To: Guilderland Planning Board

From: Guilderland Conservation Advisory Council

Date: September 26, 2016

Re.: MA Schafer Construction, West Old State road,

APPLICATION

Applicant(s): Mark A. Schafer Construction, 4928 Western Turnpike, Altamont, NY 12009

Proposal: A proposed development of a 25.6 acres two lot site.

Location: Property is on the north side of West Old State Road about 530 feet west of Route 158 (west of Parkers Corners) and about ¾ mile south of the Schenectady County line.

Zoning: RA-3.

Site Inspection Summary:

Site Inspection Date: September 17, 2016

Meeting Attendees: (September 12, 2016) Mark Schaffer (Applicant); GGCAC Members Stephen Albert, Martin Gnacik, Martha Harausz, Gordon McClelland, Stuart Reese and John Wemple (Chair).

Inspected by: Mark Schaffer (Applicant); GGCAC Members Stephen Albert, Martin Gnacik, Martha Harausz, Gordon McClelland, Stuart Reese and John Wemple (Chair).

Conclusions: GCAC envisions a minimal amount, if any, negative environmental impact as a result of this proposed subdivision provided the location and construction of the septic system is done properly and that an appropriate waste water drainage plan is incorporated in the final plan for development of Parcel 2.
Since the property is zoned RA-3, GCAC considered the possibility of Parcel 1 having a suitable site for a building site and determined that one could be located in the area adjacent to Route 158, with initial access on the short stone driveway which already exists and passes over a culvert which has been constructed along that highway. If the Parcel is developed, the developer will need to pay special attention to the limitations of the soil as noted under the Soil Section of this report, as well as formulating a proper storm water drainage plan. Due to the curve on the highway along the southern border of Parcel 2, special attention needs to be placed on the location of the driveway entrance since the line of sight appears to be limited.

Submitted by: _____

John G. Wemple, Jr. - Chair

INSPECTION DETAILS

Applicant(s): M A Schafer Construction

Address: West Old State Road, Altamont, NY 12209

Background: According to Applicant, the 25+ acres involved in this subdivision is part of a family owned parcel which included a larger portion of the property along West Old state Road and Route 159. He noted that the proposed subdivision is actually just reverting back to the way the lots were prior to about nine or ten years ago. Purpose of subdivision is to create a building lot on the 5+ acres along West Old State Road.

Topography: The acreage is described as being mainly clay. Applicant noted that the highest point on the property is at the middle of the rear (north) border. Contour lines on the Applicant's survey map show the high point on the front lot is at its southeast corner where the elevation is 320 feet AMSL. Elevation decreases to 310 feet AMSL at the rear of the proposed location of the dwelling and further declines to 300 ft. AMSL about ¾ of the way back from the Road to the rear of Parcel 2. Parcel 1 (the rear lot) continues at this 300 ft. AMSL for about 50 to 100 feet and then increase to 310 ft. AMSL. This 310 foot elevation continues for most of the open space of the remaining area of the rear lot (Parcel 1) although the map shows it does decline in elevation to about 300 ft. at the rear northwest corner; and that it declines along most of the west half of the border along the north border and at one point the elevation is 290 feet AMSL about 200 feet east of the north west corner. The elevation lines on the drawing indicate that to the east of the midpoint of the north border there is a small hill about 75 feet wide where the elevation is 320 feet which would coincide with the high point noted above by the Applicant. The property slopes to the east on the section that abuts Route 158. At about the middle of this area, the elevation declines from 310 to 300 ft. AMSL and then at about 75 feet from that road it starts declining further to 290 ft. AMSL near the north east corner and continues to a low point where it is 280 ft. AMSL. At the time of the site visit, GCAC observed that the area running across the back of Parcel 2 is indeed a low area as noted on the survey map. Prior to reaching this low area, there is a relatively flat open area that appears to be suitable for a building site. It was noted that on the south side the property drops about four to five feet from the edge of the highway along the eastern portion of that southern border which may entail construction of a culvert for the driveway for entrance to Parcel 2.

Vegetation/Trees: Applicant noted that on Parcel 2 there are tall spruce trees along much of the front portion bordering on West Old State Road; and that about nineteen of the 20+ acres on Parcel 1 are corn fields. On Parcel 2, besides the large stand of spruce trees on the forward portion of the lot, there were numerous deciduous trees especially along the east border and midsection including maple, possibly ash as well as hemlock near the south east corner. GCAC did not walk the acreage on Parcel 1 since it appeared to be fully cultivated and there was no apparent need to disturb the corn growing there and since no development is in the plan at this time.

Soil: According to Applicant, soil is clay; and he noted that the property is farmland with good top soil which doesn't contain rocks. A review of Sheet #3 of "Soil Survey of Albany County, New York" -1992 – James H. Brown indicates there are six different soils on the property – HuB, HuC, HuD, NuC, RhB and Sh. The approximate location of the planned dwelling would straddle a line where the HuC and RhB soils come together on the area of the southeast quarter of proposed Parcel 2. Most of the west portion of Parcel 2 has HuC soil except for a wedge of HuD at its northwest corner. If a diagonal line is drawn starting about 1/3 of the way from the northwest corner along the north boundary of

Parcel 2 southeastward toward the midpoint of the east border of Parcel 2, this line continues to a point about 50± feet from this east boundary and then goes southward until meets the southern border at which point it is within about 75 feet from the southeast corner – to the west is primarily HuC soil and to the east is RhB soil.
Parcel 1 is covered primarily by HuB soil except for a finger about 200 - 300 feet wide of NuC soil which juts in from the north most of the way down to the south border of the upper east portion of Parcel 1. To the east of this is an area of Sh soil slightly less in width which runs along the east side of this lot along Route 159.
A brief description of these soils and some of the limitations of the particular soil are as follows:
HnB – Hornell silt loam, 3 to 8 percent slopes. -This gently sloping soil is moderately deep and somewhat poorly drained. The seasonal high water table in this soil is perched above the clayey subsoil at a depth of 6 to 18 inches from December to May. Depth to bedrock is 20 to 40 inches. It restricts rooting depth. Permeability is moderate in the surface layer and slow or very slow in the subsoil. The available water capacity is moderate. The main limitation of this soil on sites for dwellings with basements is the seasonal high water table. Diversions placed above the building site, foundation drains, and a protective coating on basement walls help prevent wet basements. The main limitations of this soil for local roads and streets are the seasonal high water table and low strength. Constructing roads on raised fill material and installing drainage reduce wetness. Coarse textured subgrade or base material helps improve soil strength. The main limitations affecting use of this soil as a site for septic tank absorption fields are the seasonal high water table, the depth to bedrock, and the slow percolation. According to the soil survey reference book sited, a specially designed septic tank absorption field, including drainage around the site, will adequately filter effluent. **HnC – Hornell silt loam, 8 to 15 percent slopes.** -
This strongly sloping soil is moderately deep and somewhat poorly drained. The seasonal high water table in this soil is perched above the clayey subsoil at a depth of 6 to 18 inches from December to May. Depth to bedrock is 20 to 40 inches. It restricts rooting depth. Permeability is moderate in the surface layer and slow or very slow in the subsoil. The available water capacity is moderate. The main limitation of this soil on sites for dwellings with basements is the seasonal high water table. Diversions placed above the building site, foundation drains, and a protective coating on basement walls help prevent wet basements. The main limitations of this soil for local roads

and streets are the seasonal high water table and low strength. Constructing roads on raised fill material and installing drainage reduce wetness. Coarse textured subgrade or base material helps improve soil strength. The main limitations affecting use of this soil as a site for septic tank absorption fields are the seasonal high water table, the depth to bedrock, and the slow percolation. According to the soil survey reference book sited, a specially designed septic tank absorption field, including drainage around the site, will adequately filter effluent. It further points out that other nearby soils that are higher on the landscape are better suited to this use.

HuD - Hudson silt loam, hilly. This soil is very deep and moderately well drained. Slopes range from 15 to 25 percent. The seasonal high water table in this soil is perched above the clayey subsoil at a depth of 1 ½ to 2 feet between November and April. Depth to bedrock is more than 60 inches. Permeability is moderate or moderately slow in the surface and subsurface layers and slow or very slow below. The available water capacity is high. The main limitations on sites for dwellings with basements are the seasonal high water table and slope. Diversion ditches above the building, foundation drains, and protective coatings on basement walls help prevent wet basements. Designing buildings to conform to the natural slope and landscaping around buildings help overcome the slope limitation. Erosion is a hazard during construction. Maintaining a vegetative cover adjacent to the construction site and diverting runoff help control erosion during construction. The main limitations for local roads and streets are the frost-action potential, the low strength, and the slope. Coarse textured subgrade or base material to frost

depth and adequate drainage in areas of the wetter included soils will reduce frost action and increase soil strength. Building roads on the contour to the extent possible and carefully landscaping and seeding the site will avoid costly construction practices and stabilize roadbanks,respectively. 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. A drainage system around the filter field and diversions to intercept runoff from the higher areas will lower the water table. Enlarging the trench below the distribution lines will improve the percolation of effluent. Installing distribution lines on the contour and using drop boxes or other structures to distribute the effluent evenly will enable the system to function more effectively. **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. **RhB – Rhinebeck silty clay loam, 3 to 8 percent slopes.** – This gently sloping soil is very deep and somewhat poorly drained. The seasonal high water table in this Rhinebeck soil is at a depth of 6 to 18 inches from January to May. Depth to bedrock is more than 60 inches. The seasonal high water table limits the rooting depth. Permeability is moderately slow in the surface layer and subsurface layer and slow below. The available water capacity is moderate, and runoff is slow. The County survey notes that most of the acreage is used as cropland, hayland, or pasture. 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 will divert runoff and help prevent wet basements. The main limitations of this soil for local roads and streets are the seasonal high water table, low strength, and the frost-action potential. Constructing roads on raised, coarse textured fill material will reduce the frost-action potential and improve soil strength. Raising the level of fill material will reduce wetness. The main limitations affecting the use of this soil as a site for septic tank absorption fields are the seasonal high water table and slow percolation. Installing a drainage system around the absorption field and intercepting runoff from the higher areas will reduce wetness. Enlarging the absorption field or the trenches below the distribution lines will improve percolation. This soil has a low bearing capacity, especially when it is wet. Excavations and cutbacks will cave or slough. **Sh – Shakerfine sandy loam** - This nearly level soil is very deep and somewhat poorly drained to poorly drained. The seasonal high water table is at a depth of less than 1 ½ feet from November to May. Depth to bedrock is more than 60 inches. Permeability is moderately rapid in the surface layer and subsoil and slow or very slow in the substratum. The available water capacity is high, and runoff is slow. The main limitation of this soil for dwellings with basements is the seasonal high water table. Properly designed and installed foundation drains with adequate outlets will lower the water table. The soil is best suited to dwellings without basements. In many areas of this soil suitable outlets for drainage systems are not available. The main limitations for

local roads and streets are the seasonal high water table, the frost-action potential, and the low strength of the soil. Constructing roads on raised fill of course textured material will overcome these limitations. 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. Installing drainage around the field and intercepting runoff from the higher areas will reduce wetness. Enlarging the field or the trenches below the distribution lines will improve percolation.

Drainage/Wetlands: Applicant noted that there are no wetlands. Application indicates there are no streams, ponds, wetlands or floodplains on the property. A review of the FEMA map indicates the property is to the east of zone AE which follows close to the Normanskill and also to the rear (north). There was nothing on the FEMA map to indicate the property is in a floodplain.
The soil map noted in the above Soil Section shows two wet spots on Parcel 1 – one near the northwest corner and the other to the east of the mid point and about 75 to 90 feet from the north boundary. Another wet spot is shown on Parcel 2 about 130 feet north of the mid section of the southern boundary along West Old State Road. Contour lines indicate natural drainage would be toward the area where the two new lots come together and also toward the northeast corner of Parcel 1.Even though the concept plan drawing shows a State DOT drainage easement across the area close to the line that separates the two lots, Applicant noted that the area is not wet. GCAC did not observe any wet areas on Parcel 2 even in the low area at the rear of that parcel where it joins Parcel. While this area is noted as part of a NYSDOT Drainage Easement, the only thing that GCAC observed to indicate this was a few small fern plants and an old looking cattail stalk.

Septic/Wells: Application indicates the plan is to hook up to existing Town water and to have a septic system. Applicant noted that hook up to Town water is about ninety feet away from Parcel 2; and that septic system would have a leach field. Possible location of the septic system is near the north east corner of Parcel 2 or near the front toward the west of the parcel. Applicant will need to follow advice of the Health Department related to the location of the septic system.

Visual Impact: Since the intent is to leave the tall spruce trees along West Old State Road intact, with the likelihood that the driveway to the planned structure on Parcel 2 going through an existing space between the trees, it appears doubtful that this subdivision would have any significant negative impact since the trees along West Old State Road form a natural barrier.

Endangered Species: Applicant noted that there are no Karner Blue nor Indiana Bats known to him. There were no endangered species noted by GCAC at time of site visit.

Historical Considerations: No cemetery or anything of historical significance known to the Applicant. None observed by GCAC at time of site visit.

Submitted by: _____

John G. Wemple, Jr. - Chair