

CLOVEWOOD

Final Environmental Impact Statement

Section 10.3 Agency Correspondence

10.3.1 NYS Department of Environmental Conservation

10.3.2 Orange County Department of Planning

10.3.3 Village of South Blooming Grove Consultants



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**10.3.1 New York State Department of
Environmental Conservation Correspondence**

New York State Department of Environmental Conservation

Division of Environmental Permits, Region 3

21 South Putt Corners Road, New Paltz, NY 12561

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Website: www.dec.ny.gov



**Department of
Environmental
Conservation**

May 28, 2020

Simon Gelb
CPC, LLC
P.O. Box 2020
Monroe, New York

**RE: Clovewood
Village of South Blooming Grove, Orange County
DEC Application ID No. 3-3320-00150/00001,2,3
Notice of Incomplete Application**

Dear Mr. Gelb,

The New York State Department of Environmental Conservation (DEC or Department) has reviewed the resubmission materials you provided on behalf of Keen Equities, LLC. This information was received by this office on November 14, 2019 and included responses to the previously issued NOIA dated 10/17/2018 regarding the Article 15 Water Withdrawal permit application; revised State Pollution Discharge Elimination System (SPDES) permit application; and an Article 11 Incidental Take permit application. A draft Stormwater Pollution Prevention Plan (SWPPP); and Draft Environmental Impact Statement was also provided.

Based on the submitted information, the Department has the following comments. Please review and provide the following:

Article 11 Incidental Take – An Article 11 Incidental Take permit is required for the proposed project. It is the Department's opinion that the project as currently proposed, will result in the incidental take of foraging habitat, and individual snakes from the creation of roadways, increased traffic and human occupation in an area of occupied timber rattlesnake habitat. Please also be aware that the Department does not agree with the conclusions found in the DEIS related to adverse impacts to timber rattlesnakes or their habitat related reports, and submissions to date.

Required elements of an Article 11 Incidental Take permit application can be found at the following link (Part 182 regulations): <http://www.dec.ny.gov/regs/2494.html>, and specifically, *Part 182.11 Incidental take permit; specific application requirements* outline the requirements. The regulations require very specific information related to an Incidental Take permit application, and the information provided does not include all the required permit application information. As stated previously, the USFWS incidental take permit form was used in a prior submission, however, the NYSDEC Joint Application Form (JAF) is required. A correctly filled out JAF satisfies Parts 182.11(c)(1) and 182.11(c)(7). The submitted information to date, including but not

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necessarily limited to the habitat assessment for timber rattlesnake and other species observed, does not contain adequate information related to 182.11(c)(2) describing the project and impacts/take, 182.11(c)(3), or 182.11(c)(4). While some information has been provided related to potential take avoidance measures, a full mitigation plan has not been submitted following 182.11(d), and an implementation agreement has not been provided following 182.11(e).

As previously indicated and stated in the October 18, 2018 NOIA, based upon review of the Timber Rattlesnake Survey & Habitat Assessment prepared by North County Ecological Services, Inc., dated August 18, 2015 (and since revised and dated January 23, 2017), staff consider the property within 1.5 miles of the den to be occupied habitat under Article 11 Part 182. The areas outside of the basking/gestating habitats would be considered occupied foraging habitat for timber rattlesnakes and impacts to the species would need to be assessed based on project plans and appropriate impact avoidance and minimization measures. A mitigation plan is required as part of an Incidental Take permit application that ensures implementation of meaningful conservation measures and protections for the species resulting in a net conservation benefit upon permit issuance.

In addition to the comments above regarding the need and requirements for an Incidental Take permit, the Department has the following comments regarding the November 2019 resubmission materials. Some incidental take avoidance measures for reducing the chances of impacts to individuals related to project construction were proposed, however, details on how these proposed measures would be implemented are not adequate for the Department to review their effectiveness. The information provided in the 'Timber Rattlesnake On-Site Contractor BMP's' is lacking needed detail for implementation. The proposed measures are not tied to project plans or construction sequencing.

The proposed use of a barrier is discussed in the response letter, but details are not provided on project plans or in the 'Timber Rattlesnake On-Site Contractor BMP's' regarding the installation, material, or maintenance of such a barrier. Please be aware that the Department has modified its preferred barrier fencing guidance, as the Department has assessed implemented take avoidance measures used on previously permitted projects. Based on current information, standard silt fence is not a preferred barrier material for timber rattlesnakes. In addition, given the scale and large size of area requiring fencing, it is not likely to function as intended and will need to be monitored and maintained daily during the active season. While it is mentioned that tree removal would take place from November 1st to March 31st, it is not clear if other land clearing activities will also take place during this time to minimize impacts to timber rattlesnake.

While some take avoidance and minimization measures have been described, information related to how such measures will be carried forward and enacted during

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the project, and a way to ensure the methods proposed would be carried out successfully and be protective of timber rattlesnakes, has not been provided. Please also be aware that additional take avoidance and minimization measures would be required for the water supply operation and maintenance, as well as any needed infrastructure construction not discussed in the DEIS.

The Endangered and Threatened Species Report does not appear to have been revised or updated since our previous comments outlined in the October 18, 2018 Notice of Incomplete Application. The Department recognizes that responses were provided pertaining to our comments, and that Section 3.6 of the CW-DEIS was revised to include additional information, however, as stated above, it is the Department's opinion that the project as currently proposed, will result in the incidental take of foraging habitat, and individual snakes from the creation of roadways, increased traffic and human occupation in an area of occupied timber rattlesnake habitat. These impacts were not fully addressed in Section 3.6, or within the Endangered and Threatened Species Report. As part of the Article 11 Part 182.11 application requirements, additional information will be required. Please see the Department's comments regarding the DEIS for additional comments and information.

Please contact Lisa Masi from the Bureau of Wildlife for any technical questions regarding the above. Lisa can be reached via email at Lisa.Masi@dec.ny.gov, or at (845) 256-2257.

Article 15 Water Withdrawal – The WWA No. is 12,422. Please see the following comments on the pumping test and water usage rate/demand:

1. According to the Engineering Report and Pumping Test Program, average day demand for this project is 273,600 gpd and maximum day demand is 547,200 gpd. Groundwater recharge to the bedrock aquifer during a 30-year drought condition estimated a recharge rate of 352.5gpm or 507,600gpd. The project proposed a combined total withdrawal of 550,800gpd with best well out of service which is greater than the groundwater recharge rate. A prolonged drought would place the aquifer in deficit. The proposed withdrawal of 550,800 gpd is not acceptable to the Department. The applicant is recommended to evaluate other options to address this concern and update the Engineering Report and Pumping Test Program report. Please submit a revised water withdrawal application.
2. Please note that the formation of water work corporation is required before a permit can be issued.

Please contact Aparna Roy from the Division of Water for any technical questions regarding the above. Aparna can be reached via email at Aparna.Roy@dec.ny.gov, or at (914)803-8149.

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State Pollution Discharge Elimination Program – Wastewater – Please see the following comments related to SPDES – Wastewater:

1. The Form D application has been replaced. The applicant must use the new SPDES application form P/C/I Discharge of Treated Sanitary Waste and the applicant must be the sewage works corporation. The form must be accompanied by documentation showing the sewage works corporation has been formed.
2. The outfall location is not in a stream. Provide revised outfall latitude and longitude coordinates for a stream discharge.
3. Provide the swimming pool/bath house occupant capacity.
4. Provide technical justification (including data) for the alum outfall concentration on the WTC form to be reduced from 33.14 mg/l to .3314 mg/l.
5. Provide the flow rate associated with the swimming pool filter backwash.
6. According to the Addendum to the DEIS, a sand filter will be installed for turbidity and an iron and manganese filter will be installed to reduce Fe/Mn concentrations. Please be aware that the backwash wastewater is an industrial wastewater, therefore the design would have to be submitted to the NYSDEC. Please advise if this wastewater will be directed to the wastewater treatment plant, or if it will have its own treatment and discharge through a second outfall. Additional outfalls will need to be incorporated in the SPDES permit. In addition to the new SPDES application form P/C/I Discharge of Treated Sanitary Waste requested in #1 above, please also provide the Industrial SPDES Permit Application Form NY-2C.

Please contact Manju Cherian from the Division of Water for any technical questions regarding the above. Manju can be reached via email at Manju.cherian@dec.ny.gov, or at (914)803-8137.

Freshwater Wetlands - There are wetlands on the project site that appear to be large enough (12.4 acres or larger) to be eligible to be mapped and regulated by New York State under Article 24 of the Environmental Conservation Law.

Eligible wetlands that meet the regulatory criteria but are not shown on the regulatory maps should be afforded the same level of protection as the wetlands that are currently on the regulatory map.

All development should be planned to avoid the state regulated wetlands and the 100-foot adjacent areas. Unavoidable impacts such as for access to unregulated areas must be minimized and mitigated to the maximum extent practicable.

State Environmental Quality Review (SEQR) - As outlined in the Notice of Incomplete Application dated March 14, 2016, May 25, 2018 and October 17, 2018 (enclosed), the application will remain incomplete until SEQR requirements have been satisfied.

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Uniform Procedures – Please also be advised that pursuant to 6 NYCRR §621, each permit type has designations for minor actions, and all other actions are major. It appears that this project is considered major under UPA §621.4, and as such, a 30-day public notice period is required. 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.

If you have any questions you can contact me at 845-256-3059, or via e-mail at Tracey.Omalley@dec.ny.gov.

Sincerely,

Tracey L. M. O'Malley

Digitally signed by
Tracey L. M. O'Malley
Date: 2020.05.28
11:07:03 -04'00'

Tracey O'Malley
Division of Environmental Permits

Encl. Notice of Incomplete Application, dated October 17, 2018
Notice of Incomplete Application, dated May 25, 2018
Notice of Incomplete Application, dated March 14, 2016

Ecc. Keen Equites, LLC; YCR@Windsorglobal.com
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Stacy Stieber, CPG, PG(NY) – LBGHS; stacy.stieber@wsp.com
Manju Cherian, Division of Water DEC R3
Aparna Roy, Division of Water DEC R3
Erik Schmitt, Division of Water CO
Lisa Masi, Bureau of Wildlife DEC R3
Mike Fraatz, Bureau of Ecosystem Health DEC R3
Village of South Blooming Grove, Planning Board Clerk

New York State Department of Environmental Conservation

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**Department of
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Conservation**

May 28, 2020

Village of South Blooming Grove Planning and Village Boards
811 NYS Route 2-8
Monroe, NY 10950

**RE: Clovewood
Village of South Blooming Grove, Orange County
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Comments on Draft Environmental Impact Statement**

Dear Board Members,

The New York State Department of Environmental Conservation (DEC) has reviewed the Clovewood Draft Environmental Impact Statement (DEIS), received by the Department on November 14, 2019. I apologize for the delay in response.

According to the DEIS, the proposed Clovewood project would be a clustered residential development of 600 single-family lots/homes on approximately 708.2 acres, located in Blaggs Clove on the east side of NYS Route 208 and Clove Road within the Village of South Blooming Grove, Orange County, New York. In addition to the proposed 600 single-family lots/homes, the project includes a water supply system, comprised of six on-site wells, new distribution piping, fire hydrants and a water storage tank. A new on-site wastewater treatment plant (WWTP) is also proposed, that would discharge to a tributary to Slatterly Creek.

The following comments on the Clovewood DEIS are related to overall Department jurisdictions, clarifications needed on total areas of disturbance, technical comments related to DEC permit applications, as well as technical comments regarding threatened and endangered species related analyses.

Please note that permit applications have been submitted to the Department and are currently under review. However, as you will see from the comments below, the Department has determined that an Article 11 Incidental Take permit is required for the proposed project, and comments below address the Department's concerns over the materials submitted to date.

Department Jurisdiction

Article 15, Title 5, 6 NYCRR 601 – Water Withdrawal - Permit for the operation of a potable water source with the capacity of 100,000 gallons per day or greater. The proposed project entails the withdrawal of potable water from multiple on-site wells, installation of new distribution piping, fire hydrants and a water storage tank. A water withdrawal permit application has been submitted to the Department for review, under DEC ID # 3-3320-00150/00002, WWA No. 12,422. The application is currently incomplete; technical comments provided to the applicant can be found in the Notice of Incomplete Application, dated May 28, 2020, and one of which is listed below:

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- According to the Engineering Report and Pumping Test Program, average day demand for this project is 273,600 gpd and maximum day demand is 547,200 gpd. Groundwater recharge to the bedrock aquifer during a 30-year drought condition estimated a recharge rate of 352.5gpm or 507,600gpd. The project proposed a combined total withdrawal of 550,800gpd with best well out of service which is greater than the groundwater recharge rate. A prolonged drought would place the aquifer in deficit. The proposed withdrawal of 550,800 gpd is not acceptable to the Department. The applicant is recommended to evaluate other options to address this concern and update the Engineering Report and Pumping Test Program report. Please submit a revised water withdrawal application.

Article 17, Titles 7,8, 6 NYCRR Part 750-1 – State Pollutant Discharge Elimination System (SPDES) Wastewater - For the surface discharge of 280,000 gallons per day to a tributary to Slatterly Creek (Class C). A SPDES permit application has been submitted to the Department for review, under DEC ID # 3-3320-00150/00001. The application is currently incomplete; technical comments provided to the applicant can be found in the Notice of Incomplete Application, dated May 28, 2020, and are in addition to the following:

- The outfall location provided in the DEIS and in the permit application is not in a stream. Revised outfall latitude and longitude coordinates are required for a stream discharge.
- According to the Addendum to the DEIS, a sand filter will be installed for turbidity and an iron and manganese filter will be installed to reduce Fe/Mn concentrations. Please be aware that the backwash wastewater is an industrial wastewater, therefore the design would have to be submitted to the NYSDEC, and any additional outfalls, if required, would be included in the permit.

Article 11, 6 NYCRR Part 182 – Incidental Take Permit - For the incidental take of Timber Rattlesnake, a NYS listed threatened species. Individuals and their habitats are protected from take by Environmental Conservation Law Article 11-0535 and corresponding regulations Part 182. Take includes, but is not limited to, incidental killing, adverse modification of occupied habitat or adverse impacts to essential behaviors.

An Article 11 Incidental Take permit is required for the proposed project. It is the Department's opinion that the project as currently proposed, will result in the incidental take of foraging habitat, and individual snakes from the creation of roadways, increased traffic and human occupation in an area of occupied timber rattlesnake habitat. Please be aware that the Department does not agree with the conclusions found in the DEIS related to adverse impacts to timber rattlesnakes or their habitat related reports, as well as the submissions to the Department to date.

As previously indicated and stated in the October 18, 2018 NOIA, based upon review of the Timber Rattlesnake Survey & Habitat Assessment prepared by North County Ecological Services, Inc., dated August 18, 2015 (and since revised and dated January 23, 2017), staff consider the property within 1.5 miles of the den to be occupied habitat under Article 11 Part 182. The areas outside of the basking/gestating habitats would be considered occupied foraging habitat for timber rattlesnakes and impacts to the species would need to be assessed based on project plans and appropriate impact avoidance and minimization measures. A

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mitigation plan is required as part of an Incidental Take permit application that ensures implementation of meaningful conservation measures and protections for the species resulting in a net conservation benefit upon permit issuance.

While the DEIS does not list an Article 11 Incidental Take permit required under 1.6 Required Approvals, incidental take permit related information has been submitted to the Department, under DEC ID # 3-3320-00150/00003. The application is incomplete, and technical comments can be found in the enclosed Notice of Incomplete Application, dated May 28, 2020, and within this DEIS comment letter. Please note additional comments are provided in this letter.

The following comments on the DEIS are related to overall clarifications needed, as well as technical comments regarding species related analyses.

Overall Project Related Disturbances and Comments Related to Timber Rattlesnakes:

- The DEIS is inconsistent in presenting what land area is being impacted. The project site is approximately 708.2 acres, and the DEIS includes a breakdown in percentage where 20% will be for residential lots, and 80% will be preserved as open space as dedicated parkland, and 10% as active recreation. Approximately 22 acres of the site would be reserved with no current plans for development. The DEIS does not provide a total area of disturbance, including temporary and permanent for all proposed infrastructure and construction. Temporary disturbance for infrastructure includes but is not limited to disturbance related to the installation of wells, the water tank, and associated access and infrastructure; and stormwater management related infrastructure.
- Figures 362a and 362b provided in Section 3.6 of the DEIS show impacts from the proposed development. However, these figures do not include the full proposed development and infrastructure as indicated in project plans found in DEIS Appendix A, and the figures, like the project plans, do not include the wells, access routes to the wells and the proposed water tower, as they exist or are proposed. The conceptual impacts within the 70.8-acre recreational area are not included in these plans and it appears that the storm water infrastructure is also missing. Therefore, it appears that the DEIS does not contain the full project limits of disturbance included in Section 3.6. This may indicate that impacts may be greater than indicated in DEIS documents. Based on these figures and information provided in the DEIS, the impact of the project would be 178.8 acres. Calculations of acres of impacts should be based on full project limits of disturbance. Plans showing all disturbance, including that for grading, stormwater infrastructure, water infrastructure, the area of water tower, wells and access routes are needed.
- As noted above, in Section 3.6 of the DEIS, the impact from the project is 178.8 acres, but this total area does not appear to include all temporary and permanent disturbances. In addition, Section 3.6 in the DEIS includes Proposed Impacted Ecological Community maps, and projected acreages of impact for each ecological community type (found within the proposed limits of clearing), shown on Table 364. Table 364 shows a total of 178.7 acres of areas to be impacted, tallied by existing ecological community types, however, the calculated total acreage appears to be incorrect, where the total is 198.7 acres.

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- As also noted above, a certain percentage of the site will remain undeveloped. Project plans indicate that 413 acres of 'passive open space' are currently allotted after removing the 60.2 acres of 'parkland' (proposed to be given to the village) and 70.8 acres of 'active recreation land open space'. However, no information is provided on how or if any areas indicated as 'open space' on the project plans would be protected long term, such as through conservation easements. While the open space areas would be preserved through restrictive declarations and the HOA bylaws in accordance with Village Code, it is not clear if this will lead to protections for timber rattlesnakes or from future development on those lands. The Department would recommend a conservation easement be put in place for areas of 'open space'. The Department would also request to review easement language.
- The present conditions plan shows wells and access routes to wells in the 'open space' area. It is not clear if other site infrastructure, such as stormwater basins or grading, will impact the areas currently shown as open space on the project plans. Plans provided show these features outside of individual tax lots and in the area labeled as 'open space'. There is also a water tower access road and water tower proposed in the 'open space' parcel. All of these additional developed or disturbed areas need to be accounted for in the timber rattlesnake foraging habitat, and are thus greater than 142 acres as indicated in the breakdown of developed land and open space found in the plans sheets and the 178 acres (or 198.7 acres as outlined above) in section 3.6.
- The current plans in Appendix A cut off areas of impact found in the 'open space' parcel east/southeast of the main subdivision development. For example, E 14 cuts off areas of grading, not showing when the phasing for work on the wells and water tower would take place, as does plan E 8. Plan WA 1 does show the exploratory work already completed on the site related to the installation of wells, as well as the proposed work related to access roads and the water tower. Also, on WA 1, while topographic lines are shown, the evaluation labels are not. Limits of disturbance is not shown on WA 1 or other over all site plans, as also mentioned above.
- As indicated in Department correspondence as early as 2014, the project falls in what is considered occupied habitat for Timber Rattlesnakes. In 2014 and 2015, project consultants received correspondence from Lisa Masi, the Department's Senior Wildlife biologist, in reference to conducting surveys on the property for timber rattlesnakes. To summarize, the correspondence indicated that visual surveys do not require special licensing from the Department and that the goals of the surveys would dictate what the best survey methods would be. The Department also indicated that following general presence absence survey methods would not change the Department's determination that the site is considered occupied habitat. Timber rattlesnake guidelines were provided, and it was suggested that methods used be approved by the Department before undertaking the surveys. In addition, the Department also pointed to the need to characterize timber rattlesnake habitats on the site to evaluate impacts from the proposed project to that species. Information provided did not consider foraging habitat. Again, the DEIS is inconsistent in presenting what land area is being impacted, and the Department considers more habitat on site than has been evaluated. The whole site falls in what would be considered occupied habitat by the Department and since impacts from the project are not clear, the full extent of impacts to timber rattlesnake habitat has not been addressed in the DEIS.

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- Several test wells were installed for this project to determine if adequate water supply existed between 2013 and 2016. Wells C-21 and C-23 and associated roads and access routes should be included in the review of impacts to timber rattlesnake habitat for the project. The location of C-21 and C-23 fall within 1000 ft of the known timber rattlesnake basking habitats. According to the DEIS descriptions of habitat, the areas of wells C-21 and C-23 is thus close to the acidic talus situated between the Chestnut oak forest and the Oak-Tulip tree forest communities which predominately occurs between elevations of 1020ft and 1240ft, (page 3.6.5). While the DEIS states that there is no development in timber rattlesnake habitat, these wells are within what has been described by the DEIS materials as habitat and should be addressed in the DEIS and impact assessment calculations accordingly.
- The same section, page 3.6-9 of the DEIS also indicates that basking, foraging and denning habitats would be found only above 940 ft in elevation. This area contains optimal foraging, basking and shedding habitat for the species, but would not be the only area considered foraging habitat or occupied on the site. Again, as stated above, these areas of habitat overlap with two the project's wells and well infrastructure areas and should be considered part of the overall project. Thus, impacts from use of the roads to access and maintain the wells and any related infrastructure to move water downslope, need to be further reviewed and included in habitat and other take analysis for timber rattlesnakes. Appropriate take minimization measures would also be needed for this area and use of the wells. The Department is still of the opinion that the entire site, found within 1.5 miles of a known, extant, den would be considered foraging habitat.
- The DEIS does not include any discussion of impacts to timber rattlesnake from development and occupation of the project. The information provided in the current DEIS does not consider timber rattlesnake habitat below 940 ft in elevation, thus there is no discussion of impacts to the species from the proposed development and use of the site as a residential community. As mentioned earlier, the Department does not agree with the applicant's review and estimation of habitat on the site and considers the site occupied foraging habitat, including the areas proposed for development that were once the Lake Ann Golf and Country Club. Timber rattlesnakes can travel 1.5 miles or more from den locations during the summer months. History of snake observations and encounters in the area would indicate that timber rattlesnakes travel below 940ft in elevation and can enter the proposed development area. The applicant does not include any mention of avoidance, minimization or potential mitigation for loss of habitat and future impact to the snakes from new roads, houses and occupation by 600 families.
- In Addition to the information found in Appendix C Natural Resources report dated 2017, and the DEIS section 3.6, the Department has also reviewed a 2006-2007 Timber Rattlesnake Report for the property prepared by Randy Stechert in 2008. In this report, timber rattlesnakes were noted in the documented basking habitats adjacent to the site, as well as one individual snake found near the old golf course, a female snake found on July 14, 2008. In this report, Mr. Stechert also indicates that a number of timber rattlesnakes have been moved from the neighboring residential developments by himself and other nuisance timber rattlesnake responders over the years.

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- The Department did receive, under separate cover, a response to comments letter that did include some standard take avoidance measures used to reduce impacts with individual snakes that may enter the project area during construction. While some incidental take avoidance measures for reducing the chances of impacts to individuals are proposed for the project construction, take of habitat is not addressed in this submission. Outside of construction, long term and permanent impacts to timber rattlesnakes from use of the site has not been included. Development of roadways and residential housing pose a threat to timber rattlesnakes. Steps to reduce negative conflicts with residents are needed. Currently no plan for educating occupants of the development has been proposed. A plan for minimizing the creation of inadvertent snake foraging and basking habitats are also needed. In the advent event a foraging snake would be found in the development, post construction, a basic encounter plan should be provided to residents. Since an HOA is proposed, information related to Timber Rattlesnakes could be provided to homeowners through this avenue. This information should be included in the overall projects' assessment of impacts.
- While some take avoidance and minimization measures have been described, information related to how such measures will be carried forward and enacted during the project, and a way to ensure the methods proposed would be carried out successfully and be protective of timber rattlesnakes, has not been provided. In addition to those measures already provided under separate cover, additional take avoidance and minimization measures would be required for the water supply operation and maintenance, as well as any needed infrastructure construction not discussed in the DEIS.
- In Summary, the Department does not agree with the conclusions found in the DEIS related to adverse impacts to timber rattlesnakes or their habitat based on the information presented in the DEIS, related reports, and submissions to date. The Department has asked the applicant to produce an application for an Article 11 Incidental Take permit to further review the details of the project's impacts and produce a mitigation plan that would ensure implementation of meaningful conservation measures and protections for the species resulting in a net conservation benefit upon permit issuance. To date, a complete application has not been provided.

Northern Long-eared bats: Northern long-eared bat (NLEB) is a New York State threatened species. The DEIS includes the appropriate acceptable work window to avoid impacts to this species, November 1st to March 31st. However, there is no mention of this take avoidance measure in project plans. Project plans need to include a plan note that describes the acceptable work window to avoid impacts to both bat species.

Indiana Bat: Indiana Bat is a New York State listed endangered species.

All impacts from the project related to Indiana bat have not been adequately analyzed and/or addressed. Since the project will result in greater than 10 acres of tree removal, a review of impacts to habitat, including an analysis of change in percent forest cover within 2.5 miles of the known Indiana bat hibernacula, and indirect impacts to the species related to noise, lighting, chemical use, dust, etc. should be conducted. An analysis was conducted for the proposed changes in ecological community type found on the Clovewood site, but a review of impacts is needed for all areas within 2.5 miles of the known Indiana bat hibernacula to determine overall change in percent forest cover for the area, and not just for the proposed project site.

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Section 3.6 in the DEIS includes Proposed Impacted Ecological Community maps, and projected acreages of impact for each ecological community type (found within the proposed limits of clearing), shown on Table 364. Table 364 shows a total of 178.7 acres of areas to be impacted, tallied by existing ecological community types, however, the calculated total acreage appears to be incorrect, where the total is 198.7 acres. According to the table, woodland and forest categories (forested habitat) to be impacted total 15.2 acres of Oak-tulip tree forest and 157.3 acres of Successional So. Hardwoods, for a total of 172.5 acres. The remaining is 26.2 acres of successional old field, which brings the overall total of acres to be impacted to 198.7. While the table shows impacts to each community type on site with the proposed limits of clearing, the analysis is not based on percent forest cover within 2.5 miles of the known Indiana bat hibernacula. The Department can provide a center point for the analysis upon request.

The DEIS includes the appropriate acceptable work window to avoid impacts to this species, November 1st to March 31st. However, there is no mention of this take avoidance measure in project plans. Project plans need to include a plan note that describes the acceptable work window to avoid impacts to both bat species.

Article 17, Titles 7,8, 6 NYCRR Part 750-1 – State Pollutant Discharge Elimination System (SPDES) Stormwater for the proposed Clovewood project on approximately 708 acres, however, it is unclear from the information submitted how many acres are proposed for overall temporary and permanent disturbance. The DEIS states that the overall project would involve the development of 600 residential lots/homes clustered on 20% of the Project site (140 +/- acres), however, temporary disturbance associated with the entire project is unclear. As noted above, a total disturbance area for the project which includes temporary and permanent disturbances is required.

According to the DEIS, a waiver allowing 15 acres of disturbance at any one time will be requested.

Section 401 Water Quality Certification- The DEIS states that Nationwide Permit #29 Residential Developments and/or Nationwide Permit #33 Temporary Construction, Access and Dewatering for the crossing of ephemeral streams may be required. Please note that if the project cannot comply with the general conditions and the designated special conditions listed for each Nationwide Permit under New York State's Section 401 Blanket Water Quality Certification, an Individual Section 401 Water Quality Certification would be required.

Article 24 Freshwater Wetlands – The DEIS states that there are 34.98 acres of wetlands on site. Figure 381, Clovewood Wetlands Map, and Figure 382, Clovewood Composite Image, shows on-site wetlands with the proposed development areas. It is not clear from the plans in Appendix A or the Post Developed Drainage Map if grading associated with development or stormwater management features are located greater than 100 feet from DEC-eligible wetland areas. The wetlands on site are eligible to be mapped and regulated by New York State under Article 24 of the Environmental Conservation Law. Eligible wetlands that meet the regulatory criteria but are not shown on the regulatory maps should be afforded the same level of protection as the wetlands that are currently on the regulatory map. Unavoidable impacts such as for access to unregulated areas must be minimized and mitigated to the maximum extent practicable.

**RE: Clovewood
Village of South Blooming Grove, Orange County
DEC Application ID No. 3-3320-00150/00001,2,3
Comments on Draft Environmental Impact Statement**

Article 15 Protection of Waters – Trib of Slattery Creek, Waters Index Number H-89-17-4, Class C; and Subtribs of Slattery Creek, Waters Index Number H-89-17-4-1,2,3, Class C, are located on the project site. These are “non-protected” waterbodies. A Protection of Waters permit is not required to disturb the bed or banks of “non-protected” streams.

If a permit is not required, please note, however, you are still responsible for ensuring that work shall not pollute any stream or waterbody. Care shall be taken to stabilize any disturbed areas promptly after construction, and all necessary precautions shall be taken to prevent contamination of the stream or waterbody by silt, sediment, fuels, solvents, lubricants, or any other pollutant associated with the project.

If you have any questions please contact me at 845-256-3059, or via email at tracey.omalley@dec.ny.gov.

Best Regards,

Tracey O'Malley
Deputy Regional Permit Administrator

Ecc. Clerk@villageofsouthbloominggrove.com
Keen Equites, LLC; YCR@Windsorglobal.com
Simon Gelb, gelbsimon@gmail.com
Stacy Stieber, CPG, PG(NY) – LBGHS; stacy.stieber@wsp.com
Manju Cherian, Division of Water DEC R3
Aparna Roy, Division of Water DEC R3
Erik Schmitt, Division of Water CO
Lisa Masi, Bureau of Wildlife DEC R3
Mike Fraatz, Bureau of Ecosystem Health DEC R3
Orange County Department of Health

December 7, 2021

Tracey O'Malley, Deputy Regional Permit Administrator
NYS Department of Environmental Conservation
Division of Environmental Permits, Region 3
21 South Putt Corners Road, New Paltz, NY 12561

**Re: Clovewood
Village of South Blooming Grove, Orange County
DEC Application ID No. 3-3320-00150/00001,2,3**

Ms. O'Malley,

Enclosed please find our responses to the NYSDEC Comment Letter dated May 28, 2020 Entitled Notice of Incomplete Application as well as the NYSDEC Comment Letter dated May 28, 2020 on the DEIS, along with the following five attachments to the letters:

- Attachment 1: Potential Details of Permanent and Temporary Exclusionary Fencing
- Attachment 2: Response Prepared by the Project's hydrogeologist WSP
- Attachment 3: Water Works Formation Documentation
- Attachment 4: Sewage Works Formation Documentation
- Attachment 5: Response Prepared by the Project's wastewater engineer HDR

We are also submitting the following applications and/or documentation related to the Clovewood Project:

- Exhibit 1: The Project's Joint Application Form (JAF)
- Exhibit 2: Article 11 Incidental Take Permit Application and Mitigation Plan
- Exhibit 3: Implementation Agreement
- Exhibit 4: Proposed Declaration of Restrictive Covenants and Map
- Exhibit 5: PCI Discharge of Treated Sanitary Waste Application
- Exhibit 6: Marked WTC Form

Please contact us if you should require any further clarification. We look forward to working with you during the permit process.

Respectfully,



Simon Gelb
gelbsimon@gmail.com

December 7, 2021

Tracey O'Malley, Deputy Regional Permit Administrator
NYS Department of Environmental Conservation
Division of Environmental Permits, Region 3
21 South Putt Corners Road, New Paltz, NY 12561

**Re: Clovewood
Village of South Blooming Grove, Orange County
DEC Application ID No. 3-3320-00150/00001,2,3
Notice of Incomplete Application**

Dear Ms. O'Malley:

Below please find responses to your NOIA letter dated 5/28/20.

Article 11 Incidental Take Permit (ID No. 3-3320-00150/00003)

The Project has been updated to include appropriate impact avoidance and mitigation measures regarding Timber Rattlesnakes. Included with these responses are the Project's JAF (Exhibit 1), an Article 11 Incidental Take Permit (ITP) application and Mitigation Plan (Exhibit 2), and Implementation Agreement (Exhibit 3). The FEIS added the requirement of the Incidental Take Permit.

The FEIS clarifies the Project Site falls in what would be considered potential occupied and foraging habitat. The Project would avoid impacts to basking, shedding, gestating, and denning habitat and the Project would preserve 270 acres of this viable habitat (209 acres on-site and 61 acres off-site), via a formal Declaration of Restrictive Covenants, which would adequately mitigate potential impacts to occupied foraging habitat of the Project Site and would result in a net conservation benefit for the species. The proposed Declaration of Restrictive Covenants (Exhibit 4) is summarized in the response letter to Comments on the DEIS submitted along with these responses.

The Mitigation Plan sets forth measures to be implemented to reduce potential impacts during and after construction including Education and Encounter Plan, Sighting Protocol, Exclusionary Fencing, and Snake Monitor as follows.

Education and Encounter Plan. The Education Plan included in the Incidental Taking Permit Application would be presented by North Country Ecological Services (“NCES”) Staff to the contractors prior to the initiation of construction activities and when snakes are active (April-October), so that crews working on the project are knowledgeable about the regulatory requirements regarding Timber Rattlesnakes. The Education Plan identifies routine procedures for snake encounters and how to safely protect themselves and the snake during an encounter. NCES would work with DEC to develop a procedure for safe capture, handling, and relocation of a snake if one should be encountered and requires removal. In addition, the residents of the Project would be provided with an Education & Encounter Plan so they know how to identify common snake species, how to avoid snakes, and what to do if a snake is encountered. The HOA will distribute the Plans to the residents when they move into the development and provide reminder notices periodically. The proposed Education and Encounter Plans is attached for your review.

Sighting Protocol. The Education and Encounter Plan included in the Incidental Taking Permit Application would be posted in the on-site Project construction trailer. This would define the procedures to be followed should a snake be encountered on the Project site. NCES staff, or a member of the contractor’s crew (who has attended the required Education Plan presentation) would be responsible for implementing the encounter plan. If NCES is unavailable, a list of other qualified personal that can handle individual snakes would be posted.

Exclusionary Fencing. Should the NYSDEC require exclusionary fencing, during the months of April-September, such temporary exclusionary fence would be installed around active construction work areas to prevent individual snakes from entering work areas during construction. This fencing would be as documented in the DEC’s *Guidelines for Reviewing Projects for Potential Impacts to the Timber Rattlesnake* and is inclusive 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 and secured at the base (barrier/ground interface) with at least 6” of fence material covered with soil backfill, in accordance with NYSDEC guidance.

If required by NYSDEC, a permanent 6’ tall PVC barrier fence (with the lower 6-12” of the fence being buried into the ground) would be installed along the southeast side of the Project to separate the housing development from the preserved area and act as a permanent barrier for snakes from entering the development area. The PVC fence would extend from the northern and southern property lines and extend along the backside of the development.

Attachment 1 contains drawings of the potential details of permanent and temporary exclusionary fencing, if required by NYSDEC.

Snake Monitor. The responsibilities of the Snake Monitor would include the implementation of the current education and encounter plan, education of the on-site contractors, conduct surveys for snakes within the work area prior to the initiation of any disturbance activities, daily monitoring of exclusionary fencing if required by NYSDEC to make sure such exclusionary fencing is installed (or repaired/replaced where needed), and documentation of all encounters with snakes. The Snake Monitor shall be on-site daily while construction activities are ongoing. Once construction is completed, the Snake Monitor is no longer needed. The Snake Monitor is not required during the winter months (October – April) of any construction year, as that is when snakes are in the hibernacula for the winter.

NCES re-consulted with DEC Natural Heritage Office (NHO) and USFWS in an effort to obtain the latest information and to ensure that no new records of occurrence have been identified on, or within the immediate vicinity of the Project. Based on the information obtained from the NHO it was determined that the Natural Heritage Database does not possess any new records of occurrence of any state-listed endangered, threatened, or rare species or habitats. In addition, the response information obtained from the USFWS documents the same species as previously disclosed in the prior reports. Therefore, no new records of occurrence of federally-listed species have been documented.

Article 15 Water Withdrawal (WWA No. 12,422) (ID No. 3-3320-00150/00002)

1. Please refer to the response prepared by the Project’s hydrogeologist WSP in Attachment 2.
2. We submitted the water works formation documentation to the DEC on 11/25/20 and is attached hereto in Attachment 3.

State Pollution Discharge Elimination Program – Wastewater (ID No. 3-3320-00150/00001)

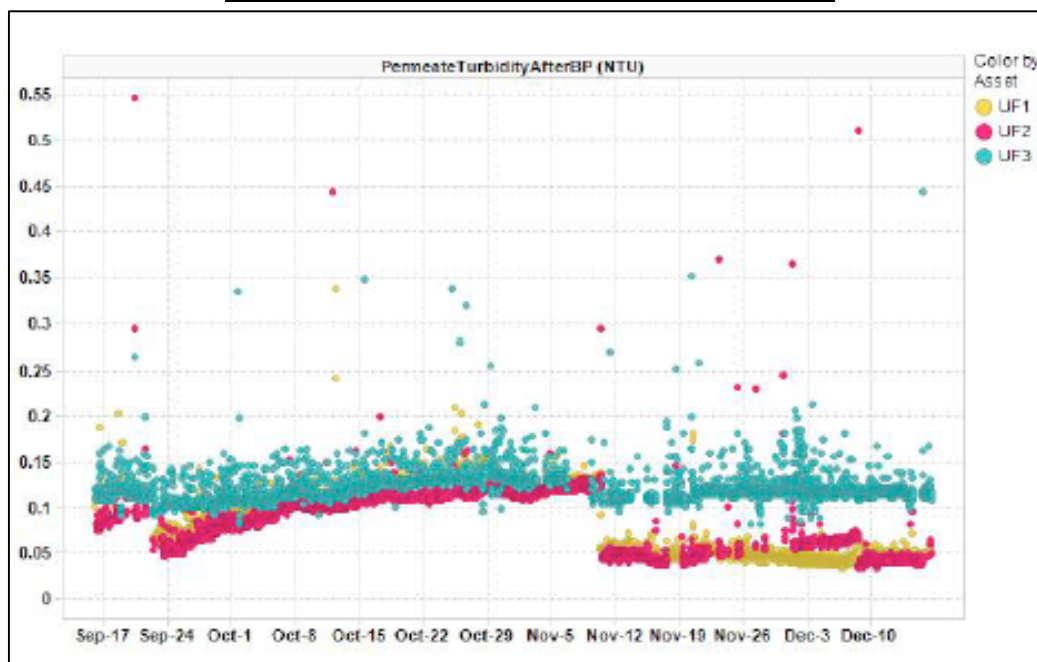
1. Please see attached the P/C/I Discharge of Treated Sanitary Waste application in Exhibit 5. We submitted the sewage works formation documentation to the DEC on 11/25/20 and it is attached hereto in Attachment 4.
2. The proposed outfall location of the Clovewood Wastewater (“WWTP”) is an unnamed tributary to Satterly Creek. The outfall latitude and longitude is 41°22'41.98"N and 74°10'15.32"W. Final outfall location would be verified during the detailed design but it is expected to be within the vicinity of the coordinates provided.
3. The Project is not proposing a swimming pool but wellness facilities may be provided depending upon the desires of the residents of the new development.

4. The 33.14 outfall WTC concentration value was listed in error under item 8b in the WTC form. The 33.14 mg/L is the aluminum sulfate (alum) concentration at the dosing point at the influent to MBR microfiltration system. The outfall WTC concentration should have been listed as 0.3314 mg/L under item 8b matching the 0.3314 mg/L value listed under item 10d for outfall concentration (see attached marked WTC Form in Exhibit 6).

The 33.14 mg/L is an estimated alum concentration for the influent to the proposed MBR treatment microfiltration system and is calculated based on the average flow and dosage (0.28 mgd and 77.4 mg/l dosage). The ZW500d membrane used in the proposed MBR applications has a pore size of 0.04 microns. The ultrafiltration membrane would remove essentially all TSS particulate and colloidal particles larger than the pore size, including precipitates of aluminum sulfate coagulation.

The turbidity results below are provided by SUEZ (MBR manufacturer) for the Fallsburg, NY MBR system for effectiveness of TSS removal. This is the same MBR treatment technology proposed for the Clovewood development. The data was collected between September to December of 2020. Fallsburg has three (3) MBR trains that operate in parallel. As evident by the collected data and provided in the figure below, the turbidity is consistently below 0.2 NTU confirming a high degree of TSS removal by an MBR system.

Figure - Fallsburg, NY MBR Turbidity Data



In addition, MBR modelling completed by SUEZ using EnviroSim Biowin indicates that more than 99% of the alum dose would be reacted with phosphorus as aluminum phosphate and would be removed by the ultrafiltration membranes as waste activated sludge.

Recognizing the pore retention size of the membranes in the MBR system and low turbidity levels demonstrated for a similar system to the one being proposed and the MBR modeling results by SUEZ, the alum concentration being added to precipitate phosphorus is expected to be reduced by at least 99% reducing the feed concentration of 33.14 mg/L to 0.3314 mg/L in the effluent after microfiltration in the MBR system.

The 0.3314 mg/L concentration is considered for permitting for outfall limit for aluminum sulfate since the effluent concentration through a MBR process is expected to be less than the permitted level based on MBR ultrafiltration membrane technology, turbidity and TSS data provided, and modeling results shared by SUEZ.

5. The Project is not proposing a swimming pool but wellness facilities may be provided depending upon the desires of the residents of the new development.

6. Please refer to the response prepared by the Project's wastewater engineer HDR in Attachment 5 in this regard.

Freshwater Wetlands

A total of 34.98+- acres of wetlands (i.e. Waters of the U.S.) are present on the Project Site that are regulated by the United States ACOE; 23.03+- acres of those 34.98+- acres of wetlands are also eligible to be regulated by the DEC. These 23.03 acres are surrounded by a 100-foot adjacent area that is also eligible to be regulated under Article 24 of the Freshwater Wetlands Act. The goal of the Project is to treat the eligible wetlands as if they were mapped NYSDEC wetlands.

The development has been designed to avoid these State eligible wetlands and their 100-foot adjacent area. There are no impervious improvements, stormwater management facilities or proposed grading within the eligible wetlands and their 100-foot adjacent area. There is one area of proposed disturbance to an eligible adjacent area that involves the installation of a sewer force main. This would be a temporary disturbance and the force main route is already disturbed and has historically been, and continues to be, used as a dirt access road to the Project Site.

Present on the Project Site are also waters of the United States as regulated by the ACOE. These consist of wetland areas and ephemeral and intermittent streams. Wetland areas have been afforded the same protections as state eligible wetlands to the greatest extent possible; that is there is no disturbance to the actual wetland and a 100-foot buffer has been provided where possible. With regard to the streams, all crossings are designed as open bottom structures that will "bridge" the water body. This results in an overall impact to streams beds of less than 300 linear feet thereby qualifying the project for blanket Water Quality Certification under Nationwide Permit #29.

C • P • C

Please contact us if you should require any further clarification. We look forward to working with you during the permit process.

Respectfully

A handwritten signature in cursive script that reads "Simon Gelb". The signature is fluid and extends to the right with a long, sweeping tail.

Simon Gelb
gelbsimon@gmail.com

December 7, 2021

Tracey O'Malley, Deputy Regional Permit Administrator
NYS Department of Environmental Conservation
Division of Environmental Permits, Region 3
21 South Putt Corners Road, New Platz, NY 12561

**Re: Clovewood
Village of South Blooming Grove, Orange County
DEC Application ID No. 3-3320-00150/00001,2,3
Comments on the DEIS**

Dear Ms. O'Malley:

Below please find responses to your Comments on the Clovewood DEIS dated 5/28/20.

Article 15, Title 5, 6 NYCRR 601 – Water Withdrawal (ID No. 3-3320-00150/00002)

Please refer to the response prepared by the Project's hydrogeologist WSP in Attachment 2.

Article 17, Titles 7,8, 6 NYCRR Part 750-1 – State Pollutant Discharge Elimination System (SPDES) Wastewater (ID No. 3-3320-00150/00001)

The proposed outfall location of the Clovewood Wastewater ("WWTP") is an unnamed creek and/or flow path tributary to Satterly Creek. The outfall latitude and longitude is 41°22'41.98"N and 74°10'15.32"W. Final outfall location would be verified during the detailed design but it is expected to be within the vicinity of the coordinates provided.

Please refer to the response prepared by the Project's wastewater engineer HDR in Attachment 6 in regard to the potential backwash.

Article 11, 6 NYCRR Part 182 – Incidental Take Permit (ID No. 3-3320-00150/00003)

Overall Project Related Disturbances and Comments Related to Timber Rattlesnakes:

The Project has been updated to include appropriate impact avoidance and mitigation measures regarding Timber Rattlesnakes. Included with these responses are the Project's JAF (Exhibit 1), an Article 11 Incidental Take Permit (ITP) application and Mitigation Plan (Exhibit 2), and

Implementation Agreement (Exhibit 3). The FEIS added the requirement of the Incidental Take Permit. The Mitigation Plan sets forth measures to be implemented to reduce potential impacts during and after construction including Education and Encounter Plan, Sighting Protocol, Exclusionary Fencing, and Snake Monitor and is summarized in the response letter to the NOIA submitted along with these responses.

The Clovewood FEIS clarifies the Project Site falls in what would be considered potential occupied and foraging habitat. The Project would avoid impacts to basking, shedding, gestating, and denning habitat and the Project would preserve 270 acres of this viable habitat (209 acres on-site and 61 acres off-site), via a formal Declaration of Restrictive Covenants, which would adequately mitigate potential impacts to occupied foraging habitat of the Project Site and would result in a net conservation benefit for the species. Attached please find the proposed Declaration of Restrictive Covenants in Exhibit 4 for your review.

The land encompassed within the Restrictive Covenants is comprised of the Acidic Talus Slope Woodland, Chestnut Oak Forest, Oak-Tulip Tree, and Successional Southern Hardwood Forest communities. These ecological communities provide suitable denning, basking, shedding, gestating, and foraging habitat for Timber Rattlesnakes. The Restrictive Covenants lands are also contiguous with other undisturbed and unfragmented forested communities that contain suitable habitat and which are found along the Schunnemunk Mountain Ridge and within the adjacent state park lands. The Restrictive Covenants results in the establishment of a large, contiguous, unfragmented expanse of forested habitat that abuts Schunnemunk Mountain State Park, which is located to the southeast of the Site. Additionally, other undeveloped forested habitats conducive to the presence of rattlesnakes are also located within Earl Reservoir Park, which is located to the northeast of the Site. The preservation of this land coupled with the unfragmented forested habitats that are located in the adjacent parks, would maintain a large, contiguous area of land that would provide substantial, viable habitat for the rattlesnakes.

Wells C-21 and C-23, located within the Restrictive Covenants area, would require access for maintenance and repair at times. The well locations would be accessed using the existing trails. The trails leading to the wells and the pump house would be gated and locked. Only those personnel required to access the wells and pump house would have access to the areas. Routine yearly maintenance of the access roads, the wells, and pump house would be scheduled from September through April when the rattlesnakes are denned for the winter. This would minimize the likelihood of an encounter along the roads or at the wells. If emergency maintenance is required during the summer months, the personnel would be provided with the Education and Encounter Plan so they are educated on how to safely react with an encounter. Minor upgrades to the roads would be required such as installing fabric and gravel to firm up the roads where needed. No paving of the roads is proposed. The roads leading to the wells would only be traveled on for

maintenance purposes on an “as needed” basis to reduce incidental encounters with Timber Rattlesnakes.

The FEIS also clarifies the Project total area of disturbance which would be 252± acres (35.6% of the entire 708 acres Project Site) including 4.7 acres of temporary disturbance and 247.3 acres of permanent disturbance. The proposed disturbance areas are detailed below in Table 1 and shown in Figure 5 of the Incidental Take Permit in Exhibit 2. The proposed development is predominantly located within the portion of the property that has been previously cleared, graded, and partially developed for the former Lake Ann Country Club and Golf Course. By limiting the proposed development to previously developed lands, impact to the undisturbed forested habitats found on the property are minimized. The revised Site Plans clearly show the lands proposed to be disturbed and the lands that would remain undisturbed.

Table 1: Clovewood: Ecological Community Type Table					
Ecological Community Type	Overall Size	Permanent Impact Proposed	Temporary Impact Proposed	Overall Impact Proposed	Percent Impacted
Acidic Talus Slope Woodland	68.18± Acres	None	None	None	0%
Chestnut Oak Forest	43.00± Acres	None	None	None	0%
Oak-Tulip Tree Forest	164.30± Acres	04.00± Acres	None	4.00± Acres	2%
Successional Hardwood Forest	286.15± Acres	195.30± Acres	None	195.30± Acres	68%
Successional Old Field	65.40± Acres	33.40± Acres	03.80± Acres	37.20± Acres	57%
Successional Shrub Land	25.63± Acres	01.80± Acres	00.40± Acres	02.20± Acres	8%
Palustrine Forested Wetland	14.31± Acres	None	None	None	0%
Palustrine Scrub-shrub Wetland	10.74± Acres	None	None	None	0%
Palustrine Emergent Wetland	05.47± Acres	None	None	None	0%
Artificial Pond	04.46± Acres	None	None	None	0%
Existing Res. Development	20.53± Acres	12.80± Acres	00.50± Acres	13.30± Acres	65%
Rocky Headwater Stream	22,640± Linear Feet	295± Linear Feet	None	295± Linear Feet	1%
Totals	708.17± Acres	247.30± Acres	4.70± Acres	252.00± Acres	35.60%

The erosion control plans have been revised to depict a disturbance limit line that encapsulates all areas of proposed clearing and disturbance. With regard to the well access roads, the wells currently exist and the construction phasing plan is depicted on sheet e14 of the Project’s Site Plan. Although this sheet does not show the actual wells themselves, it does identify what phase the work associated with the wells would be completed in (i.e. phase 11, warface 22). With regard to the well access road plan, the topography has been removed for clarity so the elevation labels are no longer applicable.

Northern long-eared bats:

The revised Site Plan includes a note that provides that the work window, e.g. seasonal limitation, for tree removal is from November 1st to March 31st.

Indiana Bat:

Based on the information obtained from the National Land Cover database, there are approximately 6,228 acres of forested habitat that is found within 2.5 miles of the known Indiana Bat hibernacula, which is not located on the Project Site. According to the Project's plans, a total of 199.3 acres of forested habitat would be impacted within that same 2.5-mile radius by the Project. This results in an impact of only 3.2% of the entire amount of forested habitat that is found within 2.5 miles of the hibernacula. Please note that the Project would preserve 270 acres of land (209 acres on-site and 61 acres off-site) consisting of forested habitat, which would be permanently protected by the placement of deed restrictions. The land, located on portions of the Project Site and adjacent areas in the Town of Blooming Grove, is being established to protect the timber rattlesnake habitat and to provide a net conservation benefit.

Indirect impacts relative to noise, lighting, chemical use, dust, etc., have been evaluated by the Applicant and studies have been conducted by the respective professionals and summarized through their respective sections in the Project's Environmental Impact Statement. Noise should not exceed existing ambient noise levels on NYS Route 208 and NYS Route 17M from vehicular traffic. In regard to dust, the Project Site would be inspected weekly by a stormwater inspection. Additionally, the contractor would maintain staff trained in erosion control methods on-Site. A water truck will be kept on-Site and areas will be sprayed, as necessary, to control dust. All street lights would be downward facing LED light with sharp cut-off shields and therefore would not adversely impact the species due to lighting.

Any herbicides and pesticide applications required after the project is completed would be conducted by a certified and licensed lawn care company and pest control company. As a result, the application of herbicides and pesticides would not have a negative effect upon ecological communities on or adjacent to the property.

As mentioned above, the total area of disturbance would be 252± acres (35.6% of the entire 708 acres Project Site) including 4.7 acres of temporary disturbance and 247.3 acres of permanent disturbance. The proposed Project Area, as well as the permanent and temporary disturbance area are shown in Table 1 above. Of the overall impact proposed, 199.3± acres of impact are to occur within forested habitats. Based on the impact assessment provided above, the impact of 199± acres is only 3.2% of the entire amount of existing forested habitat that is located within 2.5 miles of the documented bat hibernacula.

The revised Site Plan includes a note limiting the work window, e.g. seasonal limitation, for tree removal from November 1st to March 31st.

Article 17, Titles 7,8, 6 NYCRR Part 750-1 – State Pollutant Discharge Elimination System (SPDES)

As mentioned above, the FEIS clarifies the total area of disturbance.

Section 401 Water Quality Certification

It is understood that if the project does not comply with the general or special conditions listed under the nationwide permits an individual section 401 water quality certification would be required. In consideration of this the project has been designed to conform to nationwide permit number 29.

Article 24 Freshwater Wetlands

A total of 34.98+- acres of wetlands (i.e. Water of the U.S.) are present on the Project Site that are regulated by the United States ACOE; 23.03+- acres of those 34.98+- acres of wetlands are also eligible to be regulated by the DEC. These 23.03 acres are surrounded by a 100-foot adjacent area that is also eligible to be regulated under Article 24 of the Freshwater Wetlands Act. The goal of the Project is to treat the eligible wetlands as if they were mapped NYSDEC wetlands.

The development has been designed to avoid these State eligible wetlands and their 100-foot adjacent area. There are no impervious improvements, stormwater management facilities or proposed grading within the eligible wetlands and their 100-foot adjacent area. There is one area of proposed disturbance to an eligible adjacent area that involves the installation of a sewer force main. This will be a temporary disturbance and, in any event, the force main route is an already disturbed area of the Project Site that has historically been, and continues to be, used as a dirt access road to the Project Site.

Present on the Project Site are also waters of the United States regulated by the ACOE. These consist of wetland areas and ephemeral and intermittent streams. Wetland areas have been afforded the same protections as state eligible wetlands to the greatest extent possible; that is there is no disturbance to the actual wetland and a 100-foot buffer has been provided where possible. With regard to the streams, all crossings are designed as open bottom structures that will “bridge” the water body. This results in an overall impact to streams beds of less than 300 linear feet thereby qualifying the project for blanket Water Quality Certification under Nationwide Permit #29.

Article 15 Protection of Waters

Comment Noted. Care would be taken by the Project to stabilize any disturbed areas promptly after construction, and all necessary precautions would be taken to prevent contamination of the

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stream or waterbody by silt, sediment, fuels, solvents, lubricants, or any other pollutants potentially associated with Project.

Please contact us if you should require any further clarification. We look forward to working with you during the permit process.

Respectfully,

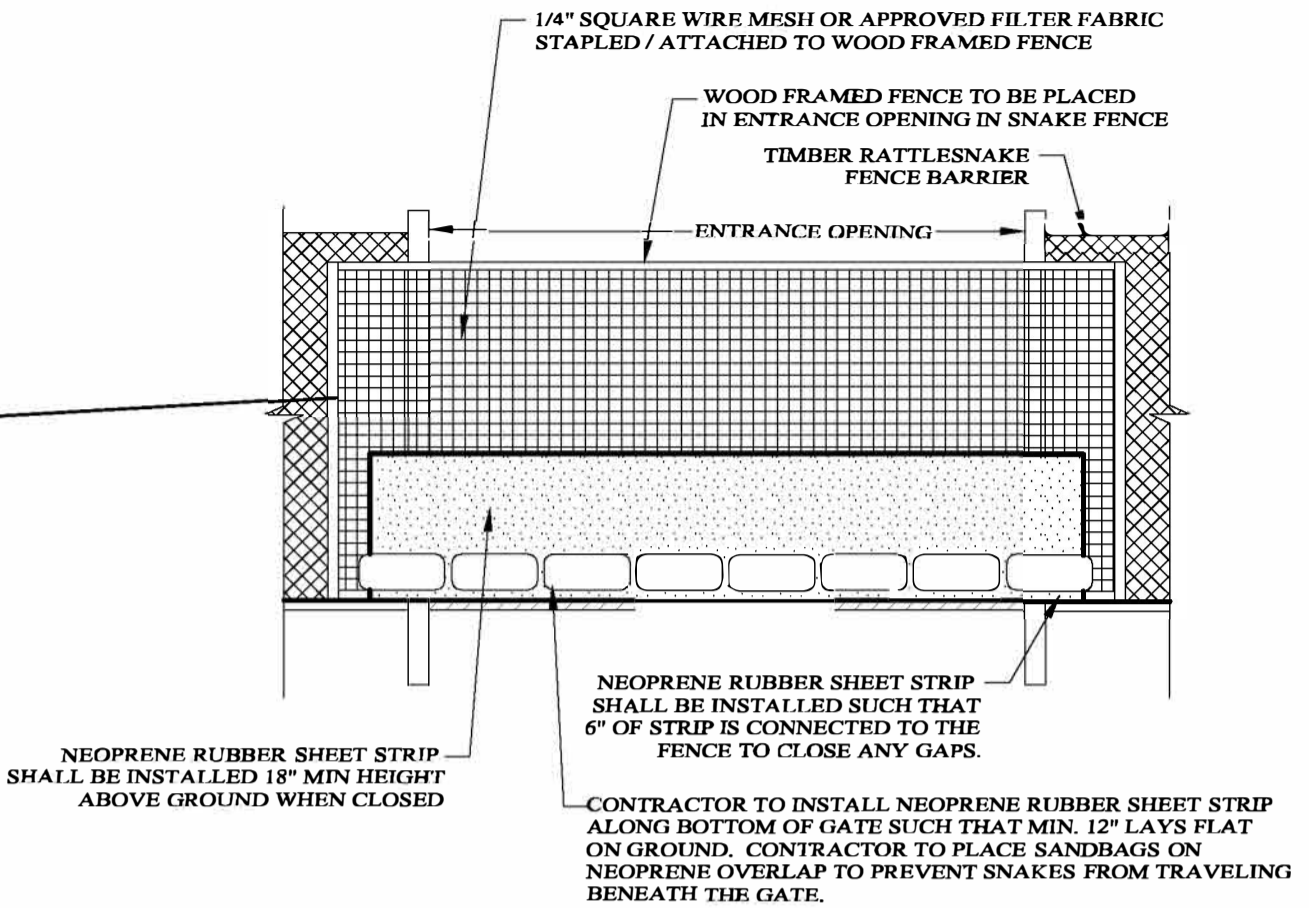


Simon Gelb
gelbsimon@gmail.com

Attachment 1

Potential Details of Permanent and Temporary Exclusionary Fencing

Potential Temporary Exclusionary Fencing Details

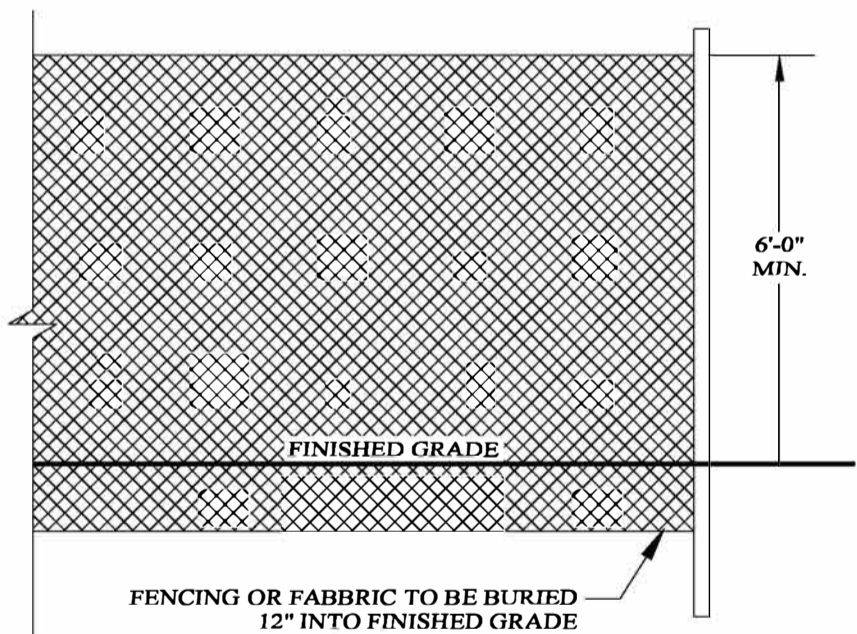


GATE OPENING WITH TEMPORARY SNAKE BARRIER

N.T.S.

NOTES:

1. THE GATE WILL REMAIN CLOSED UNLESS VEHICLES OR EQUIPMENT NEED TO PASS THROUGH THE GATE AND THE GATE SHALL ALSO BE CLOSED AT NIGHT. TO MINIMIZE THE CHANCES OF SNAKES ENTERING THE ENCLOSED AREA, EXTRA EFFORT SHOULD BE MADE TO KEEP THE GATE CLOSED AS A DEFAULT CONDITION, EVEN DURING THE DAY.



TYPICAL SECTION VIEW

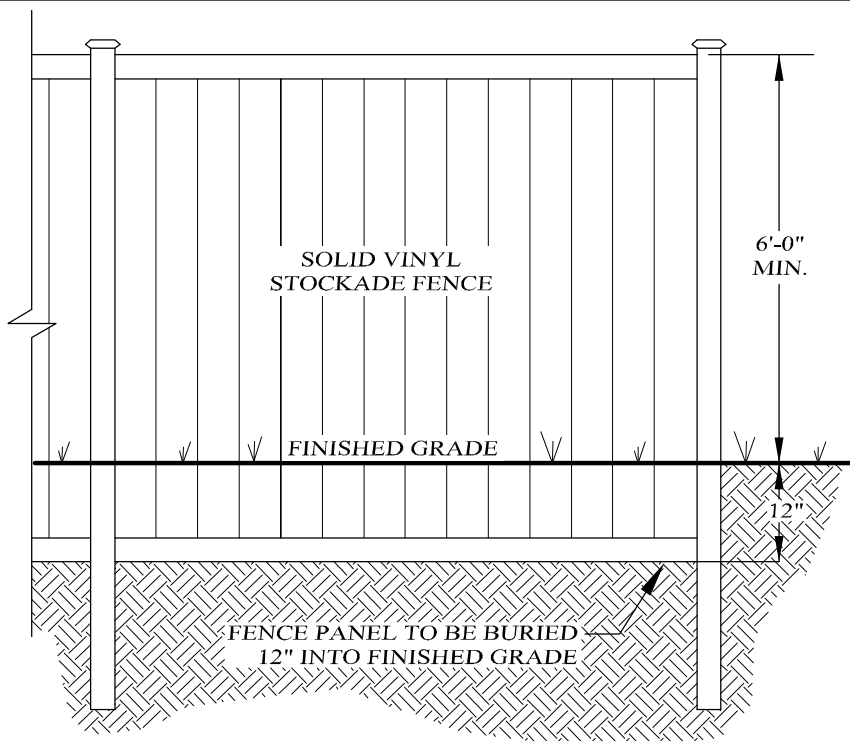
TEMPORARY FENCE BARRIER DETAIL

N.T.S.

NOTES:

1. FENCE LINE TO BE CONTINUOUS AND INSTALLED PER PLAN.
2. FENCE SHALL BE A MINIMUM OF 6 FEET TALL.
3. FENCE POST HEIGHT AND INSTALLATION PER MANUFACTURER.
4. FENCE TO BE 1/4" SQUARE WIRE MESH OR APPROVED FILTER FABRIC STAPLED / ATTACHED TO WOOD FRAMED FENCE.

Potential Permanent Exclusionary Fencing Details



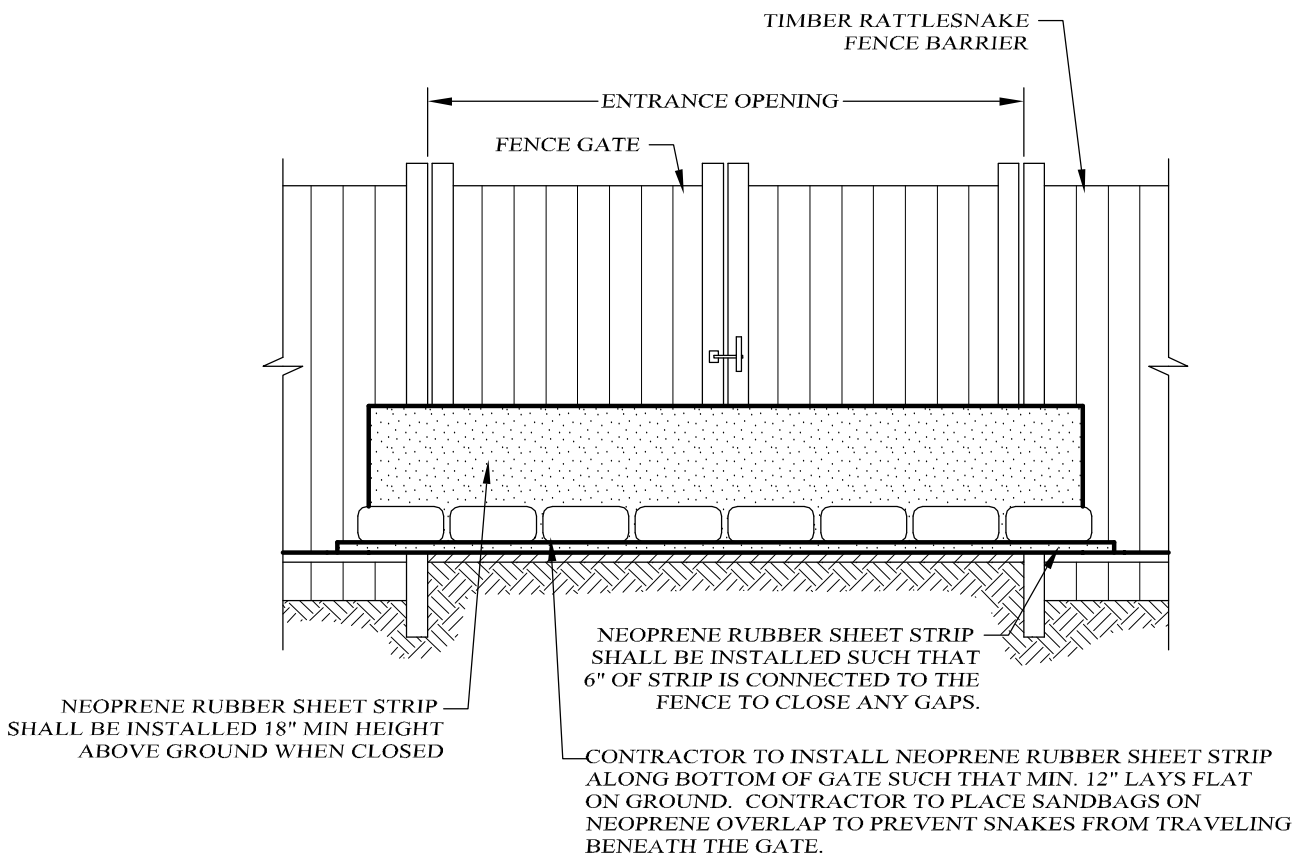
TYPICAL SECTION VIEW

FENCE BARRIER DETAIL

N.T.S.

NOTES:

1. FENCE LINE TO BE CONTINUOUS AND INSTALLED PER PLAN.
2. FENCE PANELS SHALL BE A MINIMUM OF 7 FEET TALL.
3. FENCE POST HEIGHT AND INSTALLATION PER MANUFACTURER.
4. BOTTOM FOOT OF FENCE PANEL TO BE BURIED INTO FINISHED GRADE.
5. FENCE TO BE VINYL STOCKADE FENCE.



GATE OPENING WITH SNAKE BARRIER

N.T.S.

NOTES:

1. THE GATE WILL REMAIN CLOSED UNLESS VEHICLES OR EQUIPMENT NEED TO PASS THROUGH THE GATE AND THE GATE SHALL ALSO BE CLOSED AT NIGHT. TO MINIMIZE THE CHANCES OF SNAKES ENTERING THE ENCLOSED AREA, EXTRA EFFORT SHOULD BE MADE TO KEEP THE GATE CLOSED AS A DEFAULT CONDITION, EVEN DURING THE DAY.

Attachment 2

Response Prepared by the Project's hydrogeologist WSP



December 6, 2021

Mr. Simon Gelb
CPC, LLC
P.O. Box 2020
Monroe, NY 10949

Via Electronic Transmission

RE: Clovewood Property
Village of South Blooming Grove
New York

Dear Mr. Gelb:

This is a response to the comment below included in the NYSDEC letters dated May 28, 2020.

Comment: *"According to the Engineering Report and Pumping Test Program, average day demand for this project is 273,600 gpd and maximum day demand is 547,200 gpd. Groundwater recharge to the bedrock aquifer during a 30-year drought condition estimated a recharge rate of 352.5gpm or 507,600gpd. The project proposed a combined total withdrawal of 550,800gpd with best well out of service which is greater than the groundwater recharge rate. A prolonged drought would place the aquifer in deficit. The proposed withdrawal of 550,800 gpd is not acceptable to the Department. The applicant is recommended to evaluate other options to address this concern and update the Engineering Report and Pumping Test Program report. Please submit a revised water withdrawal application."*
[DEIS Comment Letter (pages 1 and 2) and NOIA Letter (page 3) under Water Withdrawal]

Response:

The average water demand for the Clovewood project calculated based on the water usage values in the NYSDEC March 2014 New York State Design Standards for Intermediate Sized Wastewater Treatment Systems is 273,600 gpd (gallons per day). This daily demand is 54% of the estimated extreme drought (one-year-in-30 event) recharge value of 507,600 gpd. This data indicates that there is sufficient recharge available under drought conditions to support the project's water use.

The 547,200 gpd maximum daily demand value is calculated based on twice the average demand using the March 2014 Design Standards water usage values. This is a very conservative method to estimate a maximum daily demand for a new development. Actual measured maximum daily demands, which occur infrequently throughout the year, are typically much lower for residential developments. For example, actual water withdrawal data from 2017, 2018, 2019, 2020 and 2021 for the neighboring Village of Kiryas Joel comparing the maximum daily demand to the average daily demand shows the maximum daily demands were 1.24 times, 1.27 times, 1.19 times, 1.20 times and 1.17 times the average daily demand, respectively. Additionally, during an extreme drought when drought warnings have been issued, water conservation measures would be imposed to reduce water usage. Using the highest of the maximum daily demand multipliers of 1.27, the maximum daily water demand for the Clovewood project

WSP USA
4 Research Drive, Suite 204
Shelton, CT 06484

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Fax: +1 (203) 926-9140
wsp.com



would be 355,680 gpd which is 70% of the estimated extreme drought (one-year-in-30 event) recharge value of 507,600 gpd.

Additionally, an extensive evaluation of water usage in the neighboring Village of Kiryas Joel (31 housing developments between 2015-2017) has been conducted. The results of the evaluation showed that the per person water use was 35.14 gppd (gallons per day per person) and the water usage per bedroom was 71.0 gpd per bedroom. This per bedroom water usage value is significantly lower than the March 2014 Design Standard value of 110 gpd per bedroom and would result in a significantly lower calculated average daily demand (180,000 gpd) and maximum daily water demand (360,000 gpd) if applied to the Clovewood development. Both of these average and maximum daily values are well within the extreme drought recharge estimate of 507,600 gpd.

The estimated recharge value of 507,600 gpd was calculated using a reasonable desk top evaluation method to assess potential groundwater recharge under normal and extreme drought precipitation conditions. However, actual data collected during the 72-hour pumping tests conducted on the Clovewood wells support that the planned water withdrawal is feasible under drought conditions. The 180-day projections generated based on the actual well pumping data collected showing 6 months of drawdown under no recharge conditions support that the groundwater withdrawal at 550,800 gpd is feasible under extreme drought conditions.

The groundwater withdrawn to supply the Clovewood development is also proposed to be treated and discharged at a wastewater treatment plan on the project site. Therefore, the groundwater withdrawal and subsequent discharge will occur within the same watershed, offsetting potential water losses within the watershed.

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, CPG, PG(NY)
Vice President

TPC:cmm

H:\Clovewood\response to comment NYSDEC Ltr.docx

Attachment 3

Water Works Formation Documentation

CERTIFICATE OF INCORPORATION
OF
KEEN TRANSPORTATION CORPORATION
A WATER-WORKS CORPORATION

PURSUANT TO ARTICLE 1, SECTION 3 AND
ARTICLE 4 OF THE TRANSPORTATION
CORPORATIONS LAW OF THE STATE OF NEW YORK

I, the undersigned, for the purpose of forming a water- works corporation pursuant to Article 1, Section 3 and Article 4 of the Transportation Corporations Law of the State of New York, hereby certify:

FIRST: The name of the proposed corporation is:

KEEN TRANSPORTATION CORPORATION

SECOND: The purposes for which the within water-works corporation is formed are to provide for the water supply and/or distribution system and appurtenances thereto associated with the Clovewood residential development of 600 lots, located on property within the Village of South Blooming Grove, Town of Blooming Grove, County of Orange and State of New York, and in connection with said development to lay, maintain, repair and operate such facilities in any street, highway or public place of any city, town, village or other municipal area, in which it has obtained the consent required by Article 4, Section 41 of the Transportation Corporations Law and to perform all other permitted activities under Article 1, Section 3 and Article 4 of the Transportation Corporations Law.

THIRD: The aggregate number of shares which the Corporation shall have the authority to issue is 200 shares of no par value stock.

FOURTH: The office of the Corporation is to be located in Orange County.

FIFTH: The Secretary of State is designated as agent of the Corporation upon whom process against it may be served. The post office address to which the Secretary of State shall mail a copy of any process against the Corporation served upon him is: Keen Equities LLC, % Yehousha Rubin 4922 11th Avenue, Brooklyn, NY 11219.

SIXTH: The undersigned incorporator is of the age of twenty-one years or over:

YEHOUSHA RUBIN

SEVENTH: This Corporation shall be empowered to engage in any similar lawful business or enterprise which is or might be incidental to, and in any manner connected with its primary purposes.

EIGHTH: The area to be supplied with water by the Corporation is the Clovewood residential development, located solely in the Village of South Blooming Grove, Town of Blooming Grove, County of Orange, State of New York and the Consent of the Village Board of the Village of South Blooming Grove, as required by Section 41 of the Transportation Corporations Law, has been obtained and is annexed hereto.

NINTH: No holder of any of the shares of any class of the Corporation shall be entitled as of right to subscribe for, purchase, or otherwise acquire any shares of any class of the Corporation which the Corporation proposes to issue, or any rights or options which the Corporation proposes to grant for the purchase of shares of any class of the Corporation or for the purchase of any shares, bonds, securities, or obligations of the Corporation which are convertible into or exchangeable for, or which carry any rights to subscribe for, purchase or otherwise acquire shares of any class of the Corporation; and any and all of such shares, bonds, securities or obligations of the Corporation, whether now or hereafter authorized or created, may be issued, or may be reissued or transferred if the same have been reacquired and have treasury status, and any and all of such rights and options may be granted by the Board of Directors to such persons, firms, corporations and associations, and for such lawful consideration and on such terms, as the Board of Directors in its discretion may determine, without first offering the same, or any thereof, to any said holder. Without limiting the generality of the foregoing stated denial of any and all preemptive rights, no holder of shares of any class of the Corporation shall have any preemptive rights in respect of the matters, proceedings, or transaction specified in Article 6, Section 622, paragraph (e), subparagraphs (1) to (6) inclusive of the Business Corporation Law.

TENTH: Except as may otherwise be specifically provided in this Certificate of Incorporation, no provision of this Certificate of Incorporation is intended by the Corporation to be construed as limiting, prohibiting, denying, or abrogating any of the general or specific powers or rights conferred under the Transportation Corporations Law or, by virtue of Article 1, Section 3 and Article 4 thereof, the Business Corporation Law upon the Corporation, upon its shareholders, bondholders, and security holders, and upon its directors, officers and other corporate personnel including, in particular, the power of the Corporation to furnish indemnification to directors and officers in the capacities defined and prescribed by the Business Corporation Law, and the defined and prescribed rights of said persons to indemnification as the same are conferred by the Business Corporation Law.

ELEVENTH: Annexed hereto is a certificate, duly executed on behalf of the local governing body of the Village of South Blooming Grove, the Incorporated Village in which all of the water-works system provided by this Corporation is situated, consenting to the formation of this Corporation.

IN WITNESS WHEREOF, this Certificate has been signed this 16 day of November, 2020.

Y.C. Rubin
Yehoshua Rubin

State of New York, County of KINGS) ss.:

On the 16 of November in the year 2020 before me, the undersigned personally appeared YEHOSHUA RUBIN, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument the individual, or the person upon whose behalf the individual acted, executed the instrument.

[Signature]
Notary Public, State of New York
Reg. No. 01RU6370321
Qualified in Kings County
Commission Expires January 29, 2022

CERTIFICATE OF CONSENT TO FORMATION OF
KEEN TRANSPORTATION CORPORATION

I, GEORGE KALAJ, Mayor of the Village of South Blooming Grove, pursuant to Resolution of the Village Board of Village of South Blooming Grove adopted on Nov. 23, 2020 hereby certifies that the Village Board of the Village of South Blooming Grove has consented to the formation of the KEEN TRANSPORTATION CORPORATION, a water-works corporation under the provisions of Article 1, Section 3 and Article 4 of the Transportation Corporations Law of the State of New York for the purpose of servicing the Village of South Blooming Grove with a water system effective at such time as the New York State Department of Environmental Conservation issues the requisite permit and approves the maps and certifications of the proposed water system or issues notice of its intent to grant such approval, and consent to the filing of the annexed Certificate of Incorporation of the Keen Transportation Corporation.

[Signature]
George Kalaj, Mayor
Village of South Blooming Grove

State of New York, County of Orange) ss.:

On the 25th of November in the year 2020 before me, the undersigned personally appeared GEORGE KALAJ personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument the individual, or the person upon whose behalf the individual acted, executed the instrument.

[Signature]
Notary Public
KERRY A. DOUGHERTY
Notary Public, State of New York
Qualified in Orange County
Reg # 01DO5042691
Commission Expires April 24, 2023

Attachment 4

Sewage Works Formation Documentation

CERTIFICATE OF INCORPORATION
OF
CLOVEWOOD TRANSPORTATION CORPORATION
A SEWAGE-WORKS CORPORATION

PURSUANT TO ARTICLE 1, SECTION 3 AND
ARTICLE 10 OF THE TRANSPORTATION
CORPORATIONS LAW OF THE STATE OF NEW YORK

I, the undersigned, for the purpose of forming a sewage-works corporation pursuant to Article 1, Section 3 and Article 10 of the Transportation Corporations Law of the State of New York, hereby certify:

FIRST: The name of the proposed corporation is:

CLOVEWOOD TRANSPORTATION CORPORATION

SECOND: The purposes for which the within sewage-works corporation is formed are to provide for the disposal, treatment and removal of sewage and to operate, maintain, keep and repair its sewage disposal plant and appurtenances thereto associated with the Clovewood residential development of 600 lots, located on property within the Village of South Blooming Grove, Town of Blooming Grove, County of Orange and State of New York, and in connection with said development to lay, maintain, repair and operate such facilities in any street, highway or public place of any city, town, village or other municipal area, in which it has obtained the consent required by Article 10, Section 116 of the Transportation Corporations Law and to perform all other permitted activities under Article 1, Section 3 and Article 10 of the Transportation Corporations Law.

THIRD: The aggregate number of shares which the Corporation shall have the authority to issue is 200 shares of no par value stock.

FOURTH: The office of the Corporation is to be located in Orange County.

FIFTH: The Secretary of State is designated as agent of the Corporation upon whom process against it may be served. The post office address to which the Secretary of State shall mail a copy of any process against the Corporation served upon him is: Keen Equities LLC, C/O Yehoshua Rubin 4922 11th Avenue, Brooklyn, NY 11219

SIXTH: The undersigned incorporator is of the age of twenty-one years or over:

YEHOSHUA RUBIN

SEVENTH: This Corporation shall be empowered to engage in any similar lawful business or enterprise which is or might be incidental to, and in any manner connected with its primary purposes.

EIGHTH: The area to be supplied with sewer services by the Corporation is the Clovewood residential development, located solely in the Village of South Blooming Grove, Town of Blooming Grove, County of Orange, State of New York and the Consent of the Village Board of the Village of South Blooming Grove, as required by Article 10, Section 116 of the Transportation Corporations Law, has been obtained and is annexed hereto.

NINTH: No holder of any of the shares of any class of the Corporation shall be entitled as of right to subscribe for, purchase, or otherwise acquire any shares of any class of the Corporation which the Corporation proposes to issue, or any rights or options which the Corporation proposes to grant for the purchase of shares of any class of the Corporation or for the purchase of any shares, bonds, securities, or obligations of the Corporation which are convertible into or exchangeable for, or which carry any rights to subscribe for, purchase or otherwise acquire shares of any class of the Corporation; and any and all of such shares, bonds, securities or obligations of the Corporation, whether now or hereafter authorized or created, may be issued, or may be reissued or transferred if the same have been reacquired and have treasury status, and any and all of such rights and options may be granted by the Board of Directors to such persons, firms, corporations and associations, and for such lawful consideration and on such terms, as the Board of Directors in its discretion may determine, without first offering the same, or any thereof, to any said holder. Without limiting the generality of the foregoing stated denial of any and all preemptive rights, no holder of shares of any class of the Corporation shall have any preemptive rights in respect of the matters, proceedings, or transaction specified in Article 6, Section 622, paragraph (e), subparagraphs (1) to (6) inclusive of the Business Corporation Law.

TENTH: Except as may otherwise be specifically provided in this Certificate of Incorporation, no provision of this Certificate of Incorporation is intended by the Corporation to be construed as limiting, prohibiting, denying, or abrogating any of the general or specific powers or rights conferred under the Transportation Corporations Law or, by virtue of Article 1, Section 3 and Article 10 thereof, the Business Corporation Law upon the Corporation, upon its shareholders, bondholders, and security holders, and upon its directors, officers and other corporate personnel including, in particular, the power of the Corporation to furnish indemnification to directors and officers in the capacities defined and prescribed by the Business Corporation Law, and the defined and prescribed rights of said persons to indemnification as the same are conferred by the Business Corporation Law.

ELEVENTH: Annexed hereto is a certificate, duly executed on behalf of the local governing body of the Village of South Blooming Grove, the Incorporated Village in which all of the sewage-works system provided by this Corporation is situated, consenting to the formation of this Corporation.

IN WITNESS WHEREOF, this Certificate has been signed this 16 day of November 2020.

Yehoshua Rubin
Yehoshua Rubin

State of New York, County of KINGS) ss.:

On the 16 of November in the year 2020 before me, the undersigned personally appeared YEHOSHUA RUBIN, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument the individual, or the person upon whose behalf the individual acted, executed the instrument.

Chaskel Rubin
Notary Public
CHASKEL RUBIN
Notary Public, State of New York
Reg. No. 01RU6370321
Qualified in Kings County
Commission Expires January 29, 2022

CERTIFICATE OF CONSENT TO FORMATION OF
CLOVEWOOD TRANSPORTATION CORPORATION

I, GEORGE KALAJ, Mayor of the Village of South Blooming Grove, pursuant to Resolution of the Village Board of Village of South Blooming Grove adopted on November 23, 2020 hereby certifies that the Village Board of the Village of South Blooming Grove has consented to the formation of the CLOVEWOOD TRANSPORTATION CORPORATION, a sewage-works corporation under the provisions of Article 1, Section 3 and Article 10 of the Transportation Corporations Law of the State of New York for the purpose of servicing the Village of South Blooming Grove with a sewage system effective at such time as the New York State Department of Environmental Conservation issues the requisite permit and approves the maps and certifications of the proposed sewer system or issues notice of its intent to grant such approval, and consent to the filing of the annexed Certificate of Incorporation of the Clovewood Transportation Corporation.

George Kalaj
George Kalaj, Mayor
Village of South Blooming Grove

State of New York, County of Orange) ss.:

On the 25th of November in the year 2020 before me, the undersigned personally appeared GEORGE KALAJ personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument the individual, or the person upon whose behalf the individual acted, executed the instrument.

Kerry A. Dougherty
Notary Public
KERRY A. DOUGHERTY
Notary Public, State of New York
Qualified in Orange County
Reg # 01DO5042691
Commission Expires April 24, 2023

Attachment 5

Response Prepared by the Project's wastewater engineer HDR



January 18, 2021

Mr. Simon Gelb, CPC
PO Box 2020
Monroe, NY 10949
(845) 774-8000

Dear Mr. Gelb:

Please see below in response to NYSDEC Comment Letters dated May 28, 2020.

NYSDEC Comment (DEIS Letter, Under SPDES-Wastewater):

According to the Addendum to the DEIS, a sand filter will be installed for turbidity and an iron and manganese filter will be installed to reduce Fe/Mn concentrations. Please be aware the backwash wastewater is an industrial wastewater, therefore the design would have to be submitted to the NYSDEC, and any additional outfalls, if required, would be included in the permit.

HDR Response:

Please refer to the response below. There are no additional outfalls proposed for the water treatment backwashes.

NYSDEC Comment (NOIA Letter, No. 6 Under SPDES-Wastewater):

According to the Addendum to the DEIS, a sand filter will be installed for turbidity and an iron and manganese filter will be installed to reduce Fe/Mn concentrations. Please be aware that the backwash wastewater is an industrial wastewater, therefore the design would have to be submitted to the NYSDEC. Please advise if this wastewater will be directed to the wastewater treatment plant, or if it will have its own treatment and discharge through a second outfall. Additional outfalls will need to be incorporated in the SPDES permit. In addition to the new SPDES application form P/C/I Discharge of Treated Sanitary Waste requested in #1 above, please also provide the Industrial SPDES Permit Application Form NY-2C.

HDR Response:

The backwash flow will be conveyed to the on site wastewater treatment plant (WWTP) for treatment and discharge in the WWTP effluent outfall. The iron and manganese filter backwash will be generated from treatment of municipal drinking water and is anticipated to include 5 mg/L iron and 2.5 mg/L of manganese. It is expected that the backwash flow will be diluted over 20 fold when mixed with influent wastewater prior to the screening process at the head of WWTP. Further these constituents are highly treatable in the WWTP and will have no adverse impact on the performance of the WWTP. Aeration in the membrane bioreactor (MBR) will oxidize the dissolved iron and manganese while particulate iron and manganese will be retained and removed by the ultrafiltration membrane. We respectfully request that the backwash from the water treatment plant be considered a sanitary waste once mixed with the wastewater since this backwash is not a waste stream resulting from a process of industry or manufacturing as defined in 6 CRR-NY 750-1.2.

If you have any questions, please feel free to contact me at (914) 993-2037

Sincerely,

Henningson, Durham and Richardson Architecture and Engineering, P.C.

Amir Mashhad

Amir Mashhad, PE
Project Manager

Exhibit 1

The Project's Joint Application Form (JAF)



JOINT APPLICATION FORM

For Permits for activities affecting streams, waterways, waterbodies, wetlands, coastal areas, sources of water, and endangered and threatened species.

You must separately apply for and obtain Permits from each involved agency before starting work. Please read all instructions.

1. Applications To:
>NYS Department of Environmental Conservation
Check all permits that apply: Stream Disturbance, Dams and Impoundment Structures, Tidal Wetlands, Water Withdrawal, etc.
>US Army Corps of Engineers
Check all permits that apply: Section 404 Clean Water Act, Section 10 Rivers and Harbors Act
>NYS Office of General Services
Check all permits that apply: State Owned Lands Under Water, Utility Easement, Docks, Moorings or Platforms
>NYS Department of State
Check if this applies: Coastal Consistency Concurrence

2. Name of Applicant
Taxpayer ID (if applicant is NOT an individual)
Mailing Address
Post Office / City, State, Zip
Telephone, Email
Applicant Must be (check all that apply): Owner, Operator, Lessee

3. Name of Property Owner (if different than Applicant)
Mailing Address
Post Office / City, State, Zip
Telephone, Email

For Agency Use Only Agency Application Number:

4. Name of Contact / Agent

Mailing Address Post Office / City State Zip

Telephone Email

5. Project / Facility Name Property Tax Map Section / Block / Lot Number:

Project Street Address, if applicable Post Office / City State Zip

Provide directions and distances to roads, intersections, bridges and bodies of water

Town Village City County Stream/Waterbody Name

Project Location Coordinates: Enter Latitude and Longitude in degrees, minutes, seconds:
Latitude: ° ' " Longitude: ° ' "

6. Project Description: Provide the following information about your project. Continue each response and provide any additional information on other pages. **Attach plans on separate pages.**

a. Purpose of the proposed project:

b. Description of current site conditions:

c. Proposed site changes:

d. Type of structures and fill materials to be installed, and quantity of materials to be used (e.g., square feet of coverage, cubic yards of fill material, structures below ordinary/mean high water, etc.):

e. Area of excavation or dredging, volume of material to be removed, location of dredged material placement:

f. Is tree cutting or clearing proposed? Yes If Yes, explain below. No
Timing of the proposed cutting or clearing (month/year):
Number of trees to be cut: Acreage of trees to be cleared:

g. Work methods and type of equipment to be used:

h. Describe the planned sequence of activities:

i. Pollution control methods and other actions proposed to mitigate environmental impacts:

j. Erosion and silt control methods that will be used to prevent water quality impacts:

k. Alternatives considered to avoid regulated areas. If no feasible alternatives exist, explain how the project will minimize impacts:

l. Proposed use: Private Public Commercial

m. Proposed Start Date: Estimated Completion Date:

n. Has work begun on project? Yes If Yes, explain below. No

o. Will project occupy Federal, State, or Municipal Land? Yes If Yes, explain below. No

p. List any previous DEC, USACE, OGS or DOS Permit / Application numbers for activities at this location:

q. Will this project require additional Federal, State, or Local authorizations, including zoning changes?

Yes If Yes, list below. No

7. Signatures.

Applicant and Owner (If different) must sign the application. If the applicant is the landowner, the **landowner attestation form** can be used as an electronic signature as an alternative to the signature below, if necessary. Append additional pages of this Signature section if there are multiple Applicants, Owners or Contact/Agents.

I hereby affirm that information provided on this form and all attachments submitted herewith is true to the best of my knowledge and belief.

Permission to Inspect - I hereby consent to Agency inspection of the project site and adjacent property areas. Agency staff may enter the property without notice between 7:00 am and 7:00 pm, Monday - Friday. Inspection may occur without the owner, applicant or agent present. If the property is posted with "keep out" signs or fenced with an unlocked gate, Agency staff may still enter the property. Agency staff may take measurements, analyze site physical characteristics, take soil and vegetation samples, sketch and photograph the site. I understand that failure to give this consent may result in denial of the permit(s) sought by this application.

False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the NYS Penal Law. Further, the applicant accepts full responsibility for all damage, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and agrees to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from said project. In addition, Federal Law, 18 U.S.C., Section 1001 provides for a fine of not more than \$10,000 or imprisonment for not more than 5 years, or both where an applicant knowingly and willingly falsifies, conceals, or covers up a material fact; or knowingly makes or uses a false, fictitious or fraudulent statement.

Signature of Applicant

Yc. Rubin

Date

Dec. 6, 2021

Applicant Must be (check all that apply): Owner Operator Lessee

Printed Name

Yehoshua Rubin

Title

Manager

Signature of Owner (if different than Applicant)

Date

Printed Name

Title

Signature of Contact / Agent

Simon Gelb

Date

12/06/21

Printed Name

Simon Gelb, CPC

Title

Agent

For Agency Use Only

DETERMINATION OF NO PERMIT REQUIRED

Agency Application Number

(Agency Name) has determined that No Permit is required from this Agency for the project described in this application.

Agency Representative:

Printed Name

Title

Signature

Date

Exhibit 2

Article 11 Incidental Take Permit Application and Mitigation Plan

Article 11 – Incidental Take
Application
&
Mitigation Plan

for the

Cloewood Project

Village South Blooming Grove, Orange County, New York

Prepared For:

**CPC, LLC
P.O. Box 2020
Monroe, New York 10949**

Prepared By:



November 18, 2021

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Attachments

Attachment I – Timber Rattlesnake Education and Encounter Plan
Attachment II – Timber Rattlesnake Sighting Protocol
Attachment III – Resident Wildlife Education Plan

1.0 INTRODUCTION

At the request of CPC, LLC (the "Applicant"), North Country Ecological Services, Inc. (NCES) conducted an ecological investigation on a 708+/- acre property known as "Clovewood" (the "Site"). The ecological investigation was conducted as a requisite part of the Draft Environmental Impact Statement (DEIS) being compiled for a residential subdivision (the "Project") being proposed on the Site. During the DEIS process, the NYS Dept. of Environmental Conservation (DEC) raised questions concerning the existing ecological character of the Site and requested baseline information pertaining to the existing ecological communities, wildlife habitats, and the potential for presence of state and/or federally-listed Endangered, Threatened or Rare (ETR) species of flora and fauna. Accordingly, NCES was retained by the Applicant to expand on the ecological assessment of the Site that had been compiled by others.

NCES completed ecological assessments over a multi-year period, with multi-season surveys conducted during the 2014, 2015, 2016, and 2017 field seasons. During the surveys, the existing conditions of the Site were documented and specific habitat analyses were completed. In addition, reviews of the Site for the presence of listed ETR species were conducted. The findings of the ecological assessments were detailed in the "Endangered and Threatened Species Report – Clovewood" (dated September 23, 2016 and last revised January 23, 2017). As outlined in the Endangered and Threatened Species Report, individual Timber Rattlesnakes (*Crotalus horridus*) were observed off of the property and various habitat suitable to the existence of rattlesnakes was documented on the Site. Timber Rattlesnakes are listed by the DEC as a Threatened species.

At the conclusion of the Site surveys, the Endangered and Threatened Species Report was provided to DEC Regional Staff for review. As a result of their review, DEC Regional Biologists identified the entire Site as "occupied" habitat for Timber Rattlesnakes based on its proximity to a known den and the seasonal travel patterns of the snakes. The DEC also determined that the proposed residential development would result in the impact of habitats that are conducive to the existence of the species. Therefore, the project would have the

potential to have a negative, adverse impact on the local population of Timber Rattlesnakes. As a result, the Applicant (CPC, LLC) is seeking the approval of an Article 11 Incidental Take Permit (ITP) from the DEC for the Project.

This ITP Application is submitted as required by NYCRR Part 182, Article 11 of the Environmental Conservation Law (ECL). The ITP is required to authorize the clearing, grading, and subsequent development of occupied foraging habitat that has been deemed conducive to the existence of Timber Rattlesnakes. The ITP would also cover a direct incidental take of individual Timber Rattlesnakes.

2.0 SITE LOCATION AND DESCRIPTION

The Clovewood property is located at 505 Clove Road in the Village of South Blooming Grove, Orange County, New York (Figure 1). The centralized coordinates of the property are 41° 22' 36.0" N Latitude and 74° 9' 42.3" W Longitude. An upland ridge, known as Schunnemunk Mountain, extends along the southeastern property boundary. Elevations range from 1,400 feet above Mean-Sea-Level (MSL), located near the top of Schunnemunk Mountain, to approximately 500 feet above MSL, found near the intersection of Rte 208 and Clove Road, resulting in an elevation difference of 900± feet.

The Site can generally be characterized as a fallow, vacant parcel of land. The Site is predominantly forested (81.3% is wooded). However, the northwestern portion of the Site was previously developed and operated as a private golf course known as the “Lake Ann Golf Course”. The golf course has since been abandoned and the land that was previously cleared/graded for the fairways, greens and irrigation ponds are still evident, but are now fallow and exist as early successional field and/or successional shrub land. Several buildings are found throughout the northwest corner of the property. Most of these structures were associated with the previous golf facility.

The northern half of the Site was also historically farmed. Several old roads extend through the Site and remnant fields, stone structures, stone walls, and wire fencing were

documented on the property that indicate prior agricultural usage of the property. Lower elevational forested areas have been logged. Until recently, the Site had been leased and was utilized for passive recreational purposes, inclusive of hiking, ATV riding, and hunting. Several gravel roadways and trails are interspersed through-out the Site. The majority of the roadways are contained within historically manipulated lands, or where prior logging activities have occurred. A few trails extend eastward onto the wooded hillside and the steep ridge that is located in the eastern portion of the property.

Land use surrounding the property consists of single-family residential and commercial development. The property is bordered by large scale, moderate density, single-family residential developments along Clove Road and Rte. 208, respectively. Other single-family residences and undeveloped forested and agricultural lands are found to the northwest of the site, along Clove Road. Local commercial establishments are located within two separate strip malls that are located at the intersection of Clove Road and Rte. 208. Undeveloped forested land borders the property to the south and east.

3.0 EXISTING CONDITIONS

3.1 Existing Ecological Communities

Based on the definitions presented in the *Ecological Communities of New York State* (Edinger, 2014) and the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, 1979), the following communities are found on the property:

- Chestnut oak forest
- Acidic talus slope woodland
- Oak-tulip tree forest
- Successional southern hardwood forest
- Successional old field
- Successional shrub land
- Red maple hardwood swamp/Palustrine forested wetland
- Palustrine scrub-shrub wetland
- Palustrine emergent wetland
- Artificial pond

- Rocky Headwater Stream

In addition to these existing, natural ecological communities, for the purposes of identifying all potential cover/resting/foraging habitat, the existing development located in the northwest corner of the Site is included. While existing development is not a natural ecological community type, the area of former development provides cover habitat and potential foraging areas for snakes and other indigenous wildlife. Therefore, it is included in the habitat evaluations conducted on the property. The extent of the existing ecological communities and development present within the boundaries of the Site are detailed in Table 1 below:

Table 1: Existing Ecological Communities		
Ecological Community Type	Overall Size	Percentage of Site
Acidic Talus Slope Woodland	68.18± Acres	10.0%
Chestnut Oak Forest	43.00± Acres	6.5%
Oak-Tulip Tree Forest	164.30± Acres	23.0%
Successional Hardwood Forest	286.15± Acres	39.5%
Successional Old Field	65.40± Acres	10.0%
Successional Shrub Land	25.63± Acres	3.0%
Palustrine Forested Wetland	14.31± Acres	1.5%
Palustrine Scrub-shrub Wetland	10.74± Acres	1.5%
Palustrine Emergent Wetland	05.47± Acres	0.7%
Artificial Pond	04.46± Acres	0.7%
Existing Res. Development	20.53± Acres	4.0%
Rocky Headwater Stream	22,640± Linear Feet	N/A
Totals	708.17± Acres	100.00%

The location and configuration of the existing ecological communities that have been documented on the property are shown on the drawing prepared by the Engineer that is titled “Existing Ecological Communities Map – Lands of Clovewood”. A copy of this drawing is contained in Figure 3.

3.2 Vegetation

During the assessment, NCES identified eleven (11) different ecological communities within the boundaries of the Site. Each of these ecological communities, with the exception of the Artificial ponds and Rocky headwater streams, contain different vegetative structure and distinct species of vegetation that define them. The Rocky headwater streams are primarily void of vegetation as they function as intermittent, or perennial streams. In addition, the ponds are man/made structures that are open bodies of water that were created many years ago when the property was farmed, or as a golf course. The dominant species of vegetation observed within each of the vegetated ecological communities are listed below:

Acidic Talus Slope Woodland

Some of the dominant species of vegetation observed within the Acidic talus slope woodland ecological community included, but are not limited to: chestnut oak, mountain paper birch (*Betula cordifolia*), striped maple (*Acer pensylvanicum*), shrub oak, mountain laurel, rhododendron, witch-hazel (*Hamamelis virginiana*), black huckleberry, low-bush blueberry, wild sarsaparilla, rock polypody (*Polypodium virginianum*), wood fern (*Dryopteris intermedia*), and various mosses. This ecological community possesses many rock outcrops and was located along the steepest sloped portions of ridge that extends along the southeast property boundary. The Acidic talus slope is situated between the Chestnut oak forest and the Oak-Tulip tree forest communities and predominantly occurs between elevations 1,020' and 1,240'.

Chestnut Oak Forest

Some of the dominant species of vegetation observed within the Chestnut oak forest ecological community included, but are not limited to: chestnut oak (*Quercus montana*), shrub oak (*Quercus ilicifolia*), red oak (*Quercus rubra*), mountain laurel (*Kalmia latifolia*), rhododendron (*Rhododendron spp.*), black huckleberry (*Gaylussacia baccata*), low-bush

blueberry (*Vaccinium palladium*), wild sarsaparilla (*Aralia nudicaulis*) and Pennsylvania sedge (*Carex pennsylvanica*). This ecological community was located at the highest elevational portions (at or above 1,240' above MSL) of the ridge that extends along the southeast property boundary.

Oak Tulip Tree Forest

Some of the prominent species of vegetation observed within the Oak-Tulip tree forest ecological community included, but are not limited to: northern red oak (*Quercus rubra*), white oak (*Quercus alba*), tulip tree (*Liriodendron tulipifera*), American beech (*Fagus grandifolia*), sugar maple (*Acer saccharum*), red maple (*Acer rubrum*), white ash (*Fraxinus americana*), black birch (*Betula lenta*), black cherry (*Prunus serotina*), shagbark hickory (*Carya ovata*), Japanese barberry (*Berberis thunbergii*), witch-hazel, winged euonymus (*Euonymus atlatus*), wild sarsaparilla, wood fern, Christmas fern (*Polystichum agrostichoides*), garlic mustard (*Alliaria officinalis*), common blue violet (*Viola sororia*), wild geranium (*Geranium maculatum*) and false solomon's seal (*Smilacina racemosa*).

This ecological community is contained along the less steep areas of the ridge that extends along the southeastern property boundary. This ecological community is contained in areas that were not previously developed or cleared by the golf facility. This ecological community is positioned between the Acidic-talus slope woodland and the Successional southern hardwood forest and is readily established between elevations 940' and 1020'.

Successional Southern Hardwood Forest

Some of the prominent species of vegetation observed within the Successional southern hardwood forest ecological community included, but are not limited to: sugar maple, red maple, black locust (*Robinia pseudoacacia*), walnut (*Juglans* spp), quaking aspen (*Populus tremuloides*), wild apple (*Malus sylvestris*), common buckthorn (*Rhamnus cathartica*), honeysuckle (*Lonicera tatarica*), multiflora rose (*Rosa multiflora*), Japanese barberry, red raspberry (*Rubus idaeus*), black raspberry (*Rubus allegheniensis*), Virginia creeper

(*Parthenocissus quinquefolia*), oriental bittersweet (*Celastris orbiculata*) poison ivy (*Toxicodendron radicans*), garlic mustard, common blue violet, snakeroot (*Ageratina altissima*) and stick-tight (*Lappula virginiana*). This forested community comprises the majority of the forested lands that are located within and/or immediately adjacent to previously cleared land found below the 940' elevation.

Successional Old Field

Some of the prominent species of vegetation observed within the Successional old field ecological community included, but are not limited to: Canada goldenrod (*Solidago canadensis*), early goldenrod (*Solidago juncea*), timothy (*Phleum pratense*), wild carrot (*Daucus carota*), spotted knapweed (*Centaurea maculosa*), black-eyed susan (*Rudbeckia hirta*), common milkweed (*Asclepias syraca*), ragweed (*Ambrosia artemisiifolia*), little blue stem (*Andropogon scoparius*), quack grass (*Agropyron repens*), birdsfoot trefoil (*Lotus corniculatus*), orchard grass (*Dactylis glomerata*), evening primrose (*Oenothera biennis*), herbaceous cinquefoil (*Potentilla simplex*), red clover (*Trifolium pratense*), white clover (*Trifolium repens*), mullein (*Verbascum thapsus*) and dewberry (*Rubus procumbens*). This ecological community is limited to the areas that were contained within the previous golf course fairways, fringe rough and greens. All of these fields are located below the 940' elevation.

Successional Shrubland

Some of the prominent species of vegetation observed within the Successional shrubland ecological community included, but are not limited to: gray dogwood (*Cornus racemosa*), common buckthorn, tatarian honeysuckle, winged euonymus, multiflora rose, Japanese barberry, oriental bittersweet, catbrier (*Smilax* spp.) summer grape (*Vitis aestivalis*), blackberry (*Rubus occidentalis*), red raspberry (*Rubus idaeus*), Canada goldenrod, early goldenrod, spotted knapweed, ragweed, and dewberry. This ecological community is limited to areas that were cleared for the previous golf facility, but which were not graded

and utilized for play. These areas are transitional habitats found between the Successional old field and the Successional southern hardwood ecological communities.

Red Maple Hardwood Swamp / Palustrine Forested Wetland

Some of the prominent species of vegetation observed within the Red-Maple hardwood swamp/Palustrine forested wetland ecological community included, but are not limited to red maple, green ash (*Fraxinus pennsylvanica*), American elm (*Ulmus americana*), ironwood (*Carpinus caroliniana*), box elder maple (*Acer negundo*), witch hazel (*Hamamelis virginiana*), highbush blueberry (*Vaccinium corymbosum*) silky dogwood (*Cornus amomum*), tussock sedge (*Carex stricta*), fox sedge (*Carex vulpinoidea*), skunk cabbage (*Symplocarpus foetidus*), sensitive fern (*Onoclea sensibilis*), fowl manna grass (*Glyceria striata*) and moneywort (*Lysimachia nummularia*). This wetland community is located within natural topographical depressions found within forested components of the property, where previous disturbances from the golf facility did not occur.

Palustrine Scrub-shrub and Emergent Wetland

Some of the prominent species of vegetation observed within the Palustrine scrub-shrub and emergent wetland communities included, but are not limited to, silky dogwood, red-osier dogwood (*Cornus stolonifera*), gray dogwood, arrowwood (*Viburnum dentatum*), nannyberry (*Viburnum lentago*), sensitive fern, tussock sedge, late goldenrod (*Solidago gigantea*), slender goldenrod (*Solidago tenuifolia*), jewelweed (*Impatiens capensis*) common reed (*Phragmites australis*), cattail (*Typha latifolia*), purple loosestrife (*Lythrum salicaria*), boneset (*Eupatorium perfoliatum*), joe-pye weed (*Eupatorium maculatum*), willow herb (*Epilobium glandulosum*), fringed sedge (*Carex crinita*), lurid sedge (*Carex lurida*), dark green bulrush (*Scirpus atrovirens*), wool grass (*Scirpus cyperinus*), soft rush (*Juncus effusus*), tussock sedge, fox sedge, NY Aster (*Aster novi-belgii*) and New England Aster (*Aster novae-angliae*). These wetland communities are limited to the western half of the property, in areas that were part of the previous golf course facility.

3.3 Soils

According to the USDA Natural Resources Conservation Service Web Soil Survey 3.0 for Orange County, New York (the “Soil Survey”), eleven (11) different soil series are found within the boundaries of the property. The soil types identified include: Alden silt loam (Ab); Arnot-Lordstown complex, sloping (ANC); Arnot-Lordstown complex, very steep (ANF); Canandaigua silt loam (Ca); Erie gravelly silt loam, with 0 to 8 percent slopes (ErA & ErB); Hoosic gravelly sandy loam, with 8 to 15 percent slopes (HoC); Mardin gravelly silt loam, with 3 to 25 percent slopes (MdB, MdC & MdD); Raynham silt loam (Ra); Swartwood and Mardin soils, sloping, very stony (SXC); Udorthents, smoothed (UH); and Unadilla silt loam, with 0 to 8 percent slopes (UnB) (Figure 2). In addition, the Soil Survey also indicates a few separate areas of standing, open water (W). These areas of open water correlate with the man-made ponds that exist on the Site.

4.0 PROJECT DESCRIPTION

The Project proposed is a residential development of 600 single-family lots/homes on approximately 708.2± acres of land located in Blaggs Clove on the east side of NYS Route 208 and Clove Road. The Project is situated within the Village of South Blooming Grove, which was incorporated in July of 2006, approximately six months after the Applicant purchased the Site. The Village encompasses 4.98± square miles or approximately 3,187± acres of land and has a population of approximately 3,182. The Project Site contains approximately one-quarter of the Village’s total land area.

Approximately 702± acres of the Site are within the Village's RR Zoning District, which permits residential subdivisions where density is determined in accordance with a formula set forth in the Village Zoning Code. Approximately 6.2± acres of the Site are in the RC-I Zoning District. The Site is allowed to be developed with 617 dwelling units (527 from the RR Zoning District and 90 from the RC-1 Zoning District). The Applicant has reserved approximately 22 acres of land in the RR Zoning District for future development with no current plans for its development. As a result, the Project’s density is reduced from 617

dwelling units to 600, of which 506 would be market-rate housing and 94 would be affordable housing in accordance with the Village Zoning Code. The Project is consistent with the Village Zoning Code and its land use regulations. As a result, no rezoning, zoning changes, waivers and/or variances are required.

The Site is predominantly comprised vacant, forested land, with the exception of approximately 60 structures associated with the abandoned former Lake Anne Country Club, which would be demolished as part of the Project. The Project is clustered on approximately 252.0± acres of land and would leave 456.0± acres of the Site undeveloped. The undeveloped land would consist of approximately 209 acres of open space to be deed restricted and approximately 70 acres of active recreational areas for the enjoyment of the Project residents. The Project also results in the creation of approximately 60 acres of easily accessible public Village parkland.

In addition to the residences proposed, the Project also entails the installation of associated infrastructure, including but not limited to: roads, utilities, on-site water supply, a sewage treatment plant, stormwater and erosion control systems, and community and recreational facilities. As determined by the Village, the Project's internal road network could either be dedicated to the Village and maintained by the Village (in whole or in part), or remain private and be maintained by a Homeowners Association (HOA) that would be created by the Applicant. The Site development plan, showing the extent of all development proposed is included in Figure 4.

4.1 Purpose and Need for the Project

The Project proposed the development of 600 single family homes in order to meet current and future, local and regional housing needs, including those for affordable housing.

5.0 PROPOSED ECOLOGICAL IMPACT

The Project has been designed as a “cluster style” development, at the request of the Village of South Blooming Grove and in accordance with its Zoning Code. A cluster development was requested in order to limit the overall footprint of the project area. As currently designed, the project area encompasses 252.0± acres (35.6%) of the entire site. By clustering the development, 456.0± acres (64.4%) of the Site are located outside of the development area and will remain undisturbed, and ultimately be preserved as available habitat for indigenous wildlife species, including Timber Rattlesnakes.

While the Project incorporates use of 252.0± acres of the Site, not all of the lands within the project area will be permanently impacted. According to the design engineers, approximately 4.70± acres of the Project Area will be impacted “temporarily” and will be revegetated and become open space on the Site. When the revegetated areas (4.70± acres) are incorporated with the undisturbed lands, post development (456.0± acres); a cumulative total of 460.70± acres (65%) of the Site will remain as open space and available for use by indigenous species of wildlife.

Table 2: Clovewood: Ecological Community Type Table					
Ecological Community Type	Overall Size	Permanent Impact Proposed	Temporary Impact Proposed	Overall Impact Proposed	Percent Impacted
Acidic Talus Slope Woodland	68.18± Acres	None	None	None	0%
Chestnut Oak Forest	43.00± Acres	None	None	None	0%
Oak-Tulip Tree Forest	164.30± Acres	04.00± Acres	None	4.00± Acres	2%
Successional Hardwood Forest	286.15± Acres	195.30± Acres	None	195.30± Acres	68%
Successional Old Field	65.40± Acres	33.40± Acres	03.80± Acres	37.20± Acres	57%
Successional Shrub Land	25.63± Acres	01.80± Acres	00.40± Acres	02.20± Acres	8%
Palustrine Forested Wetland	14.31± Acres	None	None	None	0%
Palustrine Scrub-shrub Wetland	10.74± Acres	None	None	None	0%
Palustrine Emergent Wetland	05.47± Acres	None	None	None	0%
Artificial Pond	04.46± Acres	None	None	None	0%
Existing Res. Development	20.53± Acres	12.80± Acres	00.50± Acres	13.30± Acres	65%
Rocky Headwater Stream	22,640± Linear Feet	295± Linear Feet	None	295± Linear Feet	1%
Totals	708.17± Acres	247.30± Acres	4.70± Acres	252.00± Acres	35.60%

The proposed Project Area, and the extent of the permanent and temporary impacts to the existing ecological communities generated by the development, are shown on the drawing

titled “Impact to Existing Ecological Communities Map – Lands of Clovewood”, contained in Figure 5. These impacts are further outlined in Table 2 above.

The development is predominantly located within the portion of the property that has been previously cleared, graded, and partially developed for the former Lake Ann Country Club and Golf Course. By limiting the proposed development to previously developed lands, impact to the undisturbed forested habitats found on the property are minimized. Consequently, the Project preserves 362.33± acres (65%) of the forested habitat that is found on the property. The development has also been designed to avoid direct impact to regulated wetlands and to limit the disturbance to defined stream channels to only 295± linear feet. The stream impacts proposed are warranted for road crossings, which are required to gain access to developable portions of the Site.

5.1 Timber Rattlesnake Impact Assessment

As a result of the planned development, it has been determined that the residential subdivision avoids the direct impact of the potential basking, shedding, gestating, and denning habitats that are located above the 940’ elevation (as documented by NCES and detailed in the Endangered and Threatened Species Report). These habitats are inclusive of the Acidic Talus Slope Woodland and the Chestnut Oak Forest Community. In addition, the project only proposes the impact of 3.80± acres (2%) of the Oak-Tulip Tree Forest community, which exists between the potential basking, shedding, gestating and denning habitats and the previously disturbed sections of the property that are located in the northern half of the Site.

The proposed development is generally limited to the previously disturbed portions of the property, which are found below the 940’ elevation. While these areas have been previously developed as part of the former golf course, according to the DEC, the ecological communities found in the development area provide suitable foraging habitat for Timber Rattlesnakes. Based on the proposed development plans, 252.0± acres of potential foraging habitat will be impacted by the Project. Of the impacts proposed,

247.30± acres will result in permanent habitat conversion and the remaining 4.70± acres of impact are only temporary and result from minor proposed land clearing and grading activities. While the temporary impacts will generate a short temporal loss in available habitat, these areas will be revegetated and maintained as open space, post construction. Therefore, the temporary impact areas will exist as available habitat for indigenous species of wildlife utilizing the Site.

The proposed development is to be completed in phases. By phasing the development, the amount of land disturbance generated is limited to smaller sections of the overall property. In doing so, impact to the 252.0 acres will not be completed all at once, therefore limiting disturbance to foraging activities of Timber Rattlesnakes. Phasing the development is an ecologically sensitive approach and will allow for adequate mitigation measures to be employed to reduce/minimize the potential impact upon Timber Rattlesnakes and other indigenous fauna.

6.0 ADAPTIVE MITIGATION MEASURES

In accordance with DEC's "Guidelines for Reviewing Projects for Potential Impacts to the Timber Rattlesnake", all impacts to the potential/suitable basking and gestating habitats have been avoided and no aspect of the proposed development is located within 660 feet of any known hibernacula. As impact to foraging habitat is unavoidable, adaptive mitigative measures are proposed to be implemented during construction to minimize the potential for direct and indirect impacts to Timber Rattlesnakes. These mitigative measures include the following:

- Preservation of Undeveloped Land as Wildlife Habitat;
- Timber Rattlesnake On-Site Contractor Education and Encounter Plan;
- Timber Rattlesnake Sighting Protocol;
- On-site Snake Monitor; and
- If requested by DEC, exclusionary Construction Fencing

Preservation of Habitat for Wildlife

The project will include the permanent preservation of 270.88± acres of land as viable rattlesnake habitat, via a formal deed restriction. See Section 7.0 of this document for details.

Timber Rattlesnake On-Site Contractor Education and Encounter Plan

This education plan will be presented in a seminar format (by NCES Staff) to the general contractors that will be working on the site prior to the initiation of any construction activities. This education plan can also be presented numerous times throughout the construction season, when snakes are active (April - October), so that new crews working on the project are knowledgeable about how to operate if a snake is found within the construction site and also the regulatory requirements when working around rattlesnakes.

The education will address safety and set forth routine procedures for snake encounters. All workers at the Site will be made aware of not only the likelihood of encountering Timber Rattlesnakes, but how to safely protect themselves and the snake from injury and/or death during an encounter. NCES will work directly with DEC biologists to develop a plan that outlines a procedure for safe capture, handling, and relocation of a rattlesnake if one should be encountered and requires removal. A copy of the On-site Contractor Education and Encounter Plan is included in Attachment I. Since the Project construction will occur for an extended period of time, NCES anticipates being on the Site and working directly with the contractors on a regular basis. Each contractor will also be provided with information on how to handle an encounter with a rattlesnake and where to find the Timber Rattlesnake Sighting Protocol.

Timber Rattlesnake Sighting Protocol

The On-site Contractor Education and Encounter Plan will be clearly posted in all contractor construction trailers, prior to the commencement of any construction activities. This plan also contains the Timber Rattlesnake Sighting Protocol, which defines the

procedures to be followed should a rattlesnake be encountered within, or immediately adjacent to, active work areas. A copy of the Sighting Protocol is contained in Attachment II.

NCES Staff, or a member of the contractor's crew (who has attended the required Education Plan seminar), will be responsible for maintaining compliance with the encounter plan. If NCES Staff is un-available, a list of other qualified Snake Monitors (as approved by the DEC) will also be posted and they can be contacted by contractors directly to handle individual snakes, if required.

If a Timber Rattlesnake is encountered, the DEC Region 3 Office will be notified within 48 hours of the event and will also be provided with a copy of a sighting report that will document the following: the location of sighting, date, time, weather conditions, sex and approximate length of the snake, representative photographs, and the location of where the snake was relocated. Copies of all sighting reports will be kept and readily available upon request.

Temporary Exclusionary Fencing

If required by the DEC, 4.0' tall exclusionary fencing would be properly installed around any active work area where Timber Rattlesnakes can be found. It could be inclusive 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; and,
- Secured at the base (barrier/ground interface) with at least 6" of fence material covered with soil backfill.

It is infeasible to surround the entire project area and maintain that amount of exclusionary fencing all at once. As a result, and given that the project will be phased, only those areas of active construction (active phase of construction) will be encompassed by exclusionary fencing at any one time, if required by the DEC. The fencing would be installed prior to

the commencement of any work in the active construction zone and would be maintained for the duration of the active construction period.

Once the active construction is complete, the fencing would be removed and relocated (if available) to the next phase in the approved construction sequence. Portions of the property that are not contained within an active work zone would not be encompassed by any exclusionary fencing. No work would occur in areas that are not encompassed by exclusionary fencing.

On-site Snake Monitor

For any clearing/grading and construction work that will occur (in whole or in part) from April 1 through October 31 of any construction season, a Snake Monitor will be on-call and available to monitor construction zones for the presence of snakes. The Snake Monitor must be a qualified biologist that has knowledge of Timber Rattlesnake ecology and approved relocation procedures. The Snake Monitor must also have experience handling rattlesnakes and be licensed by New York State to do so.

The Snake Monitor will be on-call during all construction activities and would be responsible for conducting reconnaissance surveys for Timber Rattlesnakes within the work area (prior to the initiation of any disturbance activities) and relocating snakes outside of active construction zones, as required. Additional responsibilities of the Snake Monitor will include:

- Implementation of the current education program and BMP's for snake encounters;
- Education of the on-site contractors;
- Consultation with the contractor to ensure all contracts have attended an Education and Encounter seminar; and
- Document all encounters with snakes.

The Snake Monitor can designate an on-site contractor to assist with daily inspections. The responsibility of the designated on-site contractor, who would work under the specific direction of the Snake Monitor, is to conduct reconnaissance surveys within the work area

(prior to the initiation of any disturbance activities) and; if required by the DEC, the maintenance of all temporary exclusionary fencing. If a Timber Rattlesnake is encountered by the designated contractor, the Snake Monitor will be contacted to remove and relocate the snake.

The aforementioned mitigative measures are to be implemented throughout the course of the entire development. The exclusionary fencing, if required by the DEC, would be properly installed prior to the commencement of any construction related activity and will be removed immediately after construction activities are completed. However, exclusionary fencing, if required by the DEC, and a Snake Monitor are not needed during the winter months (November 1 – March 31), as that is when snakes are confined to overwintering denning habitat and not present within summer dispersal/foraging habitat.

6.1 Post Construction Mitigative Measures

After construction, and once residents are living at the development, post-construction mitigation measures to prevent/reduce conflict between humans, pets, and Timber Rattlesnakes are also required. These post-construction mitigation measures to be implemented include:

- Permanent PVC Exclusionary Fence Barrier, if required by the DEC
- Resident Wildlife Education Plan for the HOA - to identify typical wildlife and snakes that may be encountered

Permanent Exclusionary Fence Barrier

The Applicant has agreed to install a PVC fence along the south side of the development, if required by the DEC, to act as a permanent barrier to snakes entering the development. If required, the fence would be buried a minimum of 12” into the surface of the ground and be a minimum of 6 feet in height above the ground. The fence would reduce the likelihood

snakes entering the development and limit the possibility of future residents encountering Timber Rattlesnakes.

Resident Wildlife Education Plan

The Resident Wildlife Education Plan covers safety and identifies routine procedures for snake encounters. This education plan will be presented in a pamphlet that can be given to each resident of the development. The pamphlet will cover the likelihood of encountering Timber Rattlesnakes and how to safely keep residents and individual snakes from injury and/or death during an encounter. NCES has worked directly with DEC biologists to develop a plan that outlines a procedure for safe capture, handling, and relocation of a rattlesnake if one should be encountered and requires removal. A copy of the Resident Wildlife Education Plan is included in Attachment III.

6.2 Long Term Site Management

The community water wells on the property will require access for maintenance and repair. The well locations will be accessed using the existing access roads only and they will be gated and locked. Only authorized personnel who are required to monitor, maintain, and/or service the wells and pump house will have access to these areas. The individuals accessing the wells will have read the Rattlesnake Encounter Plan so they are aware of Timber Rattlesnakes and how to proceed if one is encountered.

Routine yearly maintenance of the access roads, the wells, and the pump house will be scheduled from October through April, during times when Timber Rattlesnakes are not typically located in summer foraging habitats, and are likely denned for the winter. Servicing the well and pump house during these times will decrease the likelihood of an encounter along the roads or at the well site locations themselves. If emergency maintenance is required during the summer months, authorized personnel will be provided with the Timber Rattlesnake On-Site Contractor Education and Encounter Plan.

Minor upgrades to the utility roads will be required, such as installing fabric and gravel to firm up the roads where needed. No paving of the roads is proposed. The roads leading to the wells will only be travelled for maintenance purposes, on an “as needed” basis, to reduce incidental encounters with Timber Rattlesnakes. Any maintenance personnel will attend the Timber Rattlesnake On-Site Contractor Education and Encounter Plan and be provided with the Sighting Protocol so they are educated on how to safely react, should an encounter with a Timber Rattlesnake occur.

7.0 HABITAT PRESERVATION PLAN

In accordance with the ITP issuance standards imposed by the DEC, a project resulting the incidental take of a listed species must offer an overall “net conservation benefit” to the species in order for the ITP to be authorized. This project will completely avoid the potential/suitable denning, basking, shedding, and gestation habitats; will implement adaptive mitigation measures, to avoid direct impact to Timber Rattlesnakes during construction; and, will supplement post-construction and long-term management plans. In addition, the Applicant also proposes the permanent preservation of 270.88± acres of land (209 acres on-site and 61.88 acres off-site on an adjacent parcel owned by the Applicant) as viable rattlesnake habitat, via a formal deed restriction.

The areas to be preserved contain the denning, basking, shedding, and gestation habitats that were documented by NCES on the property. The preservation area maintains an undisturbed buffer between the proposed development and adjacent undeveloped public owned state park lands (Schunnemunk Mountain State Park). This permanently protected property adequately mitigates impact to foraging habitat, and provides a net conservation benefit to Timber Rattlesnakes.

The preservation of this land will be accomplished via a deed restriction that will prevent future development or encroachment of any kind. The preservation area is inclusive of 209± acres of the Site, as well as 61.88± acres off-site of additional land owned by the Applicant and which borders the Site to the east in the Town of Blooming Grove. Per NCES’s Spring 2020 habitat assessment, this additional property is comprised of the same ecological communities as documented on the

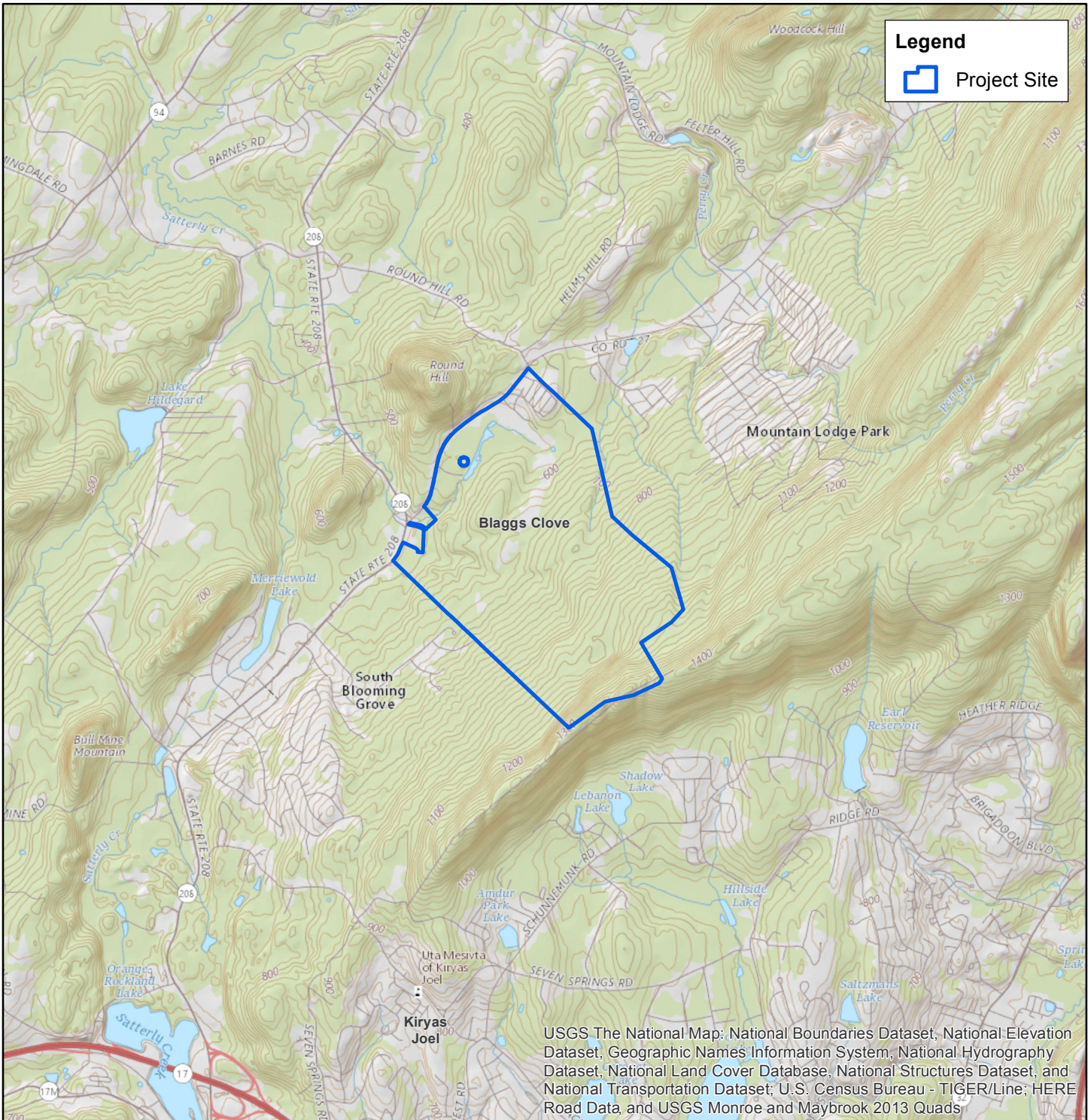
Site. Therefore, the additional land to contains habitat that would also be conducive to Timber Rattlesnake foraging activity. The location and configuration of the preservation area is shown on the drawing titled “Timber Rattlesnake Resource Property Area Map”. A copy of this map, along with a completed Metes and Bounds description is contained in Figure 6.

The land encompassed within the deed restricted areas is comprised of the Acidic Talus Slope Woodland, Chestnut Oak Forest, Oak-Tulip Tree, and Successional Southern Hardwood Forest communities. These ecological communities provide suitable denning, basking, shedding, gestating, and foraging habitat for Timber Rattlesnakes. The deed restricted lands are also contiguous with other undisturbed and unfragmented forested communities that contain suitable habitat and which that are found along the Schunnemunk Mountain Ridge and within the adjacent state park lands. Timber Rattlesnakes are also known to occupy these adjacent lands.

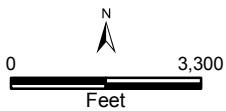
The preservation plan results in the establishment of a large, contiguous, un-fragmented expanse of forested habitat that abuts Schunnemunk Mountain State Park, which is located to the southeast of the Site. Additionally, other undeveloped forested habitats conducive to the presence of rattlesnakes are also located within Earl Reservoir Park, which is located to the northeast of the Site. The preservation of the land as proposed by the Applicant, coupled with the unfragmented forested habitats that are located in the adjacent parks, will maintain a large, contiguous, area of land that will provide substantial, viable habitat for the local population of Timber Rattlesnakes known to exist in the geographic region.

Figures

Figure 1



USGS The National Map: National Boundaries Dataset, National Elevation Dataset, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; U.S. Census Bureau - TIGER/Line; HERE Road Data, and USGS Monroe and Maybrook 2013 Quads



Data Source:
 Orange County GIS Division, 06/2016
 USGS National Map and Monroe and
 Maybrook 2013 Quads

Map prepared for CPC by:
Sarcinello Planning & GIS Services

Cloewood Project SITE LOCATION MAP

Village of South Blooming Grove
 Orange County
 New York

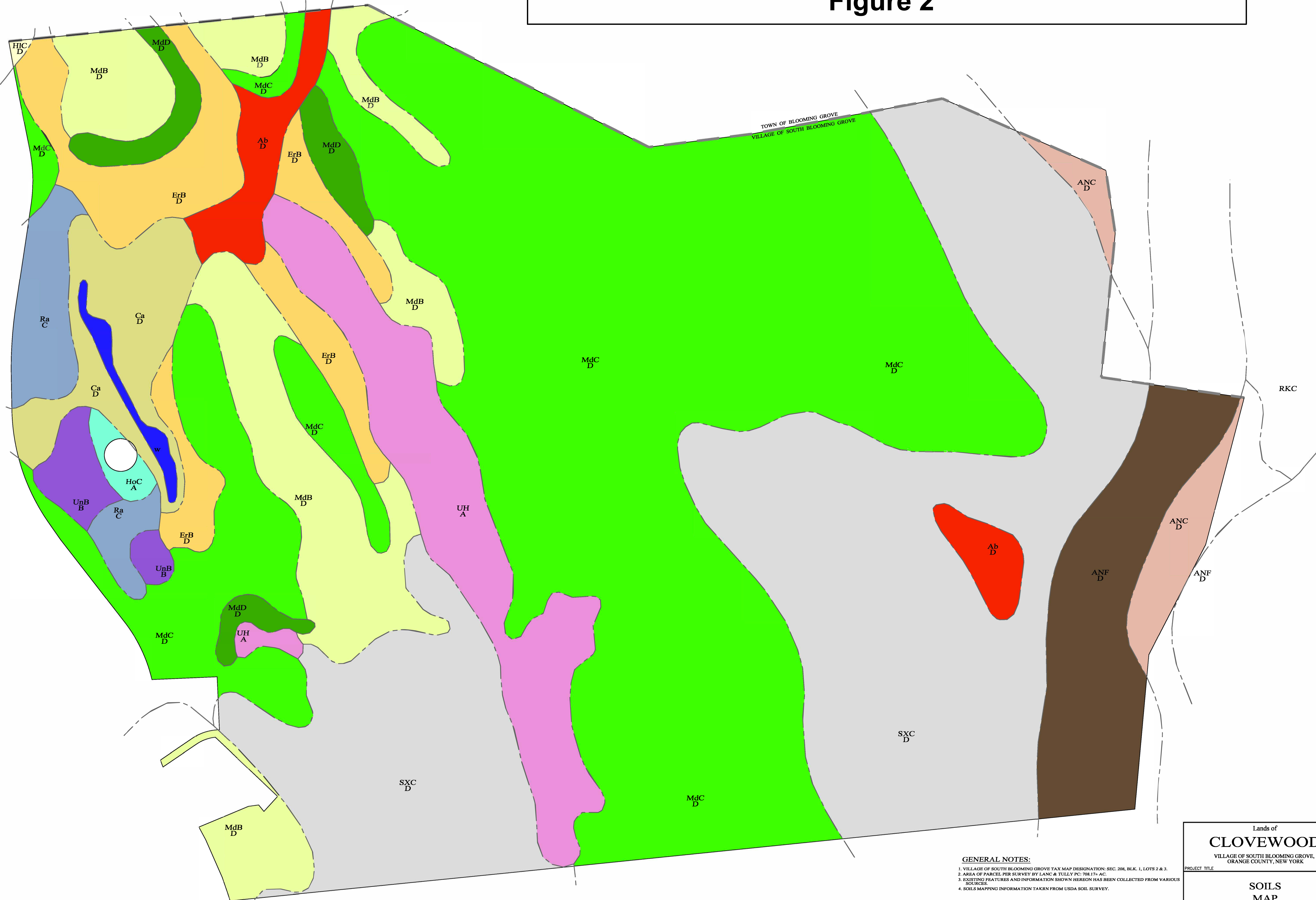
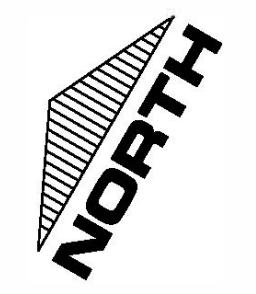
SBL # 208-1-2&3



P.O. Box 2020, Monroe, NY 10949
 Tel: (845) 774-8000 | cpcnyj@gmail.com

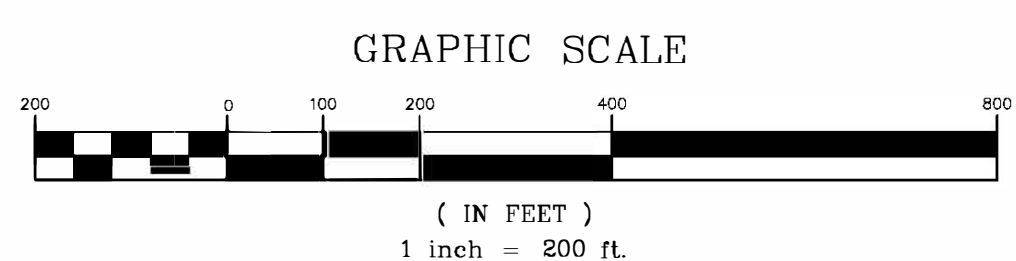
This map is intended to be used for reference and illustrative purposes only. It is not a legally recorded plan, survey, official tax map or engineering schematic and it is not intended to be used as such. Sarcinello Planning & GIS Services makes no representation as to the accuracy of lines, points, or other features shown on this map, and assumes no liability for use of this map.

Figure 2



LINETYPE LEGEND
 --- EXISTING PROPERTY LINE
 - - - USDA SOILTYPE LINE

COLOR	SYMBOL	SOIL TYPE	AREA
Red	Ab	ALDEN SILT LOAM	13.94 AC.
Light Green	AbC	ARNOT-LORDSTOWN COMPLEX, MODERATELY STEEP	10.54 AC.
Light Yellow	AbF	ARNOT-LORDSTOWN COMPLEX, VERY STEEP	32.64 AC.
Light Orange	Ca	CANANDAUGA SILT LOAM	19.84 AC.
Light Green	ErB	ERIE GRAVELLY SILT LOAM	33.14 AC.
Light Green	HIC	ERIE GRAVELLY SILT LOAM, 0% - 3% SLOPES	0.34 AC.
Light Green	HGC	HOOSES GRAVELLY SANDY LOAM, 8% - 15% SLOPES	24 AC.
Light Green	MdB	MARDIN GRAVELLY SILT LOAM, 3% - 8% SLOPES	86.64 AC.
Light Green	MdC	MARDIN GRAVELLY SILT LOAM, 8% - 15% SLOPES	277.24 AC.
Light Green	MdD	MARDIN GRAVELLY SILT LOAM, 15% - 25% SLOPES	114 AC.
Light Green	Ra	RAYNHAM SILT LOAM	9.44 AC.
Light Green	SxC	SWARTSWOOD AND MARDIN VERY STONY SOILS	189.64 AC.
Light Green	UxB	UNADILLA SILT LOAM, 0% - 8% SLOPES	6.24 AC.
Light Green	UH	UDORTHENTIS, SMOOTHED	41.84 AC.
Blue	W	WATER	2.24 AC.



GENERAL NOTES:
 1. VILLAGE OF SOUTH BLOOMING GROVE TAX MAP DESIGNATION: SEC. 208, BLK. 1, LOTS 2 & 3.
 2. AREA OF PARCEL PER SURVEY BY LANC & TULLY PC: 708.17+ AC.
 3. EXISTING FEATURES AND INFORMATION SHOWN HEREON HAS BEEN COLLECTED FROM VARIOUS SOURCES.
 4. SOILS MAPPING INFORMATION TAKEN FROM USDA SOIL SURVEY.

NO.	DATE	REVISIONS
01-03-19		REVISE SOILS
10-13-15		INITIAL PREPARATION

Lands of
CLOEWOOD
 VILLAGE OF SOUTH BLOOMING GROVE,
 ORANGE COUNTY, NEW YORK

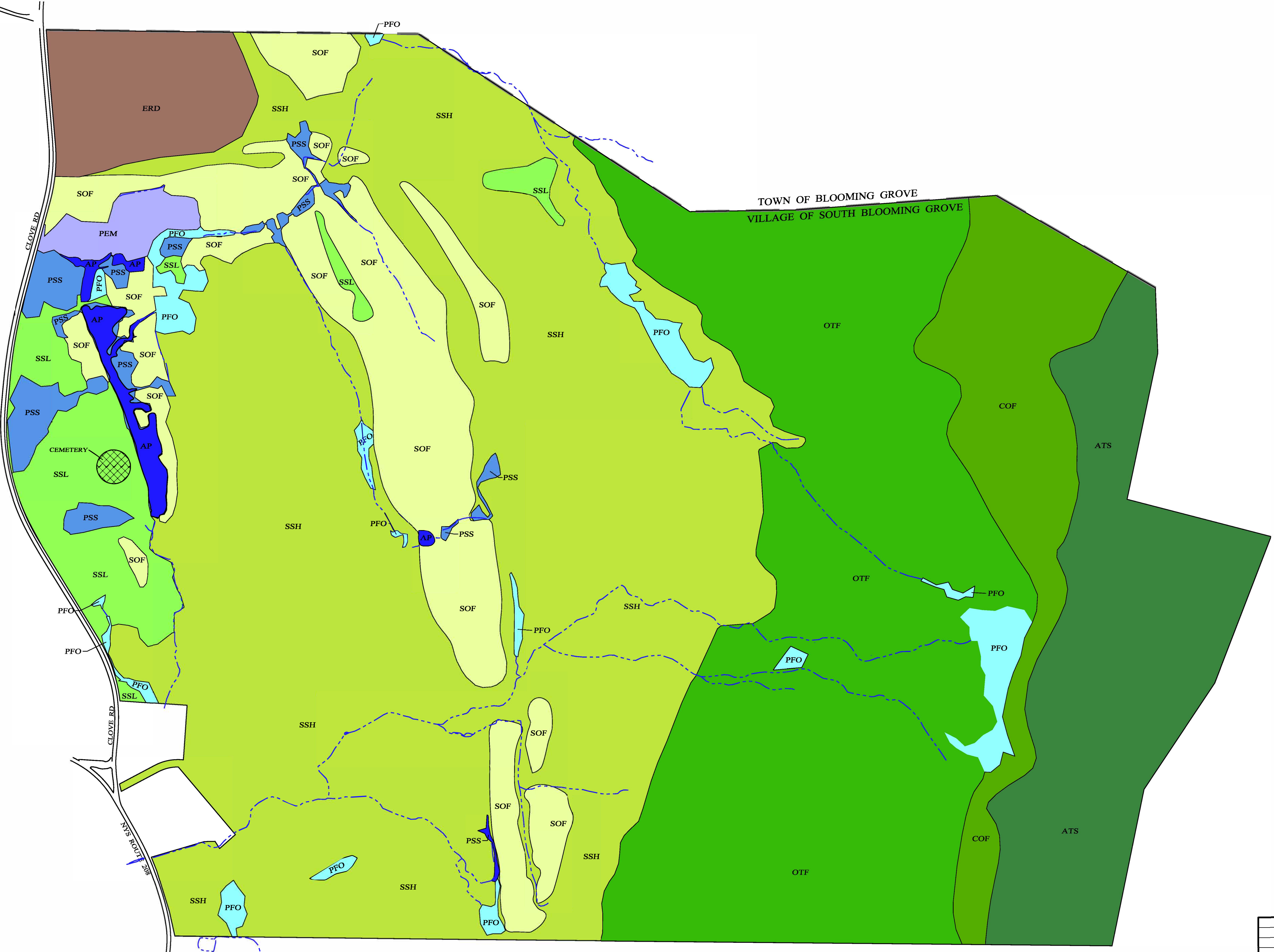
**SOILS
 MAP**

KIRK ROTHER, P.E.
 CONSULTING ENGINEER, PLLC
 5 Saint Stephens Lane, Warwick NY 10990
 (845) 988-0620

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	N.A.	N.A.	N.A.	1 OF 1

Figure 3

EXISTING ECOLOGICAL COMMUNITIES		
LEGEND	EXISTING ECOLOGICAL COMMUNITY	OVERALL AREA
ATS	ACIDIC TALUS SLOPE WOODLAND	68.18 ± AC.
COF	CHESTNUT OAK FOREST	43.00 ± AC.
OTF	OAK-TULIP TREE FOREST	164.30 ± AC.
SSH	SUCCESSIONAL SO. HARDWOOD FOREST	286.15 ± AC.
SOF	SUCCESSIONAL OLD FIELD	65.40 ± AC.
SSL	SUCCESSIONAL SHRUB LAND	25.63 ± AC.
PFO	PALUSTRINE FORESTED WETLAND	14.31 ± AC.
PSS	PALUSTRINE SCRUB-SHRUB WETLAND	10.74 ± AC.
PEM	PALUSTRINE EMERGENT WETLAND	5.47 ± AC.
AP	ARTIFICIAL POND	4.46 ± AC.
ERD	EXISTING RESIDENTIAL DEVELOPMENT	20.53 ± AC.
TOTAL AREA		708.17 ± AC.
RHS	ROCKY HEADWATER STREAM	22,640 ± L.F.



GENERAL NOTES:

- VILLAGE OF SOUTH BLOOMING GROVE TAX MAP DESIGNATION: SEC. 208, BLK. 1, LOTS 2 & 3.
- AREA OF PARCEL PER SURVEY BY LANC & TULLY PC: 708.17± AC.
- EXISTING FEATURES AND INFORMATION SHOWN HEREON HAS BEEN COLLECTED FROM VARIOUS SOURCES.

Lands of
CLOVEWOOD
 VILLAGE OF SOUTH BLOOMING GROVE,
 ORANGE COUNTY, NEW YORK

PROJECT TITLE

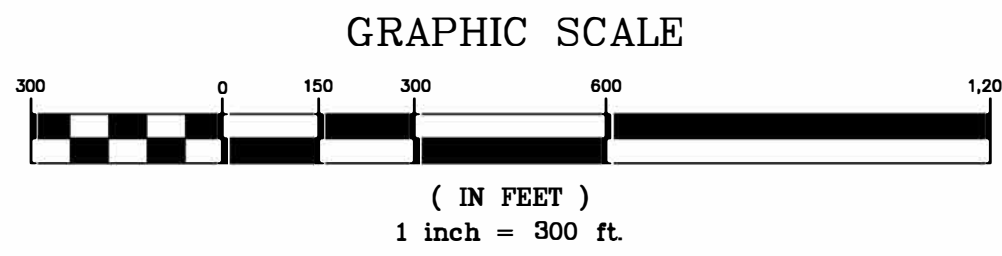
**EXISTING
 ECOLOGICAL COMMUNITIES
 MAP**

DRAWING TITLE

KIRK ROTHER, P.E.
 CONSULTING ENGINEER, PLLC
 5 Saint Stephens Lane, Warwick NY 10990
 (845) 988-0620

LEGEND

EXISTING PROPERTY LINE	—————
ECOLOGICAL COMMUNITY BOUNDARY	—————
EXISTING EDGE OF PAVEMENT	—————
EXISTING WATERCOURSE	—————
ZONING BOUNDARY	—————

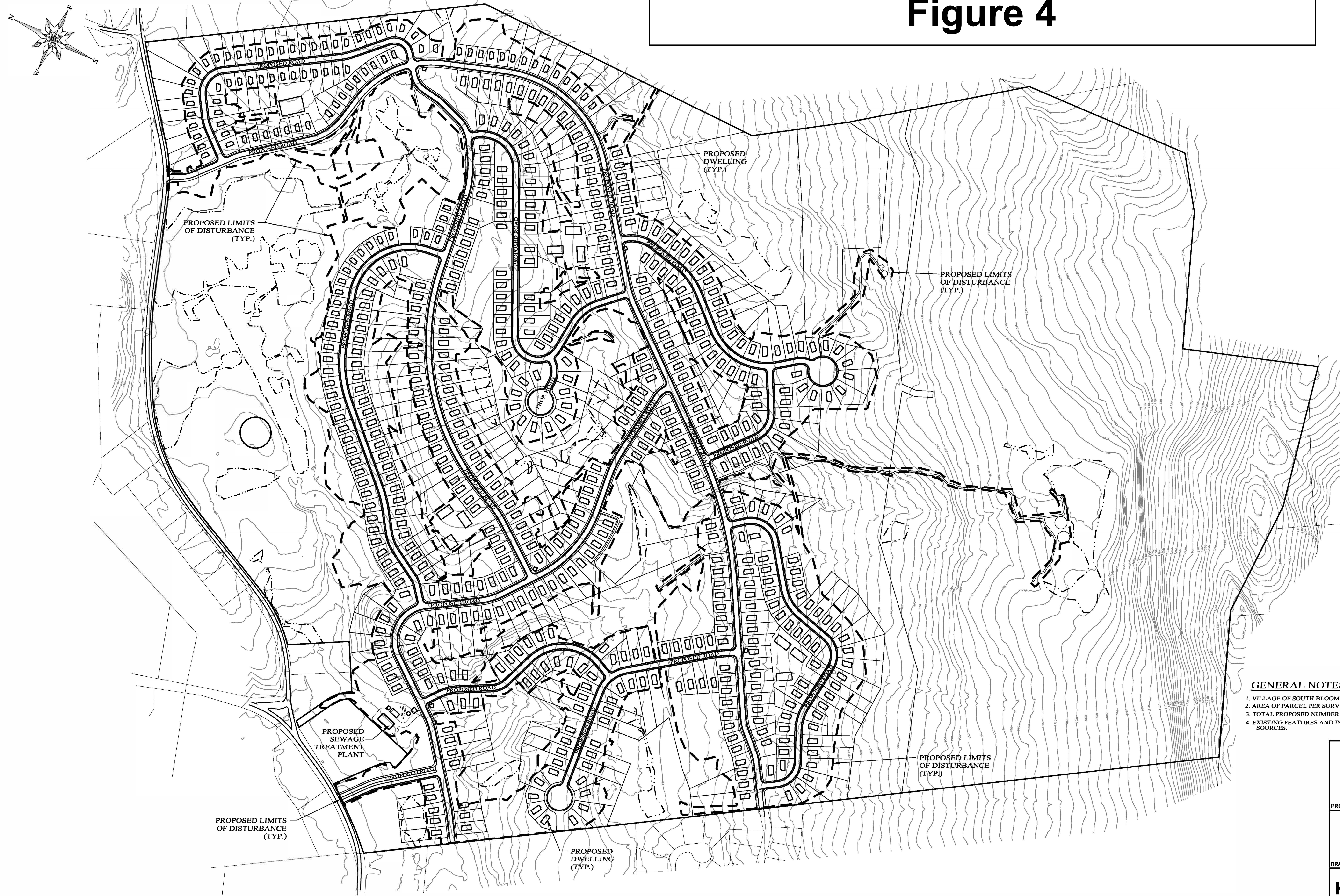


DATE	REVISIONS	KIRK ROTHER, P.E. N.Y.S. LIC. NO. 079053	DATE
02-08-21	INITIAL PREPARATION		

D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #
N.A.	N.A.	N.A.	ECM 1

CAD #	PROJECT #	SCALE
14107ECOAREA	14107.0	AS SHOWN

Figure 4



- GENERAL NOTES:**
1. VILLAGE OF SOUTH BLOOMING GROVE TAX MAP DESIGNATION: SEC. 208, BLK. 1, LOTS 2 & 3.
 2. AREA OF PARCEL PER SURVEY BY LANC & TULLY PC: 708.17± AC.
 3. TOTAL PROPOSED NUMBER OF SINGLE FAMILY LOTS: 600
 4. EXISTING FEATURES AND INFORMATION SHOWN HEREON HAS BEEN COLLECTED FROM VARIOUS SOURCES.

CLOVEWOOD
 VILLAGE OF SOUTH BLOOMING GROVE,
 ORANGE COUNTY, NEW YORK

PROJECT TITLE

**SITE
 DEVELOPMENT
 MAP**

DRAWING TITLE

KIRK ROTHER, P.E.
 CONSULTING ENGINEER, PLLC
 5 Saint Stephens Lane, Warwick NY 10990
 (845) 988-0620

06-25-21	INITIAL PREPARATION	KIRK ROTHER, P.E.	N.Y.S. LIC. NO. 079053
DATE	REVISIONS	DATE	DATE
D.O.T. SHEET #	D.E.C. SHEET #	O.C.H.D. SHEET #	SHEET #
N.A.	N.A.	N.A.	SD 1
CAD #	PROJECT #	SCALE	
14107 BASE	14107.0	AS SHOWN	

LEGEND

EXISTING PROPERTY LINE	=====
PROPOSED PROPERTY LINE	-----
EXISTING 10' CONTOUR LINE	~~~~~
EXISTING 2' CONTOUR LINE	~~~~~
EXISTING DEC WETLANDS	-----
EXISTING FEDERAL WETLANDS	-----
PROPOSED EDGE OF PAVEMENT	-----
EXISTING EDGE OF PAVEMENT	-----
LIMITS OF DISTURBANCE	-----

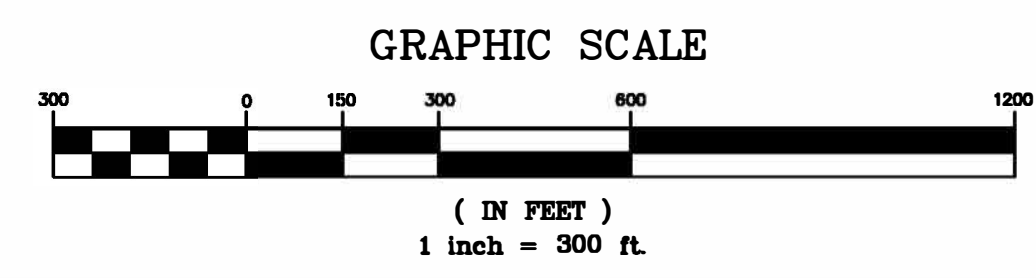
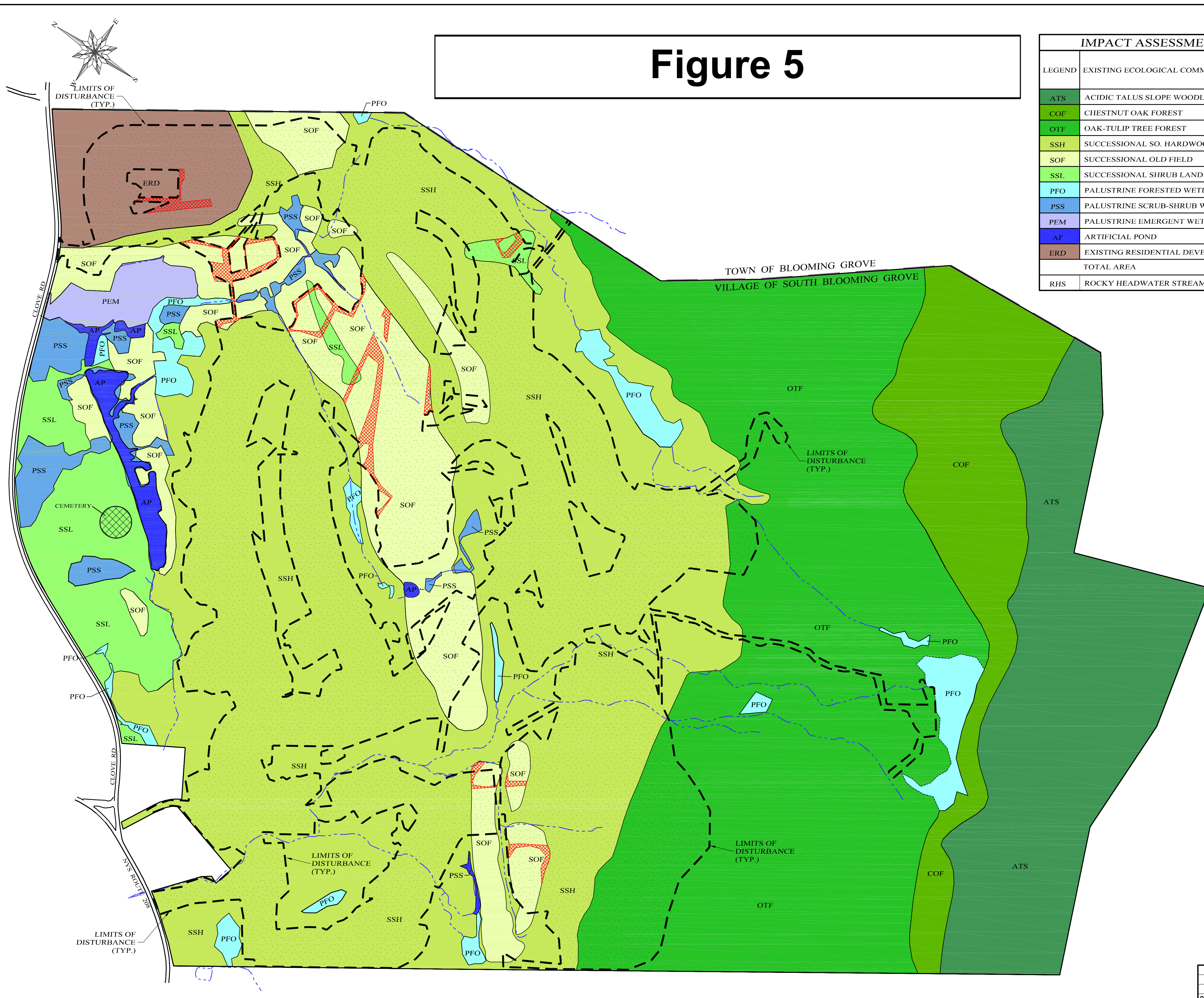


Figure 5

IMPACT ASSESSMENT OF THE EXISTING ECOLOGICAL COMMUNITIES					
LEGEND	EXISTING ECOLOGICAL COMMUNITY	OVERALL COMMUNITY AREA	OVERALL IMPACT PROPOSED	PERMANENT IMPACT PROPOSED	TEMPORARY IMPACT PROPOSED
ATS	ACIDIC TALUS SLOPE WOODLAND	68.18 ± AC.	0.0 ± AC.	0.0 ± AC.	0.0 ± AC.
COF	CHESTNUT OAK FOREST	43.00 ± AC.	0.0 ± AC.	0.0 ± AC.	0.0 ± AC.
OTF	OAK-TULIP TREE FOREST	164.30 ± AC.	4.00 ± AC.	4.00 ± AC.	0.0 ± AC.
SSH	SUCCESSIONAL SO. HARDWOOD FOREST	286.15 ± AC.	195.30 ± AC.	195.30 ± AC.	0.0 ± AC.
SOF	SUCCESSIONAL OLD FIELD	65.40 ± AC.	37.20 ± AC.	33.40 ± AC.	3.80 ± AC.
SSL	SUCCESSIONAL SHRUB LAND	25.63 ± AC.	2.20 ± AC.	1.80 ± AC.	0.40 ± AC.
PFO	PALUSTRINE FORESTED WETLAND	14.31 ± AC.	0.00 ± AC.	0.0 ± AC.	0.0 ± AC.
PSS	PALUSTRINE SCRUB-SHRUB WETLAND	10.74 ± AC.	0.00 ± AC.	0.0 ± AC.	0.00 ± AC.
PEM	PALUSTRINE EMERGENT WETLAND	5.47 ± AC.	0.0 ± AC.	0.0 ± AC.	0.0 ± AC.
AP	ARTIFICIAL POND	4.46 ± AC.	0.0 ± AC.	0.0 ± AC.	0.0 ± AC.
ERD	EXISTING RESIDENTIAL DEVELOPMENT	20.53 ± AC.	13.30 ± AC.	12.80 ± AC.	0.50 ± AC.
	TOTAL AREA	708.17 ± AC.	252.0 ± AC.	247.30 ± AC.	4.70 ± AC.
RHS	ROCKY HEADWATER STREAM	22,640 ± L.F.	295 ± LF	295 ± LF	0.0 ± LF



GENERAL NOTES:
 1. VILLAGE OF SOUTH BLOOMING GROVE TAX MAP DESIGNATION: SEC. 208, BLK. 1, LOTS 2 & 3.
 2. AREA OF PARCEL PER SURVEY BY LANC & TULLY PC: 708.17± AC.
 3. EXISTING FEATURES AND INFORMATION SHOWN HEREON HAS BEEN COLLECTED FROM VARIOUS SOURCES.

Lands of
CLOVEWOOD
 VILLAGE OF SOUTH BLOOMING GROVE,
 ORANGE COUNTY, NEW YORK

PROJECT TITLE

**IMPACT TO EXISTING
 ECOLOGICAL COMMUNITIES
 MAP**

DRAWING TITLE

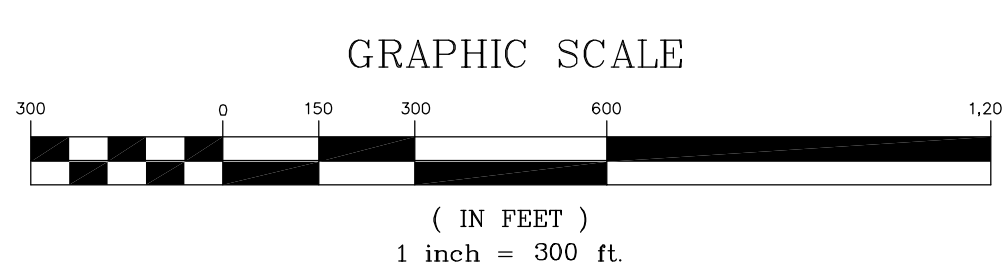
KIRK ROTHER, P.E.
 CONSULTING ENGINEER, PLLC
 5 Saint Stephens Lane, Warwick NY 10990
 (845) 988-0620

DATE	REVISIONS	KIRK ROTHER, P.E.	N.Y.S. LIC. NO. 079053	DATE
05-17-21	REVISE LIMIT OF DISTURBANCE & FIGURES			
02-25-21	REVISE FIGURES / ADD COLUMN			
02-08-21	INITIAL PREPARATION			

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	N.A.	N.A.	N.A.	ECM 2
CAD #	PROJECT #	SCALE		
14107ECOAREA	14107.0	AS SHOWN		

LEGEND

EXISTING PROPERTY LINE	—————	PERMANENT IMPACT AREA	▨	TEMPORARY IMPACT AREA	▨
ECOLOGICAL COMMUNITY BOUNDARY	—————				
EXISTING EDGE OF PAVEMENT	—————				
EXISTING WATERCOURSE	—————				
ZONING BOUNDARY	—————				
LIMITS OF DISTURBANCE	—————				



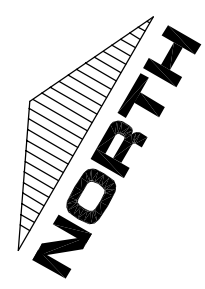
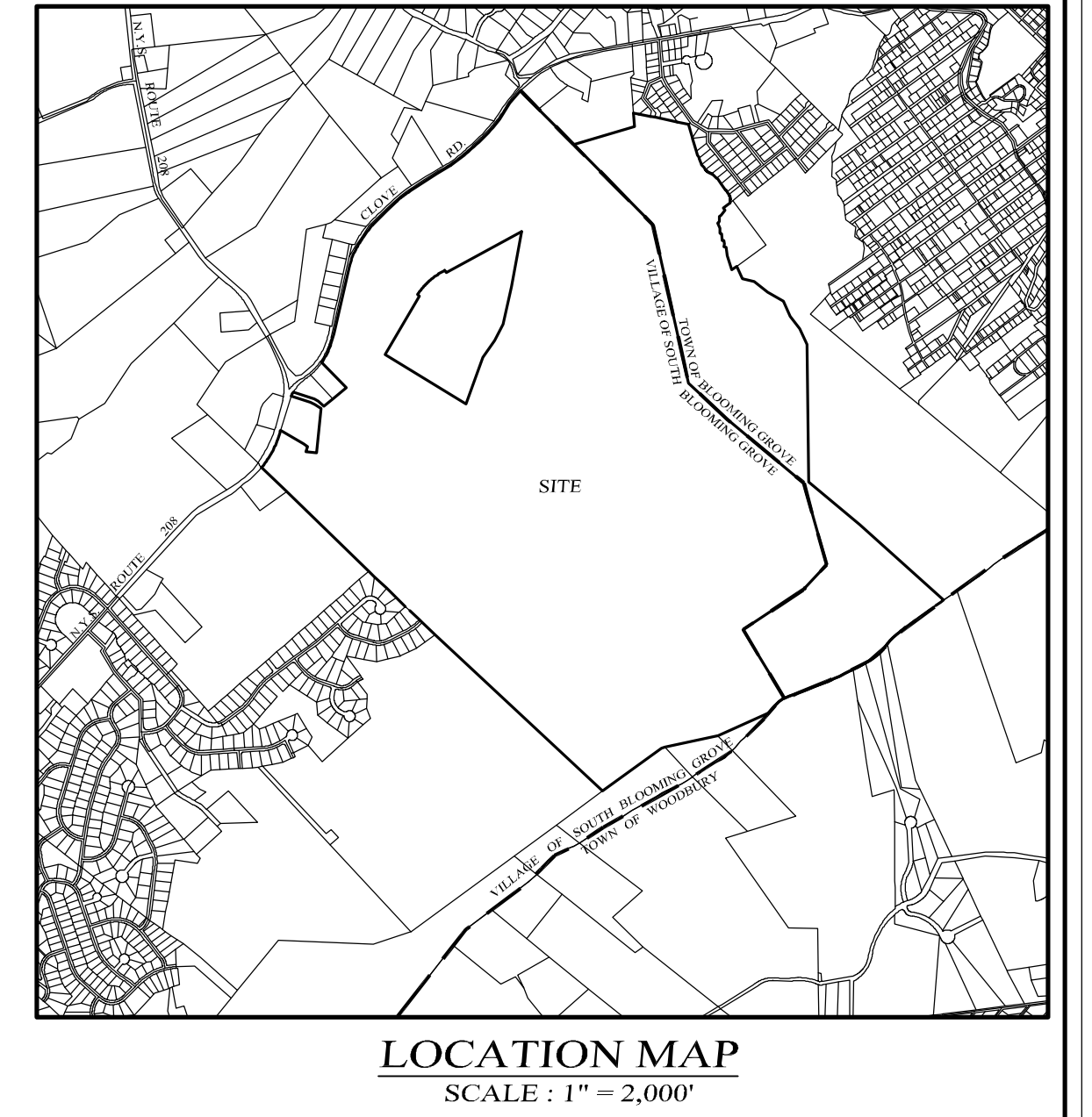
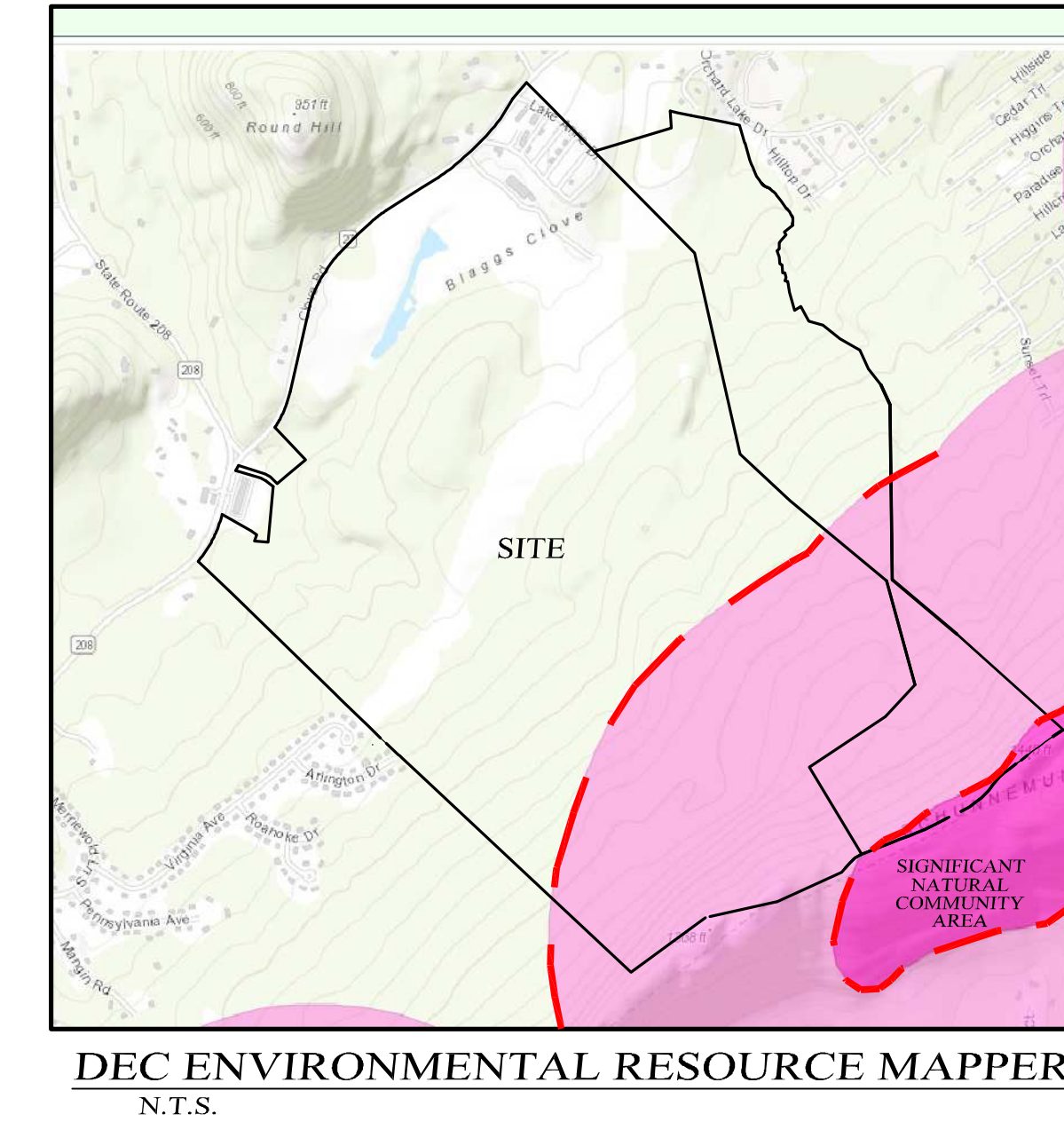
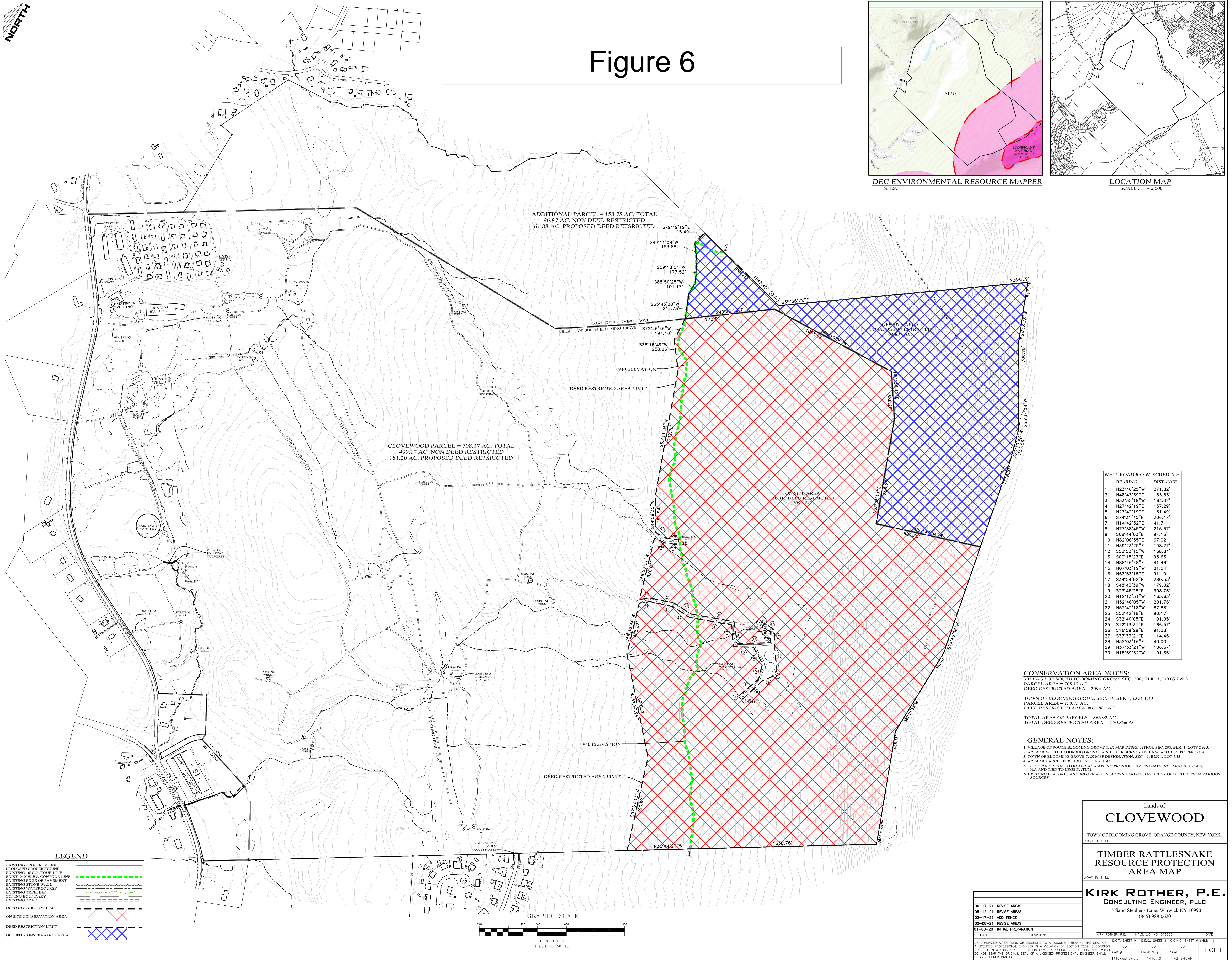


Figure 6



DEC ENVIRONMENTAL RESOURCE MAPPER
N.T.S.

LOCATION MAP
SCALE: 1" = 2,000'



WELL ROAD R.O.W. SCHEDULE	BEARING	DISTANCE
1	N23°46'25"W	271.82'
2	N48°43'39"E	183.53'
3	N33°55'19"W	164.02'
4	N27°42'19"E	157.29'
5	N27°42'19"E	131.49'
6	S74°31'45"E	206.17'
7	N14°42'32"E	41.71'
8	N77°38'45"W	215.37'
9	S68°44'03"E	84.13'
10	N82°08'55"E	67.02'
11	N39°23'25"E	198.27'
12	S53°53'15"W	138.84'
13	S00°18'27"E	55.63'
14	N88°46'48"E	41.46'
15	N07°03'19"W	81.54'
16	N53°53'15"E	81.10'
17	S34°54'02"E	280.55'
18	S48°43'39"W	179.02'
19	S23°46'25"E	308.76'
20	N12°13'31"W	155.63'
21	N32°46'05"W	201.76'
22	N52°42'18"W	87.88'
23	S52°42'18"E	90.17'
24	S32°46'05"E	191.05'
25	S12°13'31"E	166.57'
26	S16°59'29"E	91.28'
27	S37°33'21"E	114.46'
28	N52°03'16"E	40.00'
29	N37°33'21"W	106.57'
30	N15°59'52"W	101.35'

CONSERVATION AREA NOTES:
 VILLAGE OF SOUTH BLOOMING GROVE SEC. 208, BLK. 1, LOTS 2 & 3
 PARCEL AREA = 708.17 AC.
 DEED RESTRICTED AREA = 209.4 AC.

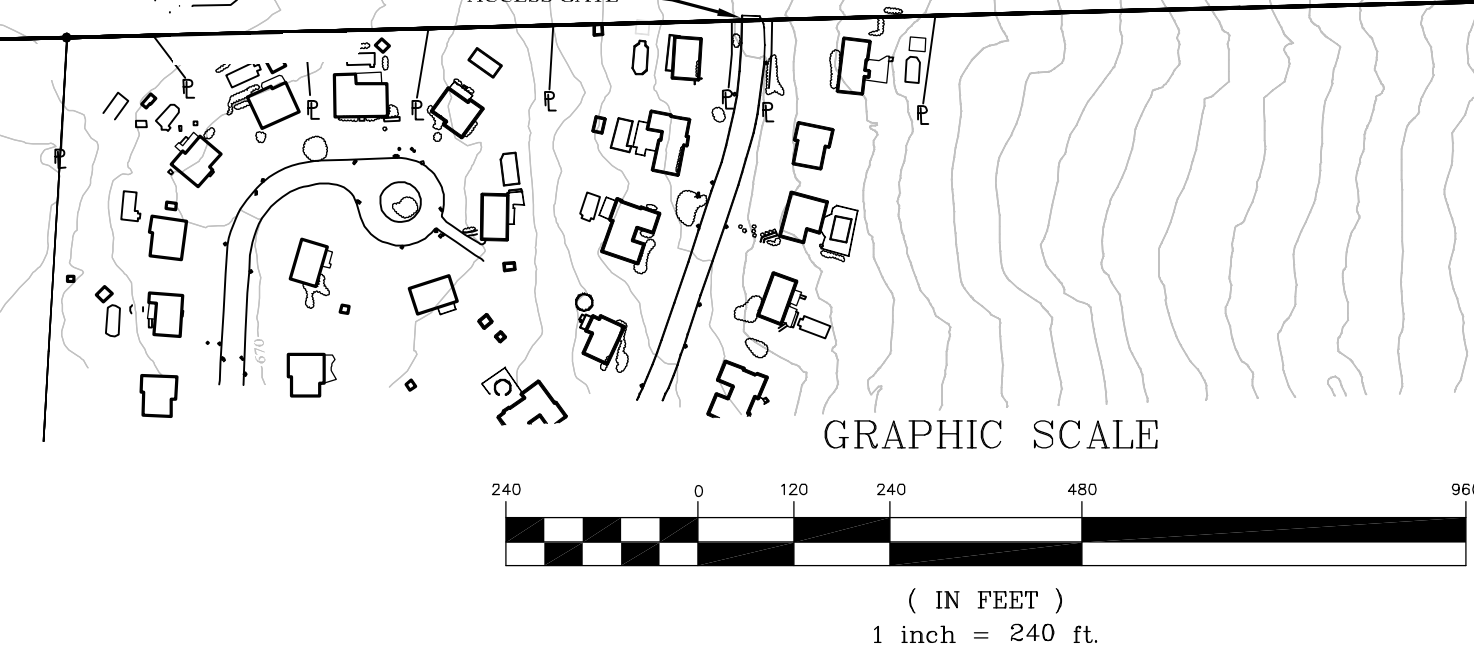
TOWN OF BLOOMING GROVE SEC. 41, BLK 1, LOT 1.13
 PARCEL AREA = 158.75 AC.
 DEED RESTRICTED AREA = 61.88 AC.

TOTAL AREA OF PARCELS = 866.92 AC.
 TOTAL DEED RESTRICTED AREA = 270.88 AC.

GENERAL NOTES:
 1. VILLAGE OF SOUTH BLOOMING GROVE TAX MAP DESIGNATION: SEC. 208, BLK. 1, LOTS 2 & 3.
 2. AREA OF SOUTH BLOOMING GROVE PARCEL PER SURVEY BY LANC & TILLEY PC 708.17 AC.
 3. TOWN OF BLOOMING GROVE TAX MAP DESIGNATION: SEC. 41, BLK 1, LOT 1.13.
 4. AREA OF PARCEL PER SURVEY: 158.75 AC.
 5. TOPOGRAPHY BASED ON AERIAL MAPPING PROVIDED BY PROMAPS INC., MOORESTOWN, N.J. AND TIED TO USGS DATUM.
 6. EXISTING FEATURES AND INFORMATION SHOWN HEREIN HAS BEEN COLLECTED FROM VARIOUS SOURCES.

LEGEND

EXISTING PROPERTY LINE	---
PROMISED PROPERTY LINE	---
EXISTING OF CONTOUR LINE	---
EXIST. 5' ELEV. CONTOUR LINE	---
EXISTING EDGE OF PAVEMENT	---
EXISTING STONE WALL	---
EXISTING WATERCOURSE	---
EXISTING FENCE LINE	---
ZONING BOUNDARY	---
EXISTING TRAIL	---
DEED RESTRICTION LIMIT	---
ON SITE CONSERVATION AREA	---
DEED RESTRICTION LIMIT	---
OFF SITE CONSERVATION AREA	---



Lands of
CLOVEWOOD
 TOWN OF BLOOMING GROVE, ORANGE COUNTY, NEW YORK
 PROJECT TITLE

**TIMBER RATTLESNAKE
 RESOURCE PROTECTION
 AREA MAP**
 DRAWING TITLE

KIRK ROTHER, P.E.
 CONSULTING ENGINEER, PLLC
 5 Saint Stephens Lane, Warwick NY 10990
 (845) 988-0620

08-17-21	REVISE AREAS	
08-12-21	REVISE AREAS	
03-17-21	ADD FENCE	
02-08-21	REVISE AREAS	
01-08-20	INITIAL PREPARATION	

DATE: 08/17/21
 REVISIONS: [None]
 KIRK ROTHER, P.E. N.Y.S. LIC. NO. 079953

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DIST. SHEET # [None] D.E.C. SHEET # [None] D.C.H.D. SHEET # [None] SHEET # [None]
 N.A. N.A. N.A. N.A.
 PROJECT # [None] SCALE [None]
 CSD # [None] 14107.D AS SHOWN
 1 OF 1

Attachment I

General Contractor

Timber Rattlesnake Education & Encounter Plan

Timber Rattlesnakes are listed as a Threatened species in NYS and any encounter with a rattlesnake that results in the harm or death of the snake can result in a violation, personal legal action, and/or fines from the NYS Department of Environmental Conservation (DEC).

It is illegal to kill, capture, disturb, harm, pursue, possess, or sell Timber Rattlesnakes, or any part thereof in New York State. No person may handle a Timber Rattlesnake unless they are licensed to do so by the DEC.

This Education and Encounter Plan is required by the DEC for any person working as a contractor, or as a sub-contractor, on the property. These guidelines have been prepared to provide instruction and guidance to prevent harm to individual snakes and how to properly handle an incidental encounter with a Timber Rattlesnake. Basic knowledge of identifying species of snakes will help protect both people and snakes that are on the property.

Key Points:

- 1) If required by the DEC, a Snake Exclusion Fence and Licensed Snake Monitor would be part of the project. The fence would be inspected to ensure it's functioning as intended. If repairs to the fence are required, those repairs would be conducted immediately.
- 2) READ OVER THE SPECIES BIOLOGY and their visual Characteristics (see attached DEC Timber Rattlesnake Fact Sheet). A lot of the time, snakes are misidentified. Refer to the Timber Rattlesnake Fact Sheet that is attached for more information about Timber Rattlesnake biology and life history.



- 1) Snakes are “ambush” predators and as a result, you can normally find them tucked up against or under rocks, debris, equipment, or spoil piles where rodents will travel and forage. Individual rattlesnakes may also be seen traveling in open areas, from one hiding place to another.
- 2) Rattlesnakes are Exothermic (cold blooded). Individuals will bask in the morning to increase their body temperature and will be found where sunlight can warm their bodies. Once a snake gets warm, it may pursue prey or hide and wait to ambush its meal. As a result, keep an eye out and be vigilant when on site. Rattlesnakes may be found alongside construction equipment or materials. AND they may be well camouflaged.
- 3) As the day passes and ambient air temperature increase, rattlesnakes may travel under equipment, machinery, or other surface materials to get out of the direct sun. A visual inspection of the area surrounding machinery and any stockpiled materials is recommended.
- 4) Typically, individual snakes will rattle as a warning, indicating that you are too close. However, they don’t always rattle. Timber Rattlesnakes are not overly aggressive and will only strike when they feel threatened, provoked, or if they have to defend themselves. Most people are bitten as they are harassing a snake, or if they accidentally step on or immediately near one. But when left alone and given a wide berth, rattlesnakes will try to get away and not initiate a strike.
- 5) Rattlesnakes cannot throw themselves at a person and they do not seek out people to bite. They use their venom to incapacitate prey and to defend themselves against predators. Their “strike range” is typically ½ of their coiled body length.

Remain vigilant throughout daily work activities. Even if not first discovered during an early morning reconnaissance, snakes may travel during the day be encountered later in the day along the exclusionary fence. Also, be sure to inspect the perimeters of equipment and materials for snakes after periods of no use (ie. after lunch or required breaks). If a snake is encountered be careful and avoid direct contact.

Timber Rattlesnakes have a relatively thick body in respect to its length and the scales are keeled (raised and rough) In the photograph below, note the thick body of this Timber Rattlesnake compared to the boot, this snake offered no inclination to bite and wandered away. As it crawled, it held its tail raised above the ground unlike any other snake in the state.





The large keeled scales of this Rattlesnake have a rough appearance which may cause some confusion when comparing one to the Water Snake or Hognose Snake. Timber Rattlesnakes do not live in the water or hang around at the waters edge. Only a rattlesnake has a rattle on the end of its tail, it is hard to mis-identify the rattle of a rattlesnake. They do not always rattle prior to striking, so being vigilant and observant is highly recommended to avoid direct contact with a snake.

******At no point should anyone, other than NCES, the DEC, or a licensed Timber Rattlesnake Monitor attempt to capture, move, or handle a rattlesnake.******

If a snake is encountered:

- Stay calm and carefully move away from the snake.
- Inform others in the work area of the location of the snake and inform them to move directly away from the snake.
- Shut down any machinery, if possible, without getting within 15' of the snake. Stay as far away from the snake as possible.
- Inform the someone in charge that a snake has been found and that NCES or another DEC Licensed Snake Handler needs to be contacted so that the snake can be relocated.
- Have 1 person keep an eye on the snake from a safe distance (15' plus) so that NCES Staff or another Licensed Snake Handler knows where to look and find the snake once on-site. This person should also ensure that no one else comes into incidental/accidental contact with the snake.

NCES, or others who are licensed to handle the snake will notify the NYSDEC that a Timber Rattlesnake has been found and that it was relocated to a wooded portion of the property on the same day, well away from any people of structures, to further avoid an encounter.



If bitten by a Timber Rattlesnake

[By Mayo Clinic Staff](#)

Most snakes aren't dangerous to humans. Only about 15% worldwide and 20% in the United States are venomous. In North America, these include the rattlesnake, coral snake, water moccasin and copperhead. Their bites can cause severe injuries and sometimes death.

If a venomous snake bites you, call 911 or your local emergency number immediately, especially if the bitten area changes color, begins to swell or is painful. Many Emergency Rooms stock antivenom drugs, which may help you.

If possible, take these steps while waiting for medical help:

- Move beyond the snake's striking distance.
- Remain still and calm to help slow the spread of venom.
- Remove jewelry and tight clothing before you start to swell.
- Position yourself, if possible, so that the bite is at or below the level of your heart.
- Clean the wound with soap and water. Cover it with a clean, dry dressing.

Caution

- Don't use a tourniquet or apply ice.
- Don't cut the wound or attempt to remove the venom.
- Don't drink caffeine or alcohol, which could speed your body's absorption of venom.
- Don't try to capture the snake. Try to remember its color and shape so that you can describe it, which will help in your treatment. If you have a smartphone with you and it won't delay your getting help, take a picture of the snake from a safe distance to help with identification.

Symptoms

Most snakebites occur on the extremities. Typical symptoms of the bite from a nonvenomous snake are pain and scratches at the site.

Usually, after a bite from a venomous snake, there is severe burning pain at the site within 15 to 30 minutes. This can progress to swelling and bruising at the wound and all the way up the arm or leg. Other signs and symptoms include nausea, labored breathing and a general sense of weakness, as well as an odd taste in the mouth.

Some snakes, such as coral snakes, have toxins that cause neurological symptoms, such as skin tingling, difficulty speaking and weakness.

Sometimes, a venomous snake can bite without injecting venom. The result of these "dry bites" is irritation at the site.





For the safety of all persons on the project site, if a Timber Rattlesnake is found within the work area and inside the barrier fence, all work in that area must stop. Work can resume once the Licensed Snake Monitor has removed the snake, inspected the remainder of the work area, and cleared the site for the resumption of work.

NCES is not liable for any injury, death, or damage to persons or property that may occur as a result of the contractor, or other on-site personnel, coming into contact with a Timber Rattlesnake, at any time.

For questions, or to schedule a presentation, please contact:

North Country Ecological Services, Inc.

25 West Fulton Street, Gloversville, New York 12078

(518) 725-1007

northcountryeco@gmail.com

Stephen P. George, PWS

Thomas M. Ward, CWB

Attachment II

Timber Rattlesnake Sighting Protocol

Should a Timber Rattlesnake be encountered, Immediately Contact
North Country Ecological Services, Inc.
Office (518) 725-1007

Stephen P. George (518) 527-6175
Thomas M. Ward (518) 852-8264

NCES Staff will document the encounter and safely relocate the snake

*****It is illegal to kill, capture, disturb, harm, pursue, possess, or sell a timber rattlesnake in New York, and that no one may handle a timber rattlesnake unless they have been licensed to do so by the DEC.*****

*****At no point should anyone, other than NCES, the DEC, or another licensed Timber Rattlesnake Monitor attempt to capture, move, or handle in a rattlesnake in any manner.*****

- Stay calm and safely move away from the snake.
- Inform others in the work area of the location of the snake and inform them to move directly away from the snake.
- Shut down any machinery, if possible, without getting within 15' of the snake.
- Inform the on-site foreman that a snake has been found and that NCES needs to be contacted to remove the snake.
- Have 1 person keep an eye on the snake from a safe distance (15' plus) so NCES knows where to look once we are on the site and so nobody else comes into incidental/accidental contact with the snake.

NCES will notify the NYSDEC that a Timber Rattlesnake has been found and that it was moved to a wooded portion of the property on the same day.

The rattlesnake barrier, if required by the DEC, will be inspected by a person who received training to ensure that the fence is in fully functional condition, and the inspections will be documented in a log that is kept on the site.

For the safety of all workers on the project, if a Timber Rattlesnake is found within the work site and inside the barrier fence, all work in the area would stop immediately. Work can resume once the Licensed Snake Monitor has removed the snake, inspected the remainder of the work area, and cleared the site for the resumption of work.

All construction personnel, after they have received training from NCES, will sign a log maintained on the site certifying they have been trained.

****NCES is not liable for any injury, death, or damage to persons or property that may occur as a result of any on-site personnel, coming into contact with a Timber Rattlesnake, at any time.****

*****If NCES Staff is unable to get to the Site and handle the Rattlesnake encounter, the following individuals (DEC Approved Rattlesnake Responders) can be contacted to capture and relocate individual snakes.*****

- 1) Ed McGowen (845) 446-5916**
- 2) Bob Savarese (845) 928-7815**
- 3) Marty Kupersmith (914) 262-3246**
- 4) David Griggs (845) 988-6029**
- 5) Tim & Susan Sharko (845) 988-9369**
- 6) Randy Stechart (845) 252-3517**

Attachment III

Timber Rattlesnake Education & Encounter Plan for Community Residents

****It is illegal to kill, capture, disturb, harm, pursue, possess, or sell a Timber Rattlesnake (or any part thereof) in New York, and no one may handle a rattlesnake unless licensed to do so by the DEC.****

Avoidance of close contact with a Timber Rattlesnake is the best way to protect both residents of the community and individual rattlesnakes from direct harm. At no point should anyone, other than NCES, the DEC, or a Licensed Timber Rattlesnake Handler attempt to capture, relocate or handle, a Timber Rattlesnake.

Timber Rattlesnake Facts & Characteristics

To properly identify a timber rattlesnake, review visual characteristics section of this plan. A lot of times snakes are misidentified. Also refer to the *DEC Timber Rattlesnake Fact Sheet* that is attached for more information about Timber Rattlesnake biology and life history.

- 1) Snakes are “ambush” predators and as a result, you can normally find them tucked up against rocks, debris, equipment, or spoil where rodents will travel. They may be seen traveling in open areas, such as fields. They will be found and around house foundations and other structures, wood piles, leaf piles, and outdoor monuments.
- 2) They will bask in the morning to increase their body temperature and will be found where sunlight can warm their bodies. Once the snake gets warm, it may pursue prey or hide and wait to ambush its meal. SO, keep an eye out and be vigilant that snakes may be alongside equipment or materials. AND they may be well camouflaged.
- 3) Once the day heats up, they may travel under vehicles or structures to get out of the direct sun.



- 4) Typically, they will rattle as a warning that you are too close but they don't always rattle. They are not overly aggressive and they will strike when they feel threatened or when they have to defend themselves. Most people get bitten as they are harassing a snake. But when left alone and given a wide berth, they will try to get away and not initiate a strike.
- 5) They cannot throw themselves at a person and they do not seek out people to bite. They use their venom to kill prey and to defend themselves. Their "strike range" is typically $\frac{1}{2}$ of their coiled body length.

Be vigilant that snakes may be on-site and/or along the perimeter of the fences and along logs that they may be backed up against, keep an eye out, when in doubt be careful and avoid contact. Inspect the perimeters of equipment and materials for snakes up against them.

If a snake is found on a roadway, path, or where routine maintenance is being conducted (mowing, weed trimming, tree removal), avoid the snake and the area until the snake has moved on.

The snake has a thick body in respect to its length and the scales appear raised, rough and keeled. Note the thick body of this Timber compared to the boot, this snake offered no inclination to bite and wandered away. As it crawled, it held its tail raised above the ground, unlike any other snake in the state.



The large keeled scales of this Rattlesnake have a rough appearance which may cause some confusion when comparing one to the Water Snake or Hognose Snake. Timbers do not live in the water or hang around at the water's edge. Only a Rattlesnake has a rattle on the end of its tail.



Individual Timber Rattlesnakes are known to occur in different color phases, as observed in the photographs above. Therefore, proper identification is key.

*****If a Timber Rattlesnake is encountered***
please follow these guidelines:**

- Stay calm and carefully move away from the snake.
- Inform others present in the general area of the location of the snake and inform them to move directly away from the snake.
- Turn off machinery and avoid loud noises or sudden movements within 30' of the snake.
- Immediately contact NCES staff, or another Licensed Timber Rattlesnake Handler so that the snake can be safely relocated. If they cannot be reached, contact the Regional Wildlife Biologists at the DEC Region 3 Office (845) 256-3098.
- Have 1 person keep an eye on the snake from a safe distance (25' plus) so NCES or another Licensed Timber Rattlesnake Handler knows where to look once on the site.

To Avoid Encounters During Routine Activities

Any required outdoor activities, that can be accomplished during the period of the year when snakes are denning (winter hibernation period), should be scheduled between October and April.

Timber Rattlesnakes are attracted to warm areas such as pavement, sidewalks, doorsteps, and other open, sunny areas to bask. As part of their daily movements, they can be found anywhere while searching for prey, which is primarily small rodents and other small mammals.

To avoid incidents that could harm a Timber Rattlesnake during daily & routine grounds maintenance outside of the winter denning period, follow these general guidelines:

- During routine lawn mowing, raise the mower deck as high as possible to avoid a snake being impacted by the mower's blades.
- Avoid work in and around rock piles, wood piles, leaf piles, around machinery, and along building foundations without a visual inspection for snakes.

If bitten by a Timber Rattlesnake

[By Mayo Clinic Staff](#)

Most snakes aren't dangerous to humans. Only about 15% worldwide and 20% in the United States are venomous. In North America, these include the rattlesnake, coral snake, water moccasin and copperhead. Their bites can cause severe injuries and sometimes death.

If a venomous snake bites you, call 911 or your local emergency number immediately, especially if the bitten area changes color, begins to swell or is painful. Many Emergency Rooms stock antivenom drugs, which may help you.

If possible, take these steps while waiting for medical help:

- Move beyond the snake's striking distance.
- Remain still and calm to help slow the spread of venom.
- Remove jewelry and tight clothing before you start to swell.
- Position yourself, if possible, so that the bite is at or below the level of your heart.
- Clean the wound with soap and water. Cover it with a clean, dry dressing.

Caution

- Don't use a tourniquet or apply ice.
- Don't cut the wound or attempt to remove the venom.
- Don't drink caffeine or alcohol, which could speed your body's absorption of venom.
- Don't try to capture the snake. Try to remember its color and shape so that you can describe it, which will help in your treatment. If you have a smartphone with you and it won't delay you getting help, take a picture of the snake from a safe distance to help with identification.

Symptoms

Most snakebites occur on the extremities. Typical symptoms of the bite from a nonvenomous snake are pain and scratches at the site.

Usually, after a bite from a venomous snake, there is severe burning pain at the site within 15 to 30 minutes. This can progress to swelling and bruising at the wound and all the way up the arm or leg. Other signs and symptoms include nausea, labored breathing and a general sense of weakness, as well as an odd taste in the mouth.

Some snakes, such as coral snakes, have toxins that cause neurological symptoms, such as skin tingling, difficulty speaking and weakness.

Sometimes, a venomous snake can bite without injecting venom. The result of these "dry bites" is irritation at the site.

NCES is not liable for any injury, death or damage to property that may occur as a result of the contractor, or other on-site personnel, coming into contact with a Timber Rattlesnake, at any time.

For questions, or to schedule a presentation, please contact:

North Country Ecological Services, Inc.

25 West Fulton Street, Gloversville, New York 12078

(518) 725-1007

northcountryeco@gmail.com

Exhibit 3
Implementation Agreement

Implementation Agreement
In Support of the NYSDEC Incidental Take Permit for the Timber Rattlesnake
Submitted by Keen Equities, LLC for Clovewood Residential Development
Village of South Blooming Grove
Orange County, NY

Property Owner: Keen Equities, LLC

This Implementation Agreement is by the Property Owner, Keen Equities, LLC (hereinafter referenced as “Grantor”).

FACTS AND PURPOSES

Facts: The Grantor has entered into this Agreement in consideration of the following facts:

The Grantor’s property is an approximately 708 +/- acre parcel (tax map parcel section 208, block 1, lots 2 and 3) located at 505 Clove Road in the Village of South Blooming Grove, Orange County, New York. This is defined as the “Project Site.” The Applicant seeks to build 600 subdivided residential units along with driveways, accessways and utilities, as well as accessory uses such as sidewalks and lighting.

The Project Site is determined to potentially provide foraging habitat for the State listed endangered Timber Rattlesnake (*Crotalus horridus*) (Covered Species).

The Grantor has developed a series of measures, described in the Incidental Take Permit Application prepared by North Country Ecological Services, Inc., to minimize and mitigate to the maximum extent practicable the effect of possible take of Covered Species incidental to the Grantor’s covered activities.

Purposes: The purposes of this Agreement are:

To demonstrate compliance with NYSDEC Endangered Species regulations at 6 NYCRR 182.6(e), which require the development of an Implementation Agreement that includes: a) The identification of all parties that will be involved in implementing the endangered and threatened species mitigation plan, with individuals funding and implementing the plan clearly identified; b) The identification of a timeline for implementation of measures outlined in the mitigation plan; c) A specific description of the funding available for, and dedicated to, implementation of the plan and a description of the methods of assurance or guarantee that the funds will be available as necessary; and d) Signature by the Grantor.

To define the Grantor's roles and responsibilities and provide a common understanding of actions that will be taken to minimize and mitigate potential effects on the Species within the project site and to avoid jeopardy to the listed Covered Species.

To provide assurances to the Grantor that as long as the terms and conditions of the Incidental Take Permit and this Implementation Agreement are correctly performed, no additional mitigation will be required of the Grantor for Timber Rattlesnakes, except as provided in this agreement or required by law.

4. To ensure, that as a mitigation measure, the NYSDEC has legal access to the Project Site to review conditions on the site relative to Timber Rattlesnakes.

NYSDEC JURISDICTION

The NYSDEC has jurisdiction under Article 11 of the New York State Environmental Conservation Law, with regulations at 6 NYCRR 182 to require that an Applicant obtains an incidental take permit prior to engaging in any activity that is likely to result in a take of any species listed as endangered or threatened under these regulations.

GRANTOR RIGHTS AND OBLIGATIONS

Rights: Through this Implementation Agreement and the issuance of the Incidental Take Permit, the Grantor has the right to construct a 600 unit residential project located on the project site as shown on the Plans in the Incidental Take Application.

Obligations: Through this implementation Agreement and the issuance of the Incidental Take Permit, the Grantor will meet the following obligations and costs:

Prior to Construction

1. Deed Restriction language has been established by the Grantor's attorney and is attached to the Incidental Take Permit Application. Once approved by NYSDEC as part of the permit issuance, the Deed Restriction will be filed with the Orange County Clerk's Office and proof of filing will be provided to NYSDEC.
2. Grantor shall follow all of the mitigation plans set forth in the Application for the Incidental Take Permit during and after construction including Education and Encounter Plan, Sighting Protocol, Exclusionary Fencing, and Snake Monitor, etc.

3. The Grantor shall preserve 270+/- acres of timber rattlesnake foraging habitat (209 acres on-site and 61+/- acres off-site) via a formal Declaration of Restrictive Covenants as described in the Application for the Incidental Take Permit.

ACCESS

The Grantor will grant access to the NYSDEC for Timber Rattlesnake research - The following language is placed in the Deed Restriction:

NYSDEC Access. The Declarant authorizes the NYSDEC to enter upon the Deed Restricted Area for scientific study, habitat management and to review the condition of the area to ensure encroachment or unauthorized occupation by others is not occurring.

FINANCIAL ASSURANCES OF THE GRANTOR

The greatest cost to the Grantor for implementation of this agreement is the preservation and long term maintenance of the Deed Restricted Area and the implementation of the public education program. The public education costs will be accounted for in the establishment of the HOA for the Project.

AUTHORIZATION

The signatory below is authorized to execute this Agreement on behalf of that Party. This Implementing Agreement will be in effect as of the date that the NYSDEC issues the Incidental Take Permit.

Dated:

By: 

Y.C. Rubin

On Behalf of Keen Equities, LLC

Title: Managing Member of the LLC

Exhibit 4

Proposed Declaration of Restrictive Covenants and Map

DECLARATION OF RESTRICTIVE COVENANTS

THIS DECLARATION OF RESTRICTIVE COVENANTS is made this ____ day of _____, 2022 by Keen Equities LLC as landowner (hereinafter referenced as “Declarant”) with a mailing addresses at 4922 11th Avenue, Brooklyn, NY 11219.

RECITALS

WHEREAS, Declarant is the owner in fee of certain real property comprising 209 acres ± located in the Village of South Blooming Grove, Orange County, New York, which property is more particularly described as a portion of tax map ID number 208-1-3 (the “Property”). The Declarant’s deed to the Property is recorded at Liber 12065, page 124; and

WHEREAS, Declarant also owns in fee certain adjacent real property comprising 61.88 acres located in the Town of Blooming Grove, Orange County, New York, which property is more particularly described as tax map ID number 41-1-1.13 (the “Additional Property”). The Declarant’s deed to the Additional Property is recorded at Liber 12065, page 124; and

WHEREAS, Declarant has applied for all necessary municipal and State permits for a 600 unit single family home residential project known as Clovewood, as shown on the site plan, entitled “Clovewood Site Plan Package” dated last revised October 27, 2021 prepared by Kirk Rother Engineering; and

WHEREAS, the area to be preserved as a Resource Protection Area, a total of 270.88 contiguous acres identified above as a portion of the Property and all of the Additional Property is shown on a map entitled “Timber Rattlesnake—Resource Protection Area”, dated last revised June 17, 2021 prepared by Kirk Rother Engineering and filed in the Office of the Orange County Clerk on _____, as Map Number _____, attached hereto as Exhibit “A”; and

WHEREAS, the metes and bounds description of the area to be preserved as a Resource Protection Area is attached hereto as Exhibit “B”; and

WHEREAS, the Property and surrounding lands contain basking and foraging habitat (but not winter habitat in the form of a hibernaculum) for the Timber Rattlesnake (*Crotalus horridus*), a New York State “threatened and/or endangered” species protected by Environmental Conservation Law (“ECL”) Section 11-0535 and the New York Code of Rules and Regulations (6 N.Y.C.R.R. Part 182); and

WHEREAS, Declarant has applied to the New York State Department of Environmental Conservation (“NYSDEC) for an Incidental Take Permit, number 3-3320-00150/00003 (“Incidental Take Permit”) to allow it to develop the Property in accordance with 6 N.Y.C.R.R. Part 182; and

WHEREAS, the NYSDEC requires, as a condition precedent to the issuance of the aforesaid Incidental Take Permit, a firm commitment by the Declarant establishing a Resource Protection Area; and

DRAFT

WHEREAS, the Resource Protection Area is to be comprised of a total of 270.88 acres as set forth in the metes and bounds description attached hereto as Exhibit “B” and made a part hereof and as shown on the “Timber Rattlesnake--Resource Protection Area” map attached hereto as Exhibit “A” and made a part hereof, and shall remain substantially in its natural condition; and

WHEREAS, this Declaration of Restrictive Covenant is made to satisfy the requirements of the NYSDEC as a condition to the issuance of the Incidental Take Permit in connection with the Property;

NOW THEREFORE, for ten dollars (\$10.00) and other good and valuable consideration as set forth above, Declarant hereby declares as follows:

The Declarant shall ensure that these Prohibitions shall run with the Resource Protection Area identified and depicted on the map entitled “ Timber Rattlesnake—Resource Protection Area” dated last revised June 17, 2021, prepared by Kirk Rother Engineering, and be binding on the Declarant and its successors, assigns, lessees, and other occupiers and users, and shall be expressly set forth in the metes and bounds description of all subsequent deeds to the Property or any subdivision of lots thereof.

1. **Prohibitions.** The killing or injuring of any Timber Rattlesnake or harming of their habitat is prohibited by law in any and all locations in New York State, within or without the Resource Protection Area. In addition, within the Resource Protection Area, there shall be no future filling, flooding, excavating, mining or drilling; no removal of natural materials including rocks; no clearing, burning, cutting or destroying of trees or vegetation, except removal or trimming of vegetation hazardous to person or property, or as authorized by a NYSDEC Permit; no planting or introduction of non-native or exotic species of trees or other vegetation; no dumping of trash, waste, or garbage; no construction; no construction and/or installation of all improvements and accoutrements; and no alteration of the topography within the Resource Protection Area in any manner, except as authorized by the Incidental Take Permit issued by NYSDEC ECL Article 11 and 6 N.Y.C.R.R. Part 182.

2. **Construction.** In addition to the permanent preservation of the Resource Protection Area pursuant to the terms of the preceding paragraph 1 (“Prohibitions”), the Property is subject to Incidental Take Permit number X-XXXX-XXXX/XXXX issued by NYSDEC pursuant to ECL Article 11 and is subject to the Conditions of that Permit. The Permit is attached as Exhibit “C.”

3. **Marking.** The Declarant shall mark the limits of the Resource Protection Area in a manner approved by the NYSDEC and future landowner(s) shall maintain the marking in place so as to notify the public that the Resource Protections Area is an area preserved for conservation purposes. Figure Name and Number depicts that Resource Protection Signage, which illustrates the signage to be placed, and the spacing of such signage.

4. **Ownership of Resource Protection Areas Reserved to Declarant and its Successors.** The covenants set forth in this Declaration are created solely for the protection of the Resource Protection Areas, and Declarant reserves the ownership of the fee simple estate upon the Resource Protection Areas and all rights appertaining thereto, including the right to engage in all

acts or uses not prohibited by this Declaration and not inconsistent with the conservation purposes hereof to itself and to its successors and assigns in interest(s) in the Property or any portion thereof. It is expressly understood and agreed that the terms of this Declaration do not grant or convey to members of the general public any rights of ownership, entry or use of the Resource Protection Areas.

5. **NYSDEC Access.** The Declarant authorizes the NYSDEC to enter upon the Resource Protection Areas for scientific study, habitat management and to review the condition of the Resource Protection Areas to ensure encroachment or unauthorized occupation by others is not occurring.

6. **Recording.** The Declarant shall, within two weeks of filing, submit proof of filing of this Declaration from the Orange County Office of Land Records showing the Liber and page number at which the Declaration was filed, the date of filing, and a copy of this Declaration to:

Regional Permit Administrator
NYSDEC Region 3
21 South Putt Corners Rd.
New Paltz, NY 12561

7. **No Third Parties:** NYSDEC shall have the sole authority to enforce this Declaration. Nothing in this Declaration is intended to, nor shall it be construed to, create rights in any person, party or entity other than NYSDEC.

9. **Notice to Government.** Any permit application or request made to any governmental entity and affecting the Resource Protection Areas shall expressly reference and include a copy (with the recording stamp) of this Declaration. Any such governmental authority to whom an application or request has been made shall notify NYSDEC at the address specified in paragraph 6 above that such permit application or request has been made.

10. **Amendment.** This Declaration may only be amended by a recorded document signed by the Declarant with the written approval of NYSDEC.

11. **Severability Provision.** Should any separable part of this Declaration be held contrary to law, the remainder shall continue in full force and effect.

12. **Provide Copy of Permit to Purchasers.** The Declarant shall provide a copy of the Incidental Take Permit number X-XXXX-XXXX/XXXX issued by NYSDEC pursuant to ECL Article 11 to any purchaser or leasee of the Property (or any lots created subsequently out of the Property).

IN WITNESS WHEREOF, the Declarant has duly executed this Declaration of Restrictive Covenants on the date written above.

Keen Equities LLC, Declarant

By: _____

Printed Name: _____

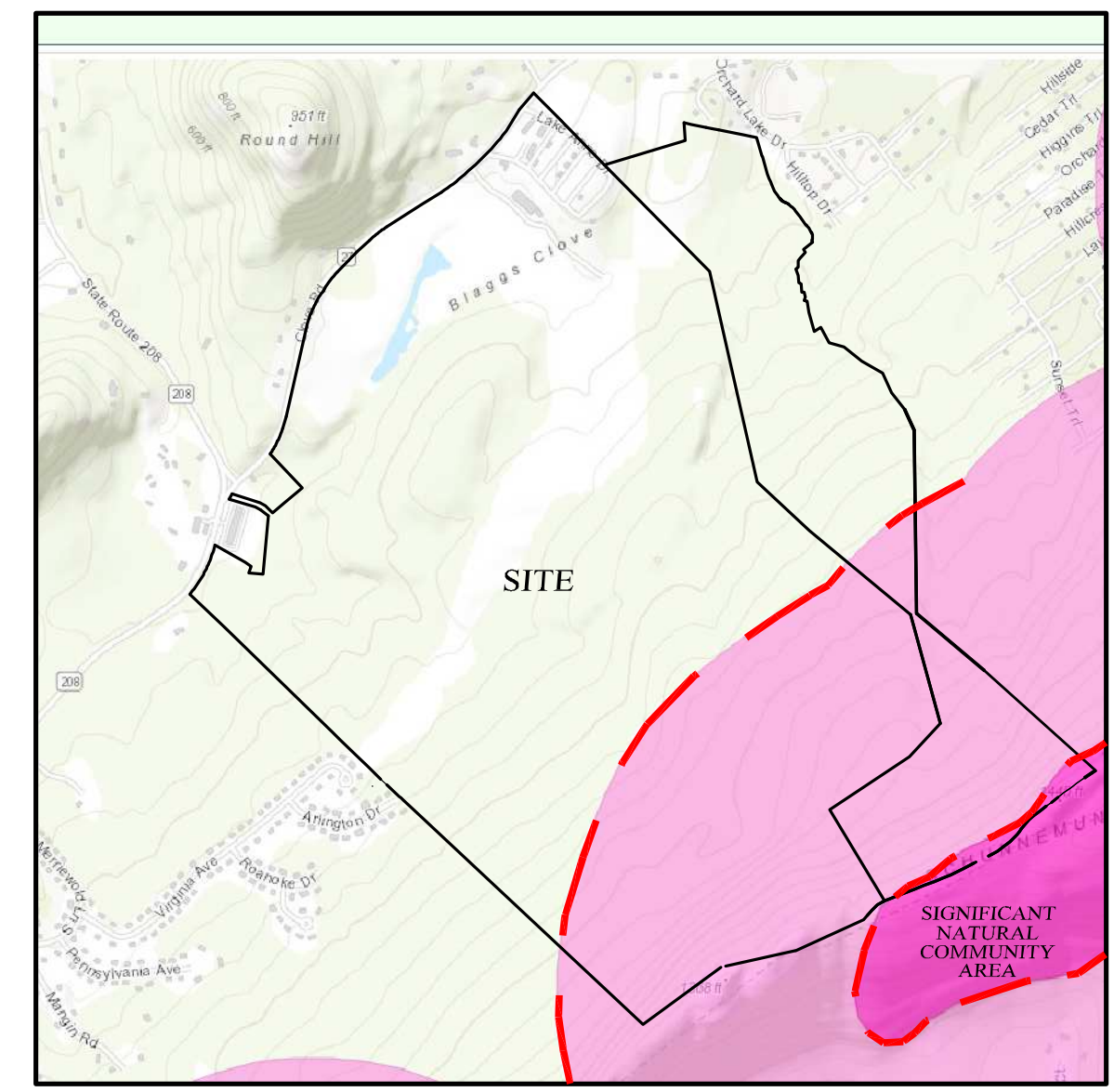
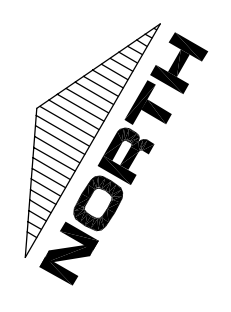
Title: _____

-----Notary Acknowledgment-----

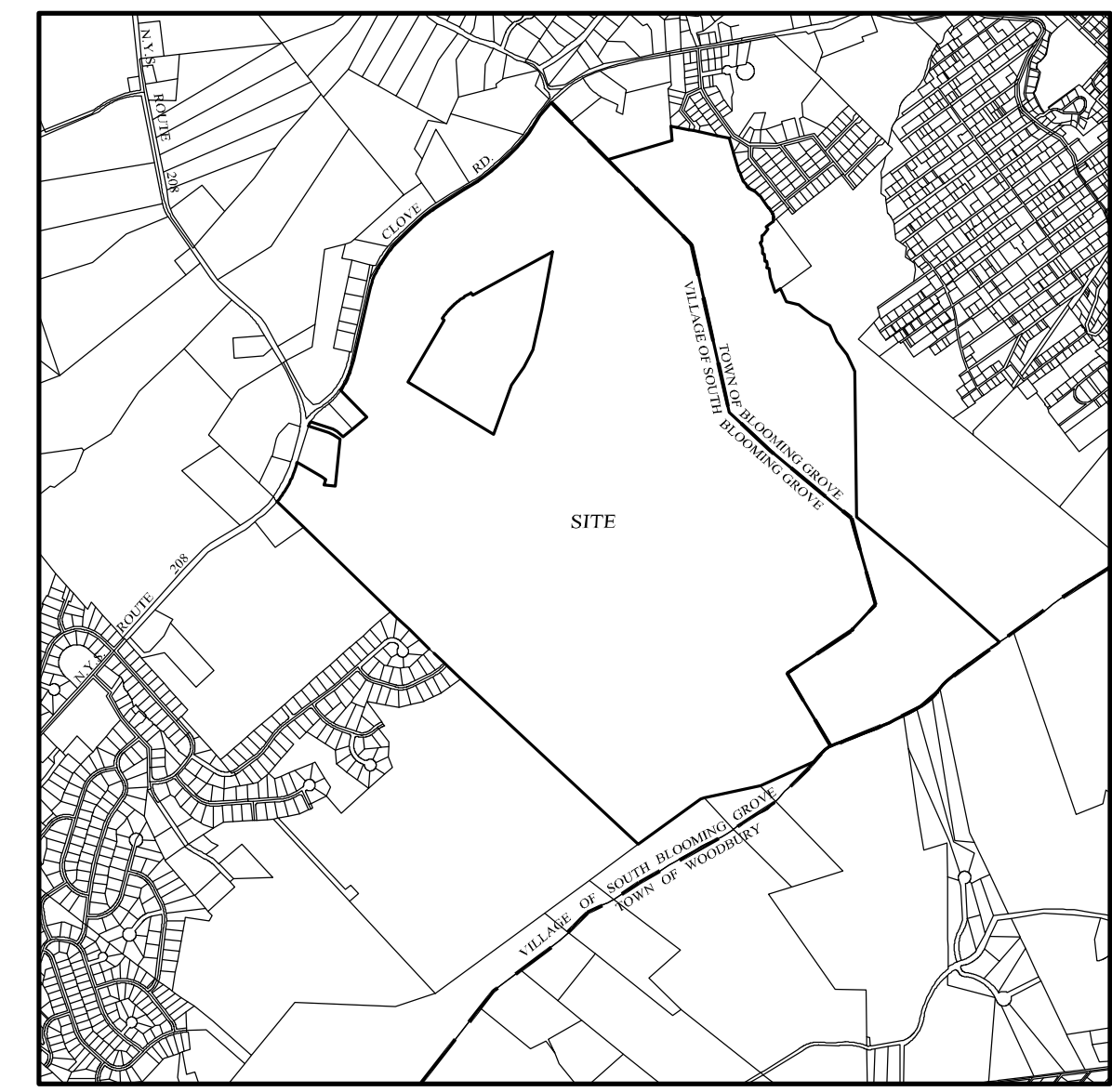
STATE OF NEW YORK)
) ss.:
COUNTY OF ORANGE)

On this ____ day of _____ in the year Two Thousand Twenty Two, before me personally appeared _____ personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed in the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

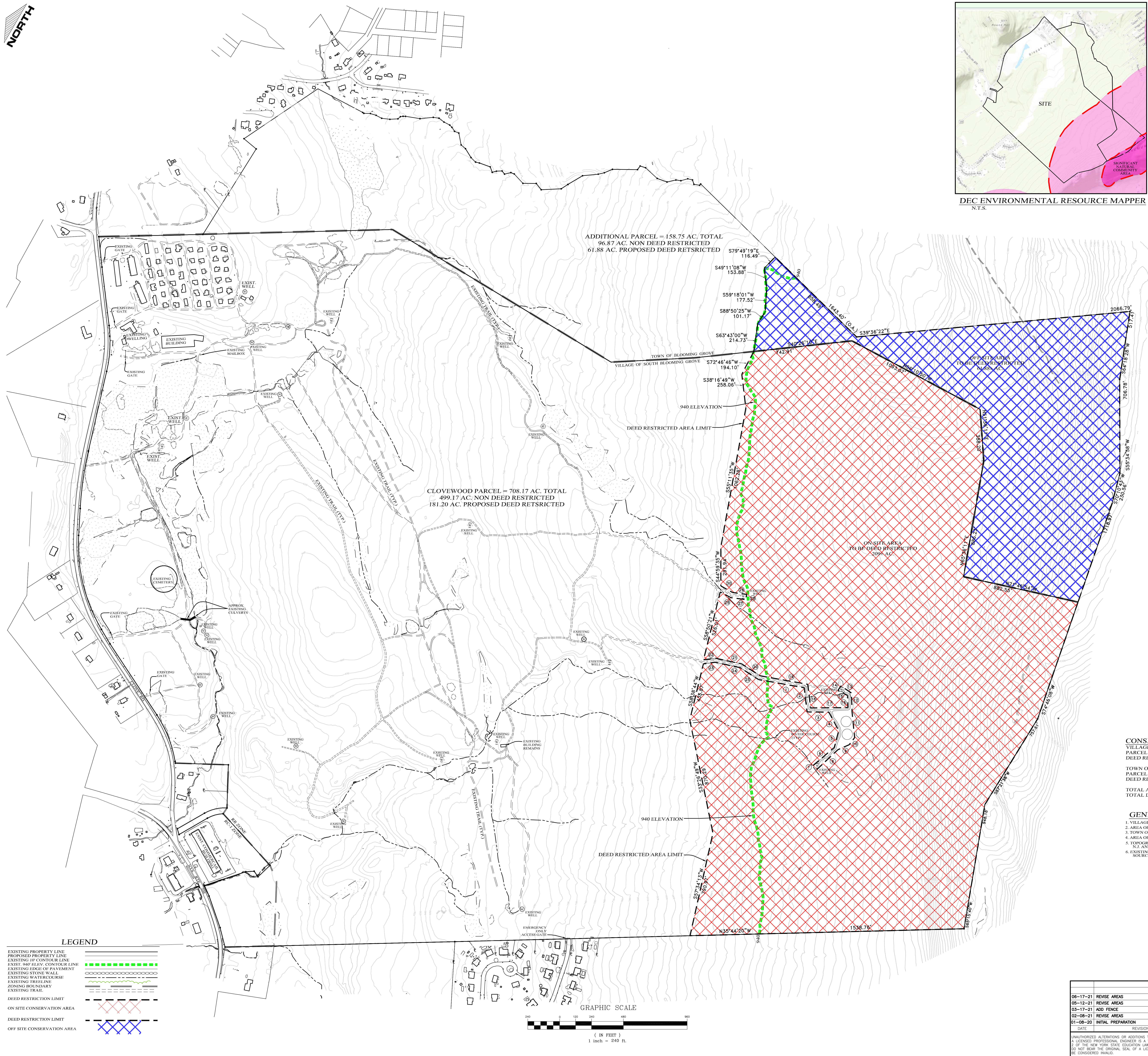
NOTARY PUBLIC – STATE OF NEW YORK



DEC ENVIRONMENTAL RESOURCE MAPPER
N.T.S.



LOCATION MAP
SCALE: 1" = 2,000'



ADDITIONAL PARCEL = 158.75 AC. TOTAL
96.87 AC. NON DEED RESTRICTED
61.88 AC. PROPOSED DEED RESTRICTED

CLOVEWOOD PARCEL = 708.17 AC. TOTAL
499.17 AC. NON DEED RESTRICTED
181.20 AC. PROPOSED DEED RESTRICTED

ON SITE AREA
TO BE DEED RESTRICTED
209.4 AC.

WELL ROAD R.O.W. SCHEDULE	BEARING	DISTANCE
1	N23°46'25"W	271.82'
2	N48°43'39"E	183.53'
3	N33°55'19"W	164.02'
4	N27°42'19"E	157.29'
5	N27°42'19"E	131.49'
6	S74°31'45"E	206.17'
7	N14°42'32"E	41.71'
8	N77°38'45"W	215.37'
9	S68°44'03"E	84.13'
10	N82°08'55"E	67.02'
11	N39°23'25"E	198.27'
12	S53°53'15"W	138.84'
13	S00°18'27"E	55.63'
14	N88°46'48"E	41.46'
15	N07°03'19"W	81.54'
16	N53°53'15"E	81.10'
17	S34°54'02"E	280.55'
18	S48°43'39"W	179.02'
19	S23°46'25"E	308.76'
20	N12°13'31"W	155.63'
21	N32°46'05"W	201.76'
22	N52°42'18"W	87.88'
23	S52°42'18"E	90.17'
24	S32°46'05"E	191.05'
25	S12°13'31"W	166.57'
26	S16°59'29"W	91.28'
27	S37°33'21"E	114.46'
28	N52°03'16"E	40.00'
29	N37°33'21"W	106.57'
30	N15°59'52"W	101.35'

CONSERVATION AREA NOTES:
 VILLAGE OF SOUTH BLOOMING GROVE SEC. 208, BLK. 1, LOTS 2 & 3
 PARCEL AREA = 708.17 AC.
 DEED RESTRICTED AREA = 209.4 AC.

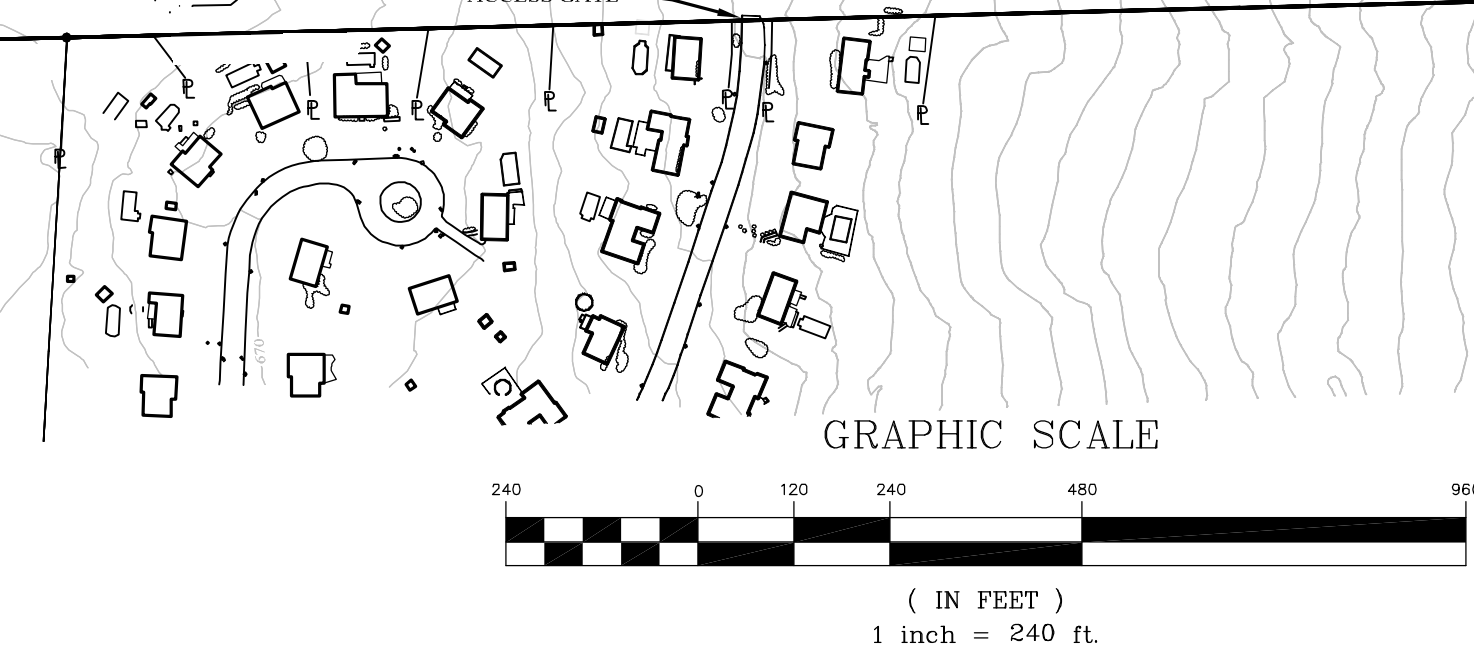
TOWN OF BLOOMING GROVE SEC. 41, BLK. 1, LOT 1.13
 PARCEL AREA = 158.75 AC.
 DEED RESTRICTED AREA = 61.88 AC.

TOTAL AREA OF PARCELS = 866.92 AC.
 TOTAL DEED RESTRICTED AREA = 270.88± AC.

GENERAL NOTES:
 1. VILLAGE OF SOUTH BLOOMING GROVE TAX MAP DESIGNATION: SEC. 208, BLK. 1, LOTS 2 & 3.
 2. AREA OF SOUTH BLOOMING GROVE PARCEL PER SURVEY BY LANC & TILLEY PC 708.17± AC.
 3. TOWN OF BLOOMING GROVE TAX MAP DESIGNATION: SEC. 41, BLK. 1, LOT 1.13.
 4. AREA OF PARCEL PER SURVEY: 158.75± AC.
 5. TOPOGRAPHY BASED ON AERIAL MAPPING PROVIDED BY PROMAPS INC., MOORESTOWN, N.J. AND TIED TO USGS DATUM.
 6. EXISTING FEATURES AND INFORMATION SHOWN HEREIN HAS BEEN COLLECTED FROM VARIOUS SOURCES.

LEGEND

EXISTING PROPERTY LINE	---
PROMISED PROPERTY LINE	---
EXISTING OF CONTOUR LINE	---
EXIST. 50' ELEV. CONTOUR LINE	---
EXISTING EDGE OF PAVEMENT	---
EXISTING STONE WALL	---
EXISTING WATERCOURSE	---
EXISTING FENCE LINE	---
ZONING BOUNDARY	---
EXISTING TRAIL	---
DEED RESTRICTION LIMIT	---
ON SITE CONSERVATION AREA	---
DEED RESTRICTION LIMIT	---
OFF SITE CONSERVATION AREA	---



Lands of
CLOVEWOOD
 TOWN OF BLOOMING GROVE, ORANGE COUNTY, NEW YORK
 PROJECT TITLE

**TIMBER RATTLESNAKE
 RESOURCE PROTECTION
 AREA MAP**
 DRAWING TITLE

KIRK ROTHER, P.E.
 CONSULTING ENGINEER, PLLC
 5 Saint Stephens Lane, Warwick NY 10990
 (845) 988-0620

08-17-21	REVISE AREAS	
08-12-21	REVISE AREAS	
03-17-21	ADD FENCE	
02-08-21	REVISE AREAS	
01-08-20	INITIAL PREPARATION	

DATE: _____ REVISIONS: _____

KIRK ROTHER, P.E. N.Y.S. LIC. NO. 079953 DATE: _____

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO A DOCUMENT BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR A SOLUTION OF SECTION 7209, SUBSECTION 2 OF THE NEW YORK STATE EDUCATION LAW, REPRODUCTIONS OF THIS PLAN WHICH DO NOT BEAR THE ORIGINAL SEAL OF A LICENSED PROFESSIONAL ENGINEER SHALL BE CONSIDERED INVALID.

DIST. SHEET # _____ D.E.C. SHEET # _____ D.C.H.D. SHEET # _____ SHEET # _____
 N.A. N.A. N.A. N.A.
 PROJECT # _____ SCALE _____
 CSD # _____ 14107.D AS SHOWN
 1 OF 1

Exhibit 5

PCI Discharge of Treated Sanitary Waste Application



State Pollutant Discharge Elimination System (SPDES) Application Form: Private, Commercial & Institutional (P/C/I) Discharge of Treated Sanitary Sewage

New Application

Renewal Application

Modification Application

SPDES Number

NY#####

DEC Authorization

#####

Applicant/Owner Information	Contact/Agent Information
Type of Ownership: <input checked="" type="radio"/> Corporate <input type="radio"/> Individual <input type="radio"/> Partnership <input type="radio"/> Public Name: Keen Equities, LLC Taxpayer ID: 20-3410737 Mailing Address: 4922 11th Avenue City: Brooklyn State: NY Zip: 11219 Phone: 949-769-9478 Email: ycr@windsorglobal.com	Name: CPC Title: Simon Gelb Mailing Address: PO Box 2020 City: Monroe State: NY Zip: 10949 Phone: 845-774-8000 Email: gelbsimon@gmail.com


Facility Information

Facility Name: Clovewood	Nature of Business or Facility: Proposed subdivision of 600 residential lots	Population Served: 600 ots (2,400 bedrooms)
Street Address: Clove Road (CR 27) and NYS Route 208	City: Village of South Blooming Grove	State: NY Zip: 10950
Municipality: <input type="radio"/> Town <input checked="" type="radio"/> Village <input type="radio"/> City	Municipality Name: Village of South Blooming Grove	County: ORANGE
Additional Facility Location Information (if needed): NYS Route 17, exit 130 to NYS Route 208 North to Clove Road (CR 27)		

Tax Map Information

Section: 208	Block: 1	Lot: 2 & 3
--------------	----------	------------

Certification: I hereby affirm under penalty of perjury that the information provided on this form and any attached supplemental forms is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to section 210.45 of the Penal Law.


 Signature of Applicant/Owner: Simon Gelb Printed Name: Simon Gelb Representative Title: 12/6/21 Date

Applicable discharge data on the following pages must be completed. Discharges from this facility are not authorized until this application form is attached to the permit signed and authorized by the New York State Department of Environmental Conservation or its designated agency.

Please Indicate Whether Your Facility 'Discharges To Groundwater', 'Discharges To Surface Water', or both.

Discharges To Groundwater

Discharges To Surface Water

SPDES Application for P/C/I Discharge of Treated Sanitary Sewage Discharges To Groundwater - 1 of 1

Facility Name

SPDES Number DEC Authorization

To Add or Remove outfalls, click on the Green + or the Red X respectively.



Complete this page of the application if your facility has any discharges to groundwater. Use additional copies of this page to list additional groundwater outfalls. Sampling information is only required if the disposal system is designed to discharge, or discharges 30,000 GPD or more.

Outfall Information:

Outfall No.

Outfall Status

Proposed Replacement Existing Expansion

Design Flow

Gal/Day

Outfall Location (if subsurface system, indicate center of disposal system area)

Latitude ° ' "

Longitude ° ' "

Treatment:

Standard On Site Treatment: Septic Tanks with:

Absorption Trenches Cut and Fill Systems

Shallow Absorption Trenches Raised Systems

Absorption Beds Seepage Pits

Other (describe)

Alternative On Site Treatment: Septic Tanks with:

Absorption Trenches Using An Alternative Aggregate Single-Pass Sand Filters & Pressurized Shallow Narrow Drainfields

Shallow Absorption Trenches Using An Alternate Aggregate Mound Systems

Absorption Beds Using An Alternate Aggregate Drip Dispersal or Other Low Profile Dispersal System

Frequency of Discharge Months/Year Days/Week

Name of Nearest Surface Waters Distance Soil Type Depth To Water Table

Ft. Ft.

SPDES Application for P/C/I Discharge of Treated Sanitary Sewage Discharges to Groundwater

Facility Name

SPDES Number

DEC Authorization

Outfall No.

Sampling Information

Include the following sampling information if the disposal system is designed to discharge, or discharges, 30,000 GPD or more. Please indicate whether the values listed are from sampling results (include the date), estimated from the treatment system design as installed, or estimated from the proposed treatment system design.

Plant Design Pollutant Information	Influent		Effluent		Number of Samples or Source of Estimate
	mg/l	lbs/day	mg/l	lbs/day	
BOD5	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 150px; height: 20px;" type="text"/>
Percent removal, BOD5	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 150px; height: 20px;" type="text"/>
pH, Range	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 150px; height: 20px;" type="text"/>
Nitrate, as N	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 150px; height: 20px;" type="text"/>
Nitrite, as N	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 150px; height: 20px;" type="text"/>
Ammonia, as N	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 150px; height: 20px;" type="text"/>
Nitrogen, Total, as N	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 150px; height: 20px;" type="text"/>
Phosphorus, Total, as P	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 150px; height: 20px;" type="text"/>
Total Residual Chlorine, if used	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 150px; height: 20px;" type="text"/>
Solids, Total Dissolved (Nassau/Suffolk only)	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 150px; height: 20px;" type="text"/>

SPDES Application for P/C/I Discharge of Treated Sanitary Sewage

Discharges To Surfacewater - 1 of 1

Facility Name

SPDES Number DEC Authorization

To Add or Remove outfalls, click on the Green + or the Red X respectively.



Complete this page of the application if your facility has any discharges to surface water.
Complete this form for each surface water outfall.

Discharge Data

Outfall No.

Outfall Status

Proposed Replacement Existing Expansion

Design Flow

Gal/Day

Outfall Location (end of pipe or conveyance)

Latitude ° ' "
Longitude ° ' "

Type of Treatment

Frequency of Discharge Months/Year Days/Week

Name of Receiving Water

Classification

Water Index Number

SPDES Application for P/C/I Discharge of Treated Sanitary Sewage

Discharges to Surface Water

Facility Name

SPDES Number DEC Authorization

Outfall No.

Sampling Information

Include the following sampling information. Please indicate whether the values listed are from sampling results (include the date), estimated from the treatment system design as installed, or estimated from the proposed treatment system design.

Plant Design Pollutant Information	Influent		Effluent		Number of Samples or Source of Estimate
	mg/l	lbs/day	mg/l	lbs/day	
BOD5	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	5	<input style="width: 50px;" type="text"/>	Proposed Treatment Syst Design
Suspended solids	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	10	<input style="width: 50px;" type="text"/>	Proposed Treatment Syst Design
Percent removal, BOD/TSS	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 100px;" type="text"/>
pH, Range	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	6.5-8.5	<input style="width: 50px;" type="text"/>	Proposed Treatment Syst Design
Settleable solids, ml/l	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	0.1	<input style="width: 50px;" type="text"/>	Proposed Treatment Syst Design
Solids, total dissolved	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 100px;" type="text"/>
Dissolved oxygen	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	> or = 7	<input style="width: 50px;" type="text"/>	Proposed Treatment Syst Design
Ammonia, as N	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	1.5	<input style="width: 50px;" type="text"/>	Proposed Treatment Syst Design
Nitrogen, Total, as N	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 100px;" type="text"/>
Phosphorus, Total, as P	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	0.5	<input style="width: 50px;" type="text"/>	Proposed Treatment Syst Design
Fecal Coliform, MPN	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	200	<input style="width: 50px;" type="text"/>	Proposed Treatment Syst Design
Total Residual Chlorine (if used)	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 100px;" type="text"/>
Temperature, Degrees F, Summer	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 100px;" type="text"/>
Temperature, Degrees F, Winter	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 100px;" type="text"/>

Exhibit 6
Marked WTC Form



New York State Department of Environmental Conservation
 Division of Water
 SPDES Permit - WTC Notification Form Page 1 of 3

(June 2017)

For help completing this form refer to instructions page and to <http://www.dec.ny.gov/permits/93245.html>.

1.a. Date Signed by Permittee - 6/5/2018		1.b. Date Signed by WTC Manufacturer - <i>N/A</i>	
2.a. Permittee Name - Clovewood Development		2.b. SPDES No. - NY	
2.c. Contact Name - Mr. Simon Gelb			
3.a. WTC Name - Aluminum Sulfate			
3.b. WTC Manufacturer - USALCO, LLC			
4.a. WTC Function - Coagulant, phosphorus precipitation			
4.b. If WTC is a biocide is it NYS registered? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		4.c. Registration Number - Not Applicable	
5. WTC Point of Addition - MBR Influent			
6. Affected Outfall(s) - 001			
7.a. WTC Daily Dosage: average lbs/day		77.4 , maximum lbs/day = 77.4	
7.b. Dosage Frequency: minutes/day =		1440 , days/week = 7	
8.a. Outfall Flow Rate: average MGD =		0.28 maximum MGD = 0.56	
8.b. Outfall WTC Concentration: average mg/l =		0.3314 33.14 , maximum mg/l = 16.57	
9.a. System Blowdown Flow Rate: average gpm =		0 , maximum gpm = 0	
9.b. System Blowdown Frequency: minutes/day =		0 , days/week = 0	
10.a. WTC Composition - Ingredients/Impurities (note: ingredients/impurities must total to 100%)	10.b. %	10.c. CAS#	10.d. Outfall Concentration
Liquid Aluminum Sulfate Solution	50	10043-01-3	0.3314 mg/l
Water	50	7732-18-5	0 mg/l
			mg/l
			mg/l
			mg/l
			mg/l
			mg/l
10.e. Intermediate/Final Degradation Products - No known decomposition products			
11. WTC BOD and COD (lb/lb) - 0			

S.g.

**10.3.2 Orange County Department of
Planning Correspondence**



Steven M. Neuhaus
County Executive

Orange County Department of Planning

124 Main Street
Goshen, NY 10924-2124
Tel: (845) 615-3840
Fax: (845) 291-2533

Alan J. Sorensen, AICP
Commissioner

www.orangecountygov.com/planning
planning@orangecountygov.com

County Reply – Mandatory Review of Local Planning Action as per NYS General Municipal Law §239-l, m, & n

Local Referring Board: Village of South Blooming Grove Bd/PB **Referral ID #:** SBG03-19M

Applicant: Keen Equities

Tax Map #: 208-1-2 and 3

Project Name: Clovewood

Local File #: none provided

Proposed Action: DEIS for major subdivision creating 600 single family residential lots

Reason for County Review: Within 500 feet of NYS Route 208, County Route 27 (Clove Road), OC Gonzaga Park and Schunnemunk State Park

Date of Full Statement: April 18, 2020

Comments: The Department has reviewed the above referenced DEIS and site plans in accordance with the State Environmental Quality Protection Act (SEQRA) and Section 239, paragraphs l and m of the NYS General Municipal Law and has determined that the intended land use has the potential to cause inter-municipal and countywide impacts to properties in neighboring municipalities, in addition to traffic impacts to State, County and local roadways, namely NYS Rte. 208, Clove Rd. (CR27) and Mountain Rd. (CR 44). Overall, the 600 primary dwelling units (with the potential for 600 accessory dwelling units incorporated within the structure of the primary dwelling units) are likely to result in significant environmental impacts to roadways, streams, groundwater aquifer and potable water supplies in the Village of South Blooming Grove and Town of Blooming Grove. A DEIS that primarily focuses on the impacts of the 600 primary dwelling units and that largely ignores the cumulative impact of adding 600 accessory dwellings that are clearly envisioned in the proposed project/housing design could be argued to result in the segmentation of the SEQRA review process. It is recommended that the DEIS be revised to assess the potential environmental impact of the entire project (i.e., 600 primary and 600 accessory dwelling units) along with the mitigation measures necessary to avoid significant adverse environmental impacts, which may include limiting the scale of the proposed project.

The following comments of the revised DEIS are offered for your consideration to mitigate potential environmental impacts and improve the quality of the proposed project.

1. Transportation: The solutions proposed by the applicant to mitigate traffic impact are unclear.
 - a) County recommendation: The applicant and the Village must work with the New York State Department of Transportation (NYSDOT) and the Orange County Department of Public Works (OCDPW) to determine the solutions necessary to ensure that this project will complement the work that is already occurring in the vicinity of the project site. Traffic and vehicular transportation behave as a system, and the Route 208 corridor, due to existing conditions and additional developments in the area, is already experiencing substantially increased traffic. The intersection of Clove Rd (CR 27) and NYS Rte. 208 is problematic as far as safety due, in most part, to the intersection alignment (a “Y” rather than a “T” with NYS Rte. 208) and the high volume of traffic on NYS Rte. 208. The reconstruction and realignment of this intersection because of its high crash (accident) rate was cited as a priority project as part of the regional Southeast Traffic and Land Use Study. The developer of Clovewood must propose concrete solutions to reconfigure this intersection and thereby improve the safety at the time that this project is developed.

- b) County recommendation: The application demonstrates existing poor Levels of Service along the NYS Rte 208 corridor that will certainly degrade further if Cloewood is developed without appropriate traffic mitigation measures. This office recognizes that a project of this size will undoubtedly require significant road improvements beyond the applicant's suggested turning lanes into the complex. Based upon these facts, the applicant, in coordination with NYSDOT and the OCDPW must determine a fair share cost for the transportation improvements necessary to mitigate traffic impacts attributable to the project, primarily at the intersections of Clove Rd. (CR 27) and NYS Rte. 208 and Mountain Rd (CR 44), and should ensure that the applicant provides this amount upfront in an escrow account.
 - c) County recommendation: Public transit should be an integral part of the project to mitigate other vehicle impacts. Two areas are shown on the site plan as "park and ride" lots as follows: 1) a park & ride nearest NYS Route 208, which is proposed as a public facility and 2) a park & ride internal to Cloewood that would serve the community. We advise the Village to ensure that the lots are reconfigured to enable buses to negotiate the tight turning radiuses and maneuver through the parking lot. The applicant should coordinate with bus operators, OCTC and State DOT to ensure the large commuter buses can safely navigate the tight spaces in each park and ride. The proposed public park and ride facility lacks a safe circulation pattern and a covered waiting facility.
 - d) County recommendation: Nonmotorized transportation should be an integral part of the project. The site plan shows sidewalks on both sides of the internal streets, which is appropriate. It is essential that proposed sidewalks continue along the length of Route 208 adjacent to the project site, to allow adjacent development to extend their sidewalks and create a longer stretch of pedestrian-friendly development.
 - e) County Recommendation. The traffic analysis for the proposed development should be expanded to include an analysis of anticipated school bus traffic to and from Cloewood.
2. Wastewater: The applicant proposes to discharge treated wastewater into a minor tributary (unnamed) of the Satterly Creek. While this Department must defer to the NYSDEC on the permission of this discharge, we advise that there is County and local concern about the impact of this discharge on local waterways. For example, the Moodna Creek Watershed Intermunicipal Council has expressed concern about the proposed discharge due to water quality impacts to the minor tributary, the Satterly Creek and the Moodna Creek, to which this tributary drains.

We understand from conversations with the NYSDEC that they do not plan to permit a SPDES discharge that includes volume from accessory units within this proposed development and therefore the discharge volume would not be as high as initially proposed, but discharge is nonetheless a concern.

The impact of this proposed wastewater discharge could affect the watershed's health, primarily in the form of in-stream ecological health and effects on nearby wells. In terms of the importance of the ecological health of the Moodna Creek, the confluence of the Moodna Creek with the Hudson River has been deemed as an "irreplaceable" Significant Coastal Fish and Wildlife Habitat by the NYS Coastal Zone Management Program. This habitat could be impacted by the change in surface water quality that this proposed discharge could create. Furthermore, a downstream vegetable farmer could be affected, as this surface water system is critical to his farm's operation.

It is the County's experience that Homeowner Association (HOA)-owned sewage treatment plants frequently are poorly managed and fail resulting in exorbitant financial burden on homeowners. Such infrastructure challenges typically involve the host municipality resulting in overall increased costs to the Village taxpayer.

County Recommendation:

- a) Reduce number of units that are proposed in order to protect local waterways from water quality impacts.
 - b) Remove the "unfinished 750 square-foot" built-in accessory apartments within each proposed dwelling unit.
 - c) Install a tertiary sewage treatment plant.
 - d) The DEIS should address payment-in-lieu of parkland fees required for the Proposed Action.
3. Water Usage: The applicant, in Scenario 1 of the Draft Environmental Impact Statement, states that the project is expected to be occupied by Orthodox Jewish households. Therefore, the occupancy of each household is more likely to conform to the standards of the Village of Kiryas Joel (5.62 people per household) than to conform to the average for the Village of South Blooming Grove (2.81 people per household). This should be accounted for in the DEIS.

Also, the Village of South Blooming Grove currently experiences periodic water shortages. The occupants of the 600 dwelling units with the potential for 600 accessory dwelling units will further deplete the Village's limited potable groundwater aquifer supply and exacerbate the already limited potable water supply. Therefore, the project should be limited to only the primary dwellings without accessory dwelling units.

County recommendation:

- a) Update the DEIS to include a more accurate representation of actual water use and limit the number of dwelling units in order to protect the Village of South Blooming Grove's already limited potable water supply.
 - b) Redesign the proposed model home floorplans to true single-family, affordable dwellings. At minimum, the "unfinished 750 square-foot" built-in accessory apartments within each proposed dwelling unit should be removed.
4. Open Space: The land that is not proposed for development is important to the local ecological landscape and should be permanently protected to ensure that it can continue to provide ecosystem services. The 2016 New York State Open Space Conservation Plan specifically designates this area as a priority for conservation due to its significant natural, scenic, and recreational resources. The Schunnemunk Mountain / Moodna Creek / Woodcock Mountain / Hudson Highlands Connectivity Project (priority project 36 of the 2016 Open Space Plan) highlights the importance of protecting these resources on this property. The County Open Space Plan also identifies the area as biologically significant, as does the Moodna Creek Watershed Conservation and Management Plan and the Town of Blooming Grove's Community Preservation Plan.

County recommendation:

- a) The applicant should permanently protect the land area that is proposed to be undisturbed by restricting it with a conservation easement or acquisition by the Village or a conservation organization, including the Orange County Land Trust or New York State Palisades Interstate Park Commission. Without this protection in perpetuity, all bonus density incentives should

be removed. While the DEIS recognizes this area of biological importance, it also shows an alternative water supply pipe from the Town of Woodbury crossing the Schunnemunk Mountain and implies connectivity to the Village of Kiryas Joel.

- b) The largest benefit of open space is that it allows for animal migration, habitat and foraging. For these life-sustaining reasons, the only genuine “open space” that should be considered for preservation is unfragmented acreage.
 - c) The number of acres of true open space needs to be recalculated.
5. Biodiversity and Wildlife Protection: The project site is listed by the New York Natural Heritage Program, a division of the New York State Department of Environmental Conservation, as an “important area” for the Timber Rattlesnake, a threatened species in New York. The Orange County Open Space Plan identifies the property and its surrounding area as a “biological hotspot,” meaning that the area has a high concentration of rare or otherwise critical species, both plant and animal, or contains significant natural communities. Additionally, the Audubon Society has identified “important bird areas” near Schunnemunk Ridge, which are critical areas for conservation to maintain stable and diverse bird populations. This rich biodiversity should be protected.

County recommendation:

- a) Conduct a rare species inventory, surveying the project site in the field with a professional qualified to do this manner of work, such as a wildlife biologist. This inventory should include, in the form of recommendations, measures for mitigation measures that would be needed to protect rare species should they be found in the areas planned for development and be included in the DEIS. This inventory should also include an inventory of trees that provide habitat for rare and endangered species. New plantings should be native and drought resistant.
6. Trail Connectivity: The Long Path, a regionally significant trail stretching 375 miles through the Hudson Valley, runs along the southeastern boundary of the property. This trail is a conservation priority in the Orange County Open Space Plan and in the 2016 New York State Open Space Conservation Plan. Additionally, there are several unmarked and unmaintained trails through the project site that are currently used by hikers to access Schunnemunk Mountain and the ridgeline. The Department recommends requiring the realignment of the trails through the site to be part of the permanently-protected open space.
7. Site Design: This office has the following concerns about the proposed site design:
- a. While the DEIS states the intention to develop 22 acres at a later date, the exact location is never given. This Village’s consulting planner has advised us the 22 acres is the area surrounding the internal park and ride lot. Several large flag lots are also shown throughout the site.

Reasonable assumptions can be logically deduced that these properties will be earmarked for future commercial and other non-residential facilities. This office questions the delay and suggests the inclusion of these lots be considered in the proposed development to avoid segmentation and provide better land use planning and traffic management.

8. Density Calculations: The applicant derives the proposed 600 units by incorporating affordable units, LEED-certified construction, and preserving open space.


Only vague references to LEED elements are made throughout the DEIS. It is essential that an itemized list of LEED-certified actions be provided along with the architectural drawings for each home, community center, wastewater treatment plant, pool house and any other building before granting final approval of this DEIS.

9. Affordable Housing: The applicant states that the driving force propelling this development is the demand for affordable housing. That stated, we advise the Village that housing affordability is always an issue, and that housing is determined to be affordable when the owner or renter of the home spends 30% or less of their household income on housing related expenses. If a density bonus is to be granted for the provision of affordable housing, then the Village should ensure that such units are designed to be affordable. If the Village requires additional information or guidance on this matter, the Department will be happy to provide technical assistance in this matter.
10. Stormwater Management: While the erosion and sediment control plan and the stormwater management plan included with the project appears to be adequate for standard stormwater design, we advise the Village to consider the impact of the more intense storms that have recently hit the Hudson Valley, and consider requiring contingency plans for 500-year storm and 1000 year storm events as well as 100 year storm events.
 - a. Our office, based on working with NYS Department of Environmental Conservation (DEC) and the Orange County Soil and Water Conservation District, strongly recommends incorporating low-impact design (LID) technologies across the entire development.

County Recommendation: The County has received the referral from the referring body. We respectfully note that while the referring body indicates it has submitted a full statement of the proposed action as defined in Section 239, paragraph m of the General Municipal Law, the referral may wish to be supplemented. As currently proposed, the DEIS for Cloewood represents a review and documentation of 600 primary dwelling units, but no assessment of the 600 accessory dwelling units that are clearly envisioned in the proposed project/housing design. The DEIS focus on the impacts of the 600 primary dwelling units, while largely ignoring the cumulative impacts of adding 600 accessory apartments, could be viewed as segmentation under SEQRA. Whether such therefore truly constitutes sufficient information is left to the discretion of the referring body. However, it is recommended that the DEIS be revised to assess the potential environmental impact of the entire project (i.e., 600 primary and 600 accessory dwelling units) along with the mitigation measures necessary to avoid significant adverse environmental impacts, which may include limiting the scale of the proposed project.

Date: May 22, 2020

Prepared by: Fred Budde, Senior Planner
Kelly Morris, Senior Planner
Megan Tennermann, Planner
Kate Schmidt, Planner



Alan Sorensen, AICP
Commissioner of Planning

As per NYS General Municipal Law 239-m & n, within 30 days of municipal final action on the above referred project, the referring board must file a report of the final action taken with the County Planning Department. For such filing, please use the final action report form attached to this review or available on-line at www.orangecountygov.com/planning.



P.O. Box 2020, Monroe, New York 10949 | Tel. (845) 774-8000

July 23, 2020

Orange County Department of Planning
Alan J. Sorensen, AICP, Commissioner
124 Main Street
Goshen, NY 10924



Re: Clovewood Project, Village of South Blooming Grove Section 208, Block 1, Lots 2 and 3

Below please find responses to the letter from the Orange County Department of Planning (“OCDP” or the “County”) dated April 18, 2020 and May 22, 2020, forwarded to us by the Village of South Blooming Grove (the “Village”) on June 5, 2020, detailing comments from the County on the Clovewood Draft Environmental Impact Statement (“DEIS”).

Comments

“The Department has reviewed the above referenced DEIS and site plans in accordance with the State Environmental Quality Protection Act (SEQRA) and Section 239. Paragraphs 1 and m of the NYS General Municipal Law and has determined that the intended land use has the potential to cause inter- municipal and countywide impacts to properties in neighboring municipalities, in addition to traffic impacts to State, County and local roadways, namely NYS Rte. 208, Clove Rd. (CR27) and Mountain Rd. (CR 44). Overall, the 600 primary dwelling units (with the potential for 600 accessory dwelling units incorporated within the structure of the primary dwelling units) are likely to result in significant environmental impacts to roadways, streams, groundwater aquifer and potable water supplies in the Village of South Blooming Grove and Town of Blooming Grove. A DEIS that primarily focuses on the impacts of the 600 primary dwelling units and that largely ignores the cumulative impact of adding 600 accessory dwellings that are clearly envisioned in the proposed project/housing design could be argued to result in the segmentation of the SEQRA review process. It is recommended that the DEIS be revised to assess the potential environmental impact of the entire project (i.e., 600 primary and 600 accessory dwelling units) along with the mitigation measures necessary to avoid significant adverse environmental impacts, which may include limiting the scale of the proposed project.”

Response

The Project proposes the development of 600 single-family residential dwelling units and the Applicant has not proposed the development of 600 accessory apartments. The Village, in its Scoping Document, requested the DEIS analyze potential impacts on applicable resources from the hypothetical inclusion of

potential accessory apartments. The Applicant believes the inclusion of accessory apartments which are not proposed as part of the Project and its application and have not been proposed by any other entity on the Project Site in any application, are a speculative impact not appropriate for consideration under SEQRA. See for example, *City Council of Watervliet v. Town Bd. of Colonie*, 3 N.Y.3d 508 (2004) (no specific project plan existed, so annexation of land could be considered independently), and numerous other cases cited in *Environmental Review in New York* (§5.02 [3] [b] pp 5-20 to 5-30)(2019); See also, *id.* §5.10[4][c] fn 61 p. 5-73 and §5.11[1] fn 9. Pp 5-83 to 5-84). The assertions that cumulative impact analysis requires the consideration of accessory apartments and the assertions that ignoring such accessory apartments could result in the impermissible segmentation of the SEQRA review process is a fiction.

1. Transportation

“The solutions proposed by the applicant to mitigate traffic impact are unclear.”

Response 1

The Projects proposed traffic mitigation measures are clearly identified in Section 3.11 and Appendix J of the DEIS.

Comment 1a

“County recommendation: The applicant and the Village must work with the New York State Department of Transportation (NYSDOT) and the Orange County Department of Public Works (OCDPW) to determine the solutions necessary to ensure that this project will complement the work that is already occurring in the vicinity of the project site . Traffic and vehicular transportation behave as a system. and the Route 208 corridor. due to existing conditions and additional developments in the area, is already experiencing substantially increased traffic. The intersection of Clove Rd (CR 27) and NYS Rte. 208 is problematic as far as safety due, in most part, to the intersection alignment (a "Y" rather than a "T" with NYS Rte. 208) and the high volume of traffic on NYS Rte. 208. The reconstruction and realignment of this intersection because of its high crash (accident) rate was cited as a priority project as part of the regional Southeast Traffic and Land Use Study. The developer of Clovewood must propose concrete solutions to reconfigure this intersection and thereby improve the safety at the time that this project is developed.”

Response 1a

The SEQRA process cannot be used to redefine the designated responsibilities of parties involved in the action. SEQRA does not change the jurisdictions of agencies or between or among agencies, ECL 8-0103.6; 6NYCRR §617.3(b). The Project cannot determine which improvements should be made to roadways located outside of the Project Site owned by other individuals/entities. It is ultimately up to the discretion of the NYSDOT what improvements, if any, would be implemented at intersections along their NYS Route 208 corridor included in the Traffic Impact Study found in Appendix J and summarized in Section 3.11 of the Project’s DEIS.

The intersection of NYS Route 208 and Clove Road was analyzed in detail as part of the Clovewood traffic impact, where it was identified as a high accident rate location in the Regional Southeast Traffic and Land

Use Study and is a problematic intersection “as is” currently without the Project. Section 3.11 of the DEIS identifies and analyzes the types of improvements which could be completed at this intersection, to be determined by NYSDOT.

Comment 1b

“County recommendation: The application demonstrates existing poor Levels of Service along the NYS Rte 208 corridor that will certainly degrade further if Clovewood is developed without appropriate traffic mitigation measures. This office recognizes that a project of this size will undoubtedly require significant road improvements beyond the applicant's suggested turning lanes into the complex. Based upon these facts, the applicant, in coordination with NYSDOT and the OCDPW must determine a fair share cost for the transportation improvements necessary to mitigate traffic impacts attributable to the project, primarily at the intersections of Clove Rd. (CR 27) and NYS Rte. 208 and Mountain Rd (CR 44), and should ensure that the applicant provides this amount upfront in an escrow account.”

Response 1b

The Project is agreeable to a fair share contribution toward traffic mitigation on the NYS Route 208 corridor. Government funding of approximately One Million Dollars had previously been allocated to improve the existing intersection of NYS Route 208 at Clove Road (County Route 27). Section 3.11 and Appendix J of the DEIS evaluate potential improvements to this intersection. It is also our understanding that the Village currently has funds in an escrow account for future improvements to the intersection of NYS Route 208 at Mountain Road, which other projects, such as the Sleep Inn Hotel have made contributions toward. As part of the NYSDOT Highway Work Permit process, the final details of any improvements and a determination of the Project’s fair share contribution would be identified and coordinated with NYSDOT.

Comment 1c

“County recommendation: Public transit should be an integral pan of the project to mitigate other vehicle impacts. Two areas are shown on the site plan as ‘park and ride’ lots as follows: 1) a park & ride nearest NYS Route 208, which is proposed as a public facility and 2) a park & ride internal to Clovewood that would serve the community. We advise the Village to ensure that the lots are reconfigured to enable buses to negotiate the tight turning radiuses and maneuver through the parking lot. The applicant should coordinate with bus operators. OCTC and State DOT to ensure the large commuter buses can safely navigate the tight spaces in each park and ride. The proposed public park and ride facility lacks a safe circulation pattern and a covered waiting facility”

Response 1c

The Project’s park and ride facility would be designed to ensure large commuter buses can safely navigate and maneuver through the parking lot and would have a safe circulation pattern with a covered waiting facility.

Comment 1d

“County recommendation: Non motorized transportation should be an integral part of the project. The site plan shows sidewalks on both sides of the internal streets. which is appropriate. It is essential that proposed sidewalks continue along the length of Route 208 adjacent to the project site, to allow adjacent development to extend their sidewalks and create a longer stretch of pedestrian-friendly development.”

Response 1d

Sidewalks would also continue along the length of NYS Route 208 fronting the Project Site as indicated in Section 3.11.2(i) of the DEIS.

Comment 1e

“County Recommendation. The traffic analysis for the proposed development should be expanded to include an analysis of anticipated school bus traffic to and from Clovewood.”

Response 1e

The traffic analysis prepared included existing and future school bus traffic as part of the factors utilized in the analysis.

2. Wastewater

“The applicant proposes to discharge treated wastewater into a minor tributary (unnamed) of the Satterly Creek. While this Department must defer to the NYSDEC on the permission of this discharge, we advise that there is County and local concern about the impact of this discharge on local waterways. For example, the Moodna Creek Watershed Intermunicipal Council has expressed concern about the proposed discharge due to water quality impacts to the minor tributary. the Satterly Creek and the Moodna Creek, to which this tributary drains.”

“We understand from conversations with the NYSDEC that they do not plan to permit a SPDES discharge that includes volume from accessory units within this proposed development and therefore the discharge volume would not be as high as initially proposed, but discharge is nonetheless a concern.”

“The impact or this proposed wastewater discharge could affect the watershed's health, primarily in the form of in-stream ecological health and effects on nearby wells. In terms of the importance of the ecological health of the Moodna Creek, the confluence of the Moodna Creek with the Hudson River has been deemed as an "irreplaceable" Significant Coastal Fish and Wildlife Habitat by the NYS Coastal Zone Management Program. This habitat could be impacted by the change in surface water quality that this proposed discharge could create. Furthermore, a downstream vegetable farmer could be affected, as this surface water system is critical to his farm's operation.”

“It is the County's experience that Homeowner Association (HOA)-owned sewage treatment plants frequently are poorly managed and fail resulting in exorbitant financial burden on

homeowners. Such infrastructure challenges typically involve the host municipality resulting in overall increased costs to the Village taxpayer.”

Response 2

The Wastewater Treatment Plant approval is issued by the NYSDEC and the Project would comply with all applicable State rules and regulations in regard to wastewater discharge and treatment. A WAC analysis (see Appendix I-2 of the DEIS) was conducted in order to obtain permit limits from the NYSDEC and resulted in the NYSDEC imposing intermittent stream standards, which the wastewater treatment system was designed to meet and achieve in order to not adversely impact stream quality.

As mentioned above, the Project is not proposing accessory apartments, and has therefore not applied for a permit for discharge associated with these speculative units from NYSDEC. The Project does not intend to have its wastewater treatment plant operated by the HOA, but rather contracted out to professional third party management company licensed in NYS who meets NYSDEC operator licensing and certification standards, thereby eliminating the concern in regard to the potential burden upon the HOA and subsequently on the Village taxpayer.

Comment 2a

“Reduce number of units that are proposed in order to protect local waterways from water quality impacts.”

Response 2a

This County comment incorrectly suggests that the Project would consists of 1,200 dwelling units (600 primary units + 600 accessory apartments). As indicated above, the entire Project consists of solely 600 single family dwelling units and is not proposing any accessory apartments. Accordingly, there is no need to reduce the number of units.

Comment 2b

“Remove the "unfinished 750 square-foot" built-in accessory apartments within each proposed dwelling unit.”

Response 2b

The area labeled as “unfinished” space in the floor plans is not a built in accessory apartment by default. Unfinished space offers flexibility for a homeowner to utilize the space appropriate to his or her needs, including as storage, home office, playroom, study, etc.

Comment 2c

“Install a tertiary sewage treatment plant.”

Response 2c

Appendix I of the DEIS details the type of sewage plant currently proposed by the Project, which was chosen as the most appropriate system for the Project. The wastewater treatment plant is designed in accordance with the NYSDEC Standards for Wastewater Treatment Works and the system was designed

to meet stream quality in accordance with the applicable NYSDEC standards.

Comment 2d

“The DEIS should address payment-in-lieu of parkland fees required for the Proposed Action.”

Response 2d

It is unclear how this comment relates to wastewater. Nonetheless, payment-in-lieu of parkland fees is not required for the Project because the Project would dedicate 60 acres of public parkland.

3. Water Usage

“The applicant, in Scenario 1 of the Draft Environmental Impact Statement, states that the project is expected to be occupied by Orthodox Jewish households. Therefore, the occupancy of each household is more likely to conform to the standards of the Village of Kiryas Joel (5.62 people per household) than to conform to the average for the Village of South Blooming Grove (2.81 people per household). This should be accounted for in the DEIS.”

“Also, the Village of South Blooming Grove currently experiences periodic water shortages. The occupants of the 600 dwelling units with the potential for 600 accessory dwelling units will further deplete the Village's limited potable groundwater aquifer supply and exacerbate the already limited potable water supply. Therefore, the project should be limited to only the primary dwellings without accessory dwelling units.”

Response 3

The calculation of the Project’s proposed water usage complies with the NYS rules and regulations, which do not take into account the religious beliefs of individuals who may occupy the units. According to State standards, projected water demand is calculated based on a per bedroom rate. All residential units in the Project would be made available for occupancy, purchase or rental to any person regardless of race, color, religion, gender identity, handicap or disability, familial status, national origin, age, marital status, military status or other protected class status in accordance with federal and state law. The Project Owner and Developer is committed to providing and satisfying equal housing opportunity principles and legal requirements. Still, the DEIS analyzes the potential impacts from two demographic scenarios (one based upon a Satmar-Hasidic community and another based upon a community with demographics similar to the Village of South Blooming Grove) where applicable because the Village, in its Scoping Document, requested the Applicant do so.

The source of the Village’s water shortages could potentially be due to many factors including: system leakage; need for well redevelopment or well repair; inadequate well/well field management; and/or limited supply. The Village consists of 4.98 square miles of land (approximately 3,187 acres) and the Village’s watershed area is 7,030 acres according to files from the Orange County Water Authority, Orange County GIS Division and USGS Streamstats program Version 4.0 (see Attachment I). Based on the Water Resources Investigation Report of the US Department of the Interior, Geological Survey Ground-Water Appraisal of the Fishkill-Beacon Area (1980), recharge to till-covered metasedimentary bedrock is approximately 400,000 gpd/sq. mi. or about 8 inches annually. This equates to groundwater recharge to

the bedrock of 625 gpd/acre. A desktop evaluation of groundwater recharge availability for the Village and the Village's watershed indicate 1.99 mgd (million gallons per day) of recharge to the bedrock within the Village's municipal boundary and 4.39 mgd of recharge to the bedrock within the Village's watershed. According to the Village of South Blooming Grove Consolidated Water District Report prepared by the Village's engineer Michael W. Weeks, P.E. of McGoey, Hauser & Edsell in 2019, the Village's average daily water demand is 201,000 gpd. The calculated recharge values for the Village's municipal boundary is 9.9 times the Village's daily demand and the recharge to the Village's watershed area is 21.8 times the daily demand. This data indicates that the available groundwater resources are more than adequate to meet the Village's water demand.

An extensive water-level data collection program was conducted during the July 2017 pumping test event on the proposed Clovewood supply wells to assess potential pumping-related drawdown in the bedrock aquifer and is summarized in Appendices F and G of the DEIS. Water-level data was collected from 40 onsite and offsite wells (including Village of South Blooming Grove's Wells 1 and 3 (Merriewold), Well 8, and well by the baseball field), and an offsite spring on Route 208. The water-level data demonstrated that all pumping-related water-level drawdown effects that were attributed to pumping of the Project's supply wells were limited to the onsite bedrock monitoring wells on the Clovewood property. No discernible water-level drawdown that was attributed to the pumping in the proposed Project's supply wells (wells C-6, C-12, C-14, C-16, C-21 and C-23) was measured in any offsite wells measured, including the four Village of South Blooming Grove wells monitored. This data supports that the use of the Project's supply wells would not affect the Village's existing water supply.

In addition, the groundwater withdrawn to supply the Project is proposed to be treated and discharged at a wastewater treatment plan on the Project Site. Therefore, the groundwater withdrawal and subsequent discharge would occur within the same watershed, further offsetting any potential water losses within the watershed.

Again, the Project is not proposing accessory apartment units as noted above.

Comment 3a

“Update the DEIS to include a more accurate representation of actual water use and limit the number of dwelling units in order to protect the Village of South Blooming Grove's already limited potable water supply.”

Response 3a

The DEIS includes an accurate representation of actual water use and proposes dwelling units based upon the Project's available water supply. Please also refer to Response 2a and 3 above.

Comment 3b

“Redesign the proposed model home floor plans to true single-family, affordable dwellings. At minimum, the “unfinished 750 square-foot” built-in accessory apartments within each proposed dwelling unit should be removed.”

Response 3b

Please refer to our first Response above in regard to accessory apartments as well as Response 2d in regard to the unfinished space.

4. Open Space

“The land that is not proposed for development is important to the local ecological landscape and should be permanently protected to ensure that it can continue to provide ecosystem services. The 2016 New York State Open Space Conservation Plan specifically designates this area as a priority for conservation due to its significant natural, scenic, and recreational resources. The Schunnemunk Mountain / Moodna Creek / Woodcock Mountain / Hudson Highlands Connectivity Project (priority project 36 of the 2016 Open Space Plan) highlights the importance of protecting these resources on this property. The County Open Space Plan also identifies the area as biologically significant, as does the Moodna Creek Watershed Conservation and Management Plan and the Town of Blooming Grove's Community Preservation Plan.”

Response 4

The Village Scoping Document determined Open Space/Recreation did not require detailed analysis for the Project in the EIS, specifically providing “the following environmental areas would not require detailed analysis for the Project in the EIS: Critical Environmental Area and Open Space/Recreation” (see Scoping Document at page 12). Nonetheless, open space was addressed in the DEIS to document the lack of potentially significant environmental impacts in this regard.

As Section 3.1 of the DEIS notes, the Village Zoning Law [§235-14.1.C(3)(m)] requires that open space areas shall be preserved in their natural state and the use of such areas shall be limited to appropriate conservation and recreation purposes. As noted in Section 2.12 of the DEIS, the Project would preserve approximately 545 acres of open space of the 708-acre Project Site. The open space would be preserved in accordance with the Village Zoning Code §235-14.1.C(2) via HOA bylaws and restrictive covenants, and would consist of approximately 70 acres of active reaction area and 60 acres of public parkland as detailed in Section 2.13, leaving the remaining approximately 415 acres of open space as passive open space.

Also, as further noted in Section 3.1 of the DEIS, the Orange County Open Space Plan indicates the Project Site is an area that is not designated as having any particular open space resource value (See Figure 317 of the DEIS). Moreover, the Orange County Comprehensive Plan specifically identifies the area of the Project Site as a Priority Growth Area within Orange County (See Figure 316 of the DEIS), as does the Southeast Orange County Land Use Study, the latter even including an illustration suggesting development on the Project Site.

Comment 4a

“The applicant should permanently protect the land area that is proposed to be undisturbed by restricting it with a conservation easement or acquisition by the Village or a conservation organization, including the Orange County Land Trust or New York State Palisades Interstate Park Commission. Without this protection in perpetuity, all bonus density incentives should be removed. While the DEIS recognizes this area of biological importance, it also shows an alternative water supply pipe from the Town of Woodbury crossing the Schunnemunk Mountain and implies connectivity to the Village of Kiryas Joel.”

Response 4a

The Project intends to include restrictive declarations and HOA bylaws to permanently preserve the Project's open space as indicated in Section 2.12 of the DEIS. This is provided for in the Village Zoning Code §235-14.1.C(2) which states, "*The permanent preservation of such open space or conservation areas shall be legally ensured to the satisfaction of the Planning Board and the Village Attorney by the filing of appropriate covenants, deed restrictions, easements or other agreements.*" Accordingly, a conservation organization would not be necessary in order for the Project to reasonably and appropriately preserve its open space.

Moreover, as noted in Section 9.5 of the DEIS Addendum, the Project does not intend to pursue a potential water supply alternative with interconnection to the Village of Kiryas Joel, eliminating the County's concern in regard to the water supply pipe crossing the Schunnemunk Mountain.

Comment 4b

"The largest benefit of open space is that it allows for animal migration, habitat and foraging. For these life-sustaining reasons, the only genuine 'open space' that should be considered for preservation is unfragmented acreage."

Response 4b

This comment implies a different, conflicting definition of open space than that which is provided for in the Village Zoning Code. According to §235-14.1.C(3)(m) of the Village Zoning Code "*a portion of the open space area, up to 10% of the total area of the proposed subdivision may be designated active recreation area where structures and facilities for active recreational purposes may be constructed and operated for the use of property owners and their guests.*" The Project would include both passive and active open space in accordance with these regulations. Moreover, the vast majority of the Project's open space is indeed unfragmented open space.

Comment 4c

"The number of acres of true open space needs to be recalculated."

Response 4c

It is our opinion this comment has not been made in good faith, as the Project's open space calculations accurately detail the true acres of open space in accordance with the requirements of the Village Zoning Code. The Project would include approximately 415 acres of passive open space, approximately 70 acres of active reaction area and 60 acres of public parkland. The Project's site plan has been specifically designed to concentrate development away from desirable open space and preserve important natural resources such as wetlands while creating a pedestrian-friendly, walkable environment for residents.

5. Biodiversity and Wildlife Protection

"The project site is listed by the New York Natural Heritage Program, a division of the New York State Department of Environmental Conservation, as an 'important area' for the Timber Rattlesnake, a threatened species in New York. The Orange County Open Space Plan identifies the property and its surrounding area as a 'biological hotspot,' meaning that the area has a high concentration of rare or

otherwise critical species, both plant and animal, or contains significant natural communities. Additionally, the Audubon Society has identified ‘important bird areas’ near Schunnemunk Ridge, which are critical areas for conservation to maintain stable and diverse bird populations. This rich biodiversity should be protected.”

Response 5

Section 3.6 of the DEIS addresses wildlife and vegetation, and its Appendix C includes a full inventory and threatened and endangered species report prepared by a qualified biologist. Likewise, the Project would preserve the majority of the Project Site as open space as detailed in Responses 4 above, allowing for ample habitat for any of the potentially displaced flora and fauna from the areas designated for development. Such space would be preserved via restrictive covenants and would protect the biodiversity of the area. As indicated in Response 4a above, there are no proposed Project elements on Schunnemunk Ridge, and therefore, the Project would contribute to the preservation of the “important bird areas” mentioned in this comment and not adversely impact them.

Comment 5a

“Conduct a rare species inventory, surveying the project site in the field with a professional qualified to do this manner of work, such as a wildlife biologist. This inventory should include, in the form of recommendations, measures for mitigation measures that would be needed to protect rare species should they be found in the areas planned for development and be included in the DEIS. This inventory should also include an inventory of trees that provide habitat for rare and endangered species. New plantings should be native and drought resistant.”

Response 5a

It appears the reviewer may not have reviewed the DEIS and its associated Appendices as this rare species inventory was undertaken by a qualified wildlife biologist and is discussed in Section 3.6 of the DEIS and included in Appendix C. The comment in regard to new plantings has been noted and the Applicant has no objection to including native and drought resistant species in its landscape plantings.

6. Trail Connectivity

“The Long Path, a regionally significant trail stretching 375 miles through the Hudson Valley, runs along the southeastern boundary of the property. This trail is a conservation priority in the Orange County Open Space Plan and in the 2016 New York State Open Space Conservation Plan. Additionally, there are several unmarked and unmaintained trails through the Project site that are currently used by hikers to access Schunnemunk Mountain and the ridgeline. The Department recommends requiring the realignment of the trails through the site to be part of the permanently-protected open space.”

Response 6

The Project Site has no impact on the Long Path which is wholly outside its boundaries. The Open Space to be preserved by the Project encompasses a large area which serves as a buffer between the Project and the Long Path. There are no public trails located on the Applicant’s property, nor is the Applicant aware of any public trails located on the Project Site used by hikers to access Schunnemunk Mountain and the ridgeline. The Project Site has been marked with NO TRESSPASSING signs for many years and anyone

physically accessing the Project Site would be doing so without the permission of the owners. Any unmarked or unmaintained trails consist of accesses used by the Applicant and its consultants for purposes of the Project Site investigation only. The Project will not impact trails located outside of the Project Site and the Project Applicant has no authority to protect trails located outside of the Project Site.

7. Site Design

“This office has the following concerns about the proposed site design:”

Comment 7a

“While the DEIS states the intention to develop 22 acres at a later date, the exact location is never given. This Village's consulting planner has advised us the 22 acres is the area surrounding the internal park and ride lot. Several large flag lots are also shown throughout the site.”

“Reasonable assumptions can be logically deduced that these properties will be earmarked for future commercial and other non-residential facilities. This office questions the delay and suggests the inclusion of these lots be considered in the proposed development to avoid segmentation and provide better land use planning and traffic management.”

Response 7a

The 22 acres reserved for future development is clearly identified on the Project's plans included in Appendix A of the DEIS which were hand delivered to Kate Schmidt at your office in 24 x 36 format on April 24, 2020. The flag lots are active open space.

It would be inappropriate for the EIS to provide additional narrative or to speculate about what would or would not be developed in the future on the 22-acre site as this information is unknown. The Co-Lead Agencies already determined an evaluation does not need to be conducted for these areas and acknowledged any future development, whether commercial or residential, on the 22 reserved acres would require a separate review under SEQRA (see pages 6 and 36 of the Scoping Document and pages 1, 41 and 88 in Appendix N-5 of the DEIS).

8. Density Calculations

“The applicant derives the proposed 600 units by incorporating affordable units, LEED-certified construction, and preserving open space.”

“Only vague references to LEED elements are made throughout the DEIS. It is essential that an itemized list of LEED-certified actions be provided along with the architectural drawings for each home, community center, wastewater treatment plant, pool house and any other building before granting final approval of this DEIS.”

Response 8

The 10% over the base lot count bonus provided for in the Zoning Code specifically provides, “Ten-percent increase over the base lot count for adherence to New York State Energy Star guidelines, low-impact development guidelines, or U.S. Green Building Council Leadership in Energy and Environmental Design

(LEED) standards as they may be amended from time to time, that are in excess of the minimum standards of the NYS Fire Prevention and Building Code,” referenced in Section 3.1.2 of the DEIS. The developer would build in accordance with either NYS Energy Star Guidelines, low-impact development guidelines, or LEED standards, whichever would be most appropriate for the Project Site at the time of its construction.

9. Affordable Housing

“The applicant states that the driving force propelling this development is the demand for affordable housing. That stated, we advise the Village that housing affordability is always an issue, and that housing is determined to be affordable when the owner or renter of the home spends 30% or less of their household income on housing related expenses. If a density bonus is to be granted for the provision of affordable housing, then the Village should ensure that such units are designed to be affordable. If the Village requires additional information or guidance on this matter, the Department will be happy to provide technical assistance in this matter.”

Response 9

Noted. As indicated in the Section 3.2 of the DEIS, the Project’s 43 affordable homes would be affordable homes in accordance with the Village Zoning Code regulations which define affordable housing as, “Housing units for which occupants of a household earning up to 80% of the Village of South Blooming Grove median income would pay less than 30% of total gross income for mortgage and property taxes.” Therefore, the affordable homes would be priced in accordance with this requirement, which is consistent with this County recommendation, and the prices would be based upon the median income at the time of build-out when homes would be sold. The assistance of the County Planning Department in formulating the most practical affordable housing program is welcomed by the Applicant.

10. Stormwater Management

“While the erosion and sediment control plan and the stormwater management plan included with the project appears to be adequate for standard stormwater design, we advise the Village to consider the impact of the more intense storms that have recently hit the Hudson Valley, and consider requiring contingency plans for 500-year storm and 1,000 year storm events as well as 100 year storm events.”

Response 10

The NYS Stormwater SPDES Permit, effective January 29, 2020, requires that stormwater quantity measures be implemented for storm events up to the 100-year event. There are no requirements for the evaluation of 500-year or 1,000-year storm events. The Village of South Blooming Grove also has no provision requiring evaluation or management of the 500-year and 1,000-year storm event. The Project would fully comply with all State and local regulatory requirements for the stormwater quality and quantity of the proposed Project.

Comment 10a

“Our office, based on working with NYS Department of Environmental Conservation (DEC) and the Orange County Soil and Water Conservation District, strongly recommends incorporating low -impact design (UD) technologies across the entire development.”

Response 10a

With regard to low impact design, one of the primary tenants of low impact design is the preservation of open space. As noted in Response 4a above and in Section 2.12 of the DEIS, the Project would include approximately 545 acres of preserved open space. Other low impact design features include the protection of wetlands and riparian buffers, both of which have been incorporated into the Project. Lastly the Project incorporated vegetated channels to convey stormwater run-off where possible and proposes the use of multiple bio-retention areas for reduction of run-off from impervious surfaces. Based on the forgoing, low impact design encouraged by the NYS Stormwater Design Guidelines has been fully incorporated into the Project.

Comment

“County Recommendation: The County has received the referral from the referring body. We respectfully note that while the referring body indicates it has submitted a full statement of the proposed action as defined in Section 239, paragraph m of the General Municipal Law, the referral may wish to be supplemented. As currently proposed, the DEIS for Clovewood represents a review and documentation of 600 primary dwelling units, but no assessment of the 600 accessory dwelling units that are clearly envisioned in the proposed project/housing design. The DEIS focus on the impacts of the 600 primary dwelling units, while largely ignoring the cumulative impacts of adding 600 accessory apartments, could be viewed as segmentation under SEQRA. Whether such therefore truly constitutes sufficient information is left to the discretion of the referring body. However, it is recommended that the DEIS be revised to assess the potential environmental impact of the entire project (i.e., 600 primary and 600 accessory dwelling units) along with the mitigation measures necessary to avoid significant adverse environmental impacts, which may include limiting the scale of the proposed project.”

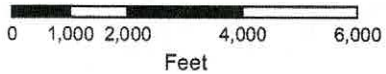
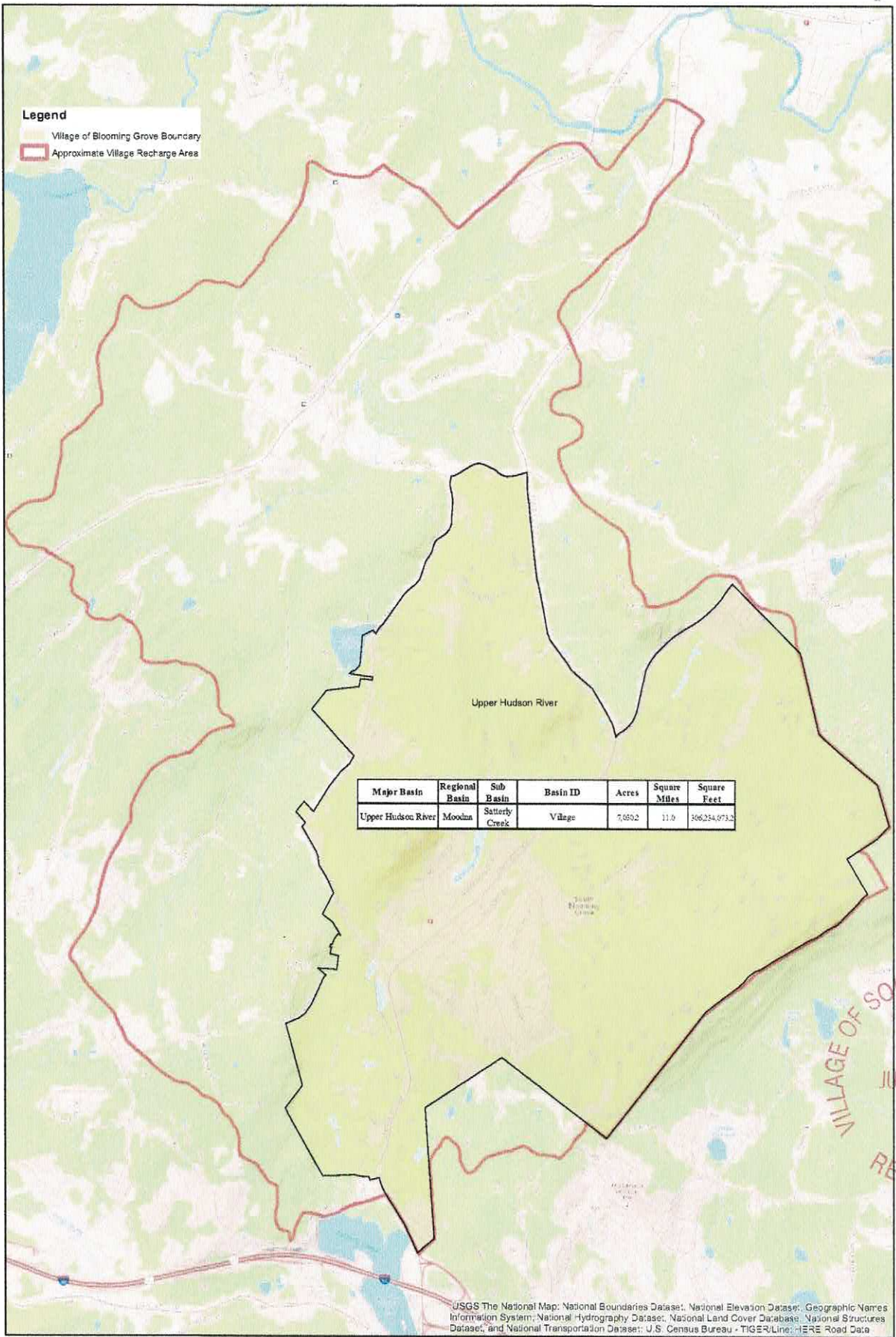
Response

As responded to above, the Project is not proposing the development of 600 accessory apartments and the DEIS addresses the requirements of the Final Scoping Outline issued by the Lead Agency. No segmentation has occurred. The County was provided with a full statement of the proposed Project under GML 239 m and 239 n including the Project’s DEIS and its associated Appendices and Addendum. In addition, on April 21, 2020, the Village of South Blooming Grove Clerk indicated the Orange County Department of Planning was requesting a full set of plan sheets for the Project, which was provided to Kate Schmidt at the County Planning offices on April 24, 2020. The requested revision to the DEIS is unwarranted.

Please do not hesitate to contact us should you need any further clarification and we look forward to working with you during the review process.

Respectfully,


Simon Gelb



Attachment I

VILLAGE OF SOUTH BLOOMING GROVE
 JUL 24 2020
 RECEIVED

**10.3.3 Village of South Blooming Grove
Consultants Correspondence**

C • P • C

P.O. Box 2020, Monroe, New York 10949 | Tel. (845) 774-8000 | cpcnynj@gmail.com

June 11, 2020

Village of South Blooming Grove
Planning and Village Boards
811 NYS Route 208
Monroe, NY 10950

Dear Board Members,

Attached is the Water Treatment Engineering Report as per the request detailed in the attached Village Comment from Village Engineer MHE dated 2/27/20

Respectfully,



Simon Gelb



**McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS D.P.C.**

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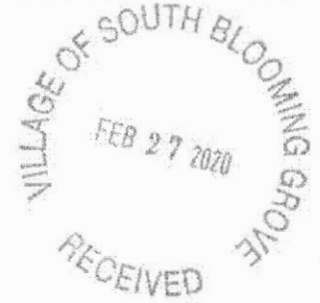
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27 February 2020

Village of South Blooming Grove
PO Box 295
Blooming Grove, New York 10914



ATTENTION: MAYOR JAMES LOFRANCO
DONNA DOUGLAS, PLANNING BOARD CHAIRWOMAN

REFERENCE: CLOVEWOOD DRAFT ENVIRONMENTAL IMPACT STATEMENT ADDENDUM
MHE PROJECT NO. 07-11; 18-12

Dear Honorable Mayor LoFranco and Chairwoman Douglas:

1. Our office is in receipt of Second Addendum to the Draft Environmental Impact Statement, dated Resubmission 13 February 2020; Executive Summary of the Draft Environmental Impact Statement, undated; CPC responses to Village comments, dated 13 February 2020; Sections 4.0 through 8.0 of the Draft Environmental Impact Statement, undated in response to our completeness review dated 27 January 2020.
2. Our previous reviews noted that an Engineering Report was required to be provided to address the fact that the water quality testing of the groundwater supply wells does not meet NY Drinking Water Standards. The first addendum included a memorandum, and the second addendum, although did provide the requested flow calculations, still did not provide an Engineering Report.
3. While our office believes this to be a void in the technical data required to complete a thorough review of the project, we do believe that there is likely adequate information to proceed with further substantive review of the DEIS.

Should you have any questions or require additional information do not hesitate the contact this office.

Respectfully submitted,

Michael W. Weeks, P.E.
Principal



CLOVEWOOD WATER SUPPLY, TREATMENT, STORAGE AND DISTRIBUTION REPORT

BLAGGS CLOVE,
VILLAGE OF SOUTH BLOOMING GROVE
ORANGE COUNTY, NEW YORK

PROJECT NO.: 770113.LAKANN.00

DATE: MAY 2020

UPDATED: JUNE 2020

WSP USA, INC.
4 RESEARCH DRIVE, SUITE 204
SHELTON, CT 06484

TEL.: +1 (203) 929-8555
WSP.COM

SIGNATURES

PREPARED BY:



Michael J. Shortell
Lead Environmental Engineer

REVIEWED BY:



Stephen Rugar, P.E.
Water Practice Leader



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PLATE

PLATE 1: Site Plan

1.0 INTRODUCTION

WSP USA, Inc., and related company Hydrogeologic Architecture, Land Surveying, Landscape Architecture Services, P.C. (WSP), formerly LBG Hydrogeologic & Engineering Services, P.C. has completed this Engineer’s Report for the Clovewood development (Clovewood) to present the preliminary selection of the water supply and treatment equipment, the preliminary sizing and siting of any atmospheric storage tank(s), identification of fire flow requirements, preliminary sizing of the distribution system and identification of the number of pressure zones within the distribution system. Also included are the number and approximate size of any water treatment buildings and pressure reducing valves. The purpose of this report is for use as a basis for design of the water supply, treatment, storage and distribution system. In addition, a preliminary opinion of probable cost (OPC) for construction of the water supply, treatment, storage and distribution system is provided.

The Clovewood property is located on Clove Road in the Village of South Blooming Grove, New York between the cross streets of Route 208 to the south and Round Hill Road to the north. The site was formerly occupied by the Lake Anne Golf Course which closed in the 1990s and the Lake Anne Country Club cottage residences, both of which are no longer in use and will be razed as part of the proposed development. The proposed development will include the construction of 600 residential structures with associated roadways and parking areas. Four community center facilities are also proposed with associated parking, playground and swimming facilities.

Six bedrock water-supply wells will be used to supply potable water to the proposed development. The well identification number, the type of well and the yield are identified in Table 1. The yield identified in the table is based upon a simultaneous 72-hour yield test that was conducted during 2017.

Table 1 - Well Yields for the Proposed Clovewood Supply Wells

Well Number	Well Diameter (inches)	Tested Yield (gpm)
C-6	8	45
C-12	8	40.5
C-14	8	157
C-16	8	50
C-21	8	163
C-23	8	90
Total	NA	545.5

gpm gallons per minute
 NA: Not Applicable

2.0 WATER QUALITY

As previously indicated, WSP completed a simultaneous 72-hour yield test of all the bedrock water-supply wells proposed for use at Clovewood. As part of the 72-hour yield test, water quality samples were collected for a full New York State (NYS) Part 5 water quality analysis which includes in excess of 200 water quality parameters. Generally speaking, the water quality samples were analyzed for approximately 200 parameters and the results of the water quality analysis for the bedrock water-supply wells met NYS drinking water standards with the exception iron, manganese, color, turbidity pH and Langlier Index. A summary of the water quality for the parameters that did not meet NYS drinking water standards is identified in Table 2. In addition, water samples from each well were analyzed by micro-particulate analysis (MPA) which is an indicator if the well could be considered groundwater under the influence of surface water (GWUDI). The results of the MPA analysis indicated that the wells are low risk and giardia and cryptosporidium were not detected.

Table 2 - Summary of Water Quality

Well	Iron (mg/l)	Manganese (mg/l)	Color (Units)	Turbidity (NTU)	pH	Langlier Index
C-6	1.21	0.201	20	8.9	6.89	-0.810
C-12	<0.06	<0.01	5	0.482	7.62	-0.05
C-14	1.19	0.285	20	11.6	7.19	-0.690
C-16	1.05	0.373	30	13.0	7.29	-.270
C-21	7.74	1.79	75	17.6	6.12	-2.95
C-23	6.70	1.73	75	35.7	6.75	-1.95
MCL	0.3	0.3	15	5	6.8 to 8.2	See Note 1

Notes:

1. There is no established MCL for Langlier Index, which is a measure of corrosivity, the desired range is -0.5 to 0.5.
2. There is an exceedance of the MCL if the sum of the iron and manganese concentration exceeds 0.5 mg/l.

The elevated color, iron and manganese concentrations are likely related to the elevated turbidity reported in the wells. Additional pumping to further develop each well is recommended to reduce the turbidity, color and iron concentrations. For the purpose of this report, it is assumed that water treatment equipment for color, iron, manganese and turbidity will be needed for all of the wells.

3.0 WATER DEMAND

As indicated above, the proposed development will include the construction of 600 residential structures with associated roadways and parking areas. Four community center facilities are also proposed with associated parking, playground and swimming facilities. The water demand has been calculated based on the hydraulic loading identified in the New York State Design Standards for Intermediate Sized Wastewater Treatment Systems, March 2014 Revision. The sewage discharge rate identified in the guidance document is 110 gallons per day (gpd) per bedroom. For the planned 600, 4-bedroom residential units within the Clovewood project, the average daily demand is therefore computed to be 264,000 gpd (183.3 gpm) and the maximum daily demand is assumed to be twice the average daily demand, or 528,000 gpd (366.7 gpm). The Clovewood project will also include swimming pools and bath houses within the four proposed community centers. The water usage associated with the swimming pools has been calculated based on 10 gpd per swimmer with an allowed 20% reduction for the use of water saving fixtures. Assuming 2 swimmers per residential unit, the additional water demand for the swimming pools and bath houses would be 9,600 gpd (6.7 gpm). The resulting average daily demand would then be 273,600 gpd (190 gpm) and the maximum daily demand would be 547,200 gpd (380 gpm).

The distribution system will also be required to provide fire protection for the proposed development. Based on the Insurance Services Office (ISO) "Guide for the Determination of Needed Fire Flow", the needed fire flow for single and two-family residential units spaced up to 30 feet apart is 1,000 gpm. It has been assumed the fire flow requirements for the community buildings will be no greater than 1,000 gpm.

4.0 WATER SUPPLY AND TREATMENT

The water-supply system will utilize six 8-inch bedrock water supply wells. Each water-supply well will be equipped with a pitless adaptor and a submersible well pump. Each submersible well pump will be designed to have the capacity to operate at the stabilized yield identified during the 72-hour yield test against the total dynamic head (TDH). The TDH is a sum of the elevation head, the friction losses associated with pumping water through the raw water transmission main and distribution system and any backpressure associated with the treatment equipment. Based on the water quality data, filtration (treatment equipment) for turbidity, iron, manganese and color are necessary, with the exception of C-12. The elevation head would be the difference between the pressure that is maintained within the pressure zone (discussed below) and the pumping water level. For the purpose of this evaluation, it is assumed that friction losses and the backpressure would be 10 pounds per square inch (psi) and 10 psi, respectively. As part of the full-scale design, the appropriate TDH calculations would need to be completed to select / confirm the section of the submersible well pump. The table below identifies the approximate TDH for each bedrock water-supply well and a preliminary make and model of each submersible well pump.

Table 3 - Well Yields for the Proposed Clovewood Supply Wells

Well Number	Tested Yield (gpm)	Elevation Head (feet)	Friction Losses (feet)	Treatment Equipment Backpressure (feet)	Total Dynamic Head (feet)	Approximate Pump Model No. / Horsepower (See Note)
C-6	45	308	23	23	354	45GS75 / 7.5
C-12	40.5	331	23	0	353	45GS75 / 7.5
C-14	157	286	23	23	333	160L20 / 20
C-16	50	302	23	23	348	65GS75 / 7.5
C-21	163	175	23	23	221	160L15 / 15
C-23	90	171	23	23	217	95L07 / 7.5

Notes: 1. Pump model number and horsepower based on Goulds Pumps.

2. The Treatment Equipment Backpressure for C-12 is 0 because this well does not require turbidity, color, iron or manganese treatment.

The water-supply wells are located throughout the proposed development which does not allow for a single water treatment building to treat all the water-supply wells. Therefore, only wells in close proximity to each other will be treated in a common treatment building; otherwise individual water treatment buildings will be constructed to provide the necessary water treatment. Based on the locations of the water-supply wells, four separate water treatment buildings will be needed. Separate treatment buildings will be needed for wells C-12 (Building #1), C-16 (Building #2), C-6 and C-14 (Building #3), and C-21 and C-23 (Building #4). The dimensions of each treatment building will range from 15 feet wide by 15 feet long by 8 feet high (ceiling height) to 20 feet wide by 20 feet long by 8 feet high (ceiling height) to account for the water treatment equipment needed. The specific construction materials (stick-build, concrete block, pre-fabricated, etc.) would be determined during the development of the full-scale design of the water supply and treatment system.

The first step in the water treatment process will be the reduction of color, iron, manganese and turbidity using a filtration vessel with appropriate media. The treatment equipment to reduce the concentration of these parameters will include provisions for backwashing the filtration vessel to regenerate the media. The volume of backwash generated will be based upon the usage of the water-supply well. The table below identifies the minimum dimensions of the filtration vessel and volume of backwash water generated. For the purpose of this evaluation, it is assumed that the backwash water will be directed to the proposed sanitary sewer system flowing to the onsite wastewater treatment plant (WWTP). Please note that C-12 is not referenced in the table because the iron, manganese, turbidity and color concentrations that were detected met NYS drinking water standards.

Table 4 – Water Treatment Backwash System

Well Number	Tested Yield (gpm)	Filtration Vessel Dimensions	Number of Filtration Vessels	Backwash Rate	Backwash Volume (gallons per backwash cycle)
C-6	45	42-inch diameter 78-inch high	1	110 gpm for 10 minutes	1,110 gallons
C-14	157	48-inch diameter 82-inch high	2 (in parallel)	144 gpm per vessel for 10 minutes	2,880 gallons
C-16	50	42-inch diameter 78-inch high	1	110 gpm for 10 minutes	1,110 gallons
C-21	163	48-inch diameter 82-inch high	2 (in parallel)	144 gpm per vessel for 10 minutes	2,880 gallons
C-23	90	36-inch diameter 78-inch high	2 (in parallel)	81 gpm per vessel for 10 minutes	1,620 gallons

The next step in the treatment process will be corrosion control for the water supply. Corrosion control is proposed because, based on the pH and Langlier Index laboratory results, the water supply would be considered corrosive and corrosion control would be accomplished through pH adjustment, injection of a corrosion control chemical or both. If appropriate, pH adjustment would be completed through injecting a neutralizing solution or conveying the groundwater through a calcite filter. Based on the water quality data, the only wells that may require pH adjustment would be C-21 and C-23. For the purpose of this evaluation it is assumed that pH adjustment for C-21 and C-23 would be accomplished by injecting a neutralizing agent and corrosion control would be accomplished by injecting a corrosion control chemical. Both treatment options would involve a small storage tank to contain the appropriate chemical (separate storage tanks for each chemical) and two chemical metering pumps to inject each solution.

The final step in the treatment process would be the injection of a sodium hypochlorite solution for disinfection of the water supply. The sodium hypochlorite solution would be injected into the discharge pipe from each well prior to connection with the distribution system and the chlorination system would be designed to provide 4-log disinfection in accordance with the United States Environmental Protection (USEPA) Ground Water Rule.

5.0 DISTRIBUTION SYSTEM

5.1 Distribution System – Pressure Zones

The proposed new community covers a wide range of elevation, with buildings located over a range from approximately elevation 500 ft. msl to approximate elevation 1020 ft. msl. The 520 feet range in elevation is the equivalent of 225 psi, and therefore multiple pressure zones will be required to serve the development. According to the Orange County Department of Health (OCDOH), the allowable normal operating range of pressures for

distribution systems is 35 psi to 100 psi. This 65 psi range is the equivalent of 150 feet, and therefore the 500 feet of elevation difference covered by the development will need to be served through four separate pressure zones.

A preliminary layout of the proposed distribution system is shown on Plate 1. The system will consist of four interconnected pressure zones, with the following pressures and elevations served as shown on Table 5, below. Information on storage volumes and pipe diameters is provided in Sections 5.2 and 5.3, respectively.

TABLE 5
CLOVEWOOD DISTRIBUTION SYSTEM
PROPOSED PRESSURE ZONES

Zone	HGL	Highest Elevation Served		Lowest Elevation Served		Demand (gpm)	
		Elevation	Pressure (psi)	Elevation	Pressure (psi)	Ave. Day	Max. Day
Upper	1020	1010	5	750	117		
High	930	850	35	730	87	34	68
Intermediate	810	730	35	590	95	84	168
Low	710	630	35	500	91	66	132

HGL: Hydraulic grade line

The Upper Zone will include two wells (C-21 and C-23) and two storage tanks. Other than the water treatment building at the wellfield site, there will not be any other customers connected to the piping in the Upper Zone. The well pumps will operate based on the level in the storage tanks and be constructed with an overflow elevation of 1020 feet. The High Zone will be supplied from the Upper Zone through a pressure reducing valve (PRV) facility (PRV No. 1). PRV No. 1 will include two pressure reducing valves (4-inch diameter and 6-inch diameter). The 4-inch diameter PRV will be set to maintain a downstream pressure of approximately 35 psi, equivalent to the proposed hydraulic grade line (HGL) elevation of 850 feet to be maintained in the High Zone. The 6-inch PRV will be set to maintain a slightly lower pressure than the 4-inch PRV and should therefore only open in the event of high demand such as during a fire. The total capacity of the two wells supplying the connected Upper and High Zones is 223 gpm, while the firm capacity (largest source out of service) is 90 gpm. The boundary of the High Zone has been established so that the total projected maximum day demand of 68 gpm is less than the 90 gpm firm capacity of the sources of supply. The boundary has also been set to maintain distribution pressures of between 35 and 100 psi under maximum day demand conditions. As shown on Table 5, the high ground elevation location served by the proposed High Zone is elevation 850 feet, and the low elevation is 590 feet. The corresponding pressures based on an HGL of 930 are 35 psi and 87 psi, respectively.

The High Zone would be provided with four connections to the Intermediate Zone. Interconnections would include two PRV facilities (PRV 2 and PRV 3) and two water quality (WQ) facilities (WQ 1 and WQ 2). The PRVs would provide supplemental flow to the Intermediate Zone in the event of a high demand. PRV 2 and PRV 3 would be similar in design to PRV 1, and would both include a 4-inch PRV for typical flows, and a 6-inch PRV for higher

flows. Two additional connections, for water quality purposes, would be provided between the High and Intermediate Zones. At each water quality facility, a manhole would be constructed around a normally closed gate valve between the pressure zones. A ¾-inch copper pipe and ¾-inch ball valve would be installed in the manhole between taps on the distribution pipe. The ¾-inch ball valve would be throttled so that the ¾-inch line would flow approximately 5 gpm under average day demand conditions. The closed gate valve at the interconnection could be opened for flushing or system maintenance.

The Intermediate Zone would include three wells (C-6, C-14 and C-16) with a total capacity of 247 gpm. Flow to the Intermediate Zone would also be supplemented by flow from the High Zone through PRV 1 and PRV 2, and through WQ 1 and WQ 2, as described above. A single storage tank would also be provided within the Intermediate Zone, with an overflow elevation of 810 feet. The wells would be operated based on level in the storage tank. The total firm capacity (largest single well out of service) of the sources serving the combined High and Intermediate Zones is 337 gpm, greater than the projected maximum day demand of the combined zones of 236 gpm. As shown on Table 5, the high ground elevation location served by the proposed Intermediate Zone is elevation 730 feet, and the low elevation is 590 feet. The corresponding pressures based on an HGL of 810 are 35 psi and 95 psi, respectively.

The Intermediate Zone would be provided with four connections to the Low Zone. Interconnections would include two PRV facilities (PRV 4 and PRV 5) and two water quality (WQ) facilities (WQ 3 and WQ 4). The PRVs would provide supplemental flow to the Low Zone in the event of a high demand. PRV 4 and PRV 5 would be similar in design to PRV 1, and would both include a 4-inch PRV for typical flows, and a 6-inch PRV for higher flows. Two additional connections, for water quality purposes, would be provided between the Intermediate and Low Zones. WQ 3 and WQ 4 would be similar in design and function to WQ 1 as described above.

The Low Zone would include a single well (C-12) with a capacity of 41 gpm. Flow to the Low Zone would also be supplemented by flow from the Intermediate Zone through PRV 4 and PRV 5, and through WQ 3 and WQ 4, as described above. The wells would be operated to maintain a constant pressure equivalent to an HGL of 710 feet. The total firm capacity (largest single well out of service) of the sources serving the combined High, Intermediate and Low Zones is 383 gpm, greater than the projected maximum day demand of the combined zones of 368 gpm. As shown on Table 5, the high ground elevation location served by the proposed Low Zone is elevation 630 feet, and the low elevation is 500 feet. The corresponding pressures based on an HGL of 710 are 35 psi and 91 psi, respectively.

5.2 Distribution System – Pipes, Valves and Hydrants

Piping in the distribution system would be sized to maintain service pressures between 35 psi and 100 psi under a maximum day demand condition, and to also maintain a residual pressure of 20 psi at all locations during a maximum day demand concurrent with a fire flow of 1,000 gpm. The Low and Intermediate Zones would be served from multiple sources, reducing the head loss in the system under high demand conditions. The Low Zone would be served through up to three locations (Well C-12, PRV 4, and PRV 5). Due to the multiple sources, 8-inch

diameter ductile iron pipe would provide adequate service throughout the Low Zone. The Intermediate Zone would be served through up to five locations (Well C-6, Well C-14, Well C-16, PRV 2, and PRV 3), and additionally a storage tank would be located within the zone. Due to the multiple sources and storage tank, 8-inch diameter ductile iron pipe would provide adequate service throughout the Intermediate Zone. The High Zone would be served through one pressure reducing facility (PRV 1). Due to concentration of flows at one location under high demands, approximately 1,200 linear feet of 12-inch diameter main would be required within the High Zone as shown on Plate 1. The remaining pipe within the High Zone would be 8-inch diameter. Piping downstream of the storage tanks would be 12-inch diameter, with 6-inch diameter pipe connecting the discharge from the treatment facility to the storage tanks.

At each intersection in the distribution system, a tee and valve assembly would be provided, with gate valves on each side and on the branch of every tee. Line gate valves would be provided at approximate 800 linear feet intervals. Hydrants would be placed at each intersection, and also spaced near the end of cul-de-sacs, and at approximate 500 linear feet intervals along longer roadways. The exact locations of hydrants and valves would be verified during final design and are, therefore, not shown on Plate 1.

5.3 Distribution System – Atmospheric Storage

Distribution system storage would be required to provide fire flow and storage for peak demands in excess of the pumping rate and flow available through the pressure reducing valves serving each pressure zone. Based on discussion with OCDOH, storage should be sized based on analysis of three components: fire protection, average daily demand, and a reserve to maintain service pressures. Additionally, multiple storage tanks should be provided so that fire protection can be maintained when a tank is removed from service for maintenance, cleaning or repairs.

Storage will be provided in the Upper Zone as well as the Intermediate Zone as shown on Plate 1. Storage in the Upper Zone is available for use by the entire development, as flow from the tanks will flow through the PRV facilities to lower gradient zones. Additional storage should be provided in the Intermediate Zone, primarily as a cushion to reduce the impact of changes in pressure on the speed of operation of the PRV facilities. Hydraulically operated PRVs in multiple facilities serving a common pressure zone have been known to respond poorly to changes in pressures, as the valves will open or close based on local conditions, and can result in valves opening or closing rapidly across the system, resulting in poor control of pressures and possible damaging surge pressures.

Table 6, below, shows the calculation for storage for the entire system per OCDOH requirements. Table 6 shows the calculation for the combined Upper and High Zones. As shown on the tables, a total of 395,000 gallons of storage is required for the entire Clovewood system. Of that total, 300,000 gallons should be located in the Upper Zone, consisting of two 150,000-gallon tanks, providing sufficient fire protection to the High Zone when one tank is out of service for maintenance, cleaning or repairs. The remaining 95,000 gallons of required system storage would be located in the Intermediate Zone.

TABLE 6

**CLOVEWOOD DISTRIBUTION SYSTEM
STORAGE ANALYSIS - ENTIRE SYSTEM**

Based on Projected Average Day Demand = 264,000 gpd

Component	Volume (gals)	Notes
Fire	120,000	1,000 gpm fire for 2 hours
Average Day Demand	273,600	
Operational Reserve	-	Volume needed to maintain 20 psi
Subtotal	393,600	
NEW STORAGE NEEDED	395,000	Gallons

**CLOVEWOOD DISTRIBUTION SYSTEM
STORAGE ANALYSIS - UPPER AND HIGH ZONE**

Based on Projected Average Day Demand = 49,000 gpd

Component	Volume (gals)	Notes
Fire	120,000	1,000 gpm fire for 2 hours
Average Day Demand	59,000	
Operational Reserve	-	Volume needed to maintain 20 psi
Subtotal	179,000	
NEW STORAGE NEEDED	179,000	Gallons

Various types of storage tanks are available, including welded steel, prestressed concrete, and glass lined bolted steel. Due to the cost of future required repainting, welded steel is not recommended for this application. For cost estimating purposes, it is assumed that the tanks would be glass lined, bolted steel. The two 150,000-gallon Upper Zone tanks would be approximately 15 feet high from ground level to overflow, with an overall height to the top of the dome roof of approximately 25 feet. The diameter of each tank would be approximately 42 feet. The single 95,000-gallon Intermediate Zone tank would also have an approximate height of 15 feet from ground level to overflow and would have a diameter of 33 feet.

Each tank would include a combined inlet and outlet pipe installed across the bottom of the tank, equipped with several ports and rubber valves to allow inflow and outflow, and to promote mixing of tank contents. A separate 8-inch diameter overflow pipe sized to accommodate the maximum fill rate, and 6-inch diameter tank drain extending to an endwall would also be provided. Each tank would also include tank sidewall manways, a roof hatch, and a central vent with protective screening. The tanks would be constructed on a reinforced concrete floor and foundation, set onto bedrock or other suitable dense, compact native earth material. For purposes of foundation design, at least four soil borings should be taken at each tank site to evaluate the nature and depth of subsurface materials.

6.0 SYSTEM OPERATION AND CONTROL

Each pressure zone would be operated to generally maintain the HGL shown on Table 5. In the Upper Zone, operation of the two wells would be controlled based on level in the storage tanks. Storage tank level would be measured by pressure transmitters sending a 4-20 milliamp signal proportionate to level to a programmable logic controller (PLC) located in the treatment building. The PLC programming would start a well when tank level dropped to a pre-set level and start the second well upon a further drop to a lower pre-set level. The wells would be shut off when tank level returned to a high level. Alarm settings would be provided for very low and very high tank levels. The lead and lag pump would be switched on each pumping cycle, to balance operation of the wells.

Operation of each of the PRV facilities would be based on downstream pressure as sensed by each PRV. The 4-inch PRVs would be set to maintain the HGL shown on Table 5, and the 6-inch PRVs would be set to maintain a pressure approximately 5 psi lower than the setting on the corresponding 4-inch PRV, and therefore would only open in the event of high demand or fire conditions.

The wells in the Intermediate and Low Zones would be operated to also maintain the HGL in the zone shown on Table 5. This would likely be accomplished through constant pressure type operation, where each well would be operated by variable frequency drive at a speed proportionate to the discharge pressure measured at the treatment facility. A PLC at each facility could vary operation of the wells based on time of day settings, to balance operation and also to allow a portion of supply to flow through the PRVs and/or the storage tank, to maintain water quality.

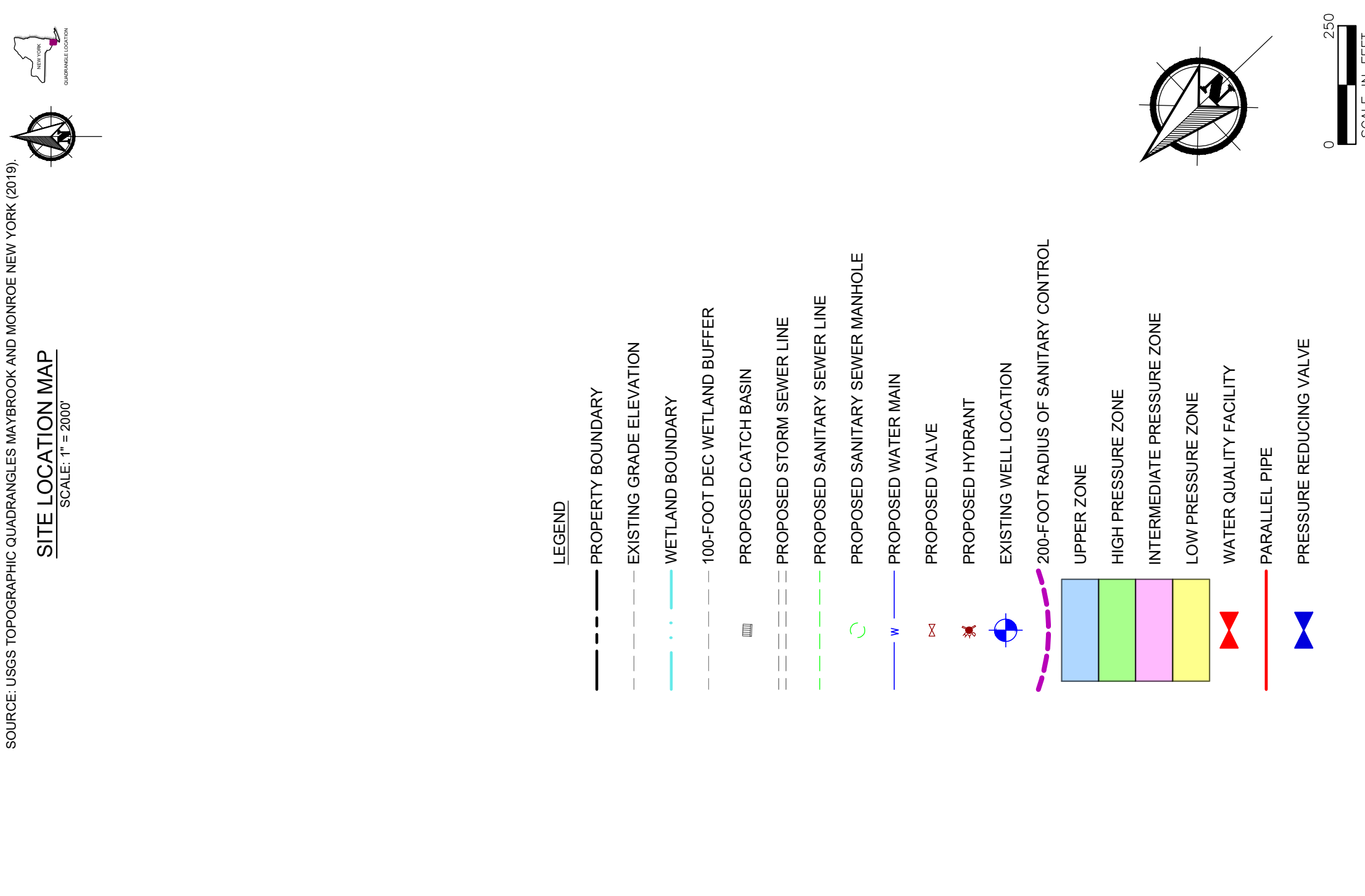
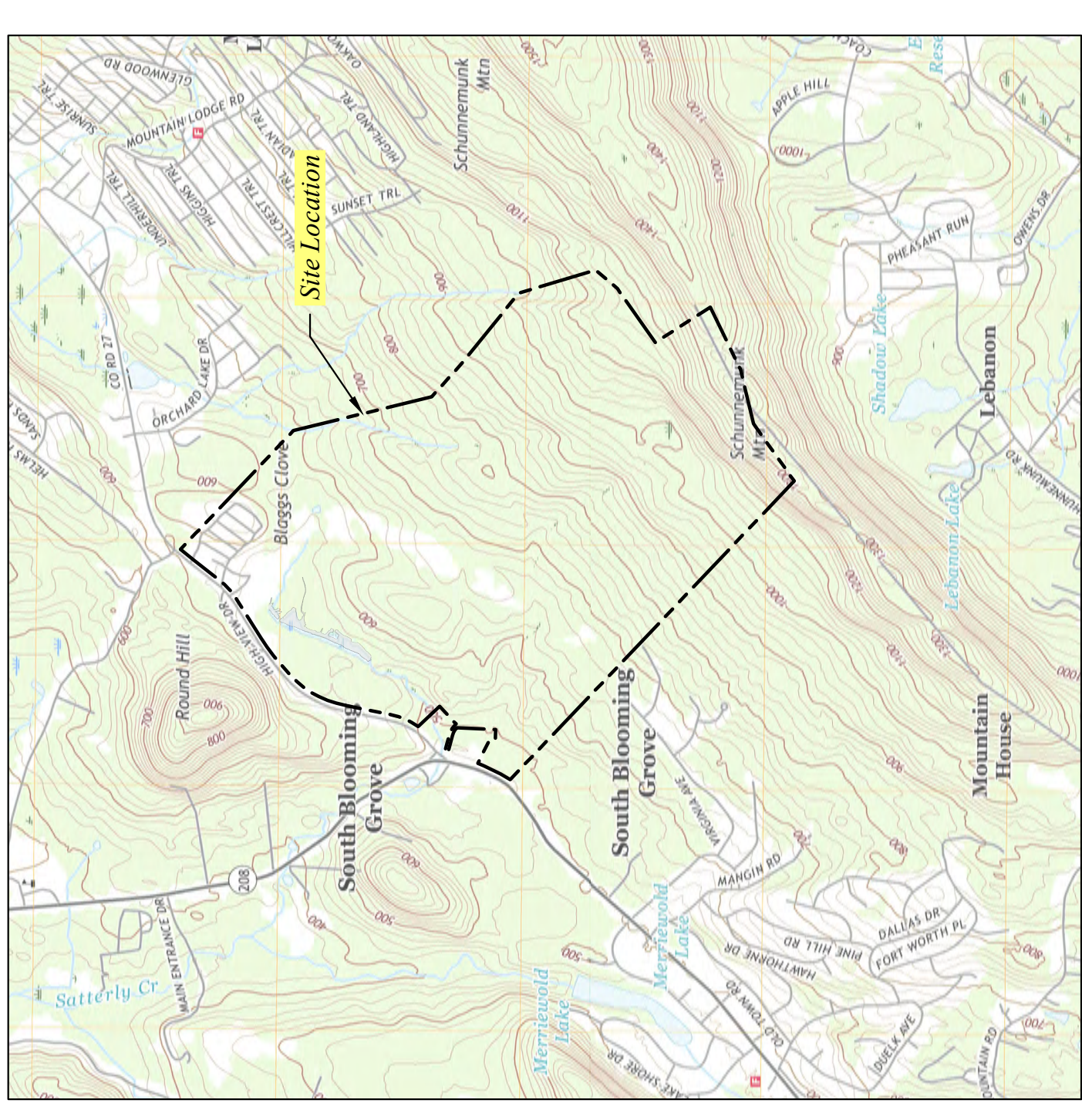
An initial plan for control settings would be prepared during design and adjusted during initial start-up. Further adjustments to control settings would be anticipated as the population in the development increases.

A complete supervisory control and data acquisition (SCADA) system monitoring treatment and distribution system status, and allowing for remote operation, is recommended but not required by OCDOH.

cmm
June 10, 2020
H:\Lake Anne\Cloveswood\2020\Updated Engineer's Report.docx

PLATE





CLOVEWOOD PROPERTY
VILLAGE OF SOUTH BLOOMING GROVE
BLAGGS CLOVE, NEW YORK

SITE PLAN

DATE	REVISED	PREPARED BY:

WSP USA
4 Research Drive
Suite 204
Shelton, Connecticut 06484
(203) 929-8555

wsp

DRAWN:	RAC	CHECKED:	MS	DATE:	06/10/20	PLATE:	1

