addition to improving guest and service traffic circulation.

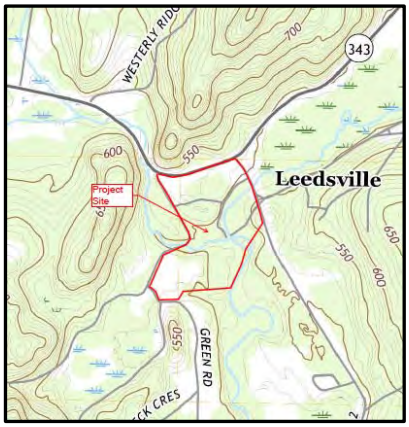
The application proposes to replace an existing ballroom located within the Manor House with a new purpose-built structure to improve serviceability and function. The former ballroom will be renovated to serve as the principal a-la-carte dining room. The existing dining room will be re-decorated as sitting rooms and public areas within the Manor House. For the avoidance of doubt, the applicant is not proposing an increase to its current event capacity.

Overall the proposed phased expansion plan would result in a 85 total guestrooms, only. This application is therefore +50% less intensive than the 168 total guestrooms permitted by code.

The provided document is used to provide supplemental information for the Environmental Assessment Form and the project in general.

1.2 Site Location

Troutbeck is located within a single 43.5-acre parcel (Parcel #: 132000-7267-00-227675) in the Town of Amenia, Dutchess County, New York. The project is located 100 miles north of New York City and is approximately 3 miles west of Sharon, CT. The project parcel maintains frontage along the south of NYS Route 343 and is divided down the middle by the Webatuck Creek, which runs north to south through the site. The parcel also maintains frontage along Yellow City Road to the west and Leedsville Road to the east. Several community resources service the Troutbeck location including: Webatuck Central School District, State Police Department (10.8 miles), Amenia Fire House (2.6 miles), NDP Station 5 (6.2 miles), Beekman Park, and Benton Hill Preserve.



1.3 Site History

Troutbeck traces its roots to the pre-revolutionary war time period of the 1760's. The first known occupant of Troutbeck was Captain William Young who built a frame house in 1765 near the current site of the current Manor House. Just across the brook from the current Manor House stands the Delamater House, which preceded Captain Young's house by a few years. It is reported that Captain Young sold Troutbeck to Captain Lasell after the Revolution who, in turn sold it to Caleb Benton Jr. in 1794. The Benton family then retained the property for the next 108 years.

In the year 1795, following Caleb Benton's purchase of Troutbeck his son Joel was married and Caleb built him a house on the farm just across the Webutuck Creek which is now known as the "Century Lodge". For the rest of his life Joel lived on that part of the farm and kept the house as a hotel for many years, making the Century Lodge the oldest known lodging facility on the current Troutbeck property.

Throughout the 1800's the Troutbeck site became a prominent part of the Leedsville hamlet; one of the Town of Amenia's six (6) prominent and well-preserved hamlets. At that time, the hamlet supported a woolen factory, mill, schoolhouse, and multiples storefronts; where, according to Elizabeth C Strauss of the Amenia Historical society, "the Troutbeck estate of the Benton family was at the center of community life for the entire century." (Appendix C - Amenia Historical Society – Why Amenia, pg. 6)

The last in the family to own it was Myron Benton, a poet and writer, to whom John Burroughs was a close friend and wrote Benton's obituary for the N.Y. Times. It is reported that Myron was the first to apply the name Troutbeck to the property, associating it with the trout that came out the Webutuck Creek and into the spring house. Myron and his Troutbeck Estate played host to many poets and writers of his time such as John

Burroughs, Mark Twain, Henry David Thoreau, and Ralph Waldo Emerson to name a few. Colonel Joel Spingarn (1875 – 1939) and his wife Amy bought the estate in 1902 after Myron's passing and continued the tradition, maintaining Troutbeck as a gathering place for thinkers and creatives.

The property was reported to have sat idle for many years before being acquired by the partnership of Jim Flaherty and Robert Skibsted in the late 1970's and, in 1979 they obtained a special use permit from the Town of Amenia to convert the estate to a hospitality use as an Inn and Conference Center, and successfully ran as such for the next 30 years.

In subsequent years Mr. Flaherty and Mr. Skibsted subdivided the Troutbeck parcel, which at the time was comprised of several hundred acres, to create multiple residential lots. The Troutbeck Community subdivision, which was approved and filed with the Dutchess County Clerk's office on 10/19/1983, as depicted in File Map #6742. The subdivision created ±40 residential parcels ranging from ±2 to 7-acres, as well several open/conservation space parcels and the parcel(s) which would eventually be merged to make up the 43.5-acres project site referred to in this application. The remaining residential parcels contain much of the original woodlands and agricultural fields often referred to by historical figures visiting the site.

In 2005 the Town of Amenia Zoning Board of Appeals affirmed prior years approvals of its use as a Country Inn, featuring overnight accommodation, a restaurant (open to the public), ballroom, and wedding venue. Prior ownership attests to at time hosting over twenty weddings at Troutbeck per year. Recreational amenities were added including two tennis courts, an indoor pool, wellness facilities, volleyball court and an outdoor pool with a grill. Troutbeck's uses, operating hours, ingress and egress patterns all pre date current zoning and most all of the residential structures directly adjacent along Yellow City Rd. The Troutbeck Community was formed by the partnership in the early 1980's from lands formerly a part of Troutbeck and, subsequent to Troutbeck's current and proposed uses, which had long since been firmly established. Lots were marketed for sale as extension of the Troutbeck service and lifestyle offering.

The Town of Amenia intentionally applied the Historic Preservation Overlay to the 43.5 acre Troutbeck site in [2007] subsequent to the ZBA findings and in the context of a recent expansion application which contemplated a hotel condominium development and spa facility on the site. The Overlay was intentionally applied to preserve the site and in furtherance of Troutbeck's necessary and widely supported expansion as a vital and essential driver of regional tourism, a local employer of choice and the only remaining lodging facility of moderate scale in the Town - objectives consistent with the then recently adopted Town of Amenia Comprehensive Plan.

In 2016 Troutbeck Holdings, LP, a partnership led by Anthony Champalimaud acquired Troutbeck, undertaking a major renovation and restoration of the existing facilities, while maintaining the property's character and history. Troutbeck is today a celebrated country house hotel with an exceptional reputation for hospitality, preservation, and cultural events that help to sustain and promote the property's history and social importance.

In 2023 Troutbeck was ranked #11 out of the top 30 hotels and resorts in New England and New York State by the readers of Conde Nast Traveller. On average Troutbeck receives 20,000+ visitors to its website. Troutbeck is an essential and critical resource to promoting economic development for the Town of Amenia.

Troutbeck has served as an enchanting private estate, country inn and tavern since the 1700's and has for centuries, been a favored retreat of distinguished guests important in the arts, letters, matters of policy and social justice. Troutbeck can be considered a jewel of the local area and Troutbeck's future development will undoubtedly enhance both the property and the Town.

1.4 Reviewing Agencies and Permits (EAF: B. Government Approvals)

The following summary is a list of government agencies with review jurisdiction:

Government Approvals for Project

Designation	Government Agency	Required Permits
Municipal	Town of Amenia Planning Board	• Special Use Permit – Adaptive Reuse • Site Plan Approval
	Town of Amenia Building Department	• Floodplain Development Permit
County	Dutchess County Department of Health (DCDOH)	• Public Water Supply System Improvements • Individual Wastewater Collection System Improvements
	Dutchess County Department of Planning & Development	• Site Plan Referral (General Municipal Law, Article 12B, Sections 239-I and 239-M)
New York State	Department of Environmental Conservation (NYSDEC)	• Stormwater Pollution Prevention Plan • SPDES General Permit GP-0-20-001 • SPDES Wastewater Discharge Permit
	New York State Division for Historic Preservation	• NYSSHPO Advisory Review

2.0 ZONING (EAF: C.3 ZONING)

2.1 Zoning District (EAF: C.3.b)

The 43.5-acre project site is presently located within the Town of Amenia's Rural Residential "RR" zoning district. The Town of Amenia's Zoning Map is included in the Reference Document - Conservation Analysis. The "RR" zoning district purpose as defined in §121-7 of the Amenia Zoning Code *"is to allow residential uses [and other permitted uses] in a rural setting, at a lower density than is allowed in the hamlets"*. As stated previously, the site was first operated as a country inn and tavern since its initial construction in 1765. Since then, it has continued and expanded on this use, receiving numerous site plan and special use permit approvals over the years for expansions of its hospitality use, the most recent of which was in 2021 for improvements to one of its existing lodging facilities

The site currently maintains the following uses:

- Lodging and Accompanying Guest Amenity Uses: 38 Lodging Units, Ballroom, Spa Areas, Guest Pool, Athletic Courts, Wellness Center, Administrative Building, Event Space
- Restaurant/Bar (Troutbeck Restaurant – Public Use)
- Residential (Staff Housing – 3 Dwelling Units)
- Parking Areas, Walking Paths, Roadways

Following the complete buildout of the Adaptive Reuse Plan, the site will contain:

- Expanded Lodging and Accompanying Guest Amenity Uses: 85 Lodging Units (Cabins, Lodging Facility Retrofits, New Hotel-Style Lodging), Enhanced Guest Pool, New Athletic Courts, On-Site Bakery, Ballroom Expansion, and New Event Space
- Troutbeck Restaurant Improved Conservatory Dining
- Residential (Staff Residences – 6 Dwelling Units)
- Hardscape Improvements (Parking Areas, Walking Paths, Reconfigured Roadways)

Continuing the site's long history of hospitality, plans outline both immediate and long-term expansions of its existing use. The uses identified above are allowed as part of the Adaptive Reuse of the site permitted by Special Use Permit due to the site being located within the Historic Preservation Overlay District outlined below.

2.2 Overlay Districts (EAF: C.3.a)

In addition to being located within the RR zoning district, the site also contains several overlay district's, which outline additional rules and regulations for development. The site is located partially or wholly within the following overlay districts: Historic Preservation (HPO), Floodplain (FPO), Stream Corridor (SCO), Scenic Protection (SPO), and Aquifer (AQO) and overlay districts. An analysis of the individual zoning overlay and how they relate to the proposed development is provided below:

2.2.A Historic Preservation Overlay "HPO" (§121-14.2):

"Special protection of historic hamlets and individual structures is necessary to preserve the attractive rural and historic quality of the Town. The purpose of this section is to regulate construction, alteration, and demolition that affects identified historic areas and parcels with historic structures." The NYSOPRHP National Register and Archeological Sensitivity Map is included in the Conservation Analysis in Appendix A.

Project Notes: The project site has been included in the HPO due to several of its existing structures having hospitality/lodging uses dating back to the 1760's. The site is also the historic center of the Leedsville hamlet; one of six (6) well preserved hamlets in the Town of Amenia. This use was later formalized in 1979, when the site received a special use permit for use as a country inn/restaurant. The proposed expansion will continue and enhance the sites hospitality use, which, while not currently permitted as of right by the "RR" zoning district, is allowed in areas designated with the HPO as an "adaptive reuse". The "adaptive reuse" is permitted with sites containing 5-acres or more and specifically permits "lodging, facilities, meeting rooms, health spas, and conference facilities" and "restaurants" on the site regardless of the underlying zoning district. An adaptive reuse of a site requires an additional Special Use Permit as well as the additional provisions outlined in §121-14.2.I:

(1) Plans to preserve, maintain, restore, and/or renovate existing historic structures/property characteristics have been provided.
   - Three existing historic structures are located on site: Delamater House, The Manor House, and Benton House (formerly Century Lodge). All existing historic structures will be preserved as part of the Adaptive Reuse Plan, with Delamater House to receive renovations, stabilizing, restoring, and expanding the existing structure. These renovations shall be reviewed and approved by NYS SHPO-OPRHP. The site also contains numerous historically significant waterways, specimen trees, and landscape features, which will be preserved by a Conservation Easement covering 54.2% of the project site, as required by §121-14.2.I.(5).

(2) Uses to be allowed on the property.

   - All permitted use to be allowed have be outlined on the Troutbeck – Adaptive Reuse Plan – Overall Master Plan, sheet 2.

(3) Conservation and historic preservation analysis as outlined §121-20.A.

   - "Adaptive Reuse Plan" included in Appendix E of this report.

(4) Adaptive reuse plan for the entire site based on the information identified in above. Information to include: preservation of open space, future site improvements (i.e.: buildings, infrastructure, parking, roadways, etc.)

   - "Adaptive Reuse Plan" included in Appendix E of this report.

(5) Open space/historic resource protections for 50% of the site.

- Approximately ±54.2% of the project site will be placed within a Conservation Easement, which will be held and maintained by the Housatonic Valley Association (HVA).

(6) Max impervious surface area of 30%, for which employee residences are excluded from these calculations. Max building height 35' for non-historic structures.

- The proposed Adaptive Reuse of the site will result in a total maximum impervious area increase to ±18.6% of the project site. No proposed structure shall exceed the 35' maximum building height.

(7) Maximum residential density calculations, where dwelling units are calculated at 1.5 unit per acre, excluding those located in historic structures (Manor House, Century Lodge). Lodging units to be counted as 0.5-residential dwellings for the purpose of density.

- The Adaptive Reuse of the project site will result in 85 lodging units and 6 staff residences, which is less than the 168.6 lodging units or 65 dwelling units that are permitted by zoning. (See Zoning Restrictions/Maximum Site Density)

(8) 100' of open space buffer from adjacent residential units.
- The Adaptive Reuse Plan provided sufficient buffering between proposed structures and existing residential uses. The nearest proposed structure to a residential use is Phase 1 – Creekside Cabin D, which is proposed 100.3' away from the adjacent residential use found on parcel #294624.

As outlined above and within the attached documentation, the improvements outlined in Adaptive Reuse/Master Development Plan are permitted within the site and meet the criteria for an "adaptive reuse" as described in §121-14.2. As part of the Adaptive Reuse compliance outlined above, a Bulk Regulations and Permitted Use Table has been prepared and included in the Adaptive Reuse Plan, which will supersede existing zoning provisions for the project site and govern all future phases of development. Bulk Regulations and Permitted Use tables for the project site can be found in the Troutbeck–Adaptive Reuse Plan Set in Appendix E of this report.

2.2.B Floodplain Overlay "FPO" (§121-13):

"To promote the public health, safety, and general welfare and to minimize public and private losses due to flood conditions and specific areas by provisions designed to:

a. Regulate uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities;

b. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

c. Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters;

d. Control filling, grading, dredging and other development which may increase erosion or flood damages;

e. Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands; and

f. Qualify for and maintain participation in the National Flood Insurance Program."

Per §67 "Flood Damage Protection" of the Town of Amenia Code

Project Notes: The FPO was designed to identify areas within the Town of Amenia for which the provisions outlined in §67 would be applied. In this instance, the FPO is pertaining to lands around Webatuck Creek, which runs north to south through the middle of the project site. In general, these provisions primarily pertain to the construction of residences and septic systems within the 100-year floodplain as designated by FEMA. There will be no new structures or buildings, with the exception of nonstructural site improvements (i.e.: walking trails, vehicle paths, gazebos, pedestrian areas, etc.), within the 100-year floodplain. A Floodway/Floodplain Impact Analysis has been prepared and included in Appendix F of this report, discussing the minimal impacts that Phase 1 deck construction may have within flood areas.

2.2.C Stream Corridor Overlay "SCO" (§121-14):
"The Town of Amenia finds that special protection of the Town's stream corridors is necessary to preserve their scenic character, biodiversity, and water quality. The purpose of this section is to regulate land uses within stream corridors to protect water quality, scenic resources, and the overall appearance of the community, as well as to reduce the risk of damage from flooding."

Boundaries for the SCO include 150' from top of bank/ highwater line of identified creeks, streams, and rivers.

Project Notes: The project site contains two waterways that have been applied with the SCO; one of which is the Webatuck Creek, the second, Dunham Creek flowing into the Webatuck Creek from the west. In general, the SCO provides limitations on the development of structure within its limits via setbacks provisions outlined in §121-14.D and summarized below:

- Within 100' of a water course: No principal structure(s).
- Within 50' of a water course: No accessory structure ≤200 SF. This does not apply to docks, bridges, piers, or other structures requiring close proximity to a watercourse.

Neither the Phase 1 Site Plan, nor any of the additional improvements outlined in the proposed Master Development Plan are in conflict with the setback provisions outlined above.

§121-14.E(1-4) also outlines additional thresholds for development within the SCO that would require site plan review. These thresholds have been noted, but should be

consider moot, as each phase of the Adaptive Reuse Plan will require Site Plan review from the Amenia Planning Board, regardless of these thresholds.

§121-14.F also outlines preparation of an erosion and stormwater control plan for disturbance within the SCO. A Stormwater Pollution Prevention Plan and erosion sediment control plans have been prepared for Phase 1 of construction. Conceptual stormwater management practices for subsequent phases of development are also outlined within the SWPPP, with specific design details to be provided as part of Site Plan approval.

Additionally, Site Plan requirements for improvements within the 150' of SCO shall be addressed as part of individual site plan approvals required before the construction of each phase of the Adaptive Reuse Plan.

2.2.D Scenic Protection Overlay "SPO" (§121-14.1):
"Special protection of scenic road corridors, the Harlem Valley Rail Trail, and highly visible scenic areas is necessary to preserve the attractive rural, historic and agricultural qualities of the Town. The purpose of this section is to regulate land uses within designated scenic areas to protect the Town's scenic beauty and rural character. This section is intended to apply to those areas that are visible to the public and that substantially retain their scenic character and/or that lie within important scenic viewsheds."

Project Notes: The site is located within the SPO due to its proximity to NYS Route 343 a "scenic road", but does not contain any additional "scenic areas" identified by the "Scenic Protection Overlay Map". Due to its proximity to NYS Route 343, all lands lying within 800 feet of the road right of way will be subject to SPO design criteria. Each phase of the Adaptive Reuse Plan will require Site Plan approval prior to their construction and as such will need to demonstrate compliance to SPO requirements.

It should also be noted that the site is located within 5-miles (4.2 miles) of a Scenic Overlook located off of NYS Route 44 (DeLavergne Hill). The scenic overlook has an approximate elevation of ±775' – 800' compared to the project site, which is at an approximate elevation of ±500' - 525'. Between the project site and the scenic overlook there are multiples hills and mountains ranging from 675' – 740' in elevation. These hills/mountains are densely vegetated, containing a mixture of evergreen and deciduous forest land. Looking down towards Troutbeck from the vantage point, these changes in topography, including a 695' peak located on adjacent parcels directly to the east (<1000' away) of the project site, combined with existing deciduous and evergreen forest areas, obscure viewlines from the scenic overlook, ensuring that the project site and all proposed structures/uses will at no point be visible from the scenic overlook. There will be no visual impacts to the Scenic Overlook from the proposed project.

Given the presence of existing structures on site, there are several notable exceptions to the site plan requirement outlined in subsection E that are identified below:

1. Agricultural uses, except for agricultural structures with a footprint exceeding 10,000 square feet.

2. The repair and maintenance of existing structures.
3. Activities carried out pursuant to a site plan or special use permit approved prior to the enactment of this section and still in effect.
4. Clearing and grading associated with construction of unpaved hiking trails.

Excluding the exceptions addressed above, the proposed Adaptive Reuse (Master Development) Plan outlines several potential improvements within the SPO that will need to address screening, architectural, and additional provisions outline in this chapter. An analysis of these additional provisions has been outlined below:

(F) General Standards

1. All proposed structure/uses will be compatible with the site's existing/historic use and will not impair existing scenic character. The application is being proposed as part of an Adaptive Reuse, as described in §121-14.2(I), which requires the preservation of historic character and structures for its approval.
2. All proposed clearing of vegetation will be minimized as much as possible. The existing orchard will remain undisturbed and native vegetation will be introduced consistent with the Conservation Plan. Areas within the SPO requiring clearing as a result of new construction, shall minimize disturbance and provide enhanced screening and grading improvements to obscure visibility from NYS Route 343 or any other public accessible place.
3. The Central Administration, Tractor Shed, Garden Cabins, Garden Reception, and Event Space are outlined on the site's Master Development Plan to be located within the SPO. Proposed structures will be clustered around existing structures, be designed and constructed with site appropriate architecture, and be provided with enhanced screening measures, as conceptually outlined in the Visual Impact Analysis (Appendix E) to obscured visibility from NYS Route 343, through the retention and expansion of existing vegetative buffers and grading improvements. The vegetative buffer areas will be regularly maintained by the Troutbeck staff and include numerous additional plantings as outlined in the Adaptive Reuse Plan Set – Site Landscaping Plan. These measures are to ensure the preservation of the site's historic character. Most of these existing and proposed screening measures shall also be located in the required Conservation Easement.
4. The site does not contain any crest or ridge lines that are viewable from a publicly accessible place.
5. There are no single-family residences proposed within the SPO, as such the 30,000 SF clearing provision does not apply to the site.
6. The nearest scenic overlook to the project site is on NYS Route 44. This overlook is over ±3.2 miles from the Troutbeck site and due to the topography of the hills ranging from 100 to 300-feet higher than the Troutbeck site, this northeasterly facing scenic overlook will not have a view of any of the Troutbeck site.

(G) Landscape

1. A line of native deciduous trees are currently present along 343's southern edge, which then transitions into a maintained hay field. There are currently no plans to alter this existing green buffer within 100' of the roadway. Additional screening shall also be provided within 800' of the NYS Route 343 right-of-way, as outlined

in the Visual Impact Analysis (Appendix E). An updated planting plan has been provided on sheet L100 of the Adaptive Reuse Plan Set, which takes into account the revised primary septic locations. This plan shows plantings in the septic reserve areas (which is permitted) and if those reserve areas become necessary to construct, then the landscape screening will be moved, as needed.

2. As stated above, a row of deciduous trees existing along NYS Route 343. No plans are proposed to remove said trees.
3. Existing vegetation within view of NYS Route 343 will remain. Areas within the SPO that require clearing for the construction of new buildings maintain minimal visibility from the roadway and will be provided with additional vegetative buffering as outlined in the Visual Impact Analysis (Appendix E). As such, proposed development will have no effect on its scenic viewshed.
4. Additional plantings outside of those identified in the Adaptive Reuse Plan Set will be provided per the Planning Board's recommendation as part of Site Plan approval.
5. The site does not contain any crest or ridge lines that are viewable from a publicly accessible place.

(H) Architectural

1. Existing historic structure's (Manor House, Delamater House, Century Lodge & Annex) facades/structural will maintain their current architectural style and will not be significantly altered to accommodate their proposed use(s). Proposed Phase 6 Delamater House renovations shall also obtain approval from NYSHPO-OPRHP prior to gaining approval form the Planning Board. Specifically, we will follow the recommendations from NYSHPO-OPRHP, based off their review of conceptual design elevations submitted as part of Adaptive Reuse Plan approval, that the porch be retained and incorporated into the renovation of the building and that all work be done in a reversable manner. As such, proposed Phase 6 Delamater House renovations shall obtain approval from NYSHPO-OPRHP prior to gaining approval from the Planning Board. All other proposed structures (administrative building, event space, additional lodging) are designed to match the existing architectural style of the site.
2. All proposed structures shall comply with roof requirements outlined in this section.
3. All proposed structures will comply with window requirements outlined in this section. For the Delamater House, we will provide NYSHPO-OPHRP with dimensional drawings of proposed windows and doors for approval, and will follow their recommendations that windows be wood or metal clad and that the glass be clear.
4. The encouraged Building Form Guidelines outlined in §121-5 of the Amenia Zoning Code have been largely incorporated into the design of the Adaptive Reuse Plan. Structures have been sited towards the interior of the site, near existing uses and structures as is typical in hamlets, which typically support higher density uses and site layouts.

(I) Fences
Split rail and 6' stockade fencing currently in use are not visible from NYS Route 343. Any visible fencing to be provided will be established identified during Site Plan approval and will reflect the architectural style of the site.

(J) Rural Siting Principles
All rural siting principals as recommended in §121-31 will be maintained. Existing farm roads, stonewalls, and vegetative buffering, will be preserved when possible, with suitable replacements being provided if alterations are required. Additional compliance information provided in §2.6 "Rural Siting Principals".

(K) Balloon testing and photographic simulations.
When building designs have been finalized as part of phased Site Plan approval, the Amenia Planning Board may request balloon testing to see whether or not the proposed development will have an adverse effect on the scenic quality of the site. As part of the Adaptive Reuse Plan, a Visual Impact Analysis (Appendix E) containing photographic simulations has been prepared to assess the potential impact that development within the 800' scenic road corridor may have and to show how proposed plantings outlined in the Adaptive Reuse Plan Set – Site Landscaping Plan will mitigate the potential visual impact of these structures.

(L) Waivers.
No waivers are requested at this time for any aspect of the proposed Adaptive Reuse Plan or for Phase 1 development. As the sections above demonstrate, the proposed project is in compliance with SPO requirements.

2.2.D.1 Visual Impact Analysis
In addition to the adherence to SPO design criteria outlined above, a Visual Impact Analysis has been prepared to assess the visual impact that the proposed construction outlined in the Adaptive Reuse Plan will have on the SPO. This report assesses potential visual impacts of the proposed Troutbeck Adaptive Reuse Plan from three vantage points along Route 343, which has been identified as a scenic road in §121-14.1.B in Town of Amenia Code, and one vantage point along Leedsville Road at the primary entrance to the site.

To analyze the potential visual impacts of the proposed project, a computer-rendered three-dimensional model of both the Project Site and the buildings outlined in Phases 1, and 3-5 was prepared. To provide a conservative analysis the model includes vegetation without foliage and shows unmitigated views of what the site would look like at full build-out without additional landscape intervention in addition to mitigated views of what the site will look like once proposed planting is completed. Based on the images provided in the analysis, the proposed construction activities within the SPO 800' scenic road buffer with have minimal impact on existing viewshed conditions. As demonstrated in the analysis, construction shall be sufficiently screened by a substantial vegetative buffer, both existing and proposed. The analysis also demonstrates that the proposed

northern parking area shall, in addition to vegetative screening outlined above, be designed to be recessed into the existing topography further obscuring its visibility from NYS Route 343. A copy of this document has been included in Appendix E – Visual Impact Analysis.

Based on the analysis provided above in 2.2.D and 2.2.D.1, all proposed buildings/uses outlined in the site's Adaptive Reuse (Master Development Plan) are, or will be in compliance with the additional provisions outlined for the Scenic Protection Overlay District.

2.2.E Aquifer Overlay District "AQO" (§121-15):
"The Aquifer Overlay (AQO) District has been created to protect the health and welfare of residents of the Town of Amenia by minimizing the potential for contamination and depletion of the Harlem Valley's aquifer system."

Project Notes: The entire Town of Amenia is located within the Aquifer Overlay District and as such so is the site. The project site contains both Upland Aquifer and Valley Bottom Aquifer areas identified in this chapter. In general, this overlay district is used to analysis proposed uses that may result in the discharge of materials that could affect the aquifer such as chemicals, gasoline, significant solid waste, fertilizers, etc.

Based on the AQO aquifer recharge calculations described in §121-15.G, the site has a net recharge of +1,299,100 gal/yr (See Appendix F – Aquifer Recharge Calculations), demonstrating the recharge rate of the existing parcel is sufficient to replace anticipated water draw of the proposed expanded uses. Additionally, the proposed project is not anticipated to utilize any chemicals, fertilizers, petroleum, or other similar products. Furthermore, the proposed adaptive reuse plan is for the continuation/expansion of an existing use which has already received numerous special permit/site plan approvals over the years, supporting the idea that the proposed project will not negatively affect the underlying aquifer(s).

2.3 Zoning Restrictions/Maximum Site Density

Discussed in the Historic Preservation Overlay district requirements, §121-14.2.I(7), project sites undergoing an Adaptive Reuse are provided with different density requirements than what are provided for their underlying zoning district. For sites undergoing an Adaptive Reuse the following density provisions are provided:

Maximum Number of Dwelling Units = 1.5 units/acre
One (1) Lodging Unit = 0.5 Residential Dwelling Unit
*Unbuildable land(s) are not deducted from density calculations.
**Units/Dwellings within historic structures are excluded from density calculations.

Based on these criteria the site is permitted the following number of units/dwellings:

43.5-acres x 1.5-units/acre = 65.25 maximum lodging/residential units*

65.25 dwellings / 0.5 lodging units = 130.5 lodging units**

*Does not include existing lodging/residential units located within historic structures.
**Does not included existing or proposed residential dwellings, counting as 1.0 units.

As outlined in previous sections of this report the site contains multiple existing structures. The site is historically documented to have maintained 38 lodging units and 3 Residential Dwellings that have been used to house staff.

Based on the above the maximum site density in regard to lodging units is as follows:

38 Historical Lodging Units
130.5 New Adaptive Reuse Lodging Units

168.5 Total Lodging Units Permitted by Zoning

2.4 Town of Amenia Comprehensive Plan

The Comprehensive Plan is a guiding document developed by the Town of Amenia to outline and provide a conceptual roadmap in achieving community goals and a collective vision. The latest version of the Town of Amenia Comprehensive Plan was adopted in July 19, 2007 and provides an in-depth review of the community and its historic, cultural, and natural resources. Included in this document is a specific "Vision" developed by community members, which could be achieved by working toward 6 specific "Goals". Upon further review of this document, it is clear that the improvements outlined in the Troutbeck – Adaptive Reuse Plan adhere to the vision established by the Town and does so by achieving the Town's stated goals. An analysis of the projects adherence to this document has been provided below:

2.4.A Comprehensive Plan – Vision

"We want Amenia to grow into a diverse, vital and business-friendly[1] community of agriculture, small businesses and homes all located in an appealing setting with great natural beauty[2]; a unique unity of six different, clean, well-preserved historic town hamlets (Amenia, Wassaic, Amenia Union, South Amenia, Smithfield, and Leedsville[3]); and amenities that attract residents, travelers, shoppers, diners and vacationers.[4]" – Town of Amenia Comprehensive Plan – "Vision Statement" pg. 5

1. The proposed Adaptive Reuse Plan represents an expansion of existing business that was approved by the Town of Amenia Planning Board and has been in operation since the 1980's. Prior to that, the site had been in consistent use by the various other property owners as an inn, residence, or conference center since its conception in the mid 1700's. Adoption of the Adaptive Reuse Plan, a multi-year expansion of existing local business operation, would be in adherence of the business friendly environment desired by Town residents.

2. The Troutbeck site has been renowned for its natural beauty since the early 1900's, with numerous specimen trees, three rivers/creeks, and abundance of other natural features (See Reference Document – Conservation Analysis) present throughout the site. As required by the Adaptive Reuse Plan, many of these features shall be preserved in a permanent 50% Conservation Easement

required for the sites adaptive reuse, while other shall be preserved through careful design of the individual phases of the proposed project, which shall require a site plan review and approval from the Planning Board prior to their construction.

3. The project is located at 515 Leedsville Road, which is within the Town of Amenia's Leedsville hamlet, as demonstrate by repeated reference throughout the document and by its presence within the HPO district and, which was designed for the "special protection of historic hamlets" as described in §121-14.2., hamlets are typically reserved for higher density, mixed-use development, supporting a variety of residential and commercial development.

   As demonstrated in the "2.3 Zoning Restrictions/Maximum Site Density" the Adaptive Reuse Plan is proposing to increase the residential and commercial density of the site, as is encouraged within hamlet areas, but not to the maximum allotment of units permitted by zoning. Density increase has been limited by the applicant to ensure the site maintains a relatively low-density, as compared to typical hamlets, which will ensure the site continues to be preserved and well maintained for residents and travelers alike.

4. Troutbeck is a leading destination for tourist and other travelers visiting Amenia and surrounding communities. The Adaptive Reuse plan outlines several improvements to lodging capacity and amenities, offering better facilities to out of town guests and travelers. An increase in the number of guests, will ultimately result in a greater number of travelers, shoppers, diners and vacationers visiting Amenia and the surrounding communities. Furthermore, the construction of 5 new residential units and the operation of a public restaurant will ensure Amenia residents benefit from the expansion as well.

2.4.B Comprehensive Plan – Goals

As stated above, six (6) goals have been developed by Town of Amenia residents to achieve their vision for the community. Said goals and an analysis of have the proposed project adheres to them have been provided below:

1. *To achieve a broad-based balance between the rural, historic, and agricultural beauty of the town as it is and the need for appropriate and smart economic growth and development.*

- The Troutbeck - Adaptive Reuse Plan has been designed to adhere to the enhanced development criteria outlined for the adaptive reuse of parcels and cultural/historic sites, which has been designed to preserve their significant historic characteristics and preserving their economic vibrancy.
- A minimum of 50% (21.75-acres) of the historic 43.5-acre site is required to be permanently preserved in conservation easement. 54.2% of the project site is proposed to be placed in Conservation Easement.
- The three (3) historic structures, Benton House, portion of the existing Manor House, and Delamater House, are proposed to be preserved and remain an integral part of

the site growth. Delamater House, currently derelict, is proposed to be preserved and restored into a restaurant for guest and community use.

2. *To establish a business-friendly attitude and commitment that:*
    a. *will attract and support the development of retail, small business, service businesses and even light industry,*
    b. *will create employment opportunities (especially for young people), and*
    c. *will increase tax revenues.*

- Adoption of the proposed Troutbeck Adaptive Reuse Plan will promote the Towns commitment to business-friendly development. Once fully constructed, the plan will:
    - Attract out of town guest who will support Troutbeck, a local business that has been in operation since the 1980's, as well as surrounding businesses who will benefit from the increase number of travelers and tourist staying at the site.
    - Result in an approximate increase in Full Time Equivalent staff working at the site from 54 to 67, with several employment positions being entry level, and therefore more accessible to young people.
    - Result in an increase in tax revenues from the numerous commercial structures being constructed, the increase in the number of full-time residents provided by the proposed staff housing, and visiting guess buying commercial goods and services in and around the site.

3. *To develop and encourage the growth of agriculture as a profitable business within the context of preserving open space*.

- The Troutbeck site maintains a publicly accessible restaurant, with a second dining guest and public accessible facility proposed within Delamater House. The existing restaurant operations use ingredients sourced from local farmers and purveyors. Usage of local produce and goods, increases the viability of local agricultural operations.
- Portions of the Troutbeck site are regularly hayed by local farmers. This practice shall continue as much of the existing agricultural fields present on the project site shall remain once the full buildout of the plan has been completed.

4. *To encourage more housing – low, affordable, moderate-income, high-end, and rental – to create a genuinely multigenerational community:*
    a. *a vital place with good schools for growing families, and*
    b. *a safe place for young people to grow up and to which they will want to return because of the employment opportunities they have here;*
    c. *an attractive, safe place for elderly people.*

- The commercial site currently provides 3 staff residences. Following the construction of Phase 3, and the completion of the voluntarily provided staff apartment building, the site will maintain 6 full time staff residences increasing the number of housing units within the Town.
- The complete buildout of the Adaptive Reuse Plan will provide an increase in the number of employment opportunities for local residents.

- Proposed and existing Troutbeck structures have been designed and provided with proper ADA facilities to ensure comfortable access for all guest, including the elderly staying at the site or coming to one of the two public accessible restaurants.

5. *To maximize our strengths and attract tourists, shoppers, athletes, lovers of good food and wine, historians, and other money-spenders.*

- The primary guest staying at the Troutbeck site would be out of town tourist and other "money-spenders", more of which would be accommodated by the proposed expansion.
- Troutbeck is situated in an area with numerous outdoor attractions (i.e: ski mountains, hiking trails, cycling routes, etc.) within close proximity of the site. An increase in lodging capacity, is likely to attract athletes and other outdoor enthusiasts to visit Amenia.
- Troutbeck regularly hosts events with artist, authors, historians, and other enthusiast and professional speakers. The site is also the venue for the Troutbeck Symposium; where students from surrounding schools gather to discuss and learn about the local and American history. All of these activities shall continue as part of the Adaptive Reuse Plan, continuing to attract a large diversity of people to the Town.

6. *To forge a strong positive public consensus about the future of Amenia so that we will live up to the commitments we make, enforce the laws/regulations we have, and consistently support community pride.*

- The proposed project has been developed to adhere to the zoning criteria outlined in the Town of Amenia Zoning Code. No variances to established zoning laws/regulations are requested at this time.
- Troutbeck regularly host events, such as the Troutbeck Symposium and frequent art exhibits, that are open to Amenia residents and neighboring communities. These events bring in visitors from outside and inside the Amenia community and are a source of pride for Troutbeck and attending residents.
- Phase 1 of the proposed Adaptive Reuse Plan outlines the construction of a gatehouse, which will monitor people entering the site, and provide an added layer of safety for the guest and community.

Lastly, the creation of the Historic Preservation Overlay (HPO), the overlay district that permits the Adaptive Reuse of the project site, was precipitated by the adoption of the 2007 Amenia Comprehensive Plan. The recommended creation of this overlay is outlined on pg. 64 of the Comprehensive Plan, with subsequent sections of this document outlining Troutbeck's historic significance, asserting that its inclusion within the HPO would ensure its protection.

2.5 Special Use Permit Compliance

The Troutbeck – Adaptive Reuse Plan is an "adaptive reuse" of an existing lodging/resort/conference facility, which is permitted with a special use permit from the Planning Board due to the sites presence within the Historic Protection Overlay (HPO) district. The proposed redevelopment would also be classified as a "major project", having exceed one or more of the minor project thresholds outlined in §121-74 "Definitions" of

the Town of Amenia Zoning Code. As such, the proposed project is required to demonstrate to the Planning Board how the project may affect the various Special Use Permit criteria outlined in §121-63 “Findings Require – Major Project Criteria”.

In order to analyze the projects compliance to Special Use permit criteria identified above, a “Special Use Permit Criteria Compliance Analysis” has been prepared by the attorney’s office of Mackey Butts & Whalen, LLP, identifying specific information provided within this document, the Phase 1 Site/Adaptive Reuse Plan Sets, and various other documents prepared for this application, which demonstrates adherence to Special Use Permit criteria. The document also notes the extensive number of studies, outside agency approval (i.e: NYSHPO-OPRHP, DCDOH), and conservation measures such as the conservation easement required for the development of the Adaptive Reuse Plan. The analysis demonstrates that the requested Special Use Permit for this application shall not negatively affect natural, scenic, municipal, or public resources and will continue to preserve the significant historical character/resources of the site. As shown by this document and all others provided as part of the development of the Adaptive Reuse Plan, the development as currently proposed is appropriate for the project site. A copy of the analysis has been included in Appendix F of this report.

2.6 Rural Siting Principals

In addition to compliance with the various other zoning provisions, the Troutbeck Adaptive Reuse Plan has been designed in general compliance with the recommended design criteria outlined in §120-31 “Rural Sting Principals” of the Amenia Zoning Code. Compliance to the recommended provisions have been outlined below:

A. *Wherever feasible, retain and reuse existing old farm roads and lanes rather than constructing new roads or driveways.*
    - The site contains five existing roadways and access drives which will be retained and/or improved as part of the adaptive reuse plan.
    - The majority of existing internal site access drives are proposed to remain. In instances where an existing access way will be rerouted to improve internal traffic circulation, former roadbeds will be reutilized to support proposed structures (i.e: Garden Cabins, Event Hall), reducing overall site disturbance.

B. Preserve stonewalls and hedgerows.
    - The site contains ±1,720 linear feet of stonewalls, which are found along the perimeter of the site. Existing stonewalls are proposed to remain with the bulk of them to be located in the Conservation Easement, ensuring their preservation.
    - As with the stonewalls, the site contains hedgerows along its ±6316’ perimeter. Proposed improvements are focused towards the interior of the site, ensuring their preservation. Additionally, many of these hedgerows are located within the conservation easement, which will ensure their preservation.

C. Avoid placing buildings in the middle of open fields.

- The site contains two existing fields, one in the north along NYS Route 343 and in the south along Yellow City Road. No structures are proposed to be located within said fields, having been sited towards the edge of said fields, towards the interior site, within close proximity of existing structures or in areas of prior disturbance.
- Improvements to be located in the middle of existing fields will subsurface sewage disposal systems, which will not be visible once constructed.

D. Use existing vegetation and topography to buffer and screen new buildings if possible, unless there are designed and located close to the road in the manner historically found in the Town.
   - As stated above, buildings have been clustered towards the interior of the site where existing/proposed structures, hedgerows and other forms of vegetation to remain, shall screen them form view.
   - In instances where existing vegetation is proposed to be removed (i.e: norther parking area), disturbance shall be minimized to retain portions of the existing vegetation and later enhanced with proposed landscaping improvements (See Visual Impact Analysis – Appendix E). The northern parking area is also proposed to be slightly recessed into the ground reducing its visibility.

E. Minimize clearing of vegetation at the edge of the road, clearing only as much as is necessary to create a driveway entrance with adequate sight lines.
   - All existing site entrances are proposed to remain.
   - 15’ of clearing will be provided from the edge of road, as recommended in the attached traffic report (See §4.5 Traffic/Parking, Appendix D - Traffic Impact Assessment)

F. Site buildings so that they do not protrude above treetops and crestlines of hill as seen from public places and roads.
   - Proposed structures have been sited towards the interior of the site where their visibility will be obscured by existing hedgerows, which, due them being located along the perimeter of the site and along existing internal drives, will also serve as a backdrop for proposed structures.
   - The tallest structure outlined on the Adaptive Reuse Plan (Garden Hotel) is proposed to be 2.5-stories (<35’), and as such shall not protrude above most existing mature trees. Proposed landscaping associated with each phase of development shall also grow into maturity, further obscuring structures.

G. Minimize crossing of steep slopes with roads and driveways.
   - The bulk of existing roadways are to remain and as such will not result in disturbance.
   - In instances where portions of existing roadways are to be reconfigured for vehicle circulation improvements, no steep slopes (>30%) are proposed to be disturbed.
   - In areas where development is proposed in close proximity to steep slopes (i.e: Creekside/Garden Cabins, Bakery Deck) piers will be utilized to reduce disturbance.

2.7 SEQR Process Summary

The Troutbeck – Adaptive Reuse Plan application was initially submitted to the Town of Amenia Planning Board in September 2021. The application outlined the "adaptive reuse" of the site, permitted under provisions provided in Historic Preservation Overlay (HPO) district. Initial assessments of the project began with the development and review of a Conservation/Historic Preservation Analysis, identifying historic and/or environmental features to be preserved under easement. Once the analysis was deemed complete by the Board and their consultants, a Conservation Findings statement was drafted by the Planning Board and adopted on February 9, 2022. The statement noted the specific and numerous conservation benefits offered by the proposed Conservation Easement to be incorporated into the Troutbeck – Adaptive Reuse Plan.

Following the adoption of the Conservation Findings statement, the project application and supporting information was circulated to involved agencies on March 16, 2022, including Dutchess County's Departments of Health and Planning, NYSDEC, and NYSHPO, who determined that the Town of Amenia Planning Board could serve as lead agency.

Following the determination of the Amenia Planning Board intent to serve as lead agency, project information was expanded to include a Project/SEQR Narrative as well as additional supporting documentation and plans, providing additional detailed development information for the proposed build out of the Adaptive Reuse Plan. Plans were revised and updated with additional information and studies to address comments provided by Amenia Planning Board and their consultants. Once the Planning Board and their consults determined at the October 12, 2022 that the application was complete, the first Public Hearing was scheduled for Troutbeck on November 9, 2022.

2.7.A Public Hearings

Following the scheduling of the first November 9 Public Hearing, the project began an intensive public comment period, where the applicant had received and responded to numerous public comments obtained during three separate planning board public hearing meetings occurring on 11/9/2022, 12/14/2022 and 2/8/2023 and through various correspondences and written statements provided by residents in between meeting. In an effort to be a responsive member of the community, the applicant has made numerous changes to the application, reducing the potential impact of a full build out of the proposed Adaptive Reuse Plan. To highlight the applicant's responsiveness to public comments, a summary of the various changes made to the application during the public comment period is summarized below:

- 1st Public Hearing (11/9/2022): Members of the public requested additional time to review the application stating that they were unfamiliar with the details of the project and that submission documents were not readily available or difficult to review on Town website.

Response: Applicant provided all application materials to town in a more easily distributable format. Members of the public were invited to visit the site and meet in person with applicant to discuss project and express their concerns. Plans and supporting documentation were expanded to provide additional supporting information on the proposed improvements.

- 2nd Public Hearing (12/14/2022): Members of the public reiterated their concerns over the length of time allotted for the review of the application. Public also expressed concerns regarding: visual impact within the SPO from NYS Route 343, well/aquifer concerns regarding anticipated water use, noise, high-density/# of proposed lodging units, historic resources, habitat degradation, construction activities, and the intent of Town zoning code/overlays/comprehensive plan.

  Response: Applicant again, worked with the Town to ensure all documents were more easily accessible to members of the public by providing them in a more easily distributable format. Again, members of the public were invited to visit the site and meet in person with applicant to discuss the project and express their concerns.

  In response to specific concerns of “density” and “water use” mentioned by members of the public, the applicant provided a statement declaring their intent to reduce the scale of the project by 33 lodging units by eliminating two buildings (32 lodging unit hotel, 1 cabin) in the next submission, which would reduce water use and density.

  The statement of use and supporting SEQR/Project information were also updated to include: compliance with the intent of the comprehensive plan and with zoning code/overlay district requirements (including a Visual Impact Analysis for development along NYS Route 343 within the SPO), limitation on the hours/days of construction, and additional mitigation and functional site improvements to reduce noise.

  Revisions also included sign offs from NYSHPO in regards to the preservation of historic structures, NYSDEC regarding potential impact to threatened/ endangered species, and numerous additional reports and studies, several of which provided additional information on the site existing/proposed water and wastewater utilities.

- 3rd Public Hearing (2/8/2023): Members of public reiterated several of the same concerns discussed at the 12/14/2022 Public hearing, the most notable ones being anticipated water use and the potential effects to the aquifer/adjacent properties’ wells, visual impact within SPO, and proposed density.
  Response: In support of the previously provided statement of use, the applicant submitted revised Adaptive Reuse and Phase 1 Site Plans reflecting the removal of the 33 lodging units (32 lodging unit hotel, 1 cabin). Plans were also revised to include a robust planted buffer and a realignment of a proposed parking lot within

the SPO corridor to reduce its visibility of improvements from NYS Route 343. Updates were also provided to all supporting document, demonstrating reductions in site density, anticipated water consumption/use, wastewater generation, traffic, disturbance.

In response to continued public concerns regarding anticipated water use, the applicant commissioned a hydrogeologic assessment from WPS USA, Inc., which concluded that the proposed development in its entirety will have no discernable impact on the regional aquifer.

- Additional Public Responses: In between Public Hearing meetings, the Town of Amenia Planning Board allowed for the submission (within a set deadline) of additional public comments in written form. The majority of public comment received between meetings were from professional consultants hired by members of the public to review the application. The applicant provided timely responses to public consultant comments, providing clarifications/revisions when needed.

During the 3rd Public Hearing, the Town of Amenia Planning Board voted to close the public hearing, citing a lack of new public comments, but allowed for additional 10-days of written public comments, to conclude on February 22, 2023.

3.0 PROJECT DETAILS

The proposed Master Plan outlines numerous improvements to be made to the existing facilities. The plan provides an outline for the carefully situated expansion of recreational, administrative, and additional lodging units to be constructed. The proposed plan will allow Troutbeck to begin expanding their existing facilities in order to better serve their guests and the community.

The site will use the plan to improve upon its existing hospitality and event services. The plan proposes expansion, construction, and improvement of several additional lodging facilities, administrative buildings, event spaces, recreational facilities, roads and parking lots, utilities, septic systems, and landscaping. The implementation of the Master Plan is phased so as to minimize the concurrent disturbance to the site and its guests.

3.1 Proposed and Potential Development Summary (EAF: D.1 Proposed and Potential Development)

Phases 1-8 of the Adaptive Reuse Plan (Master Plan) contemplate 85 total Lodging Units, equivalent to 50.4% of the total entitlement. The plan also calls for ±54.2% of the site to be held within a conservation easement, which will be controlled and maintained by the Housatonic Valley Association (HVA).

As discussed above, the proposed Adaptative Reuse Plan outlines 8 separate phases. As part of the Adaptive Reuse Plan SEQR review is being provided for phases 1-8, however, site plan approval is only being sought for Phases 1 at this time. Provided

below is a summary is further information regarding each proposed phase of construction.

3.2 Phase 1 – Site Plan Review (EAF: D.1.e)

As stated above there are 8 phases proposed as part of the Adaptive Reuse Plan, of which only Phase 1 shall be reviewed for Site Plan Approval at this time. Construction on Phase 1 is anticipated to occur during Winter/Spring of 2023.

Phase 1: As stated above, Site Plan approval is currently being sought for Phase 1 of the 8 phases outlined Adaptive Reuse Plan. Phase 1 consists of the following improvements:

- Construction of a new 1-story, ±766 SF gatehouse, with a covered deck/porch area (included in SF). An additional pull-off lane and gatehouse employee parking area, and gate will also be provided.
- Four (4) 1-story cabins, comprised of two (2) 1-bedroom cabins and two (2) two-bedroom cabin. The 1-bedroom cabins are ±698 SF with and the 2-bedroom cabin is ±1094 SF with each layout featuring a small covered deck (included in SF). A new 4 space cobblestone parking area, which includes ADA accommodations, and pedestrian path constructed on top of an existing roadbed will also be provided to support the cabins.
- Conversion of an existing maintenance garage/staff apartment into a guest amenity bakery/staff apartment. The conversion will also include a ±100.2 SF building addition, which will allow guest to purchase good from the bakery. This part of the proposed project will also result in the construction of deck overlooking Webatuck Creek.
- The improvement of the existing tennis court area by constructing an ±1,800 SF platform tennis court and ±350 SF Warming Hut.
- All associated septic, water, and electric services utilities, pedestrian connections, and all associated landscaping/lighting features.

Phase 1 shall also include the approval of an Adaptive Reuse Plan for the project site, which has been created to guide future development and establish full buildout conditions for the project once each of the proposed phases are complete. It should also be noted that following the approval of the Adaptive Reuse Plan, that the 43.5-acre project site will be placed under a conservation easement, which will prohibit further subdivision of the parcel. This subdivision restriction applies to all phases of the future development and will be maintained on the parcel in perpetuity. For additional phasing information, see below.

3.3 Phases 2-8

As stated above the Adaptive Reuse Plan outlines several improvements are proposed to be constructed in subsequent phases. Phases 2-8 will be reviewed as part of SEQR for the overall Adaptive Reuse Plan, but will need Site Plan approval from the Amenia Planning Board prior to their construction. As part of the Adaptive Reuse Plan process and in compliance with SEQR requirements, all phases of the proposed development

have been assessed to identify potential impacts (i.e: traffic improvements, species habitat assessments, water usage, land disturbance, etc.) that may occur following its complete buildout. As discussed below and demonstrated throughout this document, the proposed project, regardless of its phased nature, is not in exceedance of any thresholds established for SEQR impacts and will have no adverse environmental impacts or that identified environmental impacts will not be significant. A summary of these phases has been provided below:

3.3.A Summary of Phases

Phase 2: Phase 2 includes several minor exterior and interior building additions to the existing Manor House. The existing rear kitchen service/loading entrance shall be reconfigured for better access, which will include a minor ±192 SF building addition and reconfiguration of existing ingress/egresses. Phase 2 shall also include the enclosure and conversion of an existing ±635 SF deck/patio area into a conservatory dining space to provided additional dining area for guest use. Interiorly, this phase will include upgrades to existing kitchen equipment and the installation of three-phased electric.

Phase 3: Includes the construction of 1-story 3,150 SF Administration building to be used for office space and staff facilities, with additional basement storage, and 1-story 2,654 SF staff apartment buildings with 5 staff residences. This phase will also include the structures' septic, water, and electric facilities. Additionally, a 18-space parking lot, a 1-story tractor storage shed (1,050 SF) with 2 parking spaces, and the reconfiguration of an existing road is also proposed. Furthermore, this phase will also include the demolition of the existing Garden House (4 lodging units, 2 staff apartments), in order to prepare the site for Phase 5a-b of development.

Phase 4: Includes the construction of eight (8) cabins along an existing roadway. The cabins will be of similar size and style of the proposed Phase 1 cabins. This phase will include required all associated septic, water, and electric services. Additionally, this phase will also include the rerouting of existing roadways and the additional pedestrian pathways to better service the proposed expansion, as well as the construction of 55 space gravel parking area.

Phase 5a-b: Phase 5a includes the construction of a new 2.5-story lodging (14,374 SF) building, referred to as Garden Hotel. The new Garden Hotel, will provide an additional 33 lodging units with associated retaining walls and patio space.

Phase 5b, Garden Hall (event space) will commence once the Garden Hotel is completed and will include the construction of 1-story Event Space Building (±6,250 SF with a full basement), to be constructed where the former Garden Building (to be demolished in Phase 3) was located. The space will be used to host guest events, such as weddings and gatherings and will include a ballroom area (to serve in leu of existing facilities within the Manor House) able to accommodate ±225 guests, a kitchen, and an outdoor terrace. Once completed, events will be moved from the existing Manor House Ballroom to the Garden Hall. The new structure shall maintain

the same capacities and use as the existing ballroom space, but will provide them in facilities that have been designed specifically to accommodate events, incorporating features such as commercial/event fenestration and acoustical accommodations. Following the relocation, the existing restaurant space located within the Manor House will be relocated to the ballroom, so that the existing 92-seat restaurant area can be converted into public space (i.e.: lounge, common space, library) for guest use.

The proposed phase 5 improvements will include hookup/installation of all associated septic, water, and electric services, as well as aesthetic and functional improvements to roads, walkways, and the existing walled garden.

Phase 6: Phase 6 will include renovations to the existing Delamater House in the southern portions of the site. Currently, unused and in derelict condition, the structure will be renovated to preserve/restore the existing historically significant facade and to convert it into a bar/dining area to serve primarily as a guest amenity, but will also be open to the public. Improvements to the structure will also include the addition of ±1,200 SF conservatory dining area, and the construction of several outdoor dining terraces. The improvements will also include the installation of all necessary septic, water, and electric services, as well as additional landscaping improvements.

Phase 7: Phase 7 will include the construction of six (6) additional guest cabins units, similar in size and style as the Phase 1 Cabins. The development will include the creation a small pond area to serve as a guest amenity/aesthetic feature for the proposed cabins. This phase will also include several new pedestrian paths to access the structures and any necessary water, sewer, or electrical service improvements.

Phase 8: Phase 8 will result in the renovation and expansion of the existing pool facilities, currently assessed to have a capacity of 58 guest. The site previously maintained an indoor lap pool, which has since been demolished. The proposed renovations/expansion will reintroduce the indoor pool facility, as well as make improvements to the existing snack bar, and reconfigure/expand the pool itself. The new pool facility may increase the overall capacity of the area ±150 guests and will include additional septic system hookups and upgrades.

Following the completion of phases 2-8, each phase of which will require additional Site Plan approval(s) from the Planning Board, the site will contain a total 85 guest lodging units and 6 staff apartments.

3.3.B Project Phasing Benefits

Phasing for the full buildout of the Adaptive Reuse Plan has been prepared for several reasons and provides multiple benefits to both the applicant and in terms of environmental impacts. As discussed throughout this document, the Troutbeck site is an active commercial operation; offering lodging accommodations, dining, and conference facilities for guest and community members year-round. The benefits of this phased approach have been outlined below:

- Commercial business accommodation: The site is currently and will remain in active use throughout the duration of construction. Phasing allows for sections of the site, rather than the entire project parcel, to be cordoned off during construction. This allows the bulk of the site to continue to be utilized by guest during construction activities, while minimizing disruptions to programing and site accessibility.
- Certificate of occupancy: Smaller phases allow for a single or group of buildings and their associated improvements (i.e: stormwater management, grading, wastewater treatment systems) to be constructed, completed, and issued certificates of occupancy, without requiring all structures be completed at the same time. Smaller phases reduce the time need for construction, allowing the improvement to be constructed quicker, stabilized faster, and be put into use sooner than a full buildout.
- Regular reassessment by Planning Board: While the overall environmental impacts of the Adaptive Reuse Plan buildout are being assessed as part of SEQR review, individual Site Plan approvals, to be issued by the Planning Board on for each phase, allows continued monitoring of the proposed buildout. During Site Plan review, the Planning Board can request the applicant to make minor modifications (e.g.: construction sequencing/staging, preferred landscaping options, pedestrian accommodations), to proposed plans to reflect the comments or concerns made regarding previous phases of development, which may only be identified during the course of construction and its subsequent use. Phased construction also offers the applicant an opportunity to propose a reduction in SEQR impacts (i.e: reduction in lodging units/seats) if the need becomes apparent after the construction of the precedent phases.
- Seasonal disturbance: Phased construction also allows the applicant to coordinate construction activities with the off or winter seasons. As the site typically receives less occupancy during the winter season, construction activities will typically be focused during these months. This will reduce typical disturbances associated with construction (i.e: construction noise/traffic) as inclement seasonal weather will limit outdoor activities for guests and surrounding residents, providing less exposure to construction.
- Site Plan approval expirations: As outlined in §121-68.E(1): *"Site plan approval shall expire if the applicant fails to commence construction, to obtain the necessary building permits, or to comply with the conditions of the site plan approval within 18 months of its issuance".* As construction of the entire buildout Is anticipated to take ±6 years, the 18-month time frame is at odds with the applicant's construction schedule. By phasing site plan approvals, it spreads out the timeframe in which the applicant is required to obtain building permits for the proposed structures, conforming more with their intent to provide seasonal construction, without risking the possible expiration of their approvals.

In general, we believe the phased approach to the project approvals offers multiple benefits than a single-phase project where all work is to be completed at the same time. The proposed phasing will not increase, and in some instances will reduce, the overall level of site activity and as such should not be considered substantially different from a

single-phase project. As such the proposed phasing in terms of SEQR should be considered as having "No, or small impact." on the surrounding land.

3.4 Site Capacity/Operational Information

The site is currently used for conferences, dining, special events, lodging, retreats, and weddings, with events being hosted throughout the year. The majority of the site's larger events occur during the summer months (late May – early September), while the winter months are reserved for smaller indoor events. The facilities contain typical hospitality industry related amenities such as tennis courts, a pool, wellness center, walking trails, and other outdoor activities. Provided below is breakdown of the site's capacity based on existing and proposed structure:

3.4.A Site Staff

Currently the site maintains three (3) staff apartments (5 bedrooms)., for employees who reside on the grounds in order to provide essential services to guests and regular maintenance to the site and the existing facilities. One of the existing residences is located within a two-story Caretaker House, with garage facilities located on the first floor and a staff apartment on the second. The remaining two staff apartments are located within the Garden House, which also contains four lodging units. This structure will be demolished as part of the Adaptive Reuse Plan, with residences and lodging units being replaced by proposed facilities. Delamater House has also historically been used to house staff employees as single-family residences with 2-bedrooms, but is currently derelict and unused, with plans to convert it into a guest amenity as part of the adaptive reuse.

Troutbeck also employs numerous employees, which assist in maintaining the site and providing service to guests. As such, the numbers of employees on-site at any given time fluctuates depending on numbers of guest, seasonal capacities, and events. On average, the site employee:

53.1 Full-Time Equivalent (FTE)*

*FTE: employee's scheduled hours divided by the employer's hours for a full-time workweek (40 hrs. per. Week)

3.4.B Current Guest Capacity

As stated above, the site contains numerous existing facilities, which provided lodging and amenities to guests staying on site. The site also maintains an existing restaurant and event space, which operates out of the Manor House. As the site contains both lodging facilities and day-use facilities (i.e.: conference rooms, event space, etc.) existing site capacities have been provided for day-use, maximum number of people expected to be on site during the day, and overnight, maximum number of people expected to be on site overnight. A summary of all existing facilities contributing to site capacity has been provided below:

Existing Day-Use Capacity: 355 persons

- Manor House (lodging): 17 units = 34 guests (day-use/overnight)
- Manor House Ballroom (event): 225 guests (day use)
- Benton House: 17 units = 34 guests (day-use/overnight)
- Garden House (lodging): 4 guest units = 8 guests (day-use/overnight)
- FTE (staff): 53.1 staff (day use) = 54 staff (day use)

Existing Overnight Capacity: 87 overnight capacities

- Manor House (lodging): 17 guest units = 34 guests (day-use/overnight)
- Benton House (lodging): 17 guest units = 34 guests (day-use/overnight)
- Garden House (lodging): 4 guest units = 8 guests (day-use/overnight)
- Garden House (residence): 2 staff apartments = 4 overnight staff
- Bakery Building (residence): 1 staff apartment = 2 overnight staff
- FTE (staff): = 5-night shift staff (overnight)

*All other existing structures present on the project site are amenities to guests and do impact the overall capacity of the project site.

As previously mentioned, the site regularly hosts multiple large events each year where guests travel in from the surrounding area for day time and overnight events. These special events, retreats, and weddings primarily occur on the weekends during summer months, with a few annual events happening during the week. In general, there is overlap between the onsite uses. For instance, when a large wedding is booked, many of the lodging patrons would be guests to the wedding and Troutbeck may close down uses that do not compliment or may interfere with a major event to avoid conflict between guests and to make best use of the limited staff available.

3.4.C Proposed Guest Capacity

When fully implemented, the proposed Adaptive Reuse Plan will increase the number of guests and employees at the site. The majority of the increased capacity is in the form of guest rooms, but the plan also proposes to increase the event capacity for the site, as well as provide numerous site amenities for guest. In regards to the capacity, it is the applicant's intent to limit the number of people present on the site for several reasons:

1) It is the applicant intent that the site remains intimate for guest, providing a quiet and tranquil destination experience, which would not be possible if maximum capacity is achieved.
2) At no point will all proposed and existing structures be filled to maximum capacity due to parking, staffing, and multiple infrastructure limitations.
3) Many of the structures are programmatic; meaning that they will only be open on a part-time basis to provide specific activities for guest (i.e: Wellness Barn for Yoga Classes).

4) Large, logistically interdependent event spaces such as the Manor House ballroom and the Conservatory Dining will typically not operate concurrently. It is the intent of the applicant that activities/use not overlap in a way that would impinge on guest's experience or their access to facilities, amenities, or events.

As with the existing capacities outlined above, proposed capacities have been provided for day-use and overnight facilities to be constructed. The analysis breaks down capacities for Phase 1, as well as for the complete buildout of the site. A breakdown of proposed facility capacities has been provided below:

Proposed Maximum Day-Use Capacity (Phase 1): 359 persons

Proposed Maximum Day-Use Capacity (Full Buildout): 572 persons

Phase 1

- Manor House (lodging): 17 units = 34 guests (day-use/overnight)
- Benton House lodging): 17 units = 34 guests (day-use/overnight)
- Cabins – Creekside (lodging): 4 units = 12 guests (day-use/overnight) (assumes 2 two-bedroom unit for +2 guest capacity each)
- Manor House (event): 225 guests (day use) – *To be discontinued with construction of Garden Hall*
- FTE (Staff – Existing): 53.1 staff (day use) = 54 staff (day use) (Expanded in Full Buildout)

Full Buildout

- Cabins – Garden (lodging): 8 units = 18 guests (day-use/overnight) (assumes 1 two-bedroom unit for 2+ guest capacity)
- Garden Hall (event space): 225 guests (day use), 15 additional event staff (day use) (Staff not included in regular FTE staff)= 240 persons (day-use) (Replaces Manor House (event))
- Garden Hotel (lodging): 33 units = 66 guests (day-use/overnight)
- Delamater House (restaurant): 87 guests (day use)
- Cabins – Meadow (lodging): 6 units = 14 guests (day-use/overnight) (assumes 1 two-bedroom unit for 2+ guest capacity)
- FTE (staff): 62.1 staff (day use) (assumes 25% increase in staffing) = 67 staff (day use)

Proposed Maximum Overnight Capacity (Phase 1): 101 persons

Proposed Maximum Overnight Capacity (Full Buildout): 197 persons

Phase 1

- Manor House (lodging): 17 units = 34 guests (day-use/overnight)
- Benton House lodging): 17 units = 34 guests (day-use/overnight)

- Cabins – Creekside (lodging): 4 units = 12 guests (day-use/overnight) (assumes 2 two-bedroom unit for 2+ guest capacity)
- Bakery – Staff Apartment (residence): 1 staff apartment (overnight) = 2 staff
- Garden House (lodging): 4 guest units = 8 guests (day-use/overnight) = *To be discontinued with construction of Admin./Staff Residence*
- Garden House (residence): 2 staff apartments = 4 overnight staff
- Bakery Building (residence): 1 staff apartment = 2 overnight staff
- FTE (staff): = 5-night shift staff (overnight)

Full Buildout

- Cabins – Garden (lodging): 8 units = 18 guests (day-use/overnight) (assumes 1 two bedroom unit for 2+ guest capacity)
- Staff Residence (residence): 5 staff apartments = 8 staff (overnight) (ea. apt to count for 1.5 persons avg)
- Cabins – Meadow (lodging): 6 units = 14 guests (day-use/overnight) (assumes 1 two bedroom unit for 2+ guest capacity)
- Garden Hotel (lodging): 33 units = 66 guests (day-use/overnight)
- FTE (staff): = 9 night shift staff (overnight) (1.5x existing overnight staff assumed due to extra lodging units)

*All other existing/proposed structures are amenities to guests and do not impact the overall capacity of the project site.

4.0 PROJECT OPERATIONS – TECHNICAL INFORMATION (EAF: D.2)

Provided below is additional information regarding existing conditions and proposed development associated with the buildout of the Adaptive Reuse Plan.

4.1 Earthwork/Grading (EAF: D.1.b & (EAF: D.2.l)

The provided Adaptive Reuse Plan proposes the construction of multiple projects, many of which will require earthwork and grading in order to be completed. Associated disturbance for each phase of development will be reassessed during the site plan review for each phase.

Phase 1 Disturbance

Total Anticipated Disturbance for Complete Buildout of Phase 1: ±2.76-acres

Full Build-out Disturbance

Total Anticipated Disturbance for Complete Buildout of Adaptive Reuse Plan: ±14.03-acres

*A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared for Phase 1 and for the Full Buildout of the Adaptive Reuse Plan.

The proposed earthwork will be contained on-site during construction and any necessary cut/fill will be completed using on-site resources with no export form the site. It is anticipated that all grading completed as part of the proposed Master Plan projects

will be a balance cut and fill whenever possible. Individual earthwork/grading plans will be provided during the approval process for each phase of the proposed Master Plan.

Construction Activities – Hours of Operation

Proposed earthwork and construction activities will occur during typical construction hours:

Monday – Friday: 8:00AM – 6:00PM
Saturdays: N/A
Sunday: N/A
Holidays: N/A

Pond Construction (Phase 7) (EAF: D.1.h & D.2.a)

A pond is proposed to be constructed in Phase 7 of the Adaptive Reuse Plan. It is anticipated that the pond shall be ±0.46-acres and shall be created using ground water and surface runoff. Impounded shall be provided using earth and rock damming techniques and resulting approximately 1.2 million gallons of retention. Additional details shall be provided once Site Plan review is commenced.

4.2 Water Supply (EAF: D.2.c)

Existing

Troutbeck currently utilizes a series of on-site wells to provide their facilities with water. The existing Manor House system has recently been upgraded to a Public Water Supply System (Troutbeck PWS ID #NY133035) and distribution from the system has been extended to several other onsite buildings that required the public water supply. The Troutbeck site currently has a Public Water Supply served by 2-wells capable of producing 35 gpm and 22 gpm respectively. This equates to an available well capacity of approximately 31,680 gallons per day.

Proposed – Phase 1

As part of construction for Phase 1, all existing water supply utilities will be retained. The proposed Gatehouse and Phase 1 Cabins A-D shall be connected to existing Benton House water supply facilities and utilize approximately 672 gallons per day. The existing maintenance garage to be converted into a bakery, shall use existing connections for its water supply. With the conversion of the garage into the bakery, no increase in water is anticipated as baking activities are already conducted within the Manor House, which utilizes the same water supply system as the existing garage/staff residence. As such, while there will be a minor increase in water usage for Phase 1, only minor distribution system improvements will be required in order to serve the Phase 1 buildings.

Proposed – Full Buildout

Upon completion of the proposed Master Plan build-out, it is anticipated that all new and/or upgraded buildings will be connected to existing public water supply, as needed. As the proposed Master Plan is expected to replace or upgrade many of the existing

structures with new facilities, the majority of the existing water utility lines are expected to remain. Since the existing water supply system is more than capable of producing sufficient water for the property, no major improvements to the water supply are required. Some distribution system improvements may be required to provide the required storage and flows for future phases. Water utility plans will be developed and submitted to Health Department approval, as part of the approval process for each individual phase of the project. The anticipated water use of the complete buildout of the Adaptive Reuse Plan is 20,580 gallons per day. A breakdown of anticipated water use is included on the Master Utilities Plan Sheet. A report providing additional information on the anticipated improvements to be made to the existing water supply system has been prepared and included in Appendix G of this document.

4.3 Wastewater (EAF: D.2.d)

Existing

The wastewater generated on-site is handled by various subsurface sewage disposal systems, located throughout the parcel. The sewage collection systems use both gravity and several effluent pump stations. The existing systems have capacity to treat approximately 5,000 GPD, treating the existing flows, without signs of failure.

Proposed – Phase 1

As part of construction for Phase 1, the proposed gatehouse and cabins will be connected to a new subsurface sewage disposal system, which will require approval from the Dutchess County Department of Health. The new system will provide 672 gallons per day of wastewater treatment for both the cabins and the gatehouse. The bakery will receive a new subsurface sewage disposal system in the northern portion of the site, where the bulk of treatment facilities for subsequent phases are proposed to be located.

Proposed – Full Buildout

Some of the current wastewater treatment systems treatment capacities and locations are not suited to properly handle the flows anticipated from the expansions and improvements, so all new buildings and some of the existing buildings will have new sanitary disposal systems provided with the project. The NYSDEC 2014 “Design Standards for Intermediate Sized Wastewater Treatment Systems” was used to determine the calculated hydraulic load of the proposed full build of the Master Plan. Based on the NYSDEC design standards the calculated expected peak hydraulic load for the facility at full buildout is approximately 20,580 gallons per day, which includes a 20% reduction for using water saving fixtures in new construction. Wastewater Calculations are provided on Sheet 5 of the Troutbeck – Adaptive Reuse Plan Set.

The vast majority of new subsurface treatment facilities will be located in the northern most portion of the site. Wastewater treatment facilities for subsequent phases of the project are expected to be subsurface sewage disposal systems. Wastewater treatment facilities are planned to be constructed in phases with each phase being connected to separate subsurface disposal system. A report providing additional information on the

phased construction of proposed subsurface sewage disposal systems has been prepared and included in Appendix G of this document.

4.4 Stormwater Management (EAF: D.2.e)

In terms of Stormwater management and pollution prevention, the overall implementation of the Adaptive Reuse Plan is a commercial development and will disturb ±14.03-acre of land or vegetation and result in approximately ±3.51-acres of additional impervious surface area for a total of ±8.10-acres. Final disturbance for individual phases shall be assessed and provided adequate treatment.

Phase 1 of the proposed project is anticipated to generate ±2.76-acres of disturbance for the site. Due to the site exceeding the 1.0-acre threshold, a SWPPP will need to be developed for this phase. For the Gatehouse, a bioretention area with a perimeter pea gravel diaphragm shall be provided to collect stormwater generated by the new impervious areas. The cabins will be provided with disconnected roof leaders which will be directed towards and infiltration basin. No additional stormwater practices are proposed for the bakery conversion as the area to receive the building addition is already impervious with soil restoration of an existing gravel parking area to be provided.

The project is therefore subject to the requirements of the New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity. A new General permit was established at the start of 2020 by the NYSDEC which is named GP-0-20-000. As part of obtaining permit coverage for this project, a report will be developed that is to be used as a design tool and guide for the property owner, site contractor, and the Town of Amenia. As part of obtaining permit coverage under the SPDES GP-0-20-000 a full Storm Water Pollution Prevention Plan (SWPPP) will be prepared.

This Troutbeck project site is classified as a "Redevelopment Project" which carries specific design criteria from the NYSDEC that regulate the development of this site. The redevelopment activities are subject to the design requirements of Chapter 9: Redevelopment Projects, and the new development activities are subject to the design requirements of Chapter 4: Unified Stormwater Sizing Criteria of the NYSDEC Stormwater Management Design Manual, 2020 (SWMDM).

The following components will be part of the Stormwater Pollution Prevention Plan:

- SWPPP Report with Hydrologic and Hydraulic analysis
- Pre-Developed Drainage Plan
- Post-Development Drainage Plan
- Grading Plan
- Stormwater Details
- Erosion & Sediment Control Plan

The effects of the stormwater produced as a result of the proposed projects will be mitigated using the latest stormwater and sediment control practices. A revised SWPPP will be prepared prior to completion of each individual project. Each version of the SWPPP will be designed in order to be compatible with previously completed projects and will take into account previously utilized stormwater control measures. Each Stormwater practice installed as part of the individual projects will be incorporated into the overall Stormwater Pollution Prevention Plan that will be kept active until such time as all of the proposed master plan work is completed.

4.5 Hydrogeology

Hydrogeology pertains the study of groundwater, which is directly related to a site's water supply, wastewater treatment, and stormwater management facilities. With the site containing two significant rivers/creeks and one ephemeral stream, and being located within the Town of Amenia's Aquifer Overlay District, preservation of existing hydrogeological resources is a critical part of the implementation of the Troutbeck Adaptive Reuse Plan. As demonstrated throughout this document significant measures are being taken as part of this application to protect the hydrogeological resources of the site, neighboring parcels, and the Town of Amenia as a whole, including:

- A proposed lodging unit density 50% less than what is permitted by HPO Adaptive Reuse provisions; reducing the anticipated water draw that would be required to support a full 100% buildout.
- The projects compliance with the Aquifer Overlay District's requirements, which have been prepared and applied to all town parcels to protect the Town's Primary Valley Bottom and Upland Aquifer(s).
- The placement of all two-existing river/creeks and portions of an ephemeral stream located on the parcel under the protection of a conservation easement to be held by the Housatonic Valley Association, a conservation organization that specializes in the protection of land and waterways that are a part of the Housatonic watershed.
- The widespread use of stormwater management practices for all phases of development.
- The application of water-saving fixtures on all new development.
- The widespread use of permeable surfaces to reduce stormwater runoff and pollutants typically associated with impermeable surface cover (e.g. Asphalt)
- Use of low impact stormwater treatment techniques and stormwater infiltration.

4.5.A Hydrogeological Assessment

To further analyze the complete buildout of the Adaptive Reuse Plan and any potential impacts that's its implementation may have on the site's or adjacent parcels' hydrogeological resources, professional hydrogeologist, Thomas P. Cusack, LEP, PG(NY), with WSP USA, Inc. was commissioned to prepare a Hydrogeologic Assessment analyzing how the proposed development may effect said existing hydrogeologic resources. A copy of this assessment has been included in Appendix H.

The assessment provided by WSP reviewed the anticipated water demand of the proposed development as well as the source of said water. Proposed conditions were then compared to existing hydrogeological conditions, which included a regional and site-specific review of the hydrogeological setting (i.e: water sources, topography), an analysis of soil conditions/types, and the typical sand/gravel and/or bedrock aquifers found in this region.

The analysis also reviewed groundwater availability, which concluded that the average recharge rate of the project site is ±67,969 gpd on an average day, reducing to 44,179 gpd under drought conditions. He notes that both figures are substantially greater than the anticipated 20,580 gpd of water draw expected for a full buildout of the Adaptive Reuse. Mr. Cusack also reviewed the proposed installation of stormwater management/infiltration practices outlined in the Stormwater Pollution Prevention Plan prepared for the site, designed per NYSDEC standards, which will remove pollutants related to stormwater runoff, ensuring minimal impact on regional surface-water and groundwater quality. The report summarizes:

- Existing water demand will increase from 10,972 gpd (7.6gpm) to 20,580 gpd (14.3 gpm), which is less than the 35gpm (Well #1) and 22gpm (Well #2) provided by the existing wells.
- Proposed anticipated water draw of 20,580 gpd is less than the ±67,969 gpd (44,179 gpd under drought conditions) that the site can naturally recharge.
- That 85% of water withdrawn from the aquifer is returned to the groundwater system via onsite subsurface sewage disposal systems and that the actual water consumption is estimated to be 3,087 gpd.
- That the SWPPP prepared for the project site will provide water quality treatment to stormwater, removing particulate and sediments from runoff.
- That the demonstrated (via perc + deep test) +7.5’ (no groundwater encountered) of separation from groundwater, is greater than the 3’ of separation required for chemical, biological, sorption, and physical processes of pollution removal.

The assessment concludes that the proposed build-out of the Troutbeck – Adaptive Reuse Plan will have no discernible impact on the regional aquifer. The assessment also states that the proposed project will have no significant direct or indirect effect (either short-term or long term) on the regional bedrock aquifer or neighboring wells.

4.6 Traffic/Parking (EAF: D.2.j)

In order to evaluate these conditions, traffic engineers Creighton Manning Engineering, LLP was commissioned to conduct a Traffic Assessment for the full buildout of the project site. A copy of this assessment has been included in Appendix D of this report.

Throughout the duration of the study, field investigations were conducted at the Troutbeck site, in order to document existing traffic patterns along major roadways in and around the site. The investigations recorded traffic patterns in and around the site, documenting average speed, existing site lines, turning movements, and general traffic flow. Investigations were conducted during a typical operational day

for the site and also during a weekend wedding, which would be representative of many of the events hosted at Troutbeck.

The study also examined the proposed multi-phased project in its entirety, and provided estimates for how Phase 1 and the complete buildout of the proposed Adaptive Reuse Plan would affect traffic flow in and around the site. The study concluded that the project would generate an addition 57 new vehicle trips during PM peak hour (75 total trips) and 78 new vehicle trips during Saturday peak hour (103 total trips). increase in traffic that would be generated by the proposed conditions would not affect Level of Service (LOS) for the existing roadways, which would continue to operate with a LOS of A/B, the highest achievable rating. As such, the report does not recommend infrastructure improvements for Yellow City/Leedsville Roads, nor would the proposed buildout of the Adaptive Reuse Plan require additional improvements to be made for the surrounding intersections. The report did outline that the Troutbeck Lane-Leedsville Road primary entrance did not contain sufficient sight lines for left-turning vehicle leaving through this entrance. As such, circulation improvements shall be implemented to alleviate this concern. Additional information regarding circulation has been provided below.

The above referenced report was prepared for an earlier version of the Adaptive Reuse Plan, which proposed an additional 32 overnight lodging units, as well as five (5) Phase 1 cabins instead of four (4). Following the development of the current layout, which reduces density and the number of guests that can stay at the site compared to previous versions, Creighton Manning Engineering, LLP, provided a “Trip Generation Update” report, assessing the reduction in units and other minor modifications from the previously proposed Adaptive Reuse and Phase 1 Site Plans. The reassessment found that the reduction will reduce the number of trips during peak hours of service by 13 fewer trips during PM peak hours and 6 fewer trips during Saturday peak hours. The report reaffirmed that LOS will continue to operate at LOS A/B and that no specific site mitigation in regards to traffic is required. A copy of this report has been included in Appendix D

However, the initial report did outline several improvements that would need to be made in order to ensure adequate traffic flow for vehicles entering/exiting the site. The recommended improvements will be provided during Site Plan review for each phase, with the bulk of the improvements to be implemented during Phase 1 construction.

4.6.A. Phase 1 Improvements

As recommended in the traffic report generated for the site, the following traffic improvements will be provided as part of Phase 1 construction:

- The existing Troutbeck Lane-Leedsville Road entrance shall be designated the primary entrance for guests.
- Departing guest will be directed to exit the site via the Spingarn-Leedsville Road entrance (formerly Service Entrance), which maintains sufficient sight lines for egress, by Gatehouse employee(s).
- Gatehouse to be constructed in Phase 1 which will control traffic flow entering/exiting site and will direct exiting guests to Spingarn-Leedsville Road egress.

- augmentation of interior wayfinding to direct egress traffic to Spingarn-Leedsville road exit (phase 1-3).
- Clearing/maintenance of vegetation 15' from edge of existing Leedsville/Yellow City Road travel way at entrance(s) to maintain adequate site lines.
- An existing three-way intersection located ±530' south of the Troutbeck Lane-Leedsville Road entrance shall be replaced with a NMUTCD W2-1 Crossroads Sign (Pending Dutchess County Department of Public Works approval.) to alert drivers of the existing entrance.
- Additional signage will be placed at yellow City Road-NYS Route 343 Intersection identifying service/administration entrance on Yellow City Road.

4.6.B. Future Phased Improvements

As the proposed development is to be phased additional improvements will need to be provided in subsequent phases. The most notable changed, in regards to traffic patterns and internal site vehicle circulation. proposed as part the Adaptive Reuse Plan, occurs in Phase 4 with the reconfiguration of Spingarn Road, which runs through the middle of the site and connects to the existing Leedsville Road "Service Entrance". As part of this phase of development, additional traffic circulation improvements will need to be made in order to support the proposed change. These improvements have been outlined below:

- Following the reconfiguration of Spingarn Road, non-resident day-use event traffic (i.e: offsite guest attending an event for the day) associated with the Garden Event Building shall be directed to the Spingarn-Leedsville Road entrance (formerly Service Entrance).
- Additional signage shall be placed at the Spingarn-Leedsville Road entrance to direct day-use guest to the appropriate entrance/parking facilities.
- During phased site plan approval, interior wayfinding signage shall be reassessed and updated to direct people to the appropriate buildings and egress points.
- Throughout the implementation of the Adaptive Reuse Plan, the applicant shall work with Dutchess County Department of Emergency Response to better delineate existing/proposed roadways and establish building numbers/addresses for all existing and proposed structures.

Based on the attached Traffic Assessment's findings and recommendations, the traffic/circulation improvements outlined above should sufficiently accommodate both the Phase 1 and Full Buildout of the project site.

4.6.C Pedestrian/Bicyclist

Typically, guests will walk within the grounds of the property to make use of the various guest amenities on site. However, guests do not usually exit the property on foot to go to destinations outside of Troutbeck. When guests do exit the site to go to other destinations in the surrounding area, they are most often using their vehicle to do so. There are bikes made available for use by guests. Troutbeck does offer guests self-guided tours, but the majority of cycling beginning at Troutbeck are guided bike tours

led by a professional bicycling tour company. In these instances, guests are required to comply with the same state traffic rules and regulations that apply to all people using public roadways. As part of the implementation of the Adaptive Reuse Plan, all guest and catered bicycle traffic/tours will be instructed to depart the Troutbeck site via the northern Yellow City-Spingarn-Leedsville Road entrances, which maintains the best sight lines of all existing Troutbeck entrances. These circulation improvements will ensure the safety of pedestrians and cyclists in and around the Troutbeck site.

4.6.D Parking

Troutbeck currently has access to several improved parking facilities, totaling 165 parking spots. During normal hours of operation, designated parking spots are utilized by overnight and event guests. Separate staff parking is provided around the Manor House. During special events, the existing spaces are supplemented with overflow grass parking areas.

The implementation of the Adaptive Reuse Plan will create additional parking areas to supplement existing facilities. Based on the Town of Amenia Zoning Code §121-38 “Off-Street Parking and Loading” additional parking spaces will be required. A breakdown of the recommend spaces for Phase 1 and the complete buildout of the site, has been provided below:

4.6.E Proposed Uses

Recommended number of parking spaces are based on use for the project site. There are a number of new facilities proposed as part of the adaptive reuse plan, but many are to be used as guest amenities and would therefore not require additional parking spaces to facilitate their use. As such, the assumed number of required parking spaces are based on the following:

- Lodging Units: 85 Units X 1 Space Per Unit = 85 Spaces
- Residential Units: 6 Staff Apartments X 1.5 Space Per Unit (Multifamily) = 9 Spaces
- FTE Staff: (67 Staff X 1 Space Per Employee) X .75 (Assumed Staggered Scheduling, Which Frees Spaces for Later Shift) = 50 Spaces
- Event Space (Public Assembly): (240 Occupants (Guest + Additional Staff) / 1 Space Per 3 People) X .55 (Assumed Lodging/Event Use Overlap - Guest Staying on Site Make Up 45% Of Event Building Capacity) = 44 Spaces
- Restaurant (Delamater): 87 Seats / 1 Space Per 3 People = 29 Spaces

Total Required Parking Spaces = 217 spaces*

In order to accommodate recommend number of spaces generated by the proposed uses, the Adaptive Reuse Plan outlines a mix of grass, gravel, and asphalt parking areas to show that the site maintains sufficient spaces to accommodate anticipated parking requirements. A breakdown of the proposed parking areas has been provided below:

- Creekside Cabins: 4 Spaces

- Gate House: 2 Spaces
- Benton House Parking: 18 Spaces
- Admin/Staff Housing/Shed: 20 Spaces, (2 Spaces within Tractor Shed)
- Garden Hotel/Event Parking: 55 Spaces
- Manor House Service Yard Area(S): 35 Spaces
- Manor House Adjacent Parking: 20 Spaces
- Delamater Parking Area(S): 34 Spaces
- Grass Overflow Parking Area(s)(Valet): 60 Spaces**
- Bus Parking Area: 7 Spaces or 35 Equivalent Spaces*** (4 shuttle spaces in Admin Parking Area, 3 shuttle spaces in front of Garden Hall)
    - 1 Bus Space = 5 Reg. Spaces. Assumed

Total Parking Spaces Provided = 283 spaces

Phase 1 of the proposed development includes two small parking areas to accommodate the proposed cabins and gatehouse. Five (5) parking spaces are required for the proposed development:

- Lodging Units: 4 Units X 1 Space Per Unit = 4 Spaces
- Gatehouse: 1 Employee x 1 Space Per Employee = 1 Space

Cabin parking will be a small four (4) stall cobblestone parking area directly adjacent to the cabins. The Cabin A (ADA Accessible Cabin) parking space will be provided with an unloading area which will serve as an ADA parking space if needed. The gatehouse will be provided with 2 additional parking space next to the structure, although only 1 will be required. The proposed bakery and tennis facilities will not require additional parking spaces as they will act as amenities for the guest who would already be utilizing other parking spaces.

Specific design details for parking facilities required for phases 2-8 of the Adaptive Reuse Plan shall have their designs finalized as part of Site Plan approval.

*Recommend Parking Spaces: This does not reflect expected number of parking spaces to be utilized by the proposed project, but shows sufficient parking facilities based on established parking calculations provided in the Zoning Code. It is unlikely, that the site will achieve maximum capacity during an event, where all proposed parking space will be utilized.

**Banked Parking Note: It should be noted that the above total number of parking spaces to be provided is not anticipated for the site based on the assumption that guest attending special events will also be staying within the proposed lodging units, reducing the overall number of guests attending the event who we be coming from outside of Troutbeck facilities.

These maximum occupancy events are only expected to occur a couple of times throughout the warmer months of the year (May-Mid September). On average, the typical special event hosted at Troutbeck will occur on the weekend (Friday-Sunday) meaning that the site will not near maximum capacity during weekdays. As such, the provided 60 Grass Overflow/Banked parking spaces will only be utilized if required.

***Bus Parking Area: A small grass overflow bus parking area has been provided for the project site. When the site is being used to host large events (i.e: conferences, weddings, etc.) not all of the attending guest are anticipated to stay onsite. In these circumstances, many of the guests are staying

in off-site lodging accommodations will use smaller “party” buses, which can typically carry 15-20 people and require a 10’x30’ parking space. It is assumed that 1 bus is equivalent to 5 standard spaces (15 guest / 1 space per 3 people (public assembly use)) and as such 7 spaces is equivalent to approximately 35 additional spaces.

4.7 Energy Demand (EAF: D.2.k)

The proposed implementation of the Adaptive Reuse Plan will generate an additional demand for energy (due to construction of additional structures) which will be supplied by the existing grid and local utility provider. The estimated annual electricity demand during normal operation of the proposed development is ~2-3 million kilowatt hours.

The project site is divided into two separate areas by the Webatuck Creek. Both the eastern and western sides of the project site are served by power lines entering from the east along Leedsville Road, which then cross Webatuck Creek via over headlines to serve the western side of the site. As part of the implementation of the Adaptive Reuse Plan, the existing power facilities shall be reconfigured so that the eastern portion of the site will be provided electricity off of Leedsville Road and the western portions will receive a new connect off of Yellow City Road. Improvements include the burying of utilities to better suit the scenic character of the site.

All proposed electrical facility improvements shall be designed and installed by New York State Electric and Gas Corporation.

4.8 Noise (EAF: D.2.m)

Upon completion of the proposed Adaptive Reuse Plan, noise levels are expected to remain the same as there is no proposed change of use. In some instances, noise levels may be reduced by the implementation of functional site improvements and noise mitigation measures being offered by the applicant. These improvements/mitigation measure have been outlined below:

4.8.A Site Function Noise Improvements

- No increase to current ballroom capacity is proposed. The new event building will replace the existing ballroom altogether and accommodate the same number guests.
- The current ballroom is fitted with residential quality fenestration and has no acoustical properties designed to mitigate noise spillage. The proposed event hall is designed with acoustics and noise spillage in mind.
- The existing event space within the Manor House, at its closest point, is approximately ±1,050’ from the nearest Troutbeck Community residence (#186555). The new event structure will move this activity farther north, further east, and ±1,400’ away from the same residence.
- A conservatory enclosure is proposed for the “Manor House” dining terrace. It will enclose that space and serve to mitigate noise spillage which is, in any case, to the north and mitigated by a steep upward embankment.
- Once completed, deliveries to the Manor House will egress from Spingarn Lane to Leedsville Road thereby reducing traffic noise.

- A new loading dock and enclosure is proposed for the service point at the Manor House with the objective of concealing related activity and reducing associated noise.
- Once completed, deliveries to the event hall will egress from Spingarn Lane Leedsville Road reducing traffic noise.
- The new event hall design includes a loading dock and enclosure with the objective of concealing related activity and reducing associated noises.

4.8.B Additional Noise Mitigation

In addition to the functional improvements outlined above, the applicant shall also provide the following noise mitigation measures:

- Limiting of Pyrotechnics. Currently, the site has yearly pyrotechnic/fireworks displays for guests and neighbors. Due to noise concerns expressed by neighbors, the required conservation easement will include a prohibition on the use of pyrotechnics at Troutbeck indefinitely.
- Existing and proposed tennis facilities shall be provided with acoustical barriers around their perimeter's, which will dampen noise generated by guest playing tennis.

4.8.C Construction Noise

As outlined in the Adaptive Reuse Plan, the proposed improvements are to be constructed in phases, with a complete buildout anticipated by 2029. During this time the site will continue to operate in between and during the construction of each phase. It is anticipated that additional noise, outside of typical operation, will be generated during these construction activities. In order to mitigate disturbance to both guest and adjacent properties, the following measures shall be taken to reduce construction noise:

- Construction activities will be limited to Monday-Friday between the hours of 8:00am – 6:00PM.
- No construction activities shall occur either Saturday or Sunday.
- Construction activities shall be focused between late fall to early spring, when outdoor activities/access for both Troutbeck guests and neighboring property owners are limited by inclement weather. This construction window also coincides with the seasons where local wildlife is less active or dormant.
- Construction shall be phased, occurring over a number of years. This ensures that construction noise shall not be continuous for the duration of the buildout. This also allows the applicant to reassess, based on community feedback received during the course of construction.

In addition to the noise mitigation measures outlined above, the site will abide by all the laws outlined in §80-2 'Prohibited Noises; enumeration' of the Town of Amenia Town Code. Violation of said laws will result in appropriate disciplinary action from the Town, as outlined in the above-mentioned section.

4.9 Lighting (EAF: D.2.n)

Lighting will be provided for internal access drives, parking areas, pedestrian pathways, and security lighting around buildings. Parking areas shall be designed on a phase by phase basis. They will be adequately screened using vegetation, grading and fencing to ensure the headlights of parking cars are mitigated from neighbors and guests. All proposed light fixtures have been designed to follow Dark-Sky Guidelines, which include the following provisions:

- Lighting has been designed using small stationary light fixtures that are fully shielded and emit no light above the horizontal plane.
- There shall be no sag or drop lenses, side light panels, or uplight panels
- Site lighting will be configured only where needed to light specific paths, parking areas, and accessways to buildings with no light spillage to neighboring parcels.
- Light fixtures will not exceed height restrictions outlined in Town of Amenia Zoning Code.
- All fixtures will be designed to have 3,000 degree or lower kelvin color temperature.

By following these lightings standards, the proposed lighting will have no impact to adjacent offsite areas.

Fixtures have been identified for Phase 1 in the Site Plan Set. Future improvements will include fixtures that comply with the above referenced provisions, with the exact location of said fixtures to be identified during phased Site Plan approval.

4.10 Odor (EAF: D.2.o)

Troutbeck has existing restaurant and bakery facilities, located within the Manor House, that produces food odor during normal operation. Said food related facilities have been in operation since the site was first developed and later formalized in the approved 1979 Special Use Permit. Proposed restaurants and bakery facilities within the Event Building and Delamater House will also emit food odor during the same hours as the existing restaurant/baker facilities, but due to their part time use as a guest amenity and distance from neighboring residences (closest facility to existing residence: Delamater House, Dining Use, ±410'), shall not exceed current odor levels.

4.11 Solid Waste (EAF: D.2.r)

Currently the site's lodging and food and beverage operations produce approximately 1.6 tons of solid waste / single stream recycling a week, which is disposed of by Welsh Sanitation Services 2 times per week.

Once the buildout of the proposed Adaptive Reuse Plan is complete, the site is expected to generate a total of 2.8 tons of solid waste/single stream recycling a week. The increase will mostly be produced by the anticipated increase in food and beverage consumption from the additional guest staying at the site, as the increase in administration and lodging waste is generally lighter and less bulky compared to food/beverage waste. In response to the anticipated increase in waste, additional

pickups and dumpsters will be provided. Phase 1 is anticipated to create a negligible increase in operational waste due to its limited scope.

In order to reduce the amount of waste generated, the site has already implemented a zero plastic service policy, eliminating single use cutlery and other guest supplies. Recycling and composting through local partner organizations will continue to be utilized to dispose of organic waste on site during operation and trucking to Dutchess County Resource Recovery will be provided for other nonhazardous solid waste. All waste management and recycling service are anticipated to continue and be scaled accordingly to accommodate the additional waste.

During construction, solid waste generation disposal is anticipated to temporarily increase during the course of construction. It is anticipated that construction activities, especially during particularly active construction periods, will produce ±8 tons of solid waste weekly. This waste will consist of construction debris, and will vary significantly depending on the construction activity (i.e: site work, framing, finishing, etc.) taking place that week. During construction, said waste will be placed in a roll off dumpster and, when filled to capacity, taken off site and disposed of by the contractor/waste disposal company. Similar levels of construction waste is anticipated for all phases, but duration of said waste generation will vary depending on the length of construction.

4.12 Fire Safety

As part of the proposed overall project several fire safety measures will be utilized in order to account for the proposed expansion. In a meeting with the Amenia Fire Company on June 6th. 2022, several fire safety measures were recommended as part of the implementation of the Adaptive Reuse Plan. In order to address these comments and concerns the following fire safety measures will be implemented during the buildout of the master plan:

- All proposed roadways and road alterations within the Fire Safety Development Area will be designed to have a width of 16 feet, with 2 feet of additional clearance on either side, and unobstructed vertical height of 13.5 feet. All roads will be designed to support a load weight of 75,000 lbs.
- Future development will include dry hydrant access to an existing/proposed (i.e.: connections to pool facilities, various creeks/pond) water supplies, which can utilize by the fire department in the event of an emergency. Phase 1 shall include the installation of a dry hydrant, along the existing Troutbeck Lane entrance, which will allow the fire department to pump from an existing pond in the event of an emergency.
- All proposed structure containing, more than one lodging/residential unit, or of sufficient size (>1,000 SF) shall be equipped with Knox Boxes per the Amenia Fire Companies recommendation.
- Several of the proposed structures, most notably the Garden Hotel and Garden Hall, shall require sprinkler systems as per the NYS Building Code.
- The Amenia Fire Company shall provide key cards which will allow them to access lodging units in the event of an emergency.

A letter received from the Amenia Fire Company's Chief, Christopher Howard, dated 1/9/2023, reaffirming and approving the implementation their recommended fire safety measures outlined above has been included in Appendix F of this report.

4.12.A Sprinkler Systems

Currently, only the Manor House utilizes an existing sprinkler system for fire suppression. The existing system is directly connected to the site's water supply, which, if activated, could temporarily reduce water availability to existing structures. All other structures present onsite either do not require fire suppression or were built prior to the sprinkler system requirement. As part of the buildout of the Adaptive Reuse Plan, it is anticipated that several structures, such as the Garden Hotel and Event space, will require sprinklers as per NYS Building Code.

For structures that require fire suppression, fire pumps and water storage tanks will be required. Said tanks shall either be buried or incorporated into the design of the structure as to not be visible by guest or from adjacent roadways. Said fire suppression system storage tanks will be regularly maintained and tested. The system could be connected to the Troutbeck water system for refilling the tanks, as needed, but off-site sources of water could be utilized for larger amounts.

Any connections between the fire suppression system and the potable water supply will include the required backflow prevention protection.

5.0 NATURAL/ARCHEOLOGICAL RESOURCES

The Troutbeck Site has been in use since the 1700s, so it consists of a variety of building styles that were constructed to serve the site's needs over the years. It is bisected by the Webatuck Creek, running north to south, with tributaries running into the Webatuck, within the site. The terrain consists of some flat former farm land and some steeper slopes associated with the stream banks and other geological formations. As part of Adaptive Reuse Plan requirements 50% of the project site is required to be located within a Conservation Easement, which has been established as part of the Conservation/Historic Preservation Analysis.

For a more complete inventory of existing environmental conditions and conservations efforts see attached "Troutbeck Inn Adaptive Reuse Plan – Historic Preservation & Conservation Analysis" in Appendix A.

5.1 Wetlands/Water Courses (EAF: E.2.h)

5.1.A Watercourses

The project site contains three (3) watercourses, two of which have been identified by New York State Department of Environmental Conservation (NYSDEC) and the other being unclassified:

1) *Webatuck Creek, C(T):* Beginning offsite to the north and flowing south underneath NYS Route 343 and through the middle of the project parcel, Webatuck Creek is the larger of the two watercourses present on site. The portion of the creek located on the project site is approximately ±1,876 linear

feet long and ranges between ±45'-65' wide. The creek has an existing bridge crossing which is part of Troutbeck Lane.

The creek maintains a NYSDEC Classification of C, indicating that the watercourse is best used for fishing. The stream has also been designated as possible trout waters.

2) *Dunham Creek, C(TS):* Beginning offsite to the west, the Dunham Creek is a tributary to Webatuck Creek, flowing west underneath Yellow City Road, and into the larger watercourse. The creek is located just south of the existing Manor House and has one (1) pedestrian footbridge and two (2) vehicle crossings.

   The creek maintains a NYSDEC Classification of C, indicating that the watercourse is best used for fishing. The stream has also been designated as possible trout spawning waters.

3) *Unclassified Creek:* An unidentified stream is located within and along the boundary of the property site. Beginning offsite to the southwest, the unclassified stream begins at the outfall of a pond located on a residential property. The stream forms the southern border of the property line before flowing into Webatuck Creek. The portion of the creek located in the project site is approximately ±979 linear feet long and is about ±10' wide. The stream has two (2) earthen crossings.

5.1.B Wetlands

There are no NYSDEC regulated wetlands mapped on the site, but National Wetland Inventory (NWI) mapping indicates there may be two (2) Federal wetlands present. The wetlands are identified in Wetland & Watercourses Exhibit in the Conservation Analysis located in Appendix A and have been summarized below:

Wetland #1: Located along the entire length of the Webatuck, Dunham, and unnamed creek running along the southern edge of the property. The wetland is integral to the riverine system and its boundaries are defined by the banks of the creeks themselves. The wetland is characterized by a continuous flow of water with no tidal influence and unconsolidated bottom. Wetland #1 is approximately ± 2.81 acres in area.

Wetland #2: (PUBHx): Located northeast of Century Lodge and southwest of Leedsville Road-Webatuck Creek crossing, the identified wetland is a manmade pond. Constructed during the 1980's, the existing pond maintains a small overflow channel out falling into the Webatuck Creek. Its PUBHx classification indicates it is nontidal Palustrine (P) with an unconsolidated bottom (UB) that is permanently flooded (H) due to its original excavation (x). The pond is approximately ± 0.09 acres in area.

5.2 Floodplain (EAF: E.2.i-k)

The project site contains numerous watercourses (see §3.1 Wetlands/Water Courses), including Webatuck Creek, Dunham Creek, and an additional unclassified seasonal creek. A review of the FEMA Flood Insurance Rate Map (FIRM) for Town of Amenia shows that the project site is located within the 100-year floodplain and floodway associated with the Webatuck Creek. Within the 100-year floodplain, no new structures are intended for residential use, with proposed facilities to be located within the floodplain to be elevated above of the designated floodplain elevation. The established 100-year flood plain and floodway boundary lines are shown on the project plans. There shall be no development within the designated Floodway. Cabins A, and C, outlined in Phase 1, shall have its support piers, which elevate the structures above the floodplain, located within the 100-year floodplain. An Engineering Report for Troutbeck – Adaptive Reuse Plan – Flood Assessment has been prepared and is located in Appendix F, demonstrating that this construction shall not have an effect on established FEMA flood zones. Copies of the FEMA FIRMette maps have been included with the attached Conservation Analysis.

5.3 Flora and Fauna (EAF: E.2.m-q)

5.3.A Threatened or Endangered Species - Habitat Assessments

A review of New York State Department of Environmental Conservation's (NYSDEC) Environmental Resource Mapper identified three (3) possible threatened/endangered species that may be present on the project site: Bog Turtle, Timber Rattle Snake, and the New England Cotton Tail. Based on this assessment a certified biologist, Michael Nowicki from Ecological Solutions, LLC., surveyed the property and documented no instances or evidence of the above referenced species and outlined mitigation measures that may be taken to mitigate the impact that the proposed project may have on said species. A Threatened and Endangered Species Habitat Suitability Assessment Report, dated 10/19/2021, was prepared discussing the results of Mr. Nowicki's field investigation. A copy is included in Appendix B. A summary of the report has been provided below:

Bog Turtle

The project site was assessed for the presence of habitat characteristics consistent with the 2017 bog turtle federal recovery plan. Per the Ecological Solutions report, none of the following habitat conditions exist: soft, saturated organic/mineral soil; perennial groundwater discharge; a plant community of low-growing, native flora (including sedges, rushes, grasses, forbs, mosses, and some low shrubs); tree canopy cover less than 50%; fen indicator plants (including shrubby cinquefoil, grass-of-parnassus, and tamarack).

The report concluded that "There are no wetland communities on the site that meet the description of potential bog turtle habitat." Additionally, the watercourse and tributaries are not suitable for bog turtle habitat and as such, no mitigation is proposed.

Timber Rattlesnake

The project site was assessed for the presence of Timber Rattlesnake den, basking/gestating, and foraging habitat consistent with known locations of the species. Per the Ecological Solutions report, the following conditions exist: mixed upland fragmented forest; existing developed area; large open fields; watercourses and tributaries.
The report concluded that based on the lack of southeast to southwest facing rock formations for basking, the site likely does not contain any suitable Timber Rattlesnake den areas. Additionally, the consistent agricultural use of the bulk of the site have limited the potential for suitable foraging space due to poor shade, rest, and prey opportunities in the fields. No mitigation is suggested for the site.

New England Cottontail

The project site was assessed for the presence of New England Cottontail habitat and found no suitable shrubby areas, thickets, or wetlands with tree cover. No abandoned farm fields with native shrubs exist on the well-maintained property to provide cover for the species.

The report concluded that potential habitat does not exist on the site and as such no mitigation is proposed.

Based on the information provided within the above-referenced report, there is no suitable habitat present onsite to support any of the threatened/endangered species identified by the NYSDEC Environmental Resource Mapper.

5.3.B Threatened & Endangered Species Impact Avoidance Plan & Notes

In a letter dated January 17, 2023 NYSDEC Environmental Analyst, Katherine Coffin, concurred with the above findings, determining that the site does not contain suitable habitat to support either Bog Turtles or Timber Rattlesnakes. The letter did state that while suitable habitat is not present to support said species that the there is limited potential to encounter individuals of the species passing through the site and recommended that avoidance plans be implemented during all phases of development. As such each phase of proposed development requiring site plan approval will be required to prepare a Threatened & Endangered Species Impact Avoidance Plan, (for example see “Troutbeck - Phase 1 Site Plan Set, Threatened & Endangered Species Impact Avoidance Plan, sheet 6) to be included as part of each phases site plan set.

Each Threatened & Endangered Species Impact Avoidance Plan, will be required to include the notes, guidelines, and avoidance measures outlined in the NYSDEC provided “Bog Turtle Education and Encounter Plan (January 2022)” and “Guidelines for Reviewing Projects for Potential Impacts to Timber Rattlesnakes”. Plans will include notes for recommended seasonal work restrictions for Bog Turtle (October 1-March 31) and Timber Rattlesnakes (November 1-March 31), as well as species monitoring requirements to be performed by a qualified biologist if work cannot be avoided during specified dates. Plans shall also include notes on the installation and location of temporary species barrier to be employed (during the timeframes identified above) and education and training to be provided to contractors regarding the identification and handling of said species. The

implementation of this plan throughout all phases of development will help to ensure no impacts to either the bog turtle or timber rattlesnake passing through the site.

Additional information on the site's slopes, forest/trees, and soils can be referenced in the Conservation Analysis that was done in support of the Adaptive Reuse for the site.

5.4 Historic Preservation (EAF: E.3.c-f)

As outlined above, the project site has been in active use since the 1760's. As part of the Special Use Permit associated with the Adaptive Reuse Plan, which is only permitted within the Historic Preservation Overlay District, an inventory of historically significant features and structures is required as part of the Historic Preservation and Conservation Analysis (included in Appendix A). For additional information regarding historic resources onsite see attached document.

To summarize, there are several existing structures located within the project site, the oldest of which was constructed in 1795. None of the existing structures are listed on the National Register of Historic Places. The bulk of existing structures (excluding a residence constructed in the 1980's) shall be preserved as part of the Adaptive Reuse Plan.

In addition to the historic resource inventory provided as part of the Historic Preservation & Conservation Analysis, the New York State Historic Preservation Office (SHPO) online Cultural Resource Information System (CRIS) was consulted to determine if there were any National Register and Archeological Sensitivity areas associated with the project site. A summary of those findings has been provided below

Archeological Sensitive Area

Based on a review of CRIS, it appears the project site is located within an Archaeological Sensitive Area. A Phase 1A/B Archaeological Study has been submitted to SHPO for their review and approval.

Lewis Mumford House

The site is within close proximity of the Lewis Mumford House. Located approximately ±0.4-miles away from the site, the Lewis Mumford House was the home of author and humanist Lewis Mumford, who lived in the residence for most of his productive life. The 19th century farmhouse was listed on the Natural Register of Historic Places in the 1990's. Due to its listing, the house parcel is also identified on CRIS as a Nation Register Building Site.

Webatuck Agricultural Valley Historic District

The site is located within the northwesternmost portion of the Webatuck Agricultural Valley Historic District. Sites within this district are noteworthy due to growth as an agricultural community in the 19th century because of its association with transcendentalism during the 19th and 20th centuries.

Dutchess County Historic Resource Survey

The project site was also identified by Dutchess County Historic Research Survey, conducted by the Stephanie Mauri and John Clarke in the 1980's. The survey included a Building-Structure Inventory submission to the NYS Office of Park, Recreation & Historic Preservation Division for Historic Preservation, which identified three historically significant structures: Manor House, Century Lodge, and Delamater House, all three of which will be preserved as part of this project.

5.4.A Phase 1A/1B Archaeological Investigation

Due to the site presence within the Archeo Sensitive Area, as well as other historic resources present on site, a Phase I Archeological Investigation was commissioned, at the request of the Town of Amenia Planning Board and the NYS SHPO, to determine if any archeo-sensitive areas exist on site. Alfred Cammisa, RPA of Tracker Archaeology, Inc. performed an investigation that included both document study and ±10-acres of subsurface field testing between April 30th to May 26th, 2022. Findings from their investigation has been included in a study has been summarized in a report entitled "Phase I Archaeological Investigation for the proposed Troutbeck Inn Adaptive Reuse", dated June 2022. A copy of which has been submitted to NYS SHPO, for review by SHPO representative Jessica Schreyer, and included in Appendix C of this report.

After reviewing this initial submission, additional shovel testing was requested by SHPO representative, Jessica Schreyer, who identified areas that were outside of the previously identified Areas of Potential Effect (APE), due to modifications made to that Adaptive Reuse Plan after initial shovel test were completed. In response to Ms. Schreyer's concerns, ±4.0-acres of additional shovel testing was conducted on 9/27/2022 by TRACKER Archaeology to assess whether the identified additional APE outside of the ±10-acres of initially tested contained any significant archaeological artifacts. Besides one prehistoric site identified in initial shovel testing, and then later avoided through a redesign of the proposed layout, and several isolated finds uncovered in the most recent round of testing, no additional site's were encountered. A revised copy of the previously submitted archaeological report is being prepared by TRACKER Archaeology and will be submitted to NYS SHPO for their review and approval.

The conclusions and recommendations section of the final report state that a "small, prehistoric site was encountered" in the northern portion of the project site. No other archaeological significant sites were uncovered in either rounds of subsurface soil testing. In response to this sole find, previously proposed development was relocated in order to avoid disturbance in this area. A 25' no-development buffer has been provided around the site to ensure that no future phases will result in disturbance of the site. Once construction on the reconfigured Spingarn Road is proposed to commence (Phase 4) the site shall be delineated in the field and left undisturbed for the duration of the Adaptive Reuse Plan buildout. Besides the aforementioned site, no other sites were found and the archeologist concluded that no further work is recommended for the remainder of the project area.

In addition to the above-referenced archaeological report, an "Archaeological Site Avoidance Plan" was created, per Ms. Schreyer's recommendations, to ensure the sites continued preservation. In summary, the Archaeological Site Avoidance Plan include

both short (i.e: inclusion of the site location on construction documents, pre-construction meeting, additional fencing) and long-term avoidance measures (i.e: inclusion in perpetual conservation easement, provisions for future NYSHPO consultations) to ensure the preservation of the site at the time of construction of individual phases and following the complete buildout of all proposed improvements. The plan was reviewed and approved by Ms. Schreyer who concluded "that no further archaeological work is necessary" for the project site.

A copy of the Archaeological Site Avoidance Plan and Ms. Schreyer's final review memorandum has been included in Appendix C of this report.

5.4.B Technical Services – Historic Structures

Due to the project site containing historic structures and being located within the National Register Eligible Webatuck Agricultural Valley Historic District, our above-referenced SHPO-OPRHP submission was reviewed by the Historic Sites Restoration Coordinator, Sloane Bullough. Based on this submission two structures were identified as being older than 50-years of age; the Delamater House and the Manor House.

Manor House: As stated above, the proposed Adaptive Reuse Plan outlines two new building additions to be added to the existing structure. The additions are proposed for the portion of the structure that was added in the 1980's to the original 1919 Manor House footprint. As such, the proposed additions will not affect the historic portions of the structures.

Delamater House: The proposed Adaptive Reuse Plan outlines plans to convert and restore the existing former residence (now derelict), into a restaurant. The existing structure is currently in a severe state of disrepair. The proposed restoration calls for an addition off the southeastern side of the structure, while preserving the vast majority of the existing building, most notably the "1761" brickwork on the northern portion of the structure. Restoration efforts for the structure shall include:

1. Brace, anchor, and stabilize the existing post-and-beam structural frame.
2. Stabilize, reset, and repoint all existing stone and brick masonry.
3. Provide thermal insulation throughout.
4. Replace deteriorated asphalt shingle roofing with new roofing (material TBD).
5. Provide new sheathing and weatherproof barrier in walls.
6. Replace deteriorated wood clapboard siding & trim in kind.
7. Install new energy-efficient windows and doors.
8. Install new interior finishes, millwork, equipment, and furniture.
9. Install new heating, ventilation, and cooling systems.
10. Install new plumbing & sanitary service, piping, and fixtures.
11. Install new lighting and electrical service.
12. Provide 21st-century IT & communications systems

As outlined above, the proposed Adaptive Reuse of the structure will ensure that the building remains an integral part of the Troutbeck site and will not collapse from being in a prolonged state of disrepair/neglect.

Restoration efforts were outlined in subsequent submissions to Historic Sites Restoration Coordinator, Sloane Bullough, who determined that the proposed Adaptive Reuse Plan and Phase 1 Site Plan would not affect the historic resources of the project site. However, Ms. Bullough did determine that a more thorough review of the restoration work being provided to Delamater House would be required when the applicant's construction details for the restoration are more fully developed. This would commence in a Phase 6 Site Plan review. As such, the applicant shall require SHPO-OPRHP approval prior to the beginning restoration efforts on the Delamater House, but may proceed with Phase 1 Site Plan and Adaptive Reuse Plan approvals at this time.

Copies of the various SHPO-OPRHP submissions and correspondences have been included in Appendix C of this report.

6.0 CONCLUSION

Based on the studies completed for the project site/proposed development, adherence to the Adaptive Re-Use standards outlined in the Town of Amenia Zoning Code, inclusion of a +50% Conservation Easement encompassing the entire site, a proposed lodging unit density that is ±50% less than what is permitted by right, and the numerous other benefits and improvements outlined in this application; it is our opinion that the facts included in this document demonstrate that the Troutbeck Adaptive Reuse Plan will not result in an adverse “Moderate to Large Impact” to any of the thresholds outlined in the Full Environmental Assessment Form’s: Part 2 – Identification of Potential Project Impacts. As such, the Town of Amenia’s Planning Board, as lead agency, can confidently adopt a Negative Declaration of significance for the potential impacts that may result from the approval of the Adaptive Reuse Plan, which was prepared to ensure the economic viability of the site while also protecting and preserving the significant environmental and historic resources present on and adjacent to the Troutbeck site.

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APPENDIX A

CONSERVATION ANALYSIS
(SITE/ZONING/RESOURCE/MAPPING)

Troutbeck Inn – Historic Preservation & Conservation Analysis
(See Reference Documents)

Troutbeck Inn - Conservation Findings (adopted), dated 2/9/2022

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TOWN OF AMENIA PLANNING BOARD

TROUTBECK INN

CONSERVATION FINDINGS

Adopted February 9, 2022

Historic Preservation Overlay District - Proposed adaptive reuse development of land and buildings:

Troutbeck Holdings, LP (the "Applicant") proposes an adaptive reuse plan for land and buildings (the "Project") on a 43.5± acre parcel located at 515 Leedsville Road in the Town of Amenia, Dutchess County, New York and identified as tax parcel number 132000-7267-00-227675 (the "Site"). The Site is located in a Rural Residential zoning district and a Historic Preservation Overlay District ("HPO District"). Portions of the property are also located in in the Stream Corridor Overlay District ("SCO District"), the Scenic Protection Overlay District ("SPO District"), Road Visual Protection Corridor, and the Aquifer Overlay District in both the Priority/Primary Valley Bottom Aquifer and the Upland Aquifer. The Site includes a section of floodplain, Zone AE, with base flood elevations defined and is therefore in the Flood Plain Overlay District ("FPO District") as well.

Conservation Findings Required:

Pursuant to Zoning Law § 121-14.2(I), the Planning Board may, by special permit, allow an adaptive reuse development of land and buildings on a parcel of at least five acres in size within the HPO District. For any application for adaptive reuse development in a HPO district that involves uses other than those allowed in the underlying district, the applicant is required by Zoning Law § 121-14.2 to prepare an adaptive reuse plan for the entire property involved, a conservation analysis of the land as described in Zoning Law § 121-20(A), as well as an analysis of the historic and architectural character of the property and its immediate surroundings.

The Project includes proposed uses, specifically "Lodging Facilities," that are not allowed by the Zoning Law in the underlying Rural Residential zoning district. Accordingly, along with a proposed adaptive reuse plan for the Site, the Applicant has provided the Planning Board with a conservation, historic and architectural analysis entitled the "Troutbeck Inn Adaptive Reuse Plan, Historic Preservation & Conservation Analysis," last revised February 8, 2022 (the "Analysis") as required by the Zoning Law.

Based on its review of the Analysis, the Planning Board is required to make certain conservation findings pertaining to the lands involved in the Project pursuant to Zoning Law § 121-20(A)(4):

"The determination as to which land has the most conservation value and should be protected from development by conservation easement shall be made by the Planning Board, which shall make written findings supporting its decision (the "conservation findings"). The Planning Board shall not endorse any application that does not include a complete conservation analysis sufficient for the Board to make its conservation findings. The Planning Board's conservation

findings shall be subject to revision based upon field analysis of the site and information developed in the course of the SEQRA process."

Planning Board Findings:

Having considered the Analysis and for the reasons set forth below:

1. The Planning Board finds that the Analysis undertaken by the Applicant is sufficient for the Planning Board to make its conservation findings regarding the lands involved in the Project as required by Zoning Law § 121-20(A)(4).

2. The Planning Board further finds that the lands within the Site identified by the Analysis as having the most substantial conservation value are, in fact, the lands on the Site with the most conservation value that should be permanently protected from development as part of any approval of the Project.

3. The Planning Board's conservation findings are separate from the historic preservation requirement of Zoning Law. The Planning Board finds that while the Applicant has proposed lands for conservation as required by Zoning Law § 121-20(A)(4), its adaptive reuse plan does not include a proposal for placing a historic preservation easement on the Site to maintain its historic character, particularly with respect to historic buildings on the Site, as required by Zoning Law § 121-14.2(I)(1). The Planning Board notes that this requirement will be addressed as part of its special permit review of the Project pursuant to Zoning Law §§ 121-14.2 and 121-62.

4. The Planning Board further finds that the following areas within the Site have the most substantial conservation value and should be protected from development:
    - Open water pond,
    - Wetlands and wetland buffers,
    - Stream corridors,
    - Existing vegetative buffers along the property perimeter, together with any scenic areas highly visible to the public or from offsite, including, but not limited to land in the Scenic Protection Overlay District ("SPO"), and other lands on the Site which exhibit attractive rural and historic qualities;
    - Existing agricultural land and prime agricultural soils;
    - Steep slope areas; and
    - Forested areas, including numerous mature tree species and specimen trees.

5. The Planning Board further finds that the significant environmental natural features identified herein are linked to and are a key components of the onsite developed environment and can, as a component the historic nature of that built environment, also be considered historically significant which further serves to enhance the conservation value thereof and, when protected from development, function as an element of historic preservation as well.

6. The Planning Board acknowledges that portions of the existing development and the proposed development are located within proposed conservation areas. Those uses have

been carefully selected to ensure that the conservation value attached to the involved lands is maintained and not otherwise impacted by the existence or proposed existence of improvements within the conservation areas. The Planning Board finds that it is reasonable to conclude that the conservation value of preserved open space land is not and will not be impaired by the existence of improvements in those lands.

7. Finally, the Planning Board recognizes that it may revise these conservation findings based upon field analysis of the Site and additional information developed in the course of its SEQRA and special use permit review of the Project.

The Planning Board's conservation findings herein are supported by the following reasons:

1. The Analysis provides adequate resource information regarding the lands on the Site, including but not limited to information pertaining to wetlands and water resources, slopes, fragmented forested areas, archaeological resources, prime agricultural land, and rare, threatened, or endangered species habitat. The Analysis also identifies lands located within 100 feet of existing residential uses adjacent to the Site.

2. The Analysis incorporates the following conservation areas :

   - **CA "A**": Located along the northern edges of the site, Conservation Area "A" is used to protect existing agricultural land located within the Scenic Protection Overlay District 800' from the edge of NYS Route 343. This conservation area also provides habitat corridors, visual buffering, and management tools for ground water protection. The area also includes existing vegetative buffering along Yellow City and Leedsville Roads and a treelined roadway corridor south of NYS Route 343.

     Conservation Goal:

     o Preserve lands located within the 800' "Scenic Protection Overlay District (NYS Route 343). 100% of land within CA "A" are within the SPO. CA "A" will ensure preserve the NYS Route 343 view corridor.

     o Preserve existing treelined roadway (NYS Route 343). There are numerous mature Black Walnuts (18"-28" Ø) running parallel to NYS Route 343 creating a treelined corridor. There are numerous other matures trees (18"+ Ø) within CA "A" including oak, hickories, locust, and a several large Japanese Pagoda specimen trees, which enhance biodiversity.

     o Preserve existing agricultural lands and prime soils located within the SPO overlay district. 100% of land within CA "A" are classified as either prime agricultural soils or soils with statewide significance. This portion of the site is regularly hayed and has been throughout the history of the site.

     o Preserve existing vegetative buffering along Yellow City and Leedsville Road, rural town roads with minimal traffic.

o Provide protection for habitat corridors. This area acts as a crossroads for much wildlife movement in the area that travel off adjacent ridge lines.

o Preserves open space that can be used to support aquifer recharge.

Total Conservation Area "A" area = 4.97-acres

- **CA "B"**: Beginning just south of an existing service entrance in the northeastern corner of the site, the conservation area is located along the eastern and western floodplains of Webatuck, extending to existing stream crossing. The area also encompasses an existing pond area located on the western side of Leedsville Road, and northeast of the existing Century lodge building. This area may be extended to include the existing bridge and roadway nearest to the Webatuck Creek as it will allow for these sensitive areas to be monitored and maintained in a way that provides water quality protection.

  Conservation Goal:

  o Preserve lands located within the Stream Corridor Overlay District (SCO) applied to Webatuck Creek. Approximately 772 linear feet of Webatuck Creek, trout waters and a direct tributary to the Ten Mile River and ultimately the Housatonic River, will be preserved as an aquatic corridor.

  o Provide water quality protection and monitoring for sensitive use areas adjacent to the stream such as the existing bridge and roadway.

  o Preserve existing floodplain/floodway (Floodplain Overlay) to the east and west of Webatuck Creek. Floodplain and floodway areas are, typically prone to erosion and flooding during storm events, will be preserved and left undeveloped.

  o Preserve existing federal wetlands on either side of Webatuck Creek within overlay districts. Wetlands help mitigate the effects of flooding and provide unique habitat for aquatic, amphibian, and a variety of other species.

  o Preserve existing pond with outfall into Webatuck Creek. The existing pond provides additional aquatic habitat for common onsite species and an aesthetic feature visible partly from Leedsville Road.

  o Maintain existing vegetative buffer along the eastern edge of the project site (Leedsville Road). Existing vegetative buffer will assist in screen onsite activities from neighboring residential properties and continue providing native habitat to onsite species.

  o Numerous mature trees species (18"+ Ø) shall be preserved, many of which are specimen trees, increasing biodiversity.

  o Preserves steeps slopes, which are more prone to erosion. There are several instances of steeps slopes associated with the banks of the Webatuck Creek.

o Preserve existing agricultural lands and prime soils. 100% of land within CA "B" are classified as soils with statewide significance.

Total Conservation Area "B" area = 3.83-acres

- **CA "C**": Beginning along the western side of Leedsville Road to the southeastern portion for the site, this conservation area encompasses a forested area between Leedsville Road and Webatuck Creek floodplain south of Troutbeck Lane.

Conservation Goal:

o Maintain existing vegetative buffer along the eastern edge of the project site (Leedsville Road). Existing vegetative buffer will assist in screen onsite activities from neighboring residential properties and continue providing native habitat to onsite species.

o Maintain 100' vegetative buffer between proposed use and residential lands to the east of Leedsville Road.

o Preserves steeps slopes, which are more prone to erosion.

o Preserve existing agricultural lands and prime soils. 100% of land within CA "C" are classified as soils with statewide significance.

Total Conservation Area "C" area = 0.61-acres

- **CA "D**": Beginning just south of the Webatuck Creek stream crossing and extending to southeastern most point of the property. The conservation area encompasses area on both side of the Webatuck Creek and continues along the southern border of the property until reaching Yellow City Road. The conservation area extends along the eastern side of Yellow City and continues to the southern side of an existing driveway entrance. The CA "D" continues along Dunham Creek to just south of the Troutbeck Inn. Additionally, portions of this conservation area extend along an existing ridge.

Conservation Goal:

o Preserve existing vegetative buffer along the southern property boundary. Existing vegetative buffer will assist in screen onsite activities from neighboring residential properties and continue providing native habitat to onsite species.

o Maintain 100' vegetative buffer between project site and residential lands directly to the south of the property.

o Preserve existing vegetative buffer along the southern property boundary bordering Woodlands/Green Road.

o Maintain 100' vegetative buffer between project site and residential lands on western side of Yellow City Road.

o Preserve lands located within the Stream Corridor Overlay District (SCO) applied to Webatuck Creek. Approximately 1,034 linear feet of Webatuck Creek, trout waters and a direct tributary to the Ten Mile River and ultimately the Housatonic River, will be preserved as an aquatic corridor.

o Preserve lands located within the Stream Corridor Overlay District (SCO) applied to Dunham Creek. Approximately 545 liner feet of Dunham Creek, trout spawning waters and a direct tributary to the Webatuck Creek.

o Preserve 974 linear feet of an unnamed tributary that runs along the sites southern border.

o Preserve existing floodplain/floodway (Floodplain Overlay) to the east and west of Webatuck Creek. Floodplain and floodway areas are, typically prone to erosion and flooding during storm events, will be preserved and left undeveloped.

o Preserve large swaths of steeply sloped land, which are prone to erosion, between existing Wellness Building and fields in the west.

o Preserve large swaths of steeply sloped land just south of Dunham Creek. The identified slopes are among the steepest of the project site and contains existing vegetation, which continue providing native habitat for onsite species.

o Preserve adjacent lands running along the unclassified stream to the south.

o Preserve remains of existing stone wall located along western property line. Stonewalls have historically been used to delineate property boundaries and have historic value. Numerous mature trees species (18"+ Ø) shall be preserved, many of which are specimen trees, increasing biodiversity.

Total Conservations Area "D" area = 11.93-acres

- **CA "E**": Located directly to the east of Yellow City Road, this area encompasses land between the Spingarn Road entrance and the existing Troutbeck Manor employee service entrance, extending long an existing ridge towards the middle of the site.

  Conservation Goal:

  o Preserve existing vegetative buffer along the southern property boundary bordering Woodlands/Green Road. Existing vegetative buffer will assist in screen onsite activities from neighboring residential properties and continue providing native habitat to onsite species.

  o Maintain 100' vegetative buffer between project site and residential lands directly to the south of the property.

  o Maintain 100' vegetative buffer between project site and residential lands on western side of Yellow City Road.

o Preserve existing vegetative buffer along the western property boundary bordering Yellow City Road.

o Preserve large swaths of steeply sloped land between south of Garden House and Walled Garden area.

o Preserve remains of existing stone wall located along western property line. Stonewalls have historically been used to delineate property boundaries and have historic value.

o Numerous mature trees species (18"+ Ø) shall be preserved, many of which are specimen trees, increasing biodiversity.

Total Conservation Area "E" area = 1.14-acres

3. Through the Analysis, the Applicant has proposed the permanent conservation of 22.4± acres of the lands comprising the Site, or 51.7% of the Site, in compliance with the 50% standard required by Zoning Law § 121-14.2(I)(5) for the minimum preservation of open space and protection of resources on lands involved in an adaptive reuse development project. Consistent with the Zoning Law, the lands proposed for conservation include but are not limited to lands on the Site in the SCO, SPO and FPO districts, as well as lands including fragmented forest areas, prime agricultural land, steep slopes, a ridgeline, former property boundary stone walls, and wetlands and other surface water resources. Lands proposed for conservation also include portions of the Site within 100' feet of existing, adjacent residential uses in compliance with Zoning Law § 121-14(I)(8).

4. While not included in the proposed conservation areas, preservation of the existing historic structures is a key part to the sites overall Adaptive Reuse Plan and the overall preservation of the site. None of the existing structures are proposed to be removed. The previously identified historic structures, the Manor House, Century Lodge, and Delamater House are proposed to remain. The Manor House will continue providing lodging accommodations to guest, while also continuing to operate as a restaurant/event space. The Century Lodge & Annex recently received Site Plan and Special Use Permit approvals from the Planning Board (8/25/2021) for several building improvements, which will continue to be used for lodging. And the Delamater House has been included in the Adaptive Reuse Plan. The existing structure will be preserved and converted into a restaurant for use by guest.

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APPENDIX B
HABITAT STUDIES AND AGENCY CORRESPONDENCE

Threatened and Endangered Species Habitat Suitability Assessment Report, by Michael Nowicki, dated October 19, 2021

NYSDEC – Notice of Incomplete Application, dated June 30,2022

RED Response to NYSDEC Notice of Incomplete Application, dated October 5, 2022

Ecological Solutions, LLC – Response to Hudsonia (Public) Comments, dated 1/6/2023

NYSDEC – Notice of Incomplete Application (Threatened and Endangered Species Habitat Absence Acknowledgement), dated January 17, 2023

Bog Turtle Education and Encounter Plan – January 2022

Guidelines for Reviewing Projects for Potential Impacts to the Timber Rattlesnake

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Threatened and Endangered Species Habitat Suitability Assessment Report

Troutbeck Inn Site
State Route 343
Town of Amenia, New York

October 19, 2021

Prepared by:

Michael Nowicki
Ecological Solutions, LLC
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(203) 910-4716

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1.0 INTRODUCTION

Ecological Solutions, LLC completed a threatened and endangered species habitat suitability assessment on the Troutbeck Inn site containing 43.5 acres located on State Route 343 in the Town of Amenia, Dutchess County, New York (*Figure 1*). The site is currently used for conferences, dining, special events, lodging, retreats, and weddings. The facilities contain typical hospitality industry related amenities such as tennis courts, a pool, wellness center, walking trails, and other outdoor activities. The applicant is proposing to expand on the site's existing use. Overall, the proposed improvements focus primarily on expanding the site's existing lodging capacity and will elevate the guest experience by providing a number of additional amenities such as, additional food & beverage options, additional wellness options, additional onsite outdoor activities, and formal garden areas. A new event space will replace an existing ballroom located in the Manor House to provide more flexibility and access for events.

The New York State Department of Environmental Conservation (NYSDEC) Environmental Assessment Form indicates that the bog turtle (*Glyptemys muhlenbergii*), the timber rattlesnake (*Crotalus horridus)*, and the New England cottontail (*Sylvilagus transitionalis*) may be located on or in the vicinity of the site (*Attachment 1*).

This assessment was completed to determine if suitable habitat exists on the site for the listed species. Habitat observed on the site during a field survey on October 7, 2021 is listed in Table 1.

TABLE 1
COVER TYPES IDENTIFIED ON THE SITE

1	Existing Developed Area
2	Mixed Upland Forest
3	Watercourses/Tributaries

Existing Developed Area - The site is currently used for conferences, dining, special events, lodging, retreats, and weddings. The facilities contain typical hospitality industry related amenities such as tennis courts, a pool, wellness center, walking trails, and other outdoor activities

Mixed Upland Forest - Forest coverage within the project site is minimal, consisting of several stands of fragmented deciduous forest (black walnut, oaks, black cherry, butternut, and a variety of ornamental trees in the 12-24 inch and above dbh range, with very few evergreens located on the site. The bulk of land containing forest coverage are located along areas adjacent to the Webatuck and Dunham creeks, as well as along the property boundaries. Additionally, a larger stand of trees exists in the northern portion of the site just south of NYS Route 343. The site contains approximately ± 14.32 acres of forest.

.

There are three (3) watercourses and two (2) wetland areas that are present within the Troutbeck Inn project site. Provided below is a summary of these features:

Watercourses

The project site contains three (3) watercourses, two of which have been identified by New York State Department of Environmental Conservation (NYSDEC) and the other being unclassified:

1) Webatuck Creek, C(T): Beginning offsite to the north and flowing south underneath NYS Route 343 and through the middle of the project parcel, Webatuck Creek is the larger of the two watercourses present on site. The portion of the creek located on the project site is approximately ±1,876 linear feet long and ranges between ±45'-65' wide. The creek has an existing bridge crossing which is part of Troutbeck Lane. The creek maintains a NYSDEC Classification of C, indicating that the watercourse is best used for fishing. The stream has also been designated as possible trout waters.

2) Dunham Creek, C(TS): Beginning offsite to the west, the Dunham Creek is a tributary to Webatuck Creek, flowing west underneath Yellow City Road, and into the larger watercourse. The creek is located just south of the existing Manor House and contains one (1) pedestrian footbridge and two (2) vehicle crossings. The creek maintains a NYSDEC Classification of C, indicating that the watercourse is best used for fishing. The stream has also been designated as possible trout spawning waters.

3) Unclassified Creek: An unidentified stream is located within and along the boundary of the property site. Beginning offsite to the southwest, the unclassified stream begins at the outfall of a pond located on a residential property. The stream forms the southern border of the property line before flowing into Webatuck Creek. The portion of the creek located in the project site is approximately ±979 linear feet long and is about ±10' wide. The stream has two (2) earthen crossings.

2.0 HABITAT SUITABILITY ASSESSMENT/CONCLUSIONS

2.1 Timber Rattlesnake

The site was assessed to determine if any timber rattlesnake den sites or basking areas could potentially be found by reviewing the soils map and traveling through the site to suitable locations based on the soil survey. Requirements for timber rattlesnake dens generally include a southeast to southwest facing rock formation of either fractured ledge or talus with a nearby open basking area with sufficient rock cover for gestating females and post-emergence basking. Upon emerging from the den, timber rattlesnakes are very lethargic and basking area where the snakes can warm up is usually nearby. The eastern section of the site contains a densely forested hills with steep slopes encompassing substantial acreage with Hollis-Chatfield Rock outcrop soils (*Figure 2*).

No open rocky summit areas which are characteristics of timber rattlesnake den and basking areas were observed on the site. Rattlesnake movements are dependent upon availability of suitable basking/gestating areas, successful foraging, and mating activity. It is known that timber rattlesnakes, particularly females, may move considerable distances overland (generally migrate from 1.3 to 2.5 miles (2 to 4 km) from their den each summer) and may utilize any upland forest area during the summer season. In addition to potential den sites and associated basking area the site was assessed for potential foraging habitat. The bulk of the interior of the site contains large open field areas separated by hedgerows adjacent to the existing developed areas and therefore has limited potential foraging characteristics because of the lack of shade, rest, and prey opportunities and active farming operations.

The applicant is proposing to expand on the site's existing use. Overall, the proposed improvements focus primarily on expanding the site's existing lodging capacity and will elevate the guest experience by providing a number of additional amenities such as, additional food & beverage options, additional wellness options, additional onsite outdoor activities, and formal garden areas. A new event space will replace an existing ballroom located in the Manor House to provide more flexibility and access for events.

Conclusion - The proposed activity is to expand the amenities on the existing site. Since the site is currently and has been in operation for more than a century the impact to potential habitat for this species is unlikely since there is no habitat (rocky or talus slopes, large basking area) on or in the immediate vicinity of the site. No impact will occur to this species and no mitigation is proposed.

2.2 Bog turtle

The bog turtle is a semi-aquatic freshwater turtle that prefers open, shallow wetlands with soft soils that are saturated by perennial groundwater discharge. Habitat and associated flora vary throughout the bog turtle's range; however, in the northern part of its range (Connecticut, Massachusetts, New York, New Jersey, Pennsylvania) the bog turtle exhibits a strong preference for fens fed by calcium-rich groundwater from limestone, marble or other calcareous material. These palm-sized, secretive turtles spend much of their lives hidden in soft soils or under plant material, which serves as a refuge and aids in thermoregulation. The bog turtle is one of the few turtles that remain within its core wetland habitat to nest, typically selecting hummock-forming plants on which to deposit its eggs. Bog turtles living in groundwater-fed, calcareous

wetland habitats with low open vegetation may use areas of apparently less suitable habitat seasonally. Bog turtles are omnivorous and can live more than 50 years (Ernst et al. 1994). The U.S. Fish and Wildlife Service listed the bog turtle as *Threatened* in 1997 because of loss of habitat (USFWS 2001). It is listed as *Endangered* by the New York State Department of Environmental Conservation (NYSDEC).

Conclusion - The site was assessed for the presence of habitat characteristics consistent with the bog turtle federal recovery plan by others during 2017 (U.S. Fish and Wildlife Service, 2001): 1) soft, saturated organic and/or mineral soil; 2) hydrologic regime derived from perennial groundwater discharge; 3) plant community represented by a predominance of low-growing, native flora including sedges, rushes, grasses, forbs, mosses, and sometimes low shrubs; 4) tree canopy cover less than 50% allowing adequate sunlight to reach the ground, and 5)Fen indicator plants (calcicoles) including, shrubby cinquefoil (*Pentaphylloides floribunda*), grass-of-parnassus (*Parnassia glauca*), and tamarack (*Larix larcina*).

There are no wetland communities on the site that meet the description of potential bog turtle habitat. The watercourse or tributaries on the site are not bog turtle habitat. No impact will occur to this species and no mitigation is proposed.

2.3 New England Cottontail

The New England cottontail is native to New England and eastern New York. In New York State, the New England cottontail populations are only found east of the Hudson River in Columbia, Dutchess, Putnam, and Westchester counties and is a mid- to late-successional species, preferring shrubby areas, thickets, and wetlands with some tree cover. Areas with older shrubland with good understory are often favorable. However, ideal habitat should contain native shrubs as too many invasive shrubs, such as Japanese barberry, can have a negative impact.

Conclusion - The 43.5 acres site contains existing facilities and habitat that are not conducive to New England cottontail. There is no potential habitat on the site for this species which occurs in and favors abandoned farm fields that have become shrubby and provide cover for this species. No impact will occur to this species and no mitigation is proposed.

3.0 PHOTOGRAPHS

Webatuck Creek on the site.

Webatuck Creek.

Ornamental trees on the site.

Rear of the site.

Open field.

Wooded patch on the site featuring black walnut.

4.0 REFERENCE

Stechert, R. 2001. Effectiveness of an experimental timber rattlesnake *(Crotalus horridus)* exclusion fence at Schunemunk Mountain, Town of Woodbury, Orange County, New York. Report to the Eastern Chapter of the New York Natural Conservancy and the New York State Department of Environmental Conservation. 23p.

Ernst, C.H., R.W. Barbour and J.E. Lovich. 1994. Turtles of the United States and Canada. Smithsonian Institution Press, Washington DC. 578 p.

USFWS. 2001. Bog turtle (*Clemmys muhlenbergii*), northern population recovery plan. U.S. Fish and Wildlife Service, Hadley, MA. 103 p.

Figure 1 Location Map

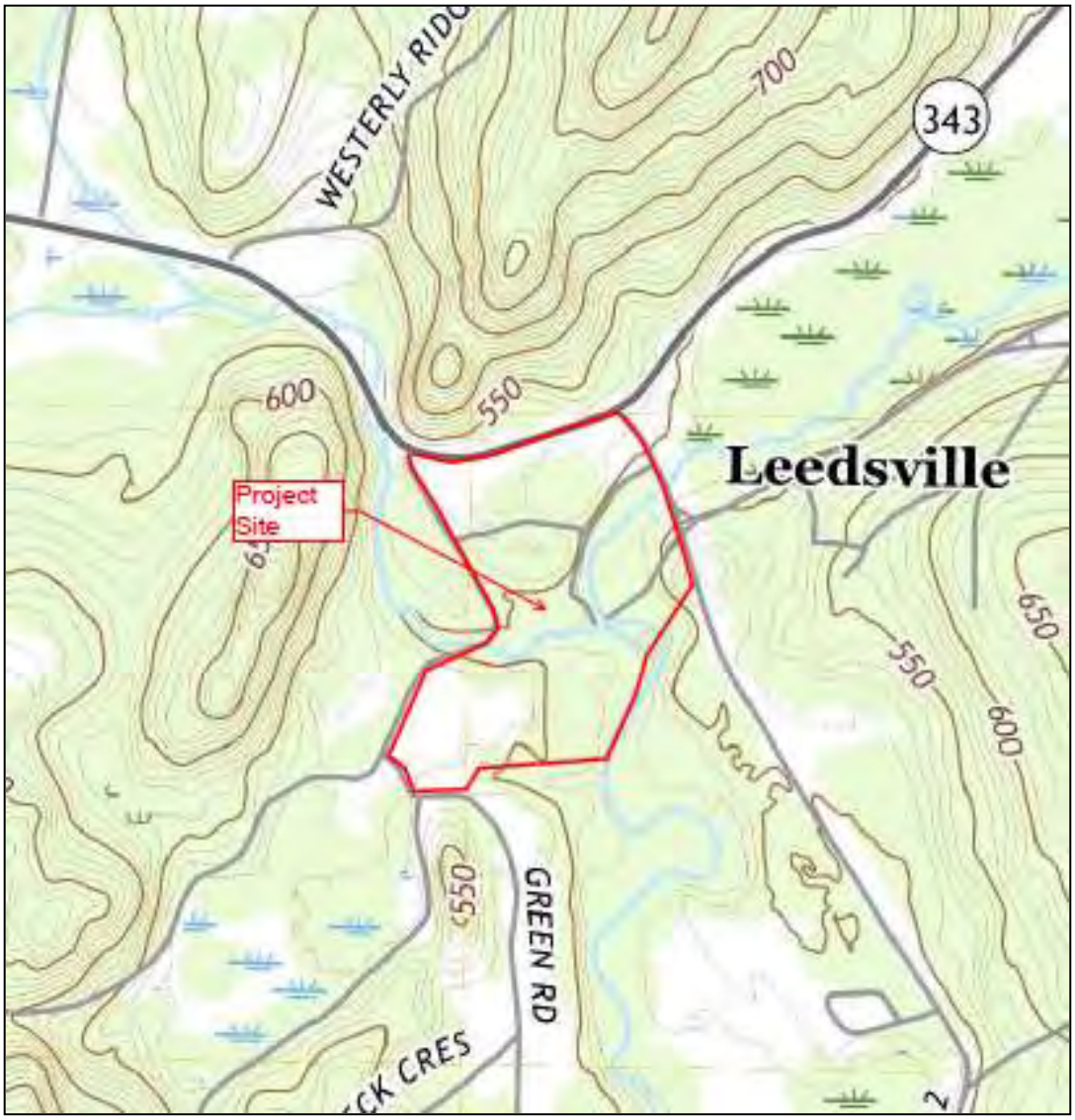


Figure 2 Soils Map

Map Unit Symbol	Map Unit Name
CuA	Copake gravelly silt loam, nearly level
CuB	Copake gravelly silt loam, undulating
CuC	Copake gravelly silt loam, rolling

Attachment 1 - NYSDEC EAF Mapper

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 3
21 South Putt Corners Road, New Paltz, NY 12561-1620
P: (845) 256-3054 | F: (845) 255-4659
www.dec.ny.gov

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

June 30, 2022

Rennia Engineering Design, PLLC
Attn: Thomas Harvey
6 Dover Plains Plaza, Suite 5
P.O. Box 400
Dover Plains, NY 12522

Re: DEC Application No. 3-1320-00027/00004
Article 17 SPDES
Troutbeck Inn
Town of Amenia, Dutchess County

Notice of Incomplete Application

Dear Thomas Harvey,

The Department of Environmental Conservation (DEC or Department) received the above-referenced application for a permit pursuant to Article 17 State Pollutant Discharge Elimination System (SPDES) of the Environmental Conservation Law on March 24, 2022, submitted by you on behalf of Troutbeck Holdings, LP. I apologize for the delay in response. The application is for the addition of outfall 003, which is proposed for 17 guest bedrooms of the Century Lodge (1,870 gpd). Please be aware that there was an error in the identification of the previous permit, and the permit was attached to a different facility identification number. Please note the new permit ID number, DEC ID# 3-1320-00027/00004 (SPDES ID#NYG003341), which will encompass all outfalls.

- 001 – 2,400 gpd, permitted 1979 and reauthorized in 2012;
- 002 – 1800 gpd, permitted 1982 and reauthorized 2012;
- previously 001, now **003** – 1,932 gpd, permitted 2019; and
- **004** – 1,870 gpd, current application)

The application is incomplete.

The Department has received a Notice of Intent to Serve as Lead Agency from the Town of Amenia Planning Board for the adaptive re-use of the Troutbeck Inn, which includes this septic system upgrade for the Century Lodge (as well as installation of various buildings, pool, cabins, walkways, and associated utilities, resulting in a total of 15.7 acres of ground disturbance). Pursuant to 6NYCRR Part 621.3(a)(4), if a project requires more than one Department permit, the applicant must simultaneously submit all necessary

applications, or demonstrate to the Department's satisfaction that there is a good cause not to do so.

Please submit the following supporting information and documentation in order for the Department to continue our review:

Article 17 SPDES

The provided site plan shows that while the proposed outfall 004 is located outside of the floodplain, the septic tanks are proposed within the floodplain. If the septic tanks are to be installed within the floodplain, the proposal will not qualify for GP-0-15-001, and an individual permit will be required. Please advise if the project can be redesigned to avoid installation within the floodplain. If the project designs cannot be altered, in line with criteria of the SPDES General Permit, please submit a completed SPDES application form to the Department for P/C/I Discharge of Treated Sanitary Sewage. The instructions for the P/C/I submission can be found at https://www.dec.ny.gov/permits/6304.html#PCI. Please note, all existing outfalls must be labelled and recorded on plans and engineering reports included in the application. An up-to-date treatment process must be indicated.

Additionally, please submit the following:

1. Flow confirmation letter
2. Outfall continuation for outfalls 001, 002, and 003.
3. Percolation tests
4. A site plan showing the location of **all** outfalls and discharge lines, clearly labeled
5. A hard copy of the plans (please include the location of all outfalls on the project plans)

The EAF and Supplement to the EAF, submitted by the Town in the Lead Agency coordination materials, indicate that the septic and reserve areas for the Garden Key Expansion, Manor House and Bakery, Garden Cabins, Century House, and Garden Key (Future West) are proposed at the northern end of the site, while the Meadow Cabins septic and reserve areas, Creekside cabins and Gate House Septic Reserve and septic absorption areas, as well as the Century House primary septic absorption area (outfall 004 – the application) are proposed to be located near to the associated buildings. The total anticipated discharges associated with this facility would be 26, 252 GPD. Given the location of the proposed outfall 004, due to the location of the septic tanks within the floodplain, the project would not be eligible for GP-0-15-001, and an individual permit would be required for the proposed disposal system. Additionally, for the proposed utility plan, an engineering report would also be required. Information such as precise outfall locations, location of drinking water wells, diagram(s) showing the processes of the treatment/disposal systems, and a brief narrative description of the diagram(s), should be provided as well. The Department requests that one hard copy of the engineering design and site plan (signed and stamped by a professional engineer) be submitted in addition to the digital submission.

Article 15 Water Withdrawal

Upon review of the provided site plans, there appear to be a number of wells located on the site. Please provide the Department with well pump capacity in order to determine if a Water Withdrawal permit is required. Additional information can be found at https://www.dec.ny.gov/lands/313.html.

The information contained in the Environmental Assessment Form (EAF) and supplement received during the Lead Agency Coordination indicates that the site is served by public water supply ID#NY1330035 and has an anticipated water use of 26,252 GPD. Please advise on the capacity of the proposed system. An Article 15 Water Withdrawal Permit may be required to undertake such activities pursuant to 6 NYCRR Part 601.6, such as the construction, operation, and maintenance of a water withdrawal system. Please note that the threshold volume of one hundred thousand gallons perm day is determined by the limiting maximum capacity of the water withdrawal system, and not the demand of the water system (6 NYCRR Part 601.6c). Additional information regarding the water withdrawal program and application procedures can be found on the DEC website at http://www.dec.ny.gov/lands/86935.html.

Article 15 Protection of Waters

According to the provided plans for the new outfall, it does not appear that there are disturbances proposed to the bed or banks of Webatuck Creek, DEC Water Index ID No. Conn 15-12, Class and Standard C(TS) or a tributary of Webatuck Creek, DEC Water Index ID No. Conn 15-12-9, Class and Standard C(TS). However, according to the plans the Department received as part of the Lead Agency coordination for the adaptive re-use of the Troutbeck Inn (which includes the new outfall), it appears that there are disturbances proposed to either the bed or banks of Webatuck Creek for the conversion of an existing building (E2 according to Troutbeck – Master Plans sheet) into a bakery and patio. Please be aware that an Article 15 Permit would be required for disturbances to the bed or banks. Additionally, please be aware that Webatuck Creek has documented occurrences of freshwater mussels; therefore, at a minimum, sediment and erosion control measures must be put into place for ground disturbance activities associated with the proposed project in order to prevent materials from entering Webatuck Creek and causing adverse impacts to this species. Additional detail regarding the proposed work at this building would be needed. Lastly, there are stream crossings shown over both the Webatuck Creek and the tributary of Webatuck Creek. Improvements to these crossings may require an Article 15 Permit, and review for impacts to freshwater mussels would likely be necessary. Please contact Sarah Pawliczak, DEC Bureau of Ecosystem Health, at sarah.pawlizcak@dec.ny.gov, for additional information regarding potential impacts to freshwater mussels.

Community Risk and Resiliency Act (CRRA)

The Community Risk and Resiliency Act (CRRA), enacted in 2014, ensures that certain projects include consideration of the effects of climate risk and extreme-weather events. CRRA covered permit programs require demonstration of consideration of these flooding

hazards for major projects (UPA-major). The Climate Leadership and Community Protection Act (CLCPA) amended the CRRA to include all permits subject to the Uniform Procedures Act (https://www.dec.ny.gov/permits/6081.html). The CLCPA also expanded the scope of the CRRA to require consideration of all climate hazards, not only sea-level rise, storm surge and flooding, in these permit programs. For additional information regarding the CRRA please see the following link: https://www.dec.ny.gov/energy/102559.html. Please provide a narrative and any additional materials that specifically shows how the design of the project is compliant with this requirement outlined in the following NYS Flood Risk Management Guidance document: https://www.dec.ny.gov/docs/administration_pdf/crrafloodriskmgmtgdnc.pdf.

Article 11 Threatened and Endangered Species
Please note that the project site is located in proximity to NYS-listed endangered Bog turtle, and NYS-listed threatened Timber rattlesnake. In order to review the project for impacts to these species, the Department will need to evaluate the entire proposal (both construction and operation); the EAF indicates that the project is anticipated to occur between 2022 and 2029.

Bog turtle
Information on impacts to water quality and hydrology from the project were not provided. Please provide a brief narrative describing impacts to water quality and hydrology; and relate this to the proposed subsurface wastewater disposal system and SWPPP. Impacts to the species and potential habitat should be assessed following the attached Bog Turtle Conservation Zones Guidance document. Additional information may be needed to determine if suitable habitat for this species will be impacted as a result of the proposed project. Please note that all known wetlands located on the site or in proximity but offsite must be identified on an aerial photo or map of the site. If any wetlands will be impacts by this project, an assessment for bog turtle habitat using the attached Bog Turtle Survey Guidelines for Phase 1 Surveys will be needed. In addition, any indirect impacts to area wetlands will need to be assessed, including wastewater, stormwater, water supply, and other possible impacts to hydrology or water quality. This review should be consistent with the attached Bog Turtle Conservation Zones document. Additionally, be aware that the bog turtle is a federally listed species, and the US Fish and Wildlife Service should be contacted as well. If project related impacts cannot be fully avoided or minimized, and Incidental Taking Permit may be required.

Timber rattlesnake
The proposed work on the Century Lodge septic system upgrades appears to be proposed during the active season for Timber rattlesnake, between April 1 and October 31. Please note that the appropriate timeframe to avoid direct adverse impacts to this species would be November 1 through March 31. No avoidance or minimizations measures were provided in the application; impacts to this species and potential suitable habitat should be assessed following the attached Timber rattlesnake guidelines document. At a minimum, conservation measures and take avoidance measures will be

needed during the construction and operation of the facility. Additional information is needed to determine is suitable habitat for this species will be impacted, such as a project narrative indicating what work is anticipated to take place between April 1 and October 31 each year. If project related impacts cannot be fully avoided or minimized, and Incidental Taking Permit may be required.

State Environmental Quality Review Act (SEQR)
The Department received the Notice of Intent to Serve as SEQR Lead Agency coordination from the Town of Amenia Planning Board, which also states that the action appears to be a Type 1 action under SEQR provisions Part 617. The Department does not object to the Town of Amenia Planning Board serving as Lead Agency. Please note that SEQR regulations 6 NYCRR 617.7 (a) and (b) require that the lead agency determine the significance of this action in writing. The written determination must thoroughly analyze identified areas of environmental concern. The application will remain as incomplete until SEQR provisions have been satisfied.

SHPO
The project location is an archaeological sensitive area. Pursuant to section 14.09 of the Parks, Recreation, and Historic Preservation Law (New York State Historic Preservation Act of 1980), the application is not complete until the Office of Parks, Recreation, and Historic Preservation has made a determination whether:

a. Any historic, architectural, archaeological, or cultural resources present in the project impact area are significant (listed on or eligible for listing on the State or National Register of Historic Places); and
b. The project may have any impacts on such significant resources.

Please submit the impact determination from the Office of Parks, Recreation, and Historic Preservation so that the application may proceed.

SPDES Stormwater Construction
Compliance with the current SPDES General Permit for Stormwater Discharges from Construction Activities (GP-0-20-001) is required for projects that disturb over one or more acres of land. According to the EAF (received during the SEQR Lead Agency Coordination), there are 15.7 acres of proposed disturbances, therefore; the applicant must prepare a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the current SPDES General Permit noted above.

Uniform Procedures
Please be advised that pursuant to 6 NYCRR Part 621(f), this project may be considered a major project; and it may be required to undergo 30 days of public notice. Once the department considers the application complete, the applicant will be responsible for publishing (for one day) the Notice of Complete Application in the official newspaper of the town in which the project will occur. Any comments received must be addressed before a final permit decision is made.

Re: DEC ID No. 3-1320-00027/00004
Troutbeck Inn
Town of Amenia, Dutchess County
Notice of Incomplete Application

Your application will remain as incomplete until all information requested is received, as Uniform Procedures Act (UPA) provisions §621.6(e) allow. Please provide a digital copy of all materials to my attention. Additional information, including regulations, is available at the DEC website at: www.dec.ny.gov.

If you have any questions, please feel free to contact me at (845) 256-3158 or via email at katherine.coffin@dec.ny.gov.

Sincerely,

Katherine Coffin

Katherine Coffin
Environmental Analyst
Division of Environmental Permits

Enc: Bog Turtle Conservation Zones
Bog Turtle Survey Guidelines for Phase 1 Surveys
Guidelines for Reviewing Projects for Potential Impacts to Timber Rattlesnake

Ecc: Stephen Monteverde, DEC DOW
Sarah Pawliczak-Vacek, DEC BEH
Lisa Masi, DEC Wildlife
Wildlife, R3 DEC
Town of Amenia Planning Board

RENNIA ENGINEERING DESIGN, PLLC

CIVIL & ENVIRONMENTAL ENGINEERING

6 Dover Village Plaza, Suite 5, P.O. Box 400, Dover Plains, NY 12522
Tel: (845) 877-0555 Fax: (845) 877-0556

October 21, 2022

New York State Department of Environmental Conservation
Division of Environmental Permits, Region 3
21 South Putt Corners Road
New Paltz, NY 12561-4659

Re: Troutbeck Inn – Adaptive Reuse
NYSDEC Response
515 Leedsville Road
132000-7267-00-227675

Dear Ms. Katherine Coffin,

Our office is in receipt of the Notice of Incomplete Application, dated June 30, 2022. This letter was triggered by both the NYSDEC Wastewater SPDES permit Application that was submitted for the Century Lodge Septic Replacement and by the SEQRA circulation for a separate Adaptive Re-Use application which is currently before the Amenia Planning Board, who intend to serve as lead agency.

Our office has reviewed the above referenced letter and we offer the following responses to the comments:

Article 17 SPDES:

- Since the septic tank and pump chamber that were designed to serve the Century Lodge septic replacement cannot be located outside of the 100-year flood plain, it is understood that an individual permit (P/C/I Discharge of Treated Sanitary Sewage) will be required and this will be applied for, as the process for the Phase 1 approvals for the overall Adaptive Re-Use progresses.
- The Troutbeck - Adaptive Reuse Plan is a proposed multi-phased development, outlining improvements to be provided to the existing resort/lodging/conference center facilities. Each improvement outlined on the Adaptive Reuse Plan, also referred to as a Master Plan, is conceptual, with design details for each proposed structure to be provided on a phase-by-phase basis. This Adaptive Re-use application and the Phase 1 site plan applications are currently under review by the Town of Amenia Planning Board. Phase 1 of the project includes plans to construct a gatehouse, five (5) cabins to be used as lodging units by guests, and the conversion of an existing maintenance garage into a bakery, to serve as an amenity to guests. Phase 1 will also include small water/wastewater improvements to serve the proposed uses. The other future improvements outlined in the Adaptive Reuse Plan will obtain the required water/wastewater and other approvals on a phase-by-phase basis.

Re: Troutbeck Inn – Adaptive Reuse
& Phase 1 Site Plan
515 Leedsville Road
132000-7267-00-227675

Article 15 Water Withdrawal:

- The Troutbeck site currently has a Public Water Supply served by 2-wells capable of producing 35 GPD and 22 GPD respectively. This equates to an available capacity of approximately 31,680 gallons per day. Our office has calculated the total use for all phases of the Adaptive Re-Use Plan as 25,250 GPD, so it is not anticipated that any water supply system improvements will be required. There are no plans that would cause the water supply needs to reach the 100,000 GPD threshold that triggers a need for a water withdrawal permit.

Article 15 Protection of Waters:

- The Bakery and deck improvements shown in the Adaptive Reuse Plan are fairly minor and will not affect Webatuck Creek. The proposed Bakery is to be located in an existing structure containing a maintenance garage (1st floor) and staff residence (2nd floor). The propose project will convert the first floor of the building into the bakery, removing the maintenance garage, with the second floor to remain as a staff residence. As for exterior improvements, only a small ±105 SF vestibule addition is proposed to be added to the front of the structure. The addition is proposed in an area already containing a gravel drive, which will minimize disturbance and new impervious surface to be created. The deck, which is shown as part of the proposed bakery conversion will have equally little impact on Webatuck Creek. The proposed deck will be constructed at grade so it will protect the underlying soil and restore the adjacent gravel parking as lawn and landscaping. No disturbance is proposed to the Webatuck Creek's bed or banks as part of these proposed improvements.
- There are no improvements to the existing creek crossings proposed at this time.

Community Risk & Resiliency Act (CRRA):

- The applicant has reviewed the CRRA and the Climate Leadership and Community Protection Act (CLCPA), as well as the "NYS Flood Risk Management Guidance for Implementation of the Community Risk and Resiliency Act" guiding document, dated August 2020, and have found the project in compliance with their requirements/recommendations. Provided below is a summary of how the project is in compliance with CRRA requirements outlined in the above referenced document:
    - The Troutbeck Inn – Adaptive Reuse Plan has been designed to be in compliance with Town of Amenia Code §67 "Flood Damage Prevention Measures", which was adopted to reduce the risk of potential flood damage in inclement weather events.
    - Furthermore, the project has been designed to be in compliance with the Town of Amenia Zoning Code §121-13 "Floodplain Overlay District" & §121-14 "Stream Corridor Overlay District", which places additional development restrictions around waterways containing FEMA designated Floodplains and other sensitive stream corridors identified by the Town.

Re: Troutbeck Inn – Adaptive Reuse
& Phase 1 Site Plan
515 Leedsville Road
132000-7267-00-227675

- Identified wetland and watercourse shall be preserved. No disturbance or improvements are proposed within federal wetlands located on site, or within existing watercourses.
- The project site is not located along any Coastal Shorelines. Therefor additional mitigation and protections measures relating to coastal development is not required.
- All proposed building improvements are located outside of the FEMA designated Floodway/Floodplain(s) or with their finished floors above the flood plain elevations with no impacts to the floodway.
- A Full Stormwater Pollution Prevention Plan (SWPPP) has been developed to mitigate the potential impact of disturbance/stormwater runoff associated with this project.

Article 11 Threatened & Endangered Species:

- A "Threatened and Endangered Species Habitat Suitability Assessment Report" has been prepared for the site by Michael Nowicki with Ecological Solutions, LLC. The report acknowledges the possible presence of NYS-listed endangered Bog Turtle(s) and Timber Rattlesnake(s). The report summarizes field investigations conducted by Mr. Nowicki, which were conducted to see whether or not the site contains the necessary habitat to support the above-referenced species. After a thorough investigation, Mr. Nowicki states in his report that the site does not contain the habitat to support either species and as such, the project will not impact the Bog Turtle or Timber Rattlesnake. The report concludes that due to the absence of native habitat that no mitigation will be required for this project.

State Environmental Quality Review (SEQRA):

- It is noted that the DEC takes no objections to the Planning Board serving as Lead Agency and the requirement for the lead agency to provide a determination of significance in writing are noted.

SHPO:

A submission has been made to the NYS Office of Parks, Recreation, and Historic Preservation to determine whether or not the project will impact any historic, architectural, archaeological or cultural resources:

- A "Phase I Archaeological Investigation for the proposed Troutbeck Inn Adaptive Reuse" has been prepared by Alfred Cammisa, RPA with TRACKER Archaeology, Inc. for the project site and submitted to SHPO for their review and approval. After this initial submission, addition shovel test areas were identified by SHPO agent Jessica Schreyer within the Area of Potential Effect (APE). Additional shovel testing conducted, per Ms. Schreyer's recommendation, has been completed and a revised report has been submitted for SHPO's review and approval.
- Several separate SHPO submissions were prepared and submitted to identify potential effects that the project may have to existing historic structures present on the project site.

Re: Troutbeck Inn – Adaptive Reuse
& Phase 1 Site Plan
515 Leedsville Road
132000-7267-00-227675

The submission is currently being reviewed by SHPO agent Sloane Bullough to determine what mitigation, if any, is required for this project.

SPDES Stormwater Construction:

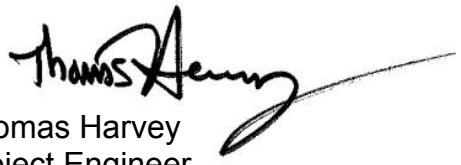
- A full SWPPP has been developed for the site, which will be the design basis to obtain the required permit coverage on a Phase-by-phase basis.

Uniform Procedures:

- It is noted that the DEC may be considering this a major project, which will require the public notice.

Please do not hesitate to contact me with any questions, (845) 877-0555.

Sincerely,



Thomas Harvey
Project Engineer

Ecological Solutions, LLC

121 Leon Stocker Drive
Stratton, VT 05360
Phone (203) 910-4716
ecolsol@aol.com

January 6, 2023

Tom Harvey, PE
c/o Troutbeck Holdings, LP
515 Leedsville Road
Amenia, NY 12501

Re: Troutbeck Inn Property
Town of Amenia, Dutchess County

Dear Tom,

As requested, I am providing responses to comments provided by Hudsonia dated December 13, 2022 regarding the wetlands and habitat at the Troutbeck Inn site. Comments regarding the potential threatened or endangered species are paraphrased below and responded to in general below.

Comment - Bog Turtle

Response - Hudsonia suggests that bog turtle are likely occasionally entering the property. However this is not a vacant tract of land with appropriate habitat for use by this species. The site is an existing developed area with structures and roads and maintenance activities such as mowing that would make any use of the site by bog turtles unlikely. It would seem that the proposed project would not change the character of the site in any event. Also, the New York State Department of Environmental Conservation (NYSDEC) is currently reviewing the Phase 1 report and regulate potential impacts to the species. I can provide any additional information to the NYSDEC if required if mitigation measures are required.

Comment - Timber Rattlesnake

Response - Hudsonia indicates that most of Rattlesnake Mountain is with 4 miles of the site and that Timber Rattlesnakes potentially migrate up to 4 miles from this known area. The NYSDEC indicates that timber rattlesnakes could migrate 3 miles (attached guidelines) which places the property beyond the normal range for this species. As with bog turtle the developed nature of the site and relatively minor project footprint suggests that there will be no impact to this species even if one outlier could reach the site. However, as with the bog turtle the NYSDEC is currently reviewing the Phase 1 report and regulate potential impacts to the species. I can provide any additional information to the NYSDEC if required if mitigation measures are required.

Comment - Bat species

Response - Comments regarding the black locust trees near a proposed impact area on the Northern end of the site are noted. I agree these large black locusts could offer potential habitat for bat species even though there is no known occurrences in the area as suggested by the lack of designation of these species by the NYSDEC on the Environmental Assessment Form.

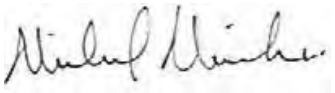
However there is no impact proposed to these trees and they will remain potential habitat. So assuming presence of regulated bats species is appropriate without conducting surveys. If changes occur to the project that require tree removal then mitigation measures could be suggested.

Comment - Rare Plants

Response - Hudsonia suggests that there may be potential rare plants on the site. Although rare plants are not regulated by the NYSDEC a review of the proposed impact areas did occur during the review of habitat potential for regulated species. None were observed in the project areas and this makes sense considering that the site undergoes mowing and other maintenance. There may be rare plants on the site but there will be no impact from the proposed project.

If you have any questions, please do not hesitate to contact me at (203) 910-4716.

Sincerely,

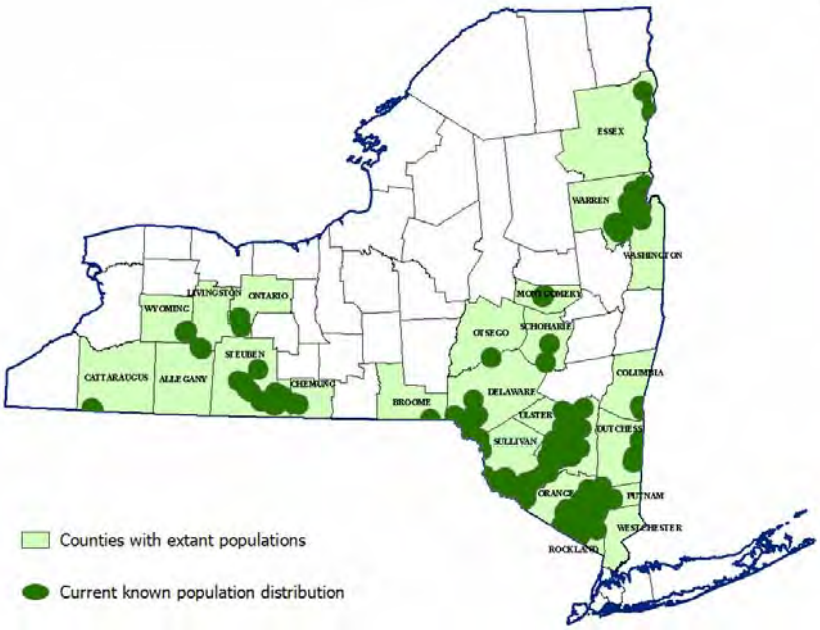


Michael Nowicki
Biologist

EXHIBIT DEC 1

Guidelines for Reviewing Projects for Potential Impacts to the Timber Rattlesnake

The timber rattlesnake (*Crotalus horridus*) is listed as a *threatened* species in New York and is protected by Environmental Conservation Law (ECL) section 11-0535 and the New York Code of Rules and Regulations (6 NYCRR Part 182). A permit is required for any proposed project that may result in a "take", which includes, but is not limited to, adverse modification, degradation or destruction of occupied habitat of any species listed as endangered or threatened pursuant to the above laws and regulations. In New York, timber rattlesnakes are typically associated with steep-slopes and rocky terrain of deciduous or mixed deciduous/coniferous forest. They are, however, known to use and/or move through a wide variety of land types (e.g. wetlands and early successional habitats) during a typical seasonal activity cycle. In areas where movement is not impeded by artificial barriers (e.g. major roads and urban areas) timber rattlesnakes may migrate three miles or more from their den each summer in search of essential summer habitats (e.g. basking and gestating areas), food, and mating partners. Human-rattlesnake interactions are most likely to occur during the summer and early autumn when movement rates peak and snakes are typically at their maximum distance from the den; in some locations, migration routes may require snakes to pass through residential developments or other areas of intensive land use. Where multiple den sites are clustered in relatively close proximity, areas of potential range overlap between snakes from different dens may be particularly important locations for continued gene flow. Thus, avoiding fragmentation of these areas of genetic exchange is critical for the long-term viability of a local population.



Timber rattlesnake distribution in New York State

Impact Assessment Requirements

For projects that have been determined to be in close proximity to a known timber rattlesnake den, the project design will need to avoid alteration of suitable habitats and incorporate mitigation measures to prevent impacts to the snakes that would constitute a take under ECL Section 11-0535. Where the landscape will be significantly altered, mitigation is difficult and avoiding impacts may require detailed information about timber rattlesnakes on and around the project site. Therefore, if it has been determined that a potential taking could result from the project, the following information may be required to assess the potential project-related impacts on timber rattlesnakes: 1) habitat assessment [identify all suitable hibernacula, transient habitat, and summer range, 2) site usage, and 3) movement between summer and winter habitats.

Habitat Assessment

Due to the species' large home range and multiple habitat requirements a habitat assessment (PFBC-NDS, 2004) should be conducted to determine the presence of suitable basking, foraging, gestating and denning habitat or potential travel corridors within the project boundaries. Information collected for each area identified as potentially suitable habitat should include, at minimum, a habitat description and geographic location (i.e. GPS coordinates). Results of the habitat assessment will determine what additional information and/or mitigation may be required. Locations identified as potential habitat will also be used as the primary focus areas of presence-absence surveys, if necessary. Habitat assessments must be conducted by individuals that have knowledge of timber rattlesnake ecology.

Population Surveys

If the project site contains suitable habitat(s), it may be assumed rattlesnakes utilize the site during some stage of their annual cycle and the potential impacts to the species and their habitats should be assessed and mitigation measures (see Mitigation Recommendations) should be incorporated into the project design. If any of the above habitat elements occur on or in close proximity to the project site ***AND*** usage of the site by timber rattlesnakes will not be assumed, then surveys to detect the presence (e.g. den emergence, basking and gestating habitat searches) and site usage/snake movement (e.g. radio telemetry) should be conducted.

Population surveys (Casper *et al.* 2001) must be conducted during the time when timber rattlesnakes are not hibernating and can be expected to be active. To ensure accurate results, surveys should only be conducted between April 15th and October 31st on days when the air temperatures is 66^{o} F or greater ***AND*** there is no appreciable precipitation.

To adequately assess the site for the presence (or probable absence) of timber rattlesnakes, each location identified as suitable basking, gestating, or denning habitat or as a potential travel corridor should be visited at least four (4) times within the survey period, and visits to each suitable habitat location should be separated by seven (7) or more days.

Survey to detect the presence of timber rattlesnakes at potential den habitats are confined to the beginning and end of the active season when snakes are most likely to be detected at or near den sites. Thus, two (2) visits per potential den should occur post den emergence between April 15th and May 15th, and an additional two (2) visits per potential den should occur between September 15th and October 25th when the snakes are congregating around dens prior to den ingress for winter hibernation.

The collection of site usage and snake movement data may require telemetric monitoring (via external and/or internal radio transmitters) to record the location and behavior of a representative sample of snakes throughout their annual cycle. In order to assess movement patterns, or to be reasonably certain that rattlesnakes do not use specific areas of a proposed project site, up to three field seasons of data collection may be required (a minimum of two full activity cycles of data are recommended). Contingent upon the data collection requirements of the project, a detailed scope of work should be developed by the project sponsor (in consultation with Department staff) and approved by the Department prior to the initiation of any field work.

All timber rattlesnake population surveys should be conducted by individuals that have knowledge of the species' ecology, and surveys that may involve handling snakes (e.g. marking, radio telemetry) must be conducted by individuals that have experience with such techniques and are licensed by New York State to handle timber rattlesnakes.

Threats

- Loss and/or degradation of habitat - residential and commercial development and mining operations eliminate available habitat and may degrade that which is not destroyed (e.g. stormwater runoff, use of residential chemicals).

- Persecution and illegal collection - increased human activity in timber rattlesnake habitats increases the potential for snake mortality from intentional killing of snakes by humans. A higher rate of illegal collection (effective mortality) for the pet trade is also often a result of increased human presence near timber rattlesnake populations.

- Fragmentation and road mortality - the species' large home range and a high degree of site fidelity result in timber rattlesnakes typically following the same route each year during long-distance migrations between habitats. Thus, any newly-constructed road that intersects a snake's traditional travel route will become either an impassable barrier to migration or an annual road-mortality hazard.

Mitigation Recommendations

The following is a list of potential mitigation methods that may be used to avoid or minimize certain project-related impacts; however, not all methods are appropriate for all projects.

- Seasonal restrictions

  All allowable disturbance activities, including movement of construction vehicles, excavation, and alteration of vegetation, should be conducted during the period when the snakes would be expected to be hibernating and are less likely to be directly impacted by above-ground disturbances. The acceptable work period is November 1st through March 31st.

  Habitat management (including timber harvesting) and trail maintenance activities should also be timed to minimize the potential for injury/death of snakes. Habitats that are actively managed (e.g. mowing and prescribed burning) and trailsides that are cleared using a brush hog may increase mortality as snakes are killed by machinery or incinerated by fire (Means and Campbell, 1982b)

  In addition to the seasonal restrictions applied to vegetation management practices, disturbance to non-transient habitats should be avoided at ***ALL*** times. Roads, skid trails and landings should be kept at least 330 feet from all known or potentially suitable basking and gestating habitats, and to minimize the potential for collapse or disturbance of dens, heavy equipment and site preparation work (e.g. disk-harrowing, shearing, root-raking) should be prohibited within 660 feet of any known hibernacula.

- Timber rattlesnake monitor

  If any project-related work is to occur (in whole or in part) during April 1st through October 31st, the project sponsor should retain the services of a snake monitor. The snake monitor must be a qualified biologist that has knowledge of timber rattlesnake ecology and relocation procedures. The monitor must also have experience handling rattlesnakes and be licensed by New York State to do so.

  The snake monitor should be on site during all construction activities and would be responsible for: 1) conducting reconnaissance surveys for timber rattlesnakes within the work area prior to the initiation of any disturbance activities, and 2) relocating snakes as required.

- Temporary barrier

When disturbance is likely to occur from actions occurring outside of the acceptable work periods, a temporary restrictive (Stechert, 2001) barrier may help to avoid impacts if installed around the perimeter of the disturbance footprint of small projects (< 1 acre). The barrier should be: 1) installed before the end of the acceptable work period and maintained until the end of the construction phase of the project or until the beginning of the next acceptable work period, whichever occurs first, 2) inspected daily and, if necessary, repaired immediately to a fully functional condition*, and 3) constructed in accordance with the following design specifications:

- made of ¼ inch square hardware cloth or wire mesh
- a minimum of 48" high
- anchored into the ground with reinforcement bars placed on the "disturbance side" of the barrier and spaced between 6 – 8 feet apart.
- secured at the base (barrier/ground interface) with at least 6" of fence material covered with soil backfill

* The effectiveness of the barrier will be diminished and snakes may be able to gain access to the disturbance area if debris (e.g. tree limbs, soil) is allowed to overtop or pile up along side of the barrier.

- Education

Persecution by humans is a significant source of timber rattlesnake mortality and is thought to be a major contributing factor to the population declines experienced by the species over the past 100 years. Misconceptions about the actual versus perceived threat posed by timber rattlesnakes often leads to the snakes being injured or killed by humans who, when encountering a timber rattlesnake, are fearful of being attacked. Prospective residents in subdivisions located near known den sites should be provided with educational materials that help identify timber rattlesnakes and accurately describe the snakes' non-aggressive behavior. Educational materials should also include information about the Department's nuisance rattlesnake relocation program. The subdivision's prospectus could also be required to disclose the potential for the presence of timber rattlesnakes on the property. Homeowners and local law enforcement agencies should be provided with phone numbers of nuisance rattlesnake responders in the area.

- Habitat creation/enhancement

In some locations, natural succession may cause shading-over of hibernacula or essential summer habitats. Such habitat suitability changes, particularly that of gestating and birthing areas, can decrease the long-term viability of the location's timber rattlesnake population. Vegetation thinning to reclaim the site or the establishment of open stone piles to create escape cover and basking areas may mitigate some of habitat lost to successional changes. In such cases, the development of a site management plan, along with a long-term commitment by the landowner, may more than offset the loss of non-essential habitat resulting from project-related actions.

- Herp tunnel

Where roads and highways separate summer and winter habitats, it may be possible to maintain migration corridors via herp tunnels.

EXHIBIT DEC 1

Nuisance Rattlesnake Responders (Region 3): The individuals listed below are qualified and licensed to relocate nuisance rattlesnakes.

Orange County

Fort Montgomery

1	Ed McGowen	(845) 446-5916

Highland Mills

2	Bob Savarese	(845) 928-7815

Warwick

3	Marty Kupersmith	(845) 986-6235 work (914) 262-3246 cell
4	David Griggs (ERS Consultants)	(845) 987-1774 work (845) 988-6029 cell
5	Tim & Susan Sharko	(845) 988-9369

Rockland County

Pomona

6	Gene Herskovics	(845) 685-1870 pager

Spring Valley

7	John Tarrant (Outragehisss Pets)	(845) 352-4477 work (845) 642-6594 cell

Sullivan County

Narrowsburg

8	Randy Stechert	(845) 252-3517
9	Kathy & Tom Michell	(845) 252-3501

Ulster County

New Paltz

10	Ed Dashnau	(845) 255-4176

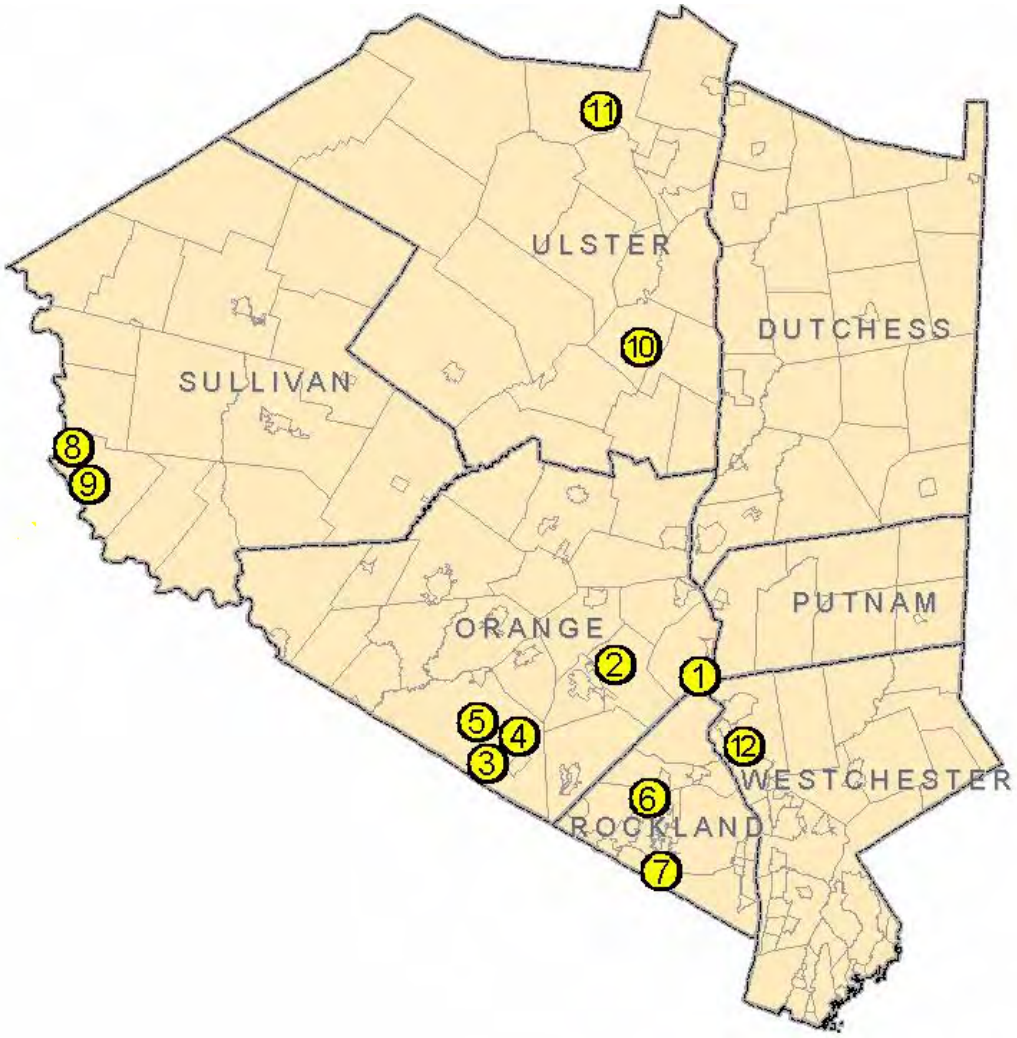
Woodstock

11	Gregory VanBogart	(845) 679-5714

Westchester County

Peekskill

12	Chris Camacho	(914) 584-1088



References

Brown, W. S. 1993. Biology, status, and management of the timber rattlesnake (*Crotalus horridus*): a guide for conservation. SSAR Herp. Circ. No. 22. vi + 78 pp.

Casper et al. 2001. *Recommended Standard Survey Protocol For the Eastern Massasauga*, *Sistrurus catenatus catenatus*. Unpublished.

Means, D. Bruce and Howard W. Campbell. 1982b. Effects of prescribed burning on amphibians and reptiles. Pages 89-97 *in* G. W. Wood, editor. Prescribed fire and wildlife in Southern forests. Proceedings of a symposium. Belle W. Baruch Forest Science Institute, Clemson University, Clemson, South Carolina, USA.

PFBC-NDS. 2004. Pennsylvania Fish and Boat Commission Natural Diversity Section Timber Rattlesnake Presence-Absence Survey Guidelines (Form-06, revised 3/9/04).

Stechert, R. 2001. Effectiveness of an experimental timber rattlesnake (*Crotalus horridus*) exclusion fence at Schunemunk Mountain, Town of Woodbury, Orange County, New York. Report to the Eastern Chapter of the New York Natural Conservancy and the New York State Department of Environmental Conservation. 23p.

Related Resources and Links

New York Natural Heritage Program

New York Natural Heritage Program. 2008. Online Conservation Guide for *Crotalus horridus*. Available from: http://www.acris.nynhp.org/guide.php?id=7536

NatureServe Explorer

NatureServe. 2009. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer

NYSDEC

New York State Department of Environmental Conservation, Division of Fish, Wildlife and Marine Resources. 2006. Timber Rattlesnake Fact Sheet. http://www.dec.ny.gov/animals/7147.html

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 3
21 South Putt Corners Road, New Paltz, NY 12561-1620
P: (845) 256-3054 | F: (845) 255-4659
www.dec.ny.gov

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

January 17, 2023

Rennia Engineering Design, PLLC
Attn: Thomas Harvey
6 Dover Plains Plaza, Suite 5
P.O. Box 400
Dover Plains, NY 12522

Re: DEC Application No. 3-1320-00027/00004
Article 17 SPDES
Troutbeck Inn – Adaptive Re-use
Town of Amenia, Dutchess County

Response to Partial Submission

Dear Thomas Harvey,

The Department of Environmental Conservation (DEC or Department) received partial responses regarding the above-referenced application on October 21, 2022, and December 5, 2022. I apologize for the delay in response. The submission (dated November 21, 2022, received December 5, 2022) includes a Threatened and Endangered Species Habitat Suitability Assessment Report regarding NYS-listed endangered Bog turtle and NYS-listed threatened Timber rattlesnake.

The Department has received a Notice of Intent to Serve as Lead Agency from the Town of Amenia Planning Board for the adaptive re-use of the Troutbeck Inn, which includes this septic system upgrade for the Century Lodge (as well as installation of various buildings, pool, cabins, walkways, and associated utilities, resulting in a total of 15.7 acres of ground disturbance). Pursuant to 6NYCRR Part 621.3(a)(4), if a project requires more than one Department permit, the applicant must simultaneously submit all necessary applications, or demonstrate to the Department's satisfaction that there is a good cause not to do so.

The application remains as incomplete. Please submit the following supporting information and documentation in order for the Department to continue our review:

Article 17 SPDES
Since the proposed outfall cannot be moved outside of the floodplain, the proposal is not eligible for coverage under the SPDES General Permit, an individual P/C/I Discharge of Treated Sanitary Sewage permit is needed. Please see the instructions at https://www.dec.ny.gov/permits/6304.html#PCI, as well as the attached Notice of Incomplete Application, for the materials required for the individual P/C/I permit application.

Phasing
It has been indicated that you are proposing to apply for NYSDEC permit as the phases progress, and the current application relates to Phase 1. There are inconsistencies between the descriptions of the phases in the submission received on October 21, 2022, and the Supplemental EAF Information. Please clarify the actions to be undertaken in Phase 1.

According to the description of Phase 1 in the partial resubmission received October 21, 2022, "Phase 1 of the project includes plans to construct a gatehouse, five (5) cabins to be used as lodging units by guests, and the conversion of an existing maintenance garage into a bakery, to serve as an amenity to guests. Phase 1 will also include small water/wastewater improvements to serve the proposed uses." However, the Supplemental EAF Information indicates that "Phase 1 will be centered around the construction of seven (7) guest cabins and a gatehouse in the eastern portions of the site along an existing entrance on Leedsville Road. The phase also includes the construction of platform tennis court and warming hut, which will serve as a guest amenity." Then "Phase 3 will be centered around the converting an existing maintenance garage/staff apartment (1) building into a bakery to be used by guests staying on site. The proposed bakery will include the construction of an outdoor patio space overlooking Webatuck Creek, as well as minor improvements to the parking area. The existing staff apartment will remain." Please clarify the actions to be taken for this permit application.

Additionally, according to the conceptual site plans, 11 of the 12 phases involve either installation of or improvements to septic systems. How many outfalls are anticipated overall? Please note that changes to the permitted discharges would require permit modification, and the addition of outfalls may require permit modification. Please advise on the anticipated timing of the phases as well.

Article 15 Protection of Waters
The Department notes the attestation that disturbances are not proposed to Webatuck Creek. As indicated in the Notice of Incomplete dated June 30, 2022; additional detail regarding the proposed work at this building (the proposed bakery and patio) would be needed. Please note that the Department would need to review site plans (plans showing how the patio construction relates to the topography, or a cross section showing how the proposed construction relates to the stream banks), including details on the sediment and erosion controls, in order to make a definitive determination on the need for a permit and to assess potential impacts to freshwater mussels.

Additionally, please indicate if the sewage pipe from the Century Lodge Septic to the septic reserve area is existing, or if it is a new installation. The Overall Concept Utility Plan depicts the line appearing to go underneath Webatuck Creek. Please note that an Article 15 Permit would be required if the line is proposed to be installed by trenching; if the line is to be installed using horizontal drilling, a contingency plan would be needed. Please advise if the septic line is existing, or proposed, or will be repaired in this proposal.

Please note that the Department would make the final determination on the need for an Article 15 Permit.

Article 11 Threatened and Endangered Species

Be aware that the below information applies to all phases of the project, and the below measures must be added to site plans and implemented for the duration of the project.

Timber rattlesnake

The Department has reviewed the provided Habitat Suitability Assessment Report, dated October 21, 2019. While the Department concurs with the determination that suitable denning and basking habitat is not present on site, potential for impacts to migrating or foraging individuals of the species remains possible given the proximity to known locations and the species ability to move long distances. While details of the proposed project elements were not shared with this Habitat Suitability Assessment Report, the Department requires that standard avoidance and minimization measures be incorporated in to project plans to avoid or minimize impacts from the overall project on this species. Please note that similar measures were identified and implemented for the Wellness Building project in 2019.

Project plans must include the below take avoidance and minimization measures as plan notes (additional information is also included in the attached guidance document):

- The acceptable work window to avoid impacts to timber rattlesnakes at the site is from November 1st to March 31st. During this timeframe, additional take-avoidance measures are not necessary.
- For work that takes place from April 1st to October 31st, contractors must be trained in the project specific Education and Encounter Plan by a qualified, licensed timber rattlesnake consultant.
- For initial ground disturbance activities/heavy equipment use occurring between April 1st and October 31st, barrier fencing must be installed that encloses the work area. This fencing should be installed before April 1st and maintained until October 31st. If the fence is installed between April 1st and October 31st, the installation must be done under the supervision of a qualified and licensed timber rattlesnake monitor. The barrier fence must be inspected and maintained daily throughout the active season.
- The NYSDEC Bureau of Wildlife must be contacted within 24-hours if a state-listed species us encountered. The Wildlife office can be reached at (845) 256-3098 or by email at wildlife.r3@dec.ny.gov. The location, project name, and an explanation must be provided.

If additional detail regarding these take avoidance measures is required, please contact Lisa Masi, DEC Wildlife, at lisa.masi@dec.ny.gov.

Bog turtle

While the Department concurs that suitable habitat is not present on the project site, there is some limited potential to encounter individuals of this species passing through the site (such as crossing roadways, work areas, etc). As such, please see the attached general Bog turtle Education and Encounter (E&E) Plan. This plan should be implemented and included with the site plans. The site plans should also incorporate any measures needed to maintain water quality as to no impact offsite wetland habitats.

If take avoidance measures cannot be followed, additional information will be required, along with the possibility of an Endangered and Threatened Species Take Permit. The issuance standards for such a permit require a Net Conservation Benefit for the impacted species, meaning the species is better off as a result of the project that if the project were not undertaken.

Note that department would need to review plans updated with the aforementioned measures included prior to making a determination on the need for an Article 11 Take Permit.

Re: DEC ID No. 3-1320-00027/00004
Troutbeck Inn – Adaptive Re-use
Town of Amenia, Dutchess County
Response to Partial Submission

SEQR
As indicated within the attached NOIA, SEQR regulations 6 NYCRR 617.7(a) and (b) require that the lead agency determine the significance of this action inwriting, and the written determination must thoroughly analyze identified areas of environmental concern. The application will remain as incomplete until the SEQR provisions have been satisfied.

Please advise on the number or phases or which work the current SEQR review is covering. If SEQR is not completed for all project phases, SEQR will need to be completed for the additional work prior to the issuance of any DEC permits.

SHPO
The Department notes that a submission has been made to NYS OPRHP. The determination from OPRHP must be submitted to the Department.

SPDES Stormwater Construction
Please provide a digital copy of the SWPPP (or preliminary SWPPP if a final is not yet prepared).

Please be aware that that in areas of active construction, the total combined area of soil disturbance may not exceed 5-acres at any given time throughout the life of the project. If construction activity is intended to exceed 5-acres at any given time, a 5-acre waiver request and phasing plan must be submitted to the Department and receive approval prior to any exceedance.

Your application will remain as incomplete until all information requested is received, as Uniform Procedures Act (UPA) provisions §621.6(e) allow. Please provide a digital copy of all materials to my attention – please note that all items addressed in the Notice of Incomplete (dated June 30, 2022) and this Response to Partial Submission should be addressed in one submission. Additional information, including regulations, is available at the DEC website at: www.dec.ny.gov.

Department staff are available to discuss the application and the items addressed in both the Notice of Incomplete and the Response to Partial Submission. If you have any questions, or would like to schedule a follow-up meeting, please feel free to contact me at (845) 256-3158 or via email at katherine.coffin@dec.ny.gov.

Sincerely,

Katherine Coffin

Katherine Coffin
Environmental Analyst
Division of Environmental Permits

Re: DEC ID No. 3-1320-00027/00004
Troutbeck Inn – Adaptive Re-use
Town of Amenia, Dutchess County
Response to Partial Submission

Enc: 3-1320-00027/00004 (P3G) NOIA dated June 30, 2022
Guidelines for Reviewing Projects for Potential Impacts to Timber Rattlesnake
Bog Turtle General Education and Encounter Plan

Ecc: Stephen Monteverde, DEC DOW
Sarah Pawliczak, DEC BEH
Lisa Masi, R3 DEC
Town of Amenia Planning Board

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January 2022-basic

Bog Turtle Education and Encounter plan – *NYS DEC issued*

This project site is located in an area of known Bog turtle habitat. Bog turtles use primarily wetland habitats but can make periodic movements over land to new habitats during dispersal events. They are particularly active on the landscape between April 1st to September 30th. This document is intended to minimize impacts to Bog and other turtles that may be encountered during otherwise lawful activities and be used in accordance with the Department's Permits and jurisdictional response letters for the above referenced project, including all other species take avoidance measures proposed. This information should be provided to construction contractors and occupants at the proposed location.

The bog turtle is listed as "Endangered" on the New York State Endangered Species List.

- As a listed species, the bog turtle is protected under the New York State Environmental Conservation Law.
- As provided by the law, it is illegal for any person to approach, touch, move, threaten, harass, disturb, injure, or kill a bog turtle. It is also illegal to take import, transport, possess, or sell any bog turtle, its skin, or other parts, except under a permit or license from the New York State Department of Environmental Conservation (DEC).
- A violation of the Environmental Conservation Law is punishable by both criminal and civil penalties.
- The bog turtle, or other turtle species, may be encountered along roads, near homes and yards, in construction sites, and in undeveloped areas. If encountered, move away and do not attempt injure or collect the turtle.
- If any turtle species is seen in the work area, stop all work immediately.
- Contact the contractor in charge and delay work in the area until the turtle has moved safely from the area. Allow the turtle to continue on its way if it is safe to do so.
- If the turtle does not move out of harm's way on its own, and unless a qualified monitor licensed in New York State to handle and relocate the species has been retained who will promptly arrange for the turtle to be moved, please contact the NYS Department of Environmental Conservation Region 3 Bureau of Wildlife at 845-256-3098 for information regarding next steps and moving the species in accordance with New York State Law.
- If the turtle is found in the roadway (or in immediate danger), it can be moved out of harm's way to the side of the road in the direction it is heading. Do not move the turtle large distances or take possession of the turtle.
- Please report any encounters within 24 hours at 845-256-3098 or Wildlife.R3@dec.ny.gov. Please provide the location, the project name, and explanation of the encounter.

Photo Credit L. Masi

Accompanying handouts:

- Turtles of New York PDF.
https://www.dec.ny.gov/docs/administration_pdf/turtles2.pdf

- NYS DEC Bog Turtle Fact Sheet. 2021
https://www.dec.ny.gov/animals/7164.html

Species description

The bog turtle is New York's smallest turtle, reaching a maximum length of 4.5 inches. It is one of seventeen species of turtles found in New York State, including marine turtles. A bright yellow or orange blotch on each side of its head and neck are a distinctive feature of this species. The body color is dark with an orange-red wash on the inside of the legs of some individuals. The carapace (upper shell) is domed and somewhat rectangular, often with prominent rings on the shell plates (scutes). In some older individuals, or those that burrow frequently in coarse substrates, the shell may become quite smooth and polished. Although generally black, the carapace is sometimes highlighted by a chestnut sunburst pattern in each scute. The plastron (lower shell) is hingeless, with a pattern of cream and black blotches.

Other more common species that may be encountered. *– All turtles are protected from collection. turtles in the wild unless injured (see below).*

Box Turtle *(Special Concern)*

Shell length: 4.5 - 6 inches

New York's most terrestrial turtle, the box turtle spends most of its time wandering open fields and forests, only retreating to shallow pools or wetlands to soak during very hot and dry periods. It can completely close its shell, distinguishing it from other turtle species. The box turtle's high-domed carapace is brightly highlighted; the plastron is hinged. Males and females can be told apart by eye color—usually brown for females, red for males. Box turtles eat a variety of fleshy fruits such as strawberries and raspberries, mushrooms and other soft vegetation, worms, slugs and snails. They will also scavenge dead birds and mammals.

Wood Turtle *(Special Concern)*

Shell length: 6 - 8 inches

The wood turtle gets its name from its preferred wooded habitat, as well as from the color of its carapace—the prominent annuli give it the sculpted appearance of weathered tree rings. Wood turtles are usually found in or along clean, fast-flowing trout streams, foraging during the summer in the woodlands bordering the streams. Like other turtles, females move into open areas for nesting. Wood turtles eat berries, mushrooms, small fish, slugs, worms and tadpoles. They have also been known to feed on carrion.

Snapping Turtle

Shell length: 10 - 16 inches

Easily recognized by its large head, long saw-toothed tail, stocky legs with large claws, and the jagged, saw-toothed rear edge on its dark shell, the snapping turtle is our largest freshwater turtle. Known for its defensive nature, this turtle will attack on land, but prefers to flee in water. Highly aquatic, this species is found in freshwater and brackish marshes, ponds, lakes, rivers and streams. Snappers often scavenge, but they also take live food ranging in size from small invertebrates to young waterfowl or small fish.

Painted Turtle

Shell length: 5 - 7 inches

Our most common species, the painted turtle is often seen basking in large numbers on logs and stumps in marshes, ponds and lakes, disappearing into the water quickly when disturbed. Bright stripes on the neck and spots on the head can be seen when the turtle is basking. The dark carapace is bordered with red. The plastron is plain yellow in the Eastern painted turtle, and has a dark central blotch in the Midland painted turtle. Males have long claws on their front feet; females have longer shells. Painted turtles eat a variety of invertebrates, tadpoles and vegetation, but will also scavenge carrion.

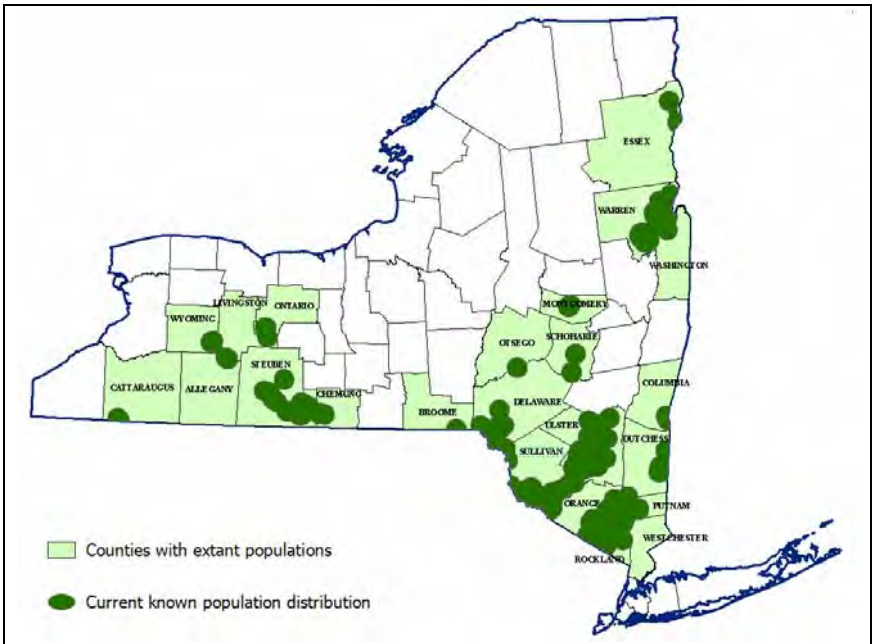
If you encounter an injured turtle, please contact a local NYS DEC licensed Wildlife Rehabilitator by scanning the QR code, or calling the Regional Wildlife office at 845-256-3098

SCAN ME

https://www.dec.ny.gov/cfmx/extapps/sls_searches/index.cfm?p=live_rehab

Guidelines for Reviewing Projects for Potential Impacts to the Timber Rattlesnake

The timber rattlesnake (*Crotalus horridus*) is listed as a *threatened* species in New York and is protected by Environmental Conservation Law (ECL) section 11-0535 and the New York Code of Rules and Regulations (6 NYCRR Part 182). A permit is required for any proposed project that may result in a "take", which includes, but is not limited to, adverse modification, degradation or destruction of occupied habitat of any species listed as endangered or threatened pursuant to the above laws and regulations. In New York, timber rattlesnakes are typically associated with steep-slopes and rocky terrain of deciduous or mixed deciduous/coniferous forest. They are, however, known to use and/or move through a wide variety of land types (e.g. wetlands and early successional habitats) during a typical seasonal activity cycle. In areas where movement is not impeded by artificial barriers (e.g. major roads and urban areas) timber rattlesnakes may migrate three miles or more from their den each summer in search of essential summer habitats (e.g. basking and gestating areas), food, and mating partners. Human-rattlesnake interactions are most likely to occur during the summer and early autumn when movement rates peak and snakes are typically at their maximum distance from the den; in some locations, migration routes may require snakes to pass through residential developments or other areas of intensive land use. Where multiple den sites are clustered in relatively close proximity, areas of potential range overlap between snakes from different dens may be particularly important locations for continued gene flow. Thus, avoiding fragmentation of these areas of genetic exchange is critical for the long-term viability of a local population.



Timber rattlesnake distribution in New York State

Impact Assessment Requirements

For projects that have been determined to be in close proximity to a known timber rattlesnake den, the project design will need to avoid alteration of suitable habitats and incorporate mitigation measures to prevent impacts to the snakes that would constitute a take under ECL Section 11-0535. Where the landscape will be significantly altered, mitigation is difficult and avoiding impacts may require detailed information about timber rattlesnakes on and around the project site. Therefore, if it has been determined that a potential taking could result from the project, the following information may be required to assess the potential project-related impacts on timber rattlesnakes: 1) habitat assessment [identify all suitable hibernacula, transient habitat, and summer range, 2) site usage, and 3) movement between summer and winter habitats.

Habitat Assessment

Due to the species' large home range and multiple habitat requirements a habitat assessment (PFBC-NDS, 2004) should be conducted to determine the presence of suitable basking, foraging, gestating and denning habitat or potential travel corridors within the project boundaries. Information collected for each area identified as potentially suitable habitat should include, at minimum, a habitat description and geographic location (i.e. GPS coordinates). Results of the habitat assessment will determine what additional information and/or mitigation may be required. Locations identified as potential habitat will also be used as the primary focus areas of presence-absence surveys, if necessary. Habitat assessments must be conducted by individuals that have knowledge of timber rattlesnake ecology.

Population Surveys

If the project site contains suitable habitat(s), it may be assumed rattlesnakes utilize the site during some stage of their annual cycle and the potential impacts to the species and their habitats should be assessed and mitigation measures (see Mitigation Recommendations) should be incorporated into the project design. If any of the above habitat elements occur on or in close proximity to the project site ***AND*** usage of the site by timber rattlesnakes will not be assumed, then surveys to detect the presence (e.g. den emergence, basking and gestating habitat searches) and site usage/snake movement (e.g. radio telemetry) should be conducted.

Population surveys (Casper *et al.* 2001) must be conducted during the time when timber rattlesnakes are not hibernating and can be expected to be active. To ensure accurate results, surveys should only be conducted between April 15th and October 31st on days when the air temperatures is 66^{o} F or greater ***AND*** there is no appreciable precipitation.

To adequately assess the site for the presence (or probable absence) of timber rattlesnakes, each location identified as suitable basking, gestating, or denning habitat or as a potential travel corridor should be visited at least four (4) times within the survey period, and visits to each suitable habitat location should be separated by seven (7) or more days.

Survey to detect the presence of timber rattlesnakes at potential den habitats are confined to the beginning and end of the active season when snakes are most likely to be detected at or near den sites. Thus, two (2) visits per potential den should occur post den emergence between April 15th and May 15th, and an additional two (2) visits per potential den should occur between September 15th and October 25th when the snakes are congregating around dens prior to den ingress for winter hibernation.

The collection of site usage and snake movement data may require telemetric monitoring (via external and/or internal radio transmitters) to record the location and behavior of a representative sample of snakes throughout their annual cycle. In order to assess movement patterns, or to be reasonably certain that rattlesnakes do not use specific areas of a proposed project site, up to three field seasons of data collection may be required (a minimum of two full activity cycles of data are recommended). Contingent upon the data collection requirements of the project, a detailed scope of work should be developed by the project sponsor (in consultation with Department staff) and approved by the Department prior to the initiation of any field work.

All timber rattlesnake population surveys should be conducted by individuals that have knowledge of the species' ecology, and surveys that may involve handling snakes (e.g. marking, radio telemetry) must be conducted by individuals that have experience with such techniques and are licensed by New York State to handle timber rattlesnakes.

Threats

- Loss and/or degradation of habitat - residential and commercial development and mining operations eliminate available habitat and may degrade that which is not destroyed (e.g. stormwater runoff, use of residential chemicals).

- Persecution and illegal collection - increased human activity in timber rattlesnake habitats increases the potential for snake mortality from intentional killing of snakes by humans. A higher rate of illegal collection (effective mortality) for the pet trade is also often a result of increased human presence near timber rattlesnake populations.

- Fragmentation and road mortality - the species' large home range and a high degree of site fidelity result in timber rattlesnakes typically following the same route each year during long-distance migrations between habitats. Thus, any newly-constructed road that intersects a snake's traditional travel route will become either an impassable barrier to migration or an annual road-mortality hazard.

Mitigation Recommendations

The following is a list of potential mitigation methods that may be used to avoid or minimize certain project-related impacts; however, not all methods are appropriate for all projects.

- Seasonal restrictions

  All allowable disturbance activities, including movement of construction vehicles, excavation, and alteration of vegetation, should be conducted during the period when the snakes would be expected to be hibernating and are less likely to be directly impacted by above-ground disturbances. The acceptable work period is November 1st through March 31st.

  Habitat management (including timber harvesting) and trail maintenance activities should also be timed to minimize the potential for injury/death of snakes. Habitats that are actively managed (e.g. mowing and prescribed burning) and trailsides that are cleared using a brush hog may increase mortality as snakes are killed by machinery or incinerated by fire (Means and Campbell, 1982b)

  In addition to the seasonal restrictions applied to vegetation management practices, disturbance to non-transient habitats should be avoided at ***ALL*** times. Roads, skid trails and landings should be kept at least 330 feet from all known or potentially suitable basking and gestating habitats, and to minimize the potential for collapse or disturbance of dens, heavy equipment and site preparation work (e.g. disk-harrowing, shearing, root-raking) should be prohibited within 660 feet of any known hibernacula.

- Timber rattlesnake monitor

  If any project-related work is to occur (in whole or in part) during April 1st through October 31st, the project sponsor should retain the services of a snake monitor. The snake monitor must be a qualified biologist that has knowledge of timber rattlesnake ecology and relocation procedures. The monitor must also have experience handling rattlesnakes and be licensed by New York State to do so.

  The snake monitor should be on site during all construction activities and would be responsible for: 1) conducting reconnaissance surveys for timber rattlesnakes within the work area prior to the initiation of any disturbance activities, and 2) relocating snakes as required.

- Temporary barrier

When disturbance is likely to occur from actions occurring outside of the acceptable work periods, a temporary restrictive (Stechert, 2001) barrier may help to avoid impacts if installed around the perimeter of the disturbance footprint of small projects (< 1 acre). The barrier should be: 1) installed before the end of the acceptable work period and maintained until the end of the construction phase of the project or until the beginning of the next acceptable work period, whichever occurs first, 2) inspected daily and, if necessary, repaired immediately to a fully functional condition*, and 3) constructed in accordance with the following design specifications:

- made of ¼ inch square hardware cloth or wire mesh
- a minimum of 48" high
- anchored into the ground with reinforcement bars placed on the "disturbance side" of the barrier and spaced between 6 – 8 feet apart.
- secured at the base (barrier/ground interface) with at least 6" of fence material covered with soil backfill

* The effectiveness of the barrier will be diminished and snakes may be able to gain access to the disturbance area if debris (e.g. tree limbs, soil) is allowed to overtop or pile up along side of the barrier.

- Education

Persecution by humans is a significant source of timber rattlesnake mortality and is thought to be a major contributing factor to the population declines experienced by the species over the past 100 years. Misconceptions about the actual versus perceived threat posed by timber rattlesnakes often leads to the snakes being injured or killed by humans who, when encountering a timber rattlesnake, are fearful of being attacked. Prospective residents in subdivisions located near known den sites should be provided with educational materials that help identify timber rattlesnakes and accurately describe the snakes' non-aggressive behavior. Educational materials should also include information about the Department's nuisance rattlesnake relocation program. The subdivision's prospectus could also be required to disclose the potential for the presence of timber rattlesnakes on the property. Homeowners and local law enforcement agencies should be provided with phone numbers of nuisance rattlesnake responders in the area.

- Habitat creation/enhancement

In some locations, natural succession may cause shading-over of hibernacula or essential summer habitats. Such habitat suitability changes, particularly that of gestating and birthing areas, can decrease the long-term viability of the location's timber rattlesnake population. Vegetation thinning to reclaim the site or the establishment of open stone piles to create escape cover and basking areas may mitigate some of habitat lost to successional changes. In such cases, the development of a site management plan, along with a long-term commitment by the landowner, may more than offset the loss of non-essential habitat resulting from project-related actions.

- Herp tunnel

Where roads and highways separate summer and winter habitats, it may be possible to maintain migration corridors via herp tunnels.

References

Brown, W. S. 1993. Biology, status, and management of the timber rattlesnake (*Crotalus horridus*): a guide for conservation. SSAR Herp. Circ. No. 22. vi + 78 pp.

Casper et al. 2001. *Recommended Standard Survey Protocol For the Eastern Massasauga*, *Sistrurus catenatus catenatus*. Unpublished.

Means, D. Bruce and Howard W. Campbell. 1982b. Effects of prescribed burning on amphibians and reptiles. Pages 89-97 *in* G. W. Wood, editor. Prescribed fire and wildlife in Southern forests. Proceedings of a symposium. Belle W. Baruch Forest Science Institute, Clemson University, Clemson, South Carolina, USA.

PFBC-NDS. 2004. Pennsylvania Fish and Boat Commission Natural Diversity Section Timber Rattlesnake Presence-Absence Survey Guidelines (Form-06, revised 3/9/04).

Stechert, R. 2001. Effectiveness of an experimental timber rattlesnake (*Crotalus horridus*) exclusion fence at Schunemunk Mountain, Town of Woodbury, Orange County, New York. Report to the Eastern Chapter of the New York Natural Conservancy and the New York State Department of Environmental Conservation. 23p.

Related Resources and Links

New York Natural Heritage Program

New York Natural Heritage Program. 2008. Online Conservation Guide for *Crotalus horridus*. Available from: http://www.acris.nynhp.org/guide.php?id=7536

NatureServe Explorer

NatureServe. 2009. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer

NYSDEC

New York State Department of Environmental Conservation, Division of Fish, Wildlife and Marine Resources. 2006. Timber Rattlesnake Fact Sheet. http://www.dec.ny.gov/animals/7147.html

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APPENDIX C
ARCHEAOLOGICAL STUDIES AND AGENCY CORRESPONDENCES

SHPO Correspondence – Phase 1A/1B Archaeological Survey Recommendation, dated 3/15/2022

OPRHP Correspondence – Historic/Cultural Resources Submission Request, dated May 13, 2022

Phase 1 Archaeological Investigation for the Proposed Troutbeck Inn Adaptive Reuse, by TRACKER Archaeology, Inc.– Alfred Cammisa, M.A., dated June 2022

OPRHP Correspondence – Historic/Cultural Resources Submission Additional Information Request, dated July 23, 2022

Troutbeck Inn – Adaptive Reuse OPRHP Resubmission Documents, 9/19/2022

OPRHP Correspondence – Historic/Cultural Resources Submission Request, dated 10/18/2022

SHPO Correspondence – Avoidance Plan Recommendation, dated 11/10/2022

SHPO Correspondence – Phase 1A/1B Archaeological Survey/Avoidance Plan Approval, dated 11/10/2022

Troutbeck – Archaeological Site Avoidance Plan

OPRHP Correspondence – Historic/Cultural Resources Conditional Approval, dated December 8, 2022

Amenia Historical Society – Why Amenia, Elizabeth C. Strauss, 2017

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NEW YORK STATE OF OPPORTUNITY. Parks, Recreation and Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

ARCHAEOLOGY COMMENTS

Phase IA/IB Archaeological Survey Recommendation
Project: Troutbeck Inn - Adaptive Reuse
PR#: 22PR01828
Date: 3/15/2022

Your project is in an archaeologically sensitive area. Therefore, the State Historic Preservation Office/Office of Parks, Recreation and Historic Preservation (SHPO/OPRHP) recommends a Phase IA/IB archaeological survey for components of the project that will involve ground disturbance, unless substantial prior ground disturbance can be documented. A Phase IA/IB survey is designed to determine the presence or absence of archaeological sites or other cultural resources in the project's Area of Potential Effects (APE).

If you consider the entire project area to be disturbed, documentation of the disturbance will need to be reviewed by SHPO/OPRHP. Examples of disturbance include mining activities and multiple episodes of building construction and demolition. Documentation of ground disturbance typically consists of soil bore logs, photos, or previous project plans. Agricultural activity is not considered to be substantial ground disturbance.

Please note that in areas with alluvial soils or fill archaeological deposits may exist below the depth of superficial disturbances such as pavement or even deeper disturbances, depending on the thickness of the alluvium or fill. Evaluation of the possible impact of prior disturbance on archaeological sites must consider the depth of potentially culture-bearing deposits and the depth of planned disturbance by the proposed project.

Our office does not conduct archaeological surveys. A 36 CFR 61 qualified archaeologist should be retained to conduct the Phase IA/IB survey.

Please also be aware that a Section 233 permit from the New York State Education Department (SED) may be necessary before archaeological fieldwork is conducted on State-owned land. If any portion of the project includes the lands of New York State, you should contact the SED before initiating survey activities. The SED contact is Christina Rieth and she can be reached at (518) 402-5975 or christina.rieth@nysed.gov. Section 233 permits are not required for projects on private land.

If you have any questions concerning archaeology, please contact Jessica Schreyer at Jessica.Schreyer@parks.ny.gov.

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

May 13, 2022

Peter Sander
Staff Planner
Rennia Engineering Design
6 Dover Village Plaza
Suite 5
Dover Plains, NY 12522

Re: SEQRA
Troutbeck Inn - Adaptive Reuse
515 Leedsville Rd.
Amenia, Dutchess Co.
22PR01828

Dear Peter Sander:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP) as part of your SEQRA process. These comments are those of OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

Troutbeck contributes to the National Register Eligible Webatuck Agricultural Valley Historic District. Because of this, we have reviewed the submitted materials.

As part of the submission package, we received proposed elevation drawings, proposed plans, and inspiration images. These were helpful, however, before we can complete our review we will need additional information. Please attach design materials to CRIS as one or a few PDFs. Photos need to be collected into a single Microsoft Word or PowerPoint file (one image per slide) for uploading to the CRIS system or as a PDF. Please do not attach individual photos to CRIS as PHOTOS because this section of CRIS takes a very long time for us to download. Please include:

A. An existing-condition site plan to double as a photo key (see "B" below).
B. Exterior photos of all elevations not yet documented; these should be numbered and keyed to the site plan to identify the location and direction of view.
C. Existing-conditions floor plans to double as a photo key (see "E" below).
E. Representative interior photos and photos where work is proposed.
F. Proposed elevation drawings of any elevations that were not part of the package we received. These should be annotated to describe the materials, finishes and colors proposed.
H. If repointing will occur, confirmation that any new mortar will match the historic mortar

in all qualities including strength, color, texture, and tooling. For information on how to do this, see Preservation Brief #2 http://www.nps.gov/tps/how-to-preserve/briefs/2-repoint-mortar-joints.htm.

I. Photographs documenting deterioration beyond repair for windows, doors or features that are 50 years old or more proposed for replacement.*

J. Information about features proposed for installation, such as windows, doors, and lighting.

K. Confirmation that any new ductwork will be concealed in a chase/soffit or above a previously suspended ceiling. All new ductwork will be either set back at least three feet from windows or hung above window heads in order to not be visible from the exterior. Sight line studies will be submitted if there are proposed roof mounted mechanical systems.

**Historic windows are a character defining feature. We recommend that they are retained and repaired wherever possible. Please send the following for our review whenever replacement is proposed:*

1. *Detailed photos of all windows proposed for replacement, keyed to an existing conditions site plan, documenting the condition.*

Please let the owner know that there are federal and state historic preservation tax credits available. For more information, go to www.nysparks.com/shpo/tax-credit-programs and http://www.nps.gov/tps/tax-incentives.htm

If you have any questions, I can be reached at sloane.bullough@parks.ny or 518-268-2158.

Sincerely,

Sloane Bullough
Historic Sites Restoration Coordinator by email only

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Phase I Archaeological Investigation for the proposed Troutbeck Inn Adaptive Reuse
At 515 Leedsville Road
Amenia, Town of Amenia, Dutchess County, New York

October 2022

Prepared for:
Rennia Engineering Design, PLLC, Dover Plains, New York

Alfred G. Cammisa, M.A.
with Alexander Padilla (CAD)

1093

MANAGEMENT SUMMARY

PR#:
22PR01828

Involved agencies:
Town of Amenia
NYDEC

Phase:
Phase IA & IB

SiLocation:
Amenia
Town of Amenia
Dutchess County

Survey Area:
Length: up to 1200 feet (366 meters) north-south
Width: up to 900 feet (274m) east-west
Total Acres Surveyed: approximately 13 acres (5.2 hectares) from a larger property

USGS:
Amenia, NY

Survey overview:
ST no. & interval: 215 ST's at 15 meter intervals, 6 ST's at 25 ft and 32 ST's at 3-1m intervals
Size of freshly plowed area: na
Surface survey transect interval: na

Results:
Small prehistoric site, proposed to be avoided by development & isolated find
No historic sites

Structures:
No. Of buildings/structures/cemeteries in project area: 2
No. Of buildings/structures/cemeteries adjacent to project area: 3 (1 building, walled garden, tennis court).
No. Of previously determined NR listed or eligible buildings/structures/cemeteries/districts: yes
No. Of identified eligible buildings/structures/cemeteries/districts: none

Authors:
Alfred G. Cammisa, M.A.
with Alexander Padilla, B.A. (CAD)

Date of Report:
Report completed October, 2022

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Photo 1 Looking toward Yellow City Road
Photo 2 Looking toward parking lot
Photo 3 Looking at field toward NYS Rt. 343
Photo 4 Looking at forest from field

INTRODUCTION

Between April 30 and September 27, 2022, TRACKER Archaeology, Inc. conducted a Phase IA documentary study and a Phase IB archaeological survey for the proposed Troutbeck Inn Adaptive Reuse at 515 Leedsville Road Amenia, Town of Amenia, Dutchess County, New York.

The purpose of the Phase IA documentary study was to determine the prehistoric and historic potential of the project area for the recovery of archaeological remains. The Phase IA was implemented by a review of the original and current environmental data, archaeological site files, other archival literature, maps, interviews, and documents.

The prehistoric and historic site file search was conducted utilizing the resources of the New York State Historic Preservation Office in Waterford, New York. Various historic web sites were queried via the internet to review any pertinent site information.

These investigations have been conducted in accordance with the standards set forth by the New York Archaeological Council and the New York State Historic Preservation Office.

The Phase IB survey provided actual evidence for the presence or absence of any archaeological sites within the property through ground surface and subsurface field testing.

The project area (APE) consists of about 13 acres, in separate disconnected areas across a much larger property on a partially developed property with numerous buildings. The project property is located at 515 Leedsville Road on the west side of that road. It is bound to the north by NYS Route 343 (Dutchess Turnpike, to the east by by Yellow City Road, and to the south by a stream.

The investigation was completed by TRACKER Archaeology, Inc. of Monroe, New York. Prehistoric and historic research was conducted by Kim Croshier and the PI, Alfred G. Cammisa, M.A. Field work was conducted by Alfred G. Cammisa and crew chiefs, Alfred T. Cammisa and Erin Murphy, B.A. Artifact analysis by Joseph Diamond, PhD. Report preparation was by Alfred G. Cammisa with Alexander Padilla (CAD).

The work was performed for Rennia Engineering Design, PLLC, Dover Plains, New York.

ENVIRONMENT

Geology

The study area is located in the southeast portion of New York State in the east part of Dutchess County. This region of New York lies on the edge of the Ridge and Valley Physiographic Province near the interface of the New England Upland-Hudson Highlands. This province, also known as the Newer Appalachians, extends from Lake Champlain to Alabama. It passes as a narrow SiLowland belt between the New England Uplands (Taconic Mountains and Hudson Highlands) to the east and the Appalachian Plateau (Catskill and Shawangunk Mountains) and Adirondack Mountains to the west. The characteristic topography is a succession of parallel valleys and ridges trending roughly in a northeasterly direction. This is a region of sedimentary rocks which were easily eroded and subjected to folding or bedding of the rock layers. The eastern limit of the Ridge and Valley Province is a broad, well-defined valley, 300 to 600 feet above sea level, known as the Great Valley. In the vicinity of Ellenville, the Great Valley is called the Wallkill Valley (Schuberth 1968: cover map, 16-18; Isachsen et al 2000: 4, 53-54; New York-New Jersey Trail Conference 1998: cover map).

Soils and Topography
Soils on the project area consist of:

Name	Soil Horizon Depth in(cm)	Color	Texture	Slope %	Drainage	Landform
Copake-Urban land	Ap=0-6 (0-13cm) B=6-8 (-20)	10YR3/3 10YR4/6	GrSiLo	0-2 & 5-16	well	40% glaciofluvial deposits on valley floors an outwash deposits 35% urban
Farmington-Galway complex, rolling, very rocky	Ap=0-7 (0-15cm) B=7-15 (-36)	10YR3/3 2.5YR5/6	Lo	5-16	well	glacial till
Palms muck	Oa1=0-12 Oa2=12-20 Oa3= 20-30 2Cg=30-80	10YR2/1 10YR2/1 10YR4/1 2.5YR4/1	muck	0-2	poor	organic deposits

(Faber 2002: Map 14; pgs. 53-54, 65, 117-118, 167-168, 169, 181).

KEY:
Shade: Lt=Light, Dk=Dark, V=Very, P=Pale
ColLor: Br=Brown, Blk=Black, Gry=Gray, Gbr=Gray Brown, StBr=Strong Brown, Rbr=Red Brown, Ybr= Yelllow Brown, O=Olive
Soils: Si=Silt, SiLo=SiLoam, Sa=Sand, Cl=Clay
Other: Sh=shale, M=Mottle, Gr=Gravelly, Cb=cobbles, /=or

Elevations on the project area are approximately 482 to 520 feet above mean sea level.

Hydrology
The Webatuck Creek flows through the project property adjacent to the project areas. The creek flows into TenMile River which in turn flows into the Housatonic River.

Vegetation
The predominant forest community in this area was probably the Oak Hickory. This forest is a nut producing forest with acorns and hickory nuts usually an obvious part of the leaf litter on the forest floor. The Oak Hickory Forest intermingles with virtually all other forest types. The northern extension of this forest community was also originally called the Oak-Chestnut forest, before the historic Chestnut blight (Kricher 1988:38, 57-60).

At the time of the Phase IB field work, the property consisted of open grassy fields, wooded areas and lawns along driveways/roads with the Troutbeck Inn estate.

PREHISTORIC POTENTIAL

A prehistoric site file search was conducted at the New York State Historic Preservation Office. The search included a 1 mile radius around the study area. The following sites were recorded:

NYSM Sites	NYSHPO Sites	Distance from APE ft(m)	Site Description
	2701.000059	on or adjacent	Hoadley Site #7: multi-component, 1 point
	2701.000049	1940(591)	Amenia rockshelter: Madison point, pottery, bifaces, scrapers, flakes, deer bone, bird bone & mussels shell

Assessing the known environmental and prehistoric data, we can summarize the following points:

-The Webatuck Creek flows through the project property adjacent to the project areas, although its course has changed over times as shown in historic maps.

-The project area contains level to steeply sloping terrain with mostly well drained soils but some poorly drained soils associated with the creek and wetlands.

-Two prehistoric sites are nearby the project area. One is possibly on or adjacent the project area.

In our opinion, the study area has an above average potential for the recovery of prehistoric sites. The type of site encountered could be a procurement/processing site most likely from the Woodland or Archaic Periods.

HISTORIC POTENTIAL

Seventeenth Century

At the time of European contact and settlement, the study area was probably occupied by the Wappingers. These peoples were likely the main branch and/or clan or village of the large Wappinger tribe. This group lived north of the Highlands within Dutchess County in the vicinity of Fishkill. Pequots may have sought refuge in Dover Plains after fleeing Conneticut from the Engllish (Ruttenber 1992:77-84; Becker 1993:18-19; Hearne Brothers nd:wall map; Bolton 1975:chart; Hasbrook 1909).

Population estimates for the Wappingers are 400 individuals. The Wappingers are described by Becker (1993:18) as foragers.

Eighteenth Century

The town was first settled about 1703 and was referred to as Washiack. In the early part of this century, many German and Dutch settlers via the upper Hudson and New Amsterdam as well as Puritans from New England came to Amenia (Hasbrook 1909:258-259).

The 1779 Sauthier map shows the project area between Rhinebeck and the Connecticut state border (Figure 3).

Nineteenth Century

The 1850 Sidney map shows buildings on the project areas including a blacksmith shop, W.A. Benton, a mill (which may or may not belong to Benton). The stream path is shown towards the western portion of the project property while currently it is in the eastern portion. The bank of Amenia is across the road and a school house is close by (Figure 4).

The 1858 Gillette map map shows a structure on the project areas along the stream which is possibly the mill. Another structure may be on the project property along Leedsville Road but it's difficult to tell as the road configuration is different. The stream path is still at odds compared to its current path (Figure 5).

The 1867 Beers atlas depicts the likely mill structure, an iron foundry and other buildings on the project areas. The school house is close by along Route 343, but not on the project area. The stream path is through the center of property, splitting off to the west (Figure 6).

The 1876 atlas shows structures belonging to W. Barlow, C.L. North, M. Benton, and possibly G. Lathrop on or adjacent to the project areas. The steam path is shown in the western part of the property contrary to its current position (Figure 7).

The 1899 USGS depicts buildings on the project area along both Leesville Road and Route 343 (Figure 8).

Businesses in the village at this time included Willson and Eaton Company retail and wholesale dealers in lumber, coal, lime, cement, all kinds or grain and stock foods, a large brick manufacturer, a woodworking plant, an iron foundry, and a caseine company (for dairy farming) (Hasbrook 1909:260).

Twentieth Century

By 1909, Amenia has stores, a weekly newspaper, a national bank, and 2 first class hotels. Money was being collected to construct stone or concrete sidewalks in the village. The village also had a water system with hydrants along the main roads, a fires & hose company, gas lights on the streets, dwellings, and churches (Hasbrouck 1909:265).

An historic site file search was conducted at the New York State Historic Preservation Office. The search included a 1 mile radius around the study area. The following sites were recorded:

NYSM Sites	NYSHPO Sites	Distance from APE ft(m)	Site Description
	2701.000131	within	Webatuck Agricultural Valley Historic District for 18th century w/20 historic farmsteads

Assessing the known environmental and historic data, we can summarize the following points:

-The Webatuck Creek flows through the project property adjacent to the project areas, although its course has changed over times as shown in historic maps.

-The project area contains level to steeply sloping terrain with mostly well drained soils but some poorly drained soils associated with the creek and wetlands.

-Numerous historic map documented structures were situated on the property possibly on, adjacent to, or nearby the numerous project areas/corridors.

-The project area lies within an historic building district.

In our opinion, the project parcel has a higher than average potential for the recovery of nineteenth century European-American historic sites.

FIELD METHODS

Walkover

Exposed ground surfaces were subjected to a close quarters walk- over, when possible, at 3 to 5 meter intervals to observe for artifacts. Covered ground terrain was reconnoitered at about 15 meter intervals to observe for any above ground features, such as berms, depression, or rock configurations, which could be evidence for a prehistoric or historic site. Photographs were taken of the project area.

Shovel Testing

Shovel tests (ST's) were excavated at about 15 meter (50ft) intervals, across the project area. Each ST measured about 30 to 40 cm. in diameter and was dug into the underlying subsoil (B horizon) 10 to 20 cm. when possible. All soils were screened through 1/4 inch wire mesh and observed for artifacts. Shovel tests were flagged in the field. All ST's were mapped on the project area map at this time. Soil stratigraphy was recorded according to texture and color. Soil color was matched against the Munsell color chart for soils. Notes were transcribed in a notebook and on pre-printed field forms.

FIELD RESULTS

During the course of the Phase IB field testing, 215 shovel tests were excavated at 15 meter intervals. An additional 6 ST's were conducted at 25 foot intervals around an historic house, and another 32 intervals around suspected isolated finds at 1 & 3 meter intervals. The project area is within Troutbeck Inn, a 250 acre estate hotel. Six ST's were excavated around a MDS existing house (labeled A,B,C) at 25 foot intervals. No historic sites were encountered. A small, prehistoric site was encountered. It is likely associated with the nearby Hoadley Site (see below):

Stratigraphy

Stratigraphy across the project corridor consisted of:

A/O horizon - 2- to 5 cm. thick of leaf litter, root mat, and humus.

A horizon - 16 to 23 cm, thick of 10YR4/3 brown gravelly loam.

B horizon - about 10 to 20 cm. dug into of 10YR5/6 yellow brown, gravelly loam.

Shovel tests 71,79, & 82 produce a flake each with chert as the raw material in the first two and quartz in 82. Radial ST's at 1 and 3 meters in the 4 cardinal directions were excavated around the 3 positive ST's. Shovel test 79 produced additional flakes to east and west while ST's 71 and 82 had all negative results. Also, ST 164, which was located further away, produced another flake and the 8 radial ST's were all negative around it.

Artifacts

ST	COUNT	TYPE
71	1	Biface
79	1	Tertiary flake
79 3E	1	Tertiary flake
79 3W1	1	Tertiary flake
79 W3	1	Tertiary flake
82	1	Quartz Tertiary flake
164	1	Tertiary fake

CONCLUSIONS AND RECOMMENDATIONS

Based upon topographic characteristics and proximity to prehistoric sites, the property was assessed as having a higher than average potential for encountering prehistoric sites.

Based upon topographic characteristics and proximity to an historic sites and MDS's, the property was assessed as having a higher than average potential for encountering European-American historic sites.

During the course of the archaeological field survey, 253 ST's were excavated across the project areas at 15 to 1 meter intervals. No historic sites were encountered. A small, prehistoric site was encountered. The prehistoric site consisted of 5 tertiary flakes and a biface limited spatially to about 70 feet at maximum along a linear configuration. There was also an isolated find in the vicinity and another further away.

The purpose of the Phase I archaeological survey is to establish the presence or absence of archaeological sites. If the site is to be impacted by proposed construction or other activities, Phase II intensive testing of any archaeological site is them specified by the regulations of the New York State Historic Preservation Office and the National Advisory Council on Historic preservation. Phase II investigation methods should interpret the archaeological sites and determine if it is eligible for the nomination to State or National Registers of Historic Places.

We would therefore recommend Phase II intensive testing on that portion of the Troutbeck Site. Prehistoric Site which is threatened by proposed impacts prior to any development related ground breaking or construction. Phase II investigations would supply information needed to make this determination and wold include:

1) Site integrity, including the depth and extent of undisturbed soil horizons and the presence or absence of cultural features, and the degree of natural and/or human disturbances to those features.
2) Cultural components/affiliations and time range present.
3) Vertical and horizontal distribution of archaeological remains (spatial boundaries and stratigraphic levels).
4) Site interpretation, including any uniqueness/significance, in a local or regional context, must be demonstrated.

No further work is recommended for the remainder of the project area.

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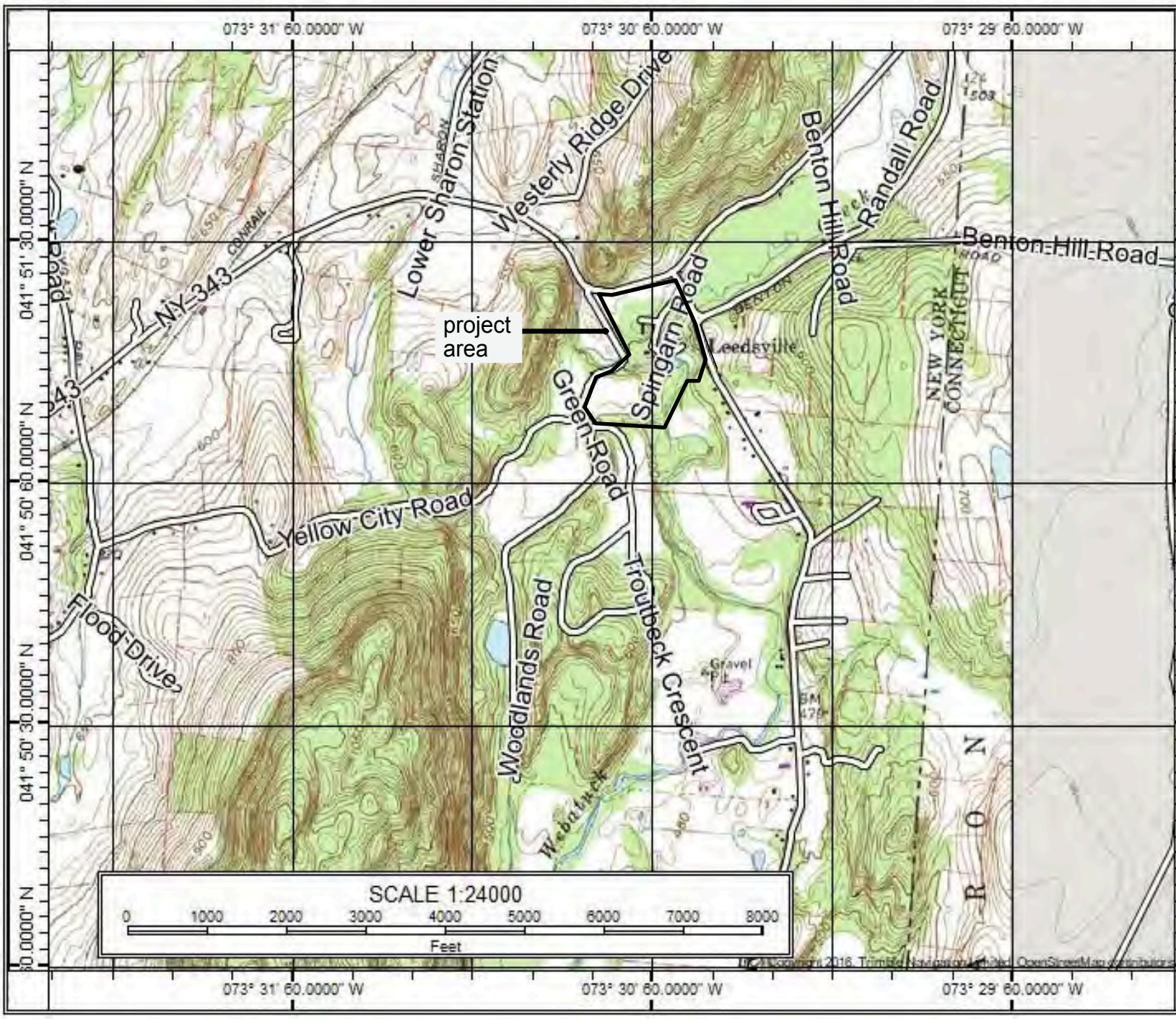
1967 Amenia*, New York* quadrangle map, 7.5 minute series.
1899 *Millbrrook, New York* quadrangle map, 7.5 minute series.

APPENDIX 1

Figure 1

Amenia, NY USGS



SCALE: 1 INCH = 100 FEET

200' 150' 100' 50' 0 100' 200'

SCHEDULE B, ITEM 9
UTILITY EASEMENTS DESCRIBED IN LIBER 1090 PAGE 6, LIBER 1655 PAGE 197 & LIBER 1666 PAGE 451.

SCHEDULE B, ITEM
POSSIBLE LOCATION OF UTILITY EASEMENT DESCRIBED IN LIBER 539 PAGE 480.

SCHEDULE B, ITEM 11
CENTERLINE OF DRIVEWAY EASEMENT DESCRIBED IN LIBER 1677 PAGE 760, LIBER 1362 PAGE 852 & LIBER 1362 PAGE 859.

SPECIAL FLOOD HAZARD AREA
ZONE AE

SPECIAL FLOOD HAZA.
ZONE A

OTHER AREAS
ZONE X
(UNSHADED)

P.O.B. PARCEL I

P.O.B. PARCEL II (Surveyors Description)

P.O.B. PARCEL II (Record Description)

NOTE:
THE LOCATION OF THE WEBATUCK CREEK AS SHOWN HEREON IS BASED ON FIELD MEASUREMENTS OF THE EDGE OF WATER AT THE TIME OF THE FIELD SURVEY.

YELLOW CITY ROAD

SPINGARN ROAD (PRIVATE)

TROUTBECK LANE (PRIVATE)

RANDALL ROAD (DIRT)

LEEDSVILLE ROAD (COUNTY ROAD 2)

WEBATUCK CREEK

POND

STEEP SLOPE

Lands Now or Formerly of
JOHN H. STEWART & & JULIA W. STEWART
Doc.# 02-2011-3567
7267-00-294624
(Formerly: Claudia Cohl, Doc.# 02-2004-4632)

INSET MAP: RADIALS

SCALE: 1 INCH = 20 FEET

INSET MAP: RADIALS

SCALE: 1 INCH = 20 FEET

INSET MAP: RADIALS

SCALE: 1 INCH = 20 FEET

FIGURE 2: LOCATION OF SHOVEL TESTS

- PHOTO ANGLE
- NEGATIVE SHOVEL TEST
- POSITIVE SHOVEL TEST w/PREHISTORIC ARTIFACTS
- PROJECT LIMITS(A.P.E.)

PROJECT NAME: 515 LEEDSVILLE RD.

TRACKER Archaeology Services, Inc. "Tracking the Footsteps of the Ancestors"


Figure 3
1779 Sauthier map
N
project area
Williamstown
Lansborough
Pittsfield
Lenox
Stockbridge
Tyringham
Great Barrington
Sheffield
Norfolk
Goshen
Cornwall
Sharon
Kinderhook
Claverack
Hudson
Livingston Manor
Palatine Town
Schuylers Patent
The Little Nine Partners
The Great Nine Partners
Beekman
Stanfordville
Pine Plains
Ancram
Taconic Mountains

Figure 4

N

1850 Sidney map ★

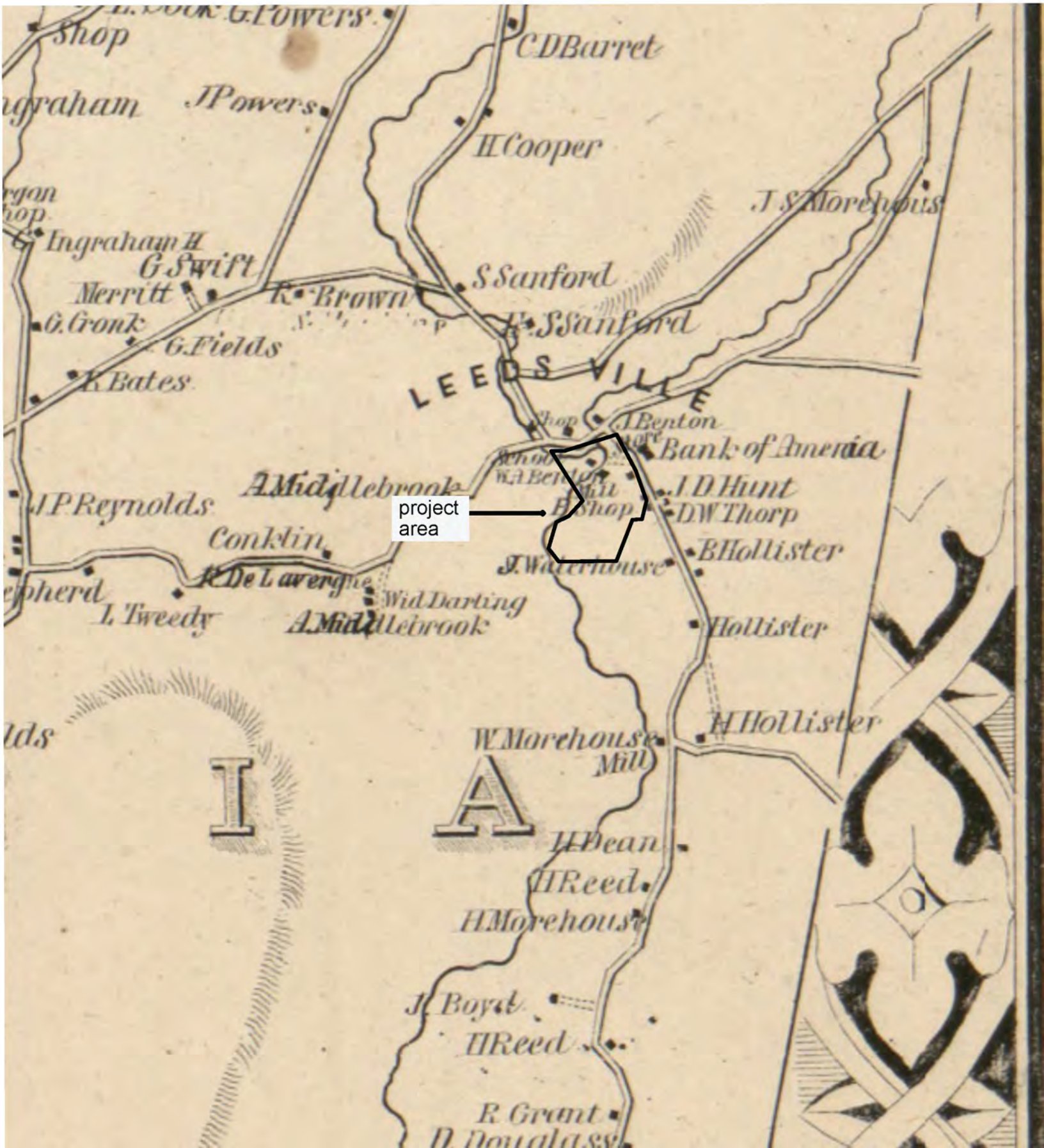


Figure 5

N

1858 Gillette map ★

Figure 6

N

1867 Beers atlas

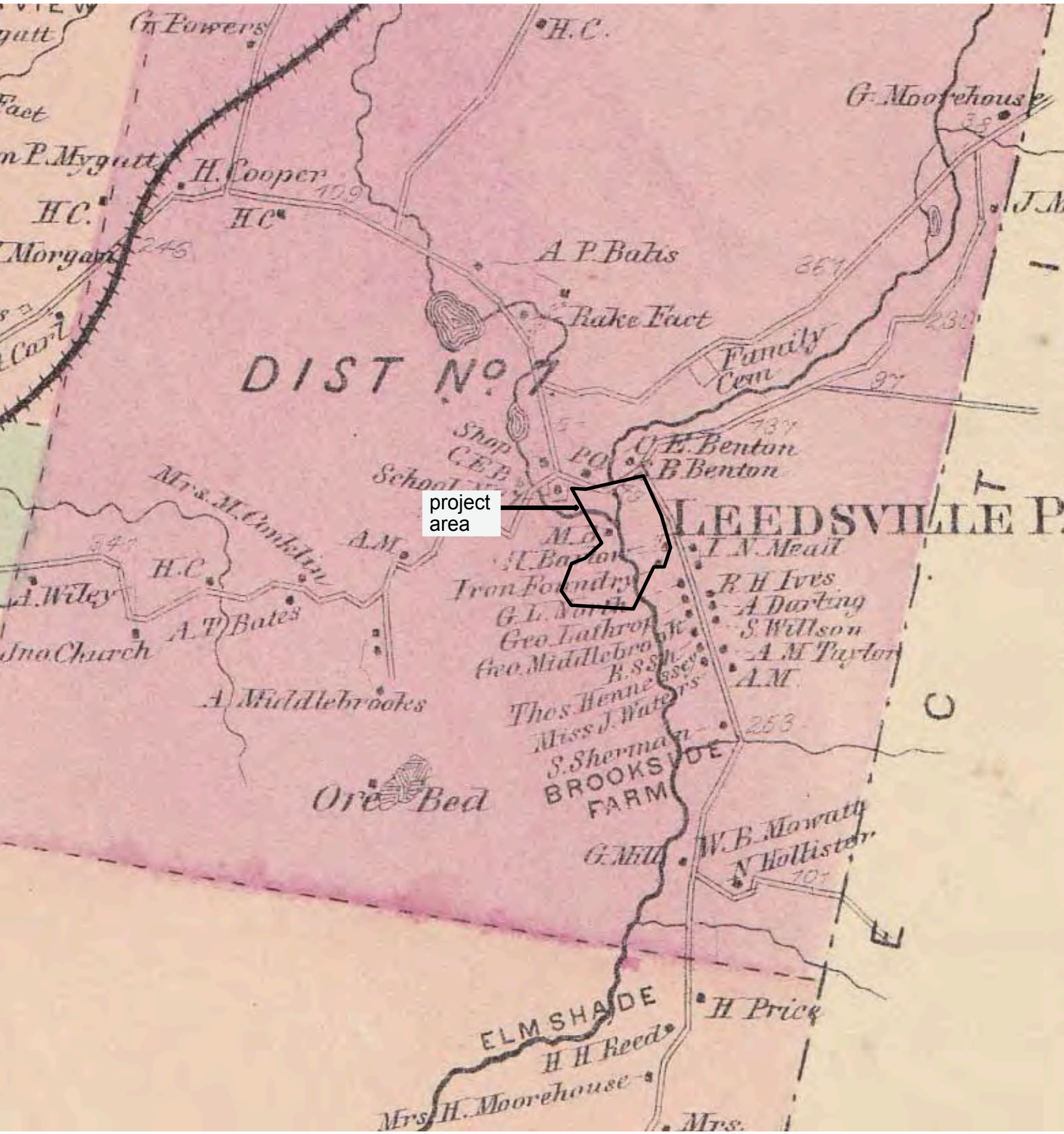


Figure 7

N

1876 County map ★

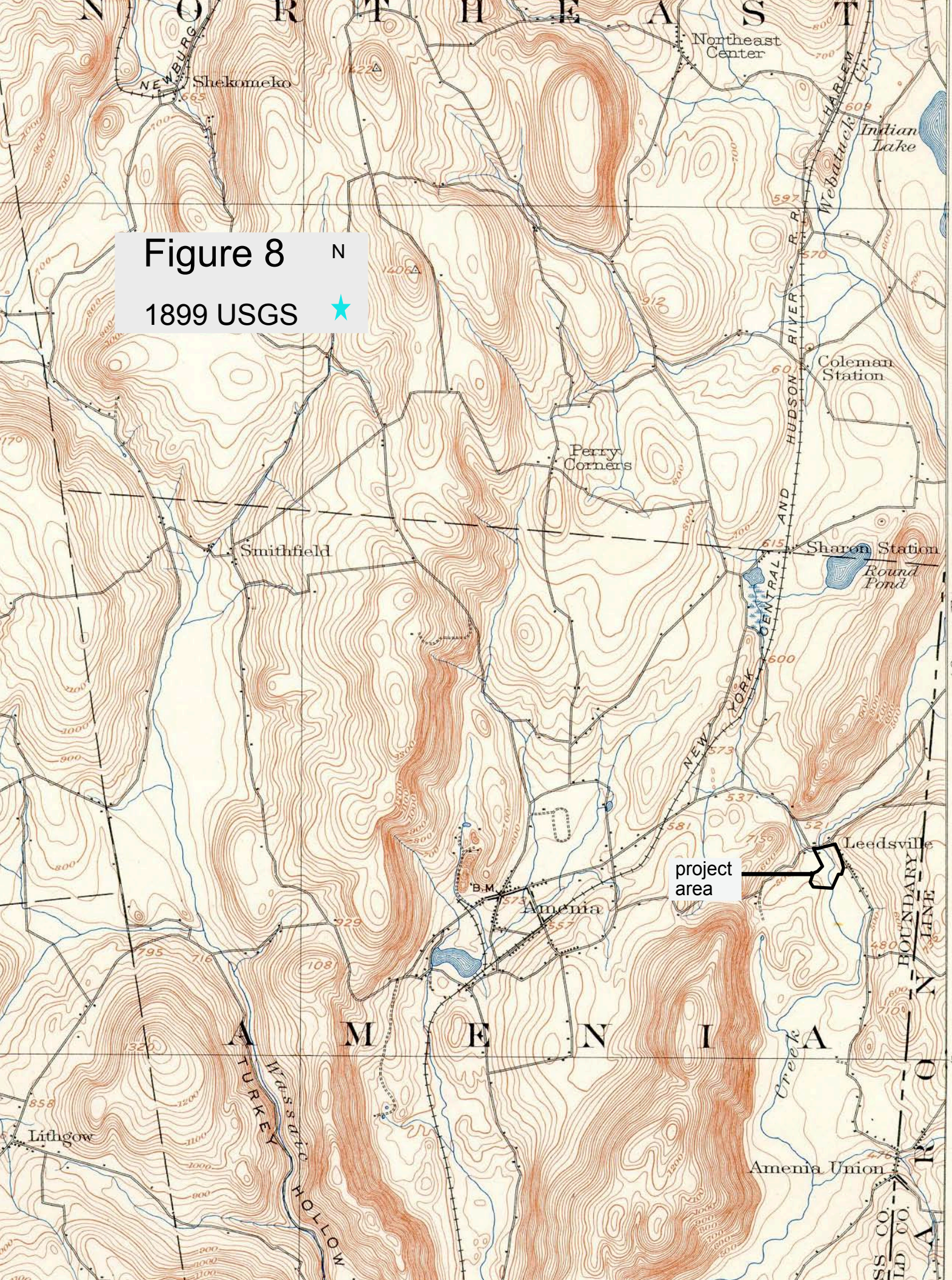


Figure 8
1899 USGS
N
project area
Leedsville
Amenia
Amenia Union
Sharon Station
Coleman Station
Perry Corners
Smithfield
Shekomeko
Northeast Center
Indian Lake
Round Pond
Lithgow
NEW YORK CENTRAL AND HUDSON RIVER R.R.
HARLEM DIV.
Webatuck Cr.
Wassaic Creek
TURKEY HOLLOW
BOUNDARY LINE
(Cornwall)
55'
50'


Figure 9
N
County Soil Survey
project area
Leedsville
Amenia
Amenia Union
Webatuck
Creek
Brook
Mill
CONRAIL RR
CONNECTICUT


Photo 1
Looking toward Yellow City Road


Photo 2
Looking toward parking lot


Photo 3
Looking at field toward NYS Rt. 343


Photo 4
Looking at forest from field

APPENDIX 2

SHOVEL TESTS

STP	Lv	Depth(cm)	Texture	Color	Hor.	Comments
1	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
2	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
3	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
4	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-27	SaLo	10YR4/3	A	NCM
	3	27-37	SaLo	10YR5/6	B	NCM
5	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
6	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
7	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
8	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
9	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-26	GrLo	10YR4/3	A	NCM
	3	26-36	GrLo	10YR5/6	B	NCM
10	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
11	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
12	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM

13	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
14	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
15	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
16	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-26	GrLo	10YR4/3	A	NCM
	3	26-36	GrLo	10YR5/6	B	NCM
17	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-26	GrLo	10YR4/3	A	NCM
	3	26-36	GrLo	10YR5/6	B	NCM
18	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-26	GrLo	10YR4/3	A	NCM
	3	26-36	GrLo	10YR5/6	B	NCM
19	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-26	GrLo	10YR4/3	A	NCM
	3	26-36	GrLo	10YR5/6	B	NCM
20	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
21	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
22	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
23	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
24	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-35	Sa	10YR4/6	A	NCM
25	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM

26	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
27	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
28	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
29	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
30	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
31	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
32	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
33	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
34	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
35	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
36	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
37	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
38	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM

39	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
40	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
41	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
42	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
43	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
44	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
45	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
46	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
47	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
48	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
49	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
50	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM

51	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
52	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
53	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
54	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
55	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
56	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
57	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
58	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
59	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
60	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
61	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-20	GrLo	10YR4/3	A	NCM
	3	20-40	GrLo	10YR5/6	B	NCM
62	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
63	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM

64	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
65	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
66	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
67	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
68	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
69	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
70	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
71	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	flake
	3	25-35	GrLo	10YR5/6	B	NCM
72	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
73	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
74	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-27	SaLo	10YR4/3	A	NCM
	3	27-37	SaLo	10YR5/6	B	NCM
75	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM

76	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
77	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
78	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
79	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-26	GrLo	10YR4/3	A	flake
	3	26-36	GrLo	10YR5/6	B	NCM
80	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
81	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
82	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	qtz flake
	3	27-37	GrLo	10YR5/6	B	NCM
83	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
84	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
85	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
86	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-26	GrLo	10YR4/3	A	NCM
	3	26-36	GrLo	10YR5/6	B	NCM
87	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-26	GrLo	10YR4/3	A	NCM
	3	26-36	GrLo	10YR5/6	B	NCM
88	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-26	GrLo	10YR4/3	A	NCM
	3	26-36	GrLo	10YR5/6	B	NCM

89	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-26	GrLo	10YR4/3	A	NCM
	3	26-36	GrLo	10YR5/6	B	NCM
90	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
91	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
92	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
93	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
94	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
95	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
96	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
97	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
98	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
99	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
100	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-26	GrLo	10YR4/3	A	NCM
	3	26-36	GrLo	10YR5/6	B	NCM

101	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
102	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
103	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
104	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
105	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
106	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
107	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
108	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
109	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
110	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
111	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
112	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
113	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM

114	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
115	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
116	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
117	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
118	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
119	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
120	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
121	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
122	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
123	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
124	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
125	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM

126	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
127	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
128	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
129	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
130	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
131	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-20	GrLo	10YR4/3	A	NCM
	3	20-40	GrLo	10YR5/6	B	NCM
132	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
133	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
134	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
135	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
136	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
137	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM

138	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
139	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-21	GrLo	10YR4/3	A	NCM
	3	21-45	GrLo	10YR5/6	B	NCM
140	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-26	GrLo	10YR4/3	A	NCM
	3	26-36	GrLo	10YR5/6	B	NCM
141	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-20	GrLo	10YR4/3	A	NCM
	3	20-40	GrLo	10YR5/6	B	NCM
142	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
143	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
144	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
145	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
146	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-24	GrLo	10YR4/3	A	NCM
	3	24-34	GrLo	10YR5/6	B	NCM
147	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
148	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
149	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-21	GrLo	10YR4/3	A	NCM
	3	21-45	GrLo	10YR5/6	B	NCM
150	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-22	GrLo	10YR4/3	A	NCM
	3	22-32	GrLo	10YR5/6	B	NCM

151	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-32	GrLo	10YR4/3	A	NCM
	3	32-42	GrLo	10YR5/6	B	
152	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
153	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-30	GrLo	10YR4/3	A	NCM
	3	30-40	GrLo	10YR5/6	B	NCM
154	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-30	GrLo	10YR4/3	A	NCM
	3	30-40	GrLo	10YR5/6	B	NCM
155	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-27	SaLo	10YR4/3	A	NCM
	3	27-37	SaLo	10YR5/6	B	NCM
156	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
157	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
158	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-26	GrLo	10YR4/3	A	NCM
	3	26-36	GrLo	10YR5/6	B	NCM
159	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
160	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-27	SaLo	10YR4/3	A	NCM
	3	27-37	SaLo	10YR5/6	B	NCM
161	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
162	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-32	GrLo	10YR4/3	A	NCM
	3	32-42	GrLo	10YR5/6	B	
163	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM

164	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-30	GrLo	10YR4/3	A	flake
	3	30-40	GrLo	10YR5/6	B	NCM
165	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-30	GrLo	10YR4/3	A	NCM
	3	30-40	GrLo	10YR5/6	B	NCM
166	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-27	SaLo	10YR4/3	A	NCM
	3	27-37	SaLo	10YR5/6	B	NCM
167	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
168	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
169	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-26	GrLo	10YR4/3	A	NCM
	3	26-36	GrLo	10YR5/6	B	NCM
170	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
171	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-27	SaLo	10YR4/3	A	NCM
	3	27-37	SaLo	10YR5/6	B	NCM
172	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
173	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
174	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
175	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-27	SaLo	10YR4/3	A	NCM
	3	27-37	SaLo	10YR5/6	B	NCM
176	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM

177	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
178	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
179	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
180	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-30	GrLo	10YR4/3	A	NCM
	3	30-40	GrLo	10YR5/6	B	NCM
181	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
182	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
183	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
184	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-30	GrLo	10YR4/3	A	NCM
	3	30-40	GrLo	10YR5/6	B	NCM
185	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
186	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-30	GrLo	10YR4/3	A	NCM
	3	30-40	GrLo	10YR5/6	B	NCM
187	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
188	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-25	GrLo	10YR4/3	A	undec ww, wire nail, clam
	3	25-35	GrLo	10YR5/6	B	NCM

189	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	clam
	3	25-35	GrLo	10YR5/6	B	NCM
190	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	slag, stoneware, brick, window glass, Jackfield type ew, clam
	3	25-35	GrLo	10YR5/6	B	NCM
191	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
192	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
193	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
194	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
195	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
196	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
197	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
198	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
199	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-45	GrLo	10YR4/3	A/fil?	NCM
200	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
201	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM

202	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-45	GrLo	10YR4/3	A/fil?	NCM
203	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-45	GrLo	10YR4/3	A/fil?	NCM
205	impeded concrete dumping					
206	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
207	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
208	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
209	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
210	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-30	GrLo	10YR4/3	A	NCM
	3	30-40	GrLo	10YR5/6	B	NCM
211	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
212	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
213	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-30	GrLo	10YR4/3	A	NCM
	3	30-40	GrLo	10YR5/6	B	NCM
214	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
215	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM

Radials:

71N1	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
71N3	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
71S1	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
71S3	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
71E1	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-26	GrLo	10YR4/3	A	NCM
	3	26-36	GrLo	10YR5/6	B	NCM
71E3	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
71W1	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
71W3	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
79N1	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
79N3	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
79S1	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
79S3	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
79E1	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM

	3	27-37	GrLo	10YR5/6	B	NCM
79E3	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	flake
	3	27-37	GrLo	10YR5/6	B	NCM
79W1	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	flake
	3	27-37	GrLo	10YR5/6	B	NCM
79W3	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	flake
	3	27-37	GrLo	10YR5/6	B	NCM
82N1	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
82N3	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-26	GrLo	10YR4/3	A	NCM
	3	26-36	GrLo	10YR5/6	B	NCM
82S1	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-26	GrLo	10YR4/3	A	NCM
	3	26-36	GrLo	10YR5/6	B	NCM
82S3	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
82W1	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
82W3	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
82E1	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-26	GrLo	10YR4/3	A	NCM
	3	26-36	GrLo	10YR5/6	B	NCM
82E3	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
164N	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-30	GrLo	10YR4/3	A	NCM
	3	30-40	GrLo	10YR5/6	B	NCM

164S	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-30	GrLo	10YR4/3	A	NCM
	3	30-40	GrLo	10YR5/6	B	NCM
164E	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-30	GrLo	10YR4/3	A	NCM
	3	30-40	GrLo	10YR5/6	B	NCM
164W	1	0-4	rootmat,leaves,humus		A/O	NCM
	2	4-30	GrLo	10YR4/3	A	NCM
	3	30-40	GrLo	10YR5/6	B	NCM

25 foot radials near historic building:

A	1	0-3	rootmat,leaves,humus		A/O	NCM
	2	3-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
B	1	0-35	rootmat,leaves,humus		A/O	NCM
	2	3-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
C	1	0-2	rootmat,leaves,humus		A/O	NCM
	2	2-28	GrLo	10YR4/3	A	NCM
	3	28-38	GrLo	10YR5/6	B	NCM
D	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM
E	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-27	GrLo	10YR4/3	A	NCM
	3	27-37	GrLo	10YR5/6	B	NCM
F	1	0-5	rootmat,leaves,humus		A/O	NCM
	2	5-25	GrLo	10YR4/3	A	NCM
	3	25-35	GrLo	10YR5/6	B	NCM

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Troutbeck Inn
Adaptive Reuse Plan

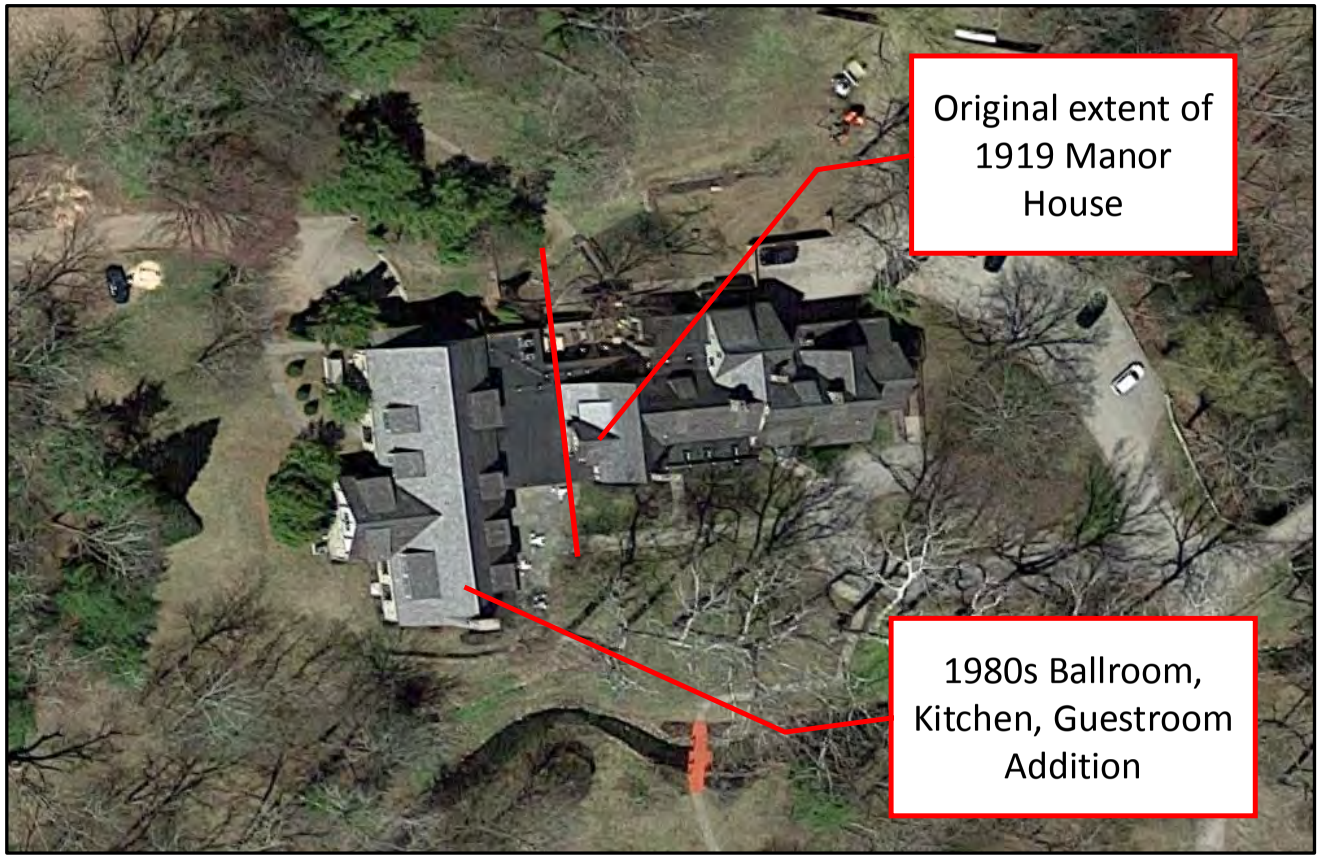
Historic Structure Inventory
6/30/2022

Manor House (1919)

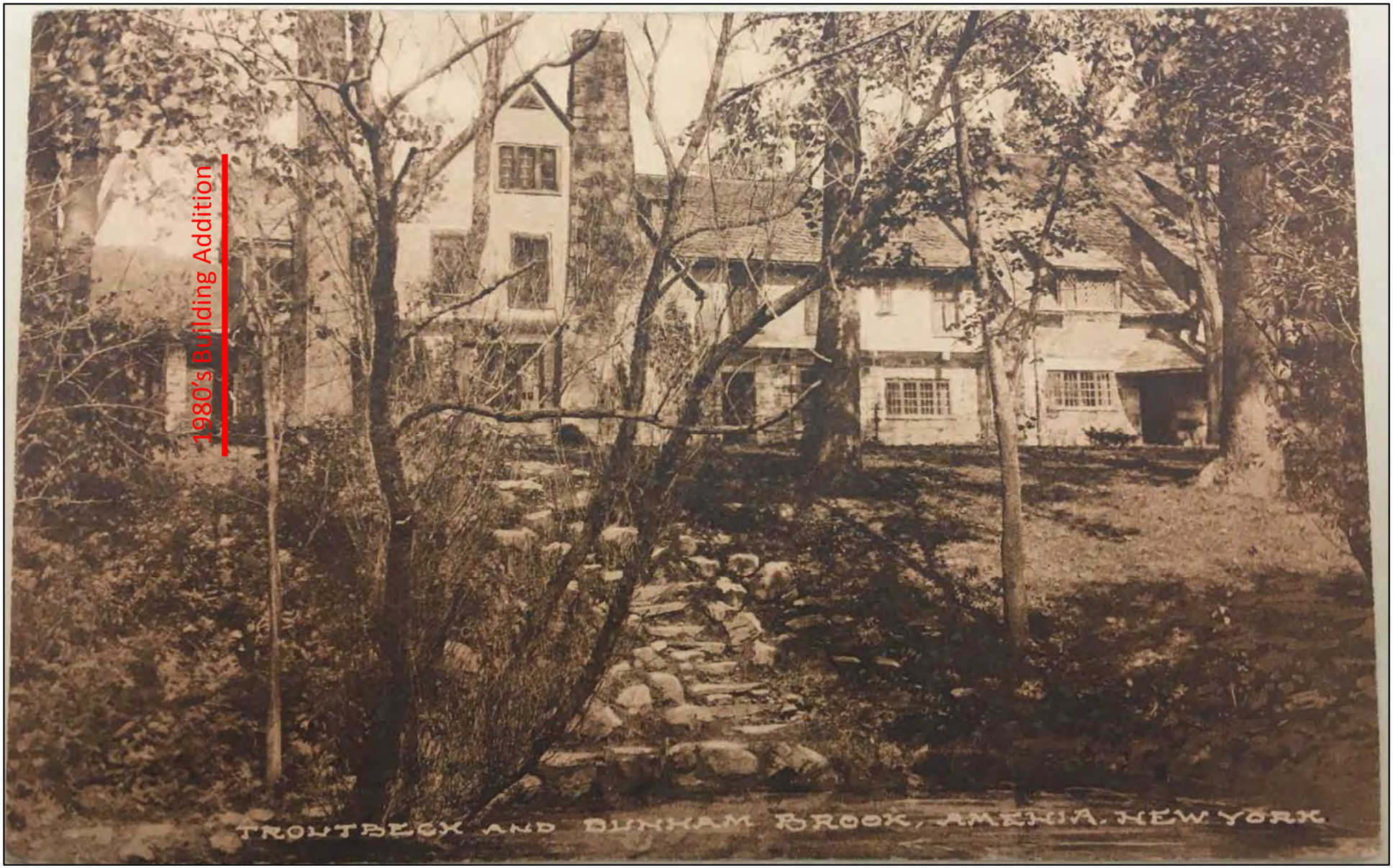
The original Benton House burnt to the ground in 1915. In its place, the Spingarn's constructed the present-day Manor House, completed in 1919 and designed by architect H. E. Woodsend. The architectural style can be described as a Tudor Revival or "Costwaldian", referring to the district of South West England. Items such as steeply pitched-roofs, half-timbering infilled with stonework, tall mullioned windows, high chimneys, and dormered windows give a Tudor Revival its most striking effects. Stone for the house (and Walled Garden) was sourced from a revolutionary foundry nearby, and the timbers and wood floors were hewn in place. By the 1970's the house had fallen into disrepair. The Flaherty/Skibsted partnership purchased the property in 1979 and began to make a series of additions and alterations to the house that extended into the mid 1980's, including:

- The expansion of the west wing to include the Ballroom, kitchen, and 6 guestrooms (5,500 SF footprint).
- The expansion of the dining room, incorporating a stone terrace.
- The addition of the sun room on the south and principal façade.
- Heating system and Energy efficiency improvements.

In 2016, the current owner refurbished the house, making repairs to the slate roof, leaded glass, copper gutters and downspouts, and windows. The east exterior stair and balcony was replaced entirely with a design complimentary to the pre-existing stair, but incorporating an ADA ramp to improve accessibility.



Manor House – Pre 1980's Building Addition



Notes: Constructed in 1919, the original footprint of the Manner House remains. Minor retrofits were provided by the 1980's owners of the property, such as the replacement of windows and doors, in order to increase energy efficiency and security.

Pre-Post Building Addition

Left: Original footprint of 1919 Manner House.
Right: Current footprint of Manner House after 1980's building addition. Original extents of Manner House remains. New facilities include banquet hall, kitchen area, meeting space, etc.

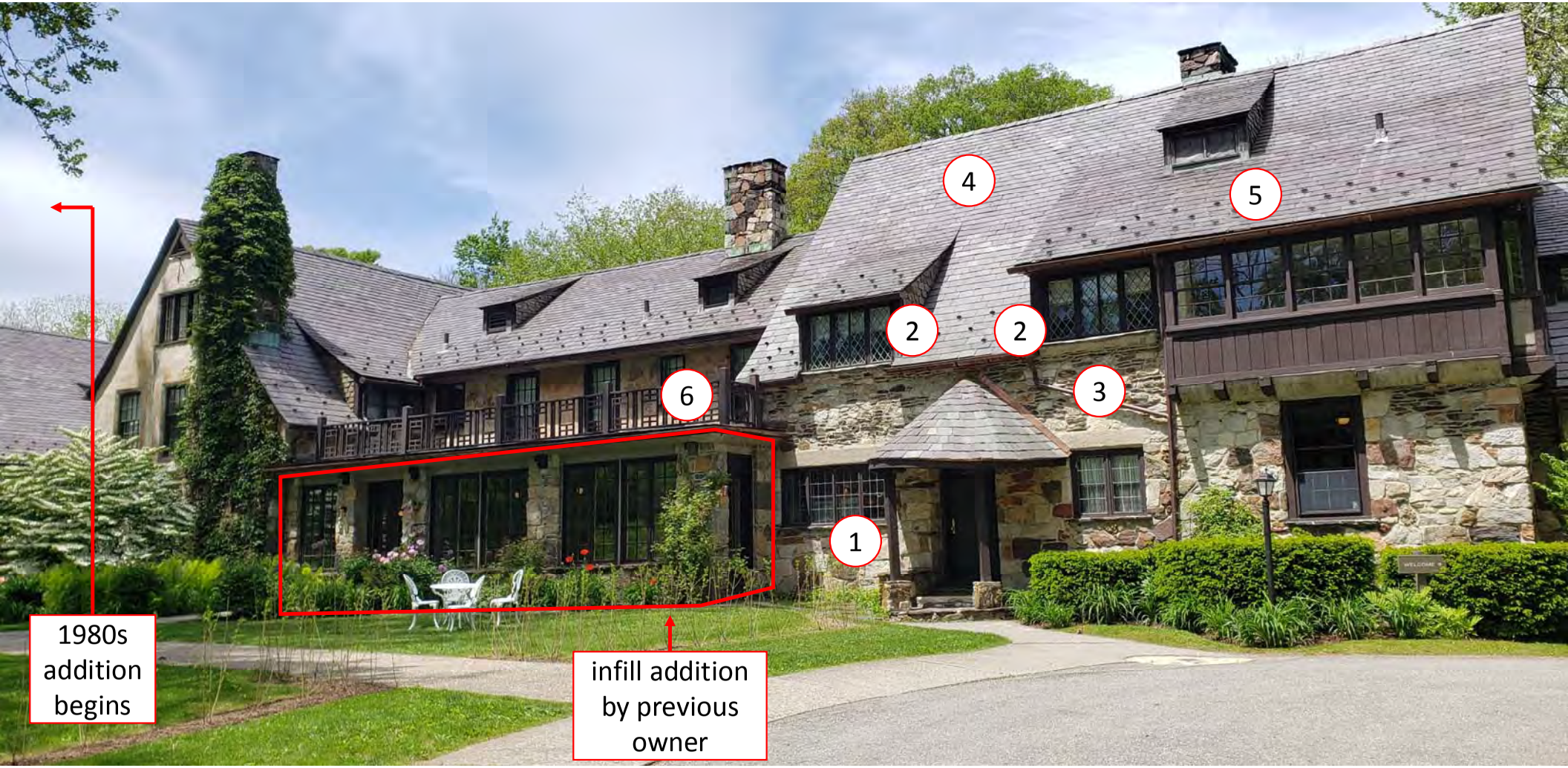
1. Flat roof. Added to structure during 1980's renovation.
2. Sunroom Building Infill. Sunroom added to original structure during 1980's renovations.
3. Kitchen facilities/deck. Facilities added during 1980's building addition. Deck constructed on existing stone terrace.
4. Ballroom/Kitchen Facilities. Facilities added during 1980's renovations.

View #1 – Southern Building Elevation (Partial)

Notes:

- 1 - Windows replaced
- 2 - Flat roof repaired
- 3 – Sunroom added by previous owner.

View #2 – Southern Building Elevation (Partial)



Notes:

- 1 & 2 - Leaded windows to the left of the front door and above the door repaired in kind.
- 3 - Gutters replaced with copper
- 4 - Roof repaired using slate
- 5 - Snow guards added in copper
- 6 - Handrail over sunroom repaired to match then existing

View #3 – Eastern Building Elevation (Partial)

Notes:

- All decks and porches are building features provided by current ownership. (2016+).
- Right (north) portion of the structure added to original Manor House by previous owners. (c. 1980's).

View #4 – Northeastern Building Elevation (Partial)

Notes:

- 1 - Fencing added
- 2 - Condensing units added
- 3 - Skirting added and painted to match
- 4 – 1980's building renovation.
- 5 – Windows replaced by current ownership.
- Copper gutters and snow guards added

View #5 – Northern Building Elevation (Partial)

Notes:

- 1 - Fencing added
- 2 - Condensing units added
- 3 – 1980's building renovation.
- 4 – Windows replaced by current ownership.
- Copper gutters and snow guards added.

View #6 – Northern Building Elevation (Partial)

Notes:

- 1 - New doors
- 2 - Handrail replaced to match the front of the house
- 3 - New stair to meet code
- 4 -1980's building renovation.
- The deck was added by the previous owners and sits atop an old stone terrace. (c. 1980's)
- The bump out to the right of the image is an addition by the previous owners.

View #7 – Northwestern Building Elevation (Partial)

View #8 – Northwestern Building Elevation (Partial)

Notes:

- This is an addition by the previous owner. (c. 1980's)
- Master plan proposes to improve circulation and hide the exterior extraction fans.
- 1 – Generator added by current owner

View #9 – Northwestern Building Elevation (partial)

Notes:

- This is an addition by the previous owner. (c. 1980's)
- 1 - Generated added
- 2 – Fencing added

View #10 – Southwestern Building Elevation (partial)

Notes:

- Everything pictured here is an addition by the previous owner. (c. 1980's)
- 1 – Door replaced

View #11 – Southern Building Elevation (partial)

Notes:

- Everything pictured here is an addition by the previous owner. (c. 1980's)
- The only changes by the current owner include copper gutters and guards.

View #12 – Southern Building Elevation (partial)

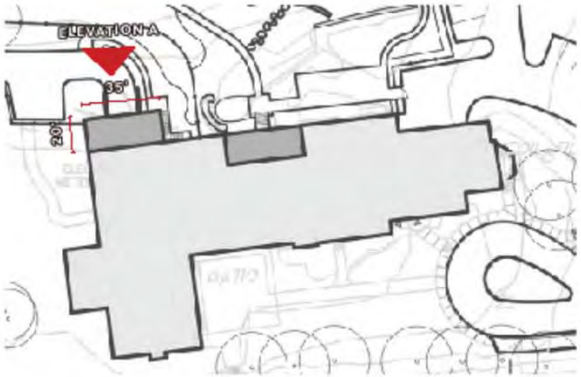
Notes:

- Everything pictured here is an addition by the previous owner. (c. 1980's)

View #13 – Southern Building Elevation (1919 – Manor House)

View #14 - Southern Building Elevation (1980's Ballroom Addition)

Proposed Manor House Elevations – Service Yard



MANOR HOUSE KITCHEN SERVICE	
BASEMENT	
Kitchen Service	700 SF
FIRST FLOOR	
Kitchen Service	700 SF
Receiving	
TOTAL	1,400 SF

EXISTING BUILDING

ELEVATION A

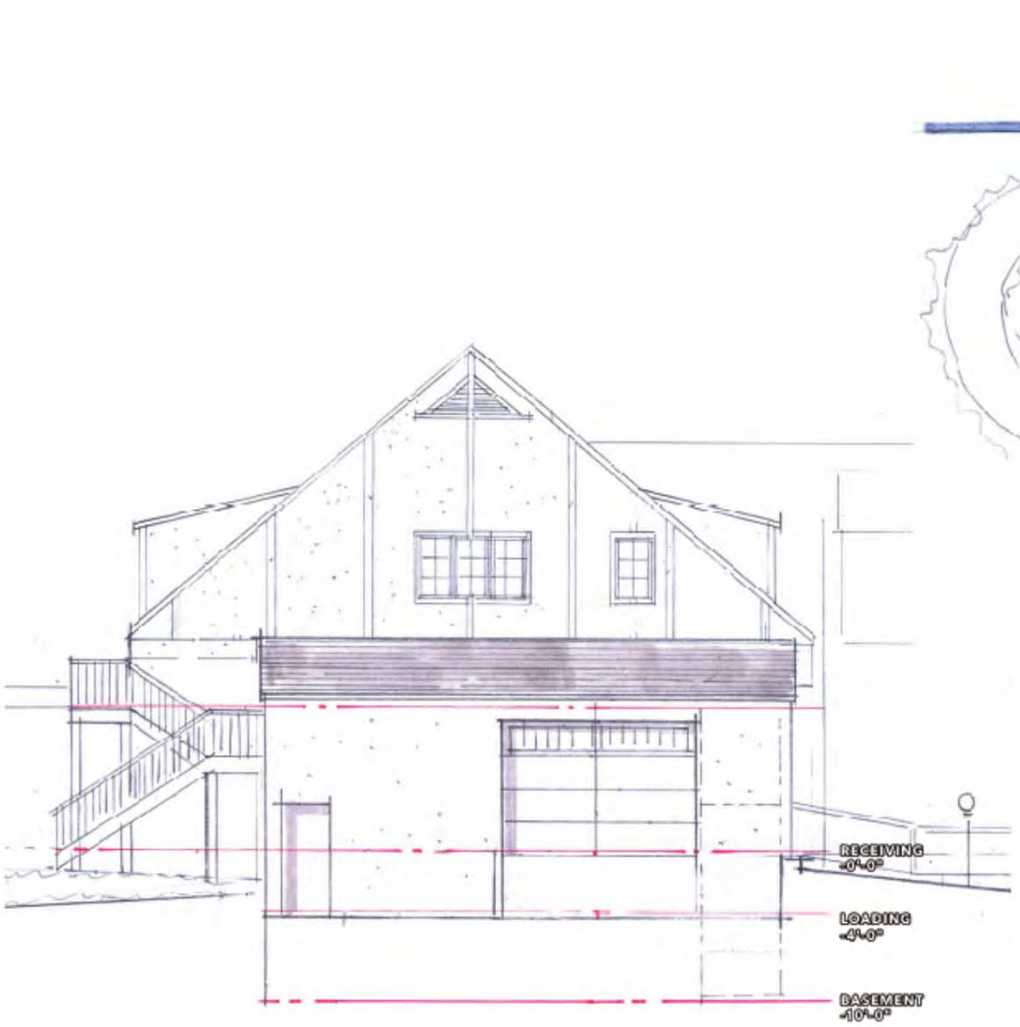
Manor House - Kitchen Service

1/8" = 1'-0" at 11"x17"

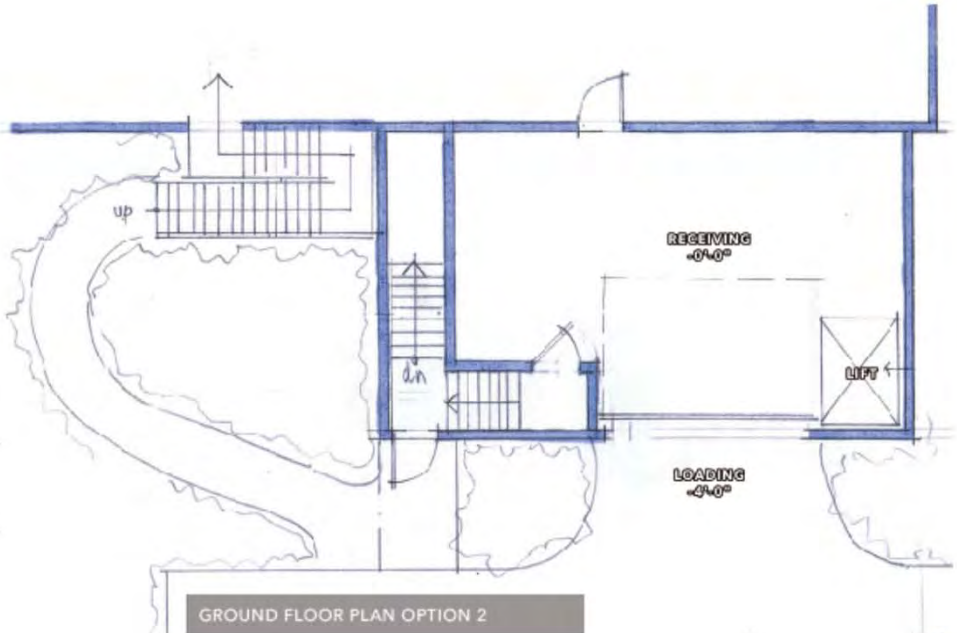
HART HOWERTON

Note: Proposed Service Yard addition will occur on portions of the structure that were constructed in the 1980's.

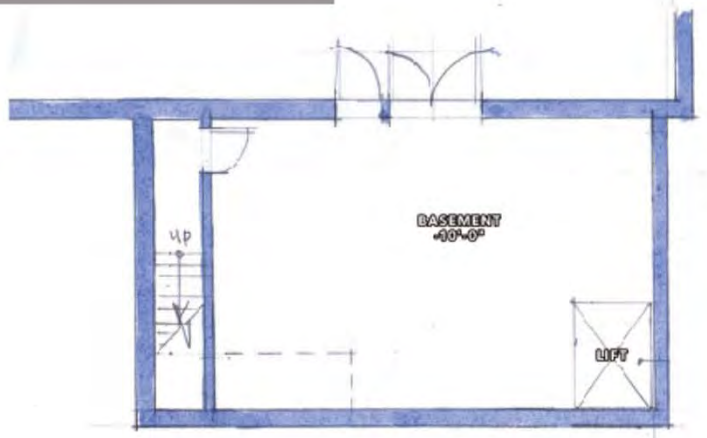
Proposed Manor House – Service Yard



NORTH ELEVATION OPTION 2



GROUND FLOOR PLAN OPTION 2



BASEMENT PLAN OPTION 2

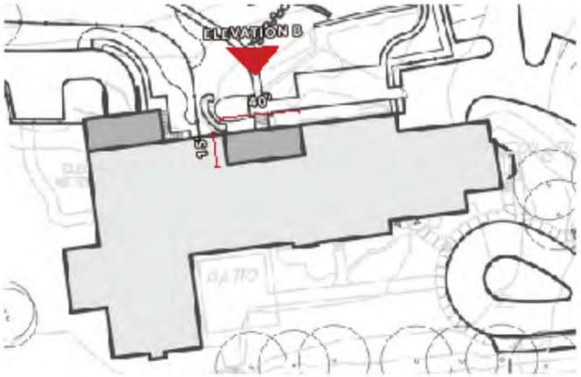
Manor House - Service Yard - Option 2

HART HOWERTON

Note: Proposed Service Yard addition will occur on portions of the structure that were constructed in the 1980's.

Proposed Manor House Elevations – Conservatory Dining

MANOR HOUSE CONSERVATORY DINING	
FIRST FLOOR	
Existing Dining Terrace	600 SF
Dining	
TOTAL	600 SF



Existing deck and back wall constructed during 1980's building renovations.

EXISTING BUILDING

ELEVATION B

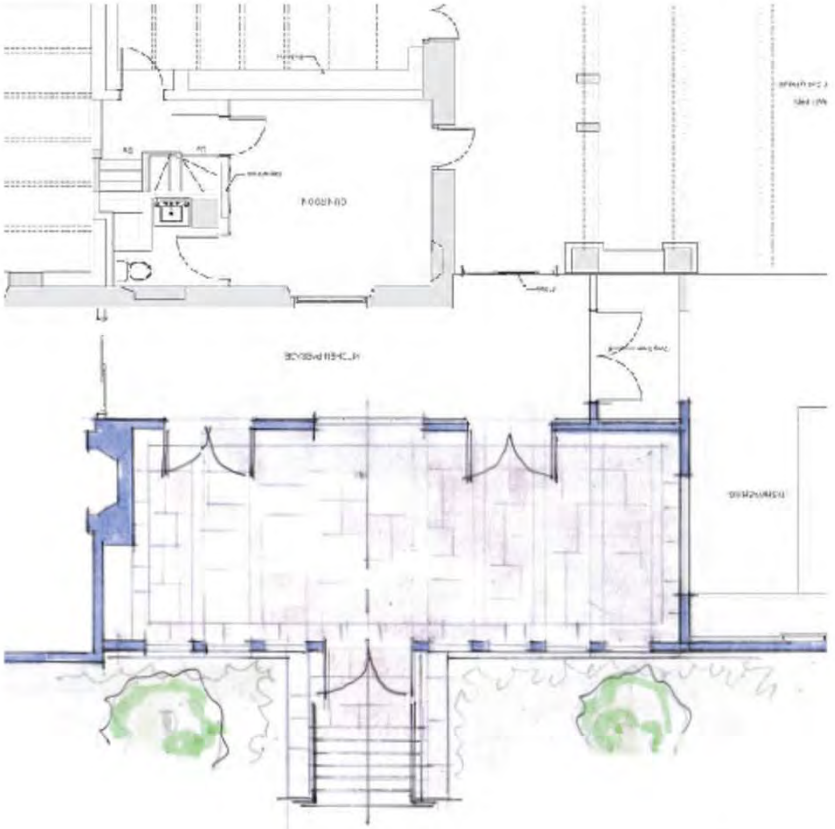
Manor House - Conservatory Dining

HART HOWERTON

Note: Existing deck to be enclosed and used for conservatory dining. Deck was constructed in 1980's over original stone terrace. Proposed enclosure to resolve architecturally the additions made by predecessor owner in the 1980's.

Proposed Manor House Floor Plan – Conservatory Dining

1980's building renovations to left right and behind proposed conservatory dining space. Deck to be enclosed also added during 1980's.



NORTH ELEVATION

GROUND FLOOR PLAN

Manor House - Conservatory Dining

HART HOWERTON

Note: Existing deck to be enclosed and used for conservatory dining. Deck was constructed in 1980's over original stone terrace.

Delamater House - 1761

An interesting albeit typical example of mid-17th century colonial architecture, this modest house retains none of its original interior detail. Noteworthy, however, is its gable end chimney of brick and field stone construction. Inset in the gable brick work is a pattern clearly spelling out the initials of the original owners.

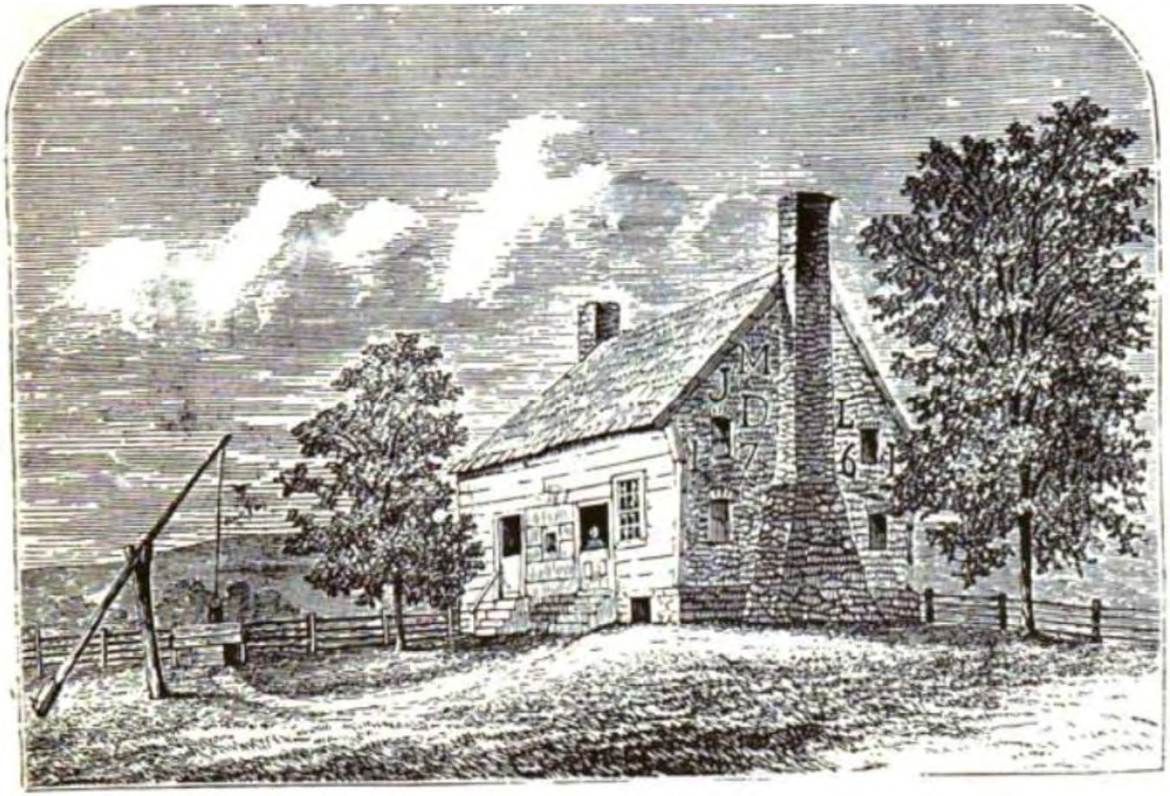
The house has been unused since the early 2000's and was formerly occupied by Troutbeck staff during the Flaherty/Skibsted era. On the ground floor the Interiors were significantly remodeled in the 1980's to provide for its use as staff housing, including, the reconfiguration of the entry hall to a three-fixture bathroom and the historic kitchen occupied as a bedroom. At the historic kitchen, the hearth linked to the gable chimney was removed altogether, infilled and then covered over with sheet rock. A second bathroom was installed in a small historic extension of unknown vintage. The adjoining living room was used as a bedroom.

The house has never been occupied by present ownership owing to its extreme disrepair at the time of acquisition in 2016. Water incursions to the basement and through the roof caused severe interior damage to sheet rock, later causing mold. The foundation shows signs of distress and seasonal inflows of water.

The exterior has not been repainted or repaired in thirty or more years. The eastern façade has bowed significantly. The northwestern corner post has rotted through entirely, along with significant portions of clapboarding.

Though Delamater requires very extensive re-construction and restoration, its historic significance to Troutbeck is of profound value to Ownership. Significant investment has already been made to preserve and save the structure which was nearing a blighted state. Further investment will be made in restoring its façade, stacked brick gable chimney and exterior stone terrace. Delamater will be elevated to a key feature of the estate, with the historic structure very much celebrated.

Sketch/Historic Photograph of Delamater House



- Left: From a sketch by Myron B. Benton about 1860. Stone terrace and southern building addition provided by future ownership.
- Right: From a photograph, 1911. Deck along eastern side of structure (left) has since been removed.

View #15 – Southeastern Building Elevation

Notes:

- No changes in the last 50 years.
- Existing porch area to be removed and replaced by building addition.

View #16 – Southern Building Elevation

Notes:

- No changes in the last 50 years.
- Existing porch area to be removed and replaced by building addition.

View #17 – Southwestern Building Elevation

Notes:

- No changes in the last 50 years.
- Existing porch area to be removed and replaced by building addition.

View #18 – Eastern Building Elevation

Notes:

- No changes in the last 50 years.
- Stone terrace to be preserved and restored.

View #19 – Northeastern Building Elevation

Notes:

- No changes in the last 50 years.

View #20 – Northern Building Elevation

Notes:

- No changes in the last 50 years.
- Historic façade to be preserved and restored.

View #21 – Northwestern Building Elevation

Notes:

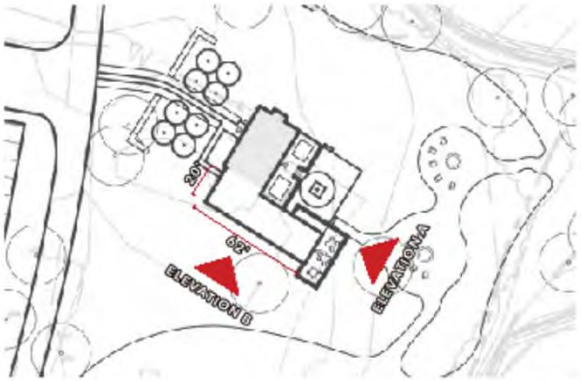
- No changes in the last 50 years.

View #22 – Western Building Elevation

Notes:

- No changes in the last 50 years.
- Existing porch area to be removed and replaced by building addition.

Proposed Delamater House - Elevations

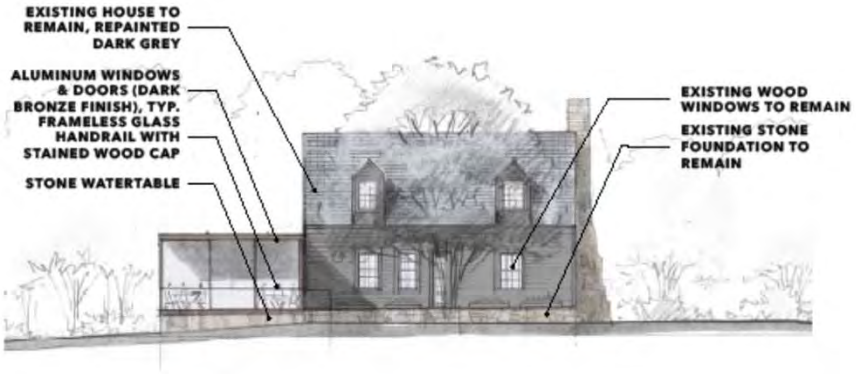



EXISTING BUILDING

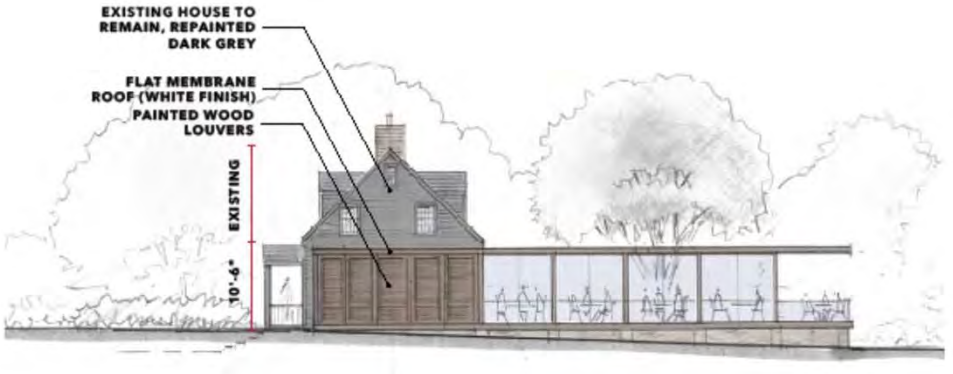
DELAMETER HOUSE	
FIRST FLOOR	
Existing Footprint*	840 SF
Reception	
Indoor Bar & Dining	
Proposed Addition	1,160 SF
Conservatory Dining	
Restrooms	
Vegetable Garden	425 SF**
New Outdoor Terraces	1,100 SF
TOTAL	2,000 SF

Assuming demolished 2nd floor & open up to 1st floor dining

***Existing terrace dimensions to be confirmed*

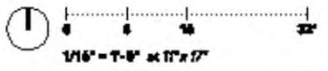


ELEVATION A



ELEVATION B

Delameter House - Elevations

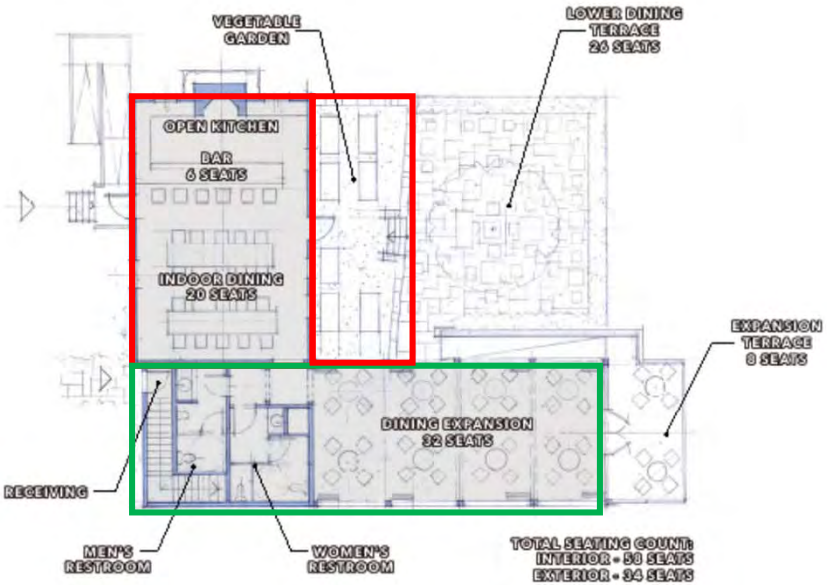


HART HOWERTON

Proposed Delamater House - Floor Plan & Elevations

Red: Existing building footprint. Northern facade to remain and be restored. Existing stone terrace (east) to remain and be restored

Green: Proposed building addition to be added to existing structure.



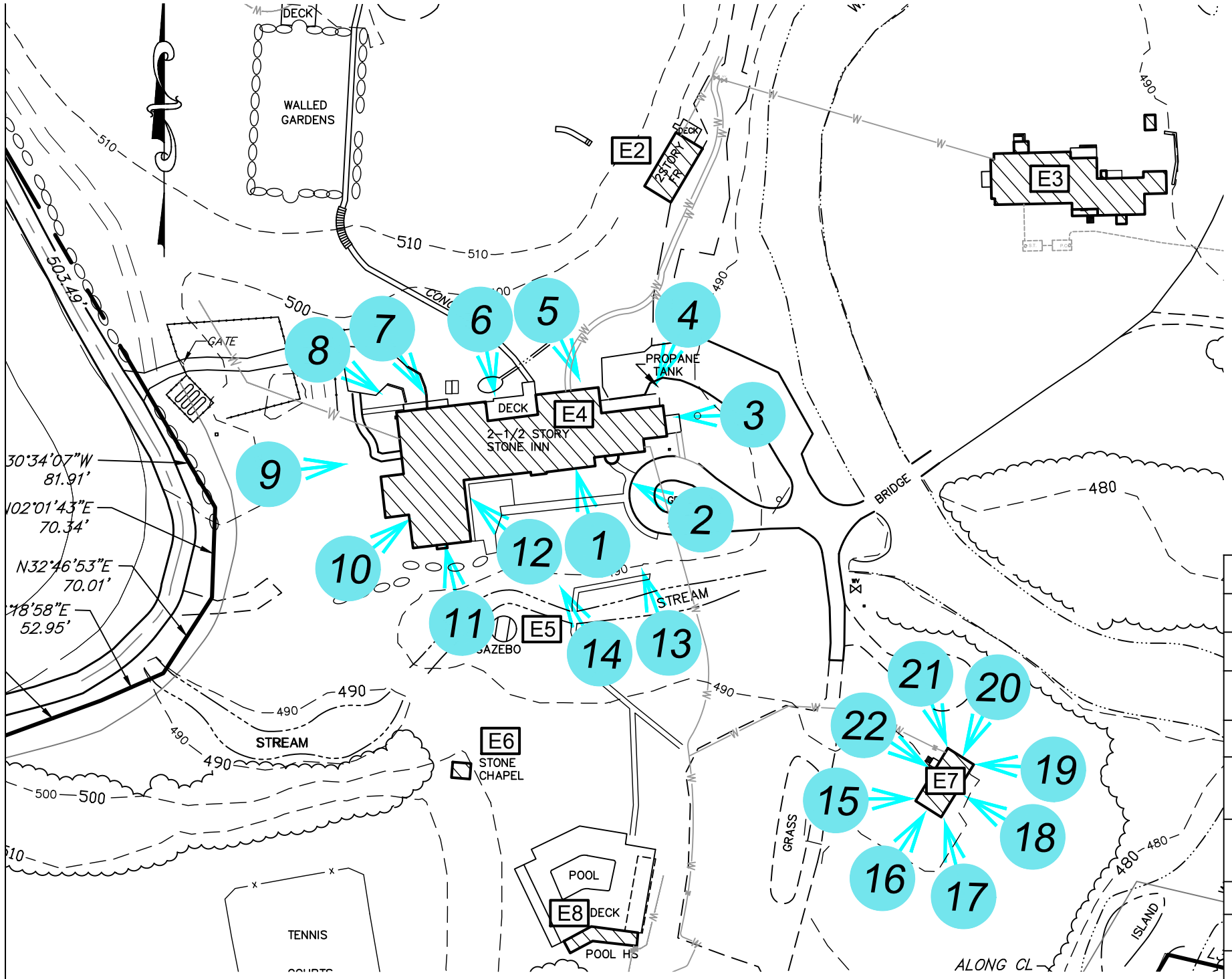
PLAN

EAST ELEVATION

SOUTH ELEVATION

Delameter House

HART HOWERTON

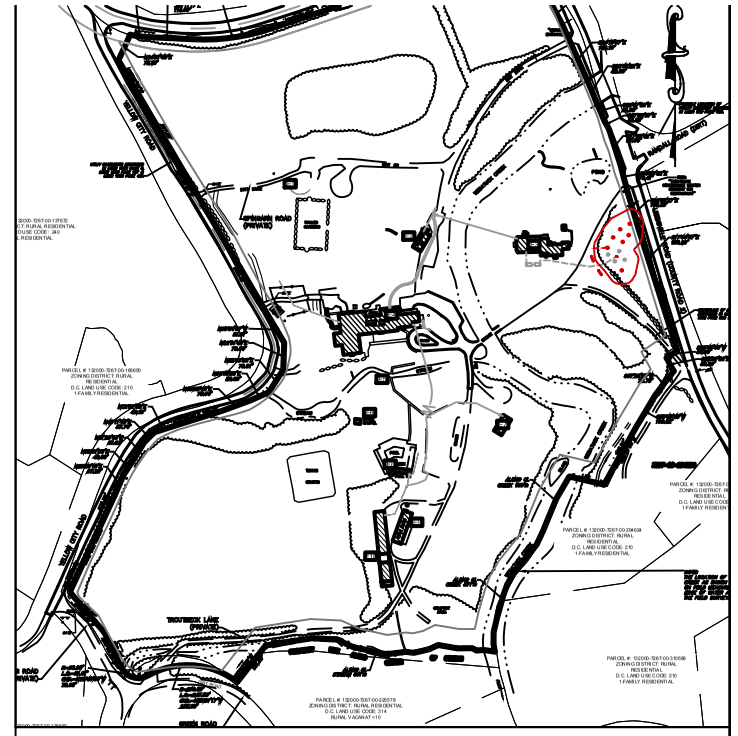


ADAPTIVE REUSE PLAN - HISTORIC STRUCTURES

NOTES:
1) "CENTURY LODGE & ANNEX" (E3) ARE NOT INCLUDED WITHIN THE TROUTBECK INN - ADAPTIVE REUSE PLAN.
2) "STONE CHAPEL" (E6) WILL REMAIN. NO MODIFICATIONS ARE PROPOSED.

0 100' 200'
1" = 100'
GRAPHIC SCALE

#
DIRECTION OF VIEW ANGEL
SEE "HISTORIC STRUCTURE INVENTORY"



OVERALL SITE PLAN SCALE: 1" = 500'

TROUTBECK INN - ADAPTIVE REUSE PLAN

EXISTING STRUCTURE INVENTORY

BLDG. #	BUILDING	EXISTING BUILDING USE	APPROX. YEAR CONSTRUCTED	APPROX. SQ. FT. (FOOTPRINT/TOTAL)		DWELLING/LODGING UNITS
E1	GARDEN HOUSE	STAFF APARTMENTS/ GUEST LODGING	1980s	1,931	3,862	4 KEYS 2 STAFF APARTMENTS
E2	CARETAKER HOUSE / GARAGE	STAFF APARTMENT / MAINTENANCE	1980s	1,172	1,800	1 STAFF APARTMENT
E3	CENTURY LODGE & ANNEX	LODGING	1795 1980s - CENTURY LODGE ANNEX 2016/17 - BUILDING RESTORATION 2022 - PORCH/ROOM ADDITIONS	5,860	9,783	17 KEYS
E4	MANOR HOUSE	LODGING/EVENT SPACE/DINING	1919 1980s - BALLROOM / KITCHEN / GUESTROOMS) 2016 - REFURBISHMENTS	14,264	35,773	17 KEYS
E5	GAZEEBO	GUEST AMENITY	1980s	315.00	315.00	N/A
E6	STONE CHAPEL	GUEST AMENITY	1916 2021 - ROOF REPAIRED	174	174	N/A
E7	DELAMETER HOUSE	VACANT/UNUSED	1761 1980s - REMODELED	1141	869.00	N/A
E8	POOL FACILITIES	GUEST AMENITY	1980s 2016 - REPLACEMENT POOL / KITCHEN FACILITIES	N/A	N/A	N/A
E9	POLE BARN	GUEST AMENITY	2020	2081	2081.00	N/A
E10	THE BARNS (WELLNESS)	GUEST AMENITY/ FITNESS/ WELLNESS	2020	4925	4925.00	N/A

DATE	REVISION

ENGINEERING, DESIGN, & PLANS PREPARED BY:
RENNIA ENGINEERING DESIGN, PLLC
CIVIL ▪ ENVIRONMENTAL ▪ STRUCTURAL
6 Dover Village Plaza, Suite 5, P.O. Box 400, Dover Plains, NY 12522
Tel: (845) 877-0555 Fax: (845) 877-0556

TROUTBECK INN
ADAPTIVE REUSE PLAN
TOWN OF DOVER DUTCHESS COUNTY, NY

EXISTING CONDITIONS PHOTO KEY

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NEW YORK STATE OF OPPORTUNITY. Parks, Recreation, and Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

July 22, 2022

Peter Sander
Staff Planner
Rennia Engineering Design
6 Dover Village Plaza
Suite 5
Dover Plains, NY 12522

Re: SEQRA
Troutbeck Inn - Adaptive Reuse
515 Leedsville Rd.
Amenia, Dutchess Co.
22PR01828

Dear Peter Sander:

Thank you for providing additional information to the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP) as part of your SEQRA process.

Troutbeck contributes to the National Register Eligible Webatuck Agricultural Valley Historic District. Because of this, we have reviewed the submitted materials.

We recommend that the proposed demolition of a section of the Delameter House not take place. The house is a rare example of early American architecture and this alteration will be a significant change to the building.

The additional information was helpful. However, we are still unclear about the interior of the buildings. Before we can complete our review, we will need additional information. Please attach design materials to CRIS as one or a few PDFs. Please include the following items that were requested in our May 12 letter:

A. Existing-conditions floor plans to double as a photo key for all buildings that are fifty years old or more if work is proposed (see "B" below).
B. Representative interior photos and photos where work is proposed.
C. If repointing will occur, confirmation that any new mortar will match the historic mortar in all qualities including strength, color, texture, and tooling. For information on how to do this, see Preservation Brief #2 http://www.nps.gov/tps/how-to-preserve/briefs/2-repoint-mortar-joints.htm. If repointing will not occur, please communicate that to us.
D. Confirmation that existing windows will not be replaced. If this is not the case, please provide the information we requested on May 12.
E. Confirmation that existing doors and lighting are not being replaced. Again, if this is not the case, please provide the information we requested on May 12.
F. Confirmation that any new ductwork will be concealed in a chase/soffit or above a

previously suspended ceiling. All new ductwork will be either set back at least three feet from windows or hung above window heads in order to not be visible from the exterior. Sight line studies will be submitted if there are proposed roof mounted mechanical systems.

If you have any questions, I can be reached at sloane.bullough@parks.ny or 518-268-2158.

Sincerely,

Sloane Bullough
Historic Sites Restoration Coordinator by email only

RENNIA ENGINEERING DESIGN, PLLC

CIVIL & ENVIRONMENTAL ENGINEERING

6 Dover Village Plaza, Suite 5, P.O. Box 400, Dover Plains, NY 12522
Tel: (845) 877-0555 Fax: (845) 877-0556

September 19th, 2022

Sloane Bullough
Historic Sites Restoration Coordinator/Technical Preservation Services Unit
New York State Parks, Recreation & Historic Preservation
Peebles Island State Park, P.O. Box 189, Waterford, NY 12188

Attn: Sloane Bullough, Historic Sites Restoration Coordinator

Re: Troutbeck Inn – Adaptive Reuse
SHPO Response
515 Leedsville Road
132000-7267-00-227675

Dear Ms. Bullough,

The Troutbeck Inn – Adaptive Reuse project is a proposed, multi-phased redevelopment of an existing resort/conference center at the above referenced address. The site contains two historic structures that are proposed to be modified by the implementation of the Adaptive Reuse Plan; the Manor House, originally constructed in 1919 and later expanded with a kitchen, service yard, patio, banquet hall, and additional lodging units in the 1980's, and Delamater House which was constructed in 1761 but was heavily modified in the 1980's and has since been allowed to deteriorate into a state of disrepair by the previous owners of the property. Proposed modifications to these two structures are part of future phases outlined for the site, with modifications to the Manor House's 1980's building addition proposed in Phase 3 and the Delamater renovations proposed in Phase 6.

Our office has received and reviewed your response to our June 30, 2022 submission. In order to alleviate your concerns regarding the proposed Delamater House addition, which would remove a small building addition that was added to the original 1761 footprint, the client's architect, Stonehill Taylor, has prepared a brief narrative for your review. The narrative provides additional information on the numerous modifications made to the structure by the previous owners, the severe state of disrepair that the structure is currently in, and the proposed modifications to be made to the structure so that it may continue being used. We believe that the proposed building renovations/addition will not only retain the vast majority of the original 1761 structure, but will also result in much needed structural improvements, which will ensure that the Delamater House continues to be a part of Troutbeck's rich history.

In addition to the above referenced narrative, this office offers the following responses to your comment memo, dated July 22, 2022. Responses to comments have been prepared in the same order they were provided:

Re: Troutbeck Inn – Adaptive Reuse
SHPO Response
515 Leedsville Road
132000-7267-00-227675

A) An Existing Conditions Floor Plan of the structure has been provided with this submission.
B) The attached "Delamater House – Existing Interior Photo Log" provides numerous interior photos documenting the structure's poor condition. The photo log also contains excerpts from the Existing Conditions Floor Plan, which has been modified to serve as a photo key, identifying the location that the images were taken from. Additionally, photos that were taken in 2016 when the current owner acquired the property have been included as part of the above referenced narrative from Stonehill Taylor.
C) Repointing is proposed for the brick chimney located on the north side of the structure and for stone retaining walls used to create an outdoor terrace along the eastern side of the building. At the time of construction, proposed repointing will be provided in accordance with "Repointing Mortar Joints in Historic Masonry Buildings", by Robert C. Mack, FAIA, and John P. Speweik, guidance provided on the National Park Service's Technical Preservation Services web page.
D) As outlined in the above-referenced narrative, all original windows, doors, and light fixtures were replaced by the previous owners of the site as part of their 1980's renovations. As such, said features no longer contribute to the historic value of the structure.
E) See "Response D".
F) Any and all new ductwork to be provided with the proposed Delamater House renovations/addition shall be concealed and will not be visible from the exterior. Currently, no roof mounted mechanical systems are proposed for either the original Delamater House structure, nor the proposed building addition.

Attached for your review and approval please find copies of the following items:

- Stonehill Taylor – Historic Structure Narrative, dated 9/15/2022
- Delamater House – Existing Interior Photo Log, dated 9/16/2022
- Delamater House Existing Floor Plans & Elevations, dated 10/25/2021
- Delamater House – Schematic Design Floor Plan & Building Elevations, dated 8/26/2022

Please do not hesitate to contact me with any questions, (845) 877-0555.

Sincerely,

Peter Sander
Staff Planner

STONEHILL TAYLOR

September 15, 2022

Sloane Bullough
Historic Sites Restoration Coordinator/Technical Preservation Services Unit
New York State Parks, Recreation & Historic Preservation
Peebles Island State Park, P.O. Box 189, Waterford, NY 12188

By email:
Sloane.Bullough@parks.ny.gov

Re: SEQRA
Troutbeck Inn – Adaptive Re-Use
515 Leedsville Road
Amenia, Dutchess County, NY
22PR01828

Dear Ms. Bullough,

I am from Stonehill Taylor Architects of New York, New York and am the architect for some new buildings, additions, and renovations planned at the Troutbeck Estate hospitality venue in Amenia, NY. I am writing to follow up on an email dialog you have been having with Peter Sander of Rennia Engineering Design, the Civil Engineer on the project, which involves a number of new buildings and renovations on the property.

The Troutbeck property contains several structures originally built as residences in the second half of the eighteenth century and early in the twentieth. Later during the twentieth century, the property was converted to a resort which eventually included food & beverage, recreation, and transient lodging facilities. As the resort developed over the years under the current and previous owners, buildings on the property have been modified and new ones have been added.

In your discussion, you and Peter have been communicating regarding building addition and renovation work currently planned for two of the structures on the property, the Delamater House and the Manor House. These are the only structures on the property that are more than 50 years old that are affected by this project.

The Manor House

This fieldstone-walled structure was built in the second half of 1910's as a residence and following the conversion to a resort, has been renovated and added to over the years by my clients predecessors. The work we are planning at this building consists of a small addition to the kitchen and loading area at the rear of the building. The existing kitchen, loading area, and the adjacent ballroom are within an addition to the Manor House that also contains four guestrooms on the second floor. This existing addition is less than 50 years old, as it was built

in the 1980's. The steel frame addition was built with stone cladded walls, slate roof, and massing to match the original Manor House structure. Since the proposed new addition will not affect a structure more than 50 years old, per our understanding of your correspondence with Peter Sander of Rennia Engineering, the proposed small addition will not be of concern to your office. Notwithstanding this fact, the property's ownership and our office are deeply committed to respecting the history and character of this remarkable property and intend to design this small addition to match the character of the 1980's addition, which is generally sympathetic to the original structure.

The Delamater House

This structure was built as a residence in 1761 and minor alterations and additions have been made over the years since. During the 1980's, the predecessors to my client, renovated the house, to four bedrooms. The gabled windows were infilled with unit shower stalls. The former entry hall also converted to a bathroom. All interior plasterwork was, at the time the present owners took possession, replaced with sheet rock. Meaning, little to no interior detailing remains. From at least the early 2000's the home has been left unoccupied and without heat.

At the time of the current owner's acquisition of Troutbeck in 2016, the "Delamater House" was already in severe disrepair, showing water damage, mold, rot and structural weaknesses. Documentation of the state of the building upon the current owner's acquisition of the property is illustrated in the attached photographs taken during an inspection by client's engineer. Upon further inspection and the discovery of both mold and asbestos, my client ordered interior remediation as an initial step to ensure its preservation.

All basic systems have been removed, therefor the building has no insulation, heating, plumbing, or electrical systems. What was suspected through earlier visual inspections is now plainly visible and confirmed. The structure is in a state of severe deterioration, including sections where daylight can be seen through the façade. It will require very substantial efforts to stabilize it structurally, weatherproof it, and make it fit for use again.

It is a simple 1-1/2 story post & beam framed structure that originally had two rooms on the ground floor, a central stair, and two rooms on the second floor under the gable roof that are lit by dormer windows. There is a screened porch at the south end of the structure that appears to have been added to the original structure at some point late in its history. There is an unfinished cellar under the main structure, but it does not provide practical headroom for use. There is no cellar under the south porch.

The exterior is sheathed in clapboard on three sides with a brick façade on the north gabled end. The roof is sheathed in asphalt shingles and has four dormers to provide light and air to the second floor. No original windows or doors remain, having been replaced in the 1980's; nor do any interior or exterior finishes or decorative work, save the brick and stone masonry at the east terrace and the north façade. The west front door is sheltered by a small ad-hoc 2x lumber and plywood porch structure supported by foundation elements cobbled together with sewer pipe and similar temporary materials.

The interior of the Delamater House has been entirely stripped of all interior finishes, leaving the exterior sheathing, wood framing, and subfloor exposed throughout the interior. No kitchens, bathrooms, plumbing, or electrical work exist. All that was removed dated to the 1980's. The south porch is in significantly worse condition than the original structure; significant out-of-level and out-of-plumb conditions exist there that are well beyond normal operational tolerances even for very crude historic Colonial American structures.

Although the original Delamater House is so severely deteriorated that making it usable again will be a very costly endeavor, Ownership considers the fascinating history of the property and the charm of its historic structures to be an integral part of the property's appeal and value as a hospitality venue and cultural resource. They have committed to spend a considerable sum to rehabilitate the Delamater House to make it an important contributing part of the Troutbeck Estate once again. Because of its size and the characteristics of its construction, the structure does not lend itself to use as a lodging facility, cannot be refurbished economically for staff housing and therefore, if it is to be preserved, is best adapted for use as a revenue generating restaurant.

The design we have proposed reserves all modern elements to a newly constructed addition. Following the Department of Interior guidelines for additions to historic structures, whilst complimentary to the original, the addition is distinct. When approached from the west façade the width and scale of the addition follows the existing enclosed porch we have proposed to remove. It is our aim that the structure retain its residential scale when approached from this vantage point. We aim to leave exposed to the interior the hand-hewn chestnut beams, live edge sheathing and early American masonry.

As proposed, the addition allows us to reserve the historic and original footprint to showcase the methods of early American construction, materiality, and form. Functionally, it is the only means by which we can incorporate modern infrastructure consistent with the service standards of the operator. Our aim is for the guest to inhabit the charm and history of the house, and, through the addition, to reside within the restored meadows and beneath the canopy of Troutbeck's extraordinary witness trees.

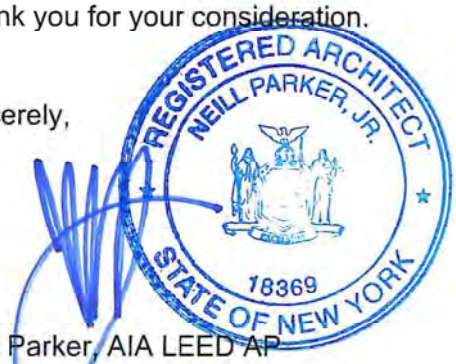
Regardless of its future use or our proposed designs, because of its deteriorated condition and total absence of any basic systems necessary for use in the twenty-first century, the following work will be necessary:

1. Brace, anchor, and stabilize the existing post-and-beam structural frame.
2. Stabilize, reset, and repoint all existing stone and brick masonry.
3. Provide thermal insulation throughout.
4. Replace deteriorated asphalt shingle roofing with new roofing (material TBD).
5. Provide new sheathing and weatherproof barrier in walls.
6. Replace deteriorated wood clapboard siding & trim in kind.
7. Install new energy-efficient windows and doors.
8. Install new interior finishes, millwork, equipment, and furniture.
9. Install new heating, ventilation, and cooling systems.
10. Install new plumbing & sanitary service, piping, and fixtures.
11. Install new lighting and electrical service.
12. Provide 21st-century IT & communications systems

We believe that the proposed renovations for the structure are the most effective way to ensure Delamater House continues to be a prominent feature at Troutbeck. Troutbeck has an exceptional reputation for hospitality, preservation, and cultural events that help to sustain and promote the property's history and social importance. We are committed to continue respecting the history and character of the property through future development.

Thank you for your consideration.

Sincerely,



Neill Parker, AIA LEED AP
Principal
Stonehill Taylor

Photos from 2016 Engineer's Report

Photograph #1
Description: View of north elevation. Deteriorated wood framing. Displaced foundation / load bearing wall at north east corner of building.

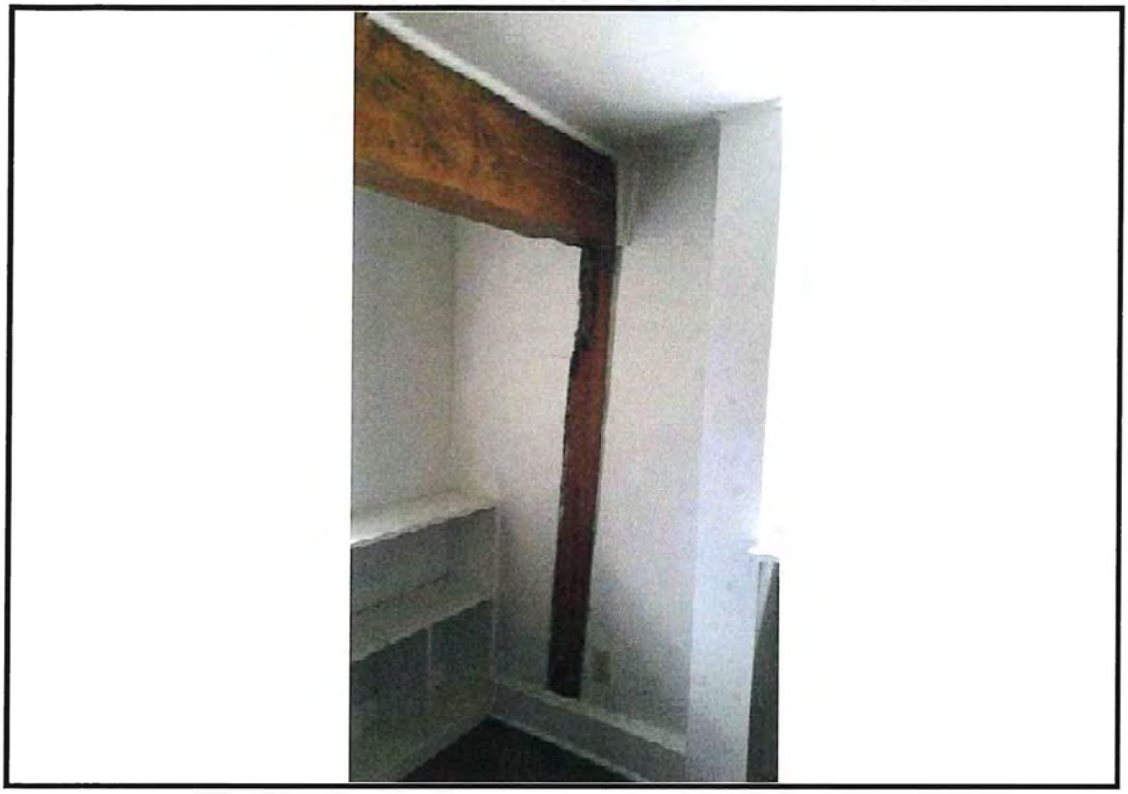
Photograph #2
Description: General view of "Delamater House". West elevation. Deteriorated gutter system, deteriorated siding, deteriorated paint. Unstable / deteriorated raised entry structure.

Photos from 2016 Engineer's Report

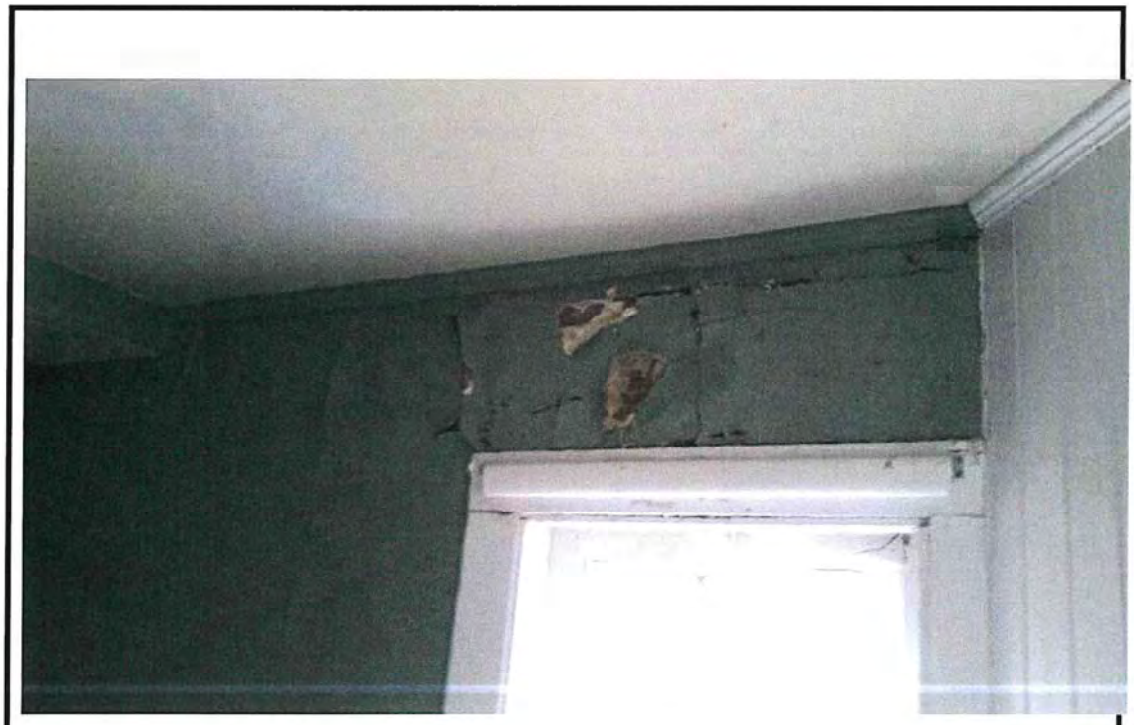
Photograph #3
Description: View of east elevation. Deteriorated paint, siding gutter system.

Photograph #4
Description: View of south elevation. Deteriorated paint, siding and organic growth. Displaced roof framing.

Photos from 2016 Engineer's Report

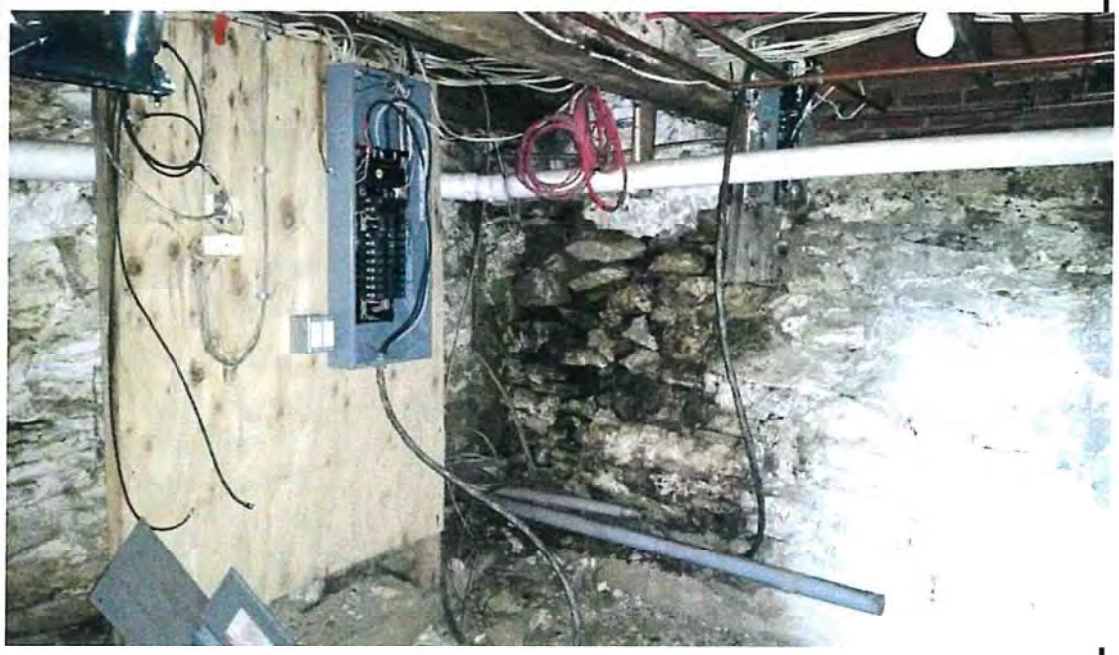


Photograph #5
Description: Skewed post at north east corner of building (at location of displaced retaining wall).



Photograph #6
Description: Water infiltration along second floor (east / south elevations).

Photos from 2016 Engineer's Report



Photograph #7
Description: Displaced field stone foundation wall at north east corner of building.

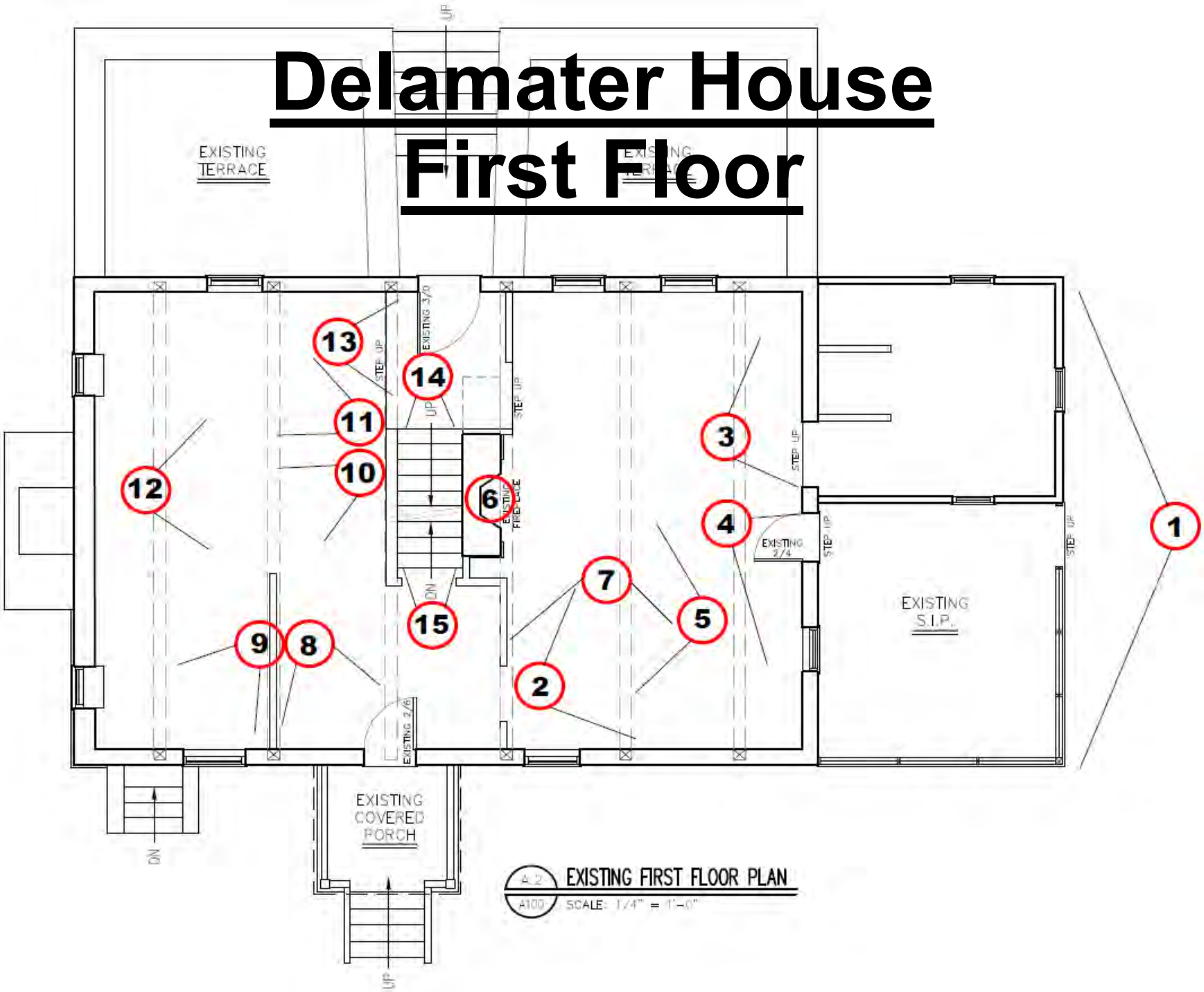
Photograph #8
Description: Displaced foundation / retaining wall at north east corner of building.

Delamater House

Existing Interior Photo Log

9/16/2022

Delamater House
First Floor



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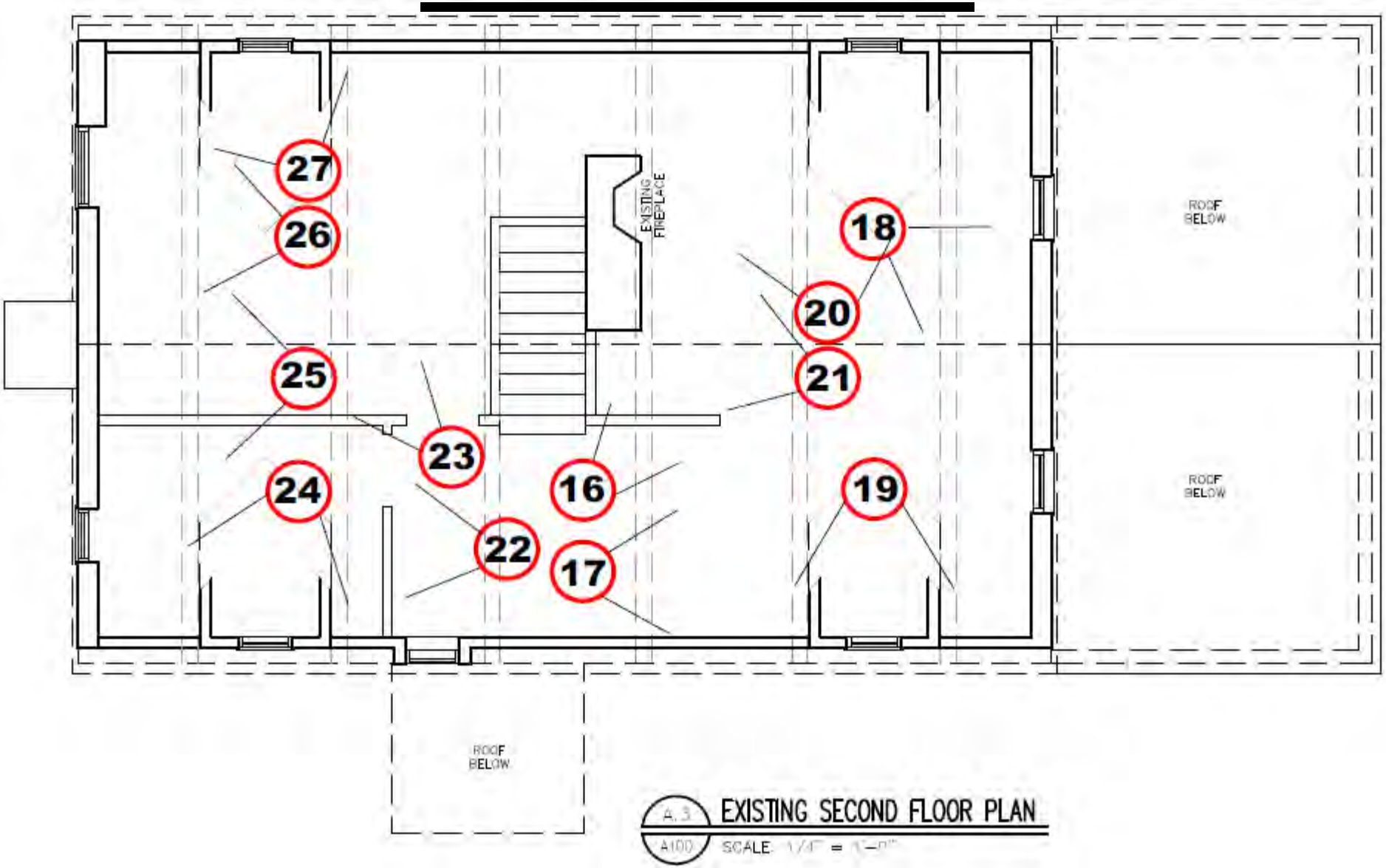
11
House
1973


13


14


15

Delamater House
Second Floor

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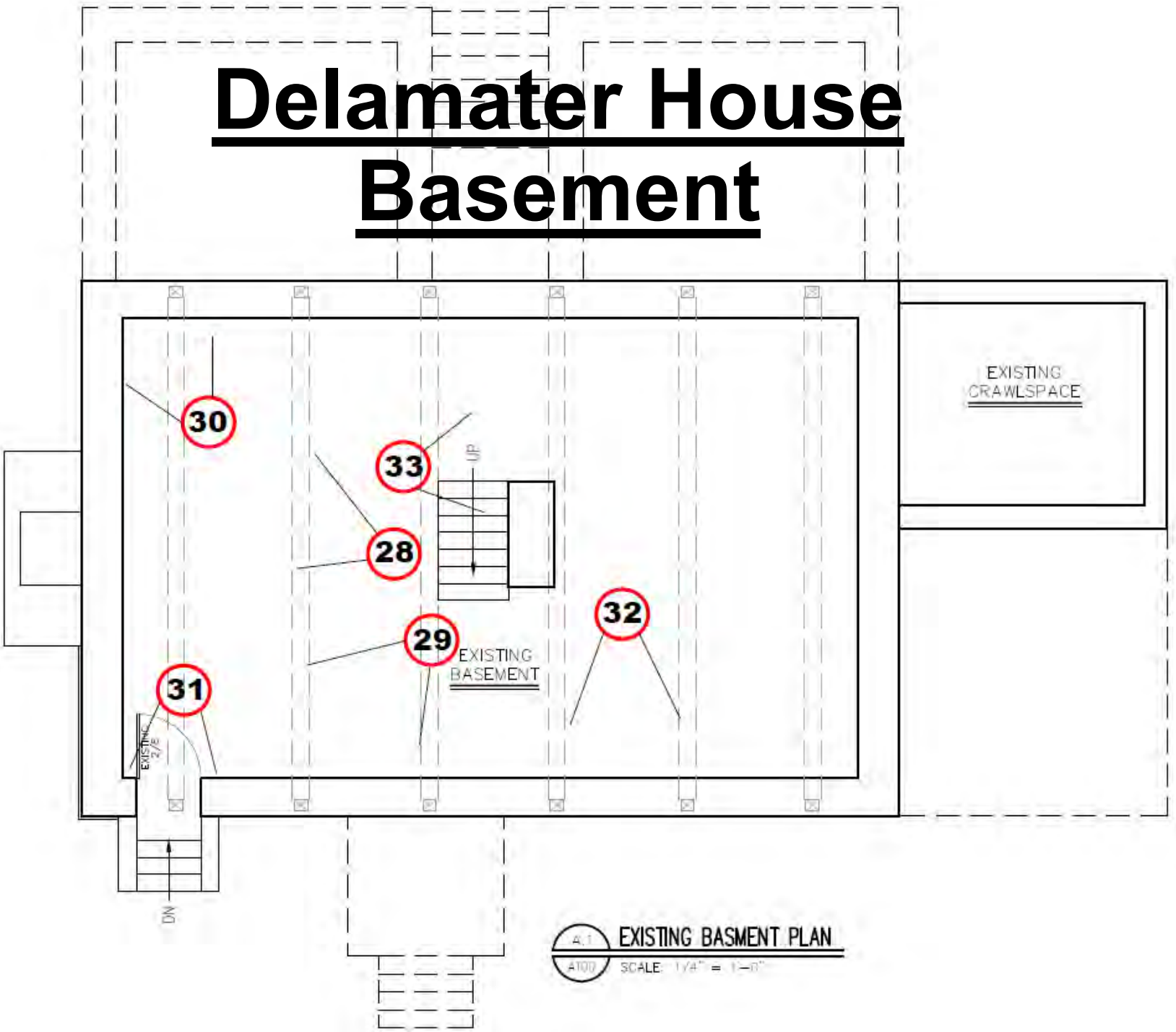
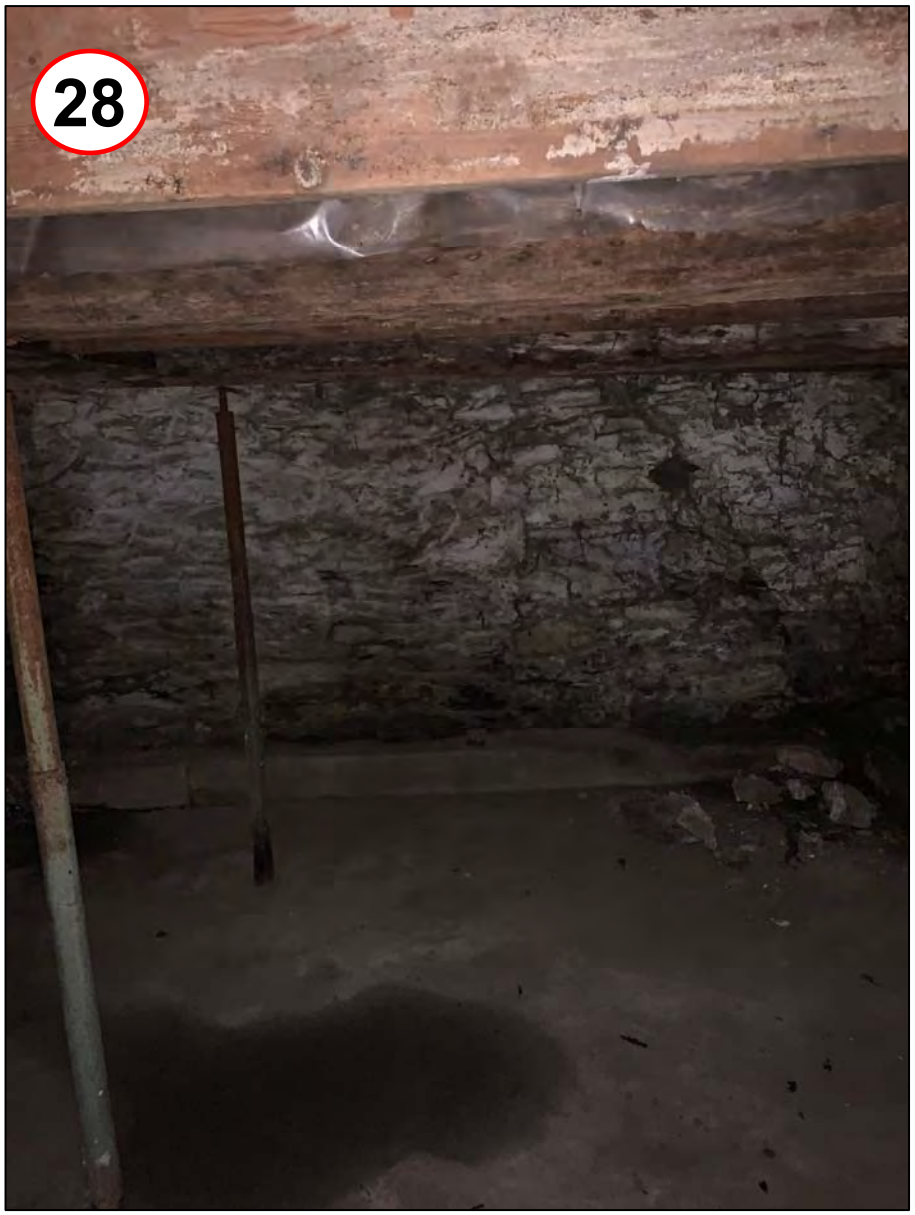
Delamater House Basement

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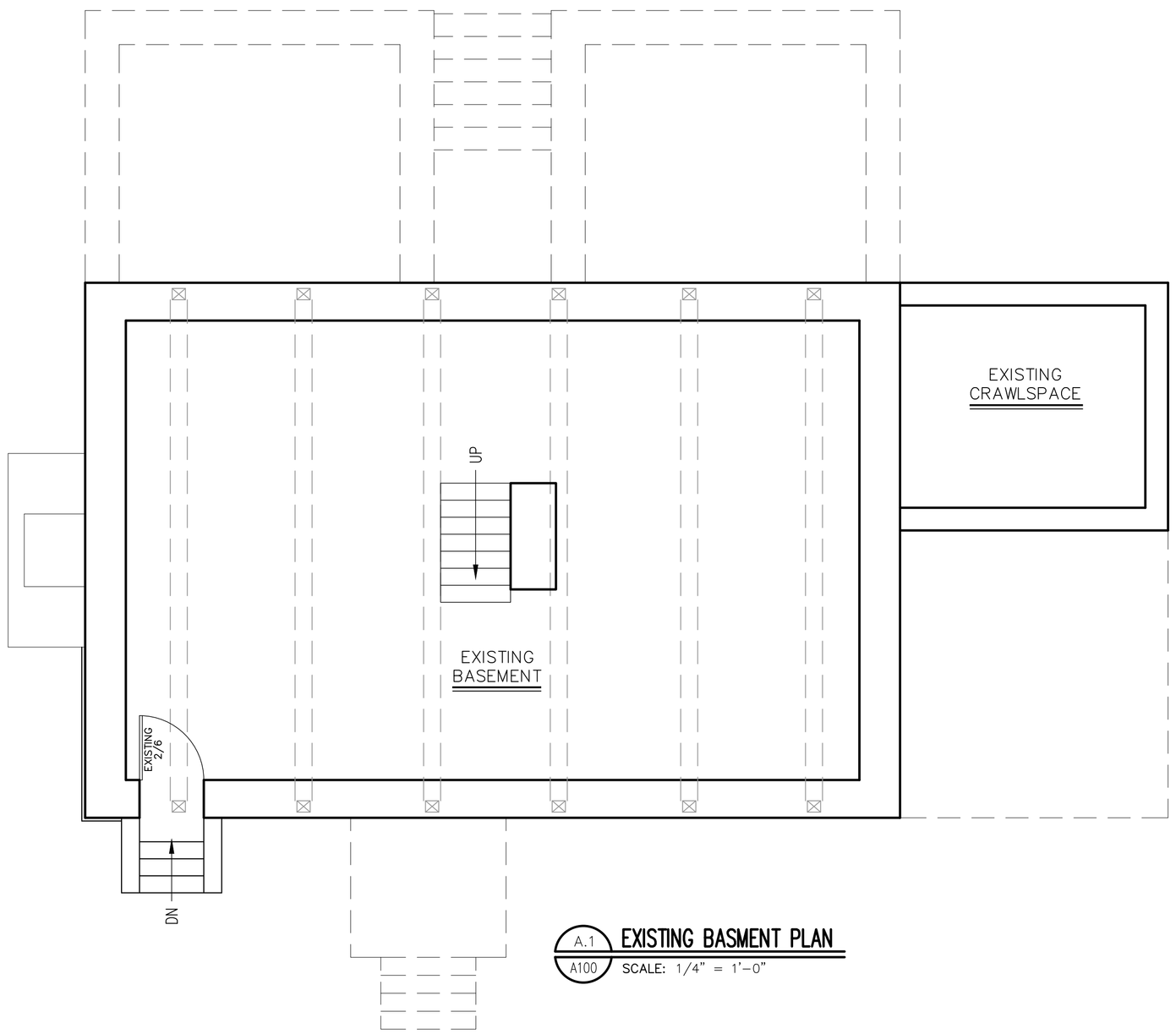
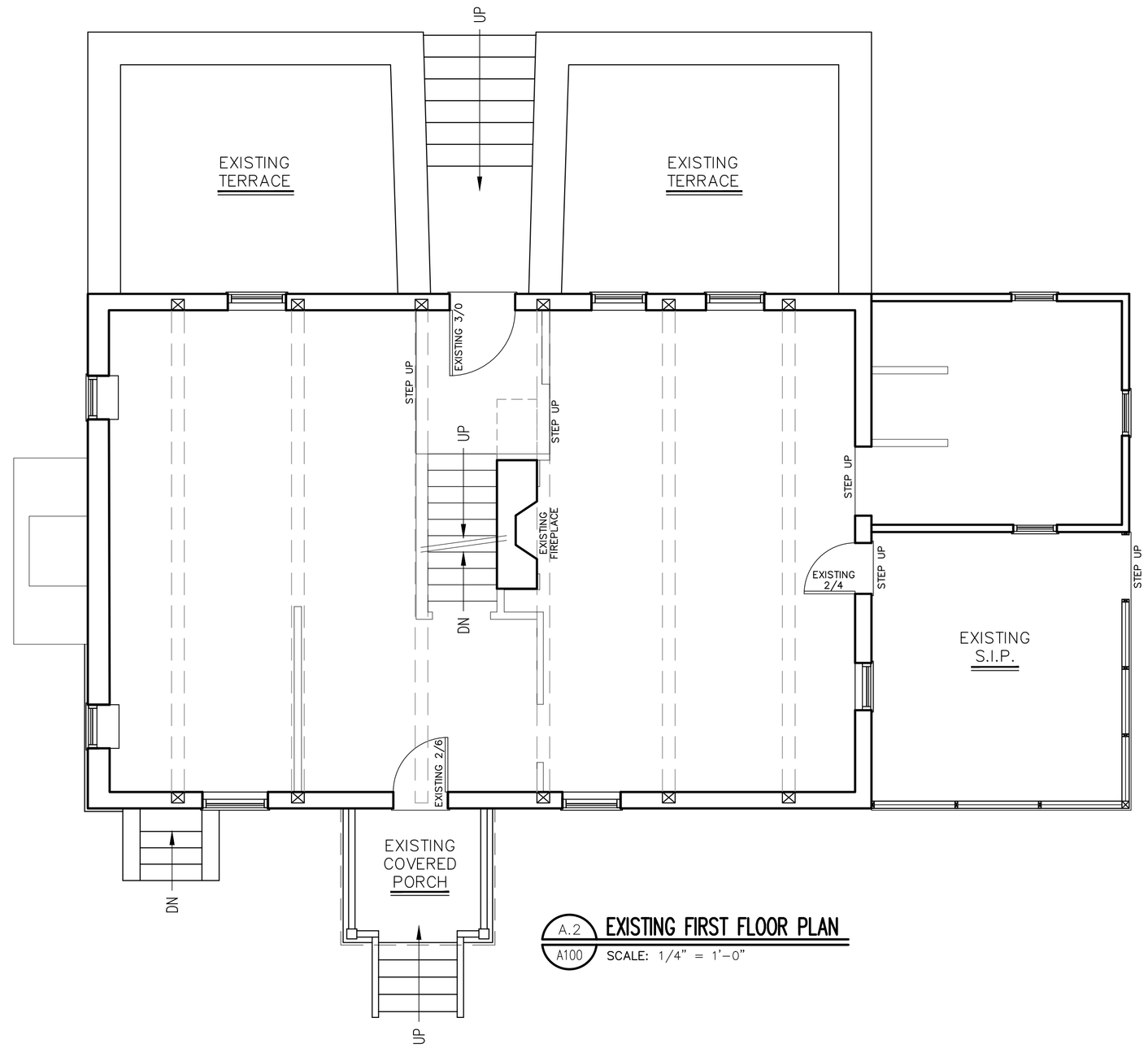
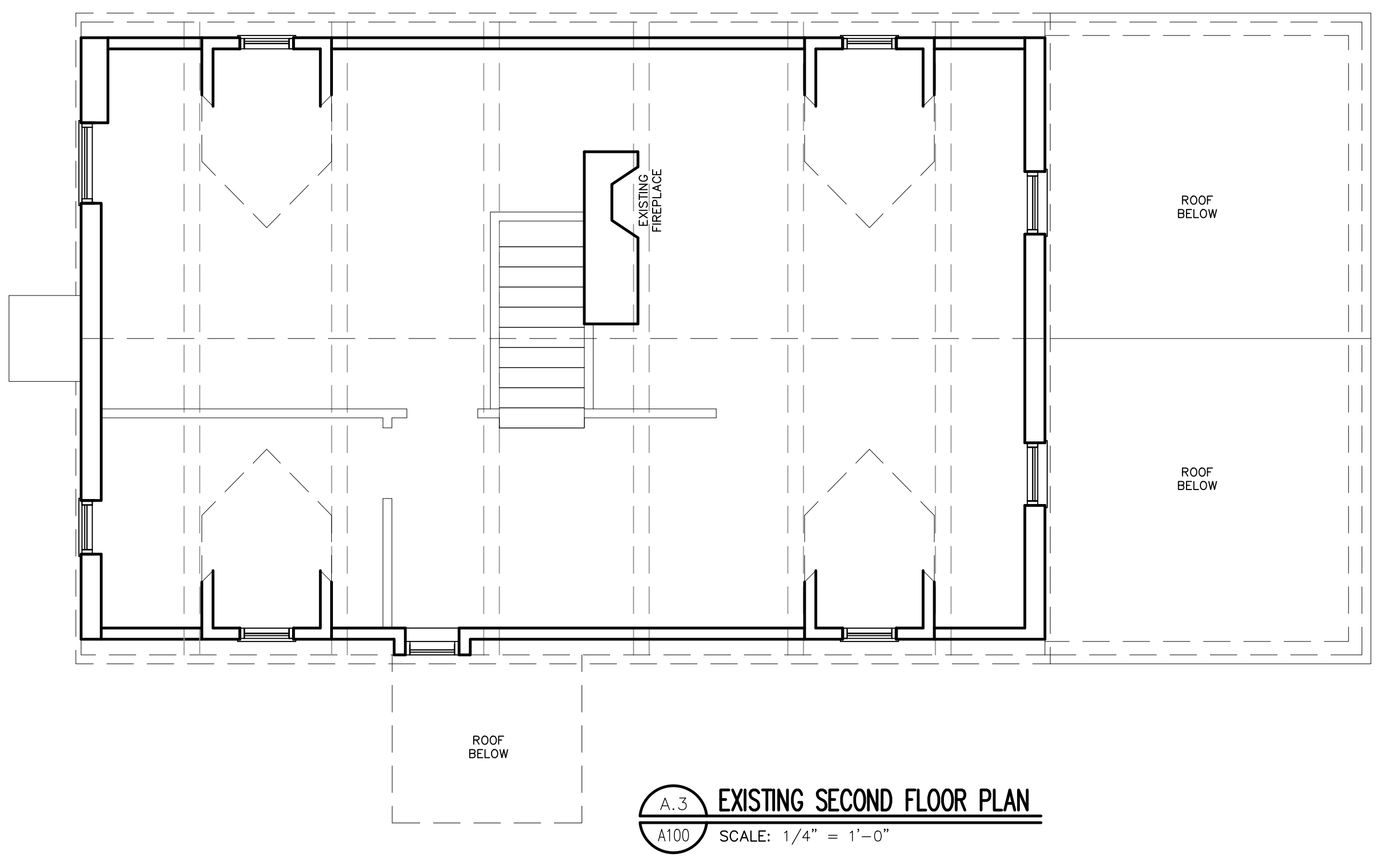


A.1 / A100 **EXISTING BASMENT PLAN**
SCALE: 1/4" = 1'-0"



A.2 / A100 **EXISTING FIRST FLOOR PLAN**
SCALE: 1/4" = 1'-0"



A.3 / A100 **EXISTING SECOND FLOOR PLAN**
SCALE: 1/4" = 1'-0"

Mark A. Day, PE

Revisions

Project No. JOB No. License No. 069646

DAY | STOKOSA
ENGINEERING P.C.
3 Van Wyck
Lane Suite 2
Wappingers Falls, New York
(845)-223-3202

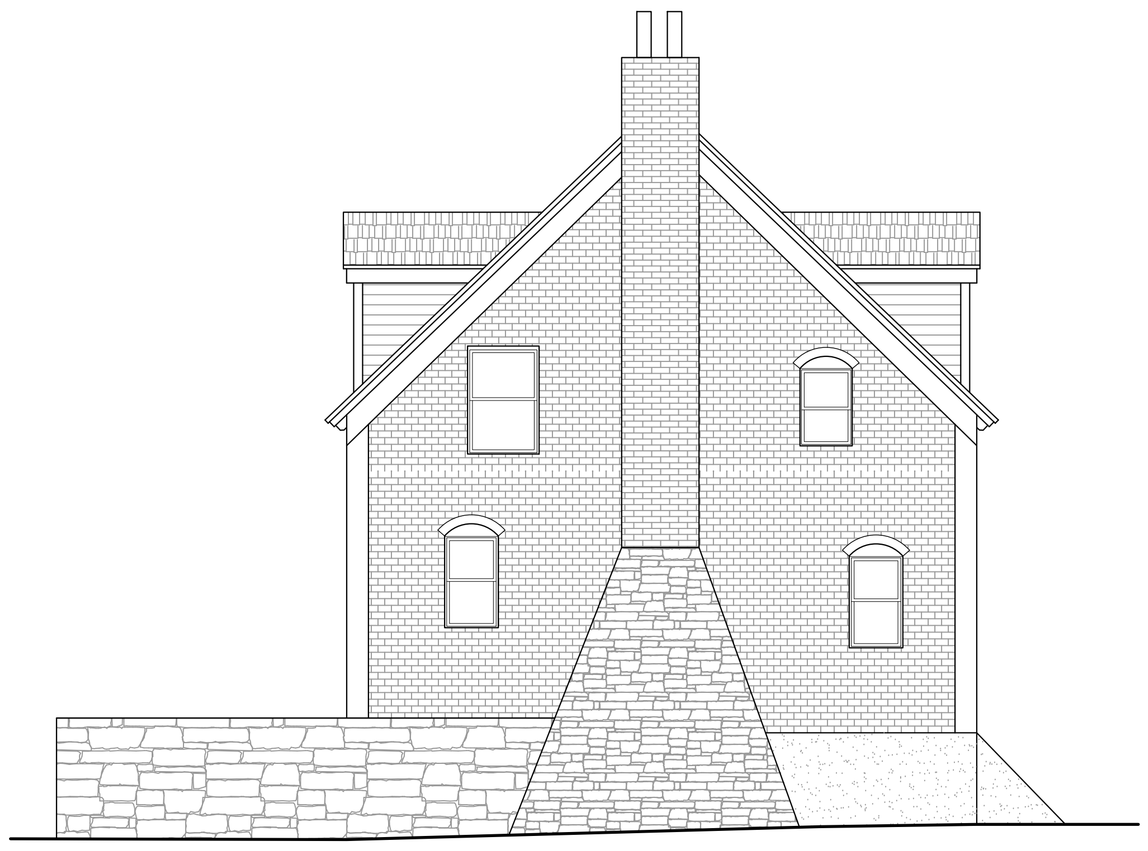
PROJECT
Troutbeck
Delameter House
Town of Amenia Dutchess County, New York

DRAWING
Existing Plans

SCALE	DRAWN BY	DRAWING No.
AS NOTED	GPL	A100
DATE	CHECKED BY	
10-25-21	MAD	

E.1 / A200 **EXISTING FRONT ELEVATION**
SCALE: 1/4" = 1'-0"

E.2 / A200 **EXISTING REAR ELEVATION**
SCALE: 1/4" = 1'-0"



E.3 / A200 **EXISTING LEFT ELEVATION**
SCALE: 1/4" = 1'-0"

E.4 / A200 **EXISTING RIGHT ELEVATION**
SCALE: 1/4" = 1'-0"

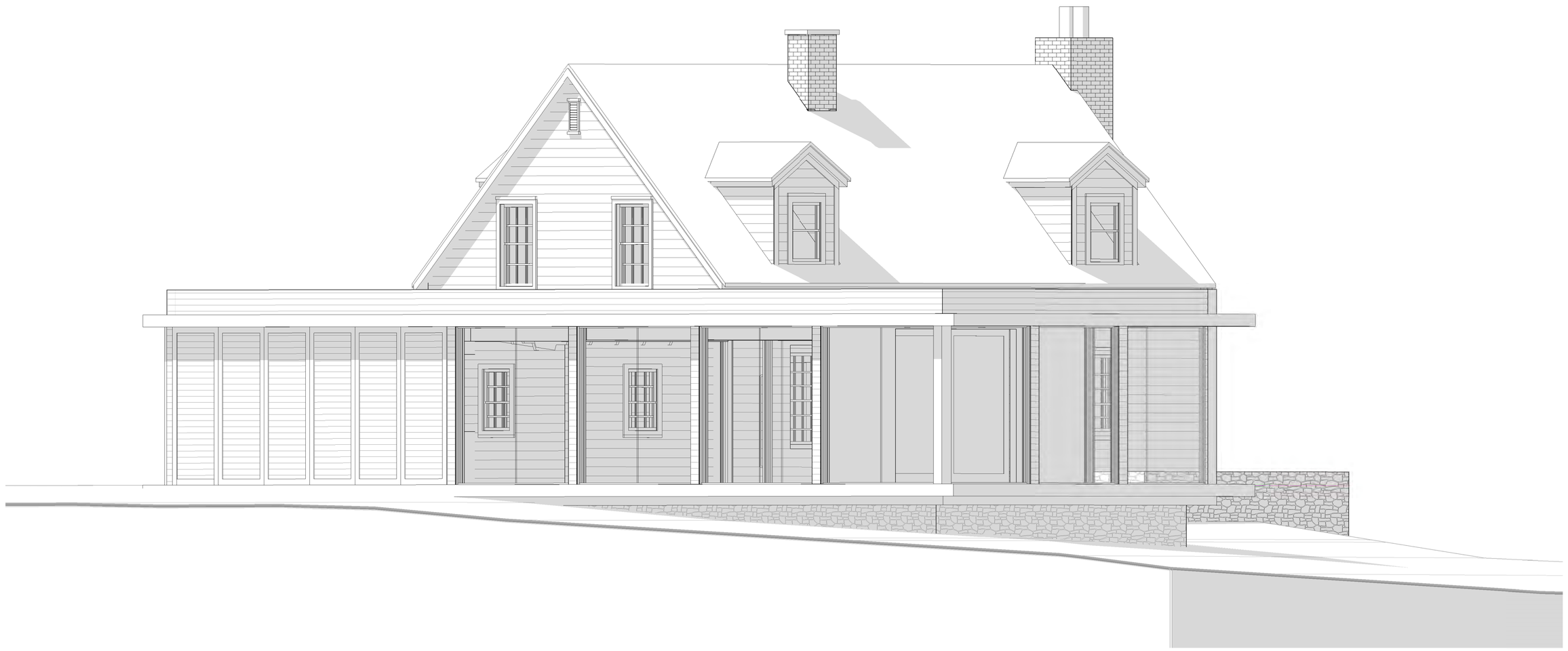
	Mark A. Day, PE
Revisions	
Project No. JOB No.	License No. 069646

DAY | STOKOSA ENGINEERING P.C.
3 Van Wyck
Lane Suite 2
Wappingers Falls, New York
(845)-223-3202

PROJECT
Troutbeck
Delameter House
Town of Amenia — Dutchess County, New York

DRAWING
Existing Elevations

SCALE	DRAWN BY	DRAWING No.
AS NOTED	GPL	A200
DATE: 10-25-21	CHECKED BY: MAD	



2 **DELAMATOR SOUTH WEST VIEW0**

1 **DELAMATER SOUTH WEST VIEW**

8/25/2022 9:03:24 PM C:\Users\ahart\Documents\22208-Troutbeck Site_V22_ARCH_ET_ahartMKFPF.rvt

STONEHILL TAYLOR

# - REVISIONS & ISSUE RECORD	DATE
100% SCHEMATIC DESIGN	8.26.22

PROJECT TEAM

ARCHITECT
STONEHILL & TAYLOR ARCHITECTS
31 WEST 27TH STREET NEW YORK, NY 10001
TEL.212.226.8898

STRUCTURAL ENGINEER
GACE
105 MADISON AVE, NEW YORK, NY 10016
TEL.212.545.7878

MEP ENGINEERS
COLLADO ENGINEERING
445 HAMILTON AVE, WHITE PLAINS, NY 10601
TEL.914.332.7658

LANDSCAPE ARCHITECT
REEDHILDERBRAND LLC
33 WHITNEY AVE, NEWHAVEN, CT 06510
TEL.617.972.7968

LIGHTING DESIGN
CHARLIE DUMAIS
231 WEST 29TH STREET, NEW YORK, NY 10001
TEL.212.620.7720

FOOD SERVICE
KITCHEN RESTAURANT & BAR SPECIALIST, LLC
36 LOCUST STREET, BURLINGTON, VT 05401
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STONEHILL & TAYLOR ARCHITECTS PC
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TEL: 212.226.8898

PROJECT

TROUTBECK

515 LEEDSVILLE RD, AMENIA, NY 12501

ARCHITECT'S SEAL

DRAWING TITLE

DELAMATOR 3D VIEWS

DOB NOW PROJ #	
PROJECT NUMBER	22208
SCALE	
DATE	08/19/22
DRAWING NUMBER	OF

A-900D

2 SOUTH ELEVATION

1/4" = 1'-0"

1 NORH ELEVATION

1/4" = 1'-0"

GENERAL NOTES

A.
B.
C.
D.
E.

KEYED NOTES

KEY	COMMENTS
4.05	STONE CAVITY WALL TO MATCH EXISTING DELAMATER STONES; SEE REPORT
4.06	RECONSTRUCT AND REPOINT EXISTING STONE WALLS; SEE REPORT
4.07	RECONSTRUCT AND REPOINT EXISTING MASONRY CHIMNEY; SEE REPORT
6.18	PAINTED RABETTED BEVEL HORIZONTAL WOOD SIDING TO EXISTING WALLS w/CORNER TRIMS; SEE REPORT
6.22	STAINED AND SEALED BEVELLED RABETTED HORIZONTAL WOOD SIDING; SEE REPORT
6.23	STAINED AND SEALED WOOD TRIM; SEE REPORT
6.24	CANTILEVERED WOOD FLOOR STRUCTURE WITH STAINED AND SEALED WOOD CLADDING; SEE REPORT
7.06	ASPHALT SHINGLE ROOF TYPE 5 FOR EXISTING STRUCTURES; SEE REPORT
7.08	CANTILEVERED ROOF STRUCTURE WITH STAINED AND SEALED WOOD CLADDING; SEE REPORT
8.01	PAINTED WOOD WINDOW AND MUNTINS, W/DOUBLE GLAZED LOW-E GLASS; SEE REPORT
8.02	PAINTED WOOD DOOR AND MUNTINS, W/DOUBLE GALZED LOW-E GLASS; SEE REPORT
8.05	WOOD CURTAIN WALL; SEE REPORT
9.01	BLUESTONE TREAD AND RISER; SEE REPORT

STONEHILL TAYLOR

# - REVISIONS & ISSUE RECORD	DATE
100% SCHEMATIC DESIGN	8/26/22

PROJECT TEAM

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PROJECT

TROUTBECK
515 LEEDSVILLE RD, AMENIA NY

ARCHITECT'S SEAL

DRAWING TITLE

DELAMATER ELEVATIONS

DOB NOW PROJ #	
PROJECT NUMBER	00000
SCALE	1/4" = 1'-0"
DATE	08/26/22
DRAWING NUMBER	OF

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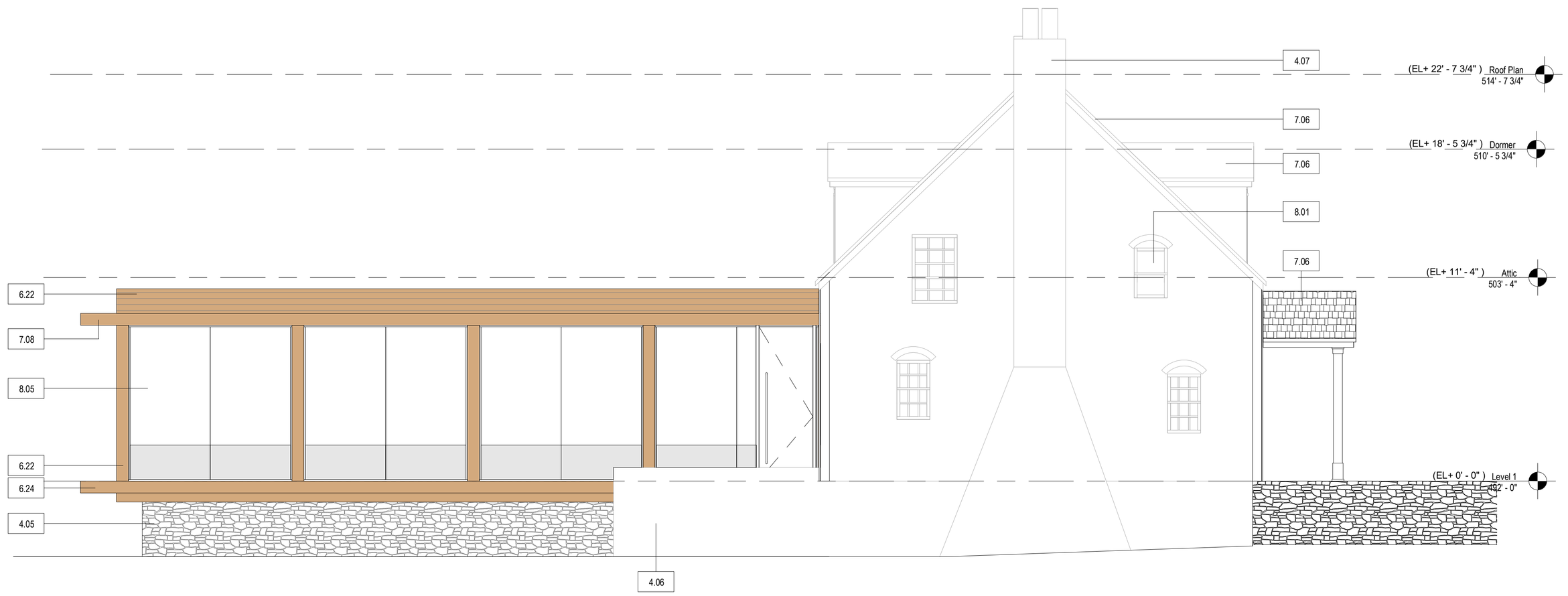
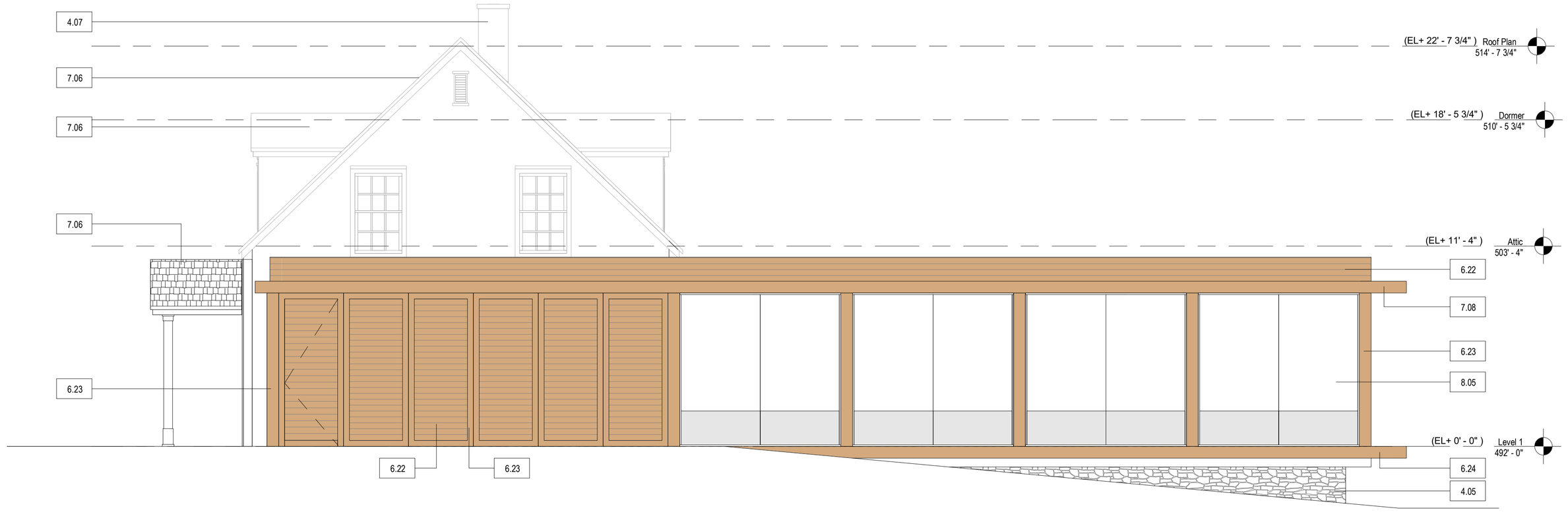


2 EAST ELEVATION
1/4" = 1'-0"



1 WEST ELEVATION
1/4" = 1'-0"

GENERAL NOTES

A.
B.
C.
D.
E.

KEYED NOTES

KEY	COMMENTS
4.05	STONE CAVITY WALL TO MATCH EXISTING DELAMATER STONES; SEE REPORT
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6.24	CANTILEVERED WOOD FLOOR STRUCTURE WITH STAINED AND SEALED WOOD CLADDING; SEE REPORT
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8.01	PAINTED WOOD WINDOW AND MUNTINS, W/DOUBLE GLAZED LOW-E GLASS; SEE REPORT
8.05	WOOD CURTAIN WALL; SEE REPORT

STONEHILL TAYLOR

# - REVISIONS & ISSUE RECORD	DATE
100% SCHEMATIC DESIGN	8/26/22

PROJECT TEAM

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PROJECT

TROUTBECK
515 LEEDSVILLE RD, AMENIA NY

ARCHITECT'S SEAL

DRAWING TITLE

DELAMATER ELEVATIONS

DOB NOW PROJ #	
PROJECT NUMBER	00000
SCALE	1/4" = 1'-0"
DATE	08/26/22
DRAWING NUMBER	OF

A-502D

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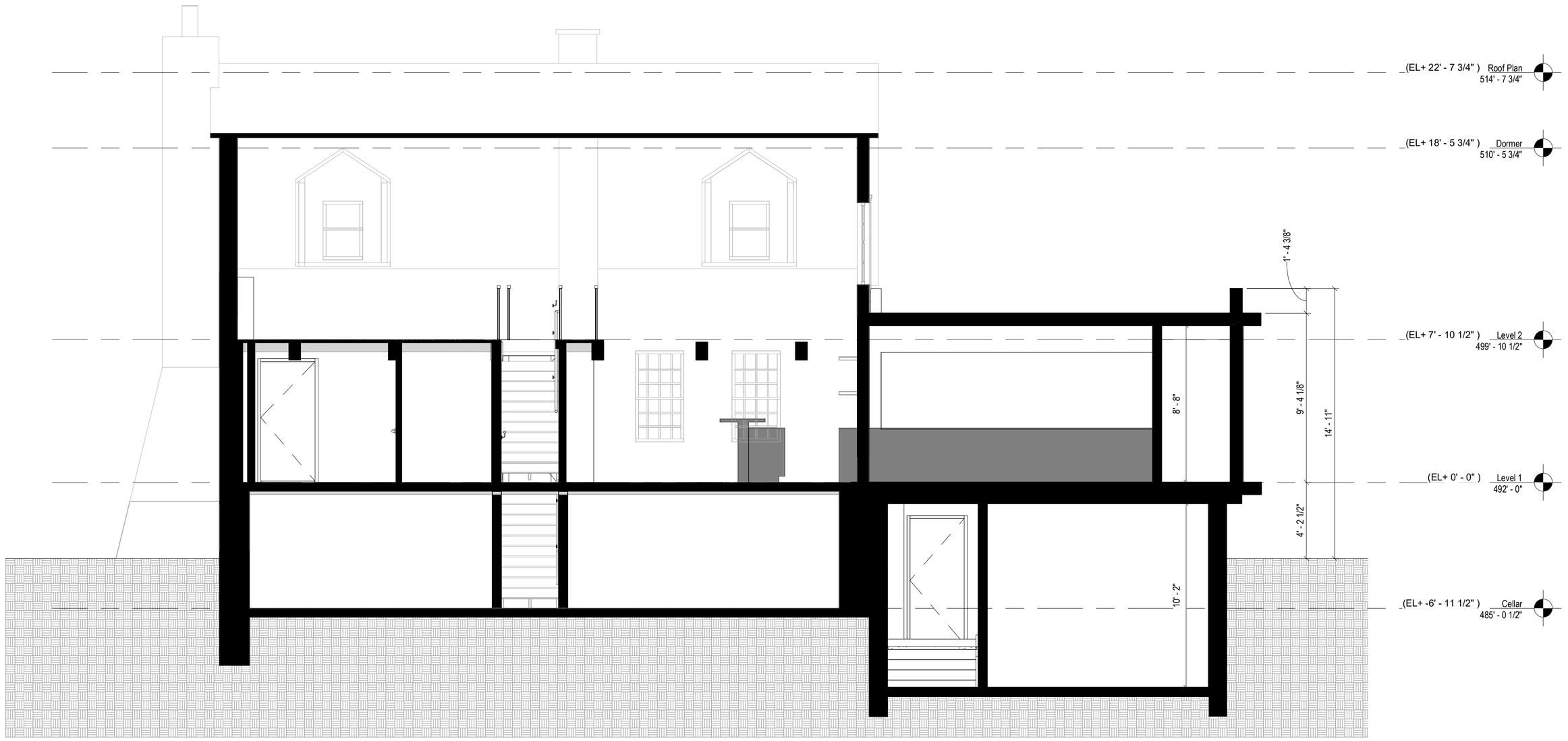

2 SECTION AA

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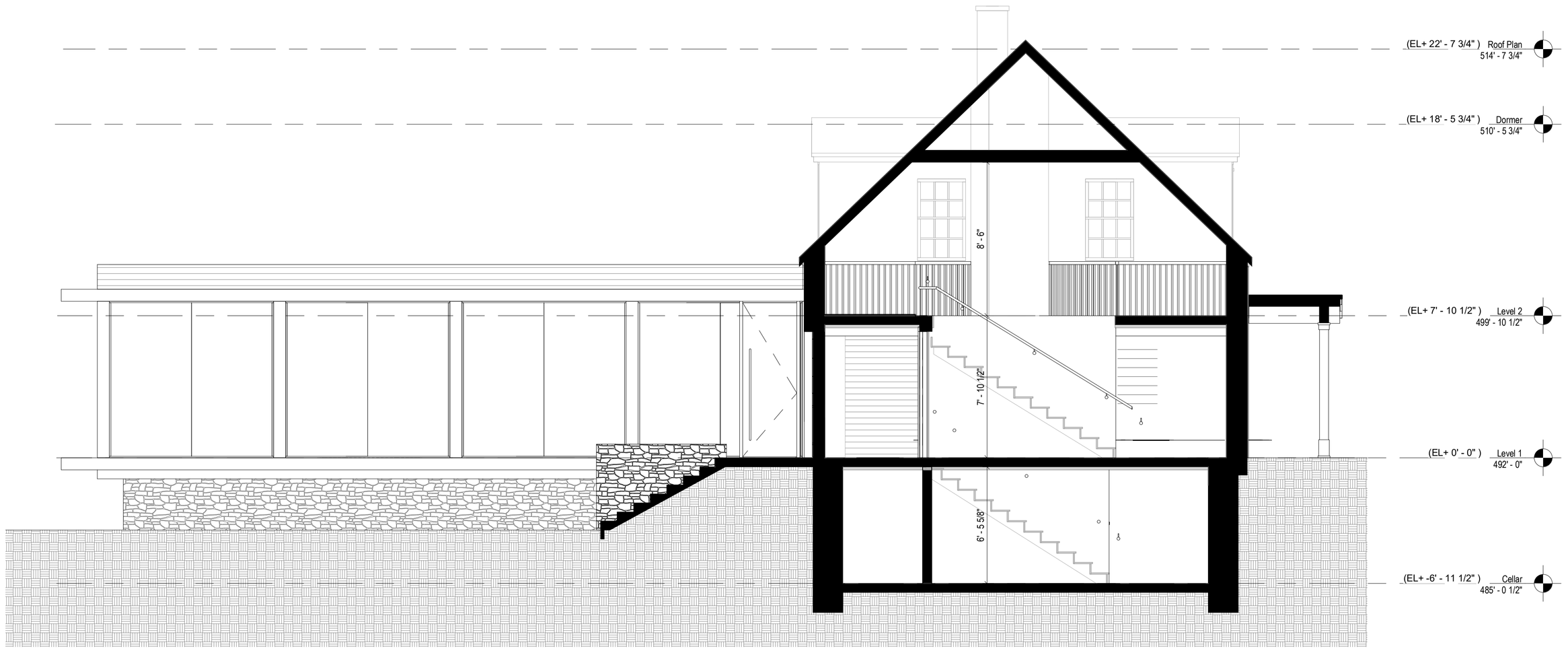

1 SECTION BB

1/4" = 1'-0"

STONEHILL TAYLOR

# - REVISIONS & ISSUE RECORD	DATE
100% SCHEMATIC DESIGN	8/26/22

PROJECT TEAM

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PROJECT

TROUTBECK
515 LEEDSVILLE RD, AMENIA NY

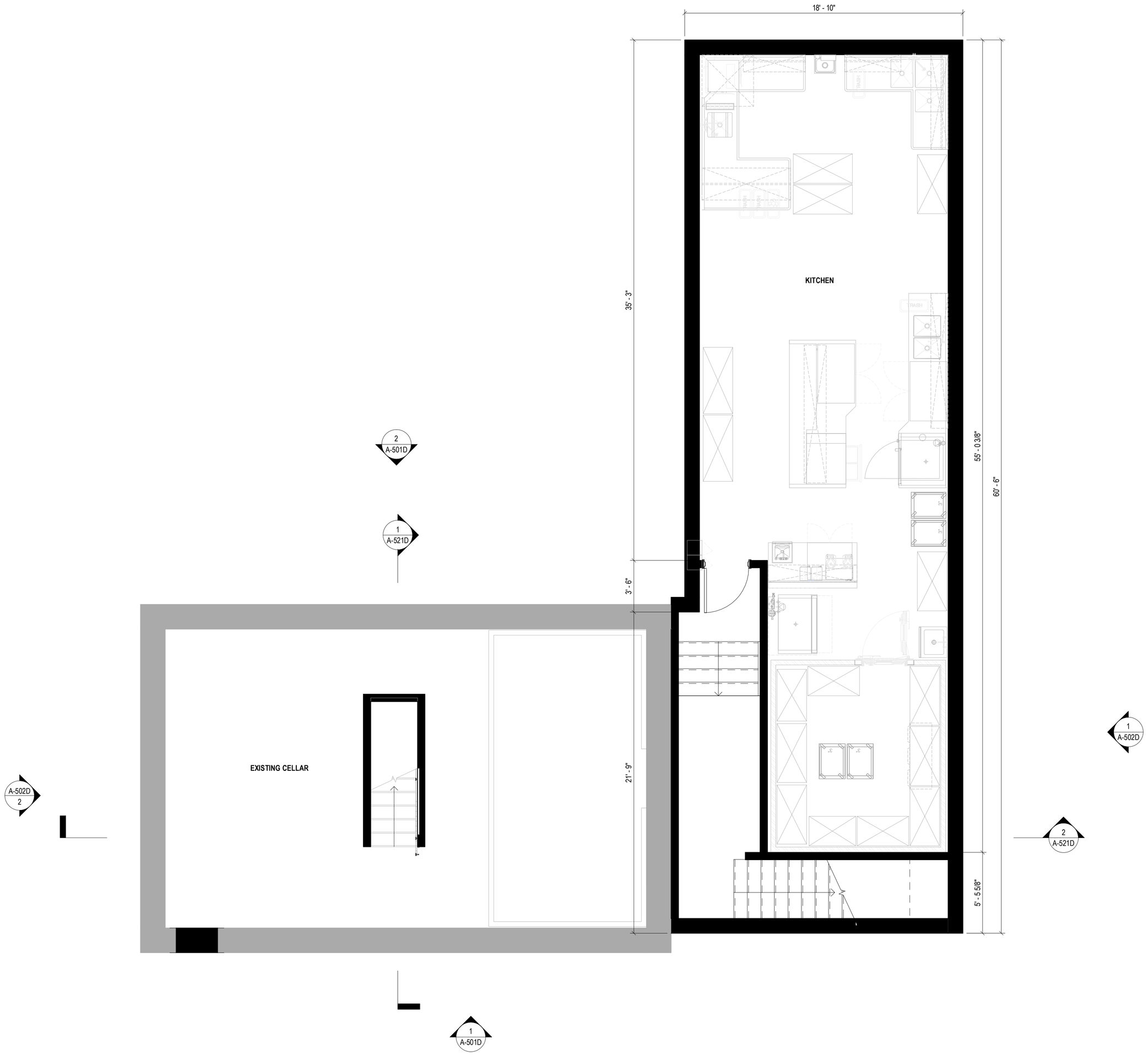
ARCHITECT'S SEAL

DRAWING TITLE

DELAMATER BUILDING SECTIONS

DOB NOW PROJ #	
PROJECT NUMBER	00000
SCALE	1/4" = 1'-0"
DATE	08/26/22
DRAWING NUMBER	OF

A-521D



1 **CELLAR FLOOR PLAN**
1/4" = 1'-0"

STONEHILL TAYLOR

# - REVISIONS & ISSUE RECORD	DATE
100% SCHEMATIC DESIGN	8/26/22

PROJECT TEAM

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PROJECT

TROUTBECK
515 LEEDSVILLE RD, AMENIA NY

ARCHITECT'S SEAL

DRAWING TITLE

DELAMATER CELLAR FLOOR CONSTRUCTION PLAN

DOB NOW PROJ #	M00000000
PROJECT NUMBER	00000
SCALE	1/4" = 1'-0"
DATE	08/26/22
DRAWING NUMBER	OF

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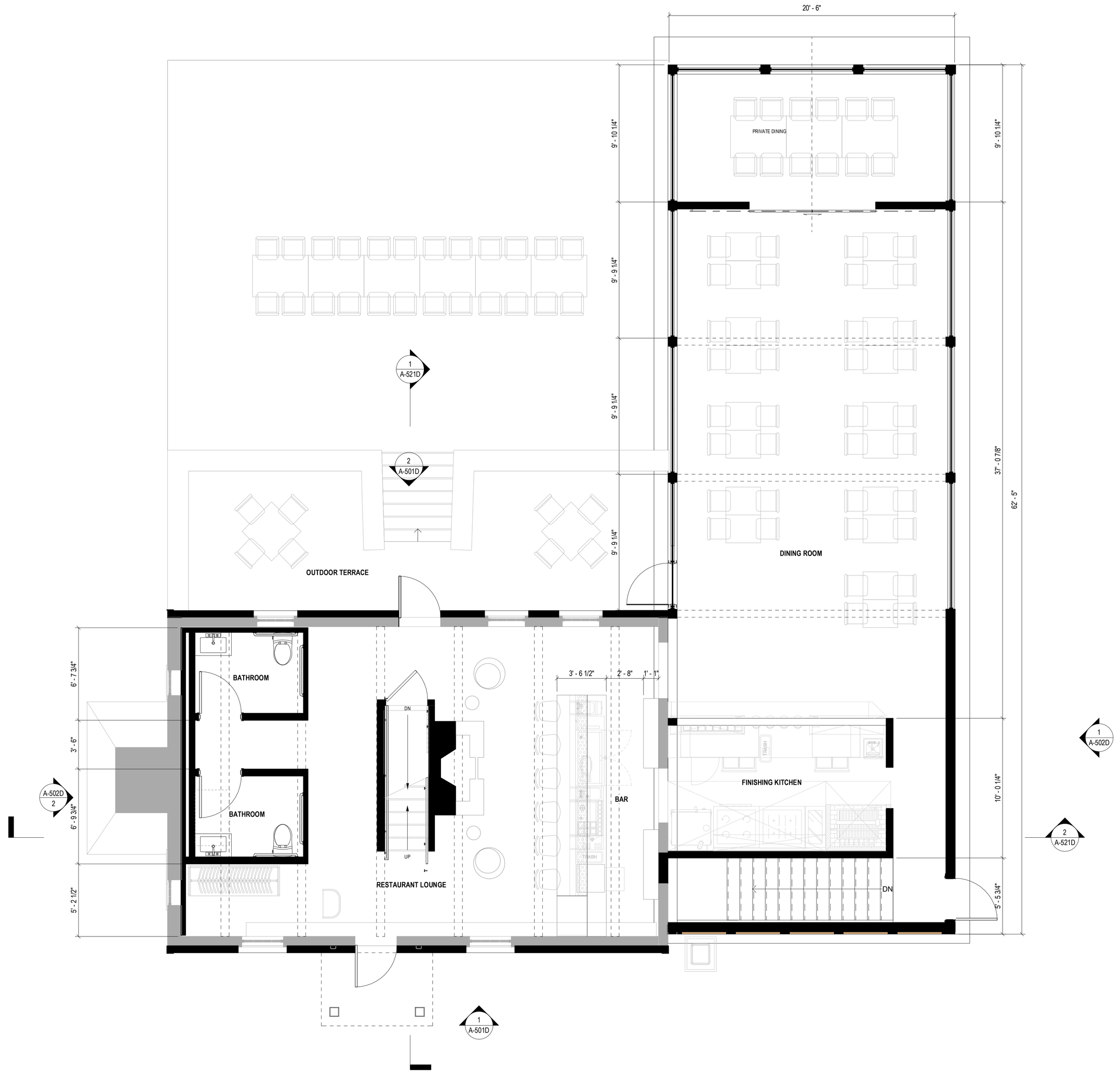

1 FIRST FLOOR PLAN
1/4" = 1'-0"

STONEHILL TAYLOR

# - REVISIONS & ISSUE RECORD	DATE
100% SCHEMATIC DESIGN	8/26/22

PROJECT TEAM

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PROJECT

TROUTBECK
515 LEEDSVILLE RD, AMENIA NY

ARCHITECT'S SEAL

DRAWING TITLE

DELAMATER FIRST FLOOR CONSTRUCTION PLAN

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SCALE	1/4" = 1'-0"
DATE	08/26/22
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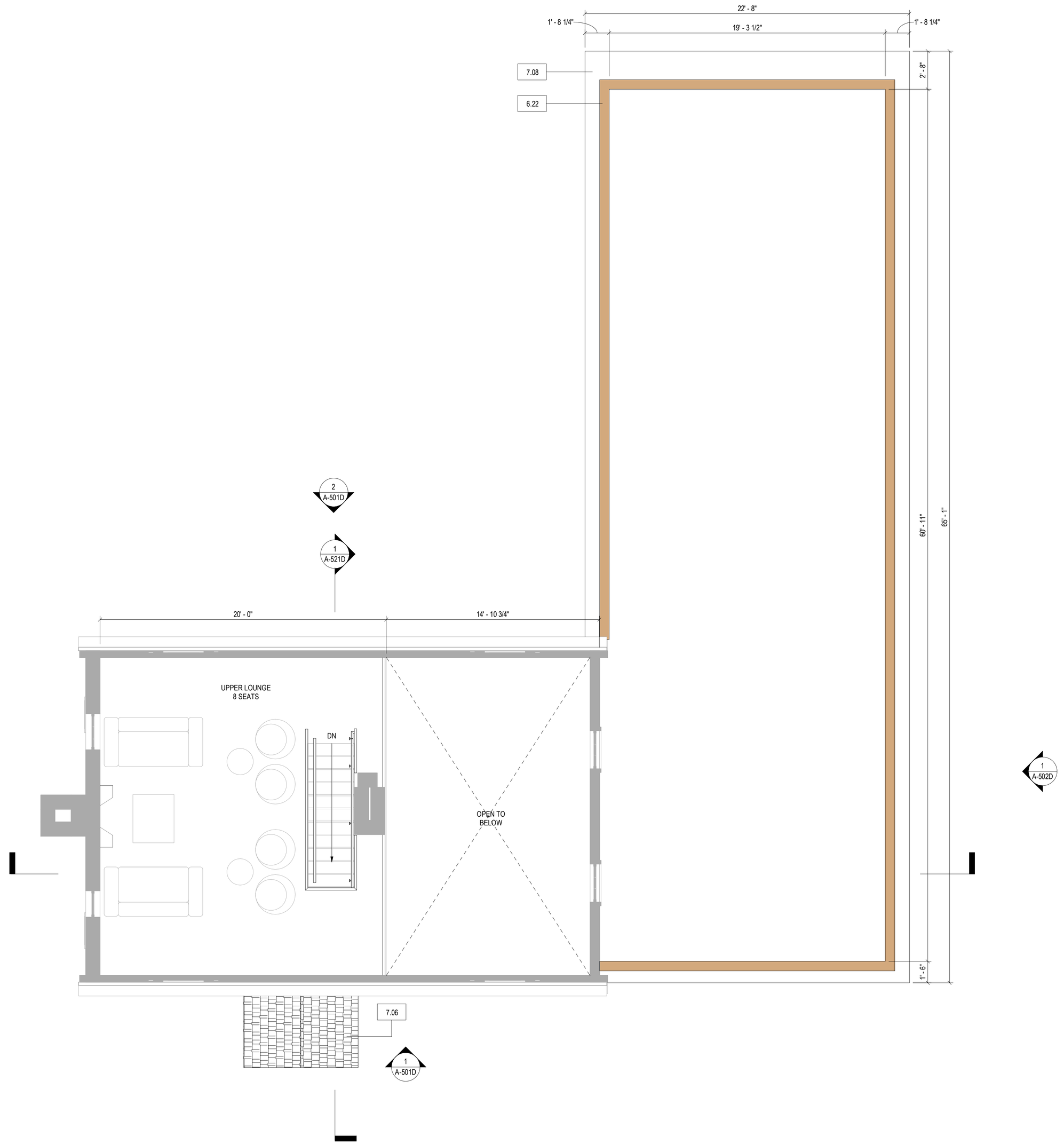

1 **SECOND FLOOR PLAN**
1/4" = 1'-0"

STONEHILL TAYLOR

# - REVISIONS & ISSUE RECORD	DATE
100% SCHEMATIC DESIGN	8/26/22

PROJECT TEAM

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PROJECT

TROUTBECK
515 LEEDSVILLE RD, AMENIA NY

ARCHITECT'S SEAL

DRAWING TITLE

DELAMATER SECOND FLOOR CONSTRUCTION PLAN

DOB NOW PROJ #	
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SCALE	1/4" = 1'-0"
DATE	08/26/22
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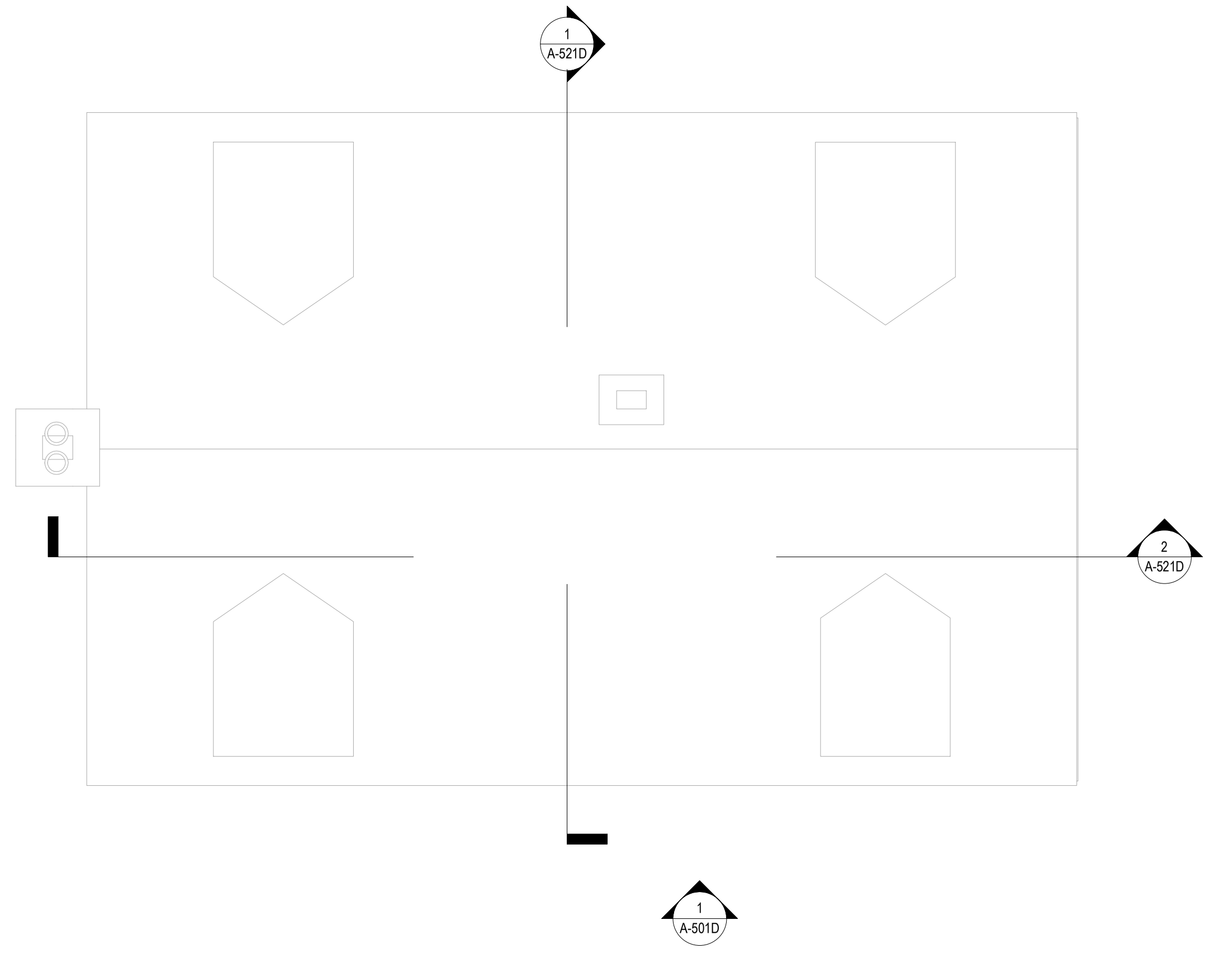

1 **ROOF FLOOR PLAN**
1/4" = 1'-0"

STONEHILL TAYLOR

# - REVISIONS & ISSUE RECORD	DATE
100% SCHEMATIC DESIGN	8/26/22

PROJECT TEAM

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PROJECT

TROUTBECK
515 LEEDSVILLE RD, AMENIA NY

ARCHITECT'S SEAL

DRAWING TITLE

DELAMATER ROOF FLOOR CONSTRUCTION PLAN

DOB NOW PROJ #	
PROJECT NUMBER	00000
SCALE	1/4" = 1'-0"
DATE	08/26/22
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NEW YORK STATE OF OPPORTUNITY. Parks, Recreation, and Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

October 21, 2022

Peter Sander
Staff Planner
Rennia Engineering Design
6 Dover Village Plaza
Suite 5
Dover Plains, NY 12522

Re: SEQRA
Troutbeck Inn - Adaptive Reuse
515 Leedsville Rd, Amenia, NY 12501
22PR01828

Dear Peter Sander:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP) as part of your SEQRA process. These comments are those of OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

OPRHP has reviewed the Phase I Archaeological Survey report entitled “Phase I Archaeological Investigation for the Proposed Troutbeck Inn Adaptive Reuse at 515 Leedsville Road, Amenia, Town of Amenia, Dutchess County, New York” prepared by TRACKER Archaeology, Inc. (October 2022, 22SR00421). The archaeological survey identified the Troutbeck Precontact Site/Hoadley Site 7 (02701.000059). OPRHP recommends that the archaeological site should be avoided, and if site avoidance is not feasible, a Phase II Site Evaluation should be completed.

If the Troutbeck Precontact Site/Hoadley Site 7 is to be avoided, an Archaeological Site Avoidance Plan should be submitted to OPRHP for review. If a Phase II Site Evaluation is to be competed, a Phase II Work Plan should be submitted to OPRHP for review. If you have any questions, I can be reached at Jessica.Schreyer@parks.ny.gov.

Sincerely,

Jessica E. Schreyer

Jessica Schreyer
Scientist Archaeology

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Troutbeck – Adaptive Reuse
Archaeological Site Avoidance Plan

The following plan has been prepared to outline provisions to avoid the disturbance of a prehistoric archaeological site found at Troutbeck, located at 515 Leedsville Road, Amenia, NY 12501. The archaeological site was uncovered by TRACKER Archaeology and further discussed in their "Phase I Archaeological Investigation for the proposed Troutbeck Inn Adaptive Reuse", dated October 2022. The prehistoric site was uncovered as part of archaeological investigations, being conducted to support the Troutbeck – Adaptive Reuse Plan, a multi-phased development, prepared to enhance the existing lodging/resort/conference center use of the site.

In order to preserve the archaeological site, all proposed improvements have been relocated away from its location. In addition to total avoidance of the site, the following supplementary provisions have been prepared to ensure its continued protection:

Short-term Avoidance Plan

The proposed project is multi-phased, with only Phase 4 to include work within close proximity of the Archaeological Site. During construction of Phase 4, the following measures shall be taken for the short-term avoidance of site:

(1) All future phase Site Plans and Construction Plans/Specifications, including Phase 4, shall depict the prehistoric archaeological site(s) and contain the necessary notations to ensure its preservation. Plans shall include:
    a. The location of the archaeological site and 25' No Disturbance Buffer.
    b. All fencing requirements outlined below.
(2) Prior to the commencement of construction activities, a pre-construction meeting shall be held at the project site to identify the archaeological site(s), identify the limit of disturbance, and review fencing requirements outlined below.
(3) Prior to the commencement of construction activities, the archaeological site(s) and perimeter 25' No Disturbance Buffer (See Troutbeck – Adaptive Reuse Plan) shall be identified and fenced so that it is avoided during construction.
    a. The fencing will be orange safety fencing.
    b. The fencing will be erected prior to construction.
    c. The fencing will be marked as an environmentally sensitive area not to be disturbed.
(4) Any other construction/site disturbance activities, including Phase 4, within 100' of the prehistoric archaeological site(s) or within 75' of the established buffer area, shall need to comply with all requirements outlined above.

Long-term Avoidance Plan

In addition to the short-term requirements outlined above, the following long-term provisions shall also be implemented:

(1) The archaeological site(s) shall be placed in a Conservation Easement, to be held in perpetuity by the Housatonic Valley Association (HVA), which will safeguard all lands included within the easement.
(2) The Conservation Easement will specify that the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) will be allowed to consult on any future ground disturbing activities that might impact the archaeological site.
(3) The Conservation Easement will accompany future transfers of the properties ownership and continue to protect the archaeological site.

Discovery of Human Remains

If human remains are discovered at any time, the New York SHPO protocol for the discovery and reporting of human remains will be in effect. This protocol is attached.

*The location of the Prehistoric Archaeological Site and associated 25' No Disturbance Buffer is identified on the Troutbeck – Adaptive Reuse Plan Set", sheets 0-6, dated 9/15/2022, revised 10/10/2022.

State Historic Preservation Office/
New York State Office of Parks, Recreation and Historic Preservation
Human Remains Discovery Protocol
(January 2021)

If human remains are encountered during construction or archaeological investigations, the New York State Historic Preservation Office (SHPO) recommends that the following protocol is implemented.

- Human remains shall be treated with dignity and respect. Should human remains or suspected human remains be encountered, work in the general area of the discovery shall stop immediately and the location shall be secured and protected from damage and disturbance.

- If skeletal remains are identified and the archaeologist is not able to conclusively determine if they are human, the remains and any associated materials shall be left in place. A qualified forensic anthropologist, bioarchaeologist or physical anthropologist shall assess the remains in situ to help determine if they are human.

- If the remains are determined to be human, law enforcement, the SHPO, the appropriate Indian Nations, and the involved state and federal agencies shall be notified immediately. If law enforcement determines that the burial site is not a criminal matter, no skeletal remains or associated materials shall be removed until appropriate consultation takes place.

- If human remains are determined to be Native American, they shall be left in place and protected from further disturbance until a plan for their avoidance or removal is developed. Please note that avoidance is the preferred option of the SHPO and the Indian Nations. The involved agency shall consult SHPO and the appropriate Indian Nations to develop a plan of action. Photographs of Native American human remains and associated materials should not be taken without consulting with the involved Indian Nations.

- If human remains are determined to be non-Native American, the remains shall be left in place and protected from further disturbance until a plan for their avoidance or removal is developed. Please note that avoidance is the preferred option of the SHPO. The involved agency shall consult SHPO and other appropriate parties to develop a plan of action.

- The SHPO recommends that burial information is not released to the public to protect burial sites from possible looting.

New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

November 10, 2022

Peter Sander
Staff Planner
Rennia Engineering Design
6 Dover Village Plaza
Suite 5
Dover Plains, NY 12522

Re: SEQRA
Troutbeck Inn - Adaptive Reuse
515 Leedsville Rd, Amenia, NY 12501
22PR01828

Dear Peter Sander:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP) as part of your SEQRA process. These comments are those of OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

The OPRHP has reviewed the Archaeological Site Avoidance Plan for the Troutbeck Precontact Site/Hoadley Site 7 (02701.000059). We concur with the short-term and long-term archaeological site avoidance measures outlined in this Plan. We recommend that no further archaeological work is necessary.

Please note that these comments pertain only to archaeological resources. Please continue to consult with Sloane Bullough regarding building/structure issues at Sloane.Bullough@parks.ny.gov. If you have any questions, I can be reached at Jessica.Schreyer@parks.ny.gov.

Sincerely,

Jessica E. Schreyer

Jessica Schreyer
Scientist Archaeology

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NEW YORK STATE OF OPPORTUNITY. Parks, Recreation, and Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

December 8, 2022

Peter Sander, Staff Planner
Rennia Engineering Design
6 Dover Village Plaza, Suite 5
Dover Plains, NY 12522

Re: SEQRA
Troutbeck Inn - Adaptive Reuse
515 Leedsville Rd.
Amenia, Dutchess Co.
22PR01828

Dear Peter Sander:

Thank you for providing additional information to the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP) as part of your SEQRA process.

The site contributes to the National Register Eligible Webatuck Agricultural Valley Historic District. Because of this, we are reviewing the project.

Our primary concern at this point is the proposal to remove the historic porch from the Delameter House. However, after our virtual meeting on November 22, 2022, we now understand that the porch demolition work is for a subsequent phase and therefore there is time for further consultation. Window replacement is also a concern of ours and it part of a subsequent phase. It is the opinion of OPRHP that the project is appropriate on the following conditions:

1. The applicant continues to consult with our office about the proposed side screen porch removal the Delameter House. We will be recommending that it be retained as part of the evolution of the development of the house over time and that it be incorporated into the new addition. Also, we will recommend that all work be done in a reversible manner.
2. The applicant provides us with drawings of the proposed windows and doors. The window drawings should include dimensioned vertical and horizontal sections as well as elevations. We recommend windows be wood or metal clad and that the glass be clear.

Please submit all subsequent information through CRIS. If you have any questions, I can be reached at sloane.bullough@parks.ny or 518-268-2158.

Sincerely,

Sloane Bullough

Sloane Bullough
Historic Sites Restoration Coordinator by email only

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Amenia Historical Society

WHY AMENIA

The name AMENIA means “a pleasant place.” This name was coined by Dr. Thomas Young in 1762, when the Amenia Precinct was formed. Certainly, the picturesque views from DeLaVergne Hill and from Depot Hill Road confirm the appropriateness of the name, as do the pastoral scenes throughout the town.

Dr. Thomas Young arrived in Amenia around 1755 and married Mary Winegar, daughter of Capt. Garrett Winegar, of Amenia and Sharon, near Amenia Union. Dr. Young was not only a physician. He was a poet, known for his epic poem, “The Conquest of Quebec,” a writer of political pamphlets, and a Latin scholar, who also gave the State of Vermont its name. Young was an ardent patriot and a friend of the irreverent patriot, Ethan Allen of Salisbury, Connecticut.

Young is said to have been so impassioned for the cause of independence that he participated in the Boston Tea Party. But because he was not in “Indian” costume for the raid and was identified by the British, he had to flee for his life to Rhode Island. He later joined Dr. Benjamin Rush in Philadelphia at the military hospital there, treating wounded and sick soldiers. In 1777, he succumbed to a disease called “putrid fever,” which took his life within hours.

The Town of Amenia is proud to have had Dr. Thomas Young as one of its own citizens. Likewise, his daughter, Susanna Knies, is worthy of praise. Mrs. Knies lived at Amenia Union, aka Hitchcock’s Corners, and conducted a private school for girls. She died in 1801 and was buried in the Amenia Union Cemetery among other Winegar descendants buried there.

THE HAMLETS OF AMENIA

The original hamlet of **Amenia**, with its 1758 Red Meeting House and Old Burying Ground, was located a mile north of today’s Amenia. The present village, once known as Payne’s Corners, and later as Ameniaville, was established at the crossroads of the Dutchess Turnpike and the old Albany Post Road in the early 1800’s. The advent of the Amenia Seminary in 1835 and the railroad in 1851 contributed to the development of the town. Four churches, two hotels, a theater, *The Amenia Times* newspaper, established in 1852, and the influx of Irish immigrants all attest to Amenia’s growth in the 19th century.

The hamlet of **Wassaic** claims to have been the home of the first white settler of the area, Mr. Richard Sackett. Sackett died in 1746 and was buried near his cabin, which was located south of Wassiac, near the Steel Works. There was a forge at the Steel Works as early as 1770. Noah Gridley's charcoal kilns and iron ore furnace, which began around 1825, developed the iron mining industry of the area. Gail Borden's condensed milk factory, established in 1859, made Wassaic the center of the dairy industry in Amenia for at least 60 years.

Amenia Union was called Hitchcock's Corners in the early 1800's. The NY-CT boundary cut right through the center of the hamlet. There were two general stores, two blacksmith shops, two mills, two cemeteries, two schoolhouses, and a variety of small businesses. The Buckley iron foundry and a knitting factory were on the Connecticut side of the line, while the hotel and the churches were on the New York side of the line.

The hamlet of **South Amenia**, previously known as Cline's Corners, had a gristmill and sawmill, a hotel, a tannery, a cupola furnace, two stores, and a hat factory during the 1800's. The South Amenia Presbyterian Church began as Rev. Knibloe's congregation at Amenia Union in 1759, but relocated further south in 1786 and again in 1881, at its present location.

Although it was a farming community, the hamlet of **Smithfield** was known as "The City" until 1889. It had a mill, a store and post office, a schoolhouse, a shoemaker's shop, a cemetery, and a beautiful Greek Revival-style church, which still stands today. Because the church was located in the northwest corner of Amenia, the Smithfield congregation included families from the surrounding townships.

The hamlet of **Leedsville**, located east of the village of Amenia, on the Webutuck Creek, was a busy locale in the early 1800's, with a woolen factory, a flouring mill, a schoolhouse, a store, and the first bank in the Amenia area. The Troutbeck estate of the Benton family was at the center of community life for the entire century.

Compiled by Elizabeth C. Strauss, AHS, 2017

APPENDIX D
TRAFFIC IMPACT ASSESSMENT

Traffic Assessment, Troutbeck Development, 515 Leedsville Road, Town of Amenia, Dutchess County, New York, CM Project 121-19, by Creighton Manning Engineering, LLP, dated October 3, 2022

Troutbeck – Adaptive Reuse – Vehicle Circulation Exhibit, dated 1/8/2023

Trip Generation Update, Troutbeck Development, 515 Leedsville Road, Town of Amenia, Dutchess County, New York; CM Project 121-191, by Creighton Manning Engineering, LLP, dated January 23, 2023

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October 3, 2022

Troutbeck Holdings, LP
c/o Mr. Anthony Champalimaud
515 Leedsville Road
Amenia, NY 12051

RE: Traffic Assessment, Troutbeck Development, 515 Leedsville Road, Town of Amenia, Dutchess County, New York; CM Project 121-191

Dear Mr. Champalimaud:

Creighton Manning Engineering, LLP (CM) has conducted a *Traffic Assessment* for the proposed *Troutbeck Development* located on Leedsville Road and Yellow City Road in the Town of Amenia. This assessment is based on information provided in the site plan prepared by Rennia Engineering Design, PLLC, last revised August 29, 2022 (see Attachment A).

1.0 Project Description

The proposed project includes re-development and expansion of the existing *Troutbeck Resort* in multiple phases. In general, the first phase will add five cabins and other guest amenities while subsequent phases will add numerous additional lodging units, expand the dining capability of the site, increase on-site staff lodging, and modify the special event space as shown in Table 1. The first phase of the project is expected to be complete by 2023 while full build-out is expected by 2026.

Table 1 – Troutbeck Resort Site Development Summary and Person Capacity

Land Use	Size	Person Capacity							
		Existing Capacity		Proposed					
				Phase 1		Subsequent Phases		Total Buildout	
		Day-Use	Overnight	Day-Use	Overnight	Day-Use	Overnight	Day-Use	Overnight
Manor House (lodging)	17 units	34	34	34	34	--	--	34	34
Manor House (event)	guests	225	--	225	--	-225	--	0	--
Benton House (lodging)	17 units	34	34	34	34	--	--	34	34
Garden House (lodging)	4 units	8	8	8	8	Removed	Removed	0	0
Garden House (residence)	2 units	--	4	--	4	--	Removed	--	0
Bakery Building (residence)	1 unit	--	2	--	--	--	--	--	--
FTE (staff)	--	54	6	54	5	67	9	67	9
Cabins – Garden (lodging)	8 units	--	--	--	--	18	18	18	18
Garden Hall (events)	guests	--	--	--	--	240	--	240	--
Garden Hotel (lodging)	33 units	--	--	--	--	66	66	66	66
Delamater House (restaurant)	guests	--	--	--	--	87	--	87	--
Cabins – Pond (lodging)	6 units	--	--	--	--	14	14	14	14
Additional Staff lodging units	--	--	--	--	--	--	--	--	--
Cabins – Creekside (lodging)	5 units	--	--	12	12	--	--	12	12
Bakery (staff apartment)	1 unit	--	--	--	2	--	--	--	2
Staff Residence	5 units	--	--	--	--	--	8	--	8
Garden Expansion (lodging)	32 units	--	--	--	--	64	64	64	64
Total	**162**	**355**	**88**	**367**	**99**	**556**	**179**	**636**	**261**

Primary access for both overnight and day-use guests to the existing site (i.e: events - weddings, conferences, etc.) is currently provided via "Troutbeck Lane" located on Leedsville Road opposite Randall Road. This will remain the primary access point into the site for overnight guest; however, departing traffic will now be redirected towards the "Troutbeck Service Entrance". The "Troutbeck Service Entrance" currently provides secondary access into the site via Leedsville Road and will be converted into the main driveway for day-use guest and for overnight guest exiting the site once re-development of the proposed *Troutbeck Development* is completed. "Spingarn Road" located on Yellow City Road is currently and will remain a service entrance to be used only by staff. The "Kitchen Delivery Entrance" on Yellow City Road will also continue to operate as a service access into the site. The project location and site access is shown on Figure 1.

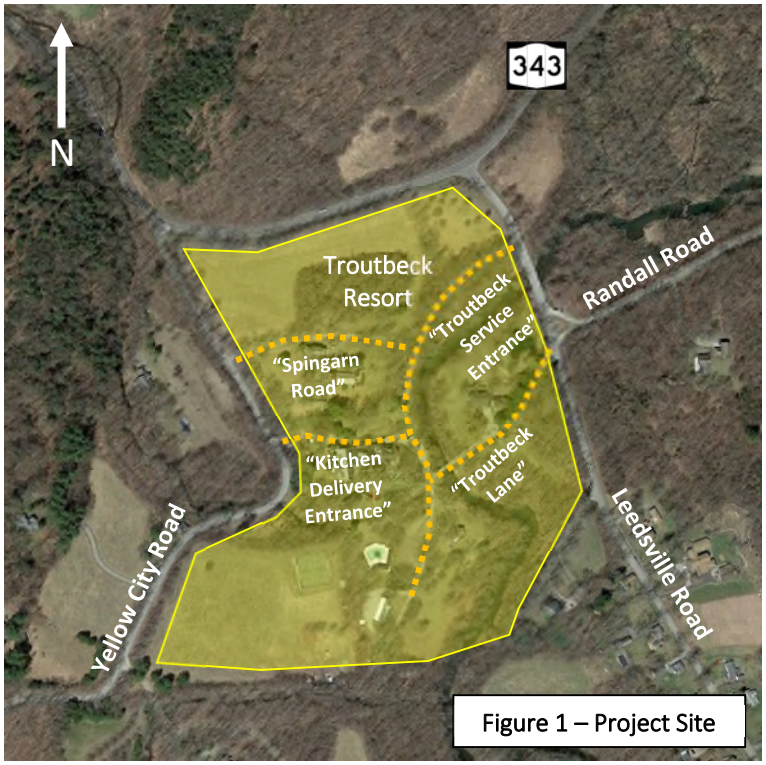


Figure 1 – Project Site

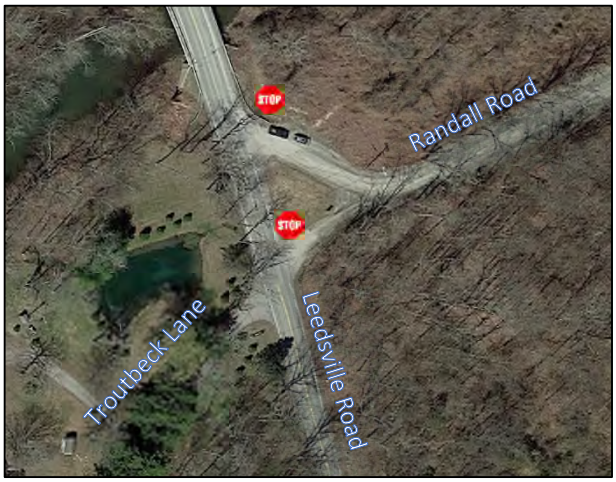
2.0 Existing Conditions

Study Area Intersection

NY Route 343/Yellow City Road is a three-leg intersection operating under stop control on the northbound Yellow City Road approach. All three approaches provide a single lane for shared travel movements. There are no marked crosswalks or sidewalks provided at the intersection.

NY Route 343/Leedsville Road is a three-leg intersection operating under stop control on the northbound Leedsville Road approach. All three approaches provide a single lane for shared travel movements. There are no marked crosswalks or sidewalks provided at the intersection.

NY Route 343/Randall Road/Troutbeck Lane is an unsignalized four-leg intersection. The westbound Randall Road approach forks and intersects Leedsville Road as shown on the right while Troutbeck Lane intersects Leedsville Road opposite the southern leg of Randall Road. Both westbound legs of Randall Road operate under stop-sign control while the eastbound Troutbeck Lane approach yields the right-of-way to traffic on Leedsville Road. A single lane is provided on each leg of the intersection for shared travel movements. There are no marked crosswalks or sidewalks provided at the intersection.



Roadways Serving the Site

Leedsville Road (CR 2) is classified as a rural minor collector near the project site that travels in a north-south direction from NY Route 343 to Amenia Union Road. Leedsville Road provides 10½-foot wide travel lanes in each direction with one to seven-foot wide paved shoulders near the project site. The posted speed limit is 40-mph and there are no sidewalks. Land uses along the roadway generally consist of residential uses, the *Troutbeck Resort,* and vacant land.

Yellow City Road is classified as a rural local road near the project site that travels from NY Route 343 to Prospect Avenue in the Town of Amenia. Yellow City Road is a 22-foot wide roadway with one travel lane in each direction with no paved shoulders or sidewalks. The speed limit is not posted and land uses along the roadway generally consist of residential uses, the *Troutbeck Resort,* and vacant land.

Data Collection

Turning movement counts were conducted at the study area intersections on Friday, May 13, 2022 during the afternoon peak period (3:00 to 6:00 p.m.) and on Saturday, May 14, 2022 during the midday peak period (12:00 to 2:00 p.m.). The observed peak hours occurred from 3:30 to 4:30 p.m. and 1:00 to 2:00 p.m. It is noted that the Troutbeck Resort accommodated a 140 guest wedding on the weekend of May 13th and 14th when the traffic counts were conducted.

Automatic traffic recorders (ATR) were installed on Yellow City Road and on Leedsville Road near the project driveways and on NY Route 343 west of the intersection with Sheffield Road from Wednesday, May 11, 2022 to Sunday, May 15, 2022 to collect volume and speed data near the proposed site. Data collected from the ATRs shows that Yellow City Road currently serves approximately 200 vehicles per day (vpd), Leedsville Road currently serves approximately 825 vpd, and NY Route 343 serves approximately 5,715 vpd. The data indicates that the 85th percentile speed[1] on Yellow City Road is approximately 35-mph in both directions while the 85th percentile speed on Leedsville Road is approximately 40-both directions. It is noted that an additional ATR was installed on Yellow City Road south of the existing "Kitchen Delivery Entrance" in order to measure vehicle speeds traveling around the horizontal curve. The data indicates that the 85th percentile speed[2] on Yellow City Road south of the "Kitchen Delivery Entrance" is approximately 30-mph in both directions

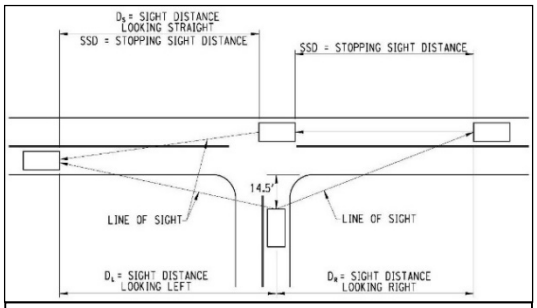
Due to altered travel and employment patterns resulting from the COVID-19 pandemic, the ATR installed on NY Route 343 west of Sheffield Road was adjusted to represent Annual Average Traffic Data (AADT) which was then compared to a traffic count conducted in 2015 by NYSDOT at that location. These traffic counts were used to develop a peak hour growth factor which is consistent with the *Traffic Data Collection Guidance during Covid-19 Pandemic* memo published by NYSDOT in August 2020. The May 2022 turning movement counts were found to be 7 to 12% higher during the AM and PM peak hour periods compared to the 2015 NYSDOT count, therefore the existing turning movement counts at the study area intersections were not factored. The Existing 2022 traffic volumes at the study area intersections during the Friday afternoon and Saturday midday peak hours are shown on Figure 2-1. The raw turning movement count data and ATR data is included under Attachment B.

1 The 85th percentile speed is the speed in which 85 percent of drivers were observed driving at or below.
2 The 85th percentile speed is the speed in which 85 percent of drivers were observed driving at or below.

3.0 Sight Distance

A sight distance evaluation was completed at the two existing site driveway intersections with Yellow City Road and two existing site driveway intersections with Leedsville Road. Available *intersection* sight distance was measured from the perspective of a passenger car exiting the site onto Yellow City Road and/or Leedsville Road. It was also measured for a passenger car traveling southbound along Yellow City Road and northbound along Leedsville Road looking straight ahead to turn left into the site. The available intersection sight distance should provide drivers a sufficient view of the intersecting roadway to allow passenger cars to enter or exit the intersection without excessively slowing vehicles traveling at or near the operating speed on the intersecting mainline.

Stopping sight distance was also measured on Yellow City Road and on Leedsville Road at the existing site driveway locations. Stopping sight distance is the length of the roadway ahead that is visible to the driver. The available stopping sight distance on a roadway should be of sufficient length to enable a vehicle traveling at or near the operating speed to stop before reaching a stationary object in its path. The diagram illustrates these sight distance measurements.



Sight Distance Measurements

The sight distances measured in the field were compared to the guidelines presented in *A Policy on Geometric Design of Highways and Streets, 2018* published by the American Association of State Highway Transportation Officials (AASHTO) and NYSDOT design guidance (EB 17-007) for the measured 30 to 35-mph travel speeds on Yellow City Road and 40-mph travel speed on Leedsville Road. The results of the sight distance analysis are summarized in Table 2.

Table 2 – Sight Distance Summary (feet)

Intersection		Intersection Sight Distance[1]				Stopping Sight Distance[2]	
		Right-Turn from Site Driveway (D_L)	Left-Turn from Site Driveway		Left-Turn from Yellow City Rd/ Leedsville Rd (D_S)	SSD_{NB}	SSD_{SB}
			Looking Left (D_L)	Looking Right (D_R)			
Yellow City Road/ Spingarn Road	Available	495	495	460	475	460	490
	Recommended[3]	335	390	390	285	225	225
Yellow City Road/ Kitchen Delivery Entrance	Available	235	235	>600	205	205	>600
	Recommended[4]	290	335	390	245	175	225
Leedsville Road/ Troutbeck Service Driveway	Available	300[3]	300[3]	445 (630)	300[3]	420 (600)	300
	Recommended[5,6]	385	445	445	325	275	275
Leedsville Rd/ Troutbeck Lane	Available	100 (>520)	100 (>520)	255	490 (>520)	230	495 (>520)
	Recommended[7]	385	445	445	325	335	250

XXX (XXX) = Available Sight Distance (Available Sight Distance with Vegetation Clearing)

[1] = Intersection sight distance is measured at 14.5 feet back from the travel way at an object height of 3.5 feet and an eye height of 3.5 feet for a vehicle.

[2]= Stopping sight distance measured for a 2 foot object located in the path of northbound and southbound vehicles on Yellow City Road and Leedsville Road

[3] = Sight distance measurements are compared to AASHTO recommended distances for a 35-mph operating speed on Yellow City Road in both directions.

[4] = Sight distance measurements are compared to AASHTO recommended distances for a 30-mph operating speed on Yellow City Road in the northbound direction and a 35-mph operating speed in the southbound direction.

[5] = Sight distance measurements are compared to AASHTO recommended distances for a 40-mph operating speed on Leedsville Road in both directions.

[6] = Intersection and stopping sight distance up to the NY Route 343/Leedsville Road intersection.

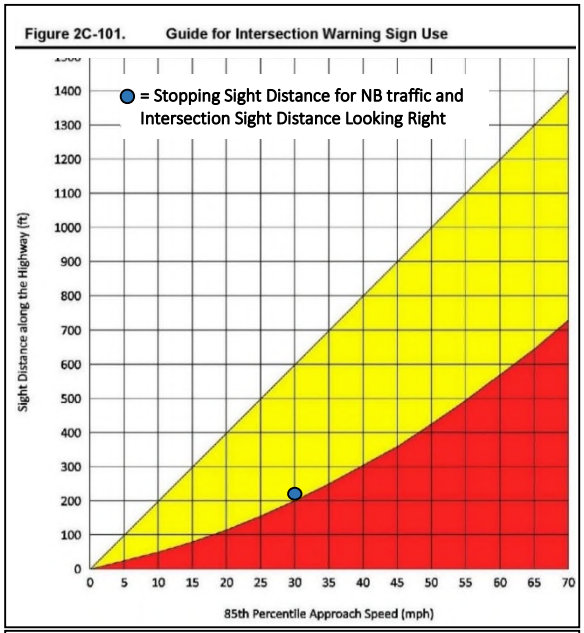
[7] = AASHTO guidelines for the Troutbeck Lane intersection were adjusted to account for a -10% grade in the northbound direction and a 6% grade in the southbound direction on Leedsville Road.

- Yellow City Road/Springarn Road – The available intersection sight distance for vehicles exiting Spingarn Road looking left and right, the distance looking straight along Yellow City Road, and the stopping sight distance for vehicles traveling northbound and southbound on Yellow City Road meet AASHTO guidelines for the applicable operating speed. No mitigation is necessary.

- Yellow City Road/Kitchen Delivery Entrance – The available intersection sight distance for vehicles exiting the Kitchen Delivery Entrance looking right and the stopping sight distance for vehicles traveling northbound and southbound on Yellow City Road meet AASHTO guidelines for the applicable operating speed. The sight distance looking left to make a left or right turn from the site and the sight distance looking straight along Yellow City Road to make a left-turn into the driveway fall short of the AASHTO guidelines due to a horizontal curve on Yellow City Road south of the site driveway (see Photograph #1).

Photograph #1 – Sight Distance Looking Left

  Figure 2C-101 found in the New York State Supplement (NYS Supplement) to the National Manual for Uniform Traffic Control Devices (NMUTCD) provides guidance for the installation of "Intersection Warning" signs as mitigation for sight distance. A review of Figure 2C-101 indicates that the available intersection sight distance looking left from the "Kitchen Delivery Entrance" and looking straight to make a left-turn into the site are not critically limited; therefore, an intersection warning sign is not recommended.



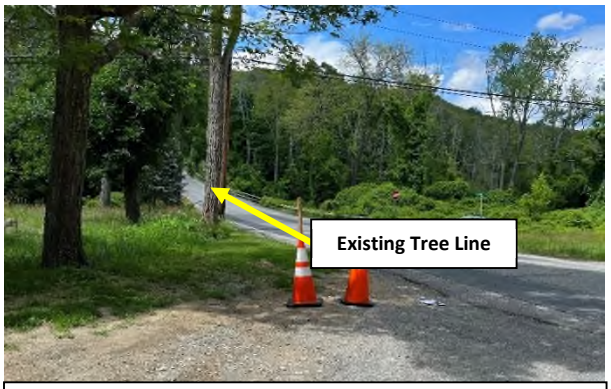
Reference: NYS Supplement to the Manual on Uniform Traffic Control Devices for Streets and Highways (2009 Edition), page 119

- Leedsville Road/Troutbeck Service Road – The available stopping sight distance for vehicles traveling northbound and southbound on Leedsville Road meet AASHTO guidelines for the applicable operating speed. The available intersection sight distance for vehicles looking right to make a left-turn from Troutbeck Service Road is less than AASHTO guidelines due to tree limbs located along the site frontage (Photograph #2); however, the sight distance looking right will meet AASHTO guidelines for the applicable operating speed with the trimming of these limbs. It is noted that available sight distance looking left for drivers exiting the Troutbeck Service Road for left and right-turns onto Leedsville Road and the distance looking straight for drivers traveling northbound on Leedsville Road turning left into the Troutbeck Service Road extends up to and through the adjacent NY Route 343/Leedsville Road intersection (see Photograph #3). It is noted that drivers traveling southbound on Leedsville Road and drivers looking left from the Site Driveway have at least 300 feet of available sight distance to view vehicles turning left or right from the NY Route 343 intersection; however, these vehicles would be traveling at slower speeds, closer to 15-mph as they complete their turns. A review of AASHTO guidelines indicates that the available sight lines meet the recommended stopping sight distance of 70 feet for a 15-mph travel speed to see a vehicle turning left or right onto Leedsville Road from NY Route 343.

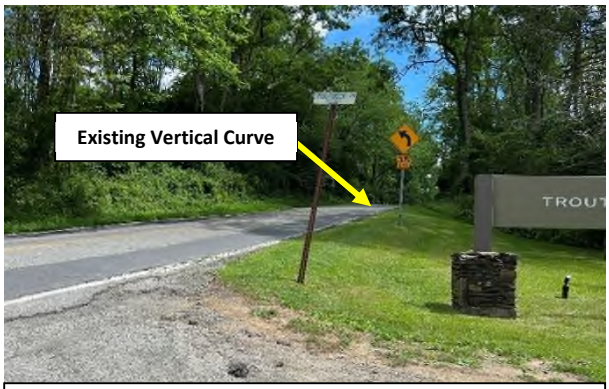
Photograph #2 – Sight Distance Looking Right

Photograph #3 – Sight Distance Looking Left

- Leedsville Road/Troutbeck Lane – The available intersection sight distance for vehicles looking straight along Leedsville Road turning left into Troutbeck Lane, as well as the stopping sight distance for vehicles traveling southbound on Leedsville Road meet AASHTO guidelines for the applicable operating speed. The available sight distance looking left to make a left or right turn from Troutbeck Lane is less than AASHTO guidelines due to an existing tree line along the project frontage on the west side of Leedsville Road (see Photograph #4). The sight distance looking left will meet AASHTO guidelines for the applicable operating speed with the removal of these trees. The intersection sight distance for vehicles looking right to make a left-turn from the site and the stopping sight distance for vehicles traveling northbound on Leedsville Road is limited due to vertical curve on Leedsville Road located south of Troutbeck Lane (see Photograph #5).

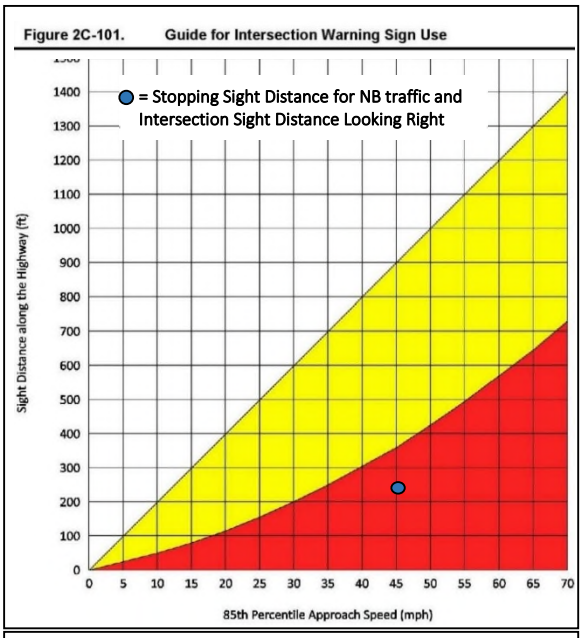


Photograph #4 – Sight Distance Looking Left



Photograph #5 – Sight Distance Looking Right

Figure 2C-101 found in the NYS Supplement to the NMUTCD provides guidance for the installation of "Intersection Warning" signs as mitigation for sight distance. A review of Figure 2C-101 indicates that the available intersection sight distance looking right from Troutbeck Lane and the northbound stopping sight distance is critically limited. An intersection warning sign (NMUTCD W2-2) that warns drivers of the limited sight distance condition approaching the opposing Randall Road leg of the intersection is currently provided to the south. It is recommended that this sign be replaced by a four-way intersection warning sign (NMUTCD W2-1) to reflect current conditions. It is also recommended that internal wayfinding signs be installed in order to direct guests to the new main access roadways into the site (Troutbeck Service Road or Spingarn Road) in order to reduce traffic at this intersection.



Reference: NYS Supplement to the Manual on Uniform Traffic Control Devices for Streets and Highways (2009 Edition), page 119

It is recommended that any site signing be placed a minimum of fifteen feet back from the travel way and that the landscaping plan consider sight lines in order to maintain visibility at the site access locations. It is also recommended that any trees or vegetation located along the property frontage on Leedsville Road and Yellow City Road be cleared 15-feet back from the travel way to ensure adequate sight lines are maintained.

4.0 Traffic Assessment

Trip Generation – Original Site Plan

Trip generation determines the quantity of traffic expected to travel to and from a given site. The Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition, is the industry-standard resource for estimating trip generation for proposed developments based on data collected at sites with similar land uses. Table 3 provides a summary of the existing and proposed land uses after full build-out of the site (excluding special event space):

Table 3 – Land Use Summary

Land Use	Existing Conditions	Full Build-Out
Manor House (lodging)	17 units	17 units
Benton House (lodging)	17 units	17 units
Garden House (lodging)	4 units	--
Garden House (residence)	2 residences	--
Bakery Building (residence)	1 residence	--
Cabins – Garden (lodging)	--	8 units
Garden Hotel (lodging)	--	33 units
Cabins – Pond (lodging)	--	6 units
Cabins – Creekside (lodging)	--	5 units
Garden Expansion (lodging)	--	32 units
Bakery (staff apartment)	--	1 residence
Staff Residence	--	5 residences
Delamater House (restaurant)	--	87 seats

The trip generation for the lodging units, restaurant, and apartments was estimated using land use code (LUC) 310/330 for a Hotel/Resort Hotel, LUC 931 for a Fine Dining Restaurant, and LUC 215 for Single-Family Attached Housing. Table 4 compares the exiting and full build-out trip generation estimate to determine how much additional traffic the facility will generate during the weekday PM and Saturday mid-day peak hours.

Table 4 – Trip Generation Summary

Land Use		Size	LUC	PM Peak Hour			Saturday Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Existing	Manor House	17 units	310/330	7	9	16	13	10	23
	Benton House	17 units							
	Garden House	4 units							
	Garden House	2 residences	215	1	1	2	1	1	2
	Bakery Building	1 residence							
	Total			**8**	**10**	**18**	**14**	**11**	**25**
Proposed	Manor House	17 units	310/330	20	28	48	40	31	71
	Benton House	17 units							
	Cabins – Garden	8 units							
	Garden Hotel	33 units							
	Cabins – Pond	6 units							
	Cabins – Creekside	5 units							
	Garden Expansion	32 units							
	Bakery Staff Apartment	1 residence	215	2	1	3	1	2	3
	Staff Residence	5 residences							
	Delamater House	87 seats	931	16	8	24	17	12	29
	Total			**38**	**37**	**75**	**58**	**45**	**103**
Difference				**30**	**27**	**57**	**44**	**34**	**78**

Based on ITE rates, the proposed site is expected to generate a total of 75 vehicle trips during the PM peak hour and 103 vehicle trips during the Saturday peak hour. A comparison to existing conditions indicates that the site will generate 57 **new** vehicle trips during the PM peak hour and 78 **new** vehicle trips during the Saturday peak hour.

The use of the ITE trip generation rates and a review of the anticipated trip distribution of travel in and out of the site indicates that there will be a maximum increase of approximately 26 new trips on any one

approach of the study area intersections during the peak hours. The magnitude of the new vehicle trips generated at the site is less than the NYSDOT and ITE threshold of 100 site generated vehicles on any one intersection approach for needing off-site intersection analysis. This guidance was developed as a tool to identify locations where the magnitude of traffic generated has the potential to impact operations at off-site intersections and screen out locations from requiring detailed analysis that do not reach the 100 vehicle threshold indicating that additional detailed intersection analysis is not needed and that the site generated traffic will be accommodated by the existing roadway network. The unsignalized study area intersections were included in the analysis to provide a worst-case assessment associated with the site since all traffic will enter and exit the area from these locations.

Future Traffic Volumes

To evaluate the impact of the proposed development, traffic projections were prepared for the expected year of completion (2026). Historical traffic volume data found in the latest version of the *Traffic Data Report* published by NYSDOT indicates that traffic volumes on NY Route 343 in the vicinity of the site has increased by approximately two percent per year from 2005 to 2015. A background growth rate of two percent per year was applied for four years. In addition, the Town of Amenia was contacted to determine if any other known developments in the project area would impact future traffic conditions; however, no known developments were provided. The 2026 No-Build traffic volumes (shown on Figure 2-2) represent future traffic volumes in the study area prior to construction of the proposed project.

Trips associated with the proposed project were distributed at the study intersections and site driveways based on existing and anticipated travel patterns for patrons of the *Troutbeck Development.* The trip distribution patterns are shown on Figure 3-1. Site-generated trips were assigned to the study area and access road intersections as shown on Figure 3-2. The 2026 Build traffic volumes represent future traffic volumes after construction and occupancy of the site and are illustrated on Figure 4. It is noted that traffic associated with the existing *Troutbeck Resort* was removed from Build conditions since full build-out of the site was accounted for in the trip generation assessment.

Traffic Operations

Intersection Level of Service (LOS) and capacity analysis relate traffic volumes to the physical characteristics of an intersection. Intersection evaluations were made using the Synchro 11 Software, which automates the procedures contained in the *Highway Capacity Manual.* Table 5 summarizes the results of the level of service calculations for the proposed project. The detailed level of service analyses are included under Attachment C.

Table 5 – Level of Service Summary

Intersection		Control	Friday PM Peak Hour			Saturday Midday Peak Hour		
			2022 Existing	2026 No-Build	2026 Build	2022 Existing	2026 No-Build	2026 Build
Leedsville Road/Randall Road/Troutbeck Lane		U						
Troutbeck Lane EB	LTR		A (9.0)	A (9.0)	A (9.1)	A (8.9)	A (9.0)	A (9.0)
Randall Road WB	LT		A (9.2)	A (9.2)	A (9.2)	A (9.2)	A (9.2)	A (9.2)
	R		A (8.5)	A (8.6)	A (8.5)	A (8.7)	A (8.7)	A (8.7)
Leedsville Road NB	LTR		A (0.0)	A (0.0)	A (7.3)	A (0.0)	A (0.0)	A (7.3)
Leedsville Road SB	LTR		A (7.3)	A (7.3)	A (7.3)	A (7.3)	A (7.3)	A (7.3)
NY Route 343/Yellow City Road		U						
NY Route 343 WB	L		A (7.1)	A (7.8)	A (7.8)	A (7.9)	A (8.1)	A (8.0)
Yellow City Road NB	LR		B (11.1)	B (11.4)	B (11.9)	A (9.9)	B (10.1)	B (11.1)
NY Route 343/Leedsville Road		U						
NY Route 343 WB	L		A (7.9)	A (7.9)	A (8.0)	A (7.8)	A (7.8)	A (7.9)
Leedsville Road NB	LR		B (11.7)	B (12.0)	B (12.5)	B (11.5)	B (11.9)	B (12.6)
Leedsville Road/Troutbeck Service Entrance		U						
Troutbeck Service Entrance WB	LR		--	--	A (9.3)	--	--	A (9.3)
Leedsville Road NB	L		--	--	A (7.4)	--	--	A (7.4)
Yellow City Rd/Spingarn Road		U						
Spingarn Road EB	LR		--	--	A (8.4)	--	--	A (8.3)
Yellow City Road SB	L		--	--	A (7.2)	--	--	A (7.2)
Yellow City Road/Kitchen Delivery Entrance		U						
Kitchen Delivery Entrance EB	LR		--	--	A (8.3)	--	--	A (8.3)
Yellow City Road SB	L		--	--	A (7.2)	--	--	A (7.2)

U = Signal Controlled intersection, Unsignalized intersection
EB, WB, NB, SB = Eastbound, Westbound, Northbound, and Southbound intersection approaches
L, T, R = Left-turn, Through, and/or Right-turn movements
X (Y.Y) = Level of service (Average delay in seconds per vehicle)

The impact of the project can be described by comparing the analysis of the No-Build and Build operating conditions. The follow observations are evident from this analysis:

- Leedsville Road/Randall Road/Troutbeck Lane – The level of service summary indicates that this unsignalized intersection will operate at LOS A during both peak hours through Build conditions. It is recommended that the unsignalized eastbound Troutbeck Lane approach continue to provide a single lane entering and exiting the site.
- NY Route 343/Yellow City Road and NY Route 343/Leedsville Road – The level of service summary indicates that these unsignalized intersections will operate at LOS B or better during both peak hours through Build conditions with a maximum delay increase of less than two seconds. No mitigation is recommended.

The remaining three unsignalized site access driveways on Yellow City Road (Spingarn Road and the Kitchen Delivery Entrance) and on Leedsville Road (Troutbeck Service Entrance) will operate at LOS A during both peak hours through Build conditions. It is recommended that each intersection provide a single lane entering and exiting the site.

5.0 Sensitivity Analysis

A sensitivity analysis has been conducted for use of the site as an event center since this will occur only periodically throughout the year with the majority occurring during the Peak-Season (Spring and Summer). While it is not anticipated that these special events would coincide with typical peak commuter time periods (3:00 to 6:00 p.m.); traffic was assigned to the study area intersections during the PM peak hour in

order to provide a worst-case traffic impact assessment. A summary of the anticipated trip generation for a worst-case 240-guest special event, such as a wedding, is included below. It is noted that a wedding has a more structured and predictable arrival and departure pattern; other special events accommodated by this site could have a less defined pattern making them less impactful than an event like a wedding.

It is anticipated that a wedding would generate the greatest number of visitors with a maximum of 240 guests and 15 support staff. While a wedding could occur any day of the week or weekend, a review of traffic volume data on NY Route 343 indicates that PM peak periods between 3:00 and 6:00 p.m. represent worst-case operating conditions on the adjacent roadways; therefore, this sensitivity analysis will assess traffic operations that could occur if a wedding ceremony and reception were held at the site on a Friday afternoon.

During a typical afternoon wedding event where the ceremony were to occur at around 6:00 p.m., the wedding party, immediate family, and select guests (say 40 people) are expected to arrive at the site on Friday afternoon between 3:00 and 4:00 p.m. It is expected that the remaining 200 guests will arrive for the ceremony between 4:00 and 6:00 p.m. In order to provide worst-case operating conditions, the estimate assumes that all guests will exit the site after the reception. Additional staff (15 people), generally associated with catering and the event production will arrive throughout the day on Friday prior to the ceremony. It is assumed that production staff (tent, tables, chairs, etc.) will arrive in the morning to set up for the ceremony and reception while the catering staff will arrive in the afternoon before the reception. This analysis assumes all 240 guests will leave after the reception between 10:00 p.m. and 12:00 a.m. Vehicle occupancy data developed by Cameron Engineering indicates that the typical vehicle occupancy for a wedding is 2.3 guests per vehicle. Table 6 summarizes the expected operations and trip generation.

Table 6 – Sample Wedding Trip Generation Summary (Friday Afternoon)

Time	Guests		Staff		Guest Vehicles		Staff Vehicles		Total Vehicles	
	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit
Wedding Party and Staff 3-4 p.m.	40	0	15	0	17	0	15	0	32	0
Guests Arrive 4-5 p.m.	50	0	0	0	22	0	0	0	22	0
Guests Arrive 5-6 p.m.	150	0	0	0	65	0	0	0	65	0
Ceremony 6-7 p.m.										
Reception 7-11 p.m.										
Guests Leave 10-11 p.m.	0	200	0	0	0	87	0	0	0	87
Wedding Party and Staff Leave 11 p.m.-12 a.m.	0	40	0	15	0	17	0	15	0	32

Under these conditions, a maximum of approximately 65 vehicles are expected to arrive Friday afternoon between 5:00 and 6:00 p.m. while a maximum of approximately 87 vehicles are expected to leave between 10:00 and 11:00 p.m. Based on these operations, the following analysis considers the traffic impacts of the property during the Friday peak hour of 5:00 to 6:00 p.m., which is the peak hour of adjacent street traffic near the site, assuming that the maximum guest arrival and departure scenarios (65 vehicles entering and 87 vehicles exiting) occur at the same time in order to provide a worst-case assessment. It is anticipated that many of the lodging rooms would be used by guests associated with the wedding; however, the assessment did not reduce traffic generated by other on-site uses in order to provide a worst-case evaluation. The special event traffic was assigned to the study area intersections similar to the other land

uses as shown on Figure 5-1. The results of the site generated traffic assignment for a special event (wedding) were added to the 2026 Build traffic volumes to develop the 2026 Build Sensitivity traffic volumes shown on Figure 5-2.

The level of service analysis (summarized below on Table 7) indicates that the study area intersections will continue to operate adequately when the proposed development is fully operational with a special event. No improvements are recommended for the special event condition.

Table 7 – Sensitivity Level of Service Summary (Special Event)

Intersection		Control	Friday PM Peak Hour		Saturday Midday Peak Hour	
			Build 2026	Build 2026 Sensitivity	Build 2026	Build 2026 Sensitivity
Leedsville Road/Randall Road/Troutbeck Lane		U				
Troutbeck Lane EB	LTR		A (9.1)	A (9.1)	A (9.0)	A (9.1)
Randall Road WB	LT		A (9.2)	A (9.4)	A (9.2)	A (9.5)
	R		A (8.5)	A (8.6)	A (8.7)	A (8.7)
Leedsville Road NB	LTR		A (7.3)	A (7.3)	A (7.3)	A (7.3)
Leedsville Road SB	LTR		A (7.3)	A (7.3)	A (7.3)	A (7.3)
NY Route 343/Yellow City Road		U				
NY Route 343 WB	L		A (7.8)	A (7.9)	A (8.0)	A (8.2)
Yellow City Road NB	LR		B (11.9)	B (12.9)	B (11.1)	B (12.3)
NY Route 343/Leedsville Road		U				
NY Route 343 WB	L		A (8.0)	A (8.1)	A (7.9)	A (8.1)
Leedsville Road NB	LR		B (12.5)	B (14.4)	B (12.6)	C (15.0)
Leedsville Road/Troutbeck Service Entrance		U				
Troutbeck Service Entrance WB	LR		A (9.3)	B (10.2)	A (9.3)	B (10.1)
Leedsville Road NB	L		A (7.4)	A (7.5)	A (7.4)	A (7.5)
Yellow City Rd/Spingarn Road		U				
Spingarn Road EB	LR		A (8.4)	A (8.4)	A (8.3)	A (8.4)
Yellow City Road SB	L		A (7.2)	A (7.2)	A (7.2)	A (7.2)
Yellow City Road/Kitchen Delivery Entrance		U				
Kitchen Delivery Entrance EB	LR		A (8.3)	A (8.4)	A (8.3)	A (8.3)
Yellow City Road SB	L		A (7.2)	A (7.2)	A (7.2)	A (7.2)

U = Unsignalized intersection
EB, WB, NB, SB = Eastbound, Westbound, Northbound, and Southbound intersection approaches
L, T, R = Left-turn, Through, and/or Right-turn movements
X (Y.Y) = Level of service (Average delay in seconds per vehicle)

6.0 Conclusions

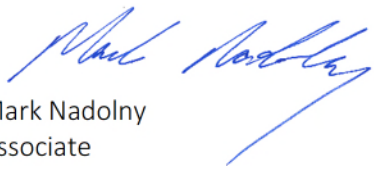
The proposed project includes the re-development and expansion of the existing *Troutbeck Resort* in multiple phases. In general, the first phase will add approximately five cabins and other guest amenities while subsequent phases will add numerous lodging units, expand the dining capability of the site, increase on-site staff lodging, and modify the special event space. The first phase of the project is expected to be complete by 2023 while full build-out is expected by 2026. Primary access to the existing site is currently provided via "Troutbeck Lane" located on Leedsville Road opposite Randall Road. This will remain the primary entrance for overnight guests; however, departures shall now be redirected to the "Troutbeck Service Entrance". The "Troutbeck Service Entrance" currently provides secondary access into the site via Leedsville Road and will be converted into the primary driveway for day-use/event guests after re-development of the project is completed. "Spingarn Road" and the "Kitchen Delivery Entrance" on Yellow

City Road will continue to operate as a service access into the site to be used by staff members and for deliveries. The following is noted regarding the proposed project:

- The proposed project will generate 57 **new** vehicle trips during the PM peak hour and 78 **new** vehicle trips during the Saturday peak hour. The magnitude of the new vehicle trips generated at the site is less than the NYSDOT and ITE threshold of 100 site generated vehicles on any one intersection approach for needing off-site intersection analysis.
- The level of service analysis indicates that the unsignalized study area intersections will operate adequately during the PM and Saturday peak hours after full build-out of the site. Mitigation is not recommended at these locations.
- The special event sensitivity analysis, which considered a wedding type event with up to 240 guests, also indicates that the study area intersections will continue to operate at good levels of service during peak conditions.
- It is recommended that the unsignalized site access roads on Yellow City Road and Leedsville Road into the site provide a single lane entering and exiting the development.
- The following sight distance improvements are recommended to either meet AASHTO guidelines for the applicable operating speeds or to improve existing conditions.
    - Leedsville Road/Troutbeck Service Road – Trim tree branches south of the intersection in order to maximize sight distance looking right.
    - Leedsville Road/Troutbeck Lane –
        - Remove trees and vegetation along the property frontage north of the intersection in order to maximize sight distance looking left.
        - Replace the existing three-way intersection warning sign located south of the intersection with a four-way intersection warning sign.
        - Install internal wayfinding signs to direct guests toward the new main access roadways into the site (Troutbeck Service Road or Spingarn Road) in order to reduce traffic at this intersection.
- It is recommended that any site signing be placed a minimum of fifteen feet back from the travel way and that the landscaping plan consider sight lines in order to maintain visibility at the site access locations. It is also recommended that any trees or vegetation located along the property frontage on Leedsville Road and Yellow City Road be cleared 15-feet back from the travel way to ensure adequate sight lines are maintained.

Please feel free to call our office if you have any questions or comments regarding the above evaluation.

Respectfully submitted,
Creighton Manning Engineering, LLP



Mark Nadolny
Associate

Attachments

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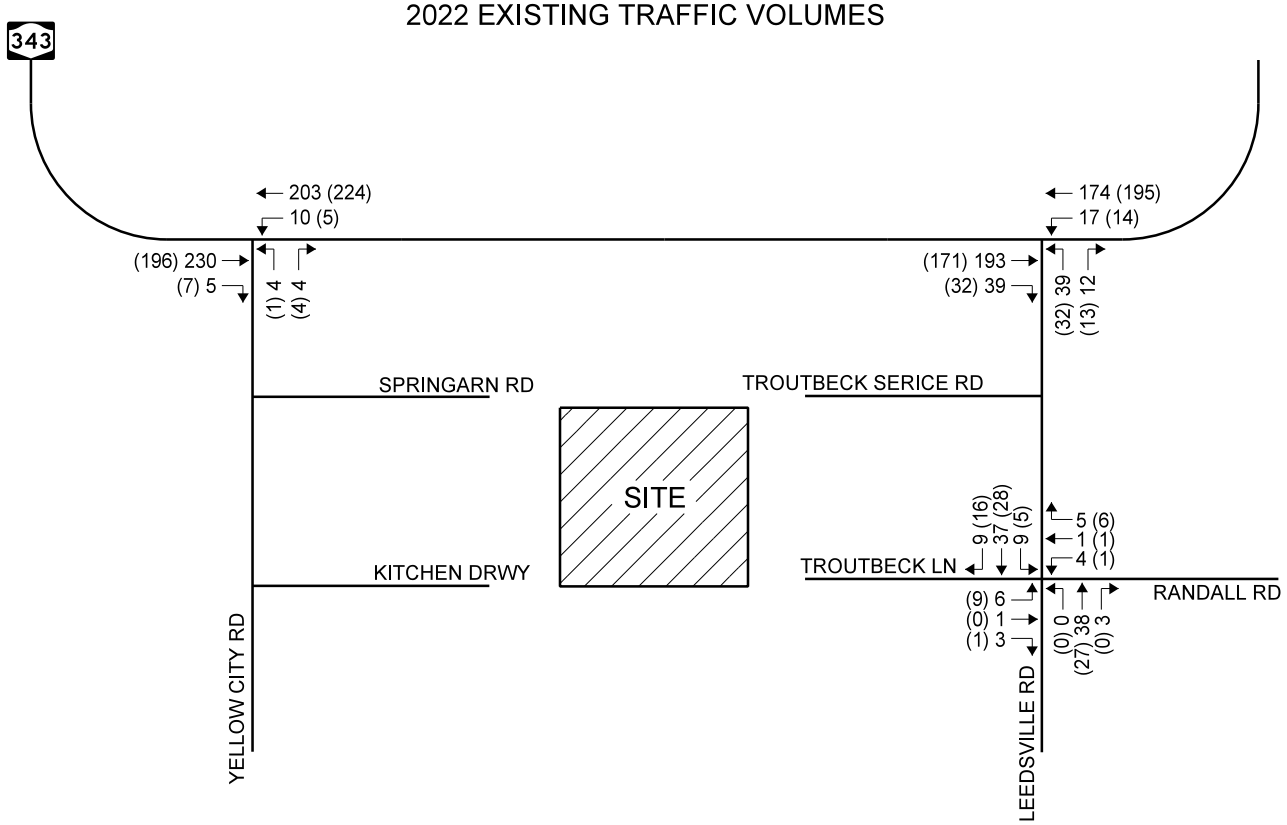
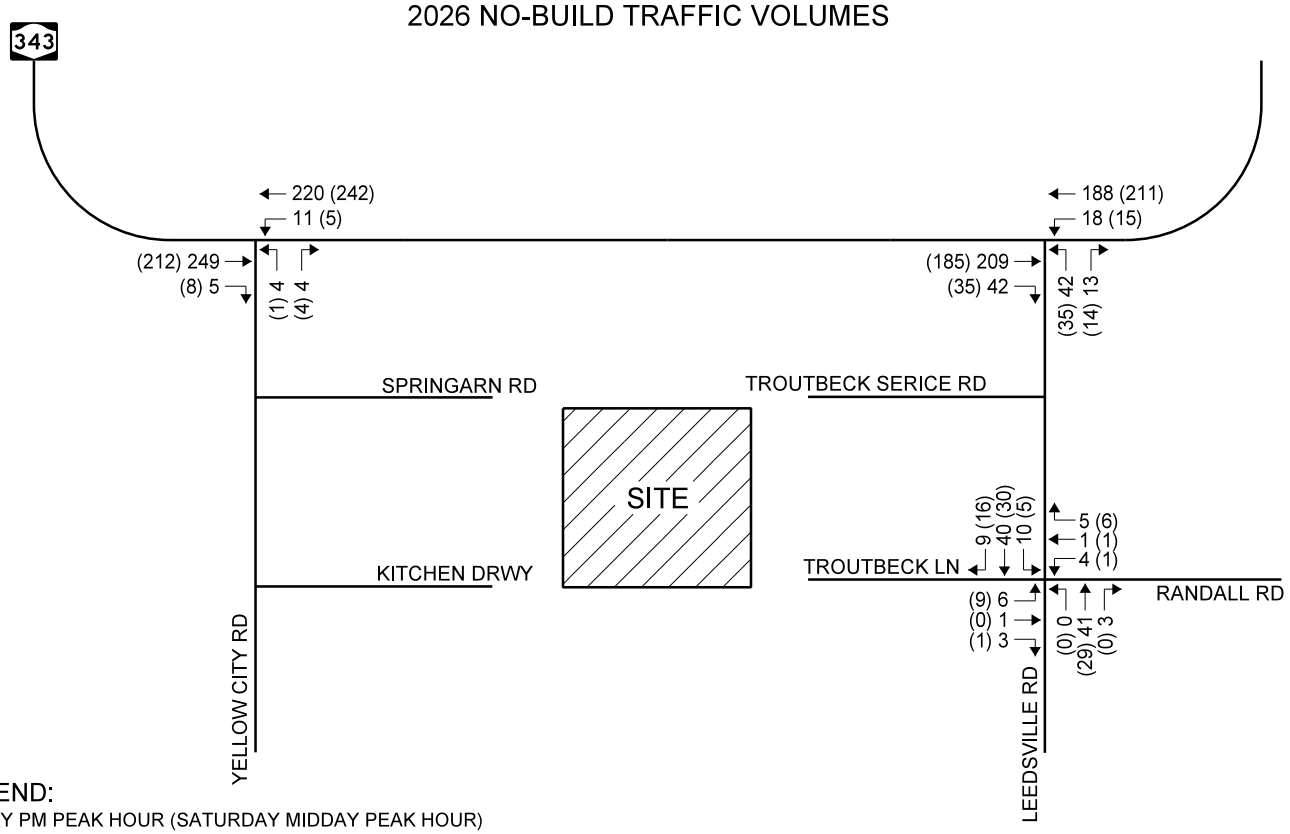
① 2022 EXISTING TRAFFIC VOLUMES



LEGEND:
FRIDAY PM PEAK HOUR (SATURDAY MIDDAY PEAK HOUR)

② 2026 NO-BUILD TRAFFIC VOLUMES



LEGEND:
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TRAFFIC VOLUMES

TROUTBECK DEVELOPMENT
TOWN OF AMENIA, NEW YORK

Creighton Manning

PROJECT: 121-191	DATE: 9/2022	FIGURE: 02

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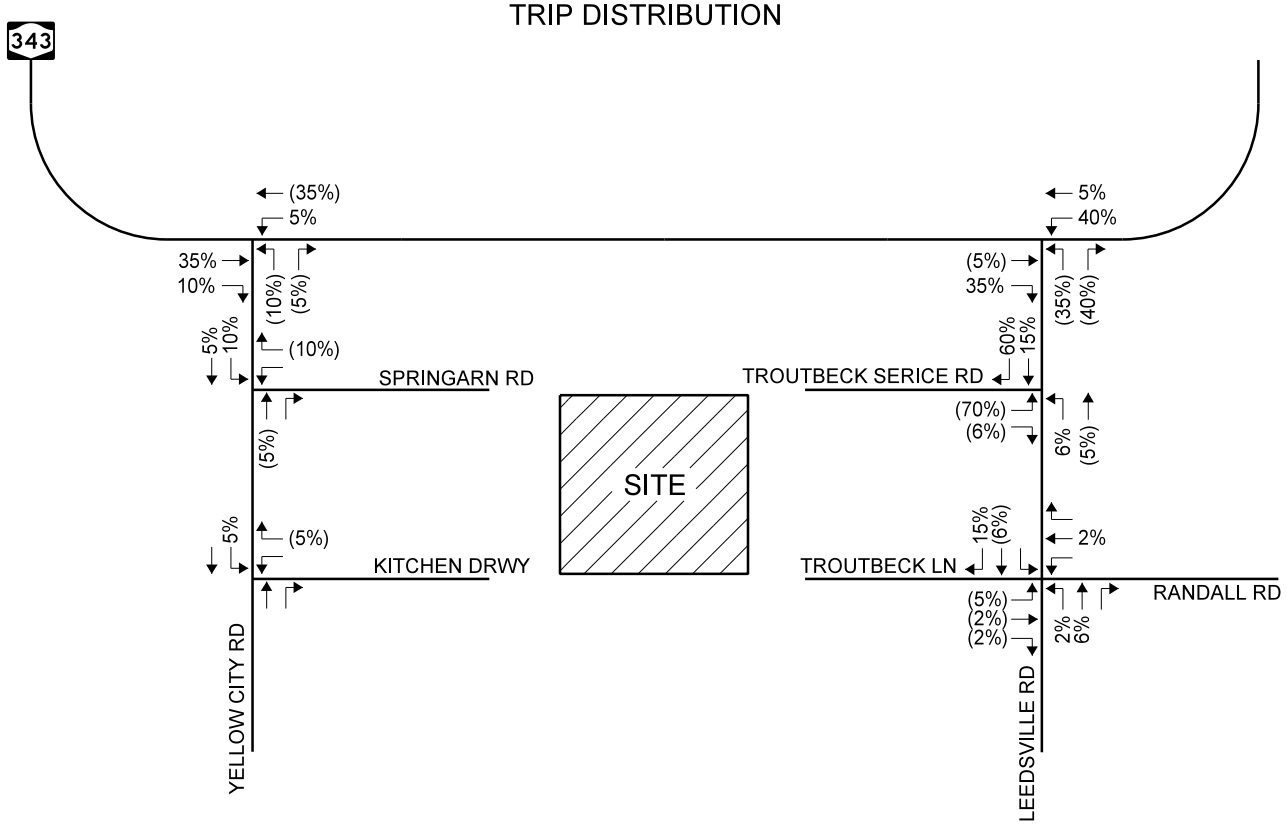
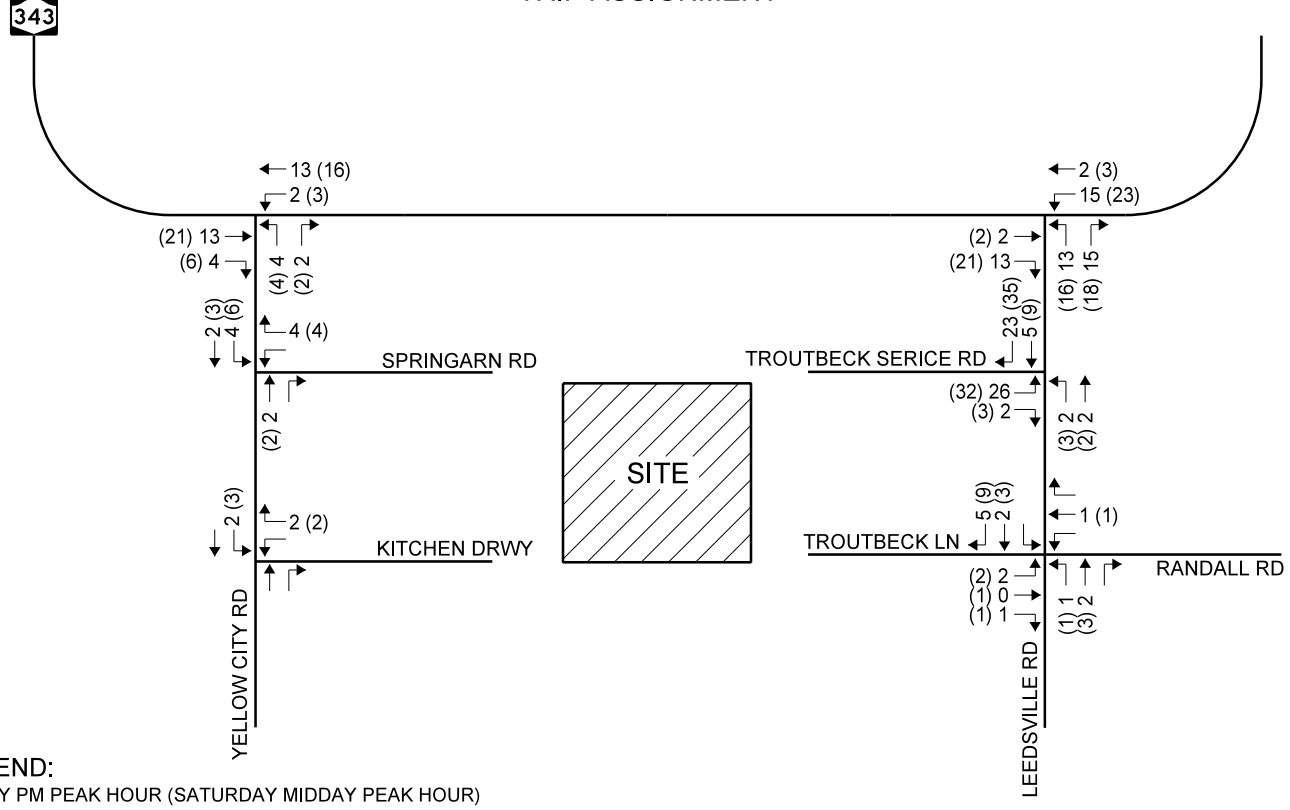
① TRIP DISTRIBUTION



LEGEND:
ENTER (EXIT)

② TRIP ASSIGNMENT



LEGEND:
FRIDAY PM PEAK HOUR (SATURDAY MIDDAY PEAK HOUR)

TRAFFIC VOLUMES	Creighton Manning		
TROUTBECK DEVELOPMENT TOWN OF AMENIA, NEW YORK	PROJECT: 121-191	DATE: 9/2022	FIGURE: 03

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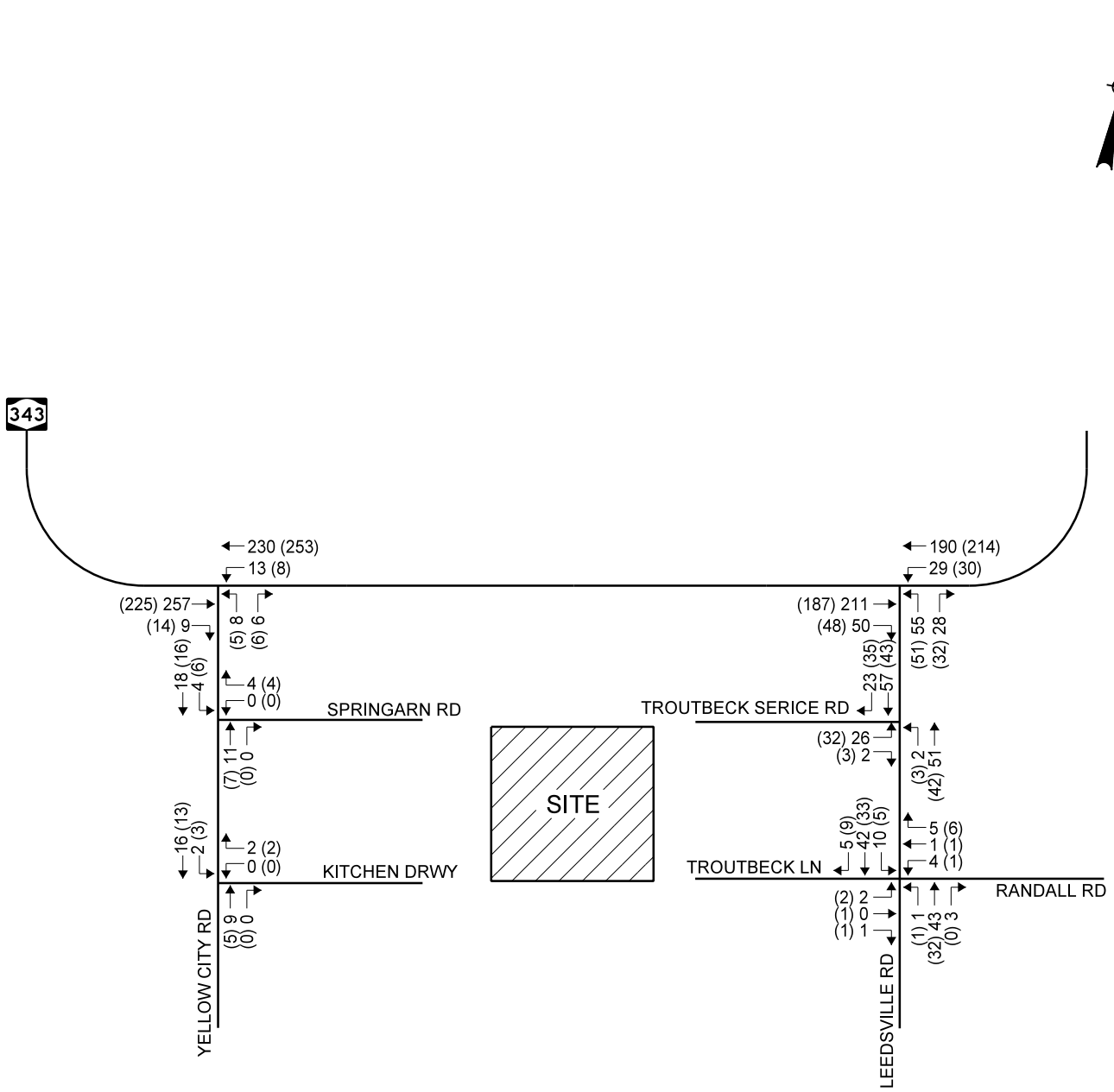
2026 BUILD TRAFFIC VOLUMES



LEGEND:

FRIDAY PM PEAK HOUR (SATURDAY MIDDAY PEAK HOUR)

TRAFFIC VOLUMES	Creighton Manning
TROUTBECK DEVELOPMENT TOWN OF AMENIA, NEW YORK	PROJECT: 121-191 | DATE: 9/2022 | FIGURE: 04

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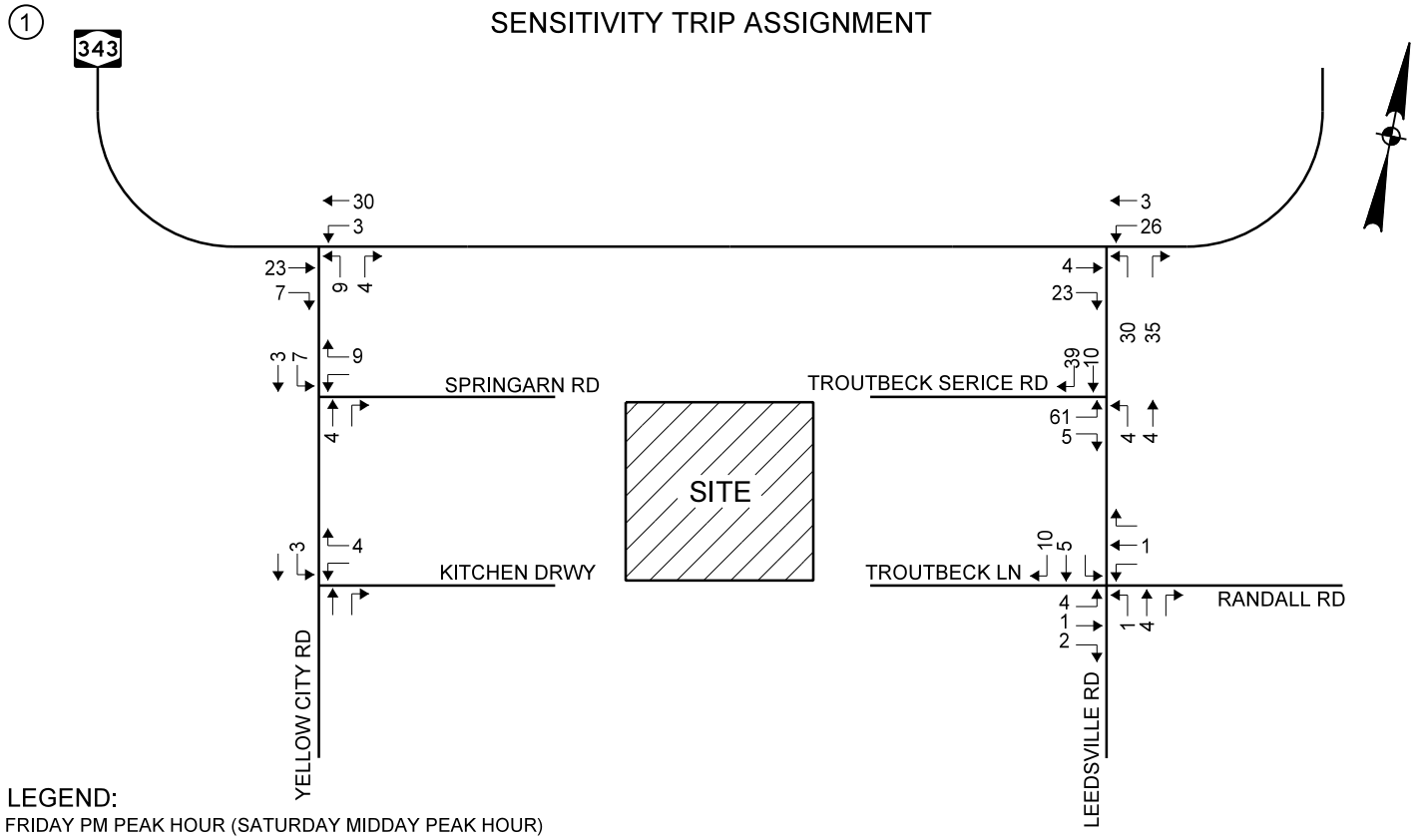
① SENSITIVITY TRIP ASSIGNMENT



LEGEND:
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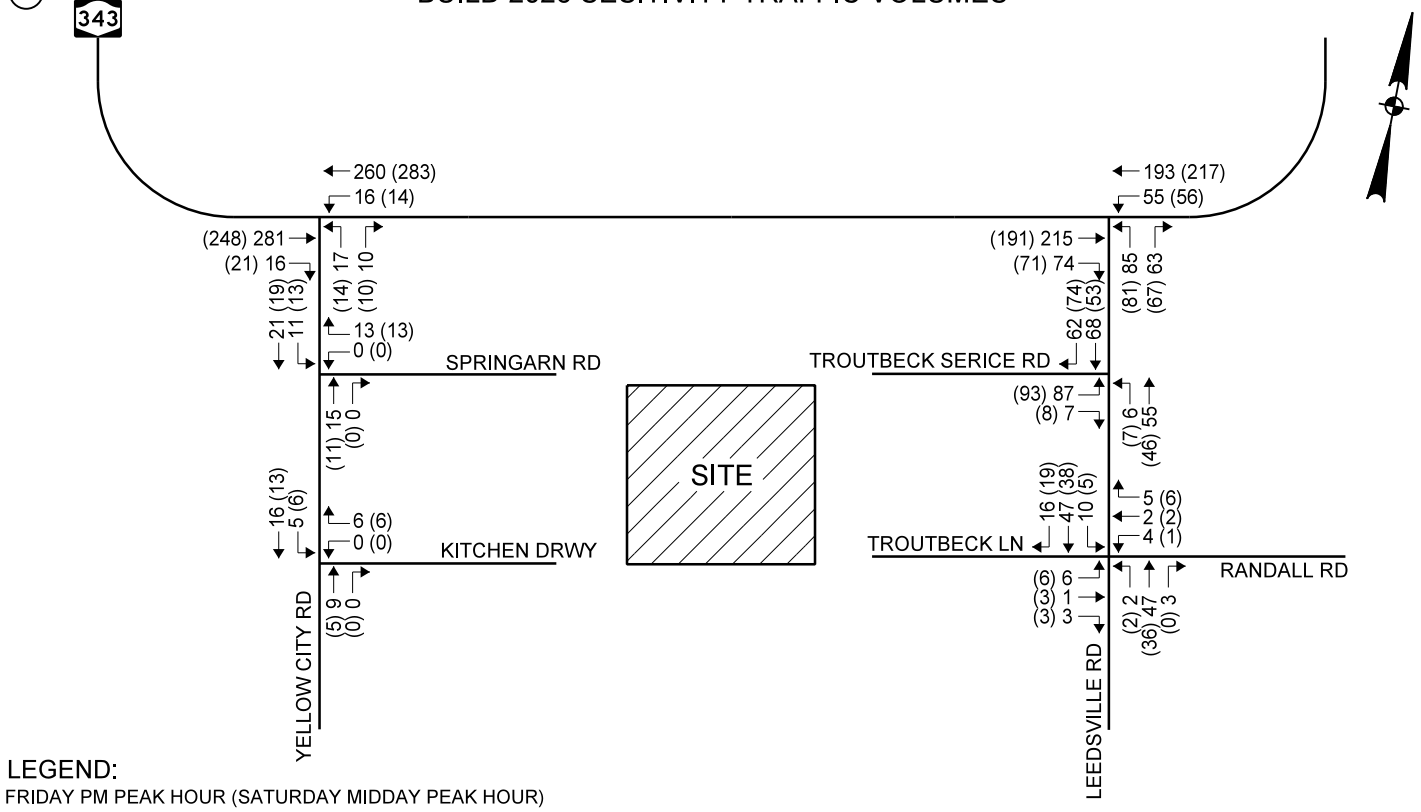
② BUILD 2026 SESITIVITY TRAFFIC VOLUMES



LEGEND:
FRIDAY PM PEAK HOUR (SATURDAY MIDDAY PEAK HOUR)

TRAFFIC VOLUMES

TROUTBECK DEVELOPMENT
TOWN OF AMENIA, NEW YORK

Creighton Manning

PROJECT: 121-191	DATE: 9/2022	FIGURE: 05

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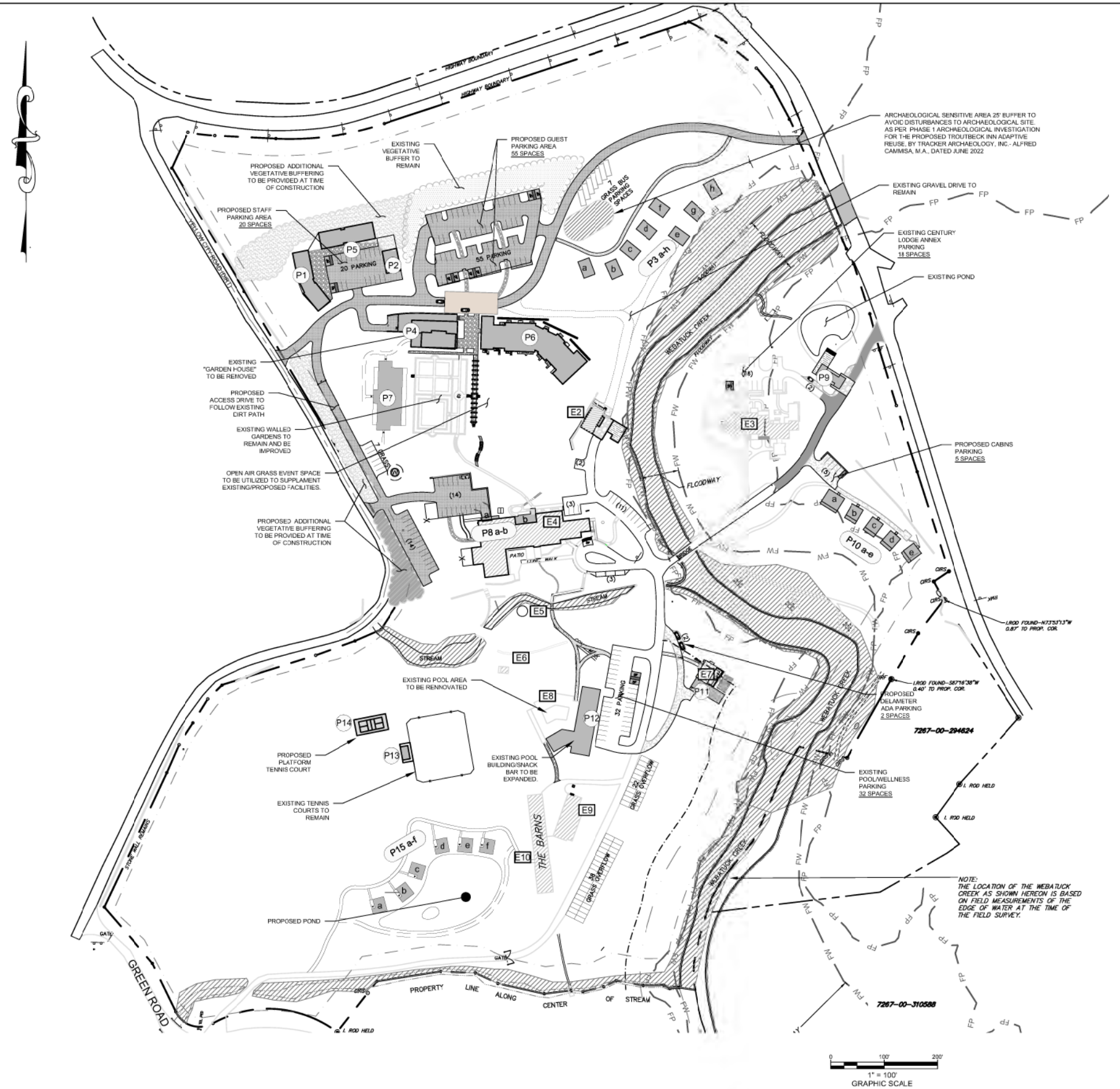
Attachment A
Site Plan

Troutbeck Development
Town of Amenia, New York



BUILDING INVENTORY
PROPOSED CONDITIONS*

BUILDING #	BUILDING	PROPOSED BUILDING USE		FLOORS	PROPOSED APPROX. SQ. FT. (FOOTPRINT/TOTAL)		DWELLING/LODGING UNITS
E2	CARETAKER HOUSE → BAKERY	BAKERY/PRODUCTION/GRAB-AND-GO/ LODGING		2-STORY	500	2,250	1 APT.
E3	CENTURY LODGE & ANNEX	LODGING		2-STORY	4,620	9,783	17 KEYS
E4	MANOR HOUSE	LODGING/EVENT SPACE/DINING		2.5-STORY	12,992	35,773	17 KEYS
E5	GAZEBO	TO BE REMOVED					
E6	STONE CHAPEL	GUEST AMENITY		1-STORY	174	174	N/A
E7	DELAMETER HOUSE	TO BE RENOVATED = GUEST BAR/DINING		1-STORY W/ BASEMENT	(SEE P11)	(SEE P11)	N/A
E8	POOL FACILITIES (POOL HOUSE)	GUEST AMENITY		1-STORY	(SEE P12)	(SEE P12)	N/A
E9	POLE BARN → OUTFITTER	GUEST AMENITY		1-STORY	2,081	2,081	N/A
E10	THE BARNS	GUEST AMENITY/ FITNESS/ WELLNESS		1-STORY	4,925	4,925	N/A
P1	STAFF HOUSING	LODGING		1-STORY	2,654	2,654	5 APT.
P2	TRACTOR SHED	UTILITY		1 STORY	1,050	1,050	N/A
P3 a-h	GARDEN CABINS	LODGING		1-STORY	723	5,784	8 KEYS
P4	GARDEN HALL (EVENT SPACE)	EVENT SPACE (I.E: WEDDINGS, CONFERENCES, EXHIBITS)		1-STORY W/ BASEMENT	6,250	12,500	N/A
P5	CENTRAL ADMIN.	ADMINISTRATION		1-STORY W/ BASEMENT	3,150	4,481	N/A
P6	GARDEN HOTEL	LODGING		2.5-STORY	10,396	22,180	33 KEYS
P7	FUTURE GARDEN WEST HOTEL EXPANSION	LODGING		2.5-STORY	5,748	14,370	32 KEYS
P8 a-b	MANOR HOUSE IMPROVEMENTS	a. SERVICE ENTRANCE b. EXPANDED CONSERVATORY DINING	a:	1-STORY W/ BASEMENT	192	384	N/A
			b:	1-STORY	635	635	N/A
P9	GATEHOUSE	SECURITY/UTILITY/RECEPTION		1-STORY	962	962	N/A
P10 a-e	CREEKSIDE CABINS	LODGING		1-STORY (ea.)	695 / 1,022	3,802	5-KEYS
P11	DELAMETER HOUSE EXPANSION	CONSERVATORY DINING W/ FULL BASEMENT		1-STORY	2,209	4,347	N/A
P12	POOL	GUEST AMENITY		N/A	5,623	5,623	N/A
P13	TENNIS WARMING HUT	GUEST AMENITY		1-STORY	351	351	N/A
P14	PLATFORM TENNIS	GUEST AMENITY		N/A	1,800	1,800	N/A
P15 A-F	POND EXPANSION CABINS	LODGING		1-STORY (ea.)	695	4,170	6-KEYS
TOTAL							118 KEYS 6 STAFF APTS.

* ALL S.F. FOR FUTURE PHASES ARE PRELIMINARY SUBJECT TO MINOR REFINEMENT DURING SITE PLAN REVIEW PROCESS.

PARKING CALCULATIONS

EXISTING/PROPOSED USES - FULL BUILDOUT

- **LODGING UNITS:** 118 UNITS X 1 SPACE PER UNIT = **118 SPACES**
- RESIDENTIAL UNITS: 6 STAFF APARTMENTS X 1.5 SPACE PER UNIT (MULTIFAMILY) = **9 SPACES**
- **FTE STAFF:** (67 STAFF X 1 SPACE PER EMPLOYEE) X .75 (ASSUMED STAGGERED SCHEDULING, WHICH FREES SPACES FOR LATER SHIFT) = **50 SPACES**
- **EVENT SPACE (PUBLIC ASSEMBLY):** (240 OCCUPANTS (GUEST + ADDITIONAL STAFF) / 1 SPACE PER 3 PEOPLE) X .55 (ASSUMED LODGING/EVENT USE OVERLAP - GUEST STAYING ON SITE MAKE UP 45% OF EVENT BUILDING CAPACITY) = **44 SPACES**
- **RESTAURANT (DELAMATER):** 87 SEATS / 1 SPACE PER 3 PEOPLE = **29 SPACES**

TOTAL REQUIRED PARKING SPACES: 250 SPACES*
TOTAL PROVIDED PARKING SPACES: 284 SPACES

- CREEKSIDE CABINS: 5 SPACES
- GATE HOUSE: 2 SPACES
- CENTURY LODGE PARKING: 18 SPACES
- ADMIN/STAFF HOUSING/SHED: 20 SPACES
  - 2 SPACES W/IN TRACTOR SHED
- GRAVEL GUESS PARKING (NORTH): 55 SPACES
- MANOR HOUSE SERVICE YARD AREA(S): 35 SPACES
- MANOR HOUSE ADJACENT PARKING: 20 SPACES
- DELAMATER PARKING AREA(S): 34 SPACES
- GRASS OVERFLOW PARKING AREA(S)(VALET): 60 SPACES**
- GRASS BUS PARKING AREA: 35 SPACES
  - 1 BUS SPACE = 5 REG. SPACES. ASSUMED 20 GUESTS PER SPACE

*BASED ON TOWN OF AMENIA RECOMMENDED PARKING CALCULATIONS. ASSUMES FULL CAPACITY FOR PROJECT SITE.
**GRASS OVERFLOW PARKING AREAS SHALL BE RESERVED FOR LARGE EVENTS AND SHALL NOT BE USED UNLESS REQUIRED.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING CONTOUR MAJOR — 510
- EXISTING CONTOUR MINOR — 508
- BUILDING SETBACKS
- STONE WALL
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SPOT GRADE — × 340.1
- EXISTING OVERHEAD UTILITIES — OH
- EXISTING TREELINE
- EXISTING STREAM BOUNDARY
- FEMA FLOCDWAY BOUNDARY — FW
- FEMA FLOCDPLAIN BOUNDARY — FP
- EXISTING WETLANDS
- PROPOSED BUILDING — P#
- EXISTING BUILDING — E#

OWNER'S CONSENT NOTE:

THE UNDERSIGNED OWNER OF THE PROPERTY HEREON STATES THAT I AM FAMILIAR WITH THIS MAP, ITS CONTENTS AND LEGENDS AND HEREBY CONSENT TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON AND TO THE FILING OF THIS PLAN IN THE OFFICE OF THE CLERK OF THE COUNTY OF DUTCHESS, IF REQUIRED.

SIGNED THIS _____ DAY OF _____ 2022

_____ OWNER'S SIGNATURE

FLOOD ZONE NOTES:
1. PROPERTY SHOWN HEREON LIES WITHIN "SPECIAL FLOOD HAZARD AREA ZONE AE", WITHIN "OTHER AREAS, ZONE X" (UNSHADED), AND WITHIN "FLOODWAY AREAS IN ZONE AE" AS SHOWN ON FEMA, NFIP, FIRM PANEL 36027C0332E, WITH AN EFFECTIVE DATE OF MAY 2, 2012.
2. THE "ZONE AE, BASE FLOOD ELEVATIONS" DETERMINED TO AFFECT THIS PARCEL ARE IN THE RANGE OF 480' TO 467' (NAVD88).

MAP NOTES:
1. PROPERTY DATA AND EXISTING FEATURES BASED UPON ACTUAL FIELD SURVEY COMPLETED ON OR BEFORE APRIL 26, 2016 PREPARED BY CHAZEN ENGINEERING AND SURVEYING, PC.
2. TOPOGRAPHIC CONTOURS BASED UPON ACTUAL FIELD SURVEY COMPLETED ON OR BEFORE DECEMBER 8, 2004 PREPARED BY STEVEN ALEX, L.S. OF CHAZEN ENGINEERING AND SURVEYING, PC.

ZONING DISTRICT: "RR" RURAL RESIDENTIAL
LOT SIZE: 43.5 ACRES
TAX GRID No. : 132000-7267-00-227675
PROPERTY ADDRESS: 515 LEEDSVILLE ROAD AMENIA, NY 12501
PROPERTY OWNER: TROUTBECK HOLDINGS, LP. 515 LEEDSVILLE ROAD AMENIA, NY 12501
APPLICANT: TROUTBECK HOLDINGS, LP. 515 LEEDSVILLE ROAD AMENIA, NY 12501

DATE	REVISION
11/3/2021	REVISED AS PER TOWN PLANNING BOARD COMMENTS
12/1/2021	REVISED FOR PLANNING BOARD SUBMISSION
2/16/2022	REVISED FOR PLANNING BOARD SUBMISSION
8/8/2022	REVISED FOR PLANNING BOARD SUBMISSION
8/29/2022	REVISED FOR PLANNING BOARD SUBMISSION

ENGINEERING, DESIGN, & PLANS PREPARED BY:
RENNIA ENGINEERING DESIGN, PLLC
CIVIL • ENVIRONMENTAL • STRUCTURAL
6 Dover Village Plaza, Suite 5, P.O. Box 400, Dover Plains, NY 12522
Tel: (845) 877-0555 Fax: (845) 877-0556

PRELIMINARY

TROUTBECK ADAPTIVE RE-USE

TOWN OF AMENIA — DUTCHESS COUNTY, NY

OVERALL MASTER PLAN

DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY	JOB NO.	SHEET NO.
9/15/2021	1" = 100'	RED	RED	RAR	16-019	2 of 5

Attachment B
Traffic Volume Data

Troutbeck Development
Town of Amenia, New York

TRI-STATE TRAFFIC DATA TSTData.com

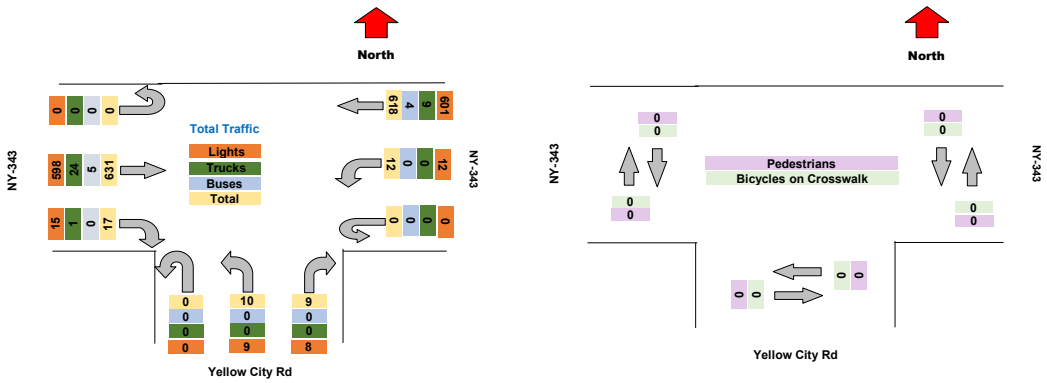
Project	Creighton Manning
Project Code	10889
Site Name	NY 343 & Yellow City Road
Legs and Movements	All Processed Legs & Movements
Bin Size	15 minutes
Survey Date	2022/05/13, Friday
Location	NY 343 & Yellow City Road
Latitude and Longitude	41.856847, -73.519277

	Start	End	PHF
PM Peak	2022/05/13 15:30:00	2022/05/13 16:30:00	0.95

Turning Movement Data

Leg	**NY-343**						**Yellow City Rd**						**NY-343**						
Direction	**Westbound**						**Northbound**						**Eastbound**						
Start Time	Thru	Left	U-Turn	**App Total**	Peds CW	Peds CCW	Right	Left	U-Turn	**App Total**	Peds CW	Peds CCW	Right	Thru	U-Turn	**App Total**	Peds CW	Peds CCW	**Total**
3:00:00 PM	47	1	0	**48**	0	0	1	1	0	**2**	0	0	2	40	0	**42**	0	0	**92**
3:15:00 PM	61	0	0	**61**	0	0	0	0	0	**0**	0	0	1	56	0	**57**	0	0	**118**
3:30:00 PM	52	5	0	**57**	0	0	0	0	0	**0**	0	0	3	52	0	**55**	0	0	**112**
3:45:00 PM	52	2	0	**54**	0	0	1	1	0	**2**	0	0	2	59	0	**61**	0	0	**117**
Hourly Total	212	8	0	**220**	0	0	2	2	0	**4**	0	0	8	207	0	**215**	0	0	**439**
4:00:00 PM	56	2	0	**58**	0	0	0	2	0	**2**	0	0	0	47	0	**47**	0	0	**107**
4:15:00 PM	43	1	0	**44**	0	0	3	1	0	**4**	0	0	0	72	0	**72**	0	0	**120**
4:30:00 PM	45	0	0	**45**	0	0	0	1	0	**1**	0	0	2	45	0	**47**	0	0	**93**
4:45:00 PM	49	0	0	**49**	0	0	0	0	0	**0**	0	0	1	56	0	**57**	0	0	**106**
Hourly Total	193	3	0	**196**	0	0	3	4	0	**7**	0	0	3	220	0	**223**	0	0	**426**
5:00:00 PM	45	0	0	**45**	0	0	1	1	0	**2**	0	0	2	51	0	**53**	0	0	**100**
5:15:00 PM	53	0	0	**53**	0	0	1	3	0	**4**	0	0	1	60	0	**61**	0	0	**118**
5:30:00 PM	61	0	0	**61**	0	0	1	0	0	**1**	0	0	1	40	0	**41**	0	0	**103**
5:45:00 PM	54	1	0	**55**	0	0	1	0	0	**1**	0	0	2	53	0	**55**	0	0	**111**
Hourly Total	213	1	0	**214**	0	0	4	4	0	**8**	0	0	6	204	0	**210**	0	0	**432**
Grand Total	618	12	0	**630**	0	0	9	10	0	**19**	0	0	17	631	0	**648**	0	0	**1297**
% Approach	98.1%	1.9%	0.0%	**0.0%**	0.0%	0.0%	47.4%	52.6%	0.0%	**0.0%**	0.0%	0.0%	2.6%	97.4%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
% Total	47.6%	0.9%	0.0%	**48.6%**	0.0%	0.0%	0.7%	0.8%	0.0%	**1.5%**	0.0%	0.0%	1.3%	48.7%	0.0%	**50.0%**	0.0%	0.0%	**0.0%**
Lights	601	12	0	**613**	0	0	8	9	0	**17**	0	0	15	598	0	**613**	0	0	**1243**
% Lights	97.2%	100.0%	0.0%	**97.3%**	0.0%	0.0%	88.9%	90.0%	0.0%	**89.5%**	0.0%	0.0%	88.2%	94.8%	0.0%	**94.6%**	0.0%	0.0%	**95.8%**
Trucks	9	0	0	**9**	0	0	0	0	0	**0**	0	0	1	24	0	**25**	0	0	**34**
% Trucks	1.5%	0.0%	0.0%	**1.4%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	5.9%	3.8%	0.0%	**3.9%**	0.0%	0.0%	**2.6%**
Buses	4	0	0	**4**	0	0	0	0	0	**0**	0	0	0	5	0	**5**	0	0	**9**
% Buses	0.6%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.8%	0.0%	**0.0%**	0.0%	0.0%	**0.7%**
Pedestrians	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

Turning Movement Data Plot

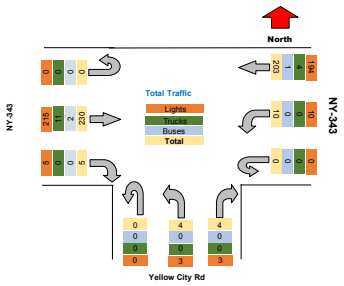


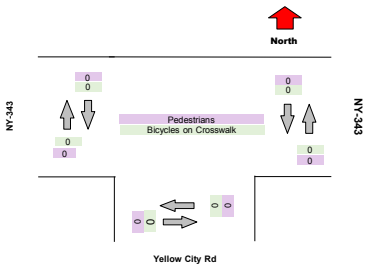
TRI-STATE TRAFFIC DATA TSTData.com

Turning Movement Peak Hour Data (PM)

3:30:00 PM

Leg	NY-343						Yellow City Rd						NY-343						
Direction	Westbound						Northbound						Eastbound						
Start Time	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	U-Turn	App Total	Peds CW	Peds CCW	Total
3:30:00 PM	52	5	0	**57**	0	0	0	0	0	**0**	0	0	3	52	0	**55**	0	0	**112**
3:45:00 PM	52	2	0	**54**	0	0	1	1	0	**2**	0	0	2	59	0	**61**	0	0	**117**
4:00:00 PM	56	2	0	**58**	0	0	0	2	0	**2**	0	0	0	47	0	**47**	0	0	**107**
4:15:00 PM	43	1	0	**44**	0	0	3	1	0	**4**	0	0	0	72	0	**72**	0	0	**120**
Grand Total	203	10	0	**213**	0	0	4	4	0	**8**	0	0	5	230	0	**235**	0	0	**456**
% Approach	95.3%	4.7%	0.0%	**0.0%**	0.0%	0.0%	50.0%	50.0%	0.0%	**0.0%**	0.0%	0.0%	2.1%	97.9%	0.0%	**0.0%**	0.0%	0.0%	
% Total	44.5%	2.2%	0.0%	**46.7%**	0.0%	0.0%	0.9%	0.9%	0.0%	**1.8%**	0.0%	0.0%	1.1%	50.4%	0.0%	**51.5%**	0.0%	0.0%	
PHF	0.906	0.500	0.000	**0.918**	0.000	0.000	0.333	0.500	0.000	**0.500**	0.000	0.000	0.417	0.799	0.000	**0.816**	0.000	0.000	**0.950**
Lights	194	10	0	**204**	0	0	3	3	0	**6**	0	0	5	215	0	**220**	0	0	**430**
% Lights	95.6%	100.0%	0.0%	**95.8%**	0.0%	0.0%	75.0%	75.0%	0.0%	**75.0%**	0.0%	0.0%	100.0%	93.5%	0.0%	**93.6%**	0.0%	0.0%	**94.3%**
Trucks	4	0	0	**4**	0	0	0	0	0	**0**	0	0	0	11	0	**11**	0	0	**15**
% Trucks	2.0%	0.0%	0.0%	**1.9%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	4.8%	0.0%	**4.7%**	0.0%	0.0%	**3.3%**
Buses	1	0	0	**1**	0	0	0	0	0	**0**	0	0	0	2	0	**2**	0	0	**3**
% Buses	0.5%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.9%	0.0%	**0.0%**	0.0%	0.0%	**0.7%**
Pedestrians	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**





TRI-STATE TRAFFIC DATA TSTData.com

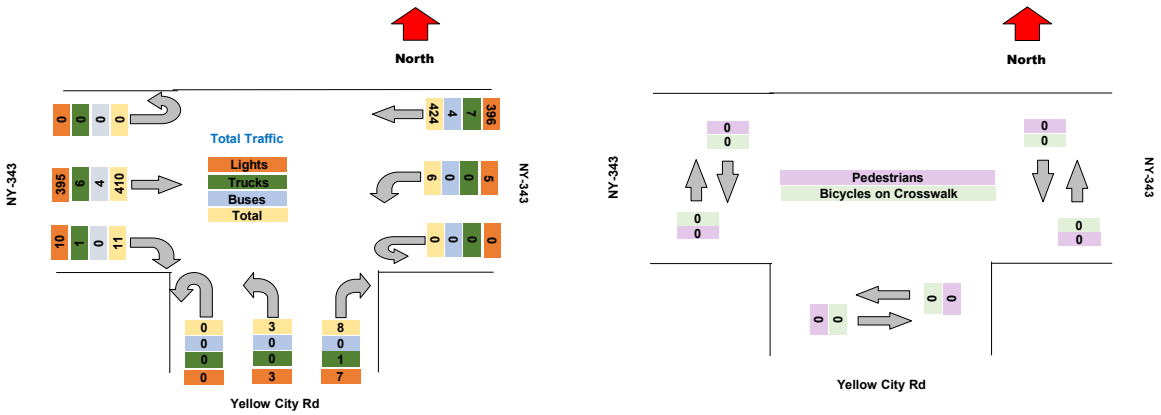
Project	Creighton Manning
Project Code	10889
Site Name	NY 343 & Yellow City Road
Legs and Movements	All Processed Legs & Movements
Bin Size	15 minutes
Survey Date	2022/05/14, Saturday
Location	NY 343 & Yellow City Road
Latitude and Longitude	41.856847, -73.519277

	Start	End	PHF
PM Peak	2022/05/14 13:00:00	2022/05/14 14:00:00	0.874

Turning Movement Data

Leg	**NY-343**						**Yellow City Rd**						**NY-343**						
Direction	**Westbound**						**Northbound**						**Eastbound**						
Start Time	Thru	Left	U-Turn	**App Total**	Peds CW	Peds CCW	Right	Left	U-Turn	**App Total**	Peds CW	Peds CCW	Right	Thru	U-Turn	**App Total**	Peds CW	Peds CCW	**Total**
12:00:00 PM	47	0	0	**47**	0	0	0	0	0	**0**	0	0	0	63	0	**63**	0	0	**110**
12:15:00 PM	45	0	0	**45**	0	0	2	1	0	**3**	0	0	1	53	0	**54**	0	0	**102**
12:30:00 PM	53	0	0	**53**	0	0	1	0	0	**1**	0	0	3	53	0	**56**	0	0	**110**
12:45:00 PM	55	1	0	**56**	0	0	1	1	0	**2**	0	0	0	45	0	**45**	0	0	**103**
Hourly Total	200	1	0	**201**	0	0	4	2	0	**6**	0	0	4	214	0	**218**	0	0	**425**
1:00:00 PM	68	2	0	**70**	0	0	1	1	0	**2**	0	0	0	39	0	**39**	0	0	**111**
1:15:00 PM	43	2	0	**45**	0	0	0	0	0	**0**	0	0	0	58	0	**58**	0	0	**103**
1:30:00 PM	51	0	0	**51**	0	0	1	0	0	**1**	0	0	2	44	0	**46**	0	0	**98**
1:45:00 PM	62	1	0	**63**	0	0	2	0	0	**2**	0	0	5	55	0	**60**	0	0	**125**
Hourly Total	224	5	0	**229**	0	0	4	1	0	**5**	0	0	7	196	0	**203**	0	0	**437**
Grand Total	424	6	0	**430**	0	0	8	3	0	**11**	0	0	11	410	0	**421**	0	0	**862**
% Approach	98.6%	1.4%	0.0%	**0.0%**	0.0%	0.0%	72.7%	27.3%	0.0%	**0.0%**	0.0%	0.0%	2.6%	97.4%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
% Total	49.2%	0.7%	0.0%	**49.9%**	0.0%	0.0%	0.9%	0.3%	0.0%	**1.3%**	0.0%	0.0%	1.3%	47.6%	0.0%	**48.8%**	0.0%	0.0%	**0.0%**
Lights	396	5	0	**401**	0	0	7	3	0	**10**	0	0	10	395	0	**405**	0	0	**816**
% Lights	93.4%	83.3%	0.0%	**93.3%**	0.0%	0.0%	87.5%	100.0%	0.0%	**90.9%**	0.0%	0.0%	90.9%	96.3%	0.0%	**96.2%**	0.0%	0.0%	**94.7%**
Trucks	7	0	0	**7**	0	0	1	0	0	**1**	0	0	1	6	0	**7**	0	0	**15**
% Trucks	1.7%	0.0%	0.0%	**1.6%**	0.0%	0.0%	12.5%	0.0%	0.0%	**9.1%**	0.0%	0.0%	9.1%	1.5%	0.0%	**1.7%**	0.0%	0.0%	**1.7%**
Buses	4	0	0	**4**	0	0	0	0	0	**0**	0	0	0	4	0	**4**	0	0	**8**
% Buses	0.9%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	1.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Pedestrians	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

Turning Movement Data Plot

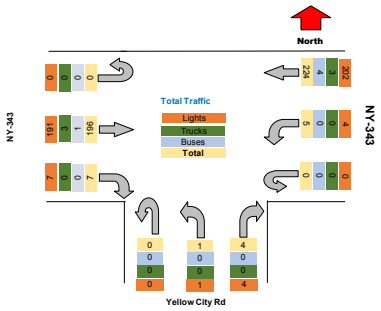


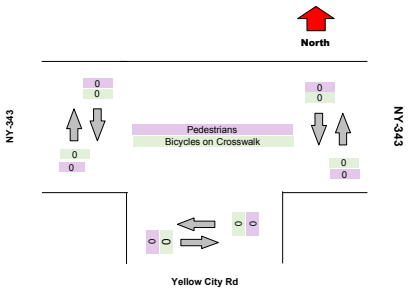
TRI-STATE TRAFFIC DATA TSTData.com

Turning Movement Peak Hour Data (PM)

1:00:00 PM

Leg	NY-343						Yellow City Rd						NY-343						
Direction	Westbound						Northbound						Eastbound						
Start Time	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	U-Turn	App Total	Peds CW	Peds CCW	Total
1:00:00 PM	68	2	0	**70**	0	0	1	1	0	**2**	0	0	0	39	0	**39**	0	0	**111**
1:15:00 PM	43	2	0	**45**	0	0	0	0	0	**0**	0	0	0	58	0	**58**	0	0	**103**
1:30:00 PM	51	0	0	**51**	0	0	1	0	0	**1**	0	0	2	44	0	**46**	0	0	**98**
1:45:00 PM	62	1	0	**63**	0	0	2	0	0	**2**	0	0	5	55	0	**60**	0	0	**125**
Grand Total	224	5	0	**229**	0	0	4	1	0	**5**	0	0	7	196	0	**203**	0	0	**437**
% Approach	97.8%	2.2%	0.0%	**0.0%**	0.0%	0.0%	80.0%	20.0%	0.0%	**0.0%**	0.0%	0.0%	3.4%	96.6%	0.0%	**0.0%**	0.0%	0.0%	
% Total	51.3%	1.1%	0.0%	**52.4%**	0.0%	0.0%	0.9%	0.2%	0.0%	**1.1%**	0.0%	0.0%	1.6%	44.9%	0.0%	**46.5%**	0.0%	0.0%	
PHF	0.824	0.625	0.000	**0.818**	0.000	0.000	0.500	0.250	0.000	**0.625**	0.000	0.000	0.350	0.845	0.000	**0.846**	0.000	0.000	**0.874**
Lights	202	4	0	**206**	0	0	4	1	0	**5**	0	0	7	191	0	**198**	0	0	**409**
% Lights	90.2%	80.0%	0.0%	**90.0%**	0.0%	0.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	97.4%	0.0%	**97.5%**	0.0%	0.0%	**93.6%**
Trucks	3	0	0	**3**	0	0	0	0	0	**0**	0	0	0	3	0	**3**	0	0	**6**
% Trucks	1.3%	0.0%	0.0%	**1.3%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	1.5%	0.0%	**1.5%**	0.0%	0.0%	**1.4%**
Buses	4	0	0	**4**	0	0	0	0	0	**0**	0	0	0	1	0	**1**	0	0	**5**
% Buses	1.8%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.5%	0.0%	**0.0%**	0.0%	0.0%	**1.1%**
Pedestrians	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**





TRI-STATE TRAFFIC DATA TSTData.com

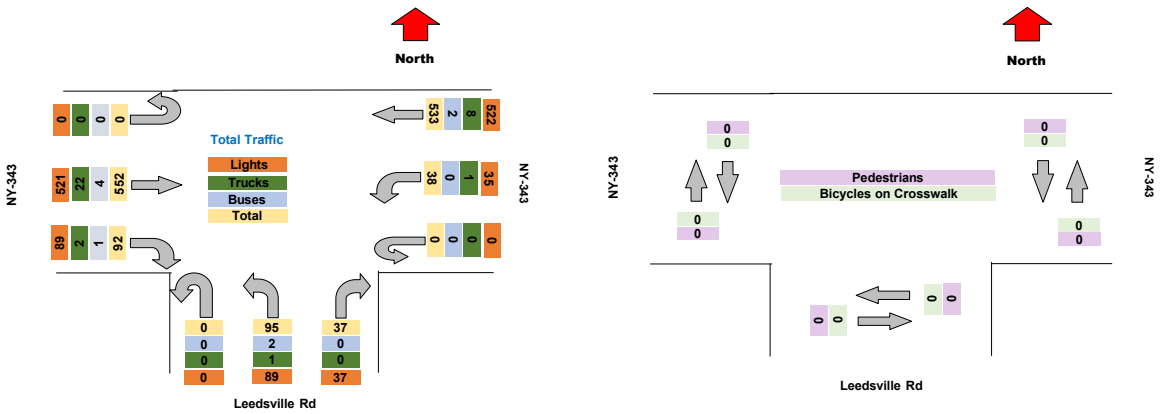
Project	Creighton Manning
Project Code	10889
Site Name	NY 343 & Leedsville Road
Legs and Movements	All Processed Legs & Movements
Bin Size	15 minutes
Survey Date	2022/05/13, Friday
Location	NY 343 & Leedsville Road
Latitude and Longitude	41.857394, -73.515422

	Start	End	PHF
PM Peak	2022/05/13 15:15:00	2022/05/13 16:15:00	0.9464

Turning Movement Data

Leg	NY-343						Leedsville Rd						NY-343						
Direction	Westbound						Northbound						Eastbound						
Start Time	Thru	Left	U-Turn	**App Total**	Peds CW	Peds CCW	Right	Left	U-Turn	**App Total**	Peds CW	Peds CCW	Right	Thru	U-Turn	**App Total**	Peds CW	Peds CCW	**Total**
3:00:00 PM	48	1	0	**49**	0	0	4	5	0	**9**	0	0	9	32	0	**41**	0	0	**99**
3:15:00 PM	48	7	0	**55**	0	0	7	7	0	**14**	0	0	5	52	0	**57**	0	0	**126**
3:30:00 PM	46	6	0	**52**	0	0	4	11	0	**15**	0	0	6	47	0	**53**	0	0	**120**
3:45:00 PM	38	4	0	**42**	0	0	0	15	0	**15**	0	0	12	48	0	**60**	0	0	**117**
Hourly Total	180	18	0	**198**	0	0	15	38	0	**53**	0	0	32	179	0	**211**	0	0	**462**
4:00:00 PM	51	4	0	**55**	0	0	6	7	0	**13**	0	0	8	38	0	**46**	0	0	**114**
4:15:00 PM	39	3	0	**42**	0	0	2	6	0	**8**	0	0	13	60	0	**73**	0	0	**123**
4:30:00 PM	39	2	0	**41**	0	0	0	5	0	**5**	0	0	3	45	0	**48**	0	0	**94**
4:45:00 PM	44	1	0	**45**	0	0	1	5	0	**6**	0	0	10	44	0	**54**	0	0	**105**
Hourly Total	173	10	0	**183**	0	0	9	23	0	**32**	0	0	34	187	0	**221**	0	0	**436**
5:00:00 PM	39	3	0	**42**	0	0	4	7	0	**11**	0	0	5	48	0	**53**	0	0	**106**
5:15:00 PM	43	2	0	**45**	0	0	5	10	0	**15**	0	0	8	51	0	**59**	0	0	**119**
5:30:00 PM	55	0	0	**55**	0	0	4	6	0	**10**	0	0	7	38	0	**45**	0	0	**110**
5:45:00 PM	43	5	0	**48**	0	0	0	11	0	**11**	0	0	6	49	0	**55**	0	0	**114**
Hourly Total	180	10	0	**190**	0	0	13	34	0	**47**	0	0	26	186	0	**212**	0	0	**449**
Grand Total	533	38	0	**571**	0	0	37	95	0	**132**	0	0	92	552	0	**644**	0	0	**1347**
% Approach	93.3%	6.7%	0.0%	**0.0%**	0.0%	0.0%	28.0%	72.0%	0.0%	**0.0%**	0.0%	0.0%	14.3%	85.7%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
% Total	39.6%	2.8%	0.0%	**42.4%**	0.0%	0.0%	2.7%	7.1%	0.0%	**9.8%**	0.0%	0.0%	6.8%	41.0%	0.0%	**47.8%**	0.0%	0.0%	**0.0%**
Lights	522	35	0	**557**	0	0	37	89	0	**126**	0	0	89	521	0	**610**	0	0	**1293**
% Lights	97.9%	92.1%	0.0%	**97.5%**	0.0%	0.0%	100.0%	93.7%	0.0%	**95.5%**	0.0%	0.0%	96.7%	94.4%	0.0%	**94.7%**	0.0%	0.0%	**96.0%**
Trucks	8	1	0	**9**	0	0	0	1	0	**1**	0	0	2	22	0	**24**	0	0	**34**
% Trucks	1.5%	2.6%	0.0%	**1.6%**	0.0%	0.0%	0.0%	1.1%	0.0%	**0.8%**	0.0%	0.0%	2.2%	4.0%	0.0%	**3.7%**	0.0%	0.0%	**2.5%**
Buses	2	0	0	**2**	0	0	0	2	0	**2**	0	0	1	4	0	**5**	0	0	**9**
% Buses	0.4%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	2.1%	0.0%	**0.0%**	0.0%	0.0%	1.1%	0.7%	0.0%	**0.0%**	0.0%	0.0%	**0.7%**
Pedestrians	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

Turning Movement Data Plot

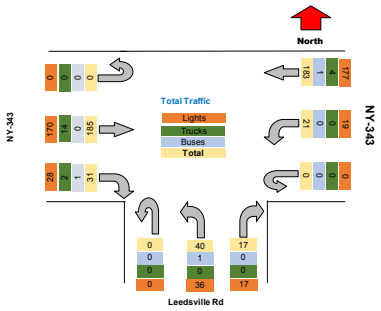


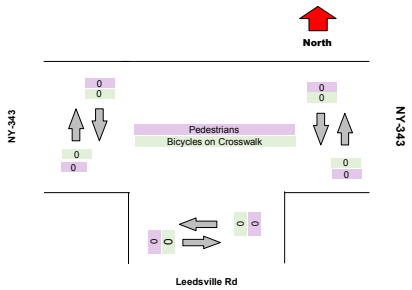
TRI-STATE TRAFFIC DATA TSTData.com

Turning Movement Peak Hour Data (PM)

3:15:00 PM

Leg	NY-343						Leedsville Rd						NY-343						
Direction	Westbound						Northbound						Eastbound						
Start Time	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	U-Turn	App Total	Peds CW	Peds CCW	Total
3:15:00 PM	48	7	0	**55**	0	0	7	7	0	**14**	0	0	5	52	0	**57**	0	0	**126**
3:30:00 PM	46	6	0	**52**	0	0	4	11	0	**15**	0	0	6	47	0	**53**	0	0	**120**
3:45:00 PM	38	4	0	**42**	0	0	0	15	0	**15**	0	0	12	48	0	**60**	0	0	**117**
4:00:00 PM	51	4	0	**55**	0	0	6	7	0	**13**	0	0	8	38	0	**46**	0	0	**114**
Grand Total	183	21	0	**204**	0	0	17	40	0	**57**	0	0	31	185	0	**216**	0	0	**477**
% Approach	89.7%	10.3%	0.0%	**0.0%**	0.0%	0.0%	29.8%	70.2%	0.0%	**0.0%**	0.0%	0.0%	14.4%	85.6%	0.0%	**0.0%**	0.0%	0.0%	
% Total	38.4%	4.4%	0.0%	**42.8%**	0.0%	0.0%	3.6%	8.4%	0.0%	**11.9%**	0.0%	0.0%	6.5%	38.8%	0.0%	**45.3%**	0.0%	0.0%	
PHF	0.897	0.750	0.000	**0.927**	0.000	0.000	0.607	0.667	0.000	**0.950**	0.000	0.000	0.646	0.889	0.000	**0.900**	0.000	0.000	**0.946**
Lights	177	19	0	**196**	0	0	17	36	0	**53**	0	0	28	170	0	**198**	0	0	**447**
% Lights	96.7%	90.5%	0.0%	**96.1%**	0.0%	0.0%	100.0%	90.0%	0.0%	**93.0%**	0.0%	0.0%	90.3%	91.9%	0.0%	**91.7%**	0.0%	0.0%	**93.7%**
Trucks	4	0	0	**4**	0	0	0	0	0	**0**	0	0	2	14	0	**16**	0	0	**20**
% Trucks	2.2%	0.0%	0.0%	**2.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	6.5%	7.6%	0.0%	**7.4%**	0.0%	0.0%	**4.2%**
Buses	1	0	0	**1**	0	0	0	1	0	**1**	0	0	1	0	0	**1**	0	0	**3**
% Buses	0.5%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	2.5%	0.0%	**0.0%**	0.0%	0.0%	3.2%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.6%**
Pedestrians	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**





TRI-STATE TRAFFIC DATA TSTData.com

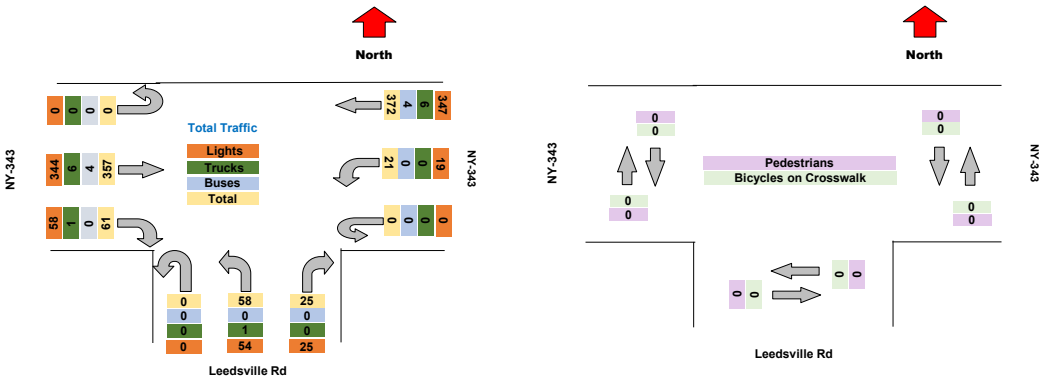
Project	Creighton Manning
Project Code	10889
Site Name	NY 343 & Leedsville Road
Legs and Movements	All Processed Legs & Movements
Bin Size	15 minutes
Survey Date	2022/05/14, Saturday
Location	NY 343 & Leedsville Road
Latitude and Longitude	41.857394, -73.515422

	Start	End	PHF
PM Peak	2022/05/14 13:00:00	2022/05/14 14:00:00	0.8788

Turning Movement Data

Leg	**NY-343**						**Leedsville Rd**						**NY-343**						
Direction	**Westbound**						**Northbound**						**Eastbound**						
Start Time	Thru	Left	U-Turn	**App Total**	Peds CW	Peds CCW	Right	Left	U-Turn	**App Total**	Peds CW	Peds CCW	Right	Thru	U-Turn	**App Total**	Peds CW	Peds CCW	**Total**
12:00:00 PM	43	2	0	**45**	0	0	3	5	0	**8**	0	0	10	52	0	**62**	0	0	**115**
12:15:00 PM	35	2	0	**37**	0	0	1	8	0	**9**	0	0	5	48	0	**53**	0	0	**99**
12:30:00 PM	48	2	0	**50**	0	0	3	5	0	**8**	0	0	8	47	0	**55**	0	0	**113**
12:45:00 PM	51	1	0	**52**	0	0	5	8	0	**13**	0	0	6	39	0	**45**	0	0	**110**
Hourly Total	177	7	0	**184**	0	0	12	26	0	**38**	0	0	29	186	0	**215**	0	0	**437**
1:00:00 PM	60	0	0	**60**	0	0	3	9	0	**12**	0	0	7	33	0	**40**	0	0	**112**
1:15:00 PM	36	5	0	**41**	0	0	1	8	0	**9**	0	0	11	47	0	**58**	0	0	**108**
1:30:00 PM	46	6	0	**52**	0	0	4	6	0	**10**	0	0	6	39	0	**45**	0	0	**107**
1:45:00 PM	53	3	0	**56**	0	0	5	9	0	**14**	0	0	8	52	0	**60**	0	0	**130**
Hourly Total	195	14	0	**209**	0	0	13	32	0	**45**	0	0	32	171	0	**203**	0	0	**457**
Grand Total	372	21	0	**393**	0	0	25	58	0	**83**	0	0	61	357	0	**418**	0	0	**894**
% Approach	94.7%	5.3%	0.0%	**0.0%**	0.0%	0.0%	30.1%	69.9%	0.0%	**0.0%**	0.0%	0.0%	14.6%	85.4%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
% Total	41.6%	2.3%	0.0%	**44.0%**	0.0%	0.0%	2.8%	6.5%	0.0%	**9.3%**	0.0%	0.0%	6.8%	39.9%	0.0%	**46.8%**	0.0%	0.0%	**0.0%**
Lights	347	19	0	**366**	0	0	25	54	0	**79**	0	0	58	344	0	**402**	0	0	**847**
% Lights	93.3%	90.5%	0.0%	**93.1%**	0.0%	0.0%	100.0%	93.1%	0.0%	**95.2%**	0.0%	0.0%	95.1%	96.4%	0.0%	**96.2%**	0.0%	0.0%	**94.7%**
Trucks	6	0	0	**6**	0	0	0	1	0	**1**	0	0	1	6	0	**7**	0	0	**14**
% Trucks	1.6%	0.0%	0.0%	**1.5%**	0.0%	0.0%	0.0%	1.7%	0.0%	**1.2%**	0.0%	0.0%	1.6%	1.7%	0.0%	**1.7%**	0.0%	0.0%	**1.6%**
Buses	4	0	0	**4**	0	0	0	0	0	**0**	0	0	0	4	0	**4**	0	0	**8**
% Buses	1.1%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	1.1%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Pedestrians	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

Turning Movement Data Plot

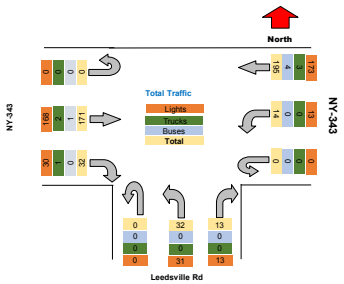


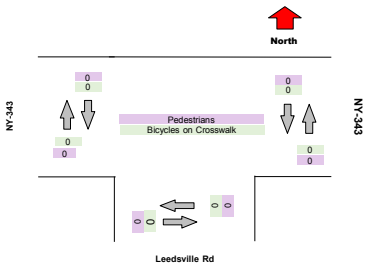
TRI-STATE TRAFFIC DATA TSTData.com

Turning Movement Peak Hour Data (PM)

1:00:00 PM

Leg	NY-343						Leedsville Rd						NY-343						
Direction	Westbound						Northbound						Eastbound						
Start Time	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	U-Turn	App Total	Peds CW	Peds CCW	Total
1:00:00 PM	60	0	0	**60**	0	0	3	9	0	**12**	0	0	7	33	0	**40**	0	0	**112**
1:15:00 PM	36	5	0	**41**	0	0	1	8	0	**9**	0	0	11	47	0	**58**	0	0	**108**
1:30:00 PM	46	6	0	**52**	0	0	4	6	0	**10**	0	0	6	39	0	**45**	0	0	**107**
1:45:00 PM	53	3	0	**56**	0	0	5	9	0	**14**	0	0	8	52	0	**60**	0	0	**130**
Grand Total	195	14	0	**209**	0	0	13	32	0	**45**	0	0	32	171	0	**203**	0	0	**457**
% Approach	93.3%	6.7%	0.0%	**0.0%**	0.0%	0.0%	28.9%	71.1%	0.0%	**0.0%**	0.0%	0.0%	15.8%	84.2%	0.0%	**0.0%**	0.0%	0.0%	
% Total	42.7%	3.1%	0.0%	**45.7%**	0.0%	0.0%	2.8%	7.0%	0.0%	**9.8%**	0.0%	0.0%	7.0%	37.4%	0.0%	**44.4%**	0.0%	0.0%	
PHF	0.813	0.583	0.000	**0.871**	0.000	0.000	0.650	0.889	0.000	**0.804**	0.000	0.000	0.727	0.822	0.000	**0.846**	0.000	0.000	**0.879**
Lights	173	13	0	**186**	0	0	13	31	0	**44**	0	0	30	168	0	**198**	0	0	**428**
% Lights	88.7%	92.9%	0.0%	**89.0%**	0.0%	0.0%	100.0%	96.9%	0.0%	**97.8%**	0.0%	0.0%	93.8%	98.2%	0.0%	**97.5%**	0.0%	0.0%	**93.7%**
Trucks	3	0	0	**3**	0	0	0	0	0	**0**	0	0	1	2	0	**3**	0	0	**6**
% Trucks	1.5%	0.0%	0.0%	**1.4%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	3.1%	1.2%	0.0%	**1.5%**	0.0%	0.0%	**1.3%**
Buses	4	0	0	**4**	0	0	0	0	0	**0**	0	0	0	1	0	**1**	0	0	**5**
% Buses	2.1%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.6%	0.0%	**0.0%**	0.0%	0.0%	**1.1%**
Pedestrians	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**





TSTData.com

Project : VBH Malta NY
Site : Site 4
Location : 42.948550, -73.790036

Survey Date : 2021-04-28, Wednesday

Project	Creighton Manning
Project Code	10889
Site Name	Leedsville Rd & Randall Rd &
Legs and Movements	All Processed Legs & Movem
Bin Size	15 minutes
Survey Date	2022/05/13, Friday
Location	Leedsville Rd & Randall Rd &
Latitude and Longitude	41.855869, -73.514291

	Start	End	PHF
PM Peak	2022/05/13 15:00:00	2022/05/13 16:00:00	0.87

Turning Movement Data

Leg	Leedsville Rd							Randall Rd							Leedsville Rd							Troutbeck Ln							
Direction	Southbound							Westbound							Northbound							Eastbound							
Start Time	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Total
3:00:00 PM	1	8	2	0	**11**	0	0	0	1	1	0	**2**	0	0	0	7	0	0	**7**	0	0	1	0	5	0	**6**	0	0	**26**
3:15:00 PM	0	11	1	0	**12**	0	0	1	0	0	0	**1**	0	0	0	12	0	0	**12**	0	0	0	0	0	0	**0**	0	0	**25**
3:30:00 PM	1	12	0	0	**13**	0	0	0	1	0	0	**1**	0	0	3	13	0	0	**16**	0	0	1	0	2	0	**3**	0	0	**33**
3:45:00 PM	4	9	3	0	**16**	0	0	3	0	2	0	**5**	0	0	0	11	0	0	**11**	0	0	1	1	0	0	**2**	0	0	**34**
Hourly Total	6	40	6	0	**52**	0	0	4	2	3	0	**9**	0	0	3	43	0	0	**46**	0	0	3	1	7	0	**11**	0	0	**118**
4:00:00 PM	2	3	5	0	**10**	0	0	1	0	0	0	**1**	0	0	0	10	0	0	**10**	0	0	0	0	3	0	**3**	0	0	**24**
4:15:00 PM	2	13	1	0	**16**	0	0	1	0	2	0	**3**	0	0	0	4	0	0	**4**	0	0	1	0	1	0	**2**	0	0	**25**
4:30:00 PM	2	3	0	0	**5**	0	0	0	0	0	0	**0**	0	0	0	2	0	0	**2**	0	0	2	0	0	0	**2**	0	0	**9**
4:45:00 PM	3	7	0	0	**10**	0	0	1	0	0	0	**1**	0	0	1	3	1	0	**5**	0	0	1	0	1	0	**2**	0	0	**18**
Hourly Total	9	26	6	0	**41**	0	0	3	0	2	0	**5**	0	0	1	19	1	0	**21**	0	0	4	0	5	0	**9**	0	0	**76**
5:00:00 PM	2	6	1	0	**9**	0	0	1	0	0	0	**1**	0	0	0	10	0	0	**10**	0	0	0	0	1	0	**1**	0	0	**21**
5:15:00 PM	2	6	0	0	**8**	0	0	2	0	0	0	**2**	0	0	0	10	1	0	**11**	0	0	0	0	3	0	**3**	0	0	**24**
5:30:00 PM	3	5	0	0	**8**	0	0	0	0	1	0	**1**	0	0	0	8	0	0	**8**	0	0	0	0	2	0	**2**	0	0	**19**
5:45:00 PM	6	6	0	0	**12**	0	0	2	0	0	0	**2**	0	0	0	6	2	0	**8**	0	0	0	0	3	0	**3**	0	0	**25**
Hourly Total	13	23	1	0	**37**	0	0	5	0	1	0	**6**	0	0	0	34	3	0	**37**	0	0	0	0	9	0	**9**	0	0	**89**
Grand Total	28	89	13	0	**130**	0	0	12	2	6	0	**20**	0	0	4	96	4	0	**104**	0	0	7	1	21	0	**29**	0	0	**283**
% Approach	21.5%	68.5%	10.0%	0.0%	**0.0%**	0.0%	0.0%	60.0%	10.0%	30.0%	0.0%	**0.0%**	0.0%	0.0%	3.8%	92.3%	3.8%	0.0%	**0.0%**	0.0%	0.0%	24.1%	3.4%	72.4%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
% Total	9.9%	31.4%	4.6%	0.0%	**45.9%**	0.0%	0.0%	4.2%	0.7%	2.1%	0.0%	**7.1%**	0.0%	0.0%	1.4%	33.9%	1.4%	0.0%	**36.7%**	0.0%	0.0%	2.5%	0.4%	7.4%	0.0%	**10.2%**	0.0%	0.0%	**0.0%**
Lights	0	84	12	0	**96**	0	0	12	2	6	0	**20**	0	0	4	90	4	0	**98**	0	0	7	1	21	0	**29**	0	0	**243**
% Lights	0.0%	94.4%	92.3%	0.0%	**73.8%**	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	93.8%	100.0%	0.0%	**94.2%**	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	**85.9%**
Trucks	0	2	1	0	**3**	0	0	0	0	0	0	**0**	0	0	0	1	0	0	**1**	0	0	0	0	0	0	**0**	0	0	**4**
% Trucks	0.0%	2.2%	7.7%	0.0%	**2.3%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	**1.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**1.4%**
Buses	0	1	0	0	**1**	0	0	0	0	0	0	**0**	0	0	0	2	0	0	**2**	0	0	0	0	0	0	**0**	0	0	**3**
% Buses	0.0%	1.1%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	2.1%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**1.1%**
Pedestrians	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

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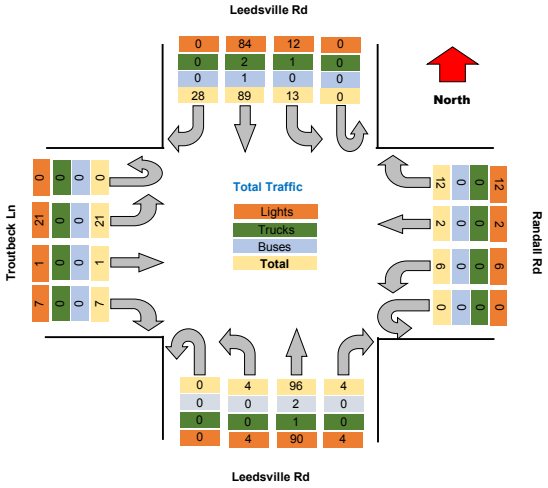
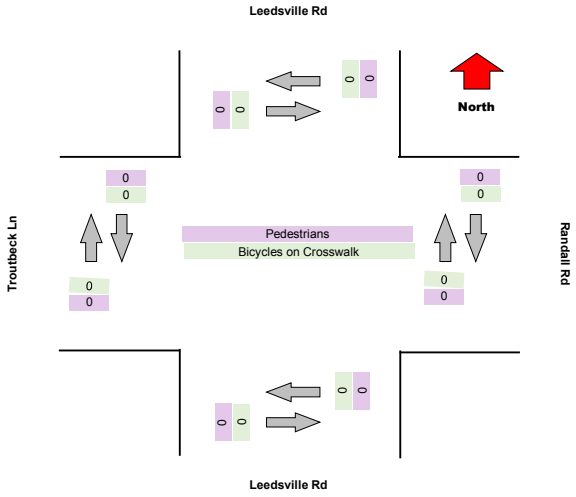
Project : VBH Malta NY
Site : Site 4
Location : 42.948550, -73.790036

Survey Date : 2021-04-28, Wednesday

Turning Movement Data Plot





TSTData.com

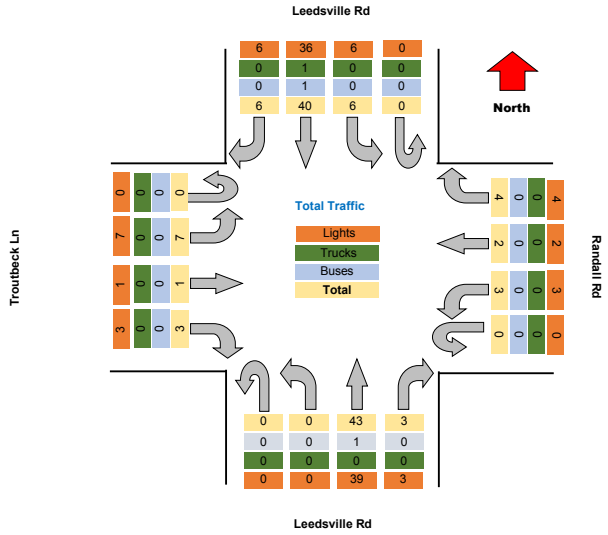
Project : VBH Malta NY
Site : Site 4
Location : 42.948550, -73.790036

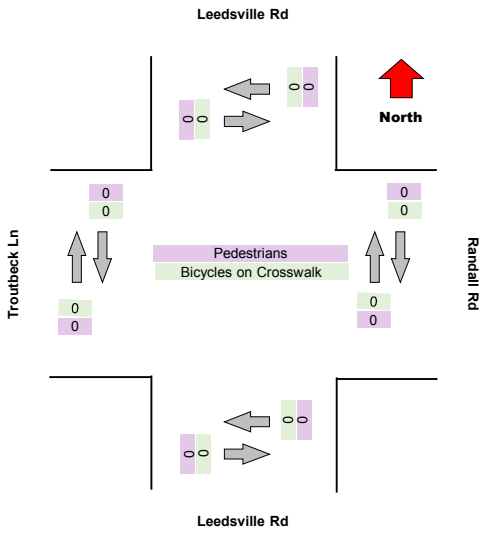
Survey Date : 2021-04-28, Wednesday

Turning Movement Peak Hour Data (PM)

3:00:00 PM

Leg	Leedsville Rd							Randall Rd							Leedsville Rd							Troutbeck Ln							
Direction	Southbound							Westbound							Northbound							Eastbound							
Start Time	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Total
3:00:00 PM	1	8	2	0	**11**	0	0	0	1	1	0	**2**	0	0	0	7	0	0	**7**	0	0	1	0	5	0	**6**	0	0	**26**
3:15:00 PM	0	11	1	0	**12**	0	0	1	0	0	0	**1**	0	0	0	12	0	0	**12**	0	0	0	0	0	0	**0**	0	0	**25**
3:30:00 PM	1	12	0	0	**13**	0	0	0	1	0	0	**1**	0	0	3	13	0	0	**16**	0	0	1	0	2	0	**3**	0	0	**33**
3:45:00 PM	4	9	3	0	**16**	0	0	3	0	2	0	**5**	0	0	0	11	0	0	**11**	0	0	1	1	0	0	**2**	0	0	**34**
Grand Total	6	40	6	0	**52**	0	0	4	2	3	0	**9**	0	0	3	43	0	0	**46**	0	0	3	1	7	0	**11**	0	0	**118**
% Approach	11.5%	76.9%	11.5%	0.0%	**0.0%**	0.0%	0.0%	44.4%	22.2%	33.3%	0.0%	**0.0%**	0.0%	0.0%	6.5%	93.5%	0.0%	0.0%	**0.0%**	0.0%	0.0%	27.3%	9.1%	63.6%	0.0%	**0.0%**	0.0%	0.0%	
% Total	5.1%	33.9%	5.1%	0.0%	**44.1%**	0.0%	0.0%	3.4%	1.7%	2.5%	0.0%	**7.6%**	0.0%	0.0%	2.5%	36.4%	0.0%	0.0%	**39.0%**	0.0%	0.0%	2.5%	0.8%	5.9%	0.0%	**9.3%**	0.0%	0.0%	
PHF	0.375	0.833	0.500	0.000	**0.813**	0.000	0.000	0.333	0.500	0.375	0.000	**0.450**	0.000	0.000	0.250	0.827	0.000	0.000	**0.719**	0.000	0.000	0.750	0.250	0.350	0.000	**0.458**	0.000	0.000	**0.868**
Lights	6	36	6	0	**48**	0	0	4	2	3	0	**9**	0	0	3	39	0	0	**42**	0	0	3	1	7	0	**11**	0	0	**110**
% Lights	100.0%	90.0%	100.0%	0.0%	**92.3%**	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	90.7%	0.0%	0.0%	**91.3%**	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	**93.2%**
Trucks	0	1	0	0	**1**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	**1**
% Trucks	0.0%	2.5%	0.0%	0.0%	**1.9%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.8%**
Buses	0	1	0	0	**1**	0	0	0	0	0	0	**0**	0	0	0	1	0	0	**1**	0	0	0	0	0	0	**0**	0	0	**2**
% Buses	0.0%	2.5%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**1.7%**
Pedestrians	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	**0**
% Pedestrians	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	**0**
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**





TSTData.com

Project : VBH Malta NY
Site : Site 4
Location : 42.948550, -73.790036

Survey Date : 2021-04-28, Wednesday

Project	Creighton Manning
Project Code	10889
Site Name	Leedsville Rd & Randall Rd &
Legs and Movements	All Processed Legs & Movem
Bin Size	15 minutes
Survey Date	2022/05/14, Saturday
Location	Leedsville Rd & Randall Rd &
Latitude and Longitude	41.855869, -73.514291

	Start	End	PHF
PM Peak	2022/05/14 13:00:00	2022/05/14 14:00:00	0.84

Turning Movement Data

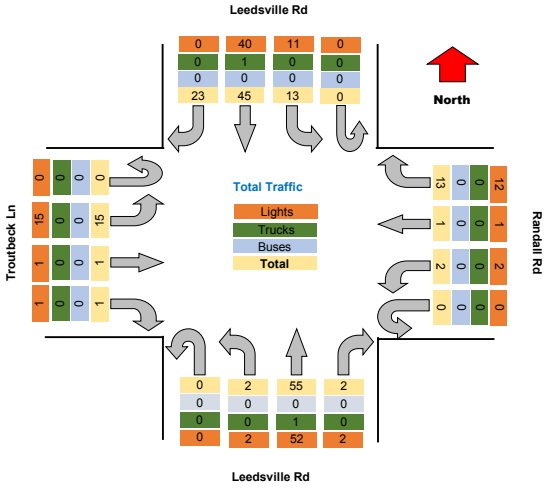
Leg	Leedsville Rd							Randall Rd							Leedsville Rd							Troutbeck Ln							
Direction	Southbound							Westbound							Northbound							Eastbound							
Start Time	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Total
12:00:00 PM	3	4	1	0	**8**	0	0	2	0	1	0	**3**	0	0	2	4	1	0	**7**	0	0	0	1	3	0	**4**	0	0	**22**
12:15:00 PM	1	1	6	0	**8**	0	0	2	0	0	0	**2**	0	0	0	6	0	0	**6**	0	0	0	0	1	0	**1**	0	0	**17**
12:30:00 PM	2	7	1	0	**10**	0	0	1	0	0	0	**1**	0	0	0	7	0	0	**7**	0	0	0	0	0	0	**0**	0	0	**18**
12:45:00 PM	1	5	0	0	**6**	0	0	2	0	0	0	**2**	0	0	0	11	1	0	**12**	0	0	0	0	2	0	**2**	0	0	**22**
Hourly Total	7	17	8	0	**32**	0	0	7	0	1	0	**8**	0	0	2	28	2	0	**32**	0	0	0	1	6	0	**7**	0	0	**79**
1:00:00 PM	2	5	1	0	**8**	0	0	1	0	0	0	**1**	0	0	0	8	0	0	**8**	0	0	0	0	3	0	**3**	0	0	**20**
1:15:00 PM	9	7	2	0	**18**	0	0	1	0	1	0	**2**	0	0	0	6	0	0	**6**	0	0	1	0	1	0	**2**	0	0	**28**
1:30:00 PM	3	8	0	0	**11**	0	0	0	1	0	0	**1**	0	0	0	5	0	0	**5**	0	0	0	0	4	0	**4**	0	0	**21**
1:45:00 PM	2	8	2	0	**12**	0	0	4	0	0	0	**4**	0	0	0	8	0	0	**8**	0	0	0	0	1	0	**1**	0	0	**25**
Hourly Total	16	28	5	0	**49**	0	0	6	1	1	0	**8**	0	0	0	27	0	0	**27**	0	0	1	0	9	0	**10**	0	0	**94**
Grand Total	23	45	13	0	**81**	0	0	13	1	2	0	**16**	0	0	2	55	2	0	**59**	0	0	1	1	15	0	**17**	0	0	**173**
% Approach	28.4%	55.6%	16.0%	0.0%	**0.0%**	0.0%	0.0%	81.3%	6.3%	12.5%	0.0%	**0.0%**	0.0%	0.0%	3.4%	93.2%	3.4%	0.0%	**0.0%**	0.0%	0.0%	5.9%	5.9%	88.2%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
% Total	13.3%	26.0%	7.5%	0.0%	**46.8%**	0.0%	0.0%	7.5%	0.6%	1.2%	0.0%	**9.2%**	0.0%	0.0%	1.2%	31.8%	1.2%	0.0%	**34.1%**	0.0%	0.0%	0.6%	0.6%	8.7%	0.0%	**9.8%**	0.0%	0.0%	**0.0%**
Lights	0	40	11	0	**51**	0	0	12	1	2	0	**15**	0	0	2	52	2	0	**56**	0	0	1	1	15	0	**17**	0	0	**139**
% Lights	0.0%	88.9%	84.6%	0.0%	**63.0%**	0.0%	0.0%	92.3%	100.0%	100.0%	0.0%	**93.8%**	0.0%	0.0%	100.0%	94.5%	100.0%	0.0%	**94.9%**	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	**80.3%**
Trucks	0	1	0	0	**1**	0	0	0	0	0	0	**0**	0	0	0	1	0	0	**1**	0	0	0	0	0	0	**0**	0	0	**2**
% Trucks	0.0%	2.2%	0.0%	0.0%	**1.2%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	**1.7%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**1.2%**
Buses	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	**0**
% Buses	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Pedestrians	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**

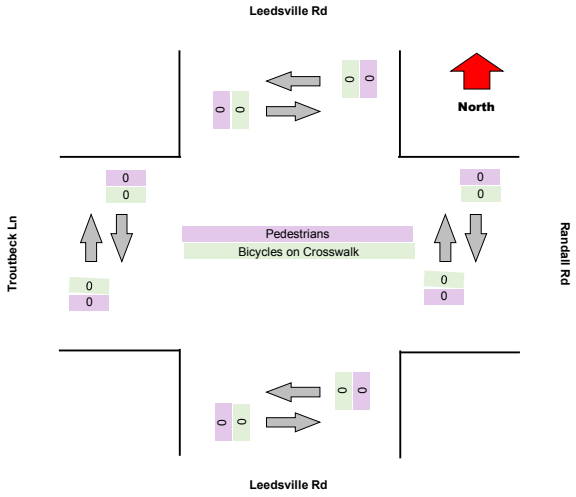
TSTData.com

Project : VBH Malta NY
Site : Site 4
Location : 42.948550, -73.790036

Survey Date : 2021-04-28, Wednesday

Turning Movement Data Plot





TSTData.com

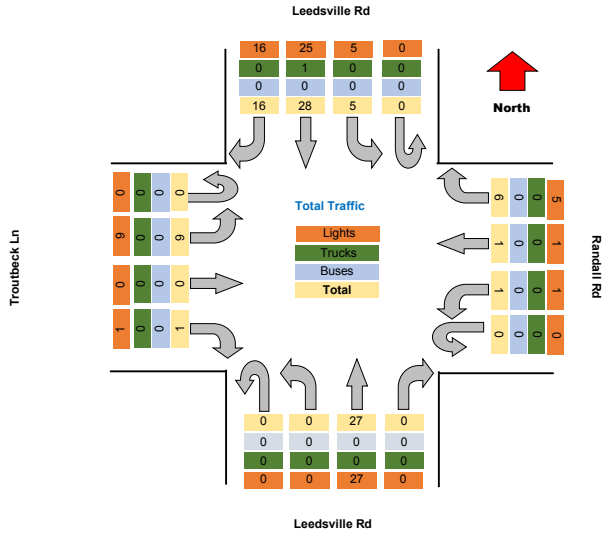
Project : VBH Malta NY
Site : Site 4
Location : 42.948550, -73.790036

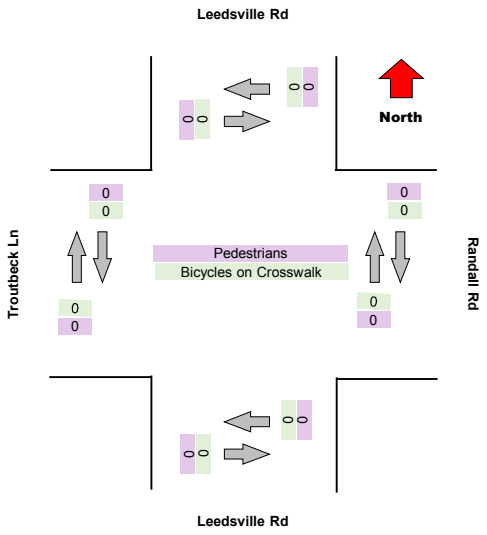
Survey Date : 2021-04-28, Wednesday

Turning Movement Peak Hour Data (PM)

1:00:00 PM

Leg	Leedsville Rd							Randall Rd							Leedsville Rd							Troutbeck Ln							
Direction	Southbound							Westbound							Northbound							Eastbound							
Start Time	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Total
1:00:00 PM	2	5	1	0	**8**	0	0	1	0	0	0	**1**	0	0	0	8	0	0	**8**	0	0	0	0	3	0	**3**	0	0	**20**
1:15:00 PM	9	7	2	0	**18**	0	0	1	0	1	0	**2**	0	0	0	6	0	0	**6**	0	0	1	0	1	0	**2**	0	0	**28**
1:30:00 PM	3	8	0	0	**11**	0	0	0	1	0	0	**1**	0	0	0	5	0	0	**5**	0	0	0	0	4	0	**4**	0	0	**21**
1:45:00 PM	2	8	2	0	**12**	0	0	4	0	0	0	**4**	0	0	0	8	0	0	**8**	0	0	0	0	1	0	**1**	0	0	**25**
Grand Total	16	28	5	0	**49**	0	0	6	1	1	0	**8**	0	0	0	27	0	0	**27**	0	0	1	0	9	0	**10**	0	0	**94**
% Approach	32.7%	57.1%	10.2%	0.0%	**0.0%**	0.0%	0.0%	75.0%	12.5%	12.5%	0.0%	**0.0%**	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	10.0%	0.0%	90.0%	0.0%	**0.0%**	0.0%	0.0%	
% Total	17.0%	29.8%	5.3%	0.0%	**52.1%**	0.0%	0.0%	6.4%	1.1%	1.1%	0.0%	**8.5%**	0.0%	0.0%	0.0%	28.7%	0.0%	0.0%	**28.7%**	0.0%	0.0%	1.1%	0.0%	9.6%	0.0%	**10.6%**	0.0%	0.0%	
PHF	0.444	0.875	0.625	0.000	**0.681**	0.000	0.000	0.375	0.250	0.250	0.000	**0.500**	0.000	0.000	0.000	0.844	0.000	0.000	**0.844**	0.000	0.000	0.250	0.000	0.563	0.000	**0.625**	0.000	0.000	**0.839**
Lights	16	25	5	0	**46**	0	0	5	1	1	0	**7**	0	0	0	27	0	0	**27**	0	0	1	0	9	0	**10**	0	0	**90**
% Lights	100.0%	89.3%	100.0%	0.0%	**93.9%**	0.0%	0.0%	83.3%	100.0%	100.0%	0.0%	**87.5%**	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	**100.0%**	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	**100.0%**	0.0%	0.0%	**95.7%**
Trucks	0	1	0	0	**1**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	**1**
% Trucks	0.0%	3.6%	0.0%	0.0%	**2.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**1.1%**
Buses	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	**0**
% Buses	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Pedestrians	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**
Bicycles on Crosswalk	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0	0	0	0	**0**	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	**0.0%**





Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

Road Name:
Segment: 80' SOUTH OF SPRINGARN RD
Ctr#: QZ12

Start Time	5/11/2022 Wed	N	S							Total
12:00 AM		*	*							*
01:00		*	*							*
02:00		*	*							*
03:00		*	*							*
04:00		*	*							*
05:00		*	*							*
06:00		*	*							*
07:00		*	*							*
08:00		*	*							*
09:00		*	*							*
10:00		*	*							*
11:00		*	*							*
12:00 PM		*	*							*
01:00		*	*							*
02:00		*	*							*
03:00		*	*							*
04:00		**37**	**45**							**82**
05:00		27	30							57
06:00		12	14							26
07:00		16	23							39
08:00		11	15							26
09:00		8	6							14
10:00		1	5							6
11:00		3	0							3
Total		115	138							253
Percent		45.5%	54.5%							
AM Peak	-	-	-	-	-	-	-	-	-	-
Vol.	-	-	-	-	-	-	-	-	-	-
PM Peak	-	16:00	16:00	-	-	-	-	-	-	16:00
Vol.	-	37	45	-	-	-	-	-	-	82

Road Name:
Segment: 80' SOUTH OF SPRINGARN RD
Ctr#: QZ12

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

Start Time	5/12/2022 Thu	N	S							Total
12:00 AM		0	0							0
01:00		0	0							0
02:00		0	0							0
03:00		0	0							0
04:00		3	0							3
05:00		9	6							15
06:00		17	15							32
07:00		22	22							44
08:00		**37**	31							**68**
09:00		31	26							57
10:00		26	**34**							60
11:00		35	33							68
12:00 PM		36	30							**66**
01:00		31	**35**							66
02:00		28	27							55
03:00		**37**	28							65
04:00		30	27							57
05:00		24	29							53
06:00		10	19							29
07:00		12	26							38
08:00		11	10							21
09:00		5	3							8
10:00		6	7							13
11:00		4	1							5
Total		414	409							823
Percent		50.3%	49.7%							
AM Peak	-	08:00	10:00	-	-	-	-	-	-	08:00
Vol.	-	37	34	-	-	-	-	-	-	68
PM Peak	-	15:00	13:00	-	-	-	-	-	-	12:00
Vol.	-	37	35	-	-	-	-	-	-	66

Road Name:
Segment: 80' SOUTH OF SPRINGARN RD
Ctr#: QZ12

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

Start Time	5/13/2022 Fri	N	S							Total
12:00 AM		1	2							3
01:00		2	0							2
02:00		0	0							0
03:00		1	1							2
04:00		1	0							1
05:00		7	6							13
06:00		19	8							27
07:00		20	22							42
08:00		35	31							66
09:00		35	32							67
10:00		22	31							53
11:00		**39**	**34**							**73**
12:00 PM		35	44							79
01:00		29	41							70
02:00		35	35							70
03:00		**54**	**51**							**105**
04:00		27	41							68
05:00		48	37							85
06:00		26	34							60
07:00		20	23							43
08:00		15	25							40
09:00		14	10							24
10:00		21	10							31
11:00		7	6							13
Total		513	524							1037
Percent		49.5%	50.5%							
AM Peak	-	11:00	11:00	-	-	-	-	-	-	11:00
Vol.	-	39	34	-	-	-	-	-	-	73
PM Peak	-	15:00	15:00	-	-	-	-	-	-	15:00
Vol.	-	54	51	-	-	-	-	-	-	105

Road Name:
Segment: 80' SOUTH OF SPRINGARN RD
Ctr#: QZ12

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

Start Time	5/14/2022 Sat	N	S							Total
12:00 AM		1	1							2
01:00		1	3							4
02:00		0	0							0
03:00		0	0							0
04:00		0	1							1
05:00		2	1							3
06:00		14	7							21
07:00		15	11							26
08:00		19	30							49
09:00		30	**41**							**71**
10:00		33	30							63
11:00		**44**	26							70
12:00 PM		40	31							71
01:00		**42**	**46**							**88**
02:00		33	35							68
03:00		24	24							48
04:00		34	38							72
05:00		16	32							48
06:00		20	16							36
07:00		20	11							31
08:00		6	10							16
09:00		2	12							14
10:00		14	12							26
11:00		15	3							18
Total		425	421							846
Percent		50.2%	49.8%							
AM Peak	-	11:00	09:00	-	-	-	-	-	-	09:00
Vol.	-	44	41	-	-	-	-	-	-	71
PM Peak	-	13:00	13:00	-	-	-	-	-	-	13:00
Vol.	-	42	46	-	-	-	-	-	-	88

Road Name:
Segment: 80' SOUTH OF SPRINGARN RD
Ctr#: QZ12

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

Start Time	5/15/2022 Sun	N	S							Total
12:00 AM		6	4							10
01:00		6	2							8
02:00		1	0							1
03:00		0	0							0
04:00		0	0							0
05:00		2	1							3
06:00		8	0							8
07:00		10	6							16
08:00		14	11							25
09:00		27	23							50
10:00		38	**30**							**68**
11:00		**40**	26							66
12:00 PM		**42**	**45**							**87**
01:00		40	29							69
02:00		33	32							65
03:00		*	*							*
04:00		*	*							*
05:00		*	*							*
06:00		*	*							*
07:00		*	*							*
08:00		*	*							*
09:00		*	*							*
10:00		*	*							*
11:00		*	*							*
Total		267	209							476
Percent		56.1%	43.9%							
AM Peak	-	11:00	10:00	-	-	-	-	-	-	10:00
Vol.	-	40	30	-	-	-	-	-	-	68
PM Peak	-	12:00	12:00	-	-	-	-	-	-	12:00
Vol.	-	42	45	-	-	-	-	-	-	87
Grand Total		1734	1701							3435
Percent		50.5%	49.5%							
ADT		ADT 873		AADT 873						

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: Amenia, New York
Road Name: Leesville Rd
Segment: 80' S of Springarn Rd
Date: 05/11/2022

Site Code:

NB

Start Time	1 9	10 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total
05/11/22	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	0	1	0	2	7	11	9	4	2	1	0	0	0	0	37
17:00	0	0	1	0	5	5	5	8	3	0	0	0	0	0	27
18:00	0	0	0	1	2	2	4	2	1	0	0	0	0	0	12
19:00	0	0	0	0	1	1	4	7	3	0	0	0	0	0	16
20:00	0	0	0	1	0	1	4	4	1	0	0	0	0	0	11
21:00	0	0	0	0	1	1	1	4	1	0	0	0	0	0	8
22:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
23:00	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3
Total	0	1	1	4	17	23	28	29	11	1	0	0	0	0	115

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: Amenia, New York
Road Name: Leesville Rd
Segment: 80' S of Springarn Rd
Date: 05/11/2022

Site Code:

NB

Start Time	1 9	10 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total
05/12/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
05:00	0	0	0	2	0	0	4	3	0	0	0	0	0	0	9
06:00	0	2	0	1	1	0	1	10	1	1	0	0	0	0	17
07:00	0	1	1	1	4	6	1	7	1	0	0	0	0	0	22
08:00	0	0	2	3	3	3	7	16	3	0	0	0	0	0	37
09:00	0	0	1	0	1	8	8	11	1	1	0	0	0	0	31
10:00	0	1	0	5	2	5	6	4	3	0	0	0	0	0	26
11:00	0	0	1	1	6	9	11	6	1	0	0	0	0	0	35
12 PM	0	0	0	5	6	5	14	6	0	0	0	0	0	0	36
13:00	0	1	0	3	4	6	7	9	1	0	0	0	0	0	31
14:00	1	0	0	2	4	6	5	9	1	0	0	0	0	0	28
15:00	0	0	1	2	6	6	10	9	3	0	0	0	0	0	37
16:00	0	0	1	3	3	6	9	6	2	0	0	0	0	0	30
17:00	0	1	0	1	1	3	5	9	2	2	0	0	0	0	24
18:00	0	0	0	0	1	1	4	2	1	0	1	0	0	0	10
19:00	0	0	2	1	3	3	2	0	1	0	0	0	0	0	12
20:00	0	0	0	1	3	0	3	2	1	0	1	0	0	0	11
21:00	0	0	0	0	0	2	1	1	0	1	0	0	0	0	5
22:00	0	0	0	0	5	0	1	0	0	0	0	0	0	0	6
23:00	0	0	0	0	2	0	1	1	0	0	0	0	0	0	4
Total	1	6	9	31	58	69	100	111	22	5	2	0	0	0	414

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: Amenia, New York
Road Name: Leesville Rd
Segment: 80' S of Springarn Rd
Date: 05/11/2022

Site Code:

NB

Start Time	1 9	10 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total
05/13/22	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
01:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
04:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
05:00	0	0	1	1	0	0	3	1	1	0	0	0	0	0	7
06:00	0	0	1	0	2	1	4	3	6	1	1	0	0	0	19
07:00	0	0	1	1	3	2	3	7	3	0	0	0	0	0	20
08:00	0	1	0	3	4	5	9	8	4	1	0	0	0	0	35
09:00	0	0	0	1	3	7	12	9	3	0	0	0	0	0	35
10:00	0	0	0	0	3	7	7	4	2	0	0	0	0	0	23
11:00	0	0	0	2	6	5	10	14	1	0	0	0	0	0	38
12 PM	0	0	3	1	2	7	10	8	2	1	1	0	0	0	35
13:00	0	0	1	1	3	5	9	9	2	0	0	0	0	0	30
14:00	0	0	1	2	3	3	10	11	4	1	0	0	0	0	35
15:00	0	0	0	2	9	5	16	10	11	1	0	0	0	0	54
16:00	0	0	0	2	5	5	3	9	2	1	0	0	0	0	27
17:00	0	0	1	2	9	4	12	13	6	1	0	0	0	0	48
18:00	0	0	1	1	2	2	7	12	0	1	0	0	0	0	26
19:00	0	0	0	2	1	3	7	7	0	0	0	0	0	0	20
20:00	0	0	1	0	3	7	1	3	0	0	0	0	0	0	15
21:00	0	0	1	1	6	3	1	1	1	0	0	0	0	0	14
22:00	0	0	3	3	6	2	4	1	2	0	0	0	0	0	21
23:00	0	0	0	0	4	2	1	0	0	0	0	0	0	0	7
Total	0	1	15	25	76	77	130	130	50	8	2	0	0	0	514

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: Amenia, New York
Road Name: Leesville Rd
Segment: 80' S of Springarn Rd
Date: 05/11/2022

Site Code:

NB

Start Time	1 9	10 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total
05/14/22	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Grand Total	1	8	25	60	151	169	259	270	83	14	4	0	0	0	1044

15th Percentile :	26 MPH
50th Percentile :	36 MPH
85th Percentile :	42 MPH
95th Percentile :	46 MPH

Statistics

Mean Speed(Average) :	36 MPH
10 MPH Pace Speed :	35-44 MPH
Number in Pace :	529
Percent in Pace :	50.7%
Number of Vehicles > 40 MPH :	317
Percent of Vehicles > 40 MPH :	30.4%

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: Amenia, New York
Road Name: Leesville Rd
Segment: 80' S of Springarn Rd
Date: 05/11/2022

Site Code:

SB

Start Time	1 9	10 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total
05/11/22	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	0	0	2	4	0	12	18	6	3	0	0	0	0	0	45
17:00	0	0	0	0	3	11	10	5	1	0	0	0	0	0	30
18:00	0	0	0	0	3	4	3	2	1	0	0	0	1	0	14
19:00	0	0	0	2	6	2	5	7	1	0	0	0	0	0	23
20:00	0	0	0	1	5	3	5	1	0	0	0	0	0	0	15
21:00	0	0	0	0	1	1	1	2	1	0	0	0	0	0	6
22:00	0	0	0	0	0	0	2	1	1	1	0	0	0	0	5
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	2	7	18	33	44	24	8	1	0	0	1	0	138

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: Amenia, New York
Road Name: Leesville Rd
Segment: 80' S of Springarn Rd
Date: 05/11/2022

Site Code:

SB

Start Time	1 9	10 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total
05/12/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	1	0	3	2	0	0	0	0	0	0	6
06:00	0	0	0	0	3	3	4	5	0	0	0	0	0	0	15
07:00	0	1	0	1	1	7	9	2	1	0	0	0	0	0	22
08:00	0	1	0	2	0	13	8	6	1	0	0	0	0	0	31
09:00	0	0	0	2	1	6	9	5	3	0	0	0	0	0	26
10:00	0	1	0	0	5	7	16	4	1	0	0	0	0	0	34
11:00	0	0	2	2	6	9	7	5	2	0	0	0	0	0	33
12 PM	0	0	1	4	3	7	10	2	2	1	0	0	0	0	30
13:00	0	0	0	3	4	8	12	7	1	0	0	0	0	0	35
14:00	0	0	0	4	3	6	5	5	3	1	0	0	0	0	27
15:00	0	1	0	1	4	9	7	5	1	0	0	0	0	0	28
16:00	0	0	0	0	3	6	9	6	2	1	0	0	0	0	27
17:00	0	0	1	1	4	7	7	6	3	0	0	0	0	0	29
18:00	0	0	1	1	1	0	5	8	2	1	0	0	0	0	19
19:00	1	0	2	2	2	5	10	2	1	1	0	0	0	0	26
20:00	0	0	0	0	3	4	1	2	0	0	0	0	0	0	10
21:00	0	0	0	0	0	2	1	0	0	0	0	0	0	0	3
22:00	0	0	0	0	1	2	2	0	2	0	0	0	0	0	7
23:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Total	1	4	7	23	45	102	125	72	25	5	0	0	0	0	409

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: Amenia, New York
Road Name: Leesville Rd
Segment: 80' S of Springarn Rd
Date: 05/11/2022

Site Code:

SB

Start Time	1 9	10 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total
05/13/22	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	2	2	1	1	0	0	0	0	0	6
06:00	0	0	0	0	0	2	2	3	1	0	0	0	0	0	8
07:00	0	1	1	0	2	10	4	4	0	0	0	0	0	0	22
08:00	0	0	0	3	2	10	11	3	2	0	0	0	0	0	31
09:00	0	0	0	0	4	7	13	8	0	0	0	0	0	0	32
10:00	0	0	0	1	3	3	11	10	3	0	0	0	0	0	31
11:00	0	0	0	2	3	8	12	7	1	1	0	0	0	0	34
12 PM	0	0	0	2	5	7	16	13	0	1	0	0	0	0	44
13:00	0	1	2	4	2	7	15	8	1	0	0	0	0	0	40
14:00	0	0	1	2	3	10	7	10	0	1	0	0	0	0	34
15:00	0	0	2	3	6	11	18	9	1	1	0	0	0	0	51
16:00	0	0	1	0	8	7	15	9	1	0	0	0	0	0	41
17:00	0	0	2	3	3	6	13	8	2	0	0	0	0	0	37
18:00	0	0	2	2	6	10	10	2	1	1	0	0	0	0	34
19:00	0	0	0	2	3	5	8	5	0	0	0	0	0	0	23
20:00	0	0	2	2	3	8	7	2	1	0	0	0	0	0	25
21:00	0	0	0	1	3	1	3	2	0	0	0	0	0	0	10
22:00	0	0	1	0	1	2	3	3	0	0	0	0	0	0	10
23:00	0	0	0	3	1	2	0	0	0	0	0	0	0	0	6
Total	0	2	15	30	58	119	171	107	15	5	0	0	0	0	522

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: Amenia, New York
Road Name: Leesville Rd
Segment: 80' S of Springarn Rd
Date: 05/11/2022

Site Code:

SB

Start Time	1 9	10 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total
05/14/22	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
01:00	0	0	0	0	0	0	2	0	1	0	0	0	0	0	3
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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	0	0	0	0	0	0	2	1	1	0	0	0	0	0	4
Grand Total	1	6	24	60	121	254	342	204	49	11	0	0	1	0	1073

15th Percentile :	26 MPH
50th Percentile :	35 MPH
85th Percentile :	41 MPH
95th Percentile :	44 MPH

Statistics

Mean Speed(Average) :	35 MPH
10 MPH Pace Speed :	30-39 MPH
Number in Pace :	596
Percent in Pace :	55.5%
Number of Vehicles > 40 MPH :	224
Percent of Vehicles > 40 MPH :	20.9%

Road Name: Yellow City Rd
Segment: 475' SOUTH OF RTE 343
Ctr#: AP12JT2K

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

GPS: 41.855683, -73.518699

Start Time	5/11/2022 Wed	N	S							Total
12:00 AM		*	*							*
01:00		*	*							*
02:00		*	*							*
03:00		*	*							*
04:00		*	*							*
05:00		*	*							*
06:00		*	*							*
07:00		*	*							*
08:00		*	*							*
09:00		*	*							*
10:00		*	*							*
11:00		*	*							*
12:00 PM		*	*							*
01:00		*	*							*
02:00		*	*							*
03:00		10	**13**							23
04:00		**13**	11							**24**
05:00		2	1							3
06:00		5	1							6
07:00		2	4							6
08:00		2	1							3
09:00		3	2							5
10:00		0	1							1
11:00		4	0							4
Total		41	34							75
Percent		54.7%	45.3%							
AM Peak	-	-	-	-	-	-	-	-	-	-
Vol.	-	-	-	-	-	-	-	-	-	-
PM Peak	-	16:00	15:00	-	-	-	-	-	-	16:00
Vol.	-	13	13	-	-	-	-	-	-	24

Road Name: Yellow City Rd
Segment: 475' SOUTH OF RTE 343
Ctr#: AP12JT2K

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

GPS: 41.855683, -73.518699

Start Time	5/12/2022 Thu	N	S							Total
12:00 AM		0	0							0
01:00		0	1							1
02:00		0	0							0
03:00		1	1							2
04:00		0	0							0
05:00		2	0							2
06:00		**7**	6							13
07:00		4	6							10
08:00		1	5							6
09:00		6	**9**							**15**
10:00		7	5							12
11:00		6	4							10
12:00 PM		6	**12**							18
01:00		5	2							7
02:00		5	6							11
03:00		**16**	12							**28**
04:00		10	10							20
05:00		6	6							12
06:00		4	4							8
07:00		3	0							3
08:00		3	7							10
09:00		2	1							3
10:00		5	1							6
11:00		2	2							4
Total		101	100							201
Percent		50.2%	49.8%							
AM Peak	-	06:00	09:00	-	-	-	-	-	-	09:00
Vol.	-	7	9	-	-	-	-	-	-	15
PM Peak	-	15:00	12:00	-	-	-	-	-	-	15:00
Vol.	-	16	12	-	-	-	-	-	-	28

Road Name: Yellow City Rd
Segment: 475' SOUTH OF RTE 343
Ctr#: AP12JT2K

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

GPS: 41.855683, -73.518699

Start Time	5/13/2022 Fri	N	S							Total
12:00 AM		1	1							2
01:00		0	0							0
02:00		0	0							0
03:00		0	0							0
04:00		0	0							0
05:00		0	0							0
06:00		6	4							10
07:00		3	**8**							11
08:00		3	3							6
09:00		6	7							13
10:00		**9**	6							**15**
11:00		5	3							8
12:00 PM		**9**	7							16
01:00		7	6							13
02:00		8	9							17
03:00		4	**17**							**21**
04:00		7	6							13
05:00		8	7							15
06:00		5	6							11
07:00		4	6							10
08:00		3	3							6
09:00		2	1							3
10:00		2	1							3
11:00		7	1							8
Total		99	102							201
Percent		49.3%	50.7%							
AM Peak	-	10:00	07:00	-	-	-	-	-	-	10:00
Vol.	-	9	8	-	-	-	-	-	-	15
PM Peak	-	12:00	15:00	-	-	-	-	-	-	15:00
Vol.	-	9	17	-	-	-	-	-	-	21

Road Name: Yellow City Rd
Segment: 475' SOUTH OF RTE 343
Ctr#: AP12JT2K

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

GPS: 41.855683, -73.518699

Start Time	5/14/2022 Sat	N	S							Total
12:00 AM		4	0							4
01:00		1	0							1
02:00		0	0							0
03:00		0	0							0
04:00		0	1							1
05:00		0	1							1
06:00		2	5							7
07:00		5	1							6
08:00		5	1							6
09:00		**7**	**10**							**17**
10:00		6	4							10
11:00		6	10							16
12:00 PM		5	4							9
01:00		5	12							17
02:00		7	**13**							**20**
03:00		7	10							17
04:00		8	7							15
05:00		7	5							12
06:00		4	2							6
07:00		2	5							7
08:00		2	0							2
09:00		2	3							5
10:00		**9**	3							12
11:00		4	2							6
Total		98	99							197
Percent		49.7%	50.3%							
AM Peak	-	09:00	09:00	-	-	-	-	-	-	09:00
Vol.	-	7	10	-	-	-	-	-	-	17
PM Peak	-	22:00	14:00	-	-	-	-	-	-	14:00
Vol.	-	9	13	-	-	-	-	-	-	20

Road Name: Yellow City Rd
Segment: 475' SOUTH OF RTE 343
Ctr#: AP12JT2K

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

GPS: 41.855683, -73.518699

Start Time	5/15/2022 Sun	N	S							Total
12:00 AM		4	0							4
01:00		3	0							3
02:00		2	0							2
03:00		0	0							0
04:00		0	0							0
05:00		1	0							1
06:00		1	4							5
07:00		4	4							8
08:00		**5**	5							**10**
09:00		3	**6**							9
10:00		1	2							3
11:00		2	2							4
12:00 PM		**5**	**7**							**12**
01:00		5	4							9
02:00		3	4							7
03:00		*	*							*
04:00		*	*							*
05:00		*	*							*
06:00		*	*							*
07:00		*	*							*
08:00		*	*							*
09:00		*	*							*
10:00		*	*							*
11:00		*	*							*
Total		39	38							77
Percent		50.6%	49.4%							
AM Peak	-	08:00	09:00	-	-	-	-	-	-	08:00
Vol.	-	5	6	-	-	-	-	-	-	10
PM Peak	-	12:00	12:00	-	-	-	-	-	-	12:00
Vol.	-	5	7	-	-	-	-	-	-	12
Grand Total		378	373							751
Percent		50.3%	49.7%							
ADT		ADT 187		AADT 187						

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

Road Name: Yellow City Rd
Segment: 475' SOUTH OF RTE 343
Ctr#: AP12JT2K

GPS: 41.855683, -73.518699

N

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
05/11/22	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	0	0	0	1	1	1	6	1	0	0	0	0	0	0	0	10
16:00	0	0	0	0	2	3	6	2	0	0	0	0	0	0	0	13
17:00	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
18:00	0	0	0	0	1	3	1	0	0	0	0	0	0	0	0	5
19:00	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
20:00	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
21:00	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	4
Total	0	0	0	2	9	9	17	3	1	0	0	0	0	0	0	41

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

Road Name: Yellow City Rd
Segment: 475' SOUTH OF RTE 343
Ctr#: AP12JT2K

GPS: 41.855683, -73.518699

N

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
05/12/2																
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
06:00	0	0	0	1	3	1	2	0	0	0	0	0	0	0	0	7
07:00	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	4
08:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
09:00	0	0	1	0	0	3	0	0	2	0	0	0	0	0	0	6
10:00	0	0	0	1	1	2	2	0	1	0	0	0	0	0	0	7
11:00	0	0	1	0	0	3	0	1	1	0	0	0	0	0	0	6
12 PM	0	0	0	0	2	1	2	0	1	0	0	0	0	0	0	6
13:00	0	0	0	1	1	1	2	0	0	0	0	0	0	0	0	5
14:00	0	0	0	0	2	1	2	0	0	0	0	0	0	0	0	5
15:00	0	0	0	2	2	7	2	2	1	0	0	0	0	0	0	16
16:00	0	0	0	0	0	4	3	3	0	0	0	0	0	0	0	10
17:00	0	0	0	1	0	3	0	1	1	0	0	0	0	0	0	6
18:00	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	4
19:00	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3
20:00	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3
21:00	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
22:00	0	0	0	0	1	2	1	0	1	0	0	0	0	0	0	5
23:00	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2
Total	0	0	2	9	13	40	22	7	8	0	0	0	0	0	0	101

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

Road Name: Yellow City Rd
Segment: 475' SOUTH OF RTE 343
Ctr#: AP12JT2K

GPS: 41.855683, -73.518699

N

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
05/13/2 2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	2	0	1	1	1	1	0	0	0	0	0	0	6
07:00	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3
08:00	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	3
09:00	0	0	0	0	1	0	3	1	1	0	0	0	0	0	0	6
10:00	0	0	0	1	1	1	1	2	3	0	0	0	0	0	0	9
11:00	0	0	1	0	3	0	1	0	0	0	0	0	0	0	0	5
12 PM	0	0	0	0	1	5	1	1	1	0	0	0	0	0	0	9
13:00	0	0	0	1	0	3	1	0	2	0	0	0	0	0	0	7
14:00	0	0	0	0	0	4	2	2	0	0	0	0	0	0	0	8
15:00	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	4
16:00	0	0	0	0	1	1	1	1	2	0	1	0	0	0	0	7
17:00	0	0	0	2	2	1	2	0	0	1	0	0	0	0	0	8
18:00	0	0	0	2	0	1	2	0	0	0	0	0	0	0	0	5
19:00	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	4
20:00	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3
21:00	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2
22:00	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
23:00	0	0	0	1	0	3	2	1	0	0	0	0	0	0	0	7
Total	0	0	1	10	12	26	27	9	12	1	1	0	0	0	0	99

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

Road Name: Yellow City Rd
Segment: 475' SOUTH OF RTE 343
Ctr#: AP12JT2K

GPS: 41.855683, -73.518699

N

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
05/14/2 2	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	4
01:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
07:00	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	5
08:00	0	0	0	0	1	0	1	2	1	0	0	0	0	0	0	5
09:00	0	0	0	1	2	2	2	0	0	0	0	0	0	0	0	7
10:00	0	0	0	1	0	2	0	2	1	0	0	0	0	0	0	6
11:00	0	0	0	1	1	2	2	0	0	0	0	0	0	0	0	6
12 PM	0	0	0	2	0	1	1	1	0	0	0	0	0	0	0	5
13:00	0	0	0	1	1	0	0	2	1	0	0	0	0	0	0	5
14:00	0	0	0	1	2	1	3	0	0	0	0	0	0	0	0	7
15:00	0	0	0	0	2	2	2	1	0	0	0	0	0	0	0	7
16:00	0	0	0	0	3	1	2	2	0	0	0	0	0	0	0	8
17:00	0	0	0	0	2	3	1	1	0	0	0	0	0	0	0	7
18:00	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	4
19:00	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2
20:00	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
21:00	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
22:00	0	0	0	3	1	1	3	1	0	0	0	0	0	0	0	9
23:00	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	4
Total	0	0	0	13	19	26	23	13	3	1	0	0	0	0	0	98

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

Road Name: Yellow City Rd
Segment: 475' SOUTH OF RTE 343
Ctr#: AP12JT2K

GPS: 41.855683, -73.518699

N

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
05/15/2 2	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	4
01:00	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3
02:00	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
06:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
07:00	0	0	0	0	0	2	1	0	1	0	0	0	0	0	0	4
08:00	0	0	0	0	2	1	0	1	1	0	0	0	0	0	0	5
09:00	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	3
10:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
11:00	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
12 PM	0	0	0	0	0	3	1	0	1	0	0	0	0	0	0	5
13:00	0	0	0	1	0	0	2	2	0	0	0	0	0	0	0	5
14:00	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	3
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	0	0	0	2	6	11	11	5	4	0	0	0	0	0	0	39
Grand Total	0	0	3	36	59	112	100	37	28	2	1	0	0	0	0	378

Stats

15th Percentile :	21 MPH
50th Percentile :	29 MPH
85th Percentile :	36 MPH
95th Percentile :	42 MPH
Mean Speed(Average) :	30 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	212
Percent in Pace :	56.1%
Number of Vehicles > 55 MPH :	0
Percent of Vehicles > 55 MPH :	0.0%

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

Road Name: Yellow City Rd
Segment: 475' SOUTH OF RTE 343
Ctr#: AP12JT2K

GPS: 41.855683, -73.518699

S

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
05/11/22	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	0	1	0	0	1	4	5	1	1	0	0	0	0	0	0	13
16:00	0	0	0	1	1	4	2	2	0	1	0	0	0	0	0	11
17:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
18:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
19:00	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	4
20:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
21:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
22:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	5	12	8	5	1	1	0	0	0	0	0	34

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

Road Name: Yellow City Rd
Segment: 475' SOUTH OF RTE 343
Ctr#: AP12JT2K

GPS: 41.855683, -73.518699

S

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
05/12/2																
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	1	0	2	3	0	0	0	0	0	0	0	0	6
07:00	0	0	0	0	1	3	1	1	0	0	0	0	0	0	0	6
08:00	0	0	0	0	1	0	2	1	1	0	0	0	0	0	0	5
09:00	0	0	0	1	1	1	3	2	1	0	0	0	0	0	0	9
10:00	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	5
11:00	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	4
12 PM	0	0	1	0	4	2	3	1	1	0	0	0	0	0	0	12
13:00	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
14:00	0	0	0	0	1	3	1	1	0	0	0	0	0	0	0	6
15:00	0	0	0	2	1	4	5	0	0	0	0	0	0	0	0	12
16:00	0	0	0	0	1	1	5	0	3	0	0	0	0	0	0	10
17:00	0	0	0	1	1	1	3	0	0	0	0	0	0	0	0	6
18:00	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	4
19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:00	0	0	0	0	1	4	1	1	0	0	0	0	0	0	0	7
21:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
22:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
23:00	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
Total	0	0	1	7	16	26	32	11	6	1	0	0	0	0	0	100

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

Road Name: Yellow City Rd
Segment: 475' SOUTH OF RTE 343
Ctr#: AP12JT2K

GPS: 41.855683, -73.518699

S

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
05/13/2 2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	4
07:00	0	0	0	0	0	3	4	1	0	0	0	0	0	0	0	8
08:00	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3
09:00	0	0	0	0	0	1	4	1	1	0	0	0	0	0	0	7
10:00	0	0	0	0	1	1	2	2	0	0	0	0	0	0	0	6
11:00	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	3
12 PM	0	0	0	0	2	4	0	1	0	0	0	0	0	0	0	7
13:00	0	0	0	0	0	2	3	0	1	0	0	0	0	0	0	6
14:00	0	0	0	1	0	1	5	1	1	0	0	0	0	0	0	9
15:00	0	0	0	1	1	6	6	3	0	0	0	0	0	0	0	17
16:00	0	0	0	0	1	1	0	3	1	0	0	0	0	0	0	6
17:00	0	0	1	0	2	3	0	1	0	0	0	0	0	0	0	7
18:00	0	0	0	0	1	1	2	2	0	0	0	0	0	0	0	6
19:00	0	0	0	0	1	4	1	0	0	0	0	0	0	0	0	6
20:00	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	3
21:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
22:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
23:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	2	14	31	32	18	4	0	0	0	0	0	0	102

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

Road Name: Yellow City Rd
Segment: 475' SOUTH OF RTE 343
Ctr#: AP12JT2K

GPS: 41.855683, -73.518699

S

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
05/14/2																
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
06:00	0	0	0	1	0	1	3	0	0	0	0	0	0	0	0	5
07:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
08:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
09:00	0	0	0	0	1	2	4	2	1	0	0	0	0	0	0	10
10:00	0	0	0	0	0	1	2	0	1	0	0	0	0	0	0	4
11:00	0	0	0	1	2	2	1	2	2	0	0	0	0	0	0	10
12 PM	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	4
13:00	0	0	0	0	4	3	5	0	0	0	0	0	0	0	0	12
14:00	0	0	0	2	1	2	5	3	0	0	0	0	0	0	0	13
15:00	0	0	0	0	1	2	6	1	0	0	0	0	0	0	0	10
16:00	0	0	1	1	1	1	2	1	0	0	0	0	0	0	0	7
17:00	0	0	0	0	2	1	2	0	0	0	0	0	0	0	0	5
18:00	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
19:00	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	5
20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	3
22:00	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
23:00	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
Total	0	0	1	7	14	24	39	10	4	0	0	0	0	0	0	99

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

Road Name: Yellow City Rd
Segment: 475' SOUTH OF RTE 343
Ctr#: AP12JT2K

GPS: 41.855683, -73.518699

S

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
05/15/2 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	4
07:00	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0	4
08:00	0	0	0	0	1	1	2	1	0	0	0	0	0	0	0	5
09:00	0	0	0	0	1	2	2	1	0	0	0	0	0	0	0	6
10:00	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
11:00	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
12 PM	0	0	0	0	2	3	0	2	0	0	0	0	0	0	0	7
13:00	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	4
14:00	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	4
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	0	0	0	0	5	11	13	8	1	0	0	0	0	0	0	38
Grand Total	0	1	3	17	54	104	124	52	16	2	0	0	0	0	0	373

Stats

15th Percentile :	23 MPH
50th Percentile :	30 MPH
85th Percentile :	36 MPH
95th Percentile :	39 MPH
Mean Speed(Average) :	30 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	228
Percent in Pace :	61.1%
Number of Vehicles > 55 MPH :	0
Percent of Vehicles > 55 MPH :	0.0%

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: AMENIA, NY
Road Name: YELLOW CITY RD
Segment: 620' N OF GREEN RD
Date: 09/12/2022

GPS: 41.854016, -73.518477

NB

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
09/12/22	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: AMENIA, NY
Road Name: YELLOW CITY RD
Segment: 620' N OF GREEN RD
Date: 09/12/2022

GPS: 41.854016, -73.518477

NB

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
09/13/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	3
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	3
09:00	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	3
10:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
11:00	0	0	0	0	3	0	2	0	0	0	0	0	0	0	0	5
12 PM	0	0	0	0	4	3	1	0	0	0	0	0	0	0	0	8
13:00	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
14:00	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	3
15:00	0	0	0	0	0	7	1	0	0	0	0	0	0	0	0	8
16:00	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3
17:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
18:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
19:00	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	3
20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	19	18	9	0	0	0	0	0	0	0	0	46

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: AMENIA, NY
Road Name: YELLOW CITY RD
Segment: 620' N OF GREEN RD
Date: 09/12/2022

GPS: 41.854016, -73.518477

NB

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
09/14/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	3
07:00	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
08:00	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3
09:00	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
10:00	0	0	0	0	4	1	1	0	0	0	0	0	0	0	0	6
11:00	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	3
12 PM	0	0	0	0	3	2	1	0	0	0	0	0	0	0	0	6
13:00	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	4
14:00	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	5
15:00	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	5
16:00	0	0	0	0	3	3	1	0	0	0	0	0	0	0	0	7
17:00	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
18:00	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	4
19:00	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
20:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	20	23	11	0	0	0	0	0	0	0	0	55

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: AMENIA, NY
Road Name: YELLOW CITY RD
Segment: 620' N OF GREEN RD
Date: 09/12/2022

GPS: 41.854016, -73.518477

NB

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
09/15/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	3
07:00	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
08:00	0	0	0	1	2	4	0	0	0	0	0	0	0	0	0	7
09:00	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
10:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
11:00	0	0	2	2	3	1	2	0	0	0	0	0	0	0	0	10
12 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
13:00	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2
14:00	0	0	0	1	1	5	2	0	0	0	0	0	0	0	0	9
15:00	0	0	0	0	1	3	1	0	0	0	0	0	0	0	0	5
16:00	0	0	0	1	0	4	0	0	0	0	0	0	0	0	0	5
17:00	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
18:00	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3
19:00	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	3
20:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	4	7	13	24	10	0	0	1	0	0	0	0	0	60

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: AMENIA, NY
Road Name: YELLOW CITY RD
Segment: 620' N OF GREEN RD
Date: 09/12/2022

GPS: 41.854016, -73.518477

NB

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
09/16/22	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	4
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	2	4	0	0	0	0	0	0	0	0	0	6
09:00	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	4
10:00	0	0	0	1	1	1	3	0	0	0	0	0	0	0	0	6
11:00	0	0	0	2	2	1	2	0	0	0	0	0	0	0	0	7
12 PM	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	3
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	0	1	0	4	8	12	6	0	0	0	0	0	0	0	0	31
Grand Total	0	2	4	12	60	77	36	0	0	1	0	0	0	0	0	192

Stats

15th Percentile :	20 MPH
50th Percentile :	26 MPH
85th Percentile :	31 MPH
95th Percentile :	33 MPH
Mean Speed(Average) :	26 MPH
10 MPH Pace Speed :	21-30 MPH
Number in Pace :	137
Percent in Pace :	71.4%
Number of Vehicles > 40 MPH :	1
Percent of Vehicles > 40 MPH :	0.5%

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: AMENIA, NY
Road Name: YELLOW CITY RD
Segment: 620' N OF GREEN RD
Date: 09/12/2022

GPS: 41.854016, -73.518477

SB

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
09/12/22	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:00	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: AMENIA, NY
Road Name: YELLOW CITY RD
Segment: 620' N OF GREEN RD
Date: 09/12/2022

GPS: 41.854016, -73.518477

SB

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
09/13/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
07:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
08:00	0	0	0	0	0	4	0	0	1	0	0	0	0	0	0	5
09:00	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
10:00	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	3
11:00	0	0	0	0	1	1	3	0	0	0	0	0	0	0	0	5
12 PM	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	4
13:00	0	0	1	0	2	1	2	1	0	0	0	0	0	0	0	7
14:00	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3
15:00	0	0	0	0	1	4	2	0	0	0	0	0	0	0	0	7
16:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
17:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
18:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
19:00	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	3
20:00	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
21:00	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	3
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	2	13	23	10	1	1	0	0	0	0	0	0	51

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: AMENIA, NY
Road Name: YELLOW CITY RD
Segment: 620' N OF GREEN RD
Date: 09/12/2022

GPS: 41.854016, -73.518477

SB

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
09/14/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
07:00	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	4
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
11:00	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	4
12 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
13:00	0	0	0	0	1	3	1	1	0	0	0	0	0	0	0	6
14:00	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	4
15:00	0	0	0	0	0	5	1	0	0	0	0	0	0	0	0	6
16:00	0	0	0	0	3	2	1	0	0	0	0	0	0	0	0	6
17:00	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4
18:00	0	0	1	0	1	0	2	0	0	0	0	0	0	0	0	4
19:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
20:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
21:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	9	24	9	2	0	0	0	0	0	0	0	46

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: AMENIA, NY
Road Name: YELLOW CITY RD
Segment: 620' N OF GREEN RD
Date: 09/12/2022

GPS: 41.854016, -73.518477

SB

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
09/15/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00	0	0	0	0	2	2	1	1	0	0	0	0	0	0	0	6
08:00	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
09:00	0	0	0	0	1	3	1	0	0	0	0	0	0	0	0	5
10:00	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
11:00	0	0	0	2	0	3	1	0	0	0	0	0	0	0	0	6
12 PM	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	3
13:00	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
14:00	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	4
15:00	0	0	0	0	1	3	1	1	0	0	0	0	0	0	0	6
16:00	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	4
17:00	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	3
18:00	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3
19:00	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3
20:00	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	5	14	21	10	3	0	0	0	0	0	0	0	53

Tri-State Traffic Data Inc.

184 Baker Rd
Coatesville PA 19320

Serving Transporatation Professionals since 1995

Location: AMENIA, NY
Road Name: YELLOW CITY RD
Segment: 620' N OF GREEN RD
Date: 09/12/2022

GPS: 41.854016, -73.518477

SB

Start Time	0 5	6 10	11 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
09/16/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
07:00	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	3
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	1	0	0	2	1	1	0	0	0	0	0	0	0	0	5
10:00	0	0	0	1	2	0	1	0	0	0	0	0	0	0	0	4
11:00	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	4
12 PM	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	4
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	0	1	0	1	7	6	4	3	0	0	0	0	0	0	0	22
Grand Total	0	1	2	9	44	74	34	9	1	0	0	0	0	0	0	174

Stats

15th Percentile :	21 MPH
50th Percentile :	27 MPH
85th Percentile :	32 MPH
95th Percentile :	35 MPH
Mean Speed(Average) :	28 MPH
10 MPH Pace Speed :	21-30 MPH
Number in Pace :	118
Percent in Pace :	67.8%
Number of Vehicles > 40 MPH :	1
Percent of Vehicles > 40 MPH :	0.6%

Road Name: NY 343
Segment: 75' WEST OF MECHANIC ST
Ctr#: AP70BJCM

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

GPS: 41.850122, -73.553935

Start Time	5/11/2022 Wed	E	W							Total
12:00 AM		*	*							*
01:00		*	*							*
02:00		*	*							*
03:00		*	*							*
04:00		*	*							*
05:00		*	*							*
06:00		*	*							*
07:00		*	*							*
08:00		*	*							*
09:00		*	*							*
10:00		*	*							*
11:00		*	*							*
12:00 PM		*	*							*
01:00		*	*							*
02:00		221	171							392
03:00		220	207							427
04:00		**232**	**223**							**455**
05:00		204	207							411
06:00		159	122							281
07:00		121	109							230
08:00		104	74							178
09:00		50	41							91
10:00		37	25							62
11:00		24	31							55
Total		1372	1210							2582
Percent		53.1%	46.9%							
AM Peak	-	-	-	-	-	-	-	-	-	-
Vol.	-	-	-	-	-	-	-	-	-	-
PM Peak	-	16:00	16:00	-	-	-	-	-	-	16:00
Vol.	-	232	223	-	-	-	-	-	-	455

Road Name: NY 343
Segment: 75' WEST OF MECHANIC ST
Ctr#: AP70BJCM

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

GPS: 41.850122, -73.553935

Start Time	5/12/2022 Thu	E	W							Total
12:00 AM		14	5							19
01:00		2	6							8
02:00		6	3							9
03:00		2	2							4
04:00		6	22							28
05:00		32	37							69
06:00		104	124							228
07:00		185	174							359
08:00		194	**199**							**393**
09:00		171	159							330
10:00		**202**	167							369
11:00		181	181							362
12:00 PM		185	218							403
01:00		172	168							340
02:00		186	204							390
03:00		221	**233**							454
04:00		**277**	226							**503**
05:00		233	198							431
06:00		202	140							342
07:00		124	128							252
08:00		99	84							183
09:00		65	35							100
10:00		51	36							87
11:00		26	26							52
Total		2940	2775							5715
Percent		51.4%	48.6%							
AM Peak	-	10:00	08:00	-	-	-	-	-	-	08:00
Vol.	-	202	199	-	-	-	-	-	-	393
PM Peak	-	16:00	15:00	-	-	-	-	-	-	16:00
Vol.	-	277	233	-	-	-	-	-	-	503

Road Name: NY 343
Segment: 75' WEST OF MECHANIC ST
Ctr#: AP70BJCM

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

GPS: 41.850122, -73.553935

Start Time	5/13/2022 Fri	E	W							Total
12:00 AM		11	4							15
01:00		1	5							6
02:00		3	6							9
03:00		4	1							5
04:00		9	12							21
05:00		25	34							59
06:00		103	108							211
07:00		182	167							349
08:00		180	185							**365**
09:00		169	**188**							357
10:00		**194**	171							365
11:00		171	182							353
12:00 PM		216	208							424
01:00		228	188							416
02:00		241	224							465
03:00		281	251							532
04:00		**301**	258							559
05:00		283	**284**							**567**
06:00		242	167							409
07:00		185	153							338
08:00		121	119							240
09:00		90	90							180
10:00		64	36							100
11:00		32	45							77
Total		3336	3086							6422
Percent		51.9%	48.1%							
AM Peak	-	10:00	09:00	-	-	-	-	-	-	08:00
Vol.	-	194	188	-	-	-	-	-	-	365
PM Peak	-	16:00	17:00	-	-	-	-	-	-	17:00
Vol.	-	301	284	-	-	-	-	-	-	567

Road Name: NY 343
Segment: 75' WEST OF MECHANIC ST
Ctr#: AP70BJCM

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

GPS: 41.850122, -73.553935

Start Time	5/14/2022 Sat	E	W							Total
12:00 AM		24	16							40
01:00		10	4							14
02:00		1	1							2
03:00		4	1							5
04:00		9	3							12
05:00		19	15							34
06:00		69	57							126
07:00		115	100							215
08:00		174	139							313
09:00		211	205							416
10:00		**239**	219							458
11:00		236	**288**							**524**
12:00 PM		**255**	**260**							**515**
01:00		247	250							497
02:00		237	225							462
03:00		200	224							424
04:00		189	234							423
05:00		184	193							377
06:00		156	155							311
07:00		122	144							266
08:00		89	90							179
09:00		78	59							137
10:00		45	53							98
11:00		38	55							93
Total		2951	2990							5941
Percent		49.7%	50.3%							
AM Peak	-	10:00	11:00	-	-	-	-	-	-	11:00
Vol.	-	239	288	-	-	-	-	-	-	524
PM Peak	-	12:00	12:00	-	-	-	-	-	-	12:00
Vol.	-	255	260	-	-	-	-	-	-	515

Road Name: NY 343
Segment: 75' WEST OF MECHANIC ST
Ctr#: AP70BJCM

Tri-State Traffic Data
184 Baker Rd
Coatesville, PA 19320

GPS: 41.850122, -73.553935

Start Time	5/15/2022 Sun	E	W							Total
12:00 AM		23	20							43
01:00		13	13							26
02:00		5	6							11
03:00		3	4							7
04:00		3	5							8
05:00		9	12							21
06:00		34	35							69
07:00		72	64							136
08:00		98	113							211
09:00		183	157							340
10:00		161	202							363
11:00		**211**	**273**							**484**
12:00 PM		**202**	**303**							**505**
01:00		188	269							457
02:00		*	*							*
03:00		*	*							*
04:00		*	*							*
05:00		*	*							*
06:00		*	*							*
07:00		*	*							*
08:00		*	*							*
09:00		*	*							*
10:00		*	*							*
11:00		*	*							*
Total		1205	1476							2681
Percent		44.9%	55.1%							
AM Peak	-	11:00	11:00	-	-	-	-	-	-	11:00
Vol.	-	211	273	-	-	-	-	-	-	484
PM Peak	-	12:00	12:00	-	-	-	-	-	-	12:00
Vol.	-	202	303	-	-	-	-	-	-	505
Grand Total		11804	11537							23341
Percent		50.6%	49.4%							
ADT		ADT 5,805		AADT 5,805						

Attachment C
Level of Service Analysis

Troutbeck Development
Town of Amenia, New York

Level of Service Criteria for Unsignalized Intersections

Level of service (LOS) for Two-Way Stop-Controlled (TWSC) intersections is determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor-street movement (or shared movement) as well as major-street left turns by using criteria given in Exhibit 20-2. LOS is not defined for the intersection as a whole or for major-street approaches for three primary reasons: (a) major-street through vehicles are assumed to experience zero delay; (b) the disproportionate number of major-street through vehicles at a typical TWSC intersection skews the weighted average of all movements, resulting in a very low overall average delay for all vehicles; and (c) the resulting low delay can mask important LOS deficiencies for minor movements. LOS F is assigned to the movement if the volume-to-capacity (v/c) ratio for the movement exceeds 1.0, regardless of the control delay.

The LOS criteria for TWSC intersections are somewhat different from the criteria used in Chapter 18 for signalized intersections, primarily because user perceptions differ among transportation facility types. The expectation is that a signalized intersection is designed to carry higher traffic volumes and will present greater delay than an unsignalized intersection. Unsignalized intersections are also associated with more uncertainty for users, as delays are less predictable than they are at signals, which can reduce users' delay tolerance.

The LOS criteria for All-Way Stop-Controlled (AWSC) intersections are given in Exhibit 21-8. LOS F is assigned if the v/c ratio of a lane exceeds 1.0, regardless of the control delay. For assessment of LOS at the approach and intersection levels, LOS is based solely on control delay.

Exhibits 20-2/21-8:
Level-of-Service Criteria for Stop Controlled Intersections

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤ 1.0	v/c ≥ 1.0
10.0	A	F
>10.0 and ≤ 15.0	B	F
>15.0 and ≤ 25.0	C	F
>25.0 and ≤ 35.0	D	F
>35.0 and ≤ 50.0	E	F
>50.0	F	F

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	230	5	10	203	4	4
Future Vol, veh/h	230	5	10	203	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	7	0	0	4	25	25
Mvmt Flow	242	5	11	214	4	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	247	0	481	245
Stage 1	-	-	-	-	245	-
Stage 2	-	-	-	-	236	-
Critical Hdwy	-	-	4.1	-	6.65	6.45
Critical Hdwy Stg 1	-	-	-	-	5.65	-
Critical Hdwy Stg 2	-	-	-	-	5.65	-
Follow-up Hdwy	-	-	2.2	-	3.725	3.525
Pot Cap-1 Maneuver	-	-	1331	-	505	741
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	752	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1331	-	500	741
Mov Cap-2 Maneuver	-	-	-	-	500	-
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	745	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	597	-	-	1331	-
HCM Lane V/C Ratio	0.014	-	-	0.008	-
HCM Control Delay (s)	11.1	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	193	39	17	174	39	12
Future Vol, veh/h	193	39	17	174	39	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	8	10	10	3	10	0
Mvmt Flow	203	41	18	183	41	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	244	0	443	224
Stage 1	-	-	-	-	224	-
Stage 2	-	-	-	-	219	-
Critical Hdwy	-	-	4.2	-	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	-	-	2.29	-	3.59	3.3
Pot Cap-1 Maneuver	-	-	1277	-	557	820
Stage 1	-	-	-	-	795	-
Stage 2	-	-	-	-	799	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1277	-	548	820
Mov Cap-2 Maneuver	-	-	-	-	548	-
Stage 1	-	-	-	-	795	-
Stage 2	-	-	-	-	786	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	11.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	594	-	-	1277	-
HCM Lane V/C Ratio	0.09	-	-	0.014	-
HCM Control Delay (s)	11.7	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	1	3	4	1	0	0	38	3	0	37	9
Future Vol, veh/h	6	1	3	4	1	0	0	38	3	0	37	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0	0	10	0	0	10	0
Mvmt Flow	7	1	3	5	1	0	0	44	3	0	43	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	94	95	48	96	99	-	53	0	0	-	-	0
Stage 1	48	48	-	46	46	-	-	-	-	-	-	-
Stage 2	46	47	-	50	53	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	-	4.1	-	-	-	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	-	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	894	799	1027	891	795	0	1566	-	-	0	-	-
Stage 1	971	859	-	973	861	0	-	-	-	0	-	-
Stage 2	973	860	-	968	855	0	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	893	799	1027	887	795	-	1566	-	-	-	-	-
Mov Cap-2 Maneuver	893	799	-	887	795	-	-	-	-	-	-	-
Stage 1	971	859	-	973	861	-	-	-	-	-	-	-
Stage 2	972	860	-	963	855	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	9.2	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	1566	-	-	918	867	-	-
HCM Lane V/C Ratio	-	-	-	0.013	0.007	-	-
HCM Control Delay (s)	0	-	-	9	9.2	-	-
HCM Lane LOS	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	44	0	9	46
Future Vol, veh/h	0	5	44	0	9	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	10	0	0	10
Mvmt Flow	0	6	51	0	10	53

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	51	0	-	51	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	1023	-	0	1568	-
Stage 1	0	-	-	0	-	-
Stage 2	0	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	1023	-	-	1568	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	1.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	1023	1568	-
HCM Lane V/C Ratio	-	0.006	0.007	-
HCM Control Delay (s)	-	8.5	7.3	0
HCM Lane LOS	-	A	A	A
HCM 95th %tile Q(veh)	-	0	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	196	7	5	224	1	4
Future Vol, veh/h	196	7	5	224	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	3	0	20	10	0	0
Mvmt Flow	225	8	6	257	1	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	233	0	498	229
Stage 1	-	-	-	-	229	-
Stage 2	-	-	-	-	269	-
Critical Hdwy	-	-	4.3	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.38	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1236	-	535	815
Stage 1	-	-	-	-	814	-
Stage 2	-	-	-	-	781	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1236	-	532	815
Mov Cap-2 Maneuver	-	-	-	-	532	-
Stage 1	-	-	-	-	814	-
Stage 2	-	-	-	-	776	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	737	-	-	1236	-
HCM Lane V/C Ratio	0.008	-	-	0.005	-
HCM Control Delay (s)	9.9	-	-	7.9	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	171	32	14	195	32	13
Future Vol, veh/h	171	32	14	195	32	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	6	7	11	3	0
Mvmt Flow	194	36	16	222	36	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	230	0	466	212
Stage 1	-	-	-	-	212	-
Stage 2	-	-	-	-	254	-
Critical Hdwy	-	-	4.17	-	6.43	6.2
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.263	-	3.527	3.3
Pot Cap-1 Maneuver	-	-	1309	-	553	833
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	786	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1309	-	545	833
Mov Cap-2 Maneuver	-	-	-	-	545	-
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	775	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	605	-	-	1309	-
HCM Lane V/C Ratio	0.085	-	-	0.012	-
HCM Control Delay (s)	11.5	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	1	1	1	0	0	27	0	0	28	16
Future Vol, veh/h	9	0	1	1	1	0	0	27	0	0	28	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	11	0
Mvmt Flow	11	0	1	1	1	0	0	32	0	0	33	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	76	75	43	75	84	-	52	0	0	-	-	0
Stage 1	43	43	-	32	32	-	-	-	-	-	-	-
Stage 2	33	32	-	43	52	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	-	4.1	-	-	-	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	-	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	919	819	1033	920	810	0	1567	-	-	0	-	-
Stage 1	976	863	-	990	872	0	-	-	-	0	-	-
Stage 2	988	872	-	976	856	0	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	918	819	1033	919	810	-	1567	-	-	-	-	-
Mov Cap-2 Maneuver	918	819	-	919	810	-	-	-	-	-	-	-
Stage 1	976	863	-	990	872	-	-	-	-	-	-	-
Stage 2	987	872	-	975	856	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.9	9.2	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	1567	-	-	928	861	-	-
HCM Lane V/C Ratio	-	-	-	0.013	0.003	-	-
HCM Control Delay (s)	0	-	-	8.9	9.2	-	-
HCM Lane LOS	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	36	0	5	44
Future Vol, veh/h	0	6	36	0	5	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	17	0	0	0	6
Mvmt Flow	0	7	43	0	6	52

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	43	0	-	43	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.37	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.453	-	-	2.2	-
Pot Cap-1 Maneuver	0	986	-	0	1579	-
Stage 1	0	-	-	0	-	-
Stage 2	0	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	986	-	-	1579	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	986	1579	-
HCM Lane V/C Ratio	-	0.007	0.004	-
HCM Control Delay (s)	-	8.7	7.3	0
HCM Lane LOS	-	A	A	A
HCM 95th %tile Q(veh)	-	0	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	249	5	11	220	4	4
Future Vol, veh/h	249	5	11	220	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	7	0	0	4	25	25
Mvmt Flow	262	5	12	232	4	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	267	0	521	265
Stage 1	-	-	-	-	265	-
Stage 2	-	-	-	-	256	-
Critical Hdwy	-	-	4.1	-	6.65	6.45
Critical Hdwy Stg 1	-	-	-	-	5.65	-
Critical Hdwy Stg 2	-	-	-	-	5.65	-
Follow-up Hdwy	-	-	2.2	-	3.725	3.525
Pot Cap-1 Maneuver	-	-	1308	-	478	721
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	736	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1308	-	473	721
Mov Cap-2 Maneuver	-	-	-	-	473	-
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	728	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	11.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	571	-	-	1308	-
HCM Lane V/C Ratio	0.015	-	-	0.009	-
HCM Control Delay (s)	11.4	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	209	42	18	188	42	13
Future Vol, veh/h	209	42	18	188	42	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	8	10	10	3	10	0
Mvmt Flow	220	44	19	198	44	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	264	0	478	242
Stage 1	-	-	-	-	242	-
Stage 2	-	-	-	-	236	-
Critical Hdwy	-	-	4.2	-	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	-	-	2.29	-	3.59	3.3
Pot Cap-1 Maneuver	-	-	1255	-	532	802
Stage 1	-	-	-	-	780	-
Stage 2	-	-	-	-	785	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1255	-	523	802
Mov Cap-2 Maneuver	-	-	-	-	523	-
Stage 1	-	-	-	-	780	-
Stage 2	-	-	-	-	772	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	12
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	570	-	-	1255	-
HCM Lane V/C Ratio	0.102	-	-	0.015	-
HCM Control Delay (s)	12	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	1	3	4	1	0	0	41	3	0	40	9
Future Vol, veh/h	6	1	3	4	1	0	0	41	3	0	40	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0	0	10	0	0	10	0
Mvmt Flow	7	1	3	5	1	0	0	47	3	0	46	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	100	101	51	102	105	-	56	0	0	-	-	0
Stage 1	51	51	-	49	49	-	-	-	-	-	-	-
Stage 2	49	50	-	53	56	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	-	4.1	-	-	-	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	-	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	886	793	1023	884	789	0	1562	-	-	0	-	-
Stage 1	967	856	-	969	858	0	-	-	-	0	-	-
Stage 2	969	857	-	965	852	0	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	885	793	1023	880	789	-	1562	-	-	-	-	-
Mov Cap-2 Maneuver	885	793	-	880	789	-	-	-	-	-	-	-
Stage 1	967	856	-	969	858	-	-	-	-	-	-	-
Stage 2	968	857	-	960	852	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	9.2	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	1562	-	-	911	860	-	-
HCM Lane V/C Ratio	-	-	-	0.013	0.007	-	-
HCM Control Delay (s)	0	-	-	9	9.2	-	-
HCM Lane LOS	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	47	0	9	49
Future Vol, veh/h	0	5	47	0	9	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	10	0	0	10
Mvmt Flow	0	6	54	0	10	56

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	54	0	-	54	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	1019	-	0	1564	-
Stage 1	0	-	-	0	-	-
Stage 2	0	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	1019	-	-	1564	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	1.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	1019	1564	-
HCM Lane V/C Ratio	-	0.006	0.007	-
HCM Control Delay (s)	-	8.6	7.3	0
HCM Lane LOS	-	A	A	A
HCM 95th %tile Q(veh)	-	0	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	212	8	5	242	1	4
Future Vol, veh/h	212	8	5	242	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	3	0	20	10	0	0
Mvmt Flow	244	9	6	278	1	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	253	0	539	249
Stage 1	-	-	-	-	249	-
Stage 2	-	-	-	-	290	-
Critical Hdwy	-	-	4.3	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.38	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1214	-	507	795
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	764	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1214	-	504	795
Mov Cap-2 Maneuver	-	-	-	-	504	-
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	759	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	713	-	-	1214	-
HCM Lane V/C Ratio	0.008	-	-	0.005	-
HCM Control Delay (s)	10.1	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	185	35	15	211	35	14
Future Vol, veh/h	185	35	15	211	35	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	6	7	11	3	0
Mvmt Flow	210	40	17	240	40	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	250	0	504	230
Stage 1	-	-	-	-	230	-
Stage 2	-	-	-	-	274	-
Critical Hdwy	-	-	4.17	-	6.43	6.2
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.263	-	3.527	3.3
Pot Cap-1 Maneuver	-	-	1287	-	526	814
Stage 1	-	-	-	-	806	-
Stage 2	-	-	-	-	770	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1287	-	518	814
Mov Cap-2 Maneuver	-	-	-	-	518	-
Stage 1	-	-	-	-	806	-
Stage 2	-	-	-	-	758	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	11.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	578	-	-	1287	-
HCM Lane V/C Ratio	0.096	-	-	0.013	-
HCM Control Delay (s)	11.9	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	1	1	1	0	0	29	0	0	30	16
Future Vol, veh/h	9	0	1	1	1	0	0	29	0	0	30	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	11	0
Mvmt Flow	11	0	1	1	1	0	0	35	0	0	36	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	82	81	46	81	90	-	55	0	0	-	-	0
Stage 1	46	46	-	35	35	-	-	-	-	-	-	-
Stage 2	36	35	-	46	55	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	-	4.1	-	-	-	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	-	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	910	813	1029	912	804	0	1563	-	-	0	-	-
Stage 1	973	861	-	986	870	0	-	-	-	0	-	-
Stage 2	985	870	-	973	853	0	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	909	813	1029	911	804	-	1563	-	-	-	-	-
Mov Cap-2 Maneuver	909	813	-	911	804	-	-	-	-	-	-	-
Stage 1	973	861	-	986	870	-	-	-	-	-	-	-
Stage 2	984	870	-	972	853	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	9.2	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	1563	-	-	920	854	-	-
HCM Lane V/C Ratio	-	-	-	0.013	0.003	-	-
HCM Control Delay (s)	0	-	-	9	9.2	-	-
HCM Lane LOS	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	38	0	5	46
Future Vol, veh/h	0	6	38	0	5	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	17	0	0	0	6
Mvmt Flow	0	7	45	0	6	55

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	45	0	-	45	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.37	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.453	-	-	2.2	-
Pot Cap-1 Maneuver	0	984	-	0	1576	-
Stage 1	0	-	-	0	-	-
Stage 2	0	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	984	-	-	1576	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	984	1576	-
HCM Lane V/C Ratio	-	0.007	0.004	-
HCM Control Delay (s)	-	8.7	7.3	0
HCM Lane LOS	-	A	A	A
HCM 95th %tile Q(veh)	-	0	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	257	9	13	230	8	6
Future Vol, veh/h	257	9	13	230	8	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	7	0	0	4	25	25
Mvmt Flow	271	9	14	242	8	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	280	0	546	276
Stage 1	-	-	-	-	276	-
Stage 2	-	-	-	-	270	-
Critical Hdwy	-	-	4.1	-	6.65	6.45
Critical Hdwy Stg 1	-	-	-	-	5.65	-
Critical Hdwy Stg 2	-	-	-	-	5.65	-
Follow-up Hdwy	-	-	2.2	-	3.725	3.525
Pot Cap-1 Maneuver	-	-	1294	-	461	711
Stage 1	-	-	-	-	720	-
Stage 2	-	-	-	-	725	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1294	-	455	711
Mov Cap-2 Maneuver	-	-	-	-	455	-
Stage 1	-	-	-	-	720	-
Stage 2	-	-	-	-	716	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	11.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	538	-	-	1294	-
HCM Lane V/C Ratio	0.027	-	-	0.011	-
HCM Control Delay (s)	11.9	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	9	0	2	16
Future Vol, veh/h	0	2	9	0	2	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	25	0	0	0
Mvmt Flow	0	2	9	0	2	17

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	30	9	0	0	9	0
Stage 1	9	-	-	-	-	-
Stage 2	21	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	989	1079	-	-	1624	-
Stage 1	1019	-	-	-	-	-
Stage 2	1007	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	988	1079	-	-	1624	-
Mov Cap-2 Maneuver	988	-	-	-	-	-
Stage 1	1019	-	-	-	-	-
Stage 2	1006	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.3	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1079	1624	-
HCM Lane V/C Ratio	-	-	0.002	0.001	-
HCM Control Delay (s)	-	-	8.3	7.2	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	211	50	29	190	55	28
Future Vol, veh/h	211	50	29	190	55	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	8	10	10	3	10	0
Mvmt Flow	222	53	31	200	58	29

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	275	0	511	249
Stage 1	-	-	-	-	249	-
Stage 2	-	-	-	-	262	-
Critical Hdwy	-	-	4.2	-	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	-	-	2.29	-	3.59	3.3
Pot Cap-1 Maneuver	-	-	1243	-	509	795
Stage 1	-	-	-	-	774	-
Stage 2	-	-	-	-	764	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1243	-	495	795
Mov Cap-2 Maneuver	-	-	-	-	495	-
Stage 1	-	-	-	-	774	-
Stage 2	-	-	-	-	743	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	567	-	-	1243	-
HCM Lane V/C Ratio	0.154	-	-	0.025	-
HCM Control Delay (s)	12.5	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1	1	4	1	0	1	43	3	0	42	5
Future Vol, veh/h	2	1	1	4	1	0	1	43	3	0	42	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0	0	10	0	0	10	0
Mvmt Flow	2	1	1	5	1	0	1	49	3	0	48	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	104	105	51	105	107	-	54	0	0	-	-	0
Stage 1	51	51	-	53	53	-	-	-	-	-	-	-
Stage 2	53	54	-	52	54	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	-	4.1	-	-	-	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	-	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	881	789	1023	880	787	0	1564	-	-	0	-	-
Stage 1	967	856	-	965	855	0	-	-	-	0	-	-
Stage 2	965	854	-	966	854	0	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	879	788	1023	877	786	-	1564	-	-	-	-	-
Mov Cap-2 Maneuver	879	788	-	877	786	-	-	-	-	-	-	-
Stage 1	966	856	-	964	854	-	-	-	-	-	-	-
Stage 2	963	853	-	964	854	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	9.2	0.2	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	1564	-	-	885	857	-	-
HCM Lane V/C Ratio	0.001	-	-	0.005	0.007	-	-
HCM Control Delay (s)	7.3	0	-	9.1	9.2	-	-
HCM Lane LOS	A	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	11	0	4	18
Future Vol, veh/h	0	4	11	0	4	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	25	0	0	0
Mvmt Flow	0	4	12	0	4	19

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	39	12	0	0	12	0
Stage 1	12	-	-	-	-	-
Stage 2	27	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	978	1074	-	-	1620	-
Stage 1	1016	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	976	1074	-	-	1620	-
Mov Cap-2 Maneuver	976	-	-	-	-	-
Stage 1	1016	-	-	-	-	-
Stage 2	999	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	1.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1074	1620	-
HCM Lane V/C Ratio	-	-	0.004	0.003	-
HCM Control Delay (s)	-	-	8.4	7.2	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	2	2	51	57	23
Future Vol, veh/h	26	2	2	51	57	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	10	10	0
Mvmt Flow	30	2	2	59	66	26

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	142	79	92	0	-	0
Stage 1	79	-	-	-	-	-
Stage 2	63	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	856	987	1515	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	965	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	855	987	1515	-	-	-
Mov Cap-2 Maneuver	855	-	-	-	-	-
Stage 1	948	-	-	-	-	-
Stage 2	965	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1515	-	863	-	-
HCM Lane V/C Ratio	0.002	-	0.037	-	-
HCM Control Delay (s)	7.4	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	45	0	10	47
Future Vol, veh/h	0	5	45	0	10	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	10	0	0	10
Mvmt Flow	0	6	52	0	11	54

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	52	0	-	52	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	1021	-	0	1567	-
Stage 1	0	-	-	0	-	-
Stage 2	0	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	1021	-	-	1567	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	1.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	1021	1567	-
HCM Lane V/C Ratio	-	0.006	0.007	-
HCM Control Delay (s)	-	8.5	7.3	0
HCM Lane LOS	-	A	A	A
HCM 95th %tile Q(veh)	-	0	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	225	14	8	253	5	6
Future Vol, veh/h	225	14	8	253	5	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	3	0	20	10	0	0
Mvmt Flow	259	16	9	291	6	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	275	0	576	267
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	309	-
Critical Hdwy	-	-	4.3	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.38	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1191	-	482	777
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	749	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1191	-	478	777
Mov Cap-2 Maneuver	-	-	-	-	478	-
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	742	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	605	-	-	1191	-
HCM Lane V/C Ratio	0.021	-	-	0.008	-
HCM Control Delay (s)	11.1	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	5	0	3	13
Future Vol, veh/h	0	2	5	0	3	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	10
Mvmt Flow	0	2	6	0	3	15

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	27	6	0	0	6	0
Stage 1	6	-	-	-	-	-
Stage 2	21	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	993	1083	-	-	1628	-
Stage 1	1022	-	-	-	-	-
Stage 2	1007	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	991	1083	-	-	1628	-
Mov Cap-2 Maneuver	991	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	1005	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.3	0	1.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1083	1628	-
HCM Lane V/C Ratio	-	-	0.002	0.002	-
HCM Control Delay (s)	-	-	8.3	7.2	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	187	48	30	214	51	32
Future Vol, veh/h	187	48	30	214	51	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	6	7	11	3	0
Mvmt Flow	213	55	34	243	58	36

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	268	0	552	241
Stage 1	-	-	-	-	241	-
Stage 2	-	-	-	-	311	-
Critical Hdwy	-	-	4.17	-	6.43	6.2
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.263	-	3.527	3.3
Pot Cap-1 Maneuver	-	-	1267	-	493	803
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	741	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1267	-	478	803
Mov Cap-2 Maneuver	-	-	-	-	478	-
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	718	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	12.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	566	-	-	1267	-
HCM Lane V/C Ratio	0.167	-	-	0.027	-
HCM Control Delay (s)	12.6	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1	1	1	1	0	1	32	0	0	33	9
Future Vol, veh/h	2	1	1	1	1	0	1	32	0	0	33	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	11	0
Mvmt Flow	2	1	1	1	1	0	1	38	0	0	39	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	86	85	45	86	90	-	50	0	0	-	-	0
Stage 1	45	45	-	40	40	-	-	-	-	-	-	-
Stage 2	41	40	-	46	50	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	-	4.1	-	-	-	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	-	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	905	809	1031	905	804	0	1570	-	-	0	-	-
Stage 1	974	861	-	980	866	0	-	-	-	0	-	-
Stage 2	979	866	-	973	857	0	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	903	808	1031	902	803	-	1570	-	-	-	-	-
Mov Cap-2 Maneuver	903	808	-	902	803	-	-	-	-	-	-	-
Stage 1	973	861	-	979	865	-	-	-	-	-	-	-
Stage 2	977	865	-	971	857	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	9.2	0.2	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	1570	-	-	904	850	-	-
HCM Lane V/C Ratio	0.001	-	-	0.005	0.003	-	-
HCM Control Delay (s)	7.3	0	-	9	9.2	-	-
HCM Lane LOS	A	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	7	0	6	16
Future Vol, veh/h	0	4	7	0	6	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	10
Mvmt Flow	0	5	8	0	7	18

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	40	8	0	0	8	0
Stage 1	8	-	-	-	-	-
Stage 2	32	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	977	1080	-	-	1625	-
Stage 1	1020	-	-	-	-	-
Stage 2	996	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	973	1080	-	-	1625	-
Mov Cap-2 Maneuver	973	-	-	-	-	-
Stage 1	1020	-	-	-	-	-
Stage 2	992	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.3	0	2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1080	1625	-
HCM Lane V/C Ratio	-	-	0.004	0.004	-
HCM Control Delay (s)	-	-	8.3	7.2	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	3	3	42	43	35
Future Vol, veh/h	32	3	3	42	43	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	2	6	0
Mvmt Flow	38	4	4	50	51	42

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	130	72	93	0	-	0
Stage 1	72	-	-	-	-	-
Stage 2	58	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	869	996	1514	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	866	996	1514	-	-	-
Mov Cap-2 Maneuver	866	-	-	-	-	-
Stage 1	953	-	-	-	-	-
Stage 2	970	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1514	-	876	-	-
HCM Lane V/C Ratio	0.002	-	0.048	-	-
HCM Control Delay (s)	7.4	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	34	0	5	42
Future Vol, veh/h	0	6	34	0	5	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	17	0	0	0	6
Mvmt Flow	0	7	40	0	6	50

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	40	0	-	40	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.37	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.453	-	-	2.2	-
Pot Cap-1 Maneuver	0	990	-	0	1583	-
Stage 1	0	-	-	0	-	-
Stage 2	0	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	990	-	-	1583	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	990	1583	-
HCM Lane V/C Ratio	-	0.007	0.004	-
HCM Control Delay (s)	-	8.7	7.3	0
HCM Lane LOS	-	A	A	A
HCM 95th %tile Q(veh)	-	0	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	281	16	16	260	17	10
Future Vol, veh/h	281	16	16	260	17	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	7	0	0	4	25	25
Mvmt Flow	296	17	17	274	18	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	313	0	613	305
Stage 1	-	-	-	-	305	-
Stage 2	-	-	-	-	308	-
Critical Hdwy	-	-	4.1	-	6.65	6.45
Critical Hdwy Stg 1	-	-	-	-	5.65	-
Critical Hdwy Stg 2	-	-	-	-	5.65	-
Follow-up Hdwy	-	-	2.2	-	3.725	3.525
Pot Cap-1 Maneuver	-	-	1259	-	421	684
Stage 1	-	-	-	-	698	-
Stage 2	-	-	-	-	696	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1259	-	414	684
Mov Cap-2 Maneuver	-	-	-	-	414	-
Stage 1	-	-	-	-	698	-
Stage 2	-	-	-	-	685	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	12.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	485	-	-	1259	-
HCM Lane V/C Ratio	0.059	-	-	0.013	-
HCM Control Delay (s)	12.9	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	9	0	5	16
Future Vol, veh/h	0	6	9	0	5	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	25	0	0	0
Mvmt Flow	0	6	9	0	5	17

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	36	9	0	0	9	0
Stage 1	9	-	-	-	-	-
Stage 2	27	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	982	1079	-	-	1624	-
Stage 1	1019	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	979	1079	-	-	1624	-
Mov Cap-2 Maneuver	979	-	-	-	-	-
Stage 1	1019	-	-	-	-	-
Stage 2	998	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	1.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1079	1624	-
HCM Lane V/C Ratio	-	-	0.006	0.003	-
HCM Control Delay (s)	-	-	8.4	7.2	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	215	74	55	193	85	63
Future Vol, veh/h	215	74	55	193	85	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	8	10	10	3	10	0
Mvmt Flow	226	78	58	203	89	66

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	304	0	584	265
Stage 1	-	-	-	-	265	-
Stage 2	-	-	-	-	319	-
Critical Hdwy	-	-	4.2	-	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	-	-	2.29	-	3.59	3.3
Pot Cap-1 Maneuver	-	-	1213	-	461	779
Stage 1	-	-	-	-	761	-
Stage 2	-	-	-	-	719	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1213	-	436	779
Mov Cap-2 Maneuver	-	-	-	-	436	-
Stage 1	-	-	-	-	761	-
Stage 2	-	-	-	-	680	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.8	14.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	537	-	-	1213	-
HCM Lane V/C Ratio	0.29	-	-	0.048	-
HCM Control Delay (s)	14.4	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	1	3	4	2	0	2	47	3	0	47	16
Future Vol, veh/h	6	1	3	4	2	0	2	47	3	0	47	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0	0	10	0	0	10	0
Mvmt Flow	7	1	3	5	2	0	2	54	3	0	54	18

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	124	124	63	125	132	-	72	0	0	-	-	0
Stage 1	63	63	-	60	60	-	-	-	-	-	-	-
Stage 2	61	61	-	65	72	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	-	4.1	-	-	-	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	-	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	855	770	1007	854	762	0	1541	-	-	0	-	-
Stage 1	953	846	-	957	849	0	-	-	-	0	-	-
Stage 2	955	848	-	951	839	0	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	852	769	1007	850	761	-	1541	-	-	-	-	-
Mov Cap-2 Maneuver	852	769	-	850	761	-	-	-	-	-	-	-
Stage 1	952	846	-	956	848	-	-	-	-	-	-	-
Stage 2	951	847	-	946	839	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	9.4	0.3	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	1541	-	-	883	818	-	-
HCM Lane V/C Ratio	0.001	-	-	0.013	0.008	-	-
HCM Control Delay (s)	7.3	0	-	9.1	9.4	-	-
HCM Lane LOS	A	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	13	15	0	11	21
Future Vol, veh/h	0	13	15	0	11	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	25	0	0	0
Mvmt Flow	0	14	16	0	12	22

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	62	16	0	0	16	0
Stage 1	16	-	-	-	-	-
Stage 2	46	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	949	1069	-	-	1615	-
Stage 1	1012	-	-	-	-	-
Stage 2	982	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	941	1069	-	-	1615	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	974	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	2.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1069	1615	-
HCM Lane V/C Ratio	-	-	0.013	0.007	-
HCM Control Delay (s)	-	-	8.4	7.2	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	87	7	7	55	68	62
Future Vol, veh/h	87	7	7	55	68	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	10	10	0
Mvmt Flow	100	8	8	63	78	71

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	193	114	149	0	-	0
Stage 1	114	-	-	-	-	-
Stage 2	79	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	800	944	1445	-	-	-
Stage 1	916	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	795	944	1445	-	-	-
Mov Cap-2 Maneuver	795	-	-	-	-	-
Stage 1	911	-	-	-	-	-
Stage 2	949	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1445	-	804	-	-
HCM Lane V/C Ratio	0.006	-	0.134	-	-
HCM Control Delay (s)	7.5	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	53	0	10	63
Future Vol, veh/h	0	5	53	0	10	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	10	0	0	10
Mvmt Flow	0	6	61	0	11	72

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	61	0	-	61	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	1010	-	0	1555	-
Stage 1	0	-	-	0	-	-
Stage 2	0	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	1010	-	-	1555	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	1010	1555	-
HCM Lane V/C Ratio	-	0.006	0.007	-
HCM Control Delay (s)	-	8.6	7.3	0
HCM Lane LOS	-	A	A	A
HCM 95th %tile Q(veh)	-	0	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	248	21	14	283	14	10
Future Vol, veh/h	248	21	14	283	14	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	3	0	20	10	0	0
Mvmt Flow	285	24	16	325	16	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	309	0	654	297
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	357	-
Critical Hdwy	-	-	4.3	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.38	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1156	-	435	747
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	713	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1156	-	428	747
Mov Cap-2 Maneuver	-	-	-	-	428	-
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	701	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	521	-	-	1156	-
HCM Lane V/C Ratio	0.053	-	-	0.014	-
HCM Control Delay (s)	12.3	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	5	0	6	13
Future Vol, veh/h	0	6	5	0	6	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	10
Mvmt Flow	0	7	6	0	7	15

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	35	6	0	0	6	0
Stage 1	6	-	-	-	-	-
Stage 2	29	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	983	1083	-	-	1628	-
Stage 1	1022	-	-	-	-	-
Stage 2	999	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	979	1083	-	-	1628	-
Mov Cap-2 Maneuver	979	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	995	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.3	0	2.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1083	1628	-
HCM Lane V/C Ratio	-	-	0.006	0.004	-
HCM Control Delay (s)	-	-	8.3	7.2	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	191	71	56	217	81	67
Future Vol, veh/h	191	71	56	217	81	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	6	7	11	3	0
Mvmt Flow	217	81	64	247	92	76

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	298	0	633	258
Stage 1	-	-	-	-	258	-
Stage 2	-	-	-	-	375	-
Critical Hdwy	-	-	4.17	-	6.43	6.2
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.263	-	3.527	3.3
Pot Cap-1 Maneuver	-	-	1235	-	442	786
Stage 1	-	-	-	-	783	-
Stage 2	-	-	-	-	693	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1235	-	415	786
Mov Cap-2 Maneuver	-	-	-	-	415	-
Stage 1	-	-	-	-	783	-
Stage 2	-	-	-	-	651	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	15
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	528	-	-	1235	-
HCM Lane V/C Ratio	0.319	-	-	0.052	-
HCM Control Delay (s)	15	-	-	8.1	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.4	-	-	0.2	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	3	3	1	2	0	2	36	0	0	38	19
Future Vol, veh/h	6	3	3	1	2	0	2	36	0	0	38	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	11	0
Mvmt Flow	7	4	4	1	2	0	2	43	0	0	45	23

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	105	104	57	108	115	-	68	0	0	-	-	0
Stage 1	57	57	-	47	47	-	-	-	-	-	-	-
Stage 2	48	47	-	61	68	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	-	4.1	-	-	-	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	-	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	880	790	1015	876	779	0	1546	-	-	0	-	-
Stage 1	960	851	-	972	860	0	-	-	-	0	-	-
Stage 2	971	860	-	955	842	0	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	877	789	1015	869	778	-	1546	-	-	-	-	-
Mov Cap-2 Maneuver	877	789	-	869	778	-	-	-	-	-	-	-
Stage 1	959	851	-	971	859	-	-	-	-	-	-	-
Stage 2	967	859	-	948	842	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	9.5	0.4	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	1546	-	-	882	806	-	-
HCM Lane V/C Ratio	0.002	-	-	0.016	0.004	-	-
HCM Control Delay (s)	7.3	0	-	9.1	9.5	-	-
HCM Lane LOS	A	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	13	11	0	13	19
Future Vol, veh/h	0	13	11	0	13	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	10
Mvmt Flow	0	15	13	0	15	22

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	65	13	0	0	13	0
Stage 1	13	-	-	-	-	-
Stage 2	52	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	946	1073	-	-	1619	-
Stage 1	1015	-	-	-	-	-
Stage 2	976	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	937	1073	-	-	1619	-
Mov Cap-2 Maneuver	937	-	-	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	967	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	2.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1073	1619	-
HCM Lane V/C Ratio	-	-	0.014	0.009	-
HCM Control Delay (s)	-	-	8.4	7.2	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	93	8	7	46	53	74
Future Vol, veh/h	93	8	7	46	53	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	2	6	0
Mvmt Flow	111	10	8	55	63	88

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	178	107	151	0	-	0
Stage 1	107	-	-	-	-	-
Stage 2	71	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	816	953	1442	-	-	-
Stage 1	922	-	-	-	-	-
Stage 2	957	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	811	953	1442	-	-	-
Mov Cap-2 Maneuver	811	-	-	-	-	-
Stage 1	916	-	-	-	-	-
Stage 2	957	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1442	-	821	-	-
HCM Lane V/C Ratio	0.006	-	0.146	-	-
HCM Control Delay (s)	7.5	0	10.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	42	0	5	57
Future Vol, veh/h	0	6	42	0	5	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	17	0	0	0	6
Mvmt Flow	0	7	50	0	6	68

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	50	0	-	50	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.37	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.453	-	-	2.2	-
Pot Cap-1 Maneuver	0	977	-	0	1570	-
Stage 1	0	-	-	0	-	-
Stage 2	0	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	977	-	-	1570	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	977	1570	-
HCM Lane V/C Ratio	-	0.007	0.004	-
HCM Control Delay (s)	-	8.7	7.3	0
HCM Lane LOS	-	A	A	A
HCM 95th %tile Q(veh)	-	0	0	-

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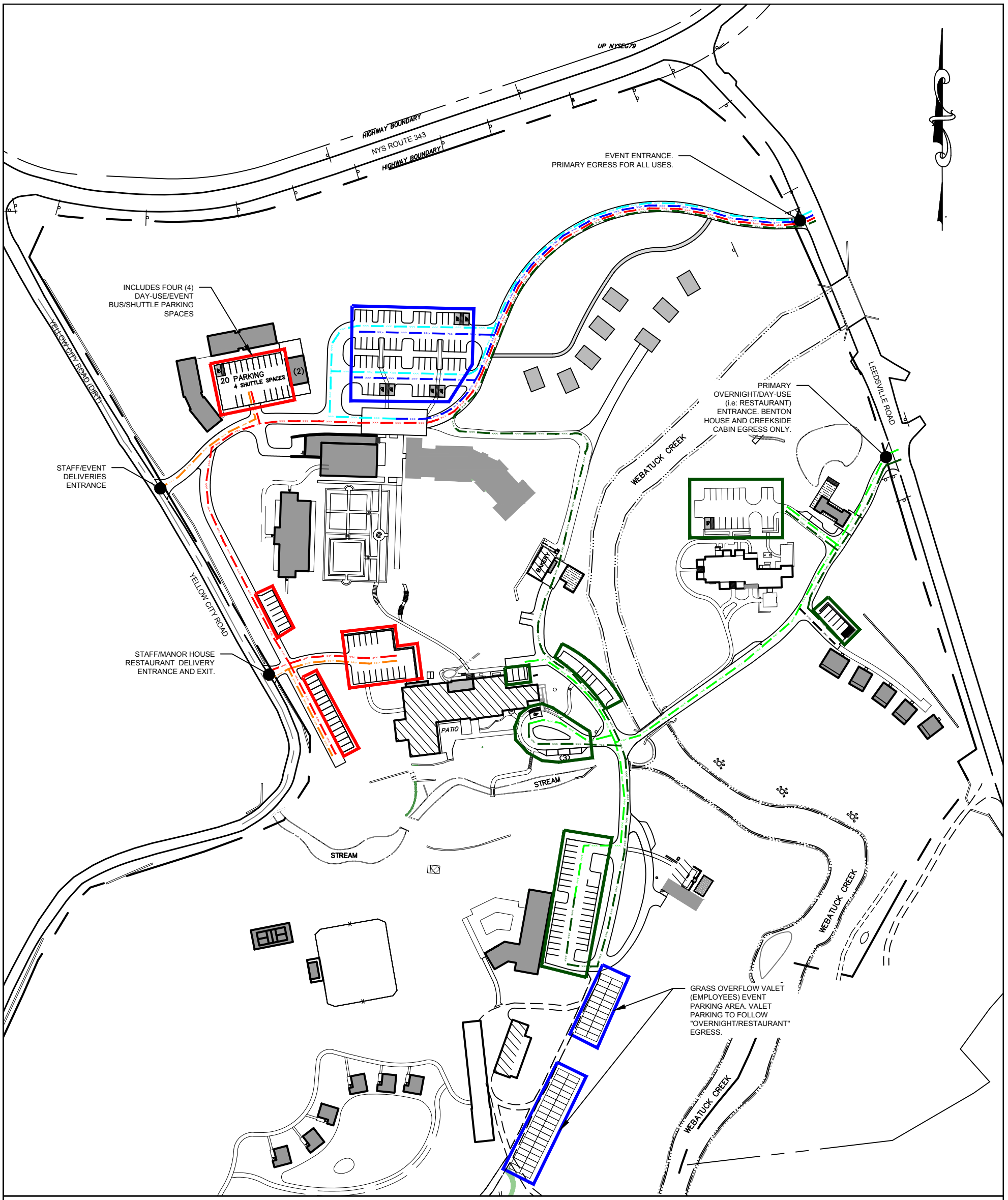

LEGEND

PROJECT PROPERTY LINE

NEIHGBORING PROPERTY

0 150' 300'

1" = 150'
GRAPHIC SCALE

	INGRESS	EGRESS	PARKING
STAFF/DELIVERIES	>>>	>>>	
OVERNIGHT/DAY-USE	>>>	>>>	
EVENT GUESTS	>>>	>>>	

DATE	REVISION

ENGINEERING, DESIGN, & PLANS PREPARED BY:

RENNIA ENGINEERING DESIGN, PLLC

CIVIL ▪ ENVIRONMENTAL ▪ STRUCTURAL

6 Dover Village Plaza, Suite 5, P.O. Box 400, Dover Plains, NY 12522

Tel: (845) 877-0555 Fax: (845) 877-0556

TROUTBECK
ADAPTIVE REUSE

TOWN OF DOVER — DUTCHESS COUNTY, NY

VEHICLE CIRCULATION EXHIBIT

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
1/8/2023	1"=150'	RED	RED	RAR	#16-019	1 of 1

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January 23, 2023

Troutbeck Holdings, LP
c/o Mr. Anthony Champalimaud
515 Leedsville Road
Amenia, NY 12051

RE: Trip Generation Update, Troutbeck Development, 515 Leedsville Road, Town of Amenia, Dutchess County, New York; CM Project 121-191

Dear Mr. Champalimaud:

Creighton Manning Engineering, LLP has completed an updated trip generation evaluation for the proposed *Troutbeck Development* located on Leedsville Road and Yellow City Road in the Town of Amenia. The original *Traffic Assessment* dated October 3, 2022 included an analysis for re-development and expansion of the existing *Troutbeck Resort* in multiple phases. In general, the first phase would have added five cabins and other guest amenities while subsequent phases would have added numerous additional lodging units, expand the dining capability of the site, increase on-site staff lodging, and modify the special event space. The current proposal will reduce the first phase to four cabins and eliminate the 32 unit expansion to the Garden Lodge as shown in red on Table 1. This assessment is based on information provided by Rennia Engineering Design, PLLC.

Table 1 – Land Use Summary

Land Use	Existing Conditions	Original Full Build-Out (10/3/22)	Updated Full Build-Out (1/17/23)
Manor House (lodging)	17 units	17 units	17 units
Benton House (lodging)	17 units	17 units	17 units
Garden House (lodging)	4 units	--	--
Garden House (residence)	2 residences	--	--
Bakery Building (residence)	1 residence	--	--
Cabins – Garden (lodging)	--	8 units	8 units
Garden Hotel (lodging)	--	33 units	33 units
Cabins – Pond (lodging)	--	6 units	6 units
Cabins – Creekside (lodging)	--	5 units	4 units
Garden Expansion (lodging)	--	32 units	0 units
Bakery (staff apartment)	--	1 residence	1 residence
Staff Residence	--	5 residences	5 residences
Delamater House (restaurant)	--	87 seats	87 seats

1.0 Trip Generation Update

Trip generation determines the quantity of traffic expected to travel to and from a given site. The Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition, is the industry-standard resource for estimating trip generation for proposed developments based on data collected at sites with similar land uses. The trip generation for the lodging units, restaurant, and apartments was estimated using land use code (LUC) 310/330 for a Hotel/Resort Hotel, LUC 931 for a Fine Dining Restaurant, and LUC 215 for Single-Family Attached Housing. Table 2 compares the original full build-out trip generation estimate to the updated assessment associated with the revised site plan.

Table 2 – Trip Generation Summary

Land Use		Size	LUC	PM Peak Hour			Saturday Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Original Proposal (10/3/22)	Manor House	17 units	310/330	20	28	48	40	31	71
	Benton House	17 units							
	Cabins – Garden	8 units							
	Garden Hotel	33 units							
	Cabins – Pond	6 units							
	Cabins – Creekside	5 units							
	Garden Expansion	32 units							
	Bakery Staff Apartment	1 residence	215	2	1	3	1	2	3
	Staff Residence	5 residences							
	Delamater House	87 seats	931	16	8	24	17	12	29
	Total			**38**	**37**	**75**	**58**	**45**	**103**
Updated Proposal (1/17/23)	Manor House	17 units	310/330	15	20	35	36	29	65
	Benton House	17 units							
	Cabins – Garden	8 units							
	Garden Hotel	33 units							
	Cabins – Pond	6 units							
	Cabins – Creekside	4 units							
	Garden Expansion	0 units							
	Bakery Staff Apartment	1 residence	215	2	1	3	1	2	3
	Staff Residence	5 residences							
	Delamater House	87 seats	931	16	8	24	17	12	29
	Total			**33**	**29**	**62**	**54**	**43**	**97**
Difference				**-5**	**-8**	**-13**	**-4**	**-2**	**-6**

The analysis for the original site plan indicates that the site would generate approximately 75 trips during the PM peak hour and approximately 103 trips during the Saturday peak hour. The revised plan indicates that the site will generate approximately 62 trips during the PM peak hour and 97 trips during the Saturday peak hour. This indicates that the revised site will generate approximately 13 fewer trips during the PM peak hour and six fewer trips during the Saturday peak hour; therefore, the conclusions provided in the original *Traffic Assessment* which indicates that the existing roadway network will be able to accommodate future traffic is still valid. No site specific mitigation is recommended.

2.0 Conclusions

The updated *Troutbeck Resort* will generate approximately 13 fewer trips during the PM peak hour and six fewer trips during the Saturday peak hour. The conclusions provided in the original *Traffic Assessment* which indicates that the existing roadway network will be able to accommodate future traffic is still valid. No site specific mitigation is recommended.

Please feel free to call our office if you have any questions or comments regarding the above evaluation.

Respectfully submitted,
Creighton Manning Engineering, LLP

Mark Nadolny
Associate

N:\Projects\2021\121-191 Rennia - Troutbeck Development\Working\Traffic\Reports\20230123_trip gen letter_121191.docx

APPENDIX E
VISUAL IMPACT ANALYSIS

Troutbeck – Adaptive Reuse Plan - Visual Impact Analysis, dated 1/9/2023, revised 2/15/2023

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Troutbeck Adaptive Reuse Plan — Visual Impact Analysis

515 Leedsville Road
Town of Amenia
Dutchess County, New York

Revision 01
February 15, 2023

STONEHILL TAYLOR

REED HILDERBRAND

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Introduction

This report assesses potential visual impacts of the proposed Troutbeck Adaptive Reuse Plan (the "Project") from three vantage points along Route 343, which has been identified as a scenic road in §121-14.1.B in Town of Amenia Code, and one vantage point along Leedsville Road at the primary entrance to the site.

To analyze the potential visual impacts of the proposed Project, a computer-rendered three-dimensional model of both the Project Site and the buildings was prepared. To provide a conservative analysis the model includes vegetation without foliage and shows unmitigated views of what the site would look like at full build-out without additional landscape intervention in addition to mitigated views of what the site will look like once proposed planting is completed.

Revision 1 updates are made in direct response the comment, "Provide an updated visual simulation for the portion of the property along NYS Route 343. Any proposed landscaping should avoid the proposed septic and replacement areas shown in the Adaptive Reuse Plan. Also, consider the possibility of including coniferous plantings to provide year-round screening."

METHODOLOGY

Selection of Vantage Points: The four views are based on both comments from the Public Hearing and Planning Board feedback about potential for visual impact . The simulations provide a worst-case scenario showing where structures and new parking will be the most visible based on leaf-off conditions.

Development of Renderings: Based on the selected Vantage Points, the following visualization creation process occurred:

- Utilizing data from the site plan survey, USGS, and LiDAR data, the existing site topography and surrounding areas are fully modeled in 3D in Rhinoceros (3D CAD Software).
- Proposed and existing survey contours are brought to elevation in 3D to proof the LiDAR-generated mesh. Where interventions in grade or discrepancies exist, the LiDAR generated mesh is adjusted or composited with new 3D geometries that accurately represent the proposal.
- The virtual model is then populated with high polygon count 3D models trees representative of the species proposed in their precise location.
- For each view, a chosen image that represents an area of future landscape and/or architectural intervention is loaded into Rhinoceros as a fixed background perpendicular to the virtual camera. The virtual camera and the background image that is paired to the virtual camera are adjusted so that the 3D model aligns with the photograph. The virtual camera is adjusted to match the focal length of camera used on site acquired from the on-site camera's metadata. Known features such as road lines or buildings or foreground elements such as trees are used to assist in the alignment. This locks in accurate building heights, tree heights, and field of vision from the perspective of the on-site camera.
- Depending on the layering of elements within the photograph a number of render passes are created isolating distinct landscape features using the ray-tracing rendering software V-Ray. These distinct layers are then composited in the image software Photoshop. Since each layer is rendered out from the same virtual camera view and the 3D geometries are located within the 3D model according to the proposed site plan, the combined composite image allows elements of the photograph to be interleaved with rendered elements with relative accuracy.
- Once placed, using Photoshop: negative spaces within the photographs are removed (around foreground tree branches and other obstructions), as is any vegetation determined to be removed by the site plan development drawings. In the latter -- removal of vegetation -- the vegetation to remain may be supplemented by 3D rendered elements when it is not feasible to accurately create masks to reveal and remove dense overlapping vegetation in the photograph.
- Finally, other shrubs and other foreground elements are collaged in using Photoshop.

POTENTIAL VISUAL IMPACTS FOR THE PROPOSED PROJECT

SUMMARY

Members of the public have questioned the visual impact of the Project's proposed plans with particular concern for the public viewshed and visibility into the property from Route 343. Today drivers can see the northeast corner of the existing "Garden House" and east wall of the walled garden when traveling east on Route 343 or south on Yellow City Road. Existing Garden House will be demolished per plan, and the proposed structures visible from Route 343 will be P1, P5 and P2 (staff housing, central administrative building, tractor shed).

For reference, P5, the administration building, is nearest to the Route 343 scenic corridor and set back +/-193 feet. Consistent with the character of the surrounding areas, these structures are designed in an agricultural style, with natural wood vertical siding. The visual impact analysis uses existing Troutbeck structures in the model as these represent, perfectly, design intent. They will weather in time and turn to grey.

Buildings P1, P5 and P2 are situated in such a way that they will obstruct views into the interior of the property. P6, the Garden Hotel, will be mostly shielded from view along Route 343, Leedsville, and Yellow City Road, due to topography, significant distance from property boundaries and existing and mature tree cover.

These structures are fully in compliance with zoning and are contextually appropriate. In response to public questions however, additional plantings are now shown in the proposed planting plan on Page 18 to further mitigate their impact on the view from Route 343. These plantings are also represented in the mitigated views of each vantage point.

Additionally, there was concern from the public that the northern parking lot off of Spingarn Lane would be highly visible from Route 343. The parking lot alignment, previously west to northwest at an angle is now proposed as west to east, in parallel to Spingarn Lane. Taken together these modifications will preserve ~20,608 sq. ft. of the existing green buffer (before additional planting is taken into account). With these changes, the parking area will be largely shielded from view from Route 343. The "7 grass bus parking spaces" shown to the east of the parking area have been relocated to the parking area surrounded by P1, P5, and P2 so as not to risk any potential visibility from Route 343.

Structure P9, the Gatehouse, will be partially visible from Leedsville Road as shown in Vantage Point 4. The architectural aesthetic of the Gate House is derived from the "Benton Cottage" (aka "Century Lodge") consistent with examples of early American colonial architecture present on the site and consistent with the surrounding area. It is a diminutive, painted clapboard structure entirely in keeping with similar structures nearby. All painted architectural elements will follow those guidelines published by the National Park Service and in keeping with the practice employed by ownership to date.

DISCUSSION OF INDIVIDUAL VANTAGE POINTS
VANTAGE POINT 1: ROUTE 343 AND YELLOW CITY ROAD VIEW TO ADMIN BUILDING AND STAFF HOUSING BUILDING

Existing Conditions:
Route 343 runs northeast from Yellow City Road, which extends southeast. The existing December 2022 view from Vantage Point 1 looks south along Route 343 as it runs northeast from the intersection with Yellow City Road, as is shown on Page VP-1. The north side of Route 343 and west side of Yellow City Road are comprised of New York State and Connecticut core forests, while the south side of Route 343 opens up to a field with deciduous and evergreen hedgerows, shrubs, and orchard trees. This view was documented using an iPhone 14 pro camera.

Proposed Mitigated Conditions:
Vantage Point 1 has been updated in Revision 1 to reflect the planting plan modifications which relocate orchard trees to avoid the proposed septic areas shown in the Adaptive Reuse Plan. The woodland screening planting mix includes evergreen trees, *Pinus strobus* and *Itex opaca* to provide additional year round screening. Based on the proposed design and for the Project, existing hedgerow trees, orchard trees, and shrubs overlooking tall grasses will be retained south of Rt 343. Additional native hedgerow, canopy trees, orchard trees, shrubs and grasses to be supplemented to match in character with the existing and partially minimizing views of the proposed project from Vantage Points 1 and 2. Behind the orchard in this view, invasives are to be removed and replaced with native shrub thickets and understory. The added density of planting seeks to maximize habitat zones and support wildlife connectivity to the NYS and Connecticut core forest areas nearby, whilst creating a further buffer between the road and the orchard with dense native shrubs planted between existing street-line trees.

In winter conditions with dropped leaves ("leaf-off"), the proposed project would be partially visible from Route 343 and Yellow City Road, although the impact is significantly mitigated by the building set back of +/-190 feet from Route 343. Views of the Proposed Project during leaf-off times of year would be more visible from this location until the proposed plantings reach their full effective maturity after approximately 10 years. This condition is documented in the unmitigated views of Vantage Point 1 and 2.

As with most structures of a residential scale, it is not possible to completely screen the building from view from Route 343. During the 6+ months of the year when trees keep their leaves, views of these structures would be substantially reduced by the retained and proposed trees and vegetation. Also, the proposed project buildings are of an agricultural style, clad in natural wood vertical siding and utilizing a non-reflective roofing material. Wood is a natural material which will weather to grey in time. These structures are limited to 1 story and are consistent in their design with the vernacular rural character of their nearby surroundings. The architectural design of these buildings is intended to reduce their visual impact, if and when partially visible through the extensive plantings proposed.

VANTAGE POINT 2: ROUTE 343 VIEW TO GARDEN HOTEL PARKING

Existing Conditions:

The existing December 2022 view from Vantage Point 2 looks south along Route 343 at its intersection with Yellow City Road as is shown on Page VP-2. Between Route 343 and the Proposed Project location, the north side of Route 343 contains existing New York State and Connecticut core forests. To the south lies an open field with deciduous and evergreen hedgerows, shrubs, orchard trees and tall grasses. This view was documented using an iPhone 14 pro camera.

Proposed Mitigated Conditions:

Vantage Point 2 has been updated in Revision 1 to reflect the planting plan modifications which relocate orchard trees to avoid the proposed septic areas shown in the Adaptive Reuse Plan. The woodland screening planting mix includes evergreen trees, *Pinus strobus* and *Itex opaca* to provide additional year round screening. Based on the proposed design, existing hedgerow trees, orchard trees, shrubs and grasses will be retained south of Rt 343. Additional native hedgerow, canopy trees, orchard trees, shrubs and grasses to be supplemented to match in character with the existing and, will partially minimize views of the proposed project from Vantage Points 1 and 2. The added density of planting seeks to maximize habitat zones and support wildlife connectivity to adjacent and nearby New York State and Connecticut core forests.

In winter conditions with dropped leaves ("leaf-off"), the proposed project would be partially visible from Route 343 and Yellow City Road, although the impact is significantly mitigated by the building set back of +/-190 from Route 343. Views of the Proposed Project during leaf-off times of year would be more visible from this location until the proposed plantings reach their full effective maturity after approximately 10 years.

VANTAGE POINT 3: CORNER OF ROUTE 343 AND LEEDSVILLE ROAD

Existing Conditions:

Vantage Point 3 is located at the intersection of Route 343 and Leedsville Road looking southwest. The image was documented December 2022. Even during leaf-off conditions, views beyond the existing hedgerow, orchard trees, shrubs and grasses are limited of the proposed project. The character is open and rural. This view was documented an iPhone 14 pro camera.

Proposed Mitigated Conditions:

Vantage Point 3 has been updated in Revision 1 to reflect the planting plan modifications which relocate orchard trees to avoid the proposed septic areas shown in the Adaptive Reuse Plan. The woodland screening planting mix includes evergreen trees, *Pinus strobus* and *Itex opaca* to provide additional year round screening. In this winter condition, representing the highest visibility scenario, views of the proposed project would be minimal. During the 6+ months of the year when trees keep their leaves, all views of the proposed project would be virtually eliminated. Additional native hedgerow, canopy trees, orchard trees, shrubs and grasses will be supplemented to match in character with the existing

vegetation and, to further minimize views of the proposed project from Vantage Points 3. The added density of planting seeks to maximize habitat zones and support wildlife connectivity.

VANTAGE POINT 4: LEEDSVILLE ROAD TOWARDS GATEHOUSE

Existing Conditions:
Vantage Point 4 is located along Route 343 looking southwest at the proposed project. The image was documented January 2022. To the right is the entry pond surrounded by hemlocks, pines and a spruce hedge. The spruce hedge presently suffers from Rhizosphaera needle cast. Grasses and shrubs line the entry drive into the project site. There is a strong existing evergreen presence is ornamental and planted to screen views views north of the entry pond.

Proposed Mitigated Conditions:
Additional native riparian trees, shrubs, forbs and aquatic grasses to be introduced with the removal of invasive plants, predominantly the abundant invasive watercress at the pond and road entry. Plantings are to nestle the proposed building for a sense of place upon arrival as well as to screen views from Leedsville Road. The mature willow tree and maple tree to be preserved at the location of the gatehouse to buffer views. A certified arborist is treating existing hemlocks and pines to likewise preserve. Hedge on the north side of the pond to be removed and replaced with native plantings that are more resilient to changing growing conditions. The alignment of the road to be the same with slight expansion to meet the requirements of local fire code and universal ADA access. The pond and the majority of this area is a component of the proposed conservation easement held by the Housatonic Valley Association.

The architectural aesthetic of the Gate House is derived from the “Benton Cottage” (aka “Century Lodge”) consistent with examples of early American colonial architecture present on the site and consistent with the surrounding area. It is a diminutive (401 sf) one-story painted clapboard structure entirely in keeping with similar structures nearby.

PROJECT LANDSCAPING

Landscaping is included as part of the Proposed Project. Along the Yellow City Road, Route 343 and Leedsville Road corridors, the conceptual landscape plan aims to amplify the plant typologies and groupings that exist: hedgerow, field, and orchard trees. An enhanced buffer of street plantings with careful placement of low shrubs and understory trees will line the inside of all roads adjacent to site. A native meadow will extend through the proposed project from the road edge inward connecting with other areas of meadow restoration already undertaken by ownership. Within the enhanced street plantings is an extension of the existing orchard condition, acting as one cohesive grove to provide additional screening, seasonal interest and habitat.

Running north-south are introduced hedgerows to build off of the existing hedge character. These hedges will run south towards denser native woodland and shrub thicket, consisting of eastern redbud, Virginia creeper, clethra, winterberry, buttonbush, witch hazel, Carolina allspice, blueberry, and blackberry bushes. In addition to screening, the landscaping aims to create continuity in habitat across adjacent core forests to the project site, using the introduction of native deciduous and evergreen trees and shrubs; orchard trees to match existing; and native meadows and forbs.

An initial and essential first step is the careful removal of the abundant existing invasive shrubs and understory. In areas adjacent to ponds and waterways, invasives will be removed and enhanced with riparian planting, including willow trees and aquatic shrubs and grasses.

Additional landscaping is proposed at the entrance to the proposed project at Leedsville Road entry and incorporating the Gatehouse. Additional evergreen and deciduous landscaping around this border is proposed to limit visual impacts.

CONCLUSION

— The Project will be partially visible from Yellow City Road, Route 343 and Leedsville Road corridors during leaf-off conditions and will be minimal during times of the year when trees have foliage due to distance, topography, the density of existing vegetation, and proposed landscaping.
— The proposed north parking area will be greatly obscured by distance, its lowered topography (requiring a retaining wall), and the density of existing and proposed vegetation.
— All newly constructed structures are designed in keeping with existing material and architectural precedents. All structures will be clad or constructed using natural materials, namely wood and stone.

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VISUAL ANALYIS

Vantage Point 1

Vantage Point 2

Vantage Point 3

Vantage Point 4

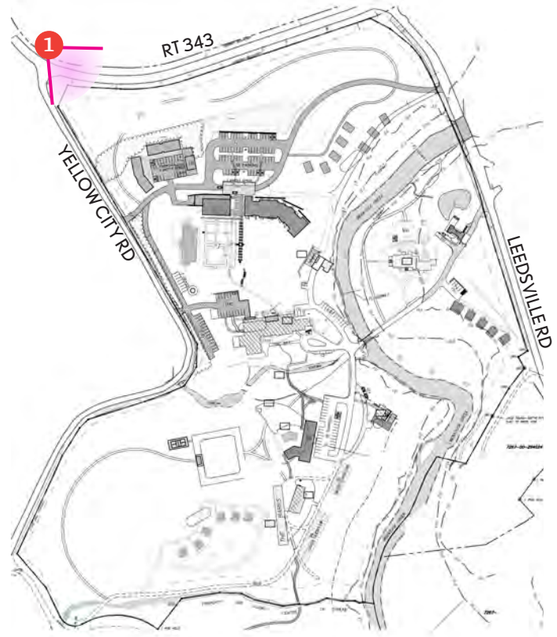
Revised Proposed Planting Plan for Area Visible from Route 343

Proposed Site Planting Plan

Vantage Point 1 CORNER OF RT 343 AND YELLOW CITY RD - TO VIEW ADMIN /STAFF HOUSING BUILDINGS

EXISTING VIEWSHED

PROPOSED VIEWSHED – UNMITIGATED

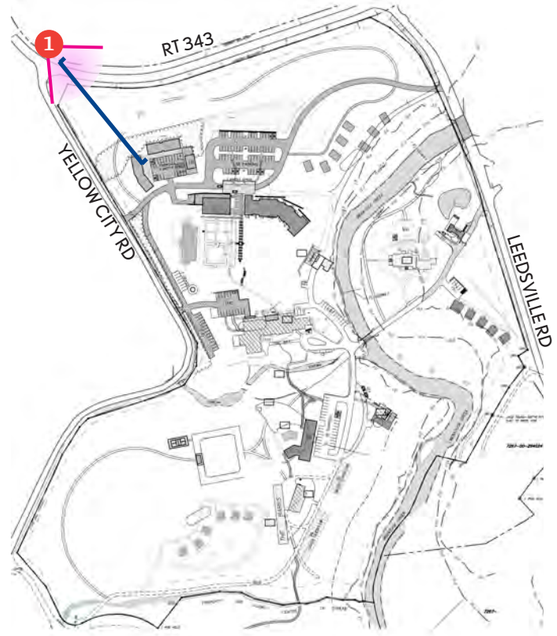


KEY MAP: SECTION AND VANTAGE POINT
SCALE: NTS

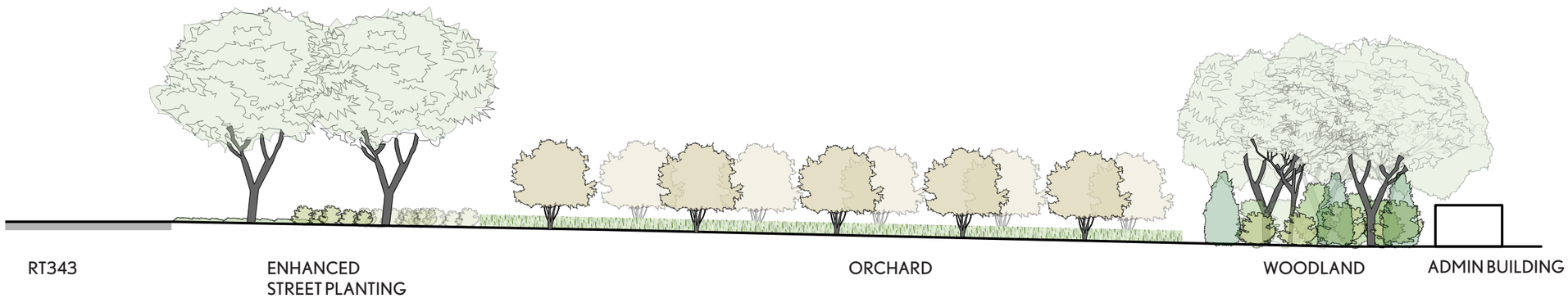
Vantage Point 1 CORNER OF RT 343 AND YELLOW CITY RD - TO VIEW ADMIN /STAFF HOUSING BUILDINGS

PROPOSED VIEWSHED – MASSING

REVISED PROPOSED VIEWSHED – MITIGATED



KEY MAP: SECTION AND VANTAGE POINT
SCALE: NTS



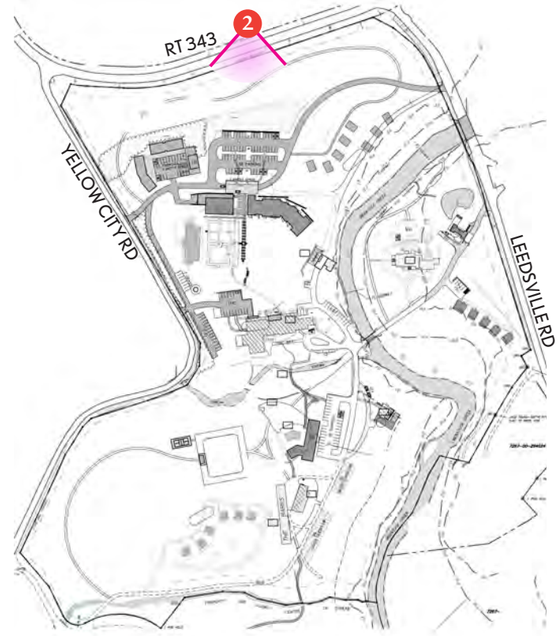
REVISED PROPOSED SECTION – MITIGATED (SCALE: 1"=30'-0")

0' 30'

Vantage Point 2 RT 343 TO GARDEN HOTEL PARKING AREA

EXISTING VIEWSHED

PROPOSED VIEWSHED – UNMITIGATED

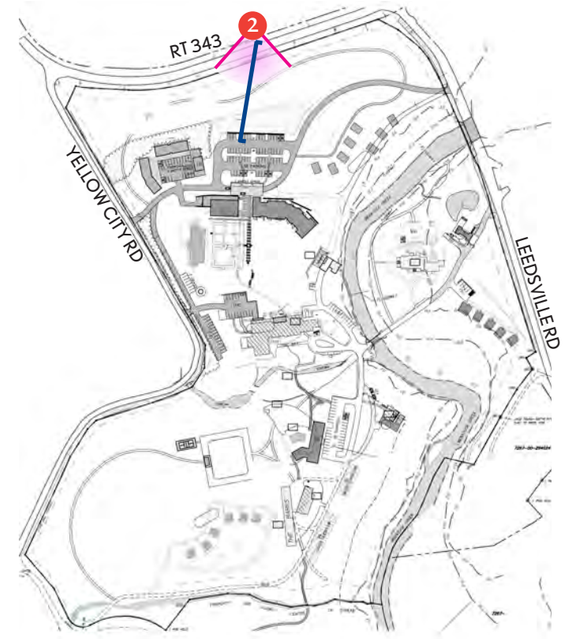


KEY MAP: SECTION AND VANTAGE POINT
SCALE: NTS

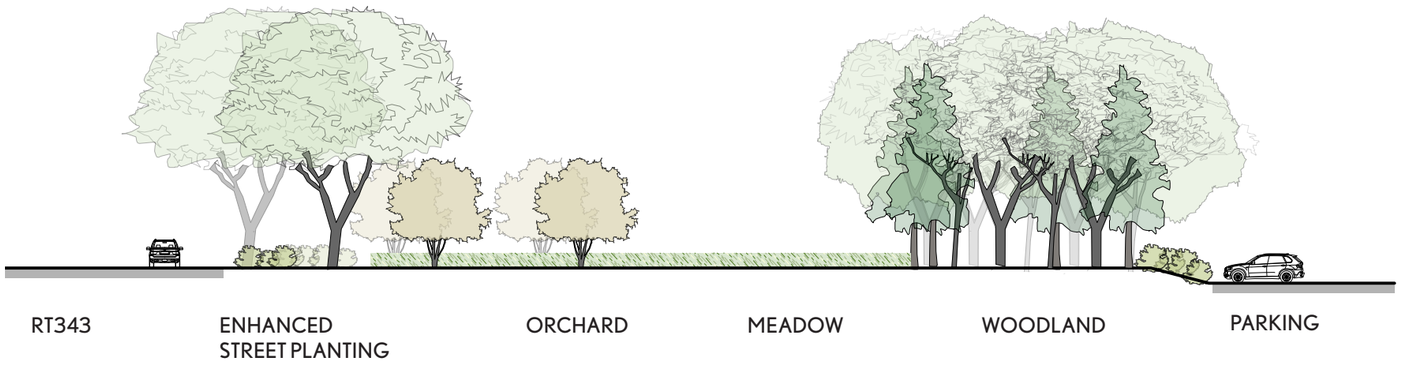
Vantage Point 2 RT 343 TO GARDEN HOTEL PARKING AREA

PROPOSED VIEWSHED – MASSING

REVISED PROPOSED VIEWSHED – MITIGATED



KEY MAP: SECTION AND VANTAGE POINT
SCALE: NTS



REVISED PROPOSED SECTION – MITIGATED (SCALE: 1" = 30'-0")

0' 30'

Vantage Point 3 CORNER OF RT 343 AND LEEDSVILLE ROAD

EXISTING VIEWSHED

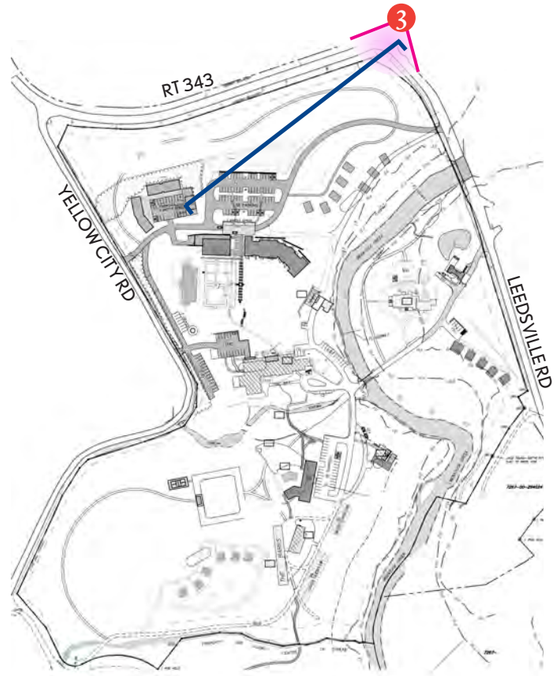
PROPOSED VIEWSHED – UNMITIGATED

KEY MAP: SECTION AND VANTAGE POINT
SCALE: NTS

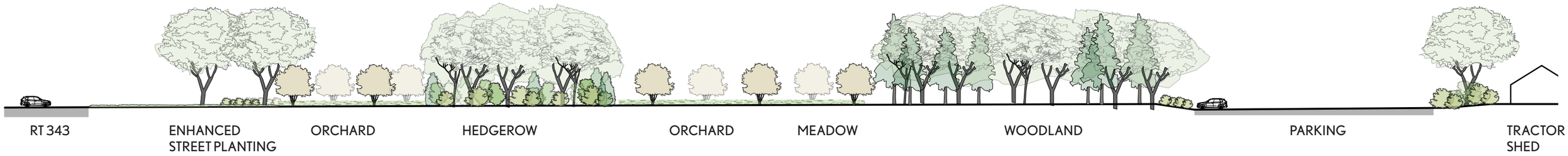
Vantage Point 3 CORNER OF RT 343 AND LEEDSVILLE ROAD

PROPOSED VIEWSHED – MASSING

REVISED PROPOSED VIEWSHED – MITIGATED



KEY MAP: SECTION AND VANTAGE POINT
SCALE: NTS



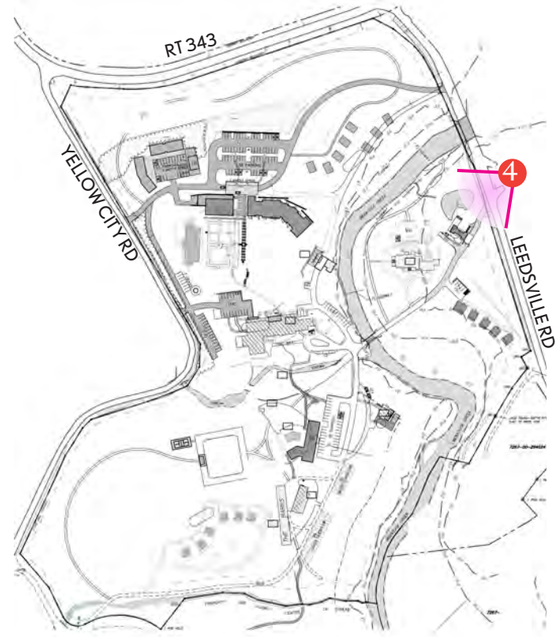
REVISED PROPOSED SECTION – MITIGATED (SCALE: 1"= 50'-0")

0' 50'

Vantage Point 4 LEEDSVILLE ROAD TOWARDS GATEHOUSE

EXISTING VIEWSHED

PROPOSED VIEWSHED – UNMITIGATED

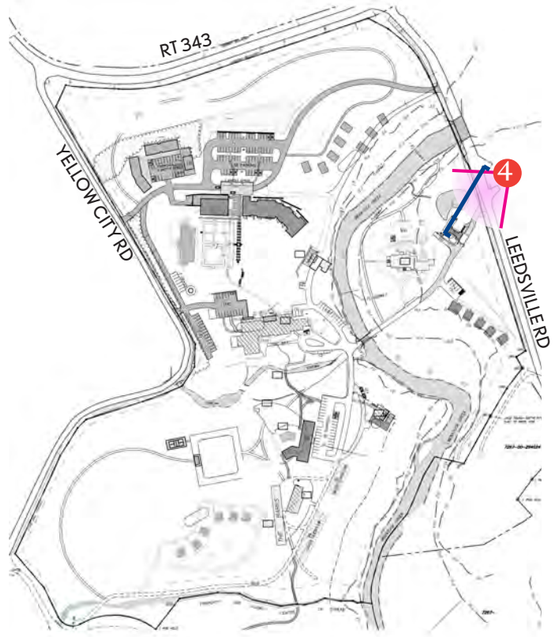


KEY MAP: SECTION AND VANTAGE POINT
SCALE: NTS

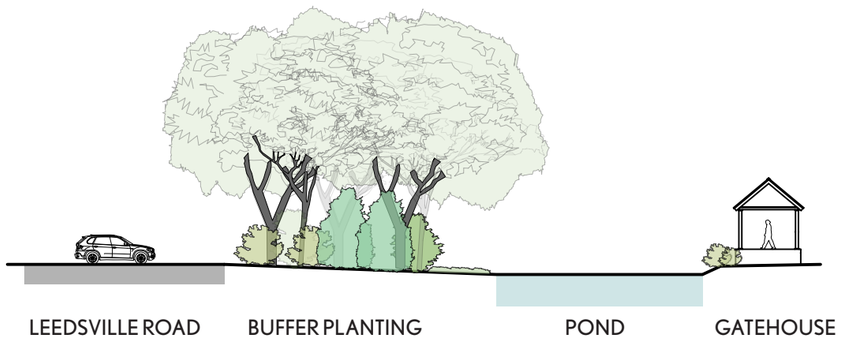
Vantage Point 4 LEEDSVILLE ROAD TOWARDS GATEHOUSE

PROPOSED VIEWSHED – MASSING

PROPOSED VIEWSHED – MITIGATED



KEY MAP: SECTION AND VANTAGE POINT
SCALE: NTS



PROPOSED SECTION – MITIGATED (SCALE: 1" = 30'-0")

0' 30'

Revised Proposed Planting Plan for Area Visibile from Rt 343

Enhanced buffer of street plantings with careful placement of low shrubs and understory trees will line the inside of all roads adjacent to site.

A native meadow with expanded orchard trees will extend through the proposed project from the road edge inward connecting with other areas of meadow restoration already undertaken.

Running north-south are introduced hedgerows to build off of the existing hedge character. These hedges will run south towards denser native woodland and shrub thicket.

Proposed woodland and shrub thicket: native deciduous and evergreen trees and shrubs

Existing woodland and shrub thicket

Running north-south are introduced hedgerows to build off of the existing hedge character. These hedges will run south towards denser native woodland and shrub thicket

0' 120'

APPENDIX F

ZONING COMPLIANCE/ADDITIONAL SUPPORTING DOCUMENTS

Special Use Permit Criteria Compliance Analysis, dated 1/9/2023

Floodway/Floodplain Impact Analysis, dated 1/6/2023

Aquifer Overlay District – Aquifer Net Recharge Calculations

Amenia Fire Company – Letter indicating the Implementation of Fire Safety Measures, dated 12/28/2022

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January 9, 2023

Town of Amenia Planning Board
Robert Boyles, Jr., Chairman
Judy Westfall, Planning Board Secretary
4988 Route 22
Amenia, New York 12501

RE: Troutbeck Holdings LP
Adaptive Reuse Plan
Our File No.:3893.0000

Dear Chairman Boyles:

On behalf of Troutbeck Holdings, LP ("Troutbeck") we submit this correspondence in further support of our client's application for a Special Use Permit in accordance with §121-14.2 of the Town of Amenia Zoning Code. This section authorizes the Planning Board to approve an "Adaptive Reuse Plan" proposed within the Historic Preservation Overlay provided that the application otherwise complies with §121-63.B which sets forth twelve criteria for granting of Special Use Permits.

As described above, the Troutbeck's Adaptive Reuse Plan complies with Special Use Permit criteria of §121-63.B in every respect. An analysis of the criteria being fully satisfied, as well as the location of additional supporting information is been provided as follows:

1. **[The application]** ***"will comply with all land use district, overlay district, and other specific requirements of this and other chapters and regulations, and will be consistent with the purposes of this chapter and of the land use district in which it is located."***

   - Land Use Districts: The project site is located with the Rural Residential "RR" Zoning District. Bulk and Use Regulations outlined for the RR Zoning District are superseded by "Adaptive Reuse" regulations outlined in in §121-14.2. "Adaptive Reuse" of the Amenia Zoning Code.

Reply to:

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**See Troutbeck – Project Narrative & SEQR Documentation, "2.1 Zoning Districts", pg. 7

- Overlay Districts: The site contains five zoning districts: Aquifer Overlay (AQO), Scenic Protection Overlay (SPO), Floodplain Overlay (FPO), Stream Corridor Overlay (SCO), and the Historic Preservation Overlay (HPO). The project utilizes provisions outlined for the HPO district, to proceed with the proposed Adaptive Reuse Plan. It is clear that the HPO district regulations, established with expansion at Troutbeck in mind embrace the proposed Adaptive Reuse Plan.
  **See Troutbeck – Project Narrative & SEQR Documentation, "2.1 Overlay Districts", pg. 8.

- Comprehensive Plan: The most recent version of the Town of Amenia Comprehensive Plan, a document designed to guide the Town on zoning and other municipal decisions, was adopted in 2007. The plan contains a vision statement for the Town, goals to achieve this vision, and all supporting information. A review of this information found that the proposed project is in general compliance with the recommendations offered in this document and meets its general aim and, in addition, its specific aim to "attract residents, travelers, shoppers, diners and vacationers.".
  **See Troutbeck – Project Narrative & SEQR Documentation, "2.4 Comprehensive Plan Compliance", pg. 15

2. ***"Will not result in excessive off-premises noise, dust, odors, solid waste, or glare or create any public or private nuisances."***

- The proposed project will not result in an increase of excessive off-premise noise, dust odors, solid waste, or glare. The proposed project is an expansion of an existing lodging, conference center and resort use. As such, so-called nuisances that may be emanate from the proposed expansion will not differ from those already generated by the existing uses; which would not be considered excessive considering they have been present on the site since the 1980s. More specific information on the individual "nuisances" and the mitigation being provided is outlined below:

  - Noise: The application provides an improvement of noise conditions in and around the site, relocating event space further away from neighboring properties, and provide significant vegetative buffers and noise mitigation measures between proposed structures and neighboring properties.
    **See "4.7 Noise", pg. 33.

- Dust: Neither existing or proposed uses shall result in an increase in dust generated from the project, with the exception of any dust generated from typical construction activities. During the course of construction, the applicant will implement provisions provided in the Stormwater Pollution Prevention and Erosion & Sediment Control Plans to reduce the potential for dust.
  **See Troutbeck – Project Narrative & SEQR Documentation, "4.7 Noise", pg. 33.

- Odors: The only odors generated by the project site would be those generated by the existing restaurant use. Currently, located in the Manor House, a second part time restaurant operation will be located in the renovated Delamater House, which will operate intermittently with existing facilities. Both restaurant locations are located sufficient distance away from neighboring parcel to negate potential odors.
  **See Troutbeck – Project Narrative & SEQR Documentation, "4.7 Odor", pg. 35.

- Solid Waste: Solid waste generated by the site will remain the same but in slightly higher volumes to accommodate additional guest capacity. The increase in waste will be accommodated by additional dumpster(s) and pickups provided by the applicant within the designated service yard area. Waste generation is further mitigated by recycling activities managed by the applicant and Dutchess County Resource and Recover.
  **See Troutbeck – Project Narrative & SEQR Documentation, "4.10 Solid Waste", pg. 35.

- Glare/Lighting: No additional glare or lighting nuisances shall be created by the proposed expansion. Lighting will be assessed on a phase-by-phase basis by the Planning Board to ensure it does not affect adjacent properties. Furthermore, it is the applicant intention that provided lighting be low-level, modest, and dark-sky compliant to minimize glare impacts to guest and neighboring properties.
  **See Troutbeck – Project Narrative & SEQR Documentation "4.8 Lighting", pg. 35; Troutbeck – Phase 1 Site Plan Set – Lighting Plan, sheet 5.

3. *Will not cause significant traffic congestion, impair pedestrian safety, or overload existing roads, considering their current width, surfacing, and condition, and any improvements proposed to be made to them by the applicant.*

- The full buildout of the proposed Troutbeck Adaptive Reuse Plan was assessed and studied by traffic engineer Creighton Manning Engineering, LLP. The Level of Service (LOS) for the existing NYS Route 343-Leedsville Road-Yellow City Road intersection will continue to operate at LOS of A/B and that no mitigation is require for development.
  **See Troutbeck – Project Narrative & SEQR Documentation, "4.5 Traffic/Parking", pg. 29; Troutbeck – Adaptive Reuse Plan – Vehicle Circulation/Parking Improvement Plan, sheet 6.

- Several minor improvements identified by Creighton Manning are being made to existing signage and internal traffic circulation to satisfy their recommendations.
  **See Troutbeck – Project Narrative & SEQR Documentation, "4.5 Traffic/Parking", pg. 29; Troutbeck – Adaptive Reuse Plan – Vehicle Circulation/Parking Improvement Plan, sheet 6.

- No new points of ingress/egress are proposed. Existing entrances will be formalized to improve wayfinding and circulation.
  **See Troutbeck – Project Narrative & SEQR Documentation, "4.5 Traffic/Parking", pg. 29; Troutbeck – Adaptive Reuse Plan – Vehicle Circulation/Parking Improvement Plan, sheet 6.

4. *Will be accessible to fire, police, and other emergency vehicles.*

- All proposed work shall occur in a manner that does not limit the accessibility of the site for emergency service vehicles.
- The applicant has met with representatives of the Amenia Fire Company to discuss emergency vehicle access and response for the site. The applicant has included their recommendations into the design of the Adaptive Reuse Plan, including fire apparatus accessible roadways, dry hydrant installation, sprinkler systems in new structures, and other emergency related improvements.
  **See Troutbeck – Project Narrative & SEQR Documentation, "4.11 Fire Safety pg. 36, Appendix F - Amenia Fire Company - Recommend Fire Safety Measures Correspondence

- Phase 1 of the Adaptive Reuse Plan proposes the construction of Gatehouse at the primary entrance to the site. The gatehouse will be staffed 24/7 to monitor ingress and egress at all points, to ensure adequate safety and security for the site. The employee assigned to the gatehouse will also be able to contact emergency response personnel in case of an emergency and be able to assist them in their response.
  **Troutbeck – Adaptive Reuse Plan – Overall Master Plan, sheet 2, Vehicle Circulation/Parking Improvement Plan, sheet 6.; Troutbeck – Phase 1 Site Plan – Site Plan, sheet 2

5. *Will not overload any public water, drainage, or sewer system or any other municipal facility.*

- Water: There are no public water supply utilities located on the project site. Water used by the existing and proposed facilities will be provided in excess by two separate on-site wells capable of generating 35gpm and 22gpm, respectively. No new wells are required. Improvements to the existing water supply system shall first be approved by the Dutchess County Department of Health and provided on phase-by-phase basis.
  ** See Troutbeck – Project Narrative & SEQR Documentation "4.2 Water Supply", pg. 27; Appendix G – Engineering Report for Troutbeck Adaptive Reuse Plan– Water Treatment System Expansion

- Wastewater: There are no public sewage systems serving the project site. Wastewater treatment is more than satisfactory under current conditions. Prospectively, wastewater will be furthered addressed by multiple subsurface sewage disposal systems. Each proposed phase of development has been designed to include a supporting subsurface sewage disposal system, which will be provided at the time of construction.
  **See Troutbeck – Project Narrative & SEQR Documentation "4.3 Wastewater", pg. 27; Appendix G – Engineering Report for Troutbeck Adaptive Reuse Plan– Wastewater Treatment System

- Drainage: There are no public drainage systems serving the project site. Stormwater and other drainage improvements will be provided on phase-by-phase basis and will comply with NYSDEC required stormwater provisions and conceptual drainage improvements outlined in the SWPPP.
  **See Troutbeck – Project Narrative & SEQR Documentation "4.4 Stormwater Management", pg. 28; Reference Documents – Troutbeck Stormwater Pollution Prevention Plan.

6. *Will not materially degrade any watercourse or other natural resource or ecosystem or endanger the water quality of an aquifer.*

- Watercourses: No improvements are proposed to be located within the banks of the three (3) existing streams present on site, nor their corresponding Floodway. A small improvement, an elevated timber deck, will be located within the Webatuck Creek Floodplain, but will not have an impact on existing water resources. A perpetual conservation easement held by the Housatonic Valley Association – the watershed conservation organization – provides specific and binding protections for all watercourses.

**See Troutbeck – Project Narrative & SEQR Documentation "5.1 Wetlands/Water Courses", pg. 37, "Floodplain", pg. 38; Reference Documents – Historic Preservation & Conservation Analysis; Appendix F - Floodway/Floodplain Impact Analysis Memorandum

- Natural Resources/Ecosystem: A Threatened and Endangered Species Habitat Suitability Assessment Report was prepared by Ecological Solutions, LLC, which concluded that the site did not contain habitat to support Threatened/Endangered species identified as having potential habitat by the NYSDEC Environmental Resource Mapper.
  ** See Troutbeck – Project Narrative & SEQR Documentation "5.3 Flora and Fauna", pg. 38; Appendix B – Threatened and Endangered Species Habitat Suitability Assessment Report

- Aquifer Preservation: The project is located within the Town of Amenia Aquifer Overlay District (AQO). Aquifer recharge calculations required by the AQO determined that the project site contains sufficient aquifer recharge rates, well in excess of the anticipated water usage of the site.
  **See Troutbeck – Project Narrative & SEQR Documentation "2.2 Overlay Districts – Aquifer Overlay District, pg. 14; Flora and Fauna", pg. 38; Appendix F – Aquifer Recharge Calculations.

7. *Will be suitable for the property on which it is proposed, considering the property's size, location, topography, vegetation, soils, natural habitat, and hydrology and, if appropriate, its ability to be buffered or screened from neighboring properties and public roads.*

- Property Size: Based on density calculations provided in the §121-14.2.I "Historic Preservation District Overlay – Adaptive Reuse", the 43.5-acre project parcel has the capacity to support 168.5 total lodging units. 118 lodging units and 6 staff residences are proposed, which is approx. ±30% than what adaptive reuse provisions say this location can support. The code establishes a permissible coverage area of 30% or ±13 acres. The project falls well below this threshold.
  **See Troutbeck – Project Narrative & SEQR Documentation "2.3 Zoning Restrictions/Maximum Site Density, pg. 15

- Location: The Troutbeck – Adaptive Reuse Plan is a proposed redevelopment/expansion of existing site that has maintained the same lodging, resort, conference center uses since the 1980's and similar uses and structures since over its history dating to the mid-1700's. The site is also the historic center of the Leedsville Hamlet, which flourished throughout the 1800's.

**See Troutbeck – Project Narrative & SEQR Documentation "1.3 Site History", pg. 6; Appendix C – Amenia Historical Society – Why Amenia?

- Topography: The site is stepped and relatively flat, with approximately ±84% of the site having a 0-15% slope. Proposed improvements have been sited within these flatter areas of the site, or in locations where the existing topography has been disturbed by previous development. All proposed disturbance of land shall be provided with sufficient erosion control measures.
  **See Reference Documents "Troutbeck – Conservation Analysis; Troutbeck – Phase 1 Site Plan Set

- Vegetation: The site contains a mixture of native species and specimen trees established over its long history, for a total of 9.42-acre of forest. The rest of the site's vegetation consist of open space/fields. Large portions of existing vegetation is to be preserved by the either the required 50% conservation easement or proposed to be undeveloped and left as open space. Trees of significant interest have been properly documented for avoidance and protection. Proposed development is focused in areas of prior disturbance. Furthermore, additional vegetation in the form of proposed landscaping shall be provided on a phase-by-phase basis. **See "Troutbeck – Conservation Analysis; Troutbeck – Phase 1 Site Plan Set; Troutbeck – Adaptive Reuse Plan

- Soils: The site is comprised of a mixture of Copake Gravelly Loam, Nearly Level (CuA) and Copake Gravelly Silt Loam, Rolling (CuC). Both soil types have a hydrologic soil type of A, which have a high infiltration rate, making the site especially suitable for subsurface sewage disposal systems, aquifer recharging measures, and stormwater mitigation practices. Additional percolation and deep test have confirmed the sites suitability for these practices. **See "Troutbeck – Conservation Analysis; Troutbeck – Project Narrative & SEQR Documentation – Appendix G "Adaptive Reuse Buildout Subsurface Sewage Disposal System Engineering Report" (Percolation Deep Test Data)

- Natural Habitat: See Response #6, bullet #2.

- Hydrology: See Response #6, bullet #1-3.

- Screening: Three of four sides of the project site border existing and public roadways and do not directly abut neighboring parcels. In addition to each neighboring parcel maintaining their own screening, an existing vegetative buffer is present along perimeter of the site,

most of which shall be preserved in the required conservation easement. In addition to preserving the bulk of existing screening, the Adaptive Reuse Plan outlines additional vegetative screening to be provided within each phase of development, with special emphasis being placed on screening development within the NYS Route 343 Scenic Protection Overlay. All structures, visible or not are fully conforming. Painted elements will adopt National Park Service guidelines. Furthermore, a visual analysis has been prepared for the proposed development affirming that the development shall be sufficiently screened.
**See "Troutbeck – Conservation Analysis; Troutbeck – Project Narrative & SEQR Documentation, Appendix E – Visual Impact Analysis.

8. *Will be subject to such conditions on operation, design and layout of structures, and provision of buffer areas as may be necessary to ensure compatibility with surrounding uses and to protect the natural, historic, and scenic resources of the Town.*

- Use Compatibility: The proposed project is continuation/expansion of an existing use, which was established by the Amenia Planning Board in 1979 and prior to that had been used by previous property owners for similar uses all of which were expanded on over the years through the construction of additional lodging and supporting facilities.

  The project site is also the historic center of the Leedsville Hamlet, which was prominent throughout the 1800's and also contained a factory, mill, ore extraction, school house, and multiple stores. All of this previous commercial activity has since been discontinued except for Troutbeck, which continues to anchor the Leedsville Hamlet.
  **See Troutbeck – Project Narrative & SEQR Documentation "1.3 Site History", pg. 6; Appendix C – Amenia Historical Society – Why Amenia?

- Natural Resources: As required for the Adaptive Reuse Plan, a Conservation Analysis was prepared for the project site, assessing existing natural and historic resources. The analysis included extensive inventories of existing historic/nonhistorical structures, former disturbance and uses, waterways, vegetation, land cover types, species habitat, and other related information. The analysis also outlined the proposed Conservation Easement, which was required as part of the Adaptive Reuse of the site to cover a minimum 50% of the total project site. This analysis was used by the Planning Board to generate a Conservations Findings Statement, which outlined numerous

conservation benefits, for both natural and historic resources, that the proposed Adaptive Reuse Plan provides to the site.
**See "Troutbeck – Conservation Analysis; Troutbeck – Project Narrative & SEQR Documentation "5.0 Natural Archeological Resources", pg. 37

- Historic Resources: Response #8, bullet #2. In addition to the detailed analysis referenced above, the application was referred to SHPO, where they concluded after reviewing numerous Archaeological Studies and technical building analysis submissions; that there would not be a negative effect on the historical structural/site resources present on site. Furthermore, the application proposes to preserve all historical structures, as well as restore the existing derelict Delamater House.
  **See "Troutbeck – Conservation Analysis; Troutbeck – Project Narrative & SEQR Documentation "5.4 Historic Preservation", pg.41

- Scenic Resources: The site is located within the Scenic Protection Overlay District, due to its proximity to NYS Route 343. As such, development has been clustered towards the interior to minimize or exclude its visibility from the scenic roadways. Significant vegetative buffers, which will be assessed by the Planning Board for sufficiency at the start of each phase, shall also be added between the proposed development and NYS Route 343.

  In addition to the mitigation outlined above, a Visual Impact Analysis has been prepared for the site assessing views of the parcel and proposed development from several viewpoints along NYS 343 and Leedsville Road. The analysis emphasizes that the proposed development will have minimal impact on scenic resources.

  The proposed project also outlines a Conservation Easement which rings quite nearly the entire perimeter of the parcel. The Conservation Easement will ensure that no development or activity will occur within with the more visibly sensitive perimeter, further constraining activity and improvements toward the center of the site and, primarily, to areas which once contained or currently have existing structures,
  **See "Troutbeck – Conservation Analysis; Troutbeck – Project Narrative & SEQR Documentation "2.2.D Scenic Protection Overlay District", pg. 11 & "2.2.D.1 Visual Impact Analysis", pg. 13; Appendix E- Visual Impact Analysis.

9. *Will be consistent with the goal of concentrating retail uses in hamlets, avoiding strip commercial development, and buffering nonresidential uses that are incompatible with residential use.*

- The project site is located within, and is considered the anchor of, the Town of Amenia Leedsville hamlet. As such the modest increase in density proposed, which is less than permitted by zoning, is in compliance with Town goals to encourage greater density and use within the hamlets.
  **See Troutbeck – Project Narrative & SEQR Documentation, Appendix C – Amenia Historical Society – Why Amenia?

- All proposed structures have been sensitively designed and sited by a team of highly reputable Architects, Planners, and Engineers. The proposed Adaptive Reuse Plan layout has been prepared specifically to avoid looking like any form of typical or strip commercial development in order to preserve the historic and scenic qualities of Troutbeck.
  **See Troutbeck – Adaptive Reuse Plan Set – Overall Master Plan, sheet 2; Troutbeck – Phase 1 Site Plan – Site Plan, sheet 2; Troutbeck – Adaptive Reuse Conceptual Building Elevations

- A significant portion of the 50% Conservation Easement is located along the perimeter of the site, ensuring that a significant vegetative buffer shall remain between the existing Troutbeck site and adjacent residential uses.
  **See "Troutbeck – Conservation Analysis; Troutbeck – Adaptive Reuse Plan Set – Overall Conservation Area Plan, sheet 3;

10. *Will not adversely affect the availability of affordable housing in the Town.*

- Phase 3 of the proposed Adaptive Reuse Plan outlines plans for the construction of 5 new staff residences, bringing the total number of staff housing units to 6, and increasing the number of affordable housing units in the Town.
  **See Troutbeck – Project Narrative & SEQR Documentation "3.3 Phases 2-9", pg. 21; Troutbeck – Adaptive Reuse Plan Set – Overall Master Plan, sheet 3;

- The Adaptive Reuse Plan is a continuation of existing uses, as such the modest expansion proposed by the plan shall not affect the affordability of housing, as the majority of adjacent parcels have already been developed or subdivided into residential lots. The conservation easement, once adopted concurrent to the approval of the proposed plan, prohibits the further subdivision of the parcel.
  **See Troutbeck – Project Narrative & SEQR Documentation "3.3 Phases 2-9", pg. 21; Troutbeck – Adaptive Reuse Plan Set – Overall Master Plan, sheet 3;

11. *Will comply with applicable site plan criteria in § **121-65D**.*

- The Troutbeck - Adaptive Reuse Plan has been designed to be implemented in 9 separate phases. Each proposed phase of development shall require Site Plan approval from the Planning Board, which will need to comply with Site Plan criteria identified in §121-65D of the Amenia Zoning Code.
  **See Troutbeck – Project Narrative & SEQR Documentation "3.3 Phases 2-9", pg. 21;

12. *If the property is in a residential district, will have no greater overall off-site impact than would full development of the property with uses permitted by right, considering relevant environmental, social, and economic impacts.*

- The proposed Troutbeck – Adaptive Reuse Plan has demonstrated that the proposed development will have little to no off-site impact. As demonstrated by the multi-phased approval process, starting with the Conservation Analysis and proceeding with Special Permit and Site Plan SEQR review, the project has been designed to comply with all Zoning rules and regulations established for the site.
  **See Troutbeck – Project Narrative & SEQR Documentation "2.0 Zoning" pg. 7, "3.3 Phases 2-9", pg. 21.

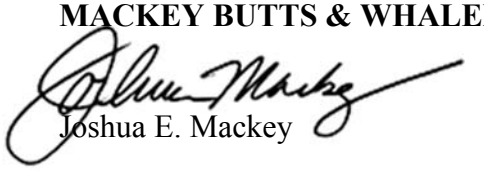
- The underlying zoning district of the project site is Rural Residential "RR", and subject to the Historic Preservation Overlay District, which allows for increase development/use flexibility in exchange for additional conservation mitigation, which would not be required with other permitted uses within the RR district. This is most notable with the lodging use, which is not permitted within the RR district unless it is part of an Adaptive Reuse Plan.
  - Taking into account the additional flexibility offered by the HPO, the site would be able to construct a total of 65-single family residences (43.5-acres x 1.5 units per acre), a permitted use within the HPO, on the 43.5-acre parcel. This excludes the additional units within existing historic structures, which would not be included in the density calculations. An alternative residential development would result in a far greater impact to the surrounding area, due to an increase in water usage, a greater number of proposed structures, individual subsurface disposal systems, impervious surface coverage, increased traffic levels, and numerous other factors.
  - Absent the additional density afforded by the HPO, the site would be permitted fewer residential units, but would not be

subjected to or conditioned upon the restrictive and protective conservation measures required for the Adaptive Reuse Plan. **See Troutbeck – Project Narrative & SEQR Documentation "2.0 Zoning" pg. 7

Accordingly, we respectfully request that the application for Special Use Permit before the Planning Board be granted.

Very truly yours,

MACKEY BUTTS & WHALEN, LLP



Joshua E. Mackey

cc.: Paul Van Cott, Esq. (via email)

ENGINEERING REPORT

for

TROUTBECK

ADAPTIVE REUSE PLAN

FLOOD ASSESSMENT

APPLICANT: Troutbeck Holdings LP
12-26 Troutbeck Lane
Amenia, NY 12501

LOCATION: 515 Leedsville Road
Town of Amenia
Dutchess County, New York

Tax Map I.D. #: 132000-7267-00-227675

DATE: January 6, 2023

PREPARED BY:

RENNIA ENGINEERING DESIGN, PLLC
CIVIL ▪ ENVIRONMENTAL ▪ STRUCTURAL

6 Dover Village Plaza, Suite 5,P.O. Box 400,Dover Plains, NY12522
Tel: (845) 877-0555

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1.0 INTRODUCTION 1
2.0 EXISTING CONDITIONS 2
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2.2 Floodway 3
3.0 CONCLUSION 4

LIST OF APPENDICIES

Appendix A

FEMA Firmette Map
FEMA Firm Panel

Reference

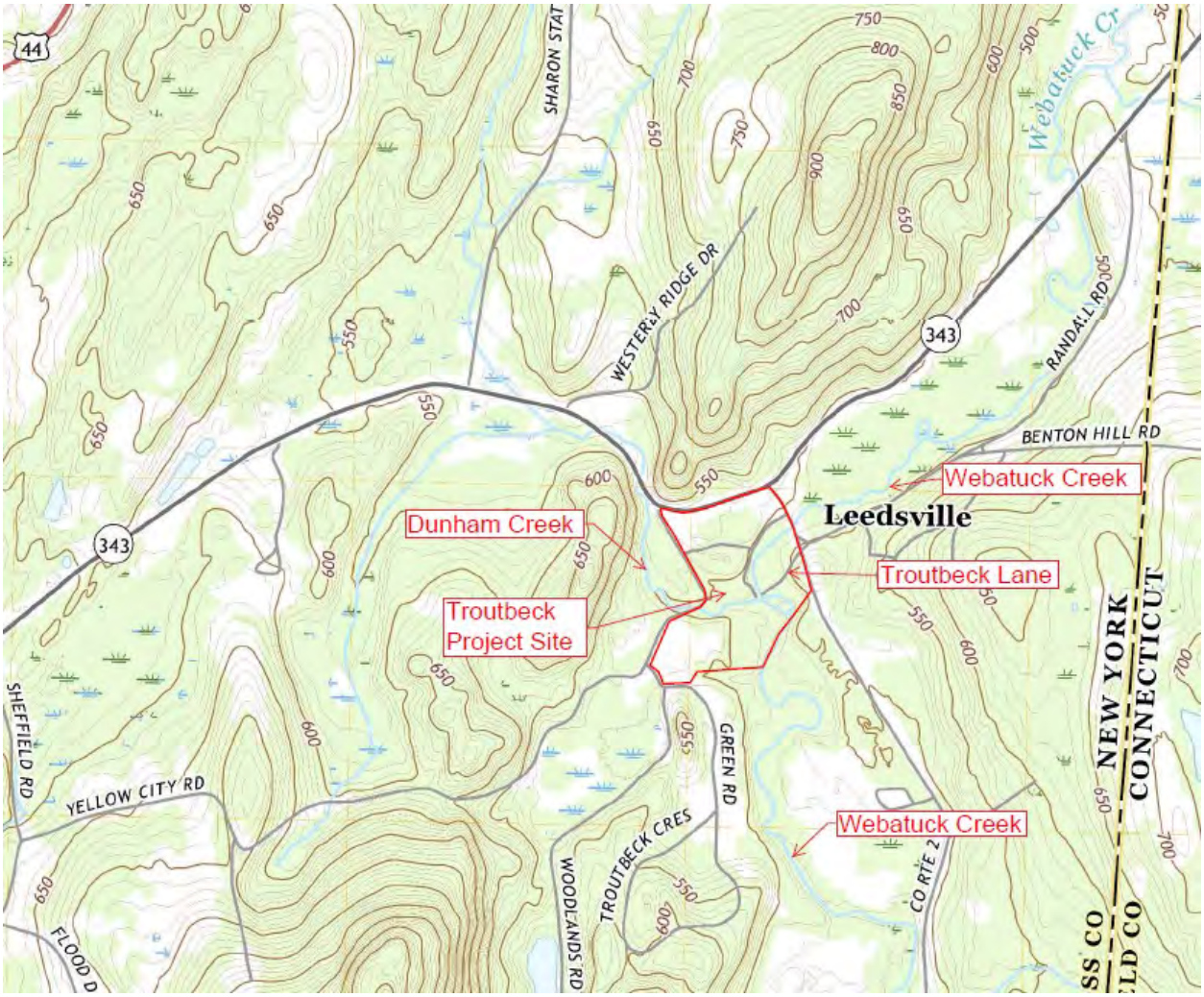
Flood Insurance Study (FIS), dated May 2, 2012 prepared for the Town of Amenia #361332, by the Federal Emergency Management Agency (FEMA)

1.0 INTRODUCTION

The 43.5-acre project site is owned by the Troutbeck Holdings, LP, and has been an active hospitality use; Lodging, Restaurant, Event and Conference Center since 1979. The owner has proposed an Adaptive Reuse Plan that consists of 9 separate phases ranging from overnight guest cabins and lodging facilities, to administration buildings and existing structure improvements. Each phase will be built out over time and that only Phase 1 will be constructed at this time. This assessment report has been developed to provide current regulatory Floodplain and Floodway information and to assess whether the project will have any impacts on the regulatory Floodplain and Floodway.

A location map is shown below on the USGS Quadrangle Map.

Figure 1.1: Location Map



2.0 EXISTING CONDITIONS

The site is bifurcated by the Webatuck Creek, a gravel bed stream with a NYS classification of C(t). At the point where the Webatuck Creek enters into the Troutbeck Parcel it has a drainage area of approximately 54.9 square miles. Also at this point the Webatuck Creek carries a flow of 4,250 ft^3/sec during the 1-percent Annual Exceedance Probability (AEP) flood (100-year flood) and carries a flow of 967 ft3/sec during the 50-percent AEP flood (2-year flood) also know as the bank full event.

The project site currently holds multiple structures including the Manor House, Garden House, Maintenance Building, Century House (Benton), Wellness Center Barns, Outdoor Pool, Pool House, and Delamater House. The site has an existing driveway and bridge that crosses the Webatuck Creek and connects the existing development on both sides of the creek.

2.1 Floodplain

A review of the FEMA Flood Insurance Rate Map (FIRM) information for the project site shows it partially within Zone AE, which designates the location the 100-year base floodplain as determined based on a detailed analyses performed by FEMA. A "Floodplain" is defined by FEMA as "Any land area susceptible to being inundated by floodwaters from any source". More specifically FEMA regulates the floodplain that is created by the elevation of surface water resulting from a flood that has a 1% chance (100-year flood) of occurrence.

The 100-year floodplain in this location generally follows the edge of the western stream bank and on the eastern side it leaves the stream bed and encroaches into the meadow areas found upstream and downstream of the Century House. The 100-year base floodplain elevation (BFE) changes as the Webatuck Creek flows through the property. The BFE is elevation 487' near the Leedsville Road Bridge and drops to elevation 481' where the creek exits the property.

With the exception of the Century House, no other existing structures are affected by the location of the 100-year base floodplain. The BFE at the Century House is approximately 486.25' to 486.5' and the finished floor elevation of the Century House is approximately 487.7' and 486.75'.

A review of the proposed Adaptive Reuse Plan finds that there are no new encroachments into the 100-year base floodplain. From the plan view the proposed Creekside Cabins (a-e) and the new deck for the proposed Bakery conversion appear to be within the outer edge of the 100-year base floodplain. However, a closer review finds that all of these structures are elevated well above the BFE's at their respective locations. These structures will create no impact to the current 100-year base floodplain. Additionally, as per sections §67-16 and §67-18 of the Town of Amenia code,

any proposed structure's base elevation will be set at least two feet above the base flood level specified in the FIRM map.

A copy of the FIRM map is included in Appendix A.

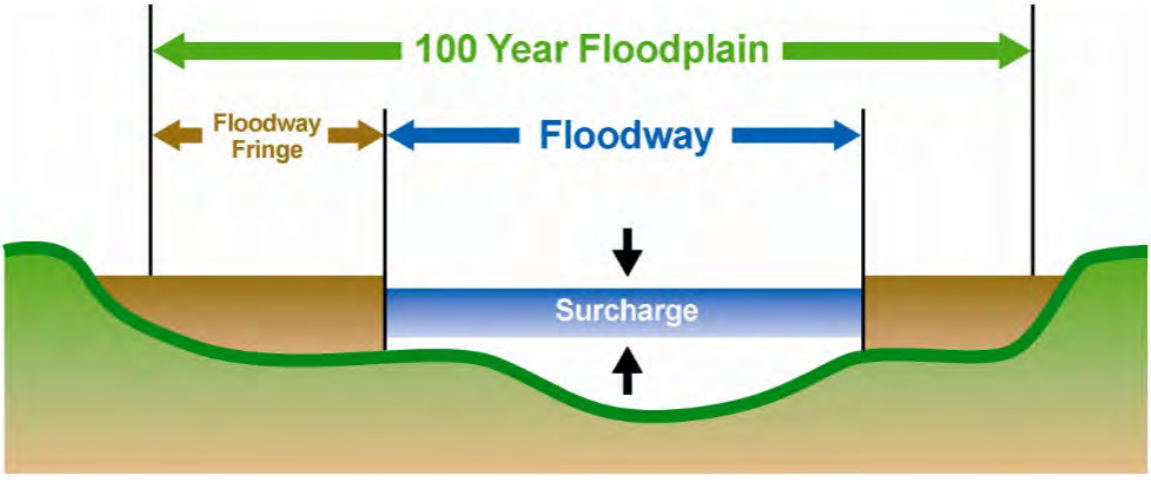
2.2 Floodway

A review of the FEMA Flood Insurance Rate Map (FIRM) information for the project site shows that a portion of the project site is within the regulatory floodway. According to FEMA a "Regulatory Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

The floodway on this site is mainly comprised of the defined stream channel plus some low areas adjacent to the channel. Only the existing bridge and some of the adjacent driveway are located within the floodway. These structures existed prior to the detailed analysis therefore they are captured within FEMA's analysis and will not impart any further changes to the floodway.

A review of the proposed Adaptive Reuse Plan finds that there are no new encroachments into the floodway. Accordingly, no further permitting is required.

Figure 2.1 FEMA Cross section of a floodplain showing the floodway, floodway fringe, and surcharge



3.0 CONCLUSION

Troutbeck Holdings, LP, as owner of the Troutbeck Estate property in the Town of Amenia wishes to expand their use of the site and has developed an Adaptive Reuse Plan. The Webatuck Creek, a gravel bed stream with a drainage area of approximately 54.9 square miles flows through the site and brings with it both a defined100-year floodplain and an associated floodway.

A review of the proposed Adaptive Reuse Plan finds that there are no new encroachments into the 100-year base floodplain and no new encroachments into the floodway. Therefore, the project as designed will have no negative impact on either the floodplain or the floodway. Further, this assessment has been made based upon the detailed analysis presented in the Flood Insurance Study (FIS), dated May 2, 2012 prepared for the Town of Amenia.

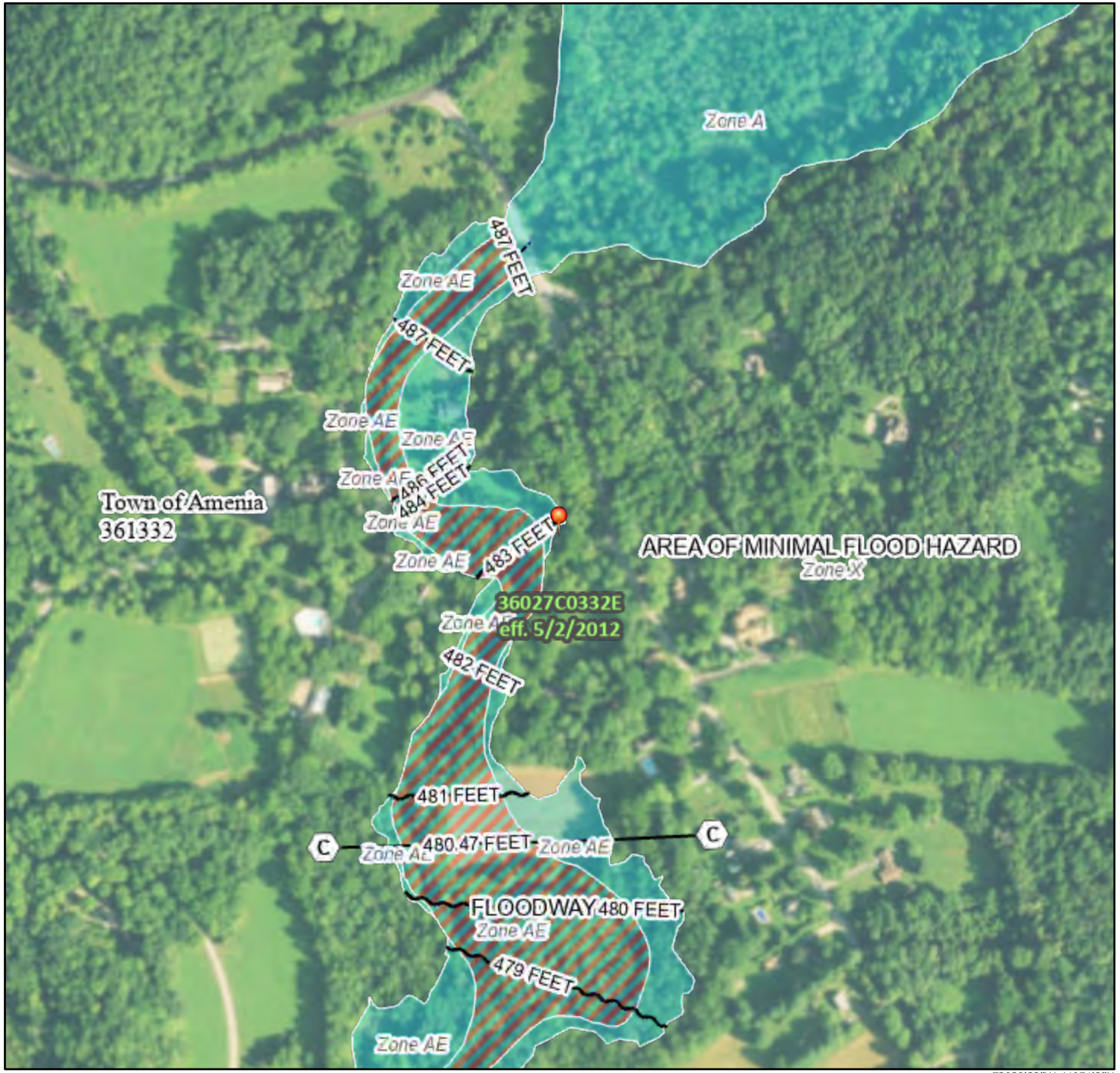
APPENDIX A

FEMA Firmette Map
FEMA Firm Panel

National Flood Hazard Layer FIRMette

FEMA

73°31'10"W 41°51'29"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

73°30'32"W 41°51'2"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

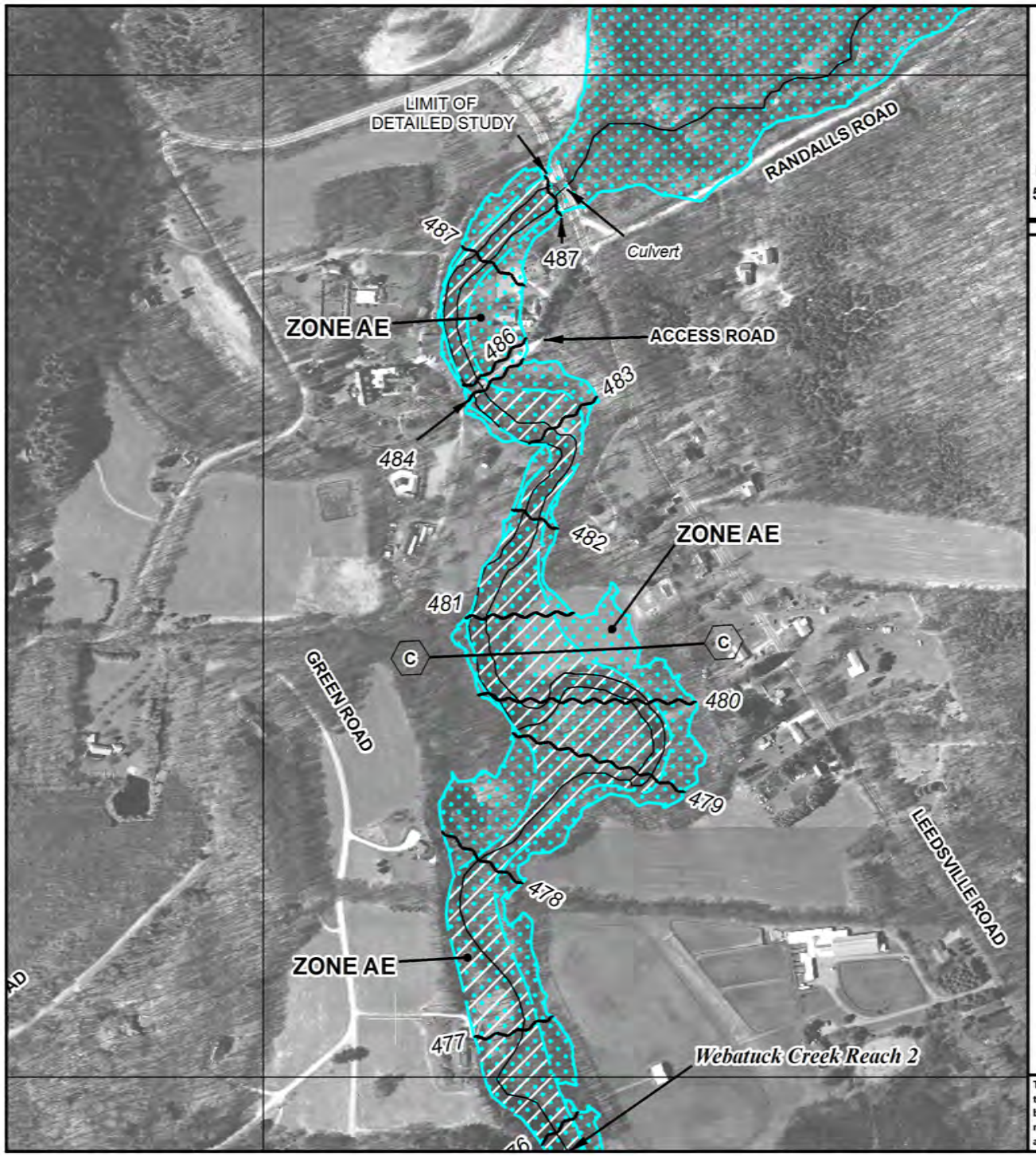
N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/5/2021 at 12:02 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



MAP SCALE 1" = 500'

250 0 500 1000 FEET

50 0 150 300 ME

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0332E

FIRM

FLOOD INSURANCE RATE MAP

for DUTCHESS COUNTY, NEW YORK
(ALL JURISDICTIONS)

CONTAINS:

COMMUNITY	NUMBER
AMENIA, TOWN OF	361332

PANEL 332 OF 602
MAP SUFFIX: E
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
36027C0332E

EFFECTIVE DATE
MAY 2, 2012

Federal Emergency Management Agency

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary

0.2% annual chance floodplain boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

513 — Base Flood Elevation line and value; elevation in feet*

(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

A — A — Cross section line

3 — 3 — Limited detail cross section line

23 — 23 — Transect line

87°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

4276000mN — 1000-meter Universal Transverse Mercator grid values, zone 18

600000 FT — 5000-foot grid values: New York State Plane coordinate system, East zone (FIPSZONE 3101), Transverse Mercator projection

DX5510 × — Bench mark (see explanation in Notes to Users section of this FIRM panel)

• M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
May 2, 2012

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Troutbeck - Adaptive Reuse

Aquifer Overlay District (AQO) - Aquifer Recharge Calculations

Troutbeck - Adaptive Re-Use - Annual Aquifer Recharge - Summary by Soil Map Unit — Dutchess County, New York (NY027)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI	*Recharge Rate (in/yr)	Natural Recharge Rate
CuA	Copake gravelly silt loam, nearly level	A	15.1	34.71%	20.2	25.41833333
CuB	Copake gravelly silt loam, undulating	A	0.1	0.23%	20.2	0.168333333
CuC	Copake gravelly silt loam, rolling	A	28.3	65.06%	20.2	47.638
		Totals for Area of Interest:	43.5	100.00%	acre feet	73.23
					cubic feet	3,189,681.00
					Natural Recharge Rate of Site (gallons)	**23,860,472.51**

Troutbeck - Daily Water Use**

Phase	ADAPTIVE RE-USE BUILDINGS & SPACES	Proposed SPDES Outfall #	# of Bedrooms	# of Staff Apts.	# of Persons or Seats	Estimated Flow (GPD)**
2	**Manor House**	#001				
	Lodging (Bedroom Units)		17			1870
	Restaurant				92	2576
1	**Bakery** (relocated to former Maintenance Garage)	#001				
	2-BedroomStaff Apt.			1		220
	Bakery / Resturant				20	320
0	**Century Lodge & Annex (Benton)**	#002				
	Guest Rooms		17			1870
0	**Wellness Center Barns & Outdoor Pool**	#003				
	Resort Amenity Use					1932
1	**Creekside Cabins (4-units)**	#004				
	Lodging (Bedroom Units)		6		12	660
1	**Gate House**	#004				
	2 employees/2 shifts				4	48
3	**Central Administration Area**	#005				
	1 Bedroom Staff Apartments			5		550
	Office Employees				8	128
4	**Garden Cabins (8-units)**	#006 & #007				
	Lodging (Bedroom Units)		9		18	990
5a	**Garden Hotel**	#008				
	Lodging (Bedroom Units)		33		66	3630
5b	**Garden Event Space**	#008				
	Event Space				224	1792
6	**Delamater House Rennovations**	#009				
	Restaurant				87	3045
7	**Meadow Cabins (6-units)**	#010				
	Lodging (Bedroom Units)		7		14	770
8	**Outdoor Pool Area Expansion**	#003				
	Indoor Pool Facility				60	480
	Indoor Pool Snack Bar				60	300
	Pool Staff				3	36
TOTAL FLOW			**89**	**6**		**21,217**

Troutbeck Inn - Water Consumption***

Use		Total Flow (gallons)	Dilution Factor	Consumption / Day
Nonresidential Uses w. Subsurface Discharge		21,217	6	127,302.00
			Total Daily Water Consumption (GPD)	76,381.20
	Annual Consumption (Assumed 70% Occupancy for Year) (Gallons) (Daily Water Consumption x 365)			**19,515,396.60**

Net Recharge (gallons/year) (Natural Recharge Rate - Annual Consumption)	**4,345,075.91**

*Amenia, NY - Zoning Code Section 121-15,F

**NYSDEC Design Standards for Intermediately Sized Wastewater Treatment Systems 2014

***Amenia, NY - Zoning Code Section 121-15,G

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January 9, 2023

Town of Amenia Planning Board
Amenia Town Hall
4988 Route 22
Amenia, NY 12501

Attn: Robert Boyles, Chairperson

Re: Troutbeck Inn – Adaptive Reuse
515 Leedsville Road
132000-7267-00-227675

Dear Mr. Boyles and Planning Board Members,

The Amenia Fire Department is aware that the owners of the Troutbeck Inn are proposing to expand their existing hospitality/lodging/restaurant use. On June 6th, 2022, our Fire Department Representatives met with the owners and design professionals for the project and reviewed the plans and discussed our expectations, in regard to the fire safety requirements for the project. In general, our recommendations included the following:

- Provide fire access roads meeting code requirements.
- Provide access to firefighting water from a dry hydrant near the entrance and access to the pool.
- Provide knox boxes for access to all lodging units.
- Provide sprinkler systems for all buildings that require them by code.

Based on the letter from Rennia Engineering Design, dated December 28, 2022 and the Adaptive Re-use plan, last revised 12/28/2022, this department is satisfied with the fire safety measures that are proposed to be implemented during the buildout of the project.

Please do not hesitate to contact me with any questions.

Sincerely,

Chief Christopher Howard
Amenia Fire District #1

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APPENDIX G

SITE UTILITY REPORTS AND SUPPORTING DOCUMENTS

Engineering Report for Troutbeck Adaptive Reuse Plan– Water Treatment System Expansion, dated 1/6/2023, revised 2/15/2023

Engineering Report for Troutbeck Adaptive Reuse Plan– Wastewater Treatment System w/ Percolation and Deep Testing Data, dated 1/6/2023, revised 2/15/2023

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ENGINEERING REPORT

for

TROUTBECK

ADAPTIVE REUSE PLAN

WATER TREATMENT SYSTEM EXPANSION

APPLICANT: **Troutbeck Holdings LP**
12-26 Troutbeck Lane
Amenia, NY 12501

LOCATION: **515 Leedsville Road**
Town of Amenia
Dutchess County, New York

Tax Map I.D. #: **132000-7267-00-227675**

DATE: **January 6, 2023**
Revised February 3, 2023
Revised February 15, 2023

PREPARED BY:

RENNIA ENGINEERING DESIGN, PLLC

CIVIL ▪ ENVIRONMENTAL ▪ STRUCTURAL

6 Dover Village Plaza, Suite 5,P.O. Box 400,Dover Plains, NY12522
Tel: (845) 877-0555

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APPENDIX A

Table 1: Separation Distances to Protect Public Water Supply Wells from Contamination

Reference Documents

Engineering Report for Troutbeck Inn Water Treatment System, dated 8/12/2016, last revised 12/2/16, prepared by Rennia Engineering Design, PLLC. Approved by the Dutchess County Department of Health on December 14, 2016.

1.0 EXECUTIVE SUMMARY

This report evaluates and proposes modifications to an existing water system for the Troutbeck Manor House Facility, located within the Town of Amenia, Dutchess County, New York. The existing manor house water treatment system currently provides water to multiple buildings on the site including the Manor House, Century House (Benton), Maintenance Garage, Delamater House, Wellness Barn, and Pool House.

The proposed Adaptive Reuse Plan consists of 8 separate phases ranging from overnight guest cabins and lodging facilities, to administration buildings and existing structure improvements. It is important to note that each phase will be built out over time and that only Phase 1 will be constructed at this time.

The existing manor house water treatment system will be expanded to provide water to the newly proposed buildings shown in the Adaptive Reuse Plan including Cabins, Gate house, Central Administration, Garden Hotel, Garden Hall (event space), etc.

The report finds that Troutbeck and the surrounding area of Leedsville are located within one of Dutchess County's higher yield bedrock and gravel overburden aquifer areas providing considerable volumes of water for both the project and surrounding properties.

Two of the sites 3 existing wells will remain in service having the capability to serve both the existing and proposed project uses.

The report describes the proposed water system modifications necessary to expand the existing water system that currently serves the property for the proposed Adaptive Reuse Plan. The report also generally describes the water treatment system that will be designed to comply with the New York State Department of Health "Part 5" requirements. The water treatment system consists of both filtration and disinfection.

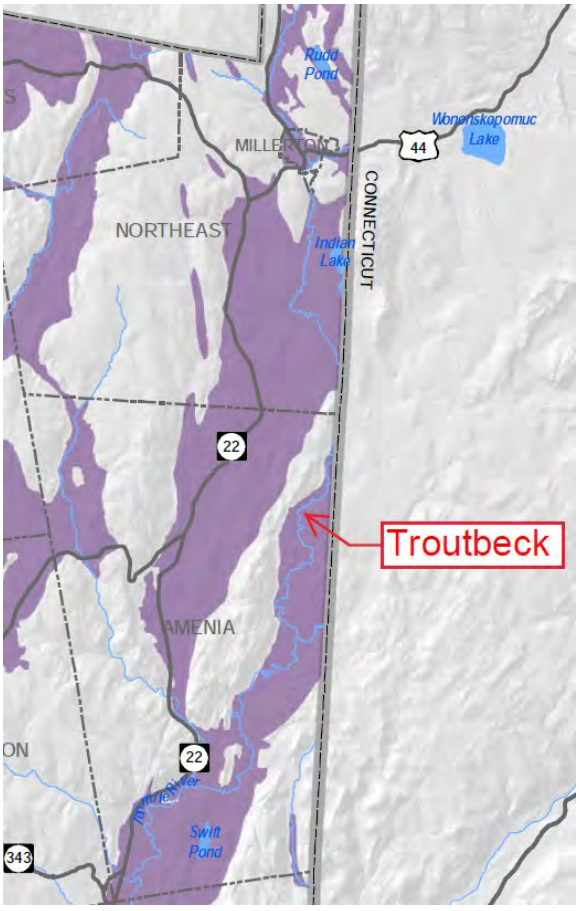
The new structures proposed as part of the Adaptive Reuse Plan that require a fire suppression system will each be configured with a separate stand-alone storage tank and each will be provided with an appropriate backflow prevention device

2.0 WATER SOURCE WELLS

2.1 Aquifer

According to the Town of Amenia Comprehensive Plan Update, dated July 19, 2007, much of Amenia is underlain by a prolific sand and gravel aquifer from which many residents draw their water supply. The Troutbeck parcel and its wells are located within a generally high yielding bedrock and sand & gravel aquifer that is part of the Webatuck Creek watershed area. The Troutbeck parcel lies low in this watershed so groundwater flows toward it from a large upwatershed area that extends north of Millerton, NY. The sand and gravel deposits under Troutbeck allow it to have very good water-bearing characteristics and to have high hydraulic conductivity tendencies producing high yielding wells. The highly porous sand and gravel deposits hold considerable volumes of water and allow the water to flow easily toward wells, springs, and streams.

According to the Natural Resource Inventory (NRI) of Dutchess County, NY dated November 2010 the Troutbeck parcel and surrounding areas are located within one of the county's "higher yield bedrock and overburden aquifers" as shown in the below map section.



*Adapted from Map 5.2: Aquifers Dutchess County, New York

2.2 Wells

The existing primary water source for the manor house system is designated as Well 1. This Well 1 is an infiltration drywell located approximately 180 feet from the northwest corner of the Manor House and at least 200' away from any existing or proposed sewage disposal system. According to the original well engineering report prepared by Ronald Friedman, P.E., the existing well was installed in August 1997. It is comprised of a 6' x 6' x 6' drywell with its bottom about 13' below grade. The bottom of the drywell sits on 3" layer of 1-1/2" stone which in turn sits on natural sand and gravel strata. The annular area around the drywell was filled in with 1-1/2" stone to the top of the drywell, and extends between 6' to 10' from the drywell. A 3' layer of clean ROB gravel was placed and compacted on top of the geotextile with an 8 to 12" layer of clay placed on top of the ROB gravel. A 3' riser was provided, and extends 2' out of the ground to access the well. A 2 hp, 35 gpm capacity well pump was installed in the drywall and piped to connect to the supply line leading to the water treatment system. The original drawdown test performed for Well #1 used a 300-gpm pump, at the end of one hour, the water level had dropped 18" from the static level. When the pump was shut down, the water level recovered 4" in 1 minute.

Existing Well 2 currently serves the Garden House which is independent from the other buildings and facilities located on the Troutbeck parcel. Well 2 has a reported pumping capacity of 5 GPM. This well will be abandoned in place in accordance with Dutchess County Department of Health guidelines. This well will not be replaced as part of the Troutbeck Adaptive Reuse project.

Existing Well #3 is used as the secondary water source for the manor house system. Well #3 has a reported pumping capacity of 22 GPM. Existing Well #3 is a conventional drilled well with a steel casing.

Both Well 1 and Well 3 are directly connected to the manor house treatment system. Both of the well pumps for Well 1 and Well 3 are controlled by a duplex control panel that alternates between the wells for normal draw (lead lag operation). Both supply sources are treated to surface water standards for disinfection and filtration.

All 3 wells are routinely tested for NYS Part 5 contaminants. The water supply is in conformance with New York State Water Quality Standards with the exception of higher iron levels which is very common for bedrock wells in parts of Amenia. The iron is removed via a conventional water softener practice.

Note that all reported well pumping capacities are based upon the previously completed and approved Engineering Report for Troutbeck Inn Water Treatment System, dated 8/12/2016, last revised 12/2/16, prepared by Rennia Engineering Design, PLLC.

As part of the planning for the adaptive reuse project the well locations and their respective water sources were assessed t ensure the land area that contributes water to the drinking water supply is free of pollution and that external sources of pollution are minimized. This involved investigating the areas outside of each well head looking for potential contaminant sources. This also involved very specific planning to locate all sewage disposal areas and stormwater infiltration areas outside of any land areas with influence on the well heads.

Section 5-B.2 of the New York State Department of Health Part 5, Subpart 5-1 Standards for Water Wells provides certain requirements for the protection of water sources. Specifically minimum horizontal separation distances from potential sources of contamination are provided. An assessment of these separation distances and potential sources of contamination as they relate to the Troutbeck project are shown in Table 1 located in appendix A. It is important to note that all required separation distances are either met or exceeded at the Troutbeck site.

3.0 DESCRIPTION OF THE WATER SYSTEM

The following is a summary of the current water system plus modifications and the supporting calculations.

3.1 Current Water Demand

The current average daily demand for the site is 10,972 gallons per day (gpd) or 7.6 gpm. See Table 3-1 below for the daily flow rate calculation.

Table 3-1: Water System Existing Daily Usage Calculation

Description	Total Demand (gpd)
Manor House	
Guest Rooms (17)	1870
Ball Room Events	1,800
Restaurant	2,576
Century House (Benton)	
Guest Rooms	1870
Other	
Delamater House (2-Bdrm)	220
Maintenance Garage w/ Staff Apartment	440
Wellness Center Barns & Outdoor Pool	1932
Softener Backwash	264
Total Flow:	10,972

3.2 Future Water Demand

The anticipated future average daily demand for the site after all 8 phases are complete is 20,580 gallons per day (gpd) or 14.3 gpm.

See Table 3-2 below for the future daily flow rate calculation.

Table 3-2: Water System Future (Phases 1-8) Daily Usage Calculation

Phase	ADAPTIVE RE-USE BUILDINGS & SPACES	# of Bdrm's	# of Staff Apts.	# of Persons or Seats	Estimated Flow (GPD)
2	**Manor House**				
	Lodging (Bedroom Units)	17			1870
	Restaurant			92	2576
1	**Bakery** (relocated to former Maintenance Garage)				
	2 Bdrm Staff Apartment		1		220
	Bakery / Restaurant			20	320
0	**Century Lodge & Annex (Benton)**				
	Guest Rooms	17			1870
0	**Wellness Center Barns & Outdoor Pool**				
	Resort Amenity Use				1932
1	**Creekside Cabins (4-units)**				
	Lodging (Bedroom Units)	6		12	660
1	**Gate House**				
	2 employees / 2 shifts			4	48
3	**Central Administration Area**				
	1 Bdrm Staff Apartments		5		550
	Office Employees			8	128
4	**Garden Cabins (8-units)**				
	Lodging (Bedroom Units)	9		18	990
5A	**Garden Hotel**				
	Lodging (Bedroom Units)	33		66	3630
5B	**Garden Event Space**				
	Event Space			224	1792
6	**Delamater House Renovations**				
	Restaurant			86	2408
7	**Meadow Cabins (6-units)**				
	Lodging (Bedroom Units)	7		14	770
8	**Pool Area Expansion**				
	Indoor Pool Facility			60	480
	Indoor pool snack bar			60	300
	Pool Staff			3	36
	TOTAL FLOW	**89**	**6**		**20,580**

3.3 Pumping & Treatment Location

The existing treatment system and distribution pumps are located in the basement of the Manor House. All modifications and new components will generally remain in this same basement location until Phase 5 at which time additional storage and distribution components will be installed within the basement of the Garden Hall event building.

3.4 Disinfection

The overall disinfection treatment system provided for this system has been designed to provide 4-log inactivation of viruses. This is accomplished with a combination of sodium hypochlorite system designed for 3.5 log virus inactivation and an ultraviolet treatment unit designed for 0.5 log virus inactivation. Additionally, the selected ultraviolet treatment unit is capable of 4 log inactivation of Cryptosporidium and Giardia. The system expansion will meet the same disinfection criteria.

3.5 Filtration

In order to remove any particulate matter or impurities cartridge filters and a water softening components are utilized as part of the treatment system. The current system uses 5-micron cartridge filters connected in parallel designed to provide roughing filtration. Then water softening is utilized to remove iron and hardness impurities. The softener contains Purolite Shallow Shell SSTC60 resin which is specifically designed for iron removal, regeneration efficiency, salt efficiency, and low rinse volumes. The final filtration step begins after the softener with a Harmsco Hurricane Filter that provides ultra-filtration. The Harmso filter contains a 1-micron absolute filter which is designed for cyst removal. All components are NSF 61 certified. The system expansion will utilize the same filtration methods.

3.6 Distribution System

The water distribution system inside the existing Manor House building includes multiple outlets to the potable distribution network and outlets to the fire suppression network. The Maintenance Building and Century House are currently served by an existing 2” DR-9 HDPE water service line from the Manor House treatment system. The Wellness Center Barns, Outdoor Pool, and Delamater House are currently served by an existing 1-1/2” DR-9 HDPE water service line from the Manor House treatment system.

It is anticipated that the newly proposed buildings shown in the Adaptive Reuse Plan including Cabins, Gate house, Central Administration, Garden Hotel, Garden Hall (event space), etc. will be served by 1”, 2”, and 3” DR-9 HDPE water service lines. These new water lines will be pressurized by a constant pressure type dual booster pumps sized for the appropriate demands.

3.7 Fire Suppression

The fire suppression system for the Manor House is directly fed from the 2 supply wells without separate storge. The Manor House fire suppression booster pumps and distribution pipes are separated from the potable water treatment and distribution system by a backflow prevention device.

It is anticipated that the new structures proposed as part of the Adaptive Reuse Plan that require a fire suppression system will each be configured with a separate stand-alone storage tank and each will be provided with an appropriate backflow prevention device.

4.0 CONCLUSIONS

This report evaluates proposed modifications to the existing Manor House water treatment system at the Troutbeck property, located within the Town of Amenia, Dutchess County, New York. This water treatment system modification is necessary to update the system as required by the Dutchess County Department of Health for the new uses shown on the Adaptive Reuse Plan.

The current approved Troutbeck Manor House water system has two wells that provide water supply (well #1 & well #3). Existing well #2 produces an additional 5 gpm and currently services the Garden House, this well will be removed and not replaced as part of the Troutbeck Adaptive Reuse project. Existing well #1 currently is flow tested to 35 gpm and existing well #3 currently is flow tested to 22 gpm. With the best well (#1) out of service, well #3 at 22 gpm can produce 31,680 gallons in a 24-hour period. The water usage projection for the overall adaptive reuse project is 20,580 gallons per day. This equates to a daily water usage of 14.3 gpm.

Based on this it is the opinion of this office that the water supply required for the Troutbeck Adaptive Reuse project is already available within the existing wells and additional wells are not necessary or anticipated to implement all phases of the adaptive reuse plan.

All proposed modifications will be designed in conformance with the New York State Department of Health “Part 5” requirements as well as local Dutchess County Department of Health requirements. Additionally, all required separation distances are either met or exceeded at the Troutbeck site.

Filtration will be accomplished using a 1-micron absolute filter cartridge. This will provide effective 2-log removal of Cryptosporidium and Giardia cysts. The system disinfection will be provided by chlorine injection and ultraviolet light treatment for a total of 4-log

inactivation of viruses. The ultraviolet light system will also provide an additional 1-log of cyst inactivation beyond the 2-log provided by the filter.

The water softener will provide iron and hardness reduction. Backflow prevention devices will provide the treatment and distribution systems with the proper level of protection from both existing and future fire suppression systems.

The Troutbeck parcel and its wells are located within a generally high yielding bedrock and sand & gravel aquifer that is part of the Webatuck Creek watershed area. The highly porous sand and gravel deposits in and around Troutbeck and the Leedsville Hamlet hold considerable volumes of water that can provide an ample supply of water for both Troutbeck and the surrounding neighbors.

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APPENDIX A

Table 1

Separation Distances to Protect Public Water Supply Wells from Contamination

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Table 1
Separation Distances to Protect Public Water Supply Wells from Contamination

Contaminant Source	Required Distance (Feet)	Exist. Well #1	Exist. Well #3
Chemical storage sites not protected from the elements (e.g., salt and sand/salt storage)[2]	300	>300	>300
Landfill waste disposal area, or hazardous or radiological waste disposal area[2]	300	>300	>300
Land surface application or subsurface injection of effluent or digested sludge from a Municipal or public wastewater treatment facility	300	>300	>300
Land surface application or subsurface injection of septage waste	300	>300	>300
Land surface spreading or subsurface injection of liquid or solid manure	200	>200	>200
Storage Areas for Manure piles [3]	200	>200	>200
Barnyard, silo, barn gutters and animal pens [3]	200	>200	>200
Cesspools (i.e. pits with no septic tank pretreatment)	200	>200	>200
Wastewater treatment absorption systems located in coarse gravel or in the direct path of drainage to a well	200	>200	>200
Fertilizer and/or pesticide mixing and/or clean up areas	200	>200	>200
Seepage pit (following septic tank)	200	>200	>200
Underground single walled chemical or petroleum storage vessels	200	>200	>200
Absorption field or bed	200	>200	>200
Contained chemical storage sites protected from the elements (e.g., salt and sand/salt storage within covered structures)[4]	200	>200	>200
Septic system components (non-watertight)	200	>200	>200
Intermittent sand filter without a watertight liner	200	>200	>200
Sanitary Privy pit	200	>200	>200
Surface wastewater recharge absorption system for storm water from parking lots, roadways or driveways	200	>200	>200
Cemeteries	200	>200	>200
Sanitary privy with a watertight vault	200	>200	>200
Septic tank, aerobic unit, watertight effluent line to distribution box	100	>100	>100
Sanitary sewer or combined sewer	50	>50	>50
Surface water recharge absorption system with no automotive-related Wastes (e.g., clear-water basin, clear-water dry well)	None	-	-
Stream, lake, watercourse, drainage ditch, or wetland	None	--	--
All known sources of contamination otherwise not shown above	200	>200	>200

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ENGINEERING REPORT

for

TROUTBECK

ADAPTIVE REUSE PLAN

WASTEWATER TREATMENT SYSTEM

APPLICANT: **Troutbeck Holdings LP**
12-26 Troutbeck Lane
Amenia, NY 12501

LOCATION: **515 Leedsville Road**
Town of Amenia
Dutchess County, New York

Tax Map I.D. #: **132000-7267-00-227675**

DATE: **January 6, 2023**
Revised February 3, 2023
Revised February 14, 2023

PREPARED BY:

RENNIA ENGINEERING DESIGN, PLLC

CIVIL ▪ ENVIRONMENTAL ▪ STRUCTURAL

6 Dover Village Plaza, Suite 5,P.O. Box 400,Dover Plains, NY12522
Tel: (845) 877-0555

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Adaptive Reuse Master Utility Plan

1.0 INTRODUCTION

The site is currently used for conferences, dining, special events, lodging, retreats, and weddings. The facilities contain typical hospitality industry related amenities such as tennis courts, a pool, wellness center, walking trails, and other outdoor activities. The applicant is proposing to expand on the site's existing use by developing an Adaptive Reuse Plan (aka Master Plan) under the town's Historic Preservation Overlay District regulations, which will outline the proposed uses for the site and how the sites existing historic resources will be preserved.

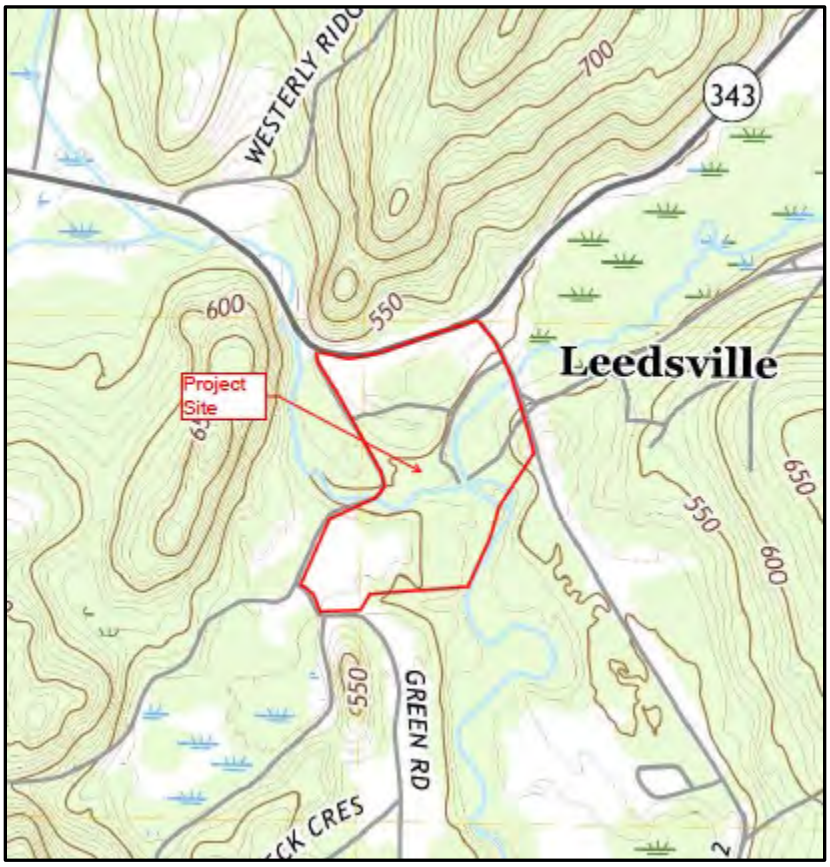
The proposed Adaptive Reuse Plan outlines 8 separate phases for the site ranging from overnight guest cabins and lodging facilities, to administration buildings and existing structure improvements. While the project is divided into 8 separate phases on the Adaptive Reuse Plan, only Phase 1 is in front of the Amenia Planning Board for Site Plan approval, while phase 2-8 will appear before the Board at a later date.

Overall, the proposed improvements focus primarily on expanding the site's existing lodging capacity and elevating the guest experience by providing a number of additional amenities such as, additional food & beverage options, additional wellness options, additional onsite outdoor activities, and additional garden areas. A new event space will replace the existing ballroom located in the Manor House to provide more flexibility and access for events.

1.1 Location

Troutbeck is located within a single 43.5-acre parcel (Parcel #: 132000-7267-00-227675) in the Town of Amenia, Dutchess County, New York. The project is located 100 miles north of New York City and is approximately 3 miles west of Sharon, CT. The project parcel maintains frontage along the south of NYS Route 343 and is divided down the middle by the Webatuck Creek, which runs north to south through the site. The parcel also maintains frontage along Yellow City Road to the east and Leedsville Road to the west.

Figure 1-1 Location Map



1.2 Wetlands and Environmental Habitat

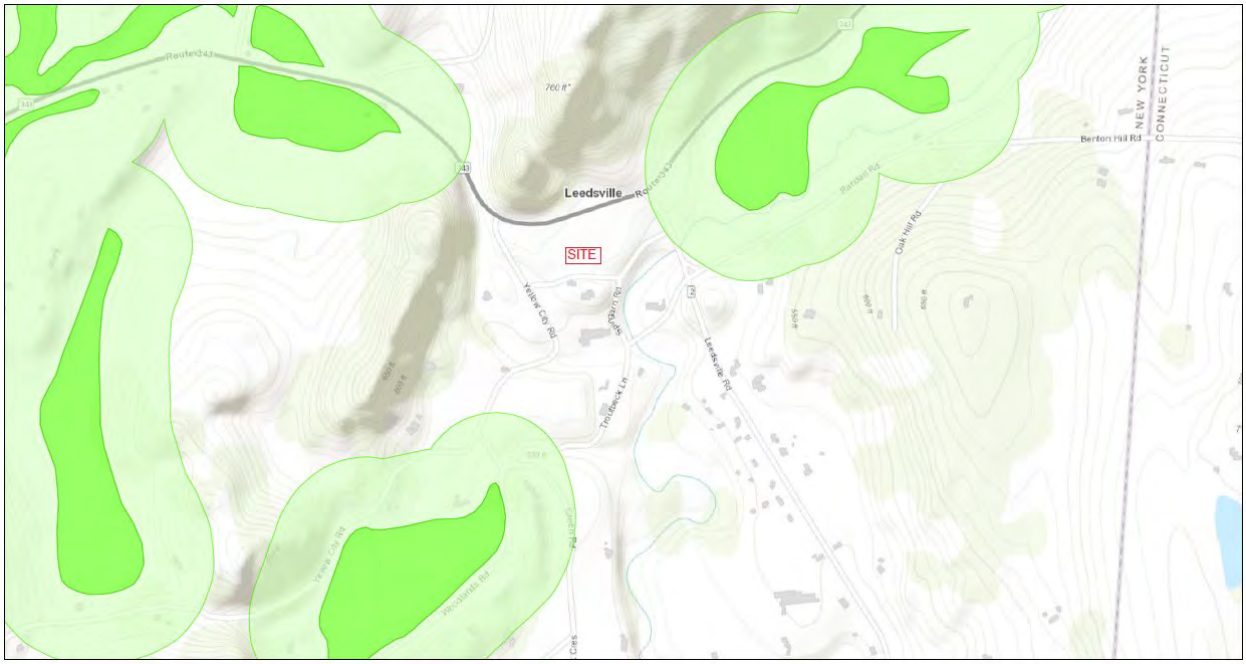
A review of the NYSDEC Environmental Resource Mapper was completed. There are two NYSDEC regulated wetland located on adjacent properties, one to the west identified as AM-5 and one to the east identified as AM-13. There are no NYSDEC Wetlands present on any portion of the property. There are two (2) Federal wetlands present:

Federal Wetland #1: Located along the entire length of the Webatuck, Dunham, and unnamed creek running along the southern edge of the property. The wetland is integral to the riverine system and its boundaries are defined by the banks of the creeks themselves. The wetland is characterized by a continuous flow of water with no tidal influence and unconsolidated bottom. Wetland #1 is approximately ± 2.81 acres in area.

Federal Wetland #2: (PUBHx): Located northeast of Century Lodge and southwest of Leedsville Road-Webatuck Creek crossing, the identified wetland is a manmade pond. Constructed during the 1980's, the existing pond maintains a small overflow channel out falling into the Webatuck Creek. Its PUBHx classification indicates it is nontidal Palustrine

(P) with an unconsolidated bottom (UB) that is permanently flooded (H) due to its original excavation (x). The pond is approximately ± 0.09 acres in area.

Figure 1-2 Troutbeck ERM



Further with respect to Threatened or Endangered Species, Ecological Solutions, LLC., surveyed the property and documented no instances or evidence of the Bog Turtle, Timber Rattle Snake, or the New England Cotton Tail.

1.3 Soils

Based on a review of the USDA Natural Resources Conservation Service's Soil Survey of Dutchess County, New York, one type of soil is present on the project site. The soil onsite consists of Copake gravelly silt loam at nearly level, undulating, and rolling (CuA, CuB, & CuC). The Copake soil is characterized as a very deep, well drained gravelly loam soil over sand and gravel, formed in outwash. The permeability of the Copake soil is moderate or moderately rapid in the solum and very rapid in the substratum.

Soil tests were conducted spread out around the outskirts of the Troutbeck project site. The soil tests covered approximately 7.2 acres out of the total 43.5 acres Troutbeck Parcel contains. In total 33 deep tests and 24 percolation tests were performed in the outer areas of the site. In general, the soils on the site were discovered to be gravelly sand loam which matches with what the USDA Natural Resources Conservation Service's Soil Survey shows. The deep tests were all dug to depths of 7.5' – 9.5' deep with no water and only two deep tests encountered rock at depths of 8'. Therefore, no

fill would be needed for any of the investigated areas for sewage disposal systems. The percolation tests showed the site to have good percolation rates. The best percolation test was 1 minute per inch, while the worst was 12 minutes per inch. A copy of the deep and percolation test results is attached in Appendix A. Locations for the conducted deep and percolation tests are shown on the attached Adaptive Reuse Master Utility Plan in Appendix B.

2.0 EXISTING

2.1 Existing Site Conditions & Collection Systems

Troutbeck is located within an important geographical context, serving as a gateway to the Hudson Valley and in close proximity to the triangle confluence of the New York, Connecticut and Massachusetts borders.

Troutbeck enjoys a unique relationship both the Webatuck Creek and the Dunham Creek, which ultimately form a part of the Housatonic River Watershed.

The historical estate generally consisted of the following buildings: Manor House (c. 1919) with 17 guestrooms today, public areas, function spaces, kitchen and dining rooms, the Century Lodge (c. 1795) with 4 ensuite guestrooms, the Century Annex (c. 1980) with 13 ensuite guestrooms, and Garden House (1980's) with four bedrooms and a staff apartment, Pool House, Wellness Barn (2020) and the Delameter House (c.1761) which was formerly an existing single-family home and later served as staff housing. Provided below is a brief description of the existing structures and their sewage collection systems:

2.1.1 The Manor House & Maintenance Garage:

The original Benton House burnt to the ground in 1915. In its place, the Spingarn's constructed the present-day Manor House, completed in 1919 and designed by architect H. E. Woodsend. The Flaherty/Skibsted partnership purchased the property in 1979 and began to make a series of additions and alterations to the house that extended into the mid 1980's. The Manor House is currently a 17-bedroom inn with a restaurant and a banquet room.

Overall, the Manor House sewage disposal system is in generally good condition. The Manor House is served by two septic tanks and one grease trap. A single septic tank and grease trap serve the banquet and food preparation portion of the Manor House. This septic tank and the grease trap each have a capacity of 1,000 gallons and are both in fair condition. The other septic tank serves the inn portion of the Manor House and has a 2,000-gallon capacity. It was found to be in fair condition. The adjacent maintenance garage with staff apartment is served by a single 1,000-gallon septic tank found to be in fair condition. The septic tank effluent from all 3 tanks travels to the pump station where

the liquid is pumped to the absorption system. The pump station has a single pump that pumps the effluent to an absorption system for the combined flow that includes 3 distribution boxes and 7 drywells. The first distribution box distributes flow in four (4) directions, it distributes flow to two (2) drywells and two (2) other distribution boxes. The second distribution box distributes flow in three (3) directions. This distribution box splits flow to three (3) drywells. The third distribution box splits flow to two (2) drywells. The drywells generally have the same dimensions with a top diameter of 6 ft and a 7 ft diameter at the bottom, and all are approximately 6 ft deep. The drywells all generally have a stone perimeter of 2-2.5 feet. The soils around the drywells generally consist of ROB Sand & Gravel.

2.1.2 The Century Lodge:

The Century Lodge and its 17 guest rooms was recently renovated. As part of that renovation the existing sewage disposal system was expanded. The recently upgraded sewage disposal system consists of a new 3,000 gal. septic tank, 3,000 gal. pump chamber, 4 previously existing seepage pits, and 8 new seepage pits.

2.1.3 The Delamater House:

The Delameter House is a very old structure that requires extensive re-construction and restoration. The current septic system will be replaced. The Delamater House is proposed to be expanded and converted to a restaurant.

2.1.4 The Garden House:

The Garden House was constructed in the 1980's and was used initially as the residence of the then owners. It was later converted to guest use as a 4-guestroom cottage. The original basement garage was converted as two staff apartments.

The Garden House septic tank has a 1,000 gallon capacity. The septic tank effluent is directed to a single drywell which in turn is connected to 2 additional drywell units. The soils in the area of the drywells ranged from a graded gravel mixture to a sand and gravel mixture commonly referred to as run of bank (ROB).

2.1.5 Indoor Pool:

The original indoor pool building and its adjacent greenhouse were removed from the property in 2017 as it was not in good operating condition and needed significant restoration. The indoor pool septic system components were also removed at that time. The soils in the area of the indoor pool also generally consisted of a sandy gravel.

2.1.6 Wellness Barn and Outdoor Pool:

In 2020 the original outdoor pool building was updated and a new Wellness Barn was added to provide guests with health and exercise amenities. The original outdoor pool sewage disposal system was limited in size therefore a new combined sewage disposal system with a capacity of 1,932 gpd was designed and constructed to service both buildings. The original pool house 1,000 gal. septic was connected to a new 3,000 gal. septic tank at the Wellness Barn that in turn flows to a new 3,000 gal pump tank. The effluent pumps then dose 13 conventional absorption trenches that are 62 feet long each. The surrounding soils within the primary absorption area were found to be a fine sandy loam.

3.0 PROPOSED DESIGN FLOW

3.1 Design Flows for each Phase

As discussed above, the proposed Adaptative Reuse Plan outlines 8 separate phases. Provided below is a summary regarding each proposed phase of construction and its proposed design flow. Design flow calculations are based on the Dutchess County Department of Health Design & Construction flow tables as well as the New York State Design Standards for Intermediate Sized Wastewater Treatment Systems, 2014.

3.1.1 Phase 1

Phase 1 includes the construction of a 1-story gatehouse and five (5) 1-story cabins comprised of four (4) 1-bedroom cabins and one (1) two-bedroom cabin, a conversion of an existing maintenance garage/staff apartment into a guest amenity bakery / staff apartment, and the replacement of the existing Manor House sewage disposal system. The Manor House and Bakery will continue to share a single combined sewage disposal system. The Cabins and Gate House will also share a sewage disposal system. The design flows for each system have been summarized in the tables below.

Phase 1 Manor House & Bakery Design Flow Rate:

Description	Quantity	Demand(GPD/PER)	Flow (GPD)
Bedrooms	17	110	1,870
Manor House Restaurant Seating	92	28 (20% reduction of 35)	2,576
Bakery Bedrooms	2	110	220
Bakery Seating	20	16 (20% reduction of 20)	320
		Total Flow (GPD)	**4,986**

Phase 1 Creekside Cabins & Gate House Design Flow Rate:

Description	Quantity	Demand(GPD/PER)	Flow (GPD)
1 Bedroom Cabin	2	110	220
2 Bedroom Cabin	2	220	440
Gate House Employee	4	12 (20% reduction of 15)	48
		Total Flow (GPD)	**708**

3.1.2 Phase 2

Phase 2 includes the construction of improvements to the Manor House only. The Manor House Sewage Disposal System will be replaced as part of the phase 1 bakery project therefore no new wastewater is required as part of Phase 2.

3.1.3 Phase 3

Phase 3 includes the construction of a new 1-story Administration Building and a new 1-story Staff Housing Building. The Administration building will be used for office space and the Staff Housing Building will be used staff facilities and staff apartments. One sewage disposal system will be designed to treat the flow from both buildings. The design flow for this system has been summarized in the tables below.

Phase 3 Central Administration / Staff Housing Design Flow Rate:

Description	Quantity	Demand(GPD/PER)	Flow (GPD)
Staff Apartments	5	110	550
Office Employees (w/ showers)	8	16 (20% reduction of 20)	128
		Total Flow (GPD)	**678**

3.1.4 Phase 4

Phase 4 includes the construction of eight (8) cabins along an existing gravel roadway. Seven (7) cabins will be sized for one bedroom and one (1) cabin will be sized for two bedrooms. Two separate sewage disposal systems are proposed to treat the 8 cabins. System A will treat the upper cabins and System B will treat the lower cabins. The design flow for this system has been summarized in the tables below.

Phase 4 System A – Upper Garden Cabins Design Flow Rate:

Description	Quantity	Demand(GPD/PER)	Flow (GPD)
1 Bedroom Cabins	4	110	440
2 Bedroom Cabin	1	220	220
		Total Flow (GPD)	**660**

Phase 4 System B – Lower Garden Cabins Design Flow Rate:

Description	Quantity	Demand(GPD/PER)	Flow (GPD)
1 Bedroom Cabins	3	110	330
		Total Flow (GPD)	**330**

3.1.5 Phase 5A & 5B

Phase 5A includes the construction of a new 2.5 story lodging building called the Garden Hotel. The Garden Hotel shall provide 33 lodging bedrooms. After the Garden Hotel construction is completed phase 5B will include the construction of a 1-story Garden Event Space building. The Garden Event Space building shall be used for events and gatherings such as conferences, exhibitions, weddings, etc. One sewage disposal system will be designed to handle the flows from both Phase 5A & 5B. The design flow for this system has been summarized in the table below.

Phase 5 Garden Hotel & Garden Event Space Total Design Flow Rate:

Description	Quantity	Demand(GPD/PER)	Flow (GPD)
Hotel Bedrooms	33	110	3630
Event Hall Seats	224	8 (20% reduction of 10)	1792
		Total Flow (GPD)	**5,422**

3.1.6 Phase 6

Phase 6 includes the renovation of the existing Delamater House into a second onsite restaurant facility. The renovated Delamater House Restaurant is anticipated to have 87 seats. One new sewage disposal system will be designed to treat all of the proposed restaurant flow. The design flow for this system has been summarized in the table below.

Phase 6 Delamater House Restaurant Design Flow Rate:

Description	Quantity	Demand(GPD/PER)	Flow (GPD)
Restaurant Seats	87	35 (no reduction applied)	3,045
		Total Flow (GPD)	**3,045**

3.1.7 Phase 7

Phase 7 includes the construction of six (6) cabins along with a small man-made pond. Five (5) cabins will be sized for one bedroom and one cabin shall be sized for two bedrooms. One sewage disposal system has been designed to treat all proposed cabins flows. The design flow for this system has been summarized in the table below.

Phase 7 Meadow Cabins Design Flow Rate:

Description	Quantity	Demand(GPD/PER)	Flow (GPD)
1 Bedroom Cabin	5	110	550
2 Bedroom Cabin	1	220	220
		Total Flow (GPD)	**770**

3.1.9 Phase 8

Phase 8 includes the renovation and expansion of the existing pool facilities. The site previously maintained an indoor pool, which has since been demolished. The proposed project will reintroduce the indoor pool facility, as well as make improvements to the existing pool snack bar, and reconfigure the pool area. One sewage disposal system will be designed to treat all proposed pool facility flows. The design flow for this system has been summarized in the table below.

Phase 8 Outdoor Pool Area Expansion Total Design Flow Rate:

Description	Quantity	Demand(GPD/PER)	Flow (GPD)
Indoor Pool Facility	60	8 (20% reduction of 10)	480
Indoor pool snack bar	60	5	300
Pool Staff	3	12 (20% reduction of 15)	36
		Total Flow (GPD)	**816**

4.0 PROPOSED SEWAGE TREATMENT

In this section of the report, each phase of construction has been designed to have adequately sized sewage disposal system components for their total design flows as explained in the previous section above. In addition to meeting the minimum size requirements for treating the proposed flow rates all sewage disposal system components must also meet the minimum separation distances required by both the Dutchess County Department of Health and NYSDEC.

All Septic Tanks and/or Pump Chambers must be kept a minimum of 50 feet away from nearest wells, bodies of water, and stormwater management practices discharging into surface water, a minimum of 25 feet away from infiltration practices, top of embankments, very steep slopes, retaining walls and stormwater piping, 20 feet away from in-ground swimming pools, and 10 feet away from dwellings & property lines. All Septic Distribution boxes and Absorption Fields must be kept a minimum of 100 feet away from nearest wells, bodies of water, and stormwater management practices discharging into surface water, 50 feet away from infiltration practices, top of embankments, very steep slopes, retaining walls and stormwater piping, 35 feet away from in-ground swimming pools, 20 feet away from dwellings, and 10 feet away from property lines. All septic effluent lines must be kept a minimum of 50 feet away from nearest wells, bodies of water, and stormwater management practices discharging into surface water, 25 feet away from infiltration practices, top of embankments, very steep slopes, and retaining walls, and 10 feet away from in-ground swimming pools, stormwater piping, dwellings and property lines. All other sewage disposal system components and pipe must be kept a minimum of 10 feet away from water lines and drainage lines. Pursuant to these requirements all separation distance minimums for sewage disposal system components have been met with the proposed design.

The majority proposed effluent disposal areas have been located in the northwest corner (along Route 343) of the site that is furthest from the Webatuck Creek to ensure the furthest separation distances possible. The soils in this area were found to be a very well drained Copake Gravel. The deep tests that were dug in this area extended to depths of 8’ – 9.5’ deep with no ground water being found. Based on these findings it is clear that a groundwater mounding analysis is not required because the hydraulic conductivity of the soil is very high and the absence of a ground water table. Additionally it is important to note that the proposed sanitary treatment systems will use conventional application rates based upon the actual percolation rates found in the field.

All septic absorption areas have been located to meet or exceed the 100-foot horizontal separation to any water body or wetland and where possible additional space has been provided between the septic absorption areas and waterbodies. By meeting the vertical

& horizontal separations to ground water and surface waters, the potential for cross contamination is removed.

The following sections show the calculations conducted for sizing each phase's sewage disposal system.

4.1 Phase 1 - Manor House & Bakery

Manor House Lodging Septic Tank Requirements:

Septic Tank: 17 Bedrooms
1,870 x 1.5 = 2,805 gal.
(NYSDEC* Table D-2 (1.5 x Q)
USE: 3,000 gal. Tank (Existing 2,000 gal. Tank)

Manor House Restaurant Septic Tank Requirements:

Septic Tank: 92 Restaurant Seating
2,576 x 1.5 = 3,864 gal.
(NYSDEC* Table D-2 (1.5 x Q)
USE: 4,000 gal. Tank (Existing 1,000 gal. Tank)

Manor House Restaurant Grease Interceptor Tank Requirements:

Design Grease Laden Flow Rate: 3,864 GPD
Peak Flow Rate: 3,864 gpd / 12 hr/day = 322 gph
322 gph / 60 min/hr = 5.367 gpm
5.367 x 6 (Peaking Factor) = 32.2 gpm
32.2 x 30 min. retention time (NYSDEC* Section D.5) = 966 gal.
USE: 1,000 gal. Grease Trap (Existing 1,000 gal. Grease Trap)

Bakery Septic Tank Requirements:

Septic Tank: 2 Bedrooms & 20 Bakery Seating
540 x 1.5 = 810 gal.
(NYSDEC* Table D-2 (1.5 x Q)
*Increase size for enhanced settling due to bakery waste
USE: 1,500 gal. Tank

Bakery Grease Interceptor Tank Requirements:

Design Grease Laden Flow Rate: 540 GPD
Peak Flow Rate: 540 gpd / 12 hr/day = 45 gph
45 gph / 60 min/hr = 0.75 gpm
0.75 x 6 (Peaking Factor) = 4.5 gpm
4.5 x 30 min. retention time (NYSDEC* Section D.5) = 135 gal.
USE: 500 gal. Grease Trap

Soil Information:

Stabilized Perc Rate:	1-5 min/inch.
Percolation Test(s):	MB-1, MB-2, MB-3
Application Rate:	1.2 gal/day/sf

Depth to Rock:	N/A
Depth to Water:	N/A

Manor House & Bakery Sewage Disposal System Requirements:

System Type:	Standard Absorption Trenches
Septic Tank(s):	(1) 3,000 gal. Proposed Concrete Tank
	(1) 4,000 gal. Proposed Concrete Tank
	(1) 1,500 gal. Proposed Concrete Tank
Absorption area required:	4,986 GPD/1.2 (GPD per S.F) = 4155 S.F.
(Req.) Length for Trenches:	4155 S.F. / 2 ft = 2077.5 LF
No. of Laterals:	24
Min. Lateral Length:	2077.5 ft / 24 = 86.5625 ft. **USE: 87 L.F.**
Total Length Provided:	24 laterals @ 87 LF for 2,088 LF
Trench Width:	2 ft.
Trench Spacing:	6 ft. O/C.
Trench Depth:	18" – 24"
Fill Depth:	0'
Dosing Required:	Yes
Required Dose Volume:	TBD
Nearest Well:	Upgradient: >200 ft.; Downgradient:>200 ft.

4.2 Phase 1 - Creekside Cabins & Gate House

Creekside Cabins Septic Tank Requirements:

Septic Tank: 6 Bedrooms
660 x 1.5 = 990 gal.
(NYSDEC* Table D-2 (1.5 x Q)
(DCDOH Table 3 - 6 bedrooms)
USE: 2,000 gal. Tank

Gate House Septic Tank Requirements:

Septic Tank: 4 Employees
12 x 4 = 48 gal.
(NYSDEC* Table D-2 (1.5 x Q)
USE: 1,000 gal. Tank

Soil Information:

Stabilized Perc Rate:	1-5 min/inch.
Percolation Test(s):	C-1
Application Rate:	1.2 gal/day/sf
Depth to Rock:	N/A
Depth to Water:	N/A

Sewage Disposal System Requirements:

System Type:	Gravelless Absorption Trenches
Septic Tank(s):	(1) 2,000 gal. Proposed Concrete Tank
	(1) 1,000 gal. Proposed Concrete Tank
Absorption area required:	708 GPD/1.2 (GPD per S.F) = 590 S.F.
(Req.) Length for Trenches:	590 S.F. / 2 ft = 295 LF
No. of Laterals:	4
Min. Lateral Length:	295 ft / 4 = 73.75 ft. **USE: 75 L.F.**
Total Length Provided:	4 laterals @ 75 LF for 300 LF
Trench Width:	2 ft.
Trench Spacing:	6 ft. O/C.
Trench Depth:	18” – 24”
Fill Depth:	0’
Dosing Required:	Yes
Required Dose Volume:	TBD
Nearest Well:	Upgradient: >200 ft.; Downgradient:>200 ft.

4.3 Phase 3 - Central Administration Area

Staff Apartments & Admin. Office Septic Tank Requirements:

Septic Tank: 5 Bedrooms & 8 Employees
678 x 1.5 = 1,017 gal.
(NYSDEC* Table D-2 (1.5 x Q)
(DCDOH Table 3 - 6 bedrooms)
USE: 1,750 gal. Tank

Soil Information:

Stabilized Perc Rate:	1-5 min/inch. (assumed perc. rate based on proximity to MB-1, MB-2, and MB-3)
Application Rate:	1.2 gal/day/sf
Depth to Rock:	N/A
Depth to Water:	N/A

Sewage Disposal System Requirements:

System Type:	Standard Absorption Trenches
Septic Tank(s):	(1) 1,750 gal. Proposed Concrete Tanks
Absorption area required:	678 GPD/1.2 (GPD per S.F) = 565 S.F.
(Req.) Length for Trenches:	565 S.F. / 2 ft = 282.5 LF
No. of Laterals:	5
Min. Lateral Length:	282.5 ft / 5 = 56.5 ft. **USE: 57 L.F.**
Total Length Provided:	5 laterals @ 57 LF for 285 LF
Trench Width:	2 ft.
Trench Spacing:	6 ft. O/C.
Trench Depth:	18” – 24”
Fill Depth:	0’
Dosing Required:	Yes
Required Dose Volume:	TBD
Nearest Well:	Upgradient:>200 ft.; Downgradient:>200 ft.

4.4 Phase 4 - Garden Cabins System A & B

System A

Lodging Septic Tank Requirements:

Septic Tank: 6 Bedrooms
660 x 1.5 = 990 gal.
(NYSDEC* Table D-2 (1.5 x Q)
(DCDOH Table 3 - 6 bedrooms)
USE: 2,000 gal. Tank

Soil Information:

Stabilized Perc Rate:	1-5 min/inch.
Percolation Test(s):	PG-2, PG-3
Application Rate:	1.2 gal/day/sf
Depth to Rock:	N/A
Depth to Water:	N/A

Sewage Disposal System Requirements:

System Type:	Standard Absorption Trenches
Septic Tank(s):	(1) 2,000 gal. Proposed Concrete Tank
Absorption area required:	660 GPD/1.2 (GPD per S.F) = 550 S.F.
(Req.) Length for Trenches:	550 S.F. / 2 ft = 275 LF
No. of Laterals:	5
Min. Lateral Length:	275 ft / 5 = 55 ft. **USE: 55 L.F.**
Total Length Provided:	5 Laterals @ 55 LF for 275 LF
Trench Width:	2 ft.
Trench Spacing:	6 ft. O/C.
Trench Depth:	18” – 24”
Fill Depth:	0’
Dosing Required:	No
Nearest Well:	Upgradient:>200 ft.; Downgradient:>200 ft.

System B

Lodging Septic Tank Requirements:

Septic Tank: 3 Bedrooms
330 x 1.5 = 495 gal.
(NYSDEC* Table D-2 (1.5 x Q)
(DCDOH Table 3 - 3 bedrooms)
USE: 1,000 gal. Tank

Soil Information:

Stabilized Perc Rate:	6-7 min/inch.
Percolation Test(s):	PG-4
Application Rate:	1.0 gal/day/sf

Depth to Rock:	N/A
Depth to Water:	N/A

Sewage Disposal System Requirements:

System Type:	Standard Absorption Trenches
Septic Tank(s):	(1) 1,000 gal. Proposed Concrete Tank
Absorption area required:	330 GPD/1.0 (GPD per S.F) = 330 S.F.
(Req.) Length for Trenches:	330 S.F. / 2 ft = 115 LF
No. of Laterals:	2
Min. Lateral Length:	115 ft / 2 = 57.5 ft. **USE: 60 L.F.**
Total Length Provided:	2 laterals @ 60 LF for 120 LF
Trench Width:	2 ft.
Trench Spacing:	6 ft. O/C.
Trench Depth:	18” – 24”
Fill Depth:	0’
Dosing Required:	No
Nearest Well:	Upgradient:>200 ft.; Downgradient:>200 ft.

4.5 Phase 5A Garden Hotel

Lodging Septic Tank Requirements:

Septic Tank: 33 Bedrooms
3630 x 1.5 = 5,445 gal.
(NYSDEC* Table D-2 (1.5 x Q)
USE: 6,000 gal. Tank

Soil Information:

Stabilized Perc Rate:	1-5 min/inch. (assumed perc. rate based on proximity to MB-1, MB-2, and MB-3)
Application Rate:	1.2 gal/day/sf
Depth to Rock:	N/A
Depth to Water:	N/A

Sewage Disposal System Requirements:

System Type:	Standard Absorption Trenches
Septic Tank(s):	(1) 6,000 gal. Proposed Concrete Tanks
Absorption area required:	3,630 GPD/1.2 (GPD per S.F) = 3,025 S.F.
(Req.) Length for Trenches:	3,025 S.F. / 2 ft = 1,512.5 LF
No. of Laterals:	24
Min. Lateral Length:	1512.5 ft / 24 = 63 ft. **USE: 65 L.F.**
Total Length Provided:	24 laterals @ 65 LF for 1560 LF
Trench Width:	2 ft.
Trench Spacing:	6 ft. O/C.
Trench Depth:	18” – 24”
Fill Depth:	0’
Dosing Required:	Yes
Required Dose Volume:	TBD
Nearest Well:	Upgradient:>200 ft.; Downgradient:>200 ft.

4.6 Phase 5B Garden Event Space (Kitchen)

Kitchen Septic Tank Requirements:

Septic Tank: 224 Seats
1,792 x 1.5 = 2,688 gal.
(NYSDEC* Table D-2 (1.5 x Q)
USE: 3,000 gal. Tank

Kitchen Grease Interceptor Tank Requirements:

Design Grease Laden Flow Rate: 2,688 GPD
Peak Flow Rate: 2,688 gpd / 12 hr/day = 224 gph
224 gph / 60 min/hr = 3.73 gpm
3.73 x 6 (Peaking Factor) = 22.38 gpm
22.38 x 30 min. retention time (NYSDEC* Section D.5) = 671.4 gal.
USE: 1,000 gal. Grease Trap

Soil Information:

Stabilized Perc Rate:	1-5 min/inch. (assumed perc. rate based on proximity to MB-1, MB-2, and MB-3)
Application Rate:	1.2 gal/day/sf
Depth to Rock:	N/A
Depth to Water:	N/A

Sewage Disposal System Requirements:

System Type:	Standard Absorption Trenches
Septic Tank(s):	(1) 3,000 gal. Proposed Concrete Tanks
Absorption area required:	1,792 GPD/1.2 (GPD per S.F) = 1,493.3 S.F.
(Req.) Length for Trenches:	1,493.3 S.F. / 2 ft = 746.65 LF
No. of Laterals:	10
Min. Lateral Length:	746.65 ft / 10 = 74.66 ft. USE: 75 L.F.
Total Length Provided:	10 laterals @ 75 LF for 750 LF
Trench Width:	2 ft.
Trench Spacing:	6 ft. O/C.
Trench Depth:	18” – 24”
Fill Depth:	0’
Dosing Required:	Yes
Required Dose Volume:	TBD
Nearest Well:	Upgradient:>200 ft.; Downgradient:>200 ft.

**The Garden Hotel & Event Sewage Disposal Systems will be combined into one field during construction.*

Total Phase 5 Sewage Disposal System Requirements:

System Type:	Standard Absorption Trenches
Septic Tank(s):	(1) 3,000 gal. Proposed Concrete Tank

	(1) 6,000 gal. Proposed Concrete Tank
Absorption area required:	5,422 GPD/1.2 (GPD per S.F) = 4,518.3 S.F.
(Req.) Length for Trenches:	4,518.3 S.F. / 2 ft = 2,259.16 LF
No. of Laterals:	24
Min. Lateral Length:	2,259.16 ft / 24 = 94.13 ft. **USE: 95 L.F.**
Total Length Provided:	24 laterals @ 95 LF for 2280 LF
Trench Width:	2 ft.
Trench Spacing:	6 ft. O/C.
Trench Depth:	18" – 24"
Fill Depth:	0'
Dosing Required:	Yes
Required Dose Volume:	TBD
Nearest Well:	Upgradient:>200 ft.; Downgradient:>200 ft.

4.7 Phase 6 Delamater House (Restaurant)

Restaurant Septic Tank Requirements:

Septic Tank: 86 Seats
2,408 x 1.5 = 3,612 gal.
(NYSDEC* Table D-2 (1.5 x Q)
USE: 4,000 gal. Tank

Restaurant Grease Interceptor Tank Requirements:

Design Grease Laden Flow Rate: 2,408 GPD

Peak Flow Rate: 2,408 gpd / 12 hr/day = 200.67 gph
200.67 gph / 60 min/hr = 3.34 gpm
3.34 x 6 (Peaking Factor) = 20.04 gpm
20.04 x 30 min. retention time (NYSDEC* Section D.5) =601.2 gal.
USE: 1,000 gal. Grease Trap

Soil Information:

Stabilized Perc Rate:	8-10 min/inch.
Test Location(s):	DH-2
Application Rate:	0.90 gal/day/sf
Depth to Rock:	N/A
Depth to Water:	N/A

Sewage Disposal System Requirements:

System Type:	Standard Absorption Trenches
Septic Tank(s):	(1) 4,000 gal. Proposed Concrete Tanks
Absorption area required:	2,408 GPD/0.9 (GPD per S.F) = 2,676 S.F.
(Req.) Length for Trenches:	2,676 S.F. / 2 ft = 1,338 LF

No. of Laterals:	22
Min. Lateral Length:	1,338 ft / 22 = 60.8 ft. **USE: 62 L.F.**
Total Length Provided:	22 laterals @ 62 LF for 1364 LF
Trench Width:	2 ft.
Trench Spacing:	6 ft. O/C.
Trench Depth:	18" – 24"
Fill Depth:	0'
Dosing Required:	Yes
Required Dose Volume:	TBD
Nearest Well:	Upgradient:>200 ft.; Downgradient:>200 ft.

4.8 Phase 7 Meadow Cabins

Lodging Septic Tank Requirements:

Septic Tank: 7 Bedrooms
770 x 1.5 = 1,155 gal.
(NYSDEC* Table D-2 (1.5 x Q)
(DCDOH Table 3 - 7 bedrooms)
USE: 2,000 gal. Tank

Soil Information:

Stabilized Perc Rate:	1-5 min/inch. (assumed based nearby tests)
Application Rate:	1.2 gal/day/sf
Depth to Rock:	N/A
Depth to Water:	N/A

Sewage Disposal System Requirements:

System Type:	Standard Absorption Trenches
Septic Tank(s):	(1) 2,000 gal. Proposed Concrete Tanks
Absorption area required:	770 GPD/1.2 (GPD per S.F) = 641.67 S.F.
(Req.) Length for Trenches:	641.67 S.F. / 2 ft = 320.83 LF
No. of Laterals:	6
Min. Lateral Length:	320.83 ft / 6 = 53.47 ft. **USE: 55 L.F.**
Total Length Provided:	6 laterals @ 55 LF for 330 LF
Trench Width:	2 ft.
Trench Spacing:	6 ft. O/C.
Trench Depth:	18" – 24"
Fill Depth:	0'
Dosing Required:	Yes
Required Dose Volume:	TBD
Nearest Well:	Upgradient:>200 ft.; Downgradient:>200 ft.

4.9 Phase 8 Pool Area Expansion

Septic Tank Requirements:

Septic Tank: Outdoor Pool, Deck, & Snack Bar
816 x 1.5 = 1,224 gal.
(NYSDEC* Table D-2 (1.5 x Q)
USE: 2,000 gal. Tank

Soil Information:

Stabilized Perc Rate:	8-10 min/inch.
Test Location(s):	PP-1 and PP-2
Application Rate:	0.9 gal/day/sf
Depth to Rock:	N/A
Depth to Water:	N/A

Sewage Disposal System Requirements:

System Type:	Standard Absorption Trenches
Septic Tank(s):	(1) 2,000 gal. Proposed Concrete Tanks
Absorption area required:	816 GPD/0.9 (GPD per S.F) = 907 S.F.
(Req.) Length for Trenches:	907 S.F. / 2 ft = 454 LF
No. of Laterals:	7
Min. Lateral Length:	454 ft / 8 = 64.86 ft. **USE: 65 L.F.**
Total Length Provided:	7 laterals @ 65 LF for 455 LF
Trench Width:	2 ft.
Trench Spacing:	6 ft. O/C.
Trench Depth:	18” – 24”
Fill Depth:	0’
Dosing Required:	Yes
Required Dose Volume:	TBD
Nearest Well:	Upgradient:>200 ft.; Downgradient:>200 ft.

4.10 100% Expansion/Reserve Areas

As required by the Dutchess County Department of Health, land space has been set aside for 100% reserve or replacement effluent absorption areas. All of the sizing for these reserve areas match the sizing requirements of the primary areas shown above and in most cases the reserve areas are right next to the primary areas, but in some cases like the gatehouse and Creekside cabins area, it was not feasible to fit the reserve areas in this area, so a remote location is shown along the northerly area of the property, where the greatest separations to waterbodies can be met.

In the cases where the reserve area needed to be located across the Webatuck Creek from the buildings they serve, directional borings are shown to allow for the effluent forcemain to be bored under the creek bed, which would require boring and receiving pits are dug at either end of the boring and then a pipe will be bored under the creek to establish a sealed carrier pipe that will be at least 4-feet below the creek bed and have all disturbances restored to match preconstruction conditions upon completion. Since this boring process will not disturb the beds or banks of the stream, no NYSDEC permitting for this would be required.

5.0 PROJECT SUMMARY

The proposed Adaptive Reuse Plan for Troutbeck consists of 8 phases. This report was prepared to review and detail both the existing site conditions and the proposed wastewater treatment renovations/construction that will occur during each phase. At this time only Phase 1 is being reviewed for Site Plan approval by the Town of Amenia. As part of the Phase 1 site plan review, the corresponding sewage disposal system design will be completed for review and approval by both the Dutchess County Department of Health and the NYSDEC division of water. The existing soil conditions that were investigated covering a large area of 7.2 acres were all found to be at least 7.5 feet deep with percolation tests ranging from 1–12 minutes per inch. Therefore, any future wastewater treatment design for the Troutbeck site will not need any fill. Furthermore, the sandy gravel soil was found to be very good percolation material showing that the 7.2 acres of tested land will be more than sufficient space to construct and install onsite conventional sanitary sewage treatment systems.

The onsite sanitary sewage treatment systems have been placed in such a way that maintains all minimum separations required by both the Dutchess County Department of Health and NYSDEC. The locations also maximize separations to the Webatuck Creek to the greatest extent possible and honor the 100-foot separation at a minimum.

None of the deep tests found any presence of ground water. Combining this with the very well drained gravel soils it was determined that a groundwater mounding analysis is not required as the introduction of effluent recharge will not have a physical effect of raising the base groundwater elevation. The various absorption systems are also spread out throughout the site to avoid concentrating wastewater in any one area and the larger systems, for example the Garden Hotel and Manor House are proposed in the northerly field, as far from surface waters as is feasible.

In general, the sewage collection system sizing calculations prepared for each future phase meet the sizing requirements of the Dutchess County Department of Health and the NYSDEC. Furthermore, the existing SPDES permit (DEC ID# 3-1320-00027/00004) identifies 4 existing outfalls for the overall Troutbeck site. As each phase is developed the SPDES Permit will be updated with each phase as it moves forward.

It is our professional opinion that the sanitary sewage treatment system designs outlined in this report meet and exceed all required local and state design requirements therefore there will be no measurable impact to the groundwater resources or surface water resources such as the nearby Webatuck Creek.

APPENDIX A

Soil Test Results (Percolation & Deep Tests)

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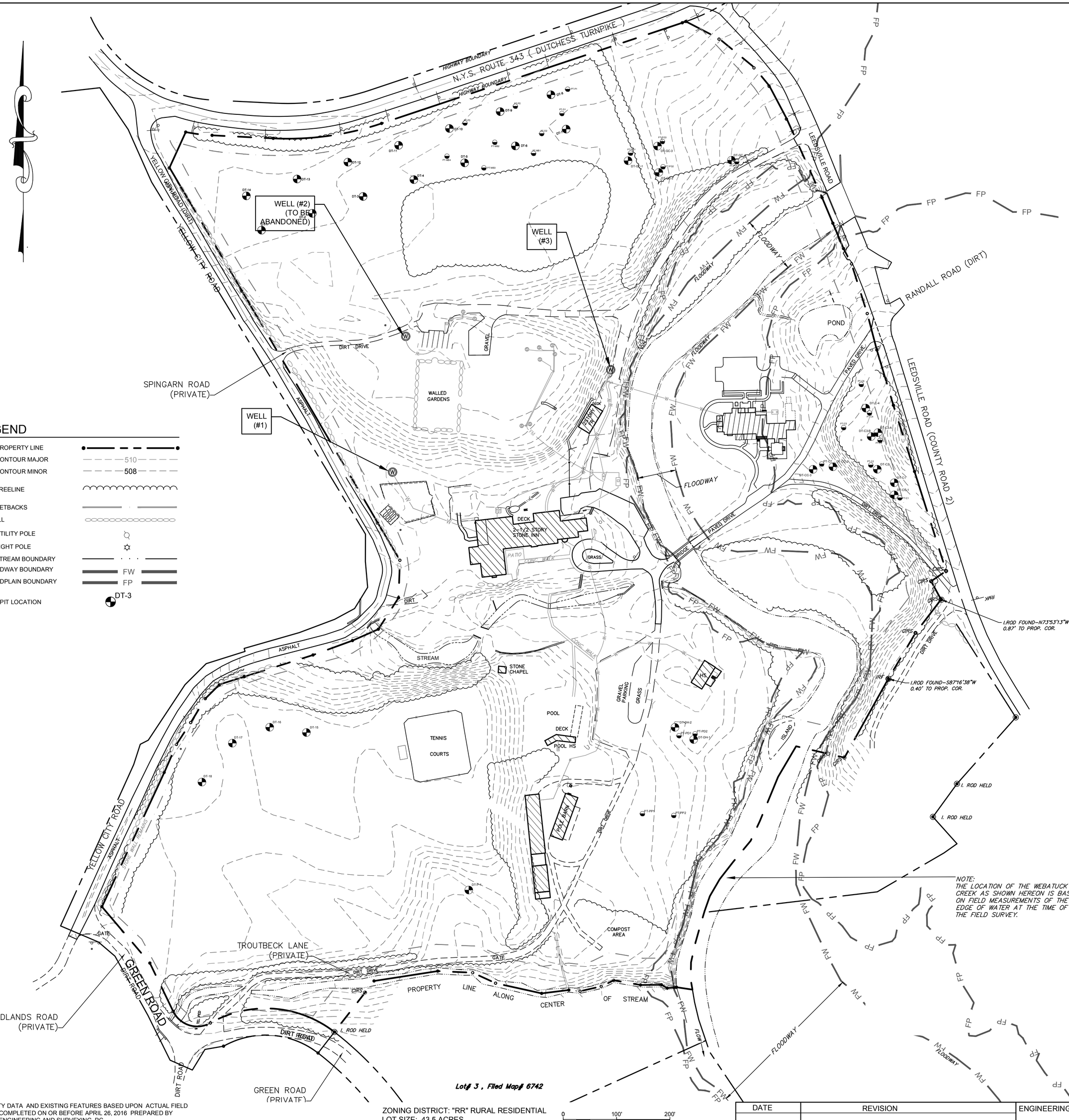

LEGEND

- EXISTING PROPERTY LINE
- EXISTING CONTOUR MAJOR — 510
- EXISTING CONTOUR MINOR — 508
- EXISTING TREELINE
- BUILDING SETBACKS
- STONE WALL
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING STREAM BOUNDARY
- FEMA FLOODWAY BOUNDARY — FW
- FEMA FLOODPLAIN BOUNDARY — FP
- DEEP TEST PIT LOCATION — DT-3

1" = 100' GRAPHIC SCALE (0, 100', 200')

MAP NOTES:
1. PROPERTY DATA AND EXISTING FEATURES BASED UPON ACTUAL FIELD SURVEY COMPLETED ON OR BEFORE APRIL 26, 2016 PREPARED BY CHAZEN ENGINEERING AND SURVEYING, PC.
2. TOPOGRAPHIC CONTOURS BASED UPON ACTUAL FIELD SURVEY COMPLETED ON OR BEFORE DECEMBER 8, 2004 PREPARED BY STEVEN ALEX, L.S. OF CHAZEN ENGINEERING AND SURVEYING, PC.

FLOOD ZONE NOTES:
1. PROPERTY SHOWN HEREON LIES WITHIN "SPECIAL FLOOD HAZARD AREA ZONE AE", WITHIN "OTHER AREAS, ZONE X" (UNSHADED), AND WITHIN "FLOODWAY AREAS IN ZONE AE" AS SHOWN ON FEMA, NFIP, FIRM PANEL 36027C0332E, WITH AN EFFECTIVE DATE OF MAY 2, 2012.
2. THE "ZONE AE, BASE FLOOD ELEVATIONS" DETERMINED TO AFFECT THIS PARCEL ARE IN THE RANGE OF 480' TO 487' (NAVD88).

ZONING DISTRICT: "RR" RURAL RESIDENTIAL
LOT SIZE: 43.5 ACRES
TAX GRID No. : 132000-7267-00-227675
PROPERTY ADDRESS: 515 LEEDSVILLE ROAD AMENIA, NY 12501
PROPERTY OWNER: TROUTBECK HOLDINGS, LP. 515 LEEDSVILLE ROAD AMENIA, NY 12501
APPLICANT: TROUTBECK HOLDINGS, LP. 515 LEEDSVILLE ROAD AMENIA, NY 12501

DEEP TEST RESULTS (10/21/2021):

HOLE #	TOTAL DEPTH	ROCK DEPTH	WATER DEPTH	MOTTLING DEPTH	SOIL DESCRIPTION
1	114"	N/A	N/A	N/A	0"-24" SILT LOAM
					24"-114" GRAVELLY SAND LOAM
2	114"	N/A	N/A	N/A	0"-24" SILT LOAM
					24"-114" GRAVELLY SAND LOAM
3	108"	N/A	N/A	N/A	0"-24" SILT LOAM
					24"-108" GRAVELLY SAND LOAM
4	108"	N/A	N/A	N/A	0"-24" SILT LOAM
					24"-108" GRAVELLY SAND LOAM
5	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
6	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
7	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
8	108"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-108" GRAVELLY SAND LOAM
9	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
10	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
11	90"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-90" GRAVELLY SAND LOAM
12	90"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-90" GRAVELLY SAND LOAM
13	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
14	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
15	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
16	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
17	90"	N/A	N/A	N/A	0"-12" SILT LOAM
					12"-90" GRAVELLY SAND LOAM
18	90"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-90" GRAVELLY SAND LOAM
P-1	132"	N/A	N/A	N/A	0"-60" GRAVEL
					60"-132" SAND

PERC. TEST RESULTS CENTURY/BENTON (11/11/2021):

Lot No.	Test Hole No.	Test Hole Depth	Soil Type	Soaked	TEST RUNS	*	1	2	3	4	5
						Finish	2:14	2:15	2:17		
	C1	48"	Gravelly Silt	YES		Start	2:13	2:14	2:16		
						Time	1 min	1 min	1 min		
						Finish	2:44	2:56	3:08		
	C2	36"	Gravelly Silt	YES		Start	2:35	2:45	2:57		
						Time	9 min	11 min	11 min		
						Finish	2:57	3:09	3:20		
	C3	48"	Gravelly Silt	YES		Start	2:47	2:58	3:09		
						Time	10 min	11 min	11 min		
						Finish	3:19	3:23	3:27		
	C4	48"	Gravelly Silt	YES		Start	3:17	3:20	3:24		
						Time	2 min	3 min	3 min		
						Finish	3:35	3:36	3:37		
	C5	36"	Gravelly Silt	YES		Start	3:34	3:35	3:36		
						Time	1 min	1 min	1 min		
						Finish	3:46	3:51	3:55		
	C6	36"	Gravelly Silt	YES		Start	3:43	3:47	3:51		
						Time	3 min	4 min	4 min		
						Finish	4:09	4:25	4:38		
	C7	36"	Gravelly Silt	YES		Start	3:59	4:13	4:26		
						Time	10 min	12 min	12 min		

PERC. TEST RESULTS DELAMATER 9/21/2022 & 10/6/2022*):

Lot No.	Test Hole No.	Test Hole Depth	Soil Type	Soaked	TEST RUNS	*	1	2	3	4	5
						Finish	1:21	1:26	1:30	1:35	1:40
Gard. H.	PG-1	24"	Sandy Gravel	YES		Start	1:18	1:22	1:26	1:31	1:36
						Time	3 min	4 min	4 min	4 min	4 min
						Finish	2:00	2:03	2:06	2:10	2:14
Gard. H.	PG-2	30"	Sandy Gravel	YES		Start	1:58	2:01	2:03	2:07	2:11
						Time	2 min	2 min	3 min	3 min	3 min
						Finish	1:40	1:45	1:49	1:52	1:55
Gard. H.	PG-3	30"	Sandy Gravel	YES		Start	1:38	1:42	1:46	1:49	1:52
						Time	2 min	3 min	3 min	3 min	3 min
						Finish	2:26	2:31	2:37	2:44	2:51
Gard. H.	PG-4	24"	Sandy Gravel	YES		Start	2:21	2:26	2:31	2:38	2:45
						Time	5 min	5 min	6 min	6 min	6 min

DEEP TEST RESULTS (10/21/2021):

HOLE #	TOTAL DEPTH	ROCK DEPTH	WATER DEPTH	MOTTLING DEPTH	SOIL DESCRIPTION
C1	108"	N/A	N/A	N/A	0"-36" SILT LOAM
					36"-108" GRAVELLY SAND LOAM W/ COBBLES
C2	132"	N/A	N/A	N/A	0"-36" SILT LOAM
					36"-132" GRAVELLY SAND LOAM
C-3A	54"	54"	N/A	N/A	0"-54" ROCK
C-3B	114"	N/A	N/A	N/A	0"-48" SILT LOAM
					48"-114" GRAVELLY SAND LOAM
C-4	126"	N/A	N/A	N/A	0"-24" SILT LOAM
					24"-126" GRAVELLY SAND LOAM

DEEP TEST RESULTS (9/20/2022):

HOLE #	TOTAL DEPTH	ROCK DEPTH	WATER DEPTH	MOTTLING DEPTH	SOIL DESCRIPTION
CC-1	102"	N/A	N/A	N/A	0"-3" TOPSOIL
					3"-102" BROWN SAND LOAM W/ GRAVEL AND COBBLES
CC-2	96"	96"	N/A	N/A	0"-4" TOPSOIL
					4"-96" BROWN SAND LOAM
CC-3	108"	108"	N/A	N/A	0"-3" TOPSOIL
					3"-108" BROWN SAND LOAM
DH-1	96"	N/A	N/A	N/A	0"-12" TOPSOIL
					12"-60" BONY GRAVEL
					60"-96" SAND WITH GRAVEL
DH-2	108"	N/A	N/A	N/A	0"-48" SAND LOAM
					48"-108" SAND WITH GRAVEL
GC-1	96"	N/A	N/A	N/A	0"-24" SAND LOAM
					24"-96" SAND W/ GRAVEL & COBBLES
GC-2	96"	N/A	N/A	N/A	0"-18" SAND LOAM
					18"-96" SAND W/ GRAVEL & COBBLES
GC-3	96"	N/A	N/A	N/A	0"-24" SAND LOAM
					24"-96" SAND W/ GRAVEL & COBBLES
GC-4	114"	N/A	N/A	N/A	0"-48" SAND LOAM
					48"-114" SAND W/ GRAVEL & COBBLES

PERC. TEST RESULTS DELAMATER 9/21/2022 & 10/6/2022*):

Lot No.	Test Hole No.	Test Hole Depth	Soil Type	Soaked	TEST RUNS	*	1	2	3	4	5
						Finish	9:17	9:24	9:33	9:42	9:51
Delam.	PD-1	24"		YES		Start	9:12	9:17	9:25	9:34	9:43
						Time	5 min	7 min	8 min	8 min	8 min
						Finish	12:37	12:45	12:54	1:03	1:12
Delam. *	PD-2	36"		YES		Start	12:30	12:39	12:47	12:55	1:04
						Time	7 min	6 min	7 min	8 min	8 min

PERC. TEST RESULTS POOL EXP. 9/21/2022):

Lot No.	Test Hole No.	Test Hole Depth	Soil Type	Soaked	TEST RUNS	*	1	2	3	4	5
						Finish	10:23	10:30	10:39	10:49	10:58
Pool H.	PP-1	24"	Sandy Gravel	YES		Start	10:18	10:24	10:30	10:40	10:49
						Time	5 min	6 min	9 min	9 min	9 min
						Finish	11:05	11:12	11:19	11:27	11:35
Pool H.	PP-2	24"	Sandy Gravel	YES		Start	11:01	11:06	11:12	11:19	11:27
						Time	4 min	6 min	7 min	8 min	8 min

PERC. TEST RESULTS MANOR HSE. BAKERY 10/6/2022 & 12/13/2022*):

Lot No.	Test Hole No.	Test Hole Depth	Soil Type	Soaked	TEST RUNS	*	1	2	3	4	5
						Finish	1:57	2:00	2:03		
Manor & Bakery	MB-1	24"	Sandy Gravel	YES		Start	1:55	1:57	2:00		
						Time	2 min	3 min	3 min		
						Finish	1:58	2:01	2:04		
Manor & Bakery	MB-2	24"	Sandy Gravel	YES		Start	1:56	1:58	2:01		
						Time	2 min	3 min	3 min		
						Finish	1:57	2:02	2:06		
Manor & Bakery	MB-3	30"	Sandy Gravel	YES		Start	1:54	1:58	2:02		
						Time	3 min	4 min	4 min		
						Finish	1:56	1:58	2:01		
Manor & Bakery	MB-4	24"	Sandy Gravel	YES		Start	1:55	1:56	1:59		
						Time	1 min	2 min	2 min		
						Finish	4:13	4:17	4:22		
Ph. 1 *	P-1	30"	Sandy Gravel	YES		Start	4:10	4:13	4:18		
						Time	3 min	4 min	4 min		
						Finish	4:19	4:23	4:28		
Ph. 1 *	P-2	30"	Sandy Gravel	YES		Start	4:15	4:19	4:24		
						Time	4 min	4 min	4 min		
						Finish	4:22	4:25	4:28		
Ph. 1 *	P-3	30"	Sandy Gravel	YES		Start	4:20	4:22	4:25		
						Time	2 min	3 min	3 min		

DATE	REVISION

ENGINEERING, DESIGN, & PLANS PREPARED BY:

RENNIA ENGINEERING DESIGN, PLLC

CIVIL • ENVIRONMENTAL • STRUCTURAL

6 Dover Village Plaza, Suite 5, P.O. Box 400, Dover Plains, NY 12522
Tel: (845) 877-0555 Fax: (845) 877-0556

TROUTBECK

TOWN OF AMENIA — DUTCHESS COUNTY, NY

SOIL TESTS LOCATIONS MAP

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
2/3/2023	1" = 100'	RED	RED	RAR	16-019	1 of 1

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DUTCHESS COUNTY DEPARTMENT OF HEALTH

PERCOLATION TEST DATA

Name: Troutbeck Century House Primary Area (T)~~(V)(C)~~ Amenia Date: 11/11/2021

TAX GRID #

132000	7	2	6	7	0	0	2	2	7	6	7	5

By: Thomas Harvey DCDOH Inspector: _____

Lot No.	Test Hole No.	Test Hole Depth	Soil Type	Soaked	TEST RUNS					
					*	1	2	3	4	5
	C1	48"	Gravelly Silt	YES	Finish	2:14	2:15	2:17		
					Start	2:13	2:14	2:16		
					Time	1 min	1 min	1 min		
	C2	36"	Gravelly Silt	YES	Finish	2:44	2:56	3:08		
					Start	2:35	2:45	2:57		
					Time	9 min	11 min	11 min		
	C3	48"	Gravelly Silt	YES	Finish	2:57	3:09	3:20		
					Start	2:47	2:58	3:09		
					Time	10 min	11 min	11 min		
	C4	48"	Gravelly Silt	YES	Finish	3:19	3:23	3:27		
					Start	3:17	3:20	3:24		
					Time	2 min	3 min	3 min		
	C5	36"	Gravelly Silt	YES	Finish	3:35	3:36	3:37		
					Start	3:34	3:35	3:36		
					Time	1 min	1 min	1 min		
	C6	36"	Gravelly Silt	YES	Finish	3:46	3:51	3:55		
					Start	3:43	3:47	3:51		
					Time	3 min	4 min	4 min		
	C7	36"	Gravelly Silt	YES	Finish	4:09	4:25	4:38		
					Start	3:59	4:13	4:26		
					Time	10 min	12 min	12 min		
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					

I, Richard A. Rennia, Jr., P.E., the undersigned, certify that these percolation tests were done by myself or or under my direction according to the standard procedure. The data and results presented are true and correct.

Dated: _____ Signature: _____

License No. (P.E.)(L.S.) NYPE: 082459

HD-184

DUTCHESS COUNTY DEPARTMENT OF HEALTH

P E R C O L A T I O N   T E S T   D A T A

Name: Troutbeck Century House (T)~~(V)(C)~~ Amenia Date: 1/12/2022
100% Reserve Area

TAX GRID #

132000	7	2	6	7	0	0	2	2	7	6	7	5

By: Thomas Harvey DCDOH Inspector: ____________

Lot No.	Test Hole No.	Test Hole Depth	Soil Type	Soaked	TEST RUNS					
					*	1	2	3	4	5
	D1	24"	Gravelly Sand Loam	YES	Finish	3:08	3:17	3:26		
					Start	3:00	3:09	3:18		
					Time	8 min	8 min	8 min		
	D2	24"	Gravelly Sand Loam	YES	Finish	3:04	3:06	3:08		
					Start	3:03	3:05	3:07		
					Time	1 min	1 min	1 min		
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					
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					Start					
					Time					
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					

I, Richard A. Rennia, Jr., P.E., the undersigned, certify that these percolation tests were done by myself or or under my direction according to the standard procedure. The data and results presented are true and correct.

Dated: ____________ Signature: ___________________________________

License No. (P.E.)(L.S.) __NYPE: 082459_________

HD-184

DUTCHESS COUNTY DEPARTMENT OF HEALTH

PERCOLATION TEST DATA

Name: Delameter (T)~~(V)(C)~~ Amenia Date: 9/21 & 10/6/2022*

TAX GRID #

132000	7	2	6	7	0	0	2	2	7	6	7	5

By: Wilson Suzuki & Kevin Guo DCHD Inspector:

Lot No.	Test Hole No.	Test Hole Depth	Soil Type	Soaked	TEST RUNS					
					*	1	2	3	4	5
Delam.	PD-1	24"		YES	Finish	9:17	9:24	9:33	9:42	9:51
					Start	9:12	9:17	9:25	9:34	9:43
					Time	5 min	7 min	8 min	8 min	8 min
Delam. *	PD-2	36"		YES	Finish	12:37	12:45	12:54	1:03	1:12
					Start	12:30	12:39	12:47	12:55	1:04
					Time	7 min	6 min	7 min	8 min	8 min
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					

I, Richard A. Rennia, Jr., P.E., the undersigned, certify that these percolation tests were done by myself or or under my direction according to the standard procedure. The data and results presented are true and correct.

Dated: _____ Signature: _____

License No. (P.E.)(L.S.) NYPE: 082459

HD-184

DUTCHESS COUNTY DEPARTMENT OF HEALTH

PERCOLATION TEST DATA

Name: Garden House (T)~~(V)(C)~~ Amenia Date: 9/21/2022

TAX GRID #

132000	7	2	6	7	0	0	2	2	7	6	7	5

By: Wilson Suzuki & Kevin Guo DCHD Inspector:

Lot No.	Test Hole No.	Test Hole Depth	Soil Type	Soaked	TEST RUNS					
					*	1	2	3	4	5
Gard. H.	PG-1	24"	Sandy Gravel	YES	Finish	1:21	1:26	1:30	1:35	1:40
					Start	1:18	1:22	1:26	1:31	1:36
					Time	3 min	4 min	4 min	4 min	4 min
Gard. H.	PG-2	30"	Sandy Gravel	YES	Finish	2:00	2:03	2:06	2:10	2:!4
					Start	1:58	2:01	2:03	2:07	2:11
					Time	2 min	2 min	3 min	3 min	3 min
Gard. H.	PG-3	30"	Sandy Gravel	YES	Finish	1:40	1:45	1:49	1:52	1:55
					Start	1:38	1:42	1:46	1:49	1:52
					Time	2 min	3 min	3 min	3 min	3 min
Gard. H.	PG-4	24"	Sandy Gravel	YES	Finish	2:26	2:31	2:37	2:44	2:51
					Start	2:21	2:26	2:31	2:38	2:45
					Time	5 min	5 min	6 min	6 min	6 min
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					

I, Richard A. Rennia, Jr., P.E., the undersigned, certify that these percolation tests were done by myself or or under my direction according to the standard procedure. The data and results presented are true and correct.

Dated: _____ Signature: _____

License No. (P.E.)(L.S.) __NYPE: 082459_____

HD-184

DUTCHESS COUNTY DEPARTMENT OF HEALTH

PERCOLATION TEST DATA

Name: Manor & Bakery (T)~~(V)(C)~~ Amenia Date: 10/6 & 12/13/2022*

TAX GRID #

132000	7	2	6	7	0	0	2	2	7	6	7	5

By: Wilson Suzuki & Kevin Guo DCHD Inspector:

Lot No.	Test Hole No.	Test Hole Depth	Soil Type	Soaked	TEST RUNS					
					*	1	2	3	4	5
Manor & Bakery	MB-1	24"	Sandy Gravel	YES	Finish	1:57	2:00	2:03		
					Start	1:55	1:57	2:00		
					Time	2 min	3 min	3 min		
Manor & Bakery	MB-2	24"	Sandy Gravel	YES	Finish	1:58	2:01	2:04		
					Start	1:56	1:58	2:01		
					Time	2 min	3 min	3 min		
Manor & Bakery	MB-3	30"	Sandy Gravel	YES	Finish	1:57	2:02	2:06		
					Start	1:54	1:58	2:02		
					Time	3 min	4 min	4 min		
Manor & Bakery	MB-4	24"	Sandy Gravel	YES	Finish	1:56	1:58	2:01		
					Start	1:55	1:56	1:59		
					Time	1 min	2 min	2 min		
Ph. 1 *	P-1	30"	Sandy Gravel	YES	Finish	4:13	4:17	4:22		
					Start	4:10	4:13	4:18		
					Time	3 min	4 min	4 min		
Ph. 1 *	P-2	30"	Sandy Gravel	YES	Finish	4:19	4:23	4:28		
					Start	4:15	4:19	4:24		
					Time	4 min	4 min	4 min		
Ph. 1 *	P-3	30"	Sandy Gravel	YES	Finish	4:22	4:25	4:28		
					Start	4:20	4:22	4:25		
					Time	2 min	3 min	3 min		

I, Richard A. Rennia, Jr., P.E., the undersigned, certify that these percolation tests were done by myself or or under my direction according to the standard procedure. The data and results presented are true and correct.

Dated: _____ Signature: _____

License No. (P.E.)(L.S.) __NYPE: 082459_____

HD-184

DUTCHESS COUNTY DEPARTMENT OF HEALTH

PERCOLATION TEST DATA

Name: Pool House (T)~~(V)(C)~~ Amenia Date: 9/21/2022

TAX GRID #

132000	7	2	6	7	0	0	2	2	7	6	7	5

By: Wilson Suzuki & Kevin Guo DCHD Inspector:

Lot No.	Test Hole No.	Test Hole Depth	Soil Type	Soaked	TEST RUNS					
					*	1	2	3	4	5
Pool H.	PP-1	24"	Sandy Gravel	YES	Finish	10:23	10:30	10:39	10:49	10:58
					Start	10:18	10:24	10:30	10:40	10:49
					Time	5 min	6 min	9 min	9 min	9 min
Pool H.	PP-2	24"	Sandy Gravel	YES	Finish	11:05	11:12	11:19	11:27	11:35
					Start	11:01	11:06	11:12	11:19	11:27
					Time	4 min	6 min	7 min	8 min	8 min
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					
					Finish					
					Start					
					Time					

I, Richard A. Rennia, Jr., P.E., the undersigned, certify that these percolation tests were done by myself or or under my direction according to the standard procedure. The data and results presented are true and correct.

Dated: _____ Signature: _____

License No. (P.E.)(L.S.) __NYPE: 082459_____

HD-184

DEEP TEST RESULTS

DUTCHESS COUNTY HEALTH DEPARTMENT

Name of property: Troutbeck Inn SDS (T)~~(V)(C)~~ Amenia Date: 10/21/2021

TAX GRID #

132000	7	2	6	7	0	0	2	2	7	6	7	5

Owner of property: Troutbeck Holding Engineer: Richard A. Rennia, Jr., P.E.

Person directing test: Thomas Harvey DCHD Rep: James A. Upright, P.E., P.G.

HOLE #	LOT #	TOTAL DEPTH	ROCK DEPTH	WATER DEPTH	MOTTLING DEPTH	SOIL DESCRIPTION
1		114"	N/A	N/A	N/A	0-24" Silt Loam
						24" - 114" Gravelly Sand Loam
2		114"	N/A	N/A	N/A	0-24" Silt Loam
						24" - 114" Gravelly Sand Loam
3		108"	N/A	N/A	N/A	0-24" Silt Loam
						24" - 108" Gravelly Sand Loam
4		108"	N/A	N/A	N/A	0-24" Silt Loam
						24" - 108" Gravelly Sand Loam
5		96"	N/A	N/A	N/A	0-18" Silty Loam
						18" - 96" Gravelly Sand Loam
6		96"	N/A	N/A	N/A	0-18" Silty Loam
						18" - 96" Gravelly Sand Loam
7		96"	N/A	N/A	N/A	0-18" Silty Loam
						18" - 96" Gravelly Sand Loam
8		108"	N/A	N/A	N/A	0-18" Silty Loam
						18" - 108" Gravelly Sand Loam
9		96"	N/A	N/A	N/A	0-18" Silty Loam
						18" - 96" Gravelly Sand Loam
10		96"	N/A	N/A	N/A	0-18" Silty Loam
						18" - 96" Gravelly Sand Loam

General remarks (terrain; weather; springs, streams, etc.) :

DEEP TEST RESULTS

DUTCHESS COUNTY HEALTH DEPARTMENT

Name of property: Troutbeck Inn SDS (T)~~(V)(C)~~ Amenia Date: 10/21/2021

TAX GRID #

132000	7	2	6	7	0	0	2	2	7	6	7	5

Owner of property: Troutbeck Holding Engineer: Richard A. Rennia, Jr., P.E.

Person directing test: Thomas Harvey DCHD Rep: James A. Upright, P.E., P.G.

HOLE #	LOT #	TOTAL DEPTH	ROCK DEPTH	WATER DEPTH	MOTTLING DEPTH	SOIL DESCRIPTION
11		90"	N/A	N/A	N/A	0-18" Silty Loam
						18" - 90" Gravelly Sand Loam
12		90"	N/A	N/A	N/A	0-18" Silty Loam
						18" - 90" Gravelly Sand Loam
13		96"	N/A	N/A	N/A	0-18" Silt Loam
						18" - 96" Gravelly Sand Loam
14		96"	N/A	N/A	N/A	0-18" Silt Loam
						18" - 96" Gravelly Sand Loam
15		96"	N/A	N/A	N/A	0-18" Silty Loam
						18" - 96" Gravelly Sand Loam
16		96"	N/A	N/A	N/A	0-18" Silty Loam
						18" - 96" Gravelly Sand Loam
17		90"	N/A	N/A	N/A	0-12" Silty Loam
						12" - 90" Gravelly Sand Loam
18		90"	N/A	N/A	N/A	0-18" Silty Loam
						18" - 90" Gravelly Sand Loam
P-1		132"	N/A	N/A	N/A	0-60" Gravel
						60" - 132" Sand

General remarks (terrain; weather; springs, streams, etc.) :

DEEP TEST RESULTS

DUTCHESS COUNTY HEALTH DEPARTMENT

Name of property: Troutbeck Inn SDS (T)~~(V)(C)~~ Amenia Date: 10/21/2021

TAX GRID #

132000	7	2	6	7	0	0	2	2	7	6	7	5

Owner of property: Troutbeck Holding Engineer: Richard A. Rennia, Jr., P.E.

Person directing test: Thomas Harvey DCHD Rep: James A. Upright, P.E., P.G.

HOLE #	LOT #	TOTAL DEPTH	ROCK DEPTH	WATER DEPTH	MOTTLING DEPTH	SOIL DESCRIPTION
C1		108"	N/A	N/A	N/A	0-36" Silt Loam
						36" - 108" Gravelly Sand Loam w/ Cobbles
C2		132"	N/A	N/A	N/A	0-36" Silt Loam
						36"- 132" Gravelly Sand Loam
C3-a		54"	54"	N/A	N/A	0-54" Rock
C3-b		114"	N/A	N/A	N/A	0-48" Silt Loam
						48"-114" Gravelly Sand Loam
C-4		126"	N/A	N/A	N/A	0 - 24" Silt Loam
						24"-126" Gravelly Sand Loam

General remarks (terrain; weather; springs, streams, etc.) :

DEEP TEST RESULTS

DUTCHESS COUNTY HEALTH DEPARTMENT

Name of property: Troutbeck Inn SDS (T)~~(V)~~~~(C)~~ Amenia Date:9/20/2022

TAX GRID #

132000	7	2	6	7	0	0	2	2	7	6	7	5

Owner of property: Troutbeck Holding Engineer: Richard A. Rennia, Jr., P.E.

Person directing test: Thomas Harvey DCHD Rep: James A. Upright, P.E., P.G.

HOLE #	LOT #	TOTAL DEPTH	ROCK DEPTH	WATER DEPTH	MOTTLING DEPTH	SOIL DESCRIPTION
CC-1		102"	N/A	N/A	N/A	0-3" Topsoil
						3"-102" Brown Sand Loam w/ Gravel and Cobbles
CC-2		96"	96"	N/A	N/A	0-4" Topsoil
						4"-96" Brown Sand Loam
CC-3		108"	108"	N/A	N/A	0-3" Topsoil
						3"-108" Brown Sand Loam

General remarks (terrain; weather; springs, streams, etc.) :

HD-185

DEEP TEST RESULTS

DUTCHESS COUNTY HEALTH DEPARTMENT

Name of property: Troutbeck Inn SDS (T)~~(V)~~~~(C)~~ Amenia Date:9/20/2022

TAX GRID #

132000	7	2	6	7	0	0	2	2	7	6	7	5

Owner of property: Troutbeck Holding Engineer: Richard A. Rennia, Jr., P.E.

Person directing test: Thomas Harvey DCHD Rep: James A. Upright, P.E., P.G.

HOLE #	LOT #	TOTAL DEPTH	ROCK DEPTH	WATER DEPTH	MOTTLING DEPTH	SOIL DESCRIPTION
DH-1		96"	N/A	N/A	N/A	0-12" Topsoil
						12"-60" Bony Gravel
						60"-96" Sand With Gravel
DH-2		108"	N/A	N/A	N/A	0-48" Sand Loam
						48"-108" Sand With Gravel

General remarks (terrain; weather; springs, streams, etc.) :

DEEP TEST RESULTS

DUTCHESS COUNTY HEALTH DEPARTMENT

Name of property: Troutbeck Inn SDS (T)~~(V)~~~~(C)~~ Amenia Date:9/20/2022

TAX GRID #

132000	7	2	6	7	0	0	2	2	7	6	7	5

Owner of property: Troutbeck Holding Engineer: Richard A. Rennia, Jr., P.E.

Person directing test: Thomas Harvey DCHD Rep: James A. Upright, P.E., P.G.

HOLE #	LOT #	TOTAL DEPTH	ROCK DEPTH	WATER DEPTH	MOTTLING DEPTH	SOIL DESCRIPTION
GC-1		96"	N/A	N/A	N/A	0-24" Sand Loam
						24"-96" Sand w/ Gravel & Cobbles
GC-2		96"	N/A	N/A	N/A	0-18" Sand Loam
						18"-96" Sand w/ Gravel & Cobbles
GC-3		96"	N/A	N/A	N/A	0-24" Sand Loam
						24"-96" Sand w/ Gravel & Cobbles
GC-4		114"	N/A	N/A	N/A	0-48" Sand Loam
						48"-114" Sand w/ Gravel & Cobbles

General remarks (terrain; weather; springs, streams, etc.) :

APPENDIX B

Adaptive Reuse Master Utility Plan

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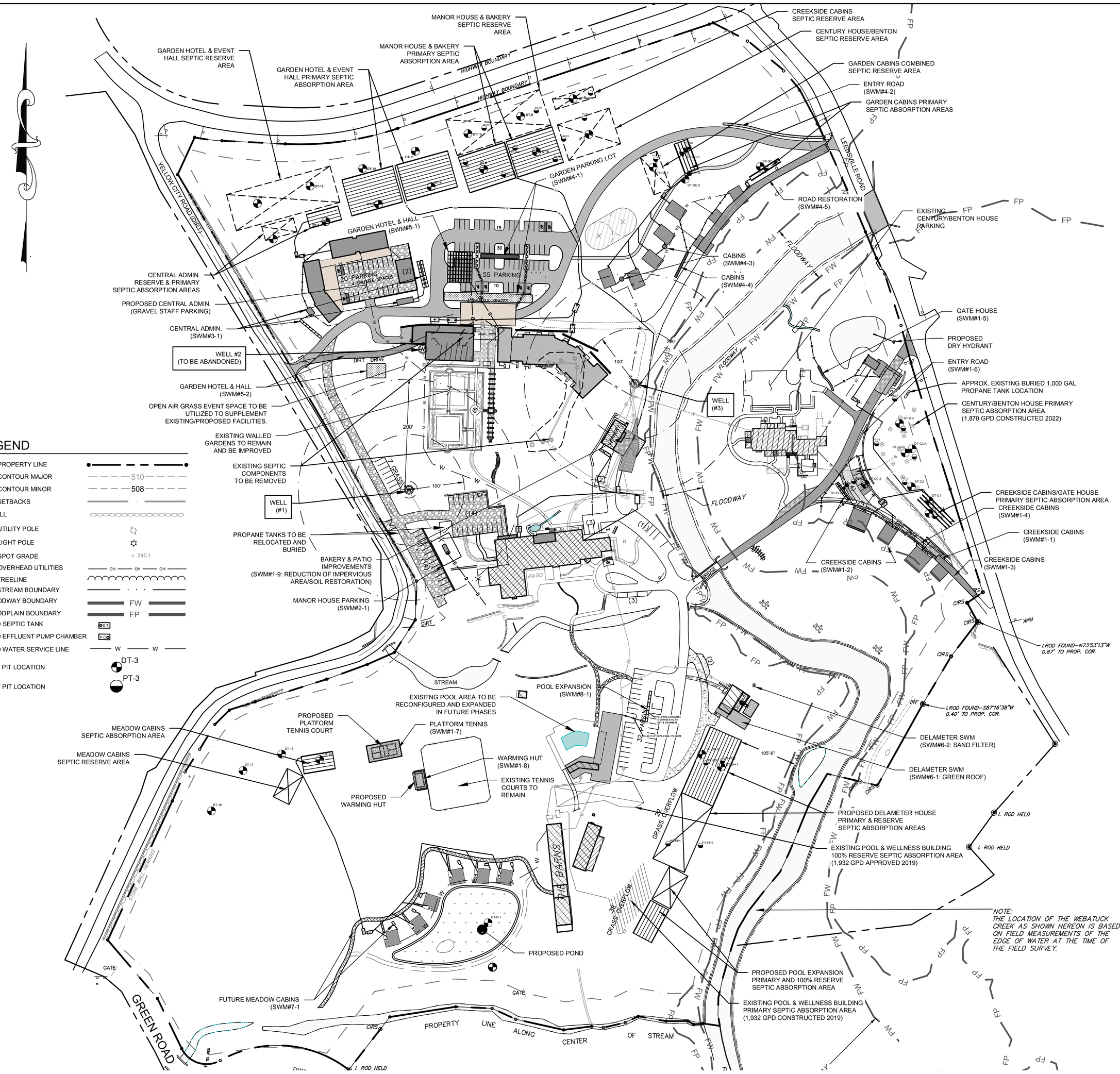

ADAPTIVE REUSE STORMWATER MANAGEMENT PRACTICE SUMMARY:

ADAPTIVE REUSE STORMWATER MANAGEMENT SUMMARY			
PHASE	PROJECT AREA	SWM #	STORMWATER MANAGEMENT INFRASTRUCTURE
1	CREEKSIDE EAST CABINS	SWM #1-1	DISCONNECTED ROOF LEADERS
1	CREEKSIDE EAST CABINS	SWM #1-2	PG-1 PEA GRAVEL DIAPHRAGM WITH LEVEL SPREADER AND SI-1 INFILTRATION CHAMBERS
1	CREEKSIDE EAST CABINS	SWM #1-3	GRASS FILTER STRIP
1	CREEKSIDE EAST CABINS	SWM #1-4	PP-1 POROUS PAVEMENT
1	GATEHOUSE	SWM #1-5	SF-1 SAND FILTER AND PEA GRAVEL DIAPHRAGM FOR IMP. ROOF AREA
1	ENTRY ROAD	SWM #1-6	IT-2 AND IT-3 INFILTRATION TRENCHES; SHARES INFIL CHAMBERS WITH CREEKSIDE CABINS
1	PLATFORM TENNIS & WARMING HUT	SWM #1-7	IB-1 INFILTRATION BASIN (PLATFORM TENNIS SMP)
1	PLATFORM TENNIS & WARMING HUT	SWM #1-8	IT-1 INFILTRATION TRENCH (WARMING HUT SMP)
1	CARETAKER HOUSE/BAKERY		NO NEED FOR SMP AS IMPERVIOUS IS REDUCED BY >25%
1	CARETAKER HOUSE/BAKERY	SWM #1-9	SOIL RESTORATION IN EXISTING COMPACTED GRAVEL PARKING AREA
2	MANOR HOUSE	SWM #2-1	SF-2 SAND FILTER FOR EXPANDED PARKING AREA AND ADDITION
3	STAFF AREA	SWM #3-1	SF-3 AND SF-4 SAND FILTERS FOR NEW BUILDINGS AND PARKING AREA WITH IC-2 AND IC-2A INFILTRATION CHAMBERS
4	GARDEN NORTH CABINS	SWM #4-1	SF-5 SAND FILTER FOR ENTRY ROAD AND NEW PARKING AREA
4	GARDEN NORTH CABINS	SWM #4-2	DS-1 DRY SWALE FOR ENTRY ROAD
4	GARDEN NORTH CABINS	SWM #4-3	DW-1 AND DW-2 DRYWELLS FOR NEW CABIN ROOFS
4	GARDEN NORTH CABINS	SWM #4-4	IT-4 INFILTRATION TRENCH FOR NEW CABIN ROOFS
4	GARDEN NORTH CABINS	SWM #4-5	SOIL RESTORATION IN EXISTING COMPACTED GRAVEL SERVICE ROAD
5A	GARDEN HOTEL	SWM #5-1	IC-1 INFILTRATION CHAMBERS FOR NEW HOTEL IMPERVIOUS
5A	GARDEN HOTEL	SWM #5-2	SOIL RESTORATION ON GRAVEL SERVICE ROAD
5B	GARDEN HALL	SWM #5-1	IC-1 INFILTRATION CHAMBERS FOR NEW EVENT SPACE IMPERVIOUS (SHARES WITH HOTEL)
6	DELAMETER HOUSE	SWM #6-1	GR-1 GREEN ROOF
6	DELAMETER HOUSE	SWM #6-2	SF-6 SAND FILTER FOR ACCESS DRIVE AND PARKING
7	POND EXPANSION CABINS	SWM #7-1	POROUS PAVEMENT AND IC-2 INFILTRATION CHAMBERS
8	POOL RENOVATION	SWM #8-1	IC-4 INFILTRATION CHAMBERS FOR NEW POOLHOUSE IMPERVIOUS

ADAPTIVE REUSE WATER/WASTEWATER SUMMARY:

Phase	ADAPTIVE RE-USE BUILDINGS & SPACES	Proposed SPDES Outfall #	# of Bedrooms	# of Staff Apts.	# of Persons or Seats	Estimated Flow (GPD)	Comments
2	**Manor House**	#001					{Old Outfall #001 to be relocated}
	Lodging (Bedroom Units)		17			1870	{110 gpd/rm.}
	Restaurant				92	2576	{35 gpd/seat}-20% includes 20-seats outside to be enclosed
1	**Bakery** (relocated to former Maintenance Garage)	#001					{Old Outfall #001 to be relocated}
	2 Bdrm Staff Apartment			1		220	{1 apt, 2beds @ 110 gpd ea.}
	Bakery / Restaurant				20	320	{20-seats @ 20gpd/seat}-20%
0	**Century Lodge & Annex (Benton)**	#002					{Old Outfall #002}
	Guest Rooms		17			1870	{110 gpd/rm.}
0	**Wellness Center Barns & Outdoor Pool**	#003					
	Resort Amenity Use					1932	existing system installed in 2019
1	**Creekside Cabins (4-units)**	#004					{2 - one bedroom cabins and 2 - two bedroom cabins}
	Lodging (Bedroom Units)		6		12	660	{110gpd/bdrm}
1	**Gate House**	#004					
	2 employees / 2 shifts				4	48	{1-employee @ 15gpd/person}-20%
3	**Central Administration Area**	#005					
	1 Bdrm Staff Apartments			5		550	{110gpd/apt.}
	Office Employees				8	128	{20gpd/employee}-20% (w/showers)
4	**Garden Cabins (8-units)**	#006 & #007					{7 - one bedroom cabins and 1 - two bedroom cabin}
	Lodging (Bedroom Units)		9		18	990	{110gpd/bdrm}
5A	**Garden Hotel**	#008					
	Lodging (Bedroom Units)		33		66	3630	{110gpd/bdrm.}
5B	**Garden Event Space**	#008					
	Event Space				224	1792	{10gpd/seat}
6	**Delamater House Renovations**	#009					
	Restaurant				86	2408	{35gpd/seat}-20% (incl. 32 outdoor / 54 indoor seats}
7	**Meadow Cabins (6-units)**	#010					{5 - one bedroom cabins and 1 - two bedroom cabin}
	Lodging (Bedroom Units)		7		14	770	{110gpd/bdrm}
8	**Pool Area Expansion**	#003					
	Indoor Pool Facility				60	480	{10gpd/person} -20%
	Indoor pool snack bar				60	300	{5gpd/person}
	Pool Staff				3	36	{1-employee @ 15gpd/person}-20%
	TOTAL FLOW		**89**	**6**		**20,580**	
			Total Bedrooms				

FIRE SAFETY NOTES:

1. ALL PROPOSED ROADWAYS AND ROAD ALTERATIONS WITHIN THE FIRE SAFETY DEVELOPMENT AREA WILL BE DESIGNED TO HAVE A WIDTH OF 16 FEET, WITH 2 FEET OF ADDITIONAL CLEARANCE ON EITHER SIDE, AND UNOBSTRUCTED VERTICAL HEIGHT OF 13.5 FEET. ALL ROADS WILL BE DESIGNED TO SUPPORT A LOAD WEIGHT OF 75,000 LBS.
2. PHASE 1 SHALL INCLUDE THE INSTALLATION OF A DRY HYDRANT, ALONG THE EXISTING TROUTBECK LANE ENTRANCE, WHICH WILL ALLOW THE FIRE DEPARTMENT TO PUMP FROM AN EXISTING POND IN THE EVENT OF AN EMERGENCY.
3. FUTURE DEVELOPMENT WILL INCLUDE WATER SOURCE ACCESS TO THE EXISTING/PROPOSED POOL FACILITIES, FOR USE BY THE FIRE DEPARTMENT IN THE EVENT OF AN EMERGENCY.
4. ALL PROPOSED STRUCTURE CONTAINING, MORE THAN ONE LODGING/RESIDENTIAL UNIT, OR OF SUFFICIENT SIZE (>1,000 SF) SHALL BE EQUIPPED WITH KNOX BOXES PER THE AMENIA FIRE COMPANIES RECOMMENDATION. (THE KNOX BOXES WILL INCLUDE ALL KEYS OR KEY CARDS REQUIRED TO PROVIDE ACCESS TO ALL RESIDENTIAL AND LODGING UNITS.)
5. ALL PROPOSED STRUCTURES THAT REQUIRE SPRINKLER SYSTEMS BY THE NYS BUILDING CODE WILL BE PROVIDED WITH CODE COMPLIANT FIRE SUPPRESSION SYSTEMS. THIS INCLUDES, BUT IS NOT LIMITED TO THE GARDEN HOTEL AND GARDEN HALL EVENT BUILDING.

MAP NOTES:

1. PROPERTY DATA AND EXISTING FEATURES BASED UPON ACTUAL FIELD SURVEY COMPLETED ON OR BEFORE APRIL 26, 2016 PREPARED BY CHAZEN ENGINEERING AND SURVEYING, PC.
2. TOPOGRAPHIC CONTOURS BASED UPON ACTUAL FIELD SURVEY COMPLETED ON OR BEFORE DECEMBER 8, 2004 PREPARED BY STEVEN ALEX, L.S. OF CHAZEN ENGINEERING AND SURVEYING, PC.

FLOOD ZONE NOTES:

1. PROPERTY SHOWN HEREON LIES WITHIN "SPECIAL FLOOD HAZARD AREA ZONE AE", WITHIN "OTHER AREAS, ZONE X" (UNSHADED), AND WITHIN "FLOODWAY AREAS IN ZONE AE" AS SHOWN ON FEMA, NFIP, FIRM PANEL 36027C0332E, WITH AN EFFECTIVE DATE OF MAY 2, 2012.
2. THE "ZONE AE, BASE FLOOD ELEVATIONS" DETERMINED TO AFFECT THIS PARCEL ARE IN THE RANGE OF 480' TO 487' (NAVD88).

GARDEN HOUSE REMOVAL NOTES:

1. THE ORIGINAL GARDEN HOUSE STRUCTURE SHALL BE COMPLETELY REMOVED AS PART PF PHASE 5A.
2. THE EXISTING WELL #2 WILL BE ABANDONED AS PART OF PHASE 5A.
3. THE EXISTING SEPTIC COMPONENTS THAT SERVE THE GARDEN HOUSE WILL BE REMOVED AS PART OF PHASE 5A.

WELL ABANDONMENT NOTES:

IF NECESSARY THE ABANDONMENT OF ANY DECOMMISSIONED WELL WILL BE ACCOMPLISHED AS FOLLOWS:

1. OBTAIN REQUIRED D.C.D.O.H. WATER WELL ABANDONMENT PERMIT.
2. FILL WELL WITH CONCRETE, CEMENT GROUT, SEALING CLAY OR NEAT CEMENT FROM THE BOTTOM UPWARD TO WITHIN 5 FEET OF THE GROUND SURFACE.
3. EXCAVATE AROUND WELL CASING 5' BELOW GRADE.
4. CUT OFF TOP OF WELL CASING 4" MIN. BELOW GRADE.
5. FILL REMAINING PORTION OF WELL WITH CONCRETE.
6. REPLACE SOIL OVER THE EXCAVATED AREA AND THE CONCRETE CAPPED WELL AFTER THE CONCRETE HAS BEEN ALLOWED TO HARDEN AND SET FOR (4) HOURS.
7. A NEW YORK STATE LICENSED ENGINEER SHALL CERTIFY THAT THE WELL HAS BEEN ABANDONED ACCORDING TO THE APPROVED PLANS.

DATE	REVISION
2/16/2022	REVISED FOR PLANNING BOARD SUBMISSION
8/29/2022	REVISED FOR PLANNING BOARD SUBMISSION
10/10/2022	REVISED FOR PLANNING BOARD SUBMISSION
12/28/2022	REVISED FOR FIRE DEPARTMENT SUBMISSION
2/3/2023	REVISED FOR PLANNING BOARD SUBMISSION
2/15/2023	REVISED FOR PLANNING BOARD SUBMISSION

ENGINEERING, DESIGN, & PLANS PREPARED BY:

RENNIA ENGINEERING DESIGN, PLLC

CIVIL • ENVIRONMENTAL • STRUCTURAL

6 Dover Village Plaza, Suite 5, P.O. Box 400, Dover Plains, NY 12522

Tel: (845) 877-0555 Fax: (845) 877-0556

TROUTBECK ADAPTIVE RE-USE

TOWN OF AMENIA — DUTCHESS COUNTY, NY

OVERALL CONCEPT UTILITY PLANS

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
12/1/2021	1" = 100'	RED	RED	RAR	16-019	5 of 6

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APPENDIX H

HYDROGEOLOGICAL RESOURCES

Troutbeck – Hydrogeological Assessment, prepared by WSP USA Inc., dated 2/15/2023

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February 15, 2023

Mr. Robert Boyles, Chairperson
Town of Amenia Planning Board
Amenia Town Hall
4988 Route 22
Amenia, NY 12501

Via Electronic Transmission

RE: Hydrogeologic Assessment
SEQRA Study
Troutbeck, Amenia, NY

Dear Mr. Boyles:

As requested, WSP USA (WSP) has completed the scope of work (SOW) to conduct a detailed hydrogeologic assessment for the proposed adoptive re-use buildout expansion plan of the Troutbeck Manor House facility (Troutbeck) (Figure 1) to be used as a support document for the SEQRA process and required approvals.

Water Demand

The following is a comparison of the existing and proposed water demands associated with the proposed buildout expansion of Troutbeck.

The present average water demand for the existing facility is estimated to be about 10,972 gpd (gallons per day) or 7.6 gpm (gallons per minute).

WATER SYSTEM EXISTING DAILY USAGE CALCULATION

Description	Total Demand (gpd)
Manor House	
Guest Rooms (17)	1,870
Ball Room Events	1,800
Restaurant	2,576
Century House (Benton)	
Guest Rooms	1,870
Other	
Delamater House (2-Bdrm)	220
Maintenance Garage w/ Staff Apartment	440
Wellness Center Barns & Outdoor Pool	1,932
Softener Backwash	264
Total Estimated Water Demand	**10,972**

WSP USA
6 Research Drive, Suite 260
Shelton, CT 06484

Phone: +1 (203) 929-8555
Fax: +1 (203) 926-9140
wsp.com

The anticipated water demand associated with the full buildout expansion of Troutbeck is estimated to be 20,580 gpd or about 14.3 gpm.

WATER SYSTEM FUTURE (PHASES 1-8) DAILY USAGE CALCULATION

Phase	ADAPTIVE RE-USE BUILDINGS & SPACES	# of Bdrms	# of Staff Apts.	# of Persons or Seats	Estimated Flow (gpd)
2	**Manor House**				
	Lodging (Bedroom Units)	17			1,870
	Restaurant			92	2,576
1	**Bakery (relocated to former Maintenance Garage)**				
	2 Bdrm Staff Apartment		1		220
	Baker / Restaurant			20	320
0	**Century Lodge & Annex (Benton)**				
	Guest Rooms	17			1,870
0	**Wellness Center Barns & Outdoor Pool**				
	Resort Amenity Use				1,932
1	**Creekside Cabins (4-units)**				
	Lodging (Bedroom Units)	6		12	660
1	**Gate House**				
	2 employees / 2 shifts			4	48
3	**Central Administration Area**				
	1 Bdrm Staff Apartments		5		550
	Office Employees			8	128
4	**Garden Cabins (8-units)**				
	Lodging (Bedroom Units)	9		18	990
5A	**Garden Hotel**				
	Lodging (Bedroom Units)	33		66	3,630
5B	**Garden Event Space**				
	Event Space			224	1,792
6	**Delamater House Renovations**				
	Restaurant			86	2,408
7	**Meadow Cabins (6-units)**				
	Lodging (Bedroom Units)	7		14	770
8	**Pool Area Expansion**				
	Indoor Pool Facility			60	480
	Indoor pool snack bar			60	300
	Pool Staff			3	36
	Total Estimated Water Demand				**20,580**

This is about a 87.6-percent increase in the water demand for the proposed project.

Water-Supply Source

The existing water-supply source is summarized in the "Engineering Report for Troutbeck Adaptive Re-Use Plan Water Treatment System Expansion (revised date February 3, 2023)", prepared by Rennia Engineering and Design, PLLC office and the summary is as follows. A map showing the location of the existing wells is presented in Appendix I.

The existing primary water source for the manor house system is designated as Well 1. Well 1 is an infiltration caisson well located approximately 180 feet from the northwest corner of the Manor House and at least 200' away from any existing or proposed sewage disposal system. According to the original well engineering report prepared by Ronald Friedman, P.E., the existing well was installed in August

1997. It is comprised of a 6' x 6' x 6' caisson well with its bottom approximately 13' below grade and the well is completed in highly permeable sand and gravel material. The bottom of the caisson well sits on a 3-inch layer of 1-1/2-inch stone which overlies the natural sand and gravel strata. The annular area around the caisson well was filled in with 1-1/2-inch stone to the top of the well, and extends between 6' to 10' from the caisson well. A 3' layer of clean ROB gravel was placed and compacted on top of the geotextile with an 8- to 12-inch layer of clay placed on top of the ROB gravel. The well was completed with a 3' riser that extends 2' out of the ground to allow access to the well. Presently, a 2 hp (horsepower), 35 gpm capacity well pump is installed in the caisson well and piped to connect to the supply line leading to the water treatment system. It should be noted, following completion in 1997, the well was pumped to waste for development purposes at 1,200 gpm. Shortly after, a pump test was conducted and reported a safe yield capacity of 300 gpm.

Existing Well 2 currently serves the Garden House which is independent from the other buildings and facilities located on the Troutbeck parcel. Well 2 has a reported pumping capacity of 5 gpm. This well will be removed and not replaced as part of the Troutbeck Adaptive Re-Use project. The well construction details for this well are unknown.

Existing Well 3 is used as the secondary water source for the Manor House system. Well 3 has a reported pumping capacity of 22 gpm. The well construction details for this well are unknown.

Both Well 1 and Well 3 are directly connected to the Manor House treatment system. The pumps for both wells are controlled by a duplex control panel that alternates between the wells for normal draw (lead lag operation). Both supply sources are treated to surface-water standards for disinfection and filtration.

All three wells have been routinely tested for NYS Part 5 contaminants. The water supply is reported to meet New York State Water Quality Standards with the exception of higher iron levels which is very common for groundwater quality in parts of Amenia. The iron is removed via a conventional water softener system.

The reported well pumping capacities are based on the previously completed and approved Engineering Report for Troutbeck Inn Water Treatment System, dated 8/12/2016, last revised 12/2/2016, prepared by Rennia Engineering Design, PLLC. The water-supply source and existing system was formally approved by Dutchess County Department of Health in December of 1997.

HYDROGEOLOGIC SETTING

The study parcel is presently developed with associated uses for overnight lodging, dining, specialty private functions and associated parking areas. Support amenities include a pool, tennis courts, wellness center and walking trails. A significant portion of the site is undeveloped. The existing conditions are shown on a site plan in Appendix II. The 43.5-acre study parcel is located south of NYS Route 343, between Yellow City Road and Leadville Road. Key features include the Webatuck Creek which bisects the site and flows north to south through the site. In addition, Dunham Creek bisects the mid-section of the site along with an unnamed tributary which parallels the southern property boundary and both flow west to east into Webatuck Creek. Wetland features exist along the Webatuck Creek, Dunham Creek and unnamed tributary and do not extend beyond the banks of the creek corridors. The study parcel is relatively flat with the highest elevation located where the property boundary abuts Route 343 (520 ft msl (feet above mean sea level)), with most of the property gently sloping from the east and the west towards Webatuck Creek. Groundwater typically mimics surface topography, therefore, surface water and groundwater on the study parcel likely flows from the western and eastern portions of the site towards Webatuck Creek with groundwater discharging into the onsite surface-water features and ultimately discharging at the southern property boundary.

SURFICIAL SOILS

The majority of the surficial soils underlying the study parcel are reported as Copake gravelly silt loam (CuA, CuB and CuC) (85.4 percent). The Copake soils are characterized as very deep, well-drained gravely loam soil over sand and gravel glacial outwash deposits. The Copake soils exhibit moderate permeability. The balance of the site is underlain by the Farmington-Galway Complex, hilly and very rocky (FcD); and Hollis-Chatfield outcrop complex, steep (HoE) and very steep (HoF). Soil tests were conducted in a number of areas throughout the Troutbeck site. In total, 33 deep test pits and 24 percolation tests were performed in the outer areas of the site. The soils logged onsite were reported to be gravelly sand loam which supports that these are Copake soils as mapped. The deep test pits were dug to depth ranging from 7.5 to 9.5 ft bg (feet below grade) with no water encountered. Two deep test pits encountered rock at 8 ft bg. The percolation tests demonstrated that the site has good percolation rates, which is expected for this soil type. The deep test pit information is presented in Appendix III.

REGIONAL AQUIFER

Groundwater in the Town is developed from two aquifer types: sand and gravel aquifers and bedrock aquifers. The sand and gravel aquifers are the most prolific in Dutchess County. Although not as prolific as the better sand and gravel aquifer units, the bedrock aquifers in the study region are utilized for development of domestic water supplies and numerous public community water supplies. The bedrock aquifers in the Town are generally a dependable and suitable groundwater supply source.

The Town of Amenia Comprehensive Plan Update (July 19, 2007) indicates much of Amenia is underlain by a prolific sand and gravel aquifer which supplies many homes with water. The Troutbeck parcel and surrounding study region are located within one of the county's "higher yielding bedrock and overburden aquifers" shown on Figure 2.

Sand and Gravel Aquifer

Glacial deposits vary in shape and size in the study region, however, a majority of the site and study region is underlain by glacial outwash deposits. Outwash deposits (og) formed from glacial meltback, as meltwater flowed from the glaciers and carried the gravel, sand, silt and clay held in the ice and deposited the material downstream. The aquifer material is not continuous vertically but occurs in layers interbedded with silty and clayey lenses. The fine-grained materials were deposited by sluggish streams capable of transporting only silt- and clay-size particles or during temporary glacial-lake environments resulting from ice damming. However, at times, the streams were regenerated and during these periods of high flow, coarse-grained materials were deposited by swifter meltwater streams. The best aquifers are glacial outwash materials deposited by swifter meltwater streams. Such outwash deposits are the "best sand and gravel aquifer" in Dutchess County, and are highly permeable and readily recharged.

Well 1 is completed in this sand and gravel aquifer and is reported to have a yield in excess of 300 gpm.

Bedrock Aquifer

Groundwater also occurs in the metamorphic bedrock units underlying the study region (Figure 3). The bedrock units may be high-yielding aquifers if there is sufficient secondary porosity and permeability, properties that resulted from post-depositional changes to the rock fabric. The bedrock aquifers occur throughout the Town, and some possess excellent water-bearing properties.

Groundwater occurs in bedrock units in secondary pores, joints, fractures, solution cavities, fault zones and other secondary openings. The yield of bedrock aquifers varies greatly, depending on the

secondary porosity and permeability of the bedrock units. The permeability of a bedrock unit depends on the degree of interconnection of fractures, joints and other secondary openings.

The site-specific bedrock geology map (Figure 3) shows most of the south-eastern portion of the site underlain by the Stockbridge Marble (OCst) which consists of white to gray massive layered marble (dolomitic). This bedrock unit is known to be high-yielding, particularly when wells are drilled in favorable geologic well sites. High yields are obtained from highly-fractured and jointed units with relatively good degree of interconnection. Wells drilled at favorable locations would likely yield 50 to 100 gpm.

The underlying bedrock unit on the north-western portion of the study parcel is mapped as the Walloomsac Formation (Owl) and consists of phyllite, schist and meta-graywacke bedrock units. The general appearance of this bedrock unit is light to dark gray minerals, with strong foliated crystalline rock that has a well-developed parallelism of the minerals present. In general, the Owl units exhibit very low permeability, and secondary permeability caused by the presence of interconnected fracture can be low to moderate. The unit is not as prolific or high yielding compared to the OCst bedrock unit (discussed above). Wells drilled at favorable geologic well sites would likely yield between 25 to possibly as high as 75 gpm.

AQUIFER OVERLAY DISTRICT

The Aquifer Overlay (AQO) District zoning code has been created to protect the health and welfare of the residents of the Town of Amenia by minimizing the potential for contamination and depletion of the local aquifer system. This aquifer system provides drinking water to public water systems and private wells and also provides groundwater and surface water that is essential to the maintenance of healthy aquatic and terrestrial ecosystems. The Town has determined that a limiting factor on the carrying capacity of the land is its capability to provide water in sufficient quality and quantity so that water use by some users does not adversely affect other users. Another limiting factor on the carrying capacity of the land is its ability to absorb wastewater without adversely affecting the quality or quantity of groundwater and surface water necessary for water supplies and other needs of the natural and human environment. The purpose of the AQO regulations is to protect the Town's groundwater aquifer system, to provide the most protective standards to those areas of the aquifer at greatest risk of contamination, and to manage development so that groundwater supplies are not depleted or degraded.

No special permit shall be granted unless the applicant can show that the proposed action will not degrade the quality and quantity of groundwater in a manner that poses potential danger to public health or safety. Sections F and G of the Aquifer Overlay District zoning code prescribes the following methodology to determine if the proposed action will or will not degrade the quality and quantity of groundwater as follows:

F. Determination of a parcel's natural recharge. The natural recharge rate for a parcel shall be determined by identifying the soil types on the property, classifying them by hydrologic soil groups (A through D, A/D and C/D), and applying a recharge rate of 20.2 inches/year for A and A/D soils, 14.7 inches/year for B soils, 7.6 inches/ year for C and C/D soils, and 4.2 inches/ year for D soils, and multiplying the recharge rate(s) by the number of acres in the parcel for each soil group.

G. Consumption of water. Water consumption is the net loss of liquid phase water through site activities, plus the water needed to dilute wastewater and other discharges to a concentration equal to 50% of the New York State Title 6, Part 703 groundwater standard. The following equation establishes the method to calculate water consumption:

Use	Gallons per Day	Multiplied by Dilution Factor	Consumption per Day
Nonresidential uses Daily use with subsurface water discharge	_____	x 6	= _____

This analysis has been applied to the proposed project and is provided in Appendix IV. The analysis shows the subtraction of the annual consumption from the natural recharge rate to the site results in a net recharge surplus of about 1.3 million gallons/year which supports the proposed project will not adversely affect the quality or quantity of groundwater and surface water in the study region.

GROUNDWATER AVAILABILITY

Groundwater in both sand and gravel aquifers and bedrock aquifers is a renewable resource that is continuously replenished by precipitation, but the volume of groundwater in storage and the available recharge varies greatly between aquifer types in the Town of Amenia. A water-budget analysis compares long-term withdrawal of groundwater to recharge estimates for a study property and region.

Recharge is generally related to precipitation, but the amount of rainfall which becomes groundwater recharge is difficult to measure directly. In Dutchess County, the average precipitation is about 40 to 45 inches per year. About half of this amount is lost to evaporation and transpiration process; the remainder is available to become surface and groundwater runoff. Groundwater recharge results from the portion of total rainfall and snowmelt that infiltration the soil and overburden materials. The sand and gravel aquifers of Dutchess County are recharged from precipitation which falls directly on the surface of the aquifer, from groundwater flow from surrounding hills and mountains and, most importantly, from significant streams of overlying surface-water bodies. A portion of the total runoff that infiltrates into the soil and overburden materials (including sand and gravel aquifers) eventually recharges the bedrock fracture system and is available for capture by bedrock wells.

When wells completed in the sand, gravel and bedrock aquifers are pumped, the hydraulic head is lowered in the aquifer unit, the downward flow gradient is increased, and the rate of recharge may be increased. For this reason, a stream which bisects a thick deposit of statured, permeable sand and gravel or a waterbody on top of a sand and gravel deposit may function as a reservoir which can increase the potential recharge to the sand and gravel aquifer. Similarly, a thick section of saturated, permeable material overlying a bedrock formation acts as a reservoir which can increase the potential to recharge the bedrock aquifer, enhancing the prospect of relatively high yields.

There are no precipitation data available specifically for the Town of Amenia. Records for nearby Glenham, New York indicate that the average annual precipitation there is 43 inches. Data show that precipitation during a one-year-in-30 drought (3.3-percent probability of reoccurrence) decreases to about 28 inches or about 65 percent of the average annual precipitation.

The amount of rainfall that becomes groundwater recharge is difficult to measure directly. An estimate developed by the USGS for recharge to similar sand and gravel deposits in the nearby Fishkill-Beacon area (Snavely, 1980) is an average recharge rate of 1,000,000 gpd per square mile. Because each of the unconsolidated material deposits (includes sand and gravel and multi-textured sand and gravel deposits) within the study area include surface-water bodies which would additionally recharge the aquifers under pumping conditions, a recharge rate of 1,000,000 gpd per square mile was used in the water budget analyses of the Troutbeck study parcel.

The average recharge to the sand and gravel aquifer within the property boundaries (43.5 acres) is estimated to be about 67,969 gpd and reduces to about 44,179 gpd under drought conditions. These recharge estimate amounts under both normal and drought conditions are significantly greater than the estimated water demands of 20,580 gpd for the overall buildout of the proposed project.

It should be noted that not all groundwater withdrawal from public and private water systems is consumptive as is the case for this study. Some of the water used by households or businesses is returned to the groundwater system by septic-system leachfields and effluent discharge from sewage treatment plants. The consumptive water use for homes or commercial-type developments utilizing onsite wells and underground septic systems is low and not typically considered in water-budget analyses. Approximately 85 percent of water withdrawn from the aquifer from an onsite well is returned to the

groundwater system by onsite septic-system leachfields. The remaining consumptive water use is primarily associated with watering lawns and gardens, washing cars and outdoor recreations, etc. These consumptive uses are highest in the warm-weather months and decline to near zero in the winter. Assuming 85 percent of the water withdrawn from the onsite wells for Troutbeck will be returned to the groundwater system by the onsite septic systems, the consumptive water use is estimated to be 3,087 gpd.

Direct recharge estimates to a study property are the most conservative approach to estimate available recharge to aquifers. Recharge to watershed areas to a study property, well or well field are likely more representative of available recharge.

The water budget analysis supports that the available groundwater recharge to the sand and gravel aquifer is more than sufficient to supply the proposed project water demands under both normal and drought precipitation conditions and should not impact neighboring users in the area.

STORMWATER POLLUTION PREVENTION PLAN

WSP has reviewed the Stormwater Pollution Prevention Plan (SWPPP), Troutbeck Adaptive Plan (February 3, 2023) prepared by Rennia Engineering Design, PLLC. As discussed, the implementation and construction related to the SWPPP is expected to take place over a period of about seven years, with eight separate phases proposed in order to make the implementation more manageable. The phased construction project will vary in classification as defined in the New York Stormwater Design Manual (NYS SWDW) and each phase will be considered either as a new development or redevelopment or a combination of the two.

A total of approximately 3.51 acres of new impervious surfaces are proposed to the existing 4.59 acres, which total 8.1 acres and the management of these areas are discussed in detail in the SWPPP.

The proposed stormwater management practices (SMPs) for precipitation runoff from the impervious surfaces will be diverted through various stormwater collection systems to onsite pretreatment systems including infiltration trenches and chambers, grass filtration strips, sand filters, and infiltration basins (Appendix V). The table below is a full list of the phased SMPs proposed for the project.

PROPOSED STORMWATER MANAGEMENT PRACTICES

ADAPTIVE REUSE STORMWATER MANAGEMENT SUMMARY			
PHASE	**PROJECT AREA**	**SWM #**	**STORMWATER MANAGEMENT INFRASTRUCTURE**
1	CREEKSIDE EAST CABINS	SWM #1-1	DISCONNECTED ROOF LEADERS
1	CREEKSIDE EAST CABINS	SWM #1-2	PG-1 PEA GRAVEL DIAPHRAGM WITH LEVEL SPREADER AND SI-1 INFILTRATION CHAMBERS
1	CREEKSIDE EAST CABINS	SWM #1-3	GRASS FILTER STRIP
1	CREEKSIDE EAST CABINS	SWM #1-4	PP-1 POROUS PAVEMENT
1	GATEHOUSE	SWM #1-5	SF-1 SAND FILTER AND PEA GRAVEL DIAPHRAGM FOR IMP ROOF AREA
1	ENTRY ROAD	SWM #1-6	IT-2 ND IT-3 INFILTRATION TRENCHES; SHARES INFIL. CHAMBERS WITH CREEKSIDE CABINS
1	PLATFORM TENNIS & WARMING HUT	SWM #1-7	IB-1 INFILTRATION BASIN (PLATFORM TENNIS SMP)
1	PLATFORM TENNIS & WARMING HUT	SWM #1-8	IT-1 INFILTRATION TRENCH (WARMING HUT SMP)
1	CARETAKER HOUSE/BAKERY		NO NEED FOR SMP AS IMPERVIOUS IS REDUCED BY >25%
1	CARETAKER HOUSE/BAKERY	SWM #1-9	SOIL RESTORATION IN EXISTING COMPACTED GRAVEL PARKING AREA

ADAPTIVE REUSE STORMWATER MANAGEMENT SUMMARY			
PHASE	**PROJECT AREA**	**SWM #**	**STORMWATER MANAGEMENT INFRASTRUCTURE**
2	MANOR HOUSE	SWM #2-1	SF-2 SAND FILTER FOR EXPANDED PARKING AREA AND ADDITION
3	STAFF AREA	SWM #3-1	SF-3 AND SF-4 SAND FILTERS FOR NEW BUILDINGS AND PARKING AREA WITH IC-2 AND IC-2A INFILTRATION CHAMBERS
4	GARDEN NORTH CABINS	SWM #4-1	SF-5 SAND FILTER FOR ENTRY ROAD AND NEW PARKING AREA
4	GARDEN NORTH CABINS	SWM #4-2	DS-1 DRY SWALE FOR ENTRY ROAD
4	GARDEN NORTH CABINS	SWM #4-3	DW-1 AND DW-2 CAISSON WELLS FOR NEW CABIN ROOFS
4	GARDEN NORTH CABINS	SWM #4-4	IT-4 INFILTRATION TRENCH FOR NEW CABIN ROOFS
4	GARDEN NORTH CABINS	SWM #4-5	SOIL RESTORATION IN EXISTING COMPACTED GRAVEL SERVICE ROAD
5A	GARDEN HOTEL	SWM #5-1	IC-1 INFILTRATION CHAMBERS FOR NEW HOTEL IMPERVIOUS
5A	GARDEN HOTEL	SWM #5-2	SOIL RESTORATION ON GRAVEL SERVICE ROAD
5B	GARDEN HALL	SWM #5-1	IC-1 INFILTRATION CHAMBERS FOR NEW EVENT SPACE IMPERVIOUS (SHARES WITH HOTEL)
6	DELAMETER HOUSE	SWM #6-1	GR-1 GREEN ROOF
6	DELAMETER HOUSE	SWM #6-2	SF-6 SAND FILTER FOR ACCESS DRIVE AND PARKING
7	MEADOW CABINS	SWM #7-1	POROUS PAVEMENT AND IC-2 INFILTRATION CHAMBERS
8	POOL RENOVATION	SWM #8-1	IC-4 INFILTRATION CHAMBERS FOR NEW POOL HOUSE IMPERVIOUS

The proposed stormwater collection system will collect 100 percent of the runoff from the new impervious surface, including roof structures. The water collection will infiltrate through the underlying soil into the onsite groundwater system in the areas it is collected. This achieves preserving the natural groundwater recharge and flow onsite.

Potential Water-Quality Impacts

Within the proposed development, the addition of roads, parking lots and automobile traffic will contribute some hydrocarbons, metallic ions and road salts to the hydraulic system. The majority of this potential impact has been alleviated by good engineering design of catch basins, drainage controls and runoff/infiltration structures. The water-quality treatment plan for this proposed project includes significant "control" devices which provide water-quality treatment. Particular attention in the design of the SWPPP addresses contamination from sediments and particulate matter contained in runoff from impervious areas. These features are outlined in the table above. In addition, groundwater was not encountered in any of the 33 deep test pits (Appendix III); which indicates groundwater elevation in these areas is greater than 7.5 feet. This affords significantly more than the required 3-foot separation distance above the groundwater table for infiltration; and chemical, biological, sorption and physical processes of pollutant removal. The proposed stormwater treatment plan is designed in accordance the New York State Department of Environmental Conservation (NYSDEC) design standards.

The stormwater treatment plan will remove all related pollutants to acceptable levels and have minimal impact on regional surface-water and groundwater quality.

CONCLUSIONS

- The present average water demand for the existing buildout is estimated to be about 10,972 gpd (gallons per day) or 7.6 gpm (gallons per minute). The anticipated water demand associated with the full buildout expansion of Troutbeck is estimated to be 20,580 gpd or about 14.3 gpm. This is about an 87.6-percent increase in the water demand for the proposed project.
- The analysis required by the AQO Zoning Code has been applied to the proposed project and is provided in Appendix IV. The analysis shows the subtraction of the annual consumption from the natural recharge rate to the site results in a net recharge surplus of about 1.3 million gallons/year which supports the proposed project will not adversely affect the quality or quantity of groundwater and surface water in the study region.
- The average recharge to the sand and gravel aquifer within the property boundaries (43.5 acres) is estimated to be about 67,969 gpd and reduces to about 44,179 gpd under drought conditions. These recharge estimate amounts under both normal and drought conditions are significantly greater than the estimated water demands of 20,580 gpd for the overall buildout of the proposed project.

  It should be noted that not all groundwater withdrawal from public and private water systems is consumptive as is the case for this study. Approximately 85 percent of water withdrawn from the aquifer from an onsite well is returned to the groundwater system by onsite septic-system leachfields. Assuming 85 percent of the water withdraws from the onsite wells for Troutbeck will be returned to the groundwater system by the onsite septic systems, the consumptive water use is estimated to be 3,087 gpd.

  Direct recharge estimates to a study property are the most conservative approach to estimate available recharge to aquifers. Recharge to watershed areas to a study property, well or well field are likely more representative of available recharge.

  The water budget analysis supports that the available groundwater recharge to the sand and gravel aquifer is more than sufficient to supply the proposed projects water demand under both normal and drought precipitation conditions and should not impact neighboring users in the area.
- The proposed stormwater collection system will collect 100 percent of the runoff from the impervious surface, including roof structures. The water collection will infiltrate through the underlying soil into the onsite groundwater system in the areas it is collected. This achieves preserving the natural groundwater recharge and flow onsite.
- Within the proposed development, the addition of roads, parking lots and automobile traffic will contribute some contaminants to the hydraulic system. The majority of this potential impact has been alleviated by good engineering design of catch basins, drainage controls and runoff/infiltration structures. The water-quality treatment plan for this proposed project includes significant “control” devices which provide water-quality treatment. Particular attention in the design of the SWPPP addresses contamination from sediments and particulate matter contained in runoff from impervious areas. In addition, groundwater was not encountered in any of the 33 deep test pits (Appendix III); which indicates groundwater elevation in these areas is greater than 7.5 feet. This affords significantly more than the required 3-foot separation distance above the groundwater table for infiltration; and chemical, biological, sorption and physical processes of pollutant removal. The proposed stormwater treatment plan is designed in accordance the New York State Department of Environmental Conservation (NYSDEC) design standards.

The proposed build-out expansion of Troutbeck will have no discernible impact on the regional aquifer. In all other respects, it is my professional opinion that the proposed project will have no significant direct or indirect effect (either short-term or long-term) on the regional aquifer or neighboring wells.

Please feel free to contact me directly at (475) 882-1704 with any questions or comments you may have.

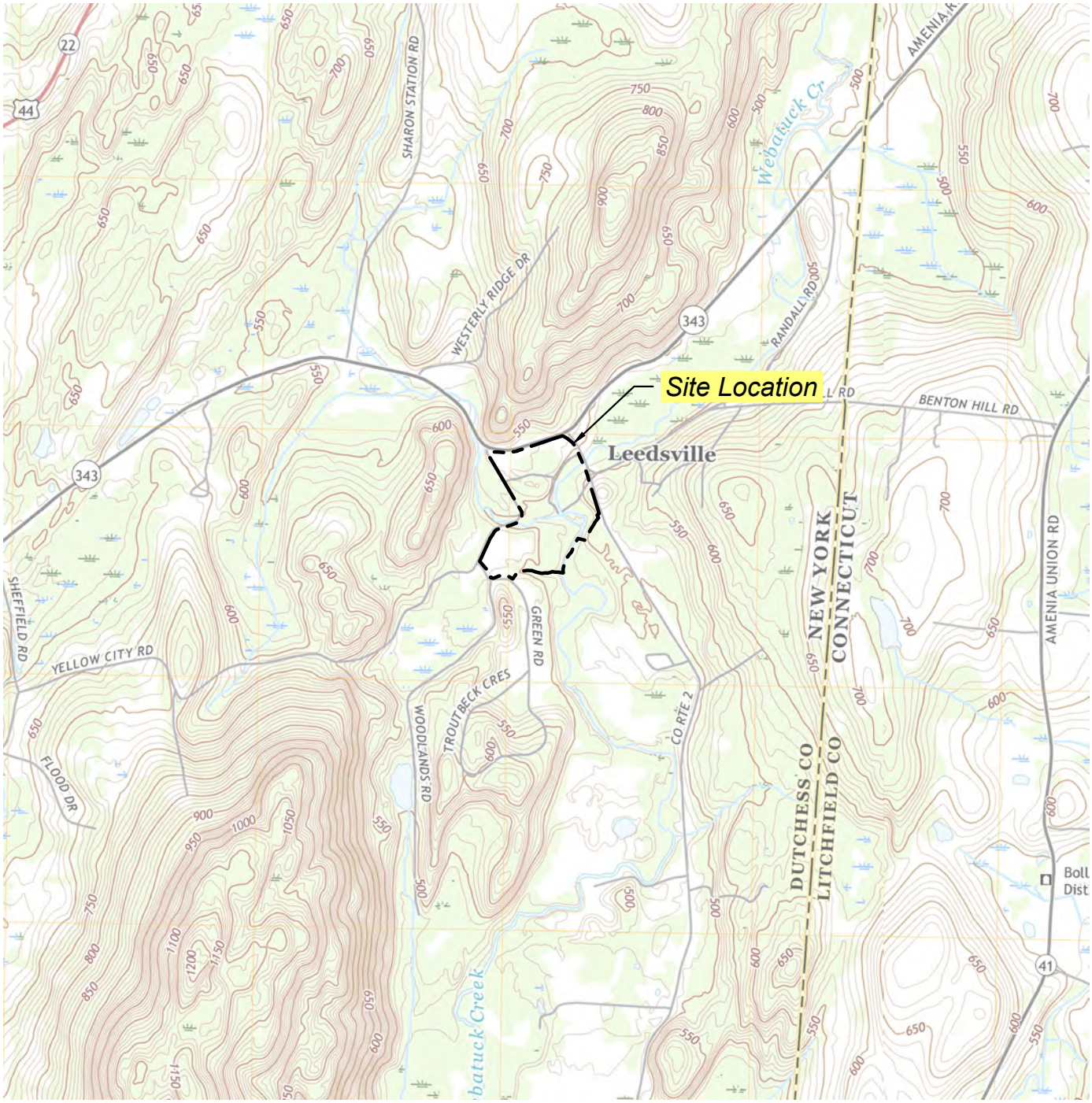
Kind regards,

WSP USA

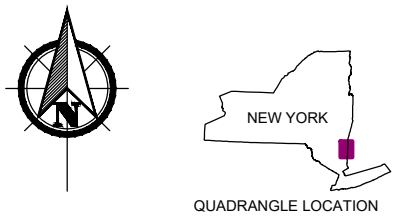
Thomas P. Cusack, LEP, PG(NY)
Vice President

TPC:cmm
Enclosures
H:\Troutbeck Manor House\Hydrogeologic Assessment.docx

FIGURES



SOURCE: USGS TOPOGRAPHIC QUADRANGLES AMENIA (2019) AND ELLSWORTH (2021), NEW YORK.



QUADRANGLE LOCATION

LEGEND

PROPERTY BOUNDARY

0 2000

SCALE IN FEET

WSP USA, Inc. and related company
Hydrogeologic, Architecture, Land Surveying, Landscape Architecture, P.C. (WSP)
6 Research Drive
Suite 260
Shelton, Connecticut 06484
(203) 929-8555

Troutbeck
515 Leedsville Road
Town of Amenia, New York

SITE LOCATION MAP

FIGURE 1

Drawn By: RAC
Checked: TPC
Approved: TPC
DWG Date: 01/27/23
A

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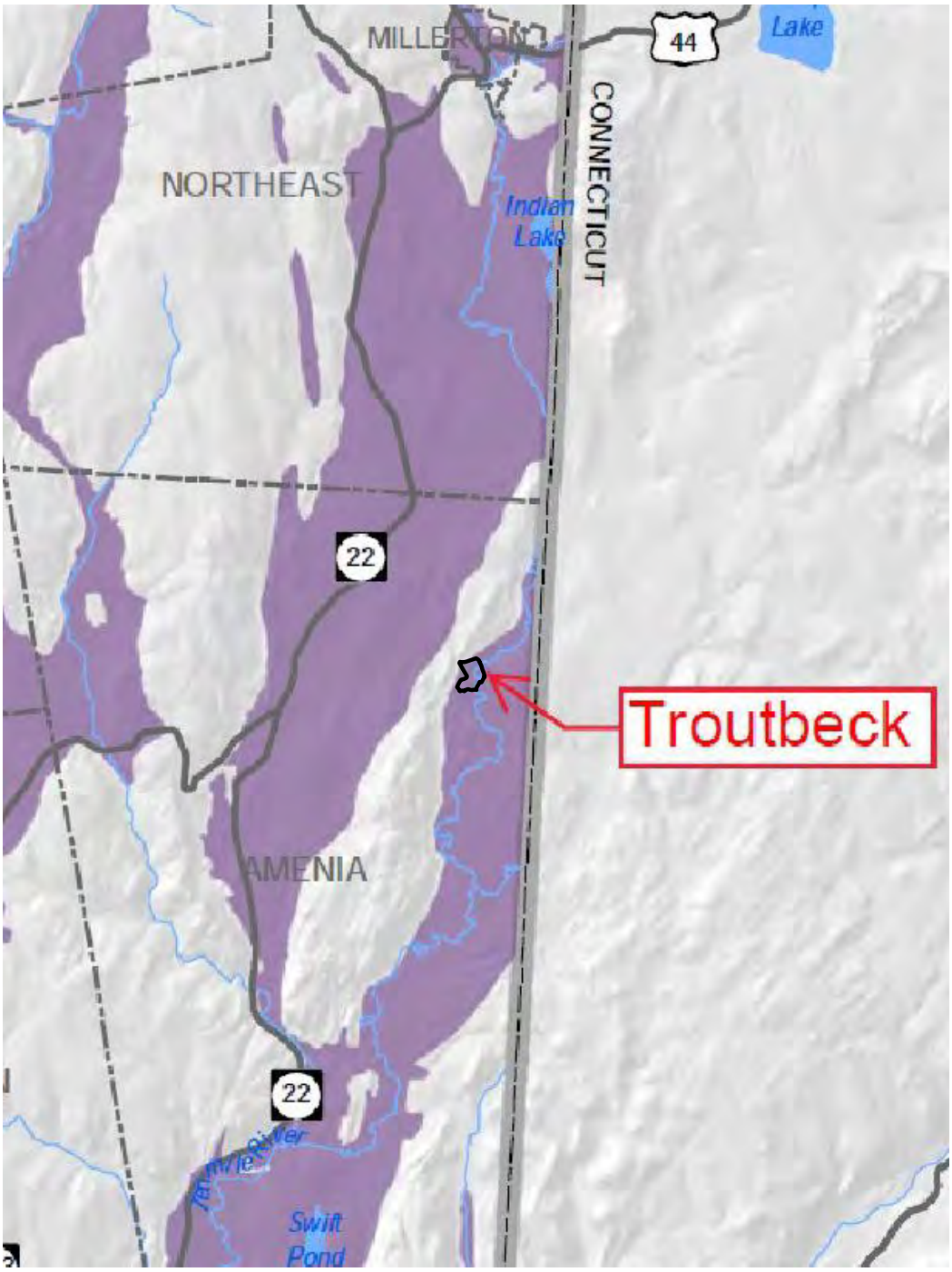


LEGEND

PROPERTY BOUNDARY

AQUIFER

0 10,000

SCALE IN FEET

WSP USA, Inc. and related company
Hydrogeologic, Architecture, Land Surveying, Landscape Architecture, P.C. (WSP)
6 Research Drive
Suite 260
Shelton, Connecticut 06484
(203) 929-8555

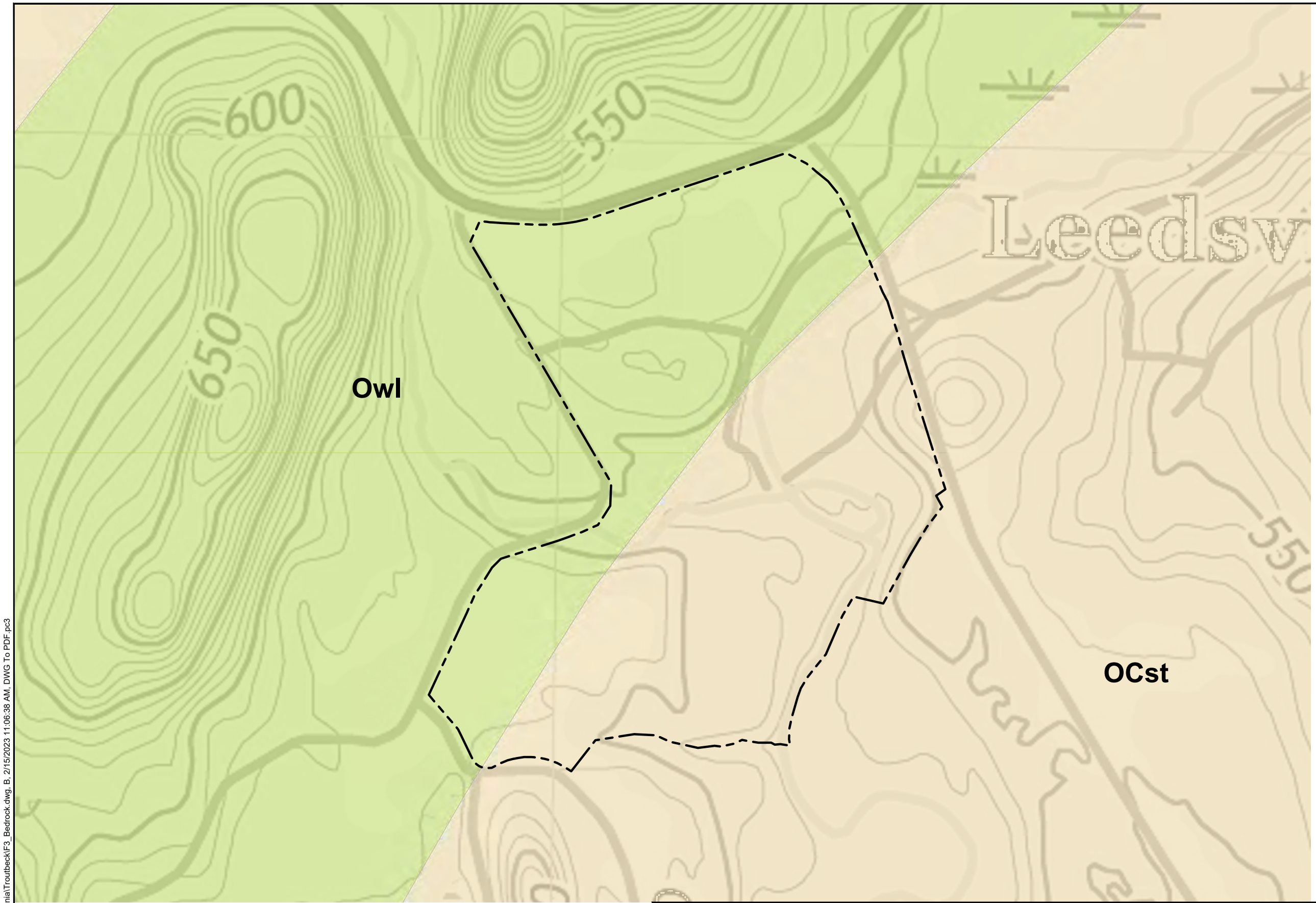
Troutbeck
515 Leedsville Road
Town of Amenia, New York

AQUIFER MAP

FIGURE 2

A | Drawn By: RAC | Checked: TPC | Approved: TPC | DWG Date: 02/15/23

O:\DWG\Town of Amenia\Troutbeck\F2_Aquifers.dwg, B, 2/15/2023 10:28:33 AM, DWG To PDF.pc3



QUADRANGLE LOCATION

LEGEND

PROPERTY BOUNDARY

NYS FAULT

OCst STOCKBRIDGE MARBLE

Owl WALLOOMSAC FORMATION

B

SOURCE:
USGS TOPOGRAPHIC QUADRANGLES AMENIA (2019) AND ELLSWORTH (2021), NEW YORK.

0 300
SCALE IN FEET

WSP USA, Inc. and related company
Hydrogeologic, Architecture, Land Surveying, Landscape Architecture, P.C. (WSP)
6 Research Drive
Suite 260
Shelton, Connecticut 06484
(203) 929-8555

Drawn By:	RAC
Checked:	TPC
Approved:	TPC
DWG Date:	01/27/23

Troutbeck
515 Leedsville Road
Town of Amenia, New York

BEDROCK GEOLOGY

FIGURE 3

APPENDIX I

LEGEND

- EXISTING PROPERTY LINE
- EXISTING CONTOUR MAJOR — 510
- EXISTING CONTOUR MINOR — 508
- EXISTING TREELINE
- BUILDING SETBACKS
- STONE WALL
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING STREAM BOUNDARY
- FEMA FLOODWAY BOUNDARY — FW
- FEMA FLOODPLAIN BOUNDARY — FP
- DEEP TEST PIT LOCATION — DT-3

ZONING DISTRICT: "RR" RURAL RESIDENTIAL
LOT SIZE: 43.5 ACRES
TAX GRID No. : 132000-7267-00-227675
PROPERTY ADDRESS: 515 LEEDSVILLE ROAD AMENIA, NY 12501
PROPERTY OWNER: TROUTBECK HOLDINGS, LP. 515 LEEDSVILLE ROAD AMENIA, NY 12501
APPLICANT: TROUTBECK HOLDINGS, LP. 515 LEEDSVILLE ROAD AMENIA, NY 12501

0 100' 200'
1" = 100'
GRAPHIC SCALE

MAP NOTES:
1. PROPERTY DATA AND EXISTING FEATURES BASED UPON ACTUAL FIELD SURVEY COMPLETED ON OR BEFORE APRIL 26, 2016 PREPARED BY CHAZEN ENGINEERING AND SURVEYING, PC.
2. TOPOGRAPHIC CONTOURS BASED UPON ACTUAL FIELD SURVEY COMPLETED ON OR BEFORE DECEMBER 8, 2004 PREPARED BY STEVEN ALEX, L.S. OF CHAZEN ENGINEERING AND SURVEYING, PC.

FLOOD ZONE NOTES:
1. PROPERTY SHOWN HEREON LIES WITHIN "SPECIAL FLOOD HAZARD AREA ZONE AE", WITHIN "OTHER AREAS, ZONE X" (UNSHADED), AND WITHIN "FLOODWAY AREAS IN ZONE AE" AS SHOWN ON FEMA, NFIP, FIRM PANEL 36027C0332E. WITH AN EFFECTIVE DATE OF MAY 2, 2012.
2. THE "ZONE AE, BASE FLOOD ELEVATIONS" DETERMINED TO AFFECT THIS PARCEL ARE IN THE RANGE OF 480' TO 487' (NAVD88).

DATE	REVISION

ENGINEERING, DESIGN, & PLANS PREPARED BY:

RENNIA ENGINEERING DESIGN, PLLC

CIVIL ▪ ENVIRONMENTAL ▪ STRUCTURAL

6 Dover Village Plaza, Suite 5, P.O. Box 400, Dover Plains, NY 12522
Tel: (845) 877-0555 Fax: (845) 877-0556

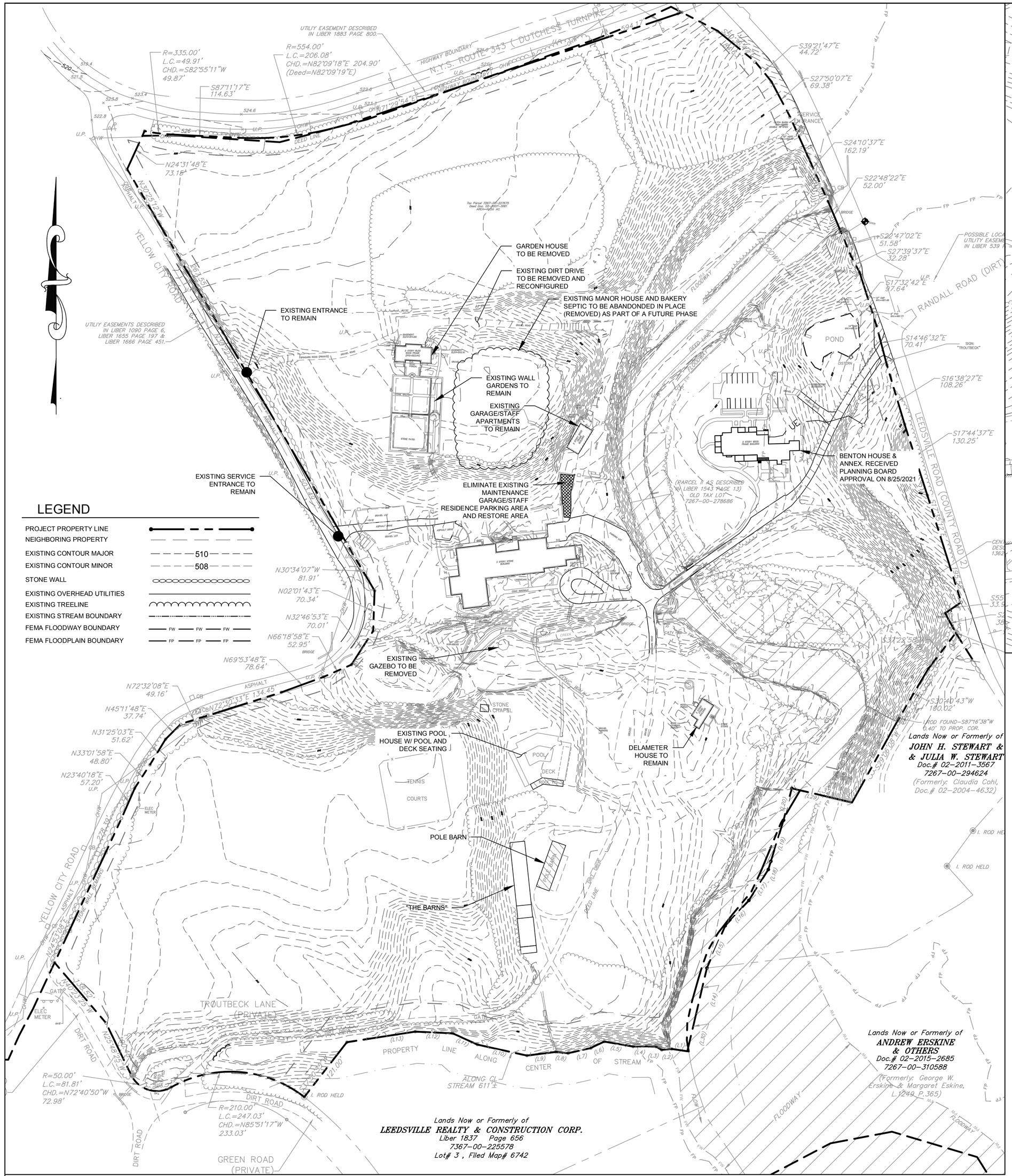
TROUTBECK

TOWN OF AMENIA — DUTCHESS COUNTY, NY

WELL LOCATIONS MAP

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
2/15/2023	1" = 100'	RED	RED	RAR	16-019	1 of 1

APPENDIX II



PHASE 1 EXISTING CONDITIONS PLAN

SCALE: 1" = 50'

EXISTING PARKING SPACES

PARKING AREA LOCATION	COVER TYPE	# OF PARKING SPACES
AREA 1 BENTON HOUSE	GRAVEL	18
AREA 2 POOL FACILITIES	GRAVEL	31
AREA 3 GRASS OVERFLOW	GRASS	60
AREA 4 MANOR HOUSE	ASPHALT	14
AREA 5 MAINTENANCE GARAGE/STAFF RESIDENCE	GRAVEL	15
AREA 6 GARDEN HOUSE	GRAVEL	10
AREA 7 MANOR HOUSE - SERVICE YARD	GRAVEL/ASPHALT	17
TOTAL		165 SPACES

ZONING DISTRICT: "RR" RURAL RESIDENTIAL
LOT SIZE: 43.5 ACRES
TAX GRID No. : 132000-7267-00-227675
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PROPERTY OWNER: TROUTBECK HOLDINGS, LP. 515 LEEDSVILLE ROAD AMENIA, NY 12501
APPLICANT: TROUTBECK HOLDINGS, LP. 515 LEEDSVILLE ROAD AMENIA, NY 12501

TROUTBECK - ADAPTIVE REUSE PLAN

EXISTING STRUCTURE INVENTORY

BUILDING #	BUILDING	EXISTING BUILDING USE	FLOORS	FOOTPRINT (SF)	TOTAL BUILDING SQ.FT.	LODGING UNITS / STAFF APARTMENTS
E1	GARDEN HOUSE*	STAFF APARTMENTS/ GUEST LODGING	2-STORY	1,931	3,862	4 LODGING UNITS 2 STAFF APARTMENTS
E2	CARETAKER HOUSE / MAINTENANCE GARAGE	STAFF APARTMENT / MAINTENANCE	2-STORY	1,172	1,800	1 STAFF APARTMENT
E3	BENTON HOUSE (FORMERLY CENTURY LODGE & ANNEX)	LODGING	2-STORY	5,860	9,783	17 LODGING UNITS
E4	MANOR HOUSE	LODGING/EVENT SPACE/DINING	2.5-STORY	14,264	35,773	17 LODGING UNITS
E5	GAZEEBO*	GUEST AMENITY	1-STORY	315	315	N/A
E6	STONE CHAPEL	GUEST AMENITY	1-STORY	174	174	N/A
E7	DELAMETER HOUSE	VACANT/UNUSED	2-STORY	1,143	2,012	N/A
E8	POOL FACILITIES (POOL HOUSE)	GUEST AMENITY	1-STORY	615	615	N/A
E9	POLE BARN	GUEST AMENITY	1-STORY	2,081	2,081	N/A
E10	THE BARNS (WELLNESS)	GUEST AMENITY/ FITNESS/ WELLNESS	1-STORY	4,925	4,925	N/A
TOTAL					**LODGING UNITS**	38
					STAFF APTS.	3

*SCHEDULED TO BE REMOVED AS PART OF PROPOSED ADAPTIVE REUSE PLAN DEVELOPMENT.

OVERALL EXISTING CONDITIONS PLAN

SCALE: 1" = 100'

0 100' 200'
1" = 100'
GRAPHIC SCALE

BACKGROUND MAPPING COMPILED FROM THE FOLLOWING:

1. PROPERTY DATA AND EXISTING FEATURES BASED UPON ACTUAL FIELD SURVEY COMPLETED ON OR BEFORE APRIL 26, 2016 PREPARED BY CHAZEN ENGINEERING AND SURVEYING, PC.
2. TOPOGRAPHIC CONTOURS BASED UPON ACTUAL FIELD SURVEY COMPLETED ON OR BEFORE DECEMBER 8, 2004 PREPARED BY STEVEN ALEX, L.S. OF CHAZEN ENGINEERING AND SURVEYING, PC.
3. A FIELD SURVEY CONDUCTED BY M.J. ENGINEERING AND LAND SURVEYING, P.C. ON AUGUST 8 THROUGH 13, 2022.
4. THE HORIZONTAL DATUM IS REFERENCED TO NORTH AMERICAN DATUM OF 1983, NEW YORK STATE PLANE EAST ZONE 3101.
5. THE VERTICAL DATUM IS REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
6. CONTOUR INTERVAL = 1 FOOT.
7. NORTH IS ORIENTED TO GRID NORTH FROM GPS OBSERVATION.

FLOOD ZONE NOTES:

1. PROPERTY SHOWN HEREON LIES WITHIN "SPECIAL FLOOD HAZARD AREA ZONE AE", WITHIN "OTHER AREAS, ZONE X" (UNSHADED), AND WITHIN "FLOODWAY AREAS IN ZONE AE" AS SHOWN ON FEMA, NFIP, FIRM PANEL 36027C0332E, WITH AN EFFECTIVE DATE OF MAY 2, 2012.
2. THE "ZONE AE, BASE FLOOD ELEVATIONS" DETERMINED TO AFFECT THIS PARCEL ARE IN THE RANGE OF 480' TO 487' (NAVD88).

DATE	REVISION
10/10/2022	REVISED FOR PLANNING BOARD SUBMISSION
11/28/2022	REVISED FOR PLANNING BOARD SUBMISSION
1/9/2023	REVISED FOR PLANNING BOARD SUBMISSION
2/3/2023	REVISED FOR PLANNING BOARD SUBMISSION

ENGINEERING, DESIGN, & PLANS PREPARED BY:

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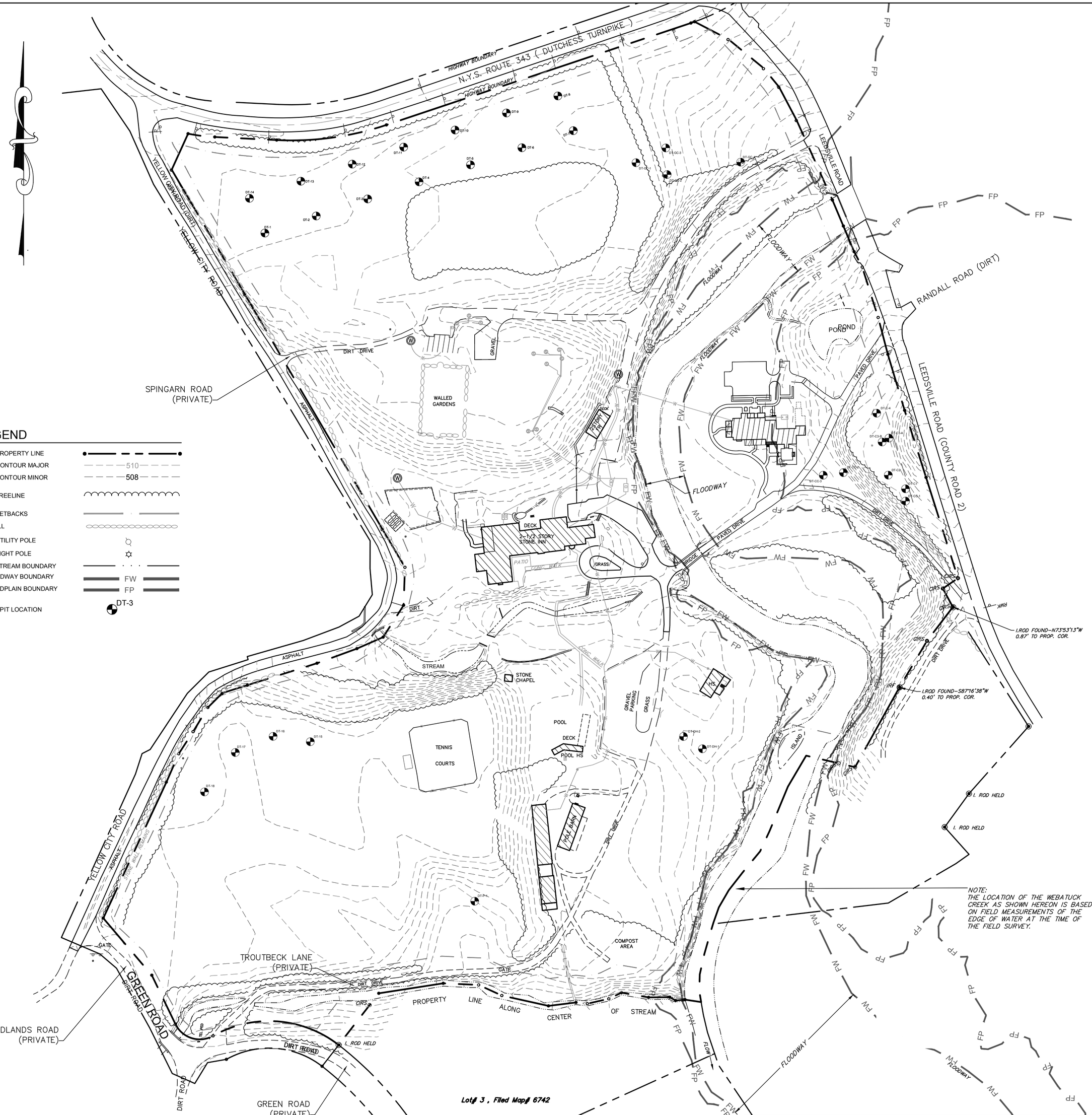
TROUTBECK
ADAPTIVE REUSE

TOWN OF AMENIA — DUTCHESS COUNTY, NY

PHASE 1
EXISTING CONDITIONS / DEMO PLAN

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
8/29/2022	AS SHOWN	RED	RED	RAR	16-019	1 of 11

APPENDIX III



LEGEND

- EXISTING PROPERTY LINE
- EXISTING CONTOUR MAJOR (510)
- EXISTING CONTOUR MINOR (508)
- EXISTING TREELINE
- BUILDING SETBACKS
- STONE WALL
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING STREAM BOUNDARY
- FEMA FLOODWAY BOUNDARY (FW)
- FEMA FLOODPLAIN BOUNDARY (FP)
- DEEP TEST PIT LOCATION (DT-3)

DEEP TEST RESULTS (10/21/2021):

HOLE #	TOTAL DEPTH	ROCK DEPTH	WATER DEPTH	MOTTLING DEPTH	SOIL DESCRIPTION
1	114"	N/A	N/A	N/A	0"-24" SILT LOAM
					24"-114" GRAVELLY SAND LOAM
2	114"	N/A	N/A	N/A	0"-24" SILT LOAM
					24"-114" GRAVELLY SAND LOAM
3	108"	N/A	N/A	N/A	0"-24" SILT LOAM
					24"-108" GRAVELLY SAND LOAM
4	108"	N/A	N/A	N/A	0"-24" SILT LOAM
					24"-108" GRAVELLY SAND LOAM
5	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
6	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
7	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
8	108"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-108" GRAVELLY SAND LOAM
9	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
10	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
11	90"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-90" GRAVELLY SAND LOAM
12	90"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-90" GRAVELLY SAND LOAM
13	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
14	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
15	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
16	96"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-96" GRAVELLY SAND LOAM
17	90"	N/A	N/A	N/A	0"-12" SILT LOAM
					12"-90" GRAVELLY SAND LOAM
18	90"	N/A	N/A	N/A	0"-18" SILT LOAM
					18"-90" GRAVELLY SAND LOAM
P-1	132"	N/A	N/A	N/A	0"-60" GRAVEL
					60"-132" SAND

DEEP TEST RESULTS (10/21/2021):

HOLE #	TOTAL DEPTH	ROCK DEPTH	WATER DEPTH	MOTTLING DEPTH	SOIL DESCRIPTION
C1	108"	N/A	N/A	N/A	0"-36" SILT LOAM
					36"-108" GRAVELLY SAND LOAM W/ COBBLES
C2	132"	N/A	N/A	N/A	0"-36" SILT LOAM
					36"-132" GRAVELLY SAND LOAM
C-3A	54"	54"	N/A	N/A	0"-54" ROCK
C-3B	114"	N/A	N/A	N/A	0"-48" SILT LOAM
					48"-114" GRAVELLY SAND LOAM
C-4	126"	N/A	N/A	N/A	0"-24" SILT LOAM
					24"-126" GRAVELLY SAND LOAM

DEEP TEST RESULTS (9/20/2022):

HOLE #	TOTAL DEPTH	ROCK DEPTH	WATER DEPTH	MOTTLING DEPTH	SOIL DESCRIPTION
CC-1	102"	N/A	N/A	N/A	0"-3" TOPSOIL
					3"-102" BROWN SAND LOAM W/ GRAVEL AND COBBLES
CC-2	96"	96"	N/A	N/A	0"-4" TOPSOIL
					4"-96" BROWN SAND LOAM
CC-3	108"	108"	N/A	N/A	0"-3" TOPSOIL
					3"-108" BROWN SAND LOAM
DH-1	96"	N/A	N/A	N/A	0"-12" TOPSOIL
					12"-60" BONY GRAVEL
					60"-96" SAND WITH GRAVEL
DH-2	108"	N/A	N/A	N/A	0"-48" SAND LOAM
					48"-108" SAND WITH GRAVEL
GC-1	96"	N/A	N/A	N/A	0"-24" SAND LOAM
					24"-96" SAND W/ GRAVEL & COBBLES
GC-2	96"	N/A	N/A	N/A	0"-18" SAND LOAM
					18"-96" SAND W/ GRAVEL & COBBLES
GC-3	96"	N/A	N/A	N/A	0"-24" SAND LOAM
					24"-96" SAND W/ GRAVEL & COBBLES
GC-4	114"	N/A	N/A	N/A	0"-48" SAND LOAM
					48"-114" SAND W/ GRAVEL & COBBLES

ZONING DISTRICT: "RR" RURAL RESIDENTIAL
LOT SIZE: 43.5 ACRES
TAX GRID No. : 132000-7267-00-227675
PROPERTY ADDRESS: 515 LEEDSVILLE ROAD AMENIA, NY 12501
PROPERTY OWNER: TROUTBECK HOLDINGS, LP. 515 LEEDSVILLE ROAD AMENIA, NY 12501
APPLICANT: TROUTBECK HOLDINGS, LP. 515 LEEDSVILLE ROAD AMENIA, NY 12501

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DATE	REVISION

ENGINEERING, DESIGN, & PLANS PREPARED BY:
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Tel: (845) 877-0555 Fax: (845) 877-0556

TROUTBECK INN

TOWN OF AMENIA — DUTCHESS COUNTY, NY

SOIL TESTS LOCATIONS MAP

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
2/3/2023	1" = 100'	RED	RED	RAR	16-019	1 of 1

APPENDIX IV

Troutbeck - Adaptive Reuse
Aquifer Overlay District (AQO) - Aquifer Recharge Calculations

Troutbeck - Adaptive Re-Use - Annual Aquifer Recharge - Summary by Soil Map Unit — Dutchess County, New York (NY027)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI	*Recharge Rate (in/yr)	Natural Recharge Rate
CuA	Copake gravelly silt loam, nearly level	A	15.1	34.71%	20.2	25.41833333
CuB	Copake gravelly silt loam, undulating	A	0.1	0.23%	20.2	0.168333333
CuC	Copake gravelly silt loam, rolling	A	28.3	65.06%	20.2	47.638
		Totals for Area of Interest:	43.5	100.00%	acre feet	73.23
					cubic feet	3,189,681.00
						28,633.00
					Natural Recharge Rate of Site (gallons)	**24,074,662.24**

Troutbeck - Peak Daily Water Use**

Phase	ADAPTIVE RE-USE BUILDINGS & SPACES	Proposed SPDES Outfall #	# of Bedrooms	# of Staff Apts.	# of Persons or Seats	Estimated Flow (GPD)**
2	**Manor House**	#001				
	Lodging (Bedroom Units)		17			1870
	Restaurant				92	2576
1	**Bakery** (relocated to former Maintenance Garage)	#001				
	2-BedroomStaff Apt.			1		220
	Bakery / Resturant				20	320
0	**Century Lodge & Annex (Benton)**	#002				
	Guest Rooms		17			1870
0	**Wellness Center Barns & Outdoor Pool**	#003				
	Resort Amenity Use					1932
1	**Creekside Cabins (4-units)**	#004				
	Lodging (Bedroom Units)		6		12	660
1	**Gate House**	#004				
	2 employees/2 shifts				4	48
3	**Central Administration Area**	#005				
	1 Bedroom Staff Apartments			5		550
	Office Employees				8	128
4	**Garden Cabins (8-units)**	#006 & #007				
	Lodging (Bedroom Units)		9		18	990
5a	**Garden Hotel**	#008				
	Lodging (Bedroom Units)		33		66	3630
5b	**Garden Event Space**	#008				
	Event Space				224	1792
6	**Delamater House Rennovations**	#009				
	Restaurant				86	2408
7	**Meadow Cabins (6-units)**	#010				
	Lodging (Bedroom Units)		7		14	770
8	**Outdoor Pool Area Expansion**	#003				
	Indoor Pool Facility				60	480
	Indoor Pool Snack Bar				60	300
	Pool Staff				3	36
TOTAL FLOW			**89**	**6**		**20,580**

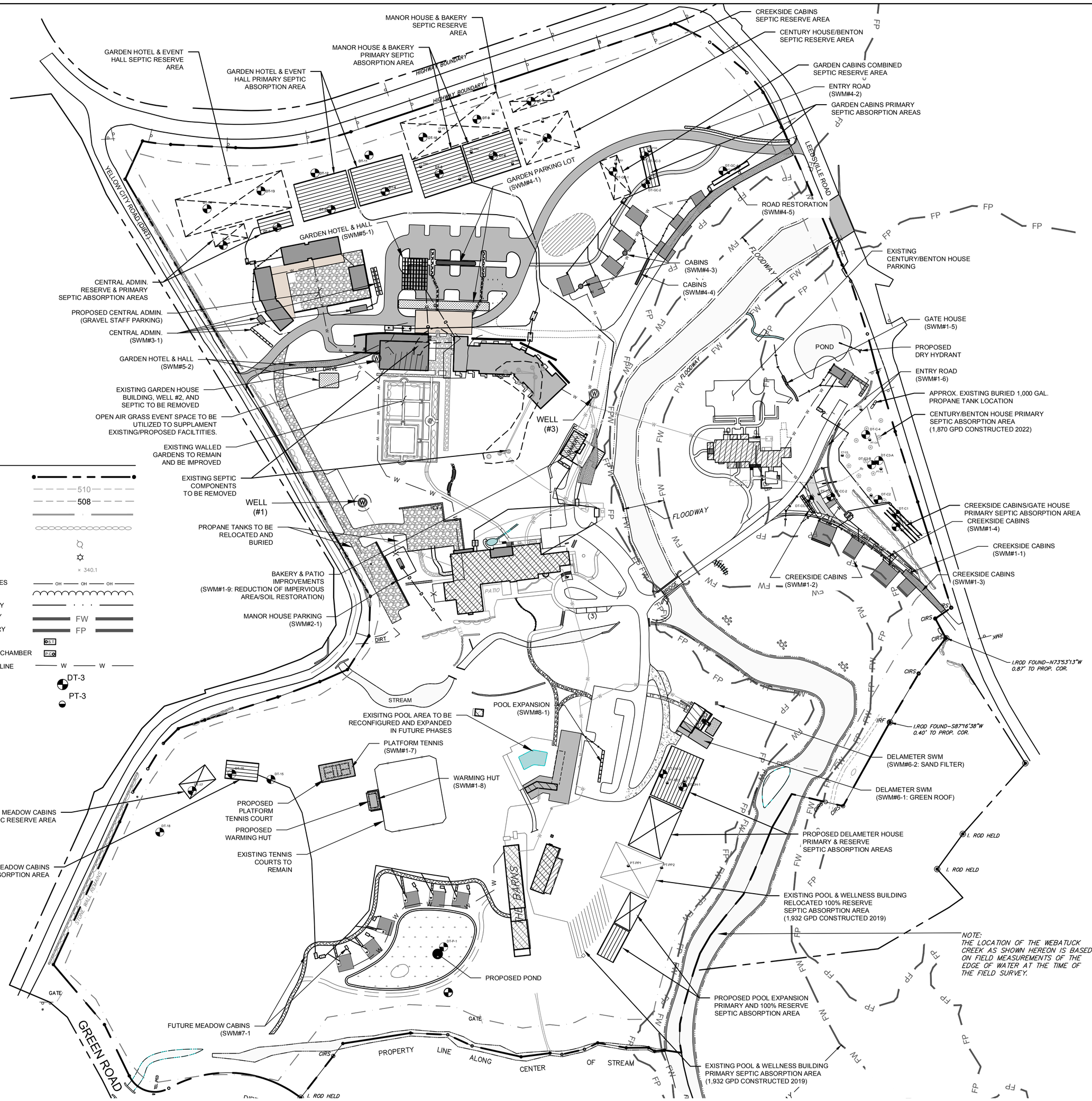
Troutbeck Inn - Water Consumption***

Use	% of Flow	Total Flow (gallons)	Dilution Factor	Consumption / Day
Nonresidential Uses w. Subsurface Discharge		20,580	6	123,480.00
			Total Daily Water Consumption (GPD)	89,141.14
		Annual Consumption (Assumed 70% Occupancy for Year) (Gallons) (Daily Water Consumption x 365)		**22,775,562.00**

Net Recharge (gallons/year) (Natural Recharge Rate - Annual Consumption)	**1,299,100.24**

*Amenia, NY - Zoning Code Section 121-15,F
**NYSDEC Design Standards for Intermediately Sized Wastewater Treatment Systems 2014
***Amenia, NY - Zoning Code Section 121-15,G

APPENDIX V



LEGEND

- EXISTING PROPERTY LINE
- EXISTING CONTOUR MAJOR — 510
- EXISTING CONTOUR MINOR — 508
- BUILDING SETBACKS
- STONE WALL
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SPOT GRADE × 340.1
- EXISTING OVERHEAD UTILITIES — OH — OH — OH
- EXISTING TREELINE
- EXISTING STREAM BOUNDARY
- FEMA FLOODWAY BOUNDARY — FW
- FEMA FLOODPLAIN BOUNDARY — FP
- PROPOSED SEPTIC TANK — ST
- PROPOSED EFFLUENT PUMP CHAMBER — PCB
- PROPOSED WATER SERVICE LINE — W — W
- DEEP TEST PIT LOCATION — DT-3
- PERC TEST PIT LOCATION — PT-3

ADAPTIVE REUSE STORMWATER MANAGEMENT PRACTICE SUMMARY:

ADAPTIVE REUSE STORMWATER MANAGEMENT SUMMARY			
PHASE	PROJECT AREA	SWM #	STORMWATER MANAGEMENT INFRASTRUCTURE
1	CREEKSIDE EAST CABINS	SWM #1-1	DISCONNECTED ROOF LEADERS
1	CREEKSIDE EAST CABINS	SWM #1-2	PG-1 PEA GRAVEL DIAPHRAGM WITH LEVEL SPREADER AND SI-1 INFILTRATION CHAMBERS
1	CREEKSIDE EAST CABINS	SWM #1-3	GRASS FILTER STRIP
1	CREEKSIDE EAST CABINS	SWM #1-4	PP-1 POROUS PAVEMENT
1	GATEHOUSE	SWM #1-5	SF-1 SAND FILTER AND PEA GRAVEL DIAPHRAGM FOR IMP. ROOF AREA
1	ENTRY ROAD	SWM #1-6	IT-2 AND IT-3 INFILTRATION TRENCHES; SHARES INFIL CHAMBERS WITH CREEKSIDE CABINS
1	PLATFORM TENNIS & WARMING HUT	SWM #1-7	IB-1 INFILTRATION BASIN (PLATFORM TENNIS SMP)
1	PLATFORM TENNIS & WARMING HUT	SWM #1-8	IT-1 INFILTRATION TRENCH (WARMING HUT SMP)
1	CARETAKER HOUSE/BAKERY		NO NEED FOR SMP AS IMPERVIOUS IS REDUCED BY >25%
1	CARETAKER HOUSE/BAKERY	SWM #1-9	SOIL RESTORATION IN EXISTING COMPACTED GRAVEL PARKING AREA
2	MANOR HOUSE	SWM #2-1	SF-2 SAND FILTER FOR EXPANDED PARKING AREA AND ADDITION
3	STAFF AREA	SWM #3-1	SF-3 AND SF-4 SAND FILTERS FOR NEW BUILDINGS AND PARKING AREA WITH IC-2 AND IC-2A INFILTRATION CHAMBERS
4	GARDEN NORTH CABINS	SWM #4-1	SF-5 SAND FILTER FOR ENTRY ROAD AND NEW PARKING AREA
4	GARDEN NORTH CABINS	SWM #4-2	DS-1 DRY SWALE FOR ENTRY ROAD
4	GARDEN NORTH CABINS	SWM #4-3	DW-1 AND DW-2 DRYWELLS FOR NEW CABIN ROOFS
4	GARDEN NORTH CABINS	SWM #4-4	IT-4 INFILTRATION TRENCH FOR NEW CABIN ROOFS
4	GARDEN NORTH CABINS	SWM #4-5	SOIL RESTORATION IN EXISTING COMPACTED GRAVEL SERVICE ROAD
5A	GARDEN HOTEL	SWM #5-1	IC-1 INFILTRATION CHAMBERS FOR NEW HOTEL IMPERVIOUS
5A	GARDEN HOTEL	SWM #5-2	SOIL RESTORATION ON GRAVEL SERVICE ROAD
5B	GARDEN HALL	SWM #5-1	IC-1 INFILTRATION CHAMBERS FOR NEW EVENT SPACE IMPERVIOUS (SHARES WITH HOTEL)
6	DELAMETER HOUSE	SWM #6-1	GR-1 GREEN ROOF
6	DELAMETER HOUSE	SWM #6-2	SF-6 SAND FILTER FOR ACCESS DRIVE AND PARKING
7	POND EXPANSION CABINS	SWM #7-1	POROUS PAVEMENT AND IC-2 INFILTRATION CHAMBERS
8	POOL RENOVATION	SWM #8-1	IC-4 INFILTRATION CHAMBERS FOR NEW POOLHOUSE IMPERVIOUS

ADAPTIVE REUSE WATER/WASTEWATER SUMMARY:

Phase	ADAPTIVE RE-USE BUILDINGS & SPACES	Proposed SPDES Outfall #	# of Bedrooms	# of Staff Apts.	# of Persons or Seats	Estimated Flow (GPD)	Comments
2	**Manor House**	#001					{Old Outfall #001 to be relocated}
	Lodging (Bedroom Units)		17			1870	{110 gpd/rm.}
	Restaurant				92	2576	{35 gpd/seat}-20% includes 20-seats outside to be enclosed
1	**Bakery** (relocated to former Maintenance Garage)	#001					{Old Outfall #001 to be relocated}
	2 Bdrm Staff Apartment			1		220	{1 apt, 2beds @ 110 gpd ea.}
	Bakery / Restaurant				20	320	{20-seats @ 20gpd/seat}-20%
0	**Century Lodge & Annex (Benton)**	#002					{Old Outfall #002}
	Guest Rooms		17			1870	{110 gpd/rm.}
0	**Wellness Center Barns & Outdoor Pool**	#003					
	Resort Amenity Use					1932	existing system installed in 2019
1	**Creekside Cabins (4-units)**	#004					{2 - one bedroom cabins and 2 - two bedroom cabins}
	Lodging (Bedroom Units)		6		12	660	{110gpd/bdrm}
1	**Gate House**	#004					
	2 employees / 2 shifts				4	48	{1-employee @ 15gpd/person}-20%
3	**Central Administration Area**	#005					
	1 Bdrm Staff Apartments			5		550	{110gpd/apt.}
	Office Employees				8	128	{20gpd/employee}-20% (w/showers)
4	**Garden Cabins (8-units)**	#006 & #007					{7 - one bedroom cabins and 1 - two bedroom cabin}
	Lodging (Bedroom Units)		9		18	990	{110gpd/bdrm}
5A	**Garden Hotel**	#008					
	Lodging (Bedroom Units)		33		66	3630	{110gpd/bdrm.}
5B	**Garden Event Space**	#008					
	Event Space				224	1792	{10gpd/seat}
6	**Delamater House Renovations**	#009					
	Restaurant				86	2408	{35gpd/seat}-20% (incl. 32 outdoor / 54 indoor seats}
7	**Meadow Cabins (6-units)**	#010					{5 - one bedroom cabins and 1 - two bedroom cabin}
	Lodging (Bedroom Units)		7		14	770	{110gpd/bdrm}
8	**Pool Area Expansion**	#003					
	Indoor Pool Facility				60	480	{10gpd/person} -20%
	Indoor pool snack bar				60	300	{5gpd/person}
	Pool Staff				3	36	{1-employee @ 15gpd/person}-20%
	TOTAL FLOW		**89** Total Bedrooms	**6**		**20,580**	

FIRE SAFETY NOTES:

1. ALL PROPOSED ROADWAYS AND ROAD ALTERATIONS WITHIN THE FIRE SAFETY DEVELOPMENT AREA WILL BE DESIGNED TO HAVE A WIDTH OF 16 FEET, WITH 2 FEET OF ADDITIONAL CLEARANCE ON EITHER SIDE, AND UNOBSTRUCTED VERTICAL HEIGHT OF 13.5 FEET. ALL ROADS WILL BE DESIGNED TO SUPPORT A LOAD WEIGHT OF 75,000 LBS.
2. PHASE 1 SHALL INCLUDE THE INSTALLATION OF A DRY HYDRANT, ALONG THE EXISTING TROUTBECK LANE ENTRANCE, WHICH WILL ALLOW THE FIRE DEPARTMENT TO PUMP FROM AN EXISTING POND IN THE EVENT OF AN EMERGENCY.
3. FUTURE DEVELOPMENT WILL INCLUDE WATER SOURCE ACCESS TO THE EXISTING/PROPOSED POOL FACILITIES, FOR USE BY THE FIRE DEPARTMENT IN THE EVENT OF AN EMERGENCY.
4. ALL PROPOSED STRUCTURE CONTAINING, MORE THAN ONE LODGING/RESIDENTIAL UNIT, OR OF SUFFICIENT SIZE (>1,000 SF) SHALL BE EQUIPPED WITH KNOX BOXES PER THE AMENIA FIRE COMPANIES RECOMMENDATION. (THE KNOX BOXES WILL INCLUDE ALL KEYS OR KEY CARDS REQUIRED TO PROVIDE ACCESS TO ALL RESIDENTIAL AND LODGING UNITS.)
5. ALL PROPOSED STRUCTURES THAT REQUIRE SPRINKLER SYSTEMS BY THE NYS BUILDING CODE WILL BE PROVIDED WITH CODE COMPLIANT FIRE SUPPRESSION SYSTEMS. THIS INCLUDES, BUT IS NOT LIMITED TO THE GARDEN HOTEL AND GARDEN HALL EVENT BUILDING.

FLOOD ZONE NOTES:

1. PROPERTY SHOWN HEREON LIES WITHIN "SPECIAL FLOOD HAZARD AREA ZONE AE", WITHIN "OTHER AREAS, ZONE X" (UNSHADED), AND WITHIN "FLOODWAY AREAS IN ZONE AE" AS SHOWN ON FEMA, NFIP, FIRM PANEL 36027C0332E, WITH AN EFFECTIVE DATE OF MAY 2, 2012.
2. THE "ZONE AE, BASE FLOOD ELEVATIONS" DETERMINED TO AFFECT THIS PARCEL ARE IN THE RANGE OF 480' TO 487' (NAVD88).

MAP NOTES:

1. PROPERTY DATA AND EXISTING FEATURES BASED UPON ACTUAL FIELD SURVEY COMPLETED ON OR BEFORE APRIL 26, 2016 PREPARED BY CHAZEN ENGINEERING AND SURVEYING, PC.
2. TOPOGRAPHIC CONTOURS BASED UPON ACTUAL FIELD SURVEY COMPLETED ON OR BEFORE DECEMBER 8, 2004 PREPARED BY STEVEN ALEX, L.S. OF CHAZEN ENGINEERING AND SURVEYING, PC.

DATE	REVISION
2/16/2022	REVISED FOR PLANNING BOARD SUBMISSION
8/29/2022	REVISED FOR PLANNING BOARD SUBMISSION
10/10/2022	REVISED FOR PLANNING BOARD SUBMISSION
12/28/2022	REVISED FOR FIRE DEPARTMENT SUBMISSION
2/3/2023	REVISED FOR PLANNING BOARD SUBMISSION

ENGINEERING, DESIGN, & PLANS PREPARED BY:

RENNIA ENGINEERING DESIGN, PLLC

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TROUTBECK ADAPTIVE RE-USE

TOWN OF AMENIA — DUTCHESS COUNTY, NY

OVERALL CONCEPT UTILITY PLANS

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
12/1/2021	1" = 100'	RED	RED	RAR	16-019	5 of 6