To: Guilderland Planning Board

From: Guilderland Conservation Advisory Council

Date: November 28, 2016

Re.: Efaw, 6627 Lainhart Road, Altamont, NY 12009

APPLICATION

Applicant(s): Kevin and Darci Efaw, 1 Gregg Rd., Altamont, NY 12009

Proposal: A proposed three lot subdivision of 153 acres.

Location: Property is located in the northwest corner of the Town of Guilderland to the north of the Village of Altamont.

Zoning: RA-3.

Site Inspection Summary:

Site Inspection Date: November 19, 2016

Meeting Attendees: (November 14, 2016) Kevin and Darci Efaw (Applicants); GGCAC Members Stephen Albert, Martin Gnacik, Martha Harausz, Gordon McClelland, Stuart Reese and John Wemple (Chair).

Inspected by: Kevin Efaw (Applicant); GGCAC Members Martin Gnacik, Gordon McClelland, Stuart Reese and John Wemple (Chair).

**Conclusions:** GCAC did restrict the site visit to the area of proposed Lots 2 and 3 since the Council did not see the need to inspect the many acres that make up this 150+ acre site. Since the proposed lots are on the lower edge of the property, development on that part of the property should have little, if any, effect on the remainder of the property to the north and west. Provided the Applicants can find a suitable place for the well and an approved septic system is constructed, GCAC does not envision much if any negative impact to the environment by the planned development of this site provided an appropriate plan for stormwater management is included in the final plan. As noted under the Topography section, the angle of repose as it relates to the set backs from the stream and creek beds will need to be considered in thw location of inhabited structures.

Submitted by: _____

John G. Wemple, Jr. - Chair

INSPECTION DETAILS

Applicant(s): Kevin and Darci Efaw, 1 Gregg Rd., Altamont, NY 12009

Address: 6627 Lainhart Rd., Altamont, NY 12209

Background: As noted in the Town final assessment roll, the property is owned by Altamont Orchards Realty LLC of 6654 Dunnsville Road, Altamont, NY. According to Applicant, the property has been in the Abbruzzese family for forty to fifty years. Applicant (Kevin) has been an employee of Orchard Creek Golf Club for nine years, where

he is food and beverage manager. He became interested in the property on which nothing had been done for about fifteen to twenty years. He has already cleared some of the area for which he has a contingency agreement to buy where there is about 15 acres which he described as an area of dead and deteriorating apple orchard. The plan is to purchase the 5.25 acre parcel (Lot 3) on which the Efaws would build their home; and subsequently, in a couple years, purchase adjacent Lot 2 on which they have a first option to buy.

Topography: Applicant described that area (Lot 3) which they plan to purchase as being very flat with a crown near the center on which they would build there home. Applicant did note that there is a steep drop at the south east corner of the Lot. He also pointed out on the site drawing that there is a ravine in the area adjacent to the south boundary of the property leading toward the Bozenkill.
A review of the contour lines on the Altamont Quadrangle of the US Department of Interior Geological Survey map, photorevised 1980, indicates that the elevation of the northmost corner of this large 154 acre property is at an elevation of almost 680 feet Above Mean Sea Level (AMSL) and decreases in elevation in a fairly even slope to the southeast over most of the acreage until it reaches the area on which the existing residence is located which is on a less sloping section. From that point downward to the southeast corner, where the elevation is 440 ft. AMSL, the direction of the slope is a bit different. It is this area of the property on which proposed lot 2 and lot 3 are planned. The elevation on Lot 2 is 480 ft. AMSL at its upper northeast corner and decreases to 460 ft. AMSL as it slopes westward and continues this downward slope along its west boundary. The upper northwest quarter of Lot 3 is on an area where the elevation is between 480 and 500 ft. AMSL and slopes downward to the south toward contour line of 460 ft. AMSL. It was further noted that the south east corner of this Lot is at an elevation, as noted above, of 440 ft. AMSL, a relatively sharp drop of 20 feet in this last fifty feet as it meets the area of the highway. The topography of the access driveway, which is part of Lot 2 is similar to that of the upper portion of Lot 3; From the northeast corner of the main section of Lot 2 where the elevation is 480 ft. AMSL, the driveway continues at that level for about two-thirds of its length eastward and then decreases in elevation to 460 ft AMSL as it reaches Lainhart Road. As to the slope on Lot 3, the drop from the northwest quadrant to the southwest corner is 40 feet in a distance of 250 feet. GCAC calculates this results in an average slope of 16% or approximately 9.09º. If the last 50 feet, where the drop is 20 feet, is not taken into consideration, the slope is more gradual – 20 feet downward over a distance of 200 feet – resulting in a slope of 10% or and angle of 5.71º. The slope toward the west on Lot 2 is similar near the upper (northern) part of the lot and is less as on the lower half of that lot. The slope from the south west corner of Lot 2 to the feeder stream which runs to the west of that lot is approximately 10% with an angle of about 5.7º. Since there is a drop in elevation from the area on which the Applicants are interested in building to the BozenKill, the angle of repose was taken into consideration. GCAC calculated there is a drop of about 100 feet over the distance on about 1400 feet; and using a Texas Instruments scientific calculator, computed the angle to be approximately 7 percent with a slope of approximately 4.09º. Since the contour lines available to GCAC at the time of its review were at 20 ft. intervals, a more precise review of the angle of



repose may be advisable. At time of November 19th site visit, GCAC walked much of the perimeter of Lots 2 and 3 in a counterclockwise direction starting at the northeast corner of Lot 3. What GCAC saw was a bit different than that just described in that the slope encountered was very gradual on the main potion of the area comprising Lots 2 and 3. There is a gradual slope toward the northwest corner; from there the is a gradual rise toward the south and then a leveling off as the south west corner area is approached. Beyond the boundaries of Lots 2 and 3, the terrain is much more sloped and does appear to be more in line with what is seen on the reference maps. Due to the angle of repose related to the stream that runs close to the western boundary of Lot 2, there may be a need for a setback of about 200+ feet for a residence or an occupied structure. Since there is adequate space on this proposed 7+ acre plot, this should not cause a problem if the lot is developed some time in the future.

Vegetation/Trees: While the property had been an orchard, the Applicant stated there are no mature trees on Lots 2 and 3 other than some trees along Lainhart Road. Along the area adjacent to Lainhart Road, there are also two or three tall evergreen trees. As noted by the Applicant, most of the trees on Lot 3 have been cut down. These trees lie on a large pile toward the south east center of that lot and are awaiting being burned for which the Applicant stated he has a permit. The apple orchard on Lot 2 is pretty much intact but appears to be in need of pruning. Other than some brush along the west side of this orchard and within the orchard, the south and south west area has very low vegetation having been hedgehogged.

Soil: Applicant noted that the soil is about twelve inches deep with clay and under that six to seven feet of shale. GCAC also identified top layer of soil on Lot 3 to be clay. In the area to the east of the pile of cut down trees, there was standing water in a small ditch, apparently due to the nature of the soil.
A review of Sheet Number 10 from "Soil Survey of Albany County, New York" -1992 – James H. Brown, as well as the USDA Natural Resources conservation services map shows six different soils on the two smaller lots being

cut out from this large acreage property. The remaining 140.8 acres (Lot 1) referred to as the parent lot has primarily Nunda silt loam with scattered areas of Angola silt loam and Burdett silt loam. On Lot 2 th3e main part has AnC soil with a small area of NuD at the northwest corner and NuC along the southwest corner. There is also a very small wedge shaped area at the southeast corner where there is BuB soil. Lot 3 has AnB at the mid section. AnC soil covers most of the northwest corner running from the mid-point of the north boundary and west of a line from that point to a point along the west boundary just north of the southwest corner. There is a small area at the southwest corner that runs about 200 feet along the south border. At the southeast corner there ia a larger area of NuE soil that extends about 175 feet in from that corner. A brief description of the six soils found on Lots 2 and 3 and some of the limitations of the particular soil are as follows:

**AnB - Angola silt loam, 3 to 8 percent slopes** - This gently sloping soil is moderately deep and somewhat poorly drained. It is in slightly concave positions in bedrock-controlled areas on uplands. The seasonal high water table in this Angola soil is at a depth of ½ foot to 1 ½ feet from December to May. The water table is perched above the bedrock. Depth to bedrock is 20 to 40 inches. Permeability is moderate in the surface layer and slow in the subsoil. Available water capacity is moderate. Surface runoff is slow. The surface layer ranges from moderately acid to mildly alkaline. The moderate depth to bedrock restricts root penetration. Northern red oak, sugar maple, and white ash are common on this soil. The main limitation of this soil on sites for dwellings with basements is the seasonal high water table. The moderate depth to bedrock is also a limitation. On construction sites, erosion is a limitation where the soil is bare of vegetation. Installing foundation drains and applying protective coatings to basement walls will help prevent



wet basements. A backhoe can easily rip away the soft shale bedrock when digging the basement. The harder sandstone bedrock is more difficult to remove. Restoring vegetation or applying mulch on the surface helps to control erosion. The main limitations for local roads and streets on this soil are the seasonal high water table and the frost-action potential. This soil is soft when wet and causes the pavement to crack under heavy traffic. Constructing roads on raised fill material helps prevent the road damage that the seasonal high water table causes. The main limitations affecting the use of this soil as a site for septic tank absorption fields are the seasonal high water table, the slow percolation in the subsoil, and the depth to bedrock. A specially designed septic tank absorption field or an alternative system will properly filter effluent if located in areas of the deep included soils. A drainage system around the filter field and diversion ditches to intercept water from the higher areas will reduce wetness. Revegetating or mulching disturbed areas of this soil helps to control erosion. **AnC - Angola silt loam, 8 to 15 percent slopes** - This strongly sloping soil is moderately deep and somewhat poorly drained. It is in the intermediate positions between bedrock-controlled areas and deeper deposits. The seasonal high water table in this Angola soil is at a depth of ½ foot to 1 ½ feet, perched above bedrock, from December to May. Bedrock is at a depth of 20 to 40 inches. Permeability is moderate in the surface layer and slow in the subsoil. Available water capacity is moderate. Surface runoff is medium. The surface layer ranges from moderately acid to mildly alkaline. The main limitation of this soil on sites for dwellings with basements is the seasonal high water table. The moderate depth to bedrock and the strong slopes are also limitations. Long, strongly sloping areas will increase the cost of excavating basements and of smoothing operations following construction. Erosion is a hazard where the soil is bare of vegetation. Installing foundation drains and applying protective coatings to basement walls will help prevent wet basements. A backhoe easily rips the softer shale bedrock when digging the basement. The harder sandstone bedrock is more difficult to remove. Restoring vegetation or applying mulch, and installing diversion ditches or grassed waterways help control erosion. The main limitations for local roads and streets on this soil are the seasonal high water table and the frost-action potential. The costs will be high for construction including excavation and grading. This soil is soft when wet and causes the pavement to crack under heavy traffic. Constructing roads on raised fill material will prevent the road damage that the seasonal high water table causes. Providing a coarse textured subgrade or base material and installing surface or subsurface drainage will reduce the frost-action potential and enhance soil strength. Mulching or revegetating to stabilize graded roadbanks and ditches helps control erosion. The main limitations affecting the use of this soil as a site for septic tank absorption fields are the seasonal high water table, the slow percolation in the subsoil, and the depth to bedrock. A specially designed septic tank absorption field or an alternative system will filter effluent if located in the areas of the deeper included soils in this map unit.. A drainage system around the filter field and diversion ditches to intercept water from the higher areas help control erosion. Revegetating or mulching disturbed areas of this soil helps to control erosion.

**BuB – Burdett silt loam, 3 to 8 percent slopes** - This gently sloping soil is very deep and somewhat poorly drained. The seasonal high water table in this Burdett soil is perched on the clayey subsoil at a depth of ½ foot to 1 ½ feet from December to May in most years. Permeability is moderate in the surface and subsurface layers and slow in the subsoil and substratum. Available water capacity is high. Surface runoff is medium. County soil survey notes that most of the acreage of this soil is used as hayland, pasture, or woodland. The main limitation of this soil on sites for dwellings with basements is the seasonal high water table. Installing foundation drains and applying protective coatings to basement walls help prevent wet basements. Land grading and properly placed diversions will remove

surface water. The main limitations for local roads and streets on this soil are the seasonal high water table and frost-action potential. This soil is soft when wet and causes the pavement to crack under heavy traffic.



Constructing roads on raised fill material will reduce wetness and prevent the road damage that the seasonal high water table causes. Providing a coarse textured subgrade or base material and providing surface or subsurface drainage will reduce the frost-action potential and enhance soil strength. The main limitations affecting the use of this soil as a site for septic tank absorption fields are the seasonal high water table and the slow percolation in the subsoil. A specially designed septic tank absorption field or an alternative system will properly filter effluent. An alternate system will include a drainage system around the filter field to lower the water table, diversion ditches to intercept water from the higher areas, and an enlarged trench below the distribution line to improve percolation.
**NuB - Nunda silt loam, 3 to 8 percent slopes–** This gently sloping soil is very deep and moderately well drained. The seasonal high water table is at a depth of 18 to 24 inches from March to May. Depth to bedrock is more than 60 inches. Permeability is moderate in the surface layer and in the upper part of the subsoil and slow to very slow below. The available water capacity is high, and runoff is medium. The main limitation of this soil on sites for dwellings with basements is the seasonal high water table. Foundation drains and interceptor drains upslope from construction sites divert runoff and lower the water table. The main limitation of this soil for local roads and streets is the frost-action potential. Constructing roads on coarse textured fill material provides drainage away from the roadway. The main limitation affecting the use of this soil as a site for septic tank absorption fields are the seasonal high water table and the slow percolation in the subsoil and substratum. Installing a drainage system around the absorption field and diversions to intercept runoff from the higher areas will reduce wetness. Enlarging the absorption field or the trench below the distribution lines will improve percolation. **NuC – Nunda silt loam, 8 to 15 percent slopes**– This strongly sloping soil is very deep and moderately well drained. The seasonal high water table is at a depth of 18 to 24 inches from March to May. Depth to bedrock is more than 60 inches. Permeability is moderate in the surface layer and in the upper part of the subsoil and slow or very slow below. The available water capacity is high, and runoff is medium or rapid. The main limitation of this soil on sites for dwellings with basements is the seasonal high water table. Foundation drains and interceptor drains upslope from construction sites divert runoff and reduce wetness. Erosion is a hazard during construction. Maintaining the vegetative cover adjacent to the site and diverting runoff from the higher areas help control erosion. The main limitation of this soil for local roads and streets is the frost-action potential. Constructing roads on coarse textured fill material provides drainage away from the roadway. Erosion is a hazard if these sloping soils are left unprotected. The main limitations affecting the use of this soil as a site for septic tank absorption fields are the seasonal high water table and the slow percolation in the subsoil and substratum. A drainage system around the absorption field and diversions to intercept runoff from the higher areas will reduce wetness. Enlarging the absorption field or the trench below the distribution lines will improve percolation.
**NuD – Nunda silt loam, 15 to 25 percent slopes.** - This moderately steep soil is very deep and moderately well drained. The seasonal high water table in this Nunda soil is at a depth of 1 ½ to 2 feet from March to May. Depth to bedrock is more than 60 inches. Permeability is moderate in the surface layer and in the upper part of the subsoil and slow or very slow below. The available water capacity is high, and runoff is rapid. The main limitations of this soil on sites for dwellings with basements are the seasonal high water table and slope. Foundation drains and interceptor drains upslope from construction sites divert runoff and reduce wetness. Cutting and filling in construction benches and grading help overcome the slope limitation. Erosion is a severe hazard during construction. Maintaining the vegetative cover adjacent to the site, diverting runoff from the higher areas, and mulching help control erosion. The main limitations of this soil for local roads and streets are the slope and the frost-action potential. The main limitations affecting the use of this soil as a site for septic tank absorption fields are the seasonal high water table, the



slow percolation, and the slope. Installing a drainage system around the absorption fields and diversions to intercept runoff from the higher areas will reduce wetness. Enlarging the absorptionfield or the trench below the distribution lines will improve percolation. Installing distribution lines on the contour with drop boxes or other structures will ensure even distribution of effluent.

Drainage/Wetlands: According to the Application form and also according to Applicant at time of presentation, there are no wetlands or streams on the proposed Lots 2 and 3. He noted the creek (or stream) bed is on the other side of the parcel. GCAC did see this deep stream bed a short distance west of the Lot 2 boundary. Contour lines on the Geological Survey map indicates the natural drainage is from northwest to southeast. In reviewing the soil survey maps it was noted by GCAC that on survey map (sheet no. 10) there is a symbol indicating that there is a wet area on adjacent property about 150 feet south of Lot 3. The Geological Survey map also shows a stream or

watercourse of some kind running down through the east portion of the acreage and close to the west boundary of proposed Lot 2. It also shows another watercourse running through the west corner of the acreage of Lot 1. Both of these streams enter the Bozenkill which in turn leads to the Watervliet Reservoir. A review of the Albany County Interactive Mapping map showing the location of the flood plain along the Bozenkill indicates the flood plain is to the south and below Lots 2 and 3. The flood plain is adjacent to the creek and at that point ranges in width from about 65 feet to about 400 feet. The Interactive Mapping map also shows a wetland approximately 780 feet south west of area of Lots 2 and 3.

Septic/Wells: Application indicates the plan is to have well water and to have a septic system. Applicant noted that the Health Department did perc test which it passed for a raised bed for septic system; and further noted that re is working on someone to do the well. Also noted by the Applicant is that the purchase of the property is contingent upon being able to get water.

Visual Impact: Because of the existing trees along the east side of Lot 3, Applicant feels that the planned residence will not be visible from the Road. While the area near the entrance to the property is cleared of trees, it appears to be wise to have this space open from the standpoint of safety in entering and leaving the property due to the windy mountain road.

Endangered Species: No Karner Blue or Indiana bats or endangered species known to be on Lots 2 and 3 by Applicant and none observed by GCAC at time of site visit.

Historical Considerations: No cemetery or anything of historical significance known to Applicant on Lots 2 and 3 and known observed by GCAC at time of site visit. While GCAC did not inspect the property to the west, it should be noted that GCAC did find this address on the list from the Assessor's Office of properties on which there is a structure built in 1875. Property class is 171. While the NYS Office of Real Property Services Assessor's Manual does not list this code the first two digits (170) indicates Nursery and Greenhouses. From what the Applicant related to GCAC, it appears that the old structures on Lot 1 have been abandoned and left to deteriorate.

Submitted by: _____

John G. Wemple, Jr. - Chair