

Appendix F

Natural Resources Reports and Legislation

**Wetlands Survey
The Zappi Development Site**

715 Sleepy Hollow Road

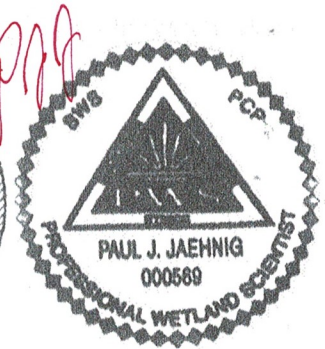
Tax ID 105.17-1-15

Mount Pleasant, NY

Approx. 36.83 - acres total

*Prepared for
Zappi Development*

Oct. 1, 2020



20zappi.715sleepyhollowroad.brircliffmanorwlrp

**Wetlands Survey
*The Zappi Development Site***

715 Sleepy Hollow Road

Tax ID 105.17-1-15

Mount Pleasant, NY

Approx. 36.83 - acres total

*Prepared for
Zappi Development*

Oct. 1, 2020

20zappi.715sleepyhollowroad.brircliffmanorwrep

Introduction

A wetland investigation was completed on 715 Sleepy Hollow Road with Tax ID 105.17-1-15 in the Town of Mount Pleasant on Oct. 1, 2020 by Paul J. Jaehnig, Certified Professional Geologist, Soil Scientist, and Wetland Scientist. The work consisted of taking soil borings across the site to identify wetland or hydric soils, and the delineation or flagging of the wetland boundary. The work was conducted in accordance with the Town of Mount Pleasant Wetland Law. The work was done at the request of the client and owner Zappi Development.

Site Description

The site is an approx. 36.83 acres total area property fronting on the southeast side of Sleepy Hollow Road. The site consists of: main residence with cottage, detached garage, tennis court, and in-ground swimming pool, separate residence, lawn, meadow, old meadow; woodlands, and wetlands (see enclosed *Wetland Map* and *photos 1-22* in Appendix I). The Croton Aqueduct subsurface easement traverses northwest to southeast across the western edge of the site.

The land slopes down on all side from a relative elevation highpoint on the central portion of the site. Slopes across the site vary from level and gently sloping to steep sloping. Nearly level land is on the some of the northwest, central, and south-central portions of the site. Gently sloped areas are on the western, central, and central-northern portions of the site. Steep sloped areas are on the eastern, southeastern, some southwestern, and some southwest-central portions of the site. Topography in some areas on the northwest, central-northern, eastern-central, southern-central, and some southwestern portions of the site has been modified by past man-made activity including soil fill, soil cut, and machine grading of the land. These disturbances were carried-out mainly during the development of the site.

A main driveway, coming off of the southeast side of Sleepy Hollow Road, continues easterly through an adjacent property, turns southeast and into the central-northern edge of the site (see *photos 1 & 2* in Appendix I). A second driveway comes off of the main driveway, approx. 200 ft. east of the beginning at Sleepy Hollow Road, continues southeast into the northwest edge of the to a residence located on the northwest portion of the site (see *photo 3* in Appendix I). The main driveway continues south for approx. 1,000 ft. across the east-central and southeast-central portions of the site, and then turns west for 200 ft., and north for 200 ft., ending on the south-central portion of the site (see *photo 4* in Appendix I). On the south-central portion of the site the main driveway passes by a main residence, cottage, and detached garage (see *photos 5 to 7* in Appendix I). Nearby to these structures are a tennis court and in-ground swimming pool (see *photos 8 & 9* in Appendix I).

Lawn area is on the northwest and south-central portions of the site, as well as, some of the western edge of the site, and as a narrow corridor flanking the main driveway (see *photo 10* in Appendix I).

Meadow covers many portions of the western edge of the site. The meadow areas consist of meadow grasses, including little red top and Japanese stilt grass, and aster. The herbaceous cover is less than 15 inches height. The meadow is likely cut on an occasional basis

Less manicured or overgrown meadow area is primarily on the southwest portion of the site (see *photo 11* in Appendix I). Overgrown old field areas occur on the central-western and central-southern portions of the site. These areas have a thick vegetative cover of goldenrod, mugwort, ragweed, Japanese stilt grass, local hedges or clusters of multiflora rose, commonly draped with porcelain-berry and wild grape vines. A few mowed foot paths have been cut through these areas. A vault with man holes is on the southern end of the meadow area (see *photo 12* in Appendix I).

Non-wetland woodlands cover the eastern, northeast, north-central, southeast, and southwest portions of the site, as well as, the southern edge of the site (see *photos 13 to 15* in Appendix I). Woodlands have a tree canopy of tall sugar maple, beech, northern red oak, white oak, black birch, and black cherry. Shorter Ironwood and witch hazel is locally found in the woodlands. Garlic mustard, Christmas fern, and minor wintergreen grow on the woodland floor. Twig and leaf litter covers the un-vegetated areas of the woodland floor.

Rock outcrop is scattered across the north-central, eastern, and southern portions of the site (see *photos 13 & 15* in Appendix I).

Wetlands

The wetlands boundary was flagged in the field with consecutively numbered flagging (WL-A-1, WL-A-2, etc.) and plotted on the enclosed *Wetland and Soils Map*. Wetlands are found on the southwest portion and central-western edge of the site of the site.

Wetlands are poorly drained. Micro-topography is weak to absent. A large portion of the wetlands on the site have been previously disturbed by man-made activity. The disturbances include: removal of original natural wetland vegetative cover, mixing of natural wetland soils profiles, and modification of original hydrologic patterns. These disturbances were carried-out during the development of the site. Wetlands consist of gently sloped swampland and wet meadow. Two wetland areas, wetlands WL-“B” & “C”, have been labelled on the site.

Wetland Area WL-“B”

Description

Wetland Area WL-“B” is an elongate, irregularly-shaped area of swampland and wet meadow located on the southwest portion of the site. The wetland area is approx. 800 ft. long in a northeast to southwest direction, and 150 to 300 ft. wide in a northwest to southeast direction. The wetland drains to the southwest. Most of the wetland has been previously disturbed; only the northern portion is generally undisturbed.

The northern portion of wetland WL-“B” is undisturbed, gently sloped swampland and wet meadow (see *photos 16 & 17* in Appendix I). This area is poorly drained. Micro-

topography is weak to absent. The swampland area has vegetative cover of: shady tree canopy of red maple with shallow and exposed roots; thin shrub understory of clusters of multiflora rose, spicebush, local silky dogwood, and barberry; sparse herbaceous cover of Japanese stilt grass, skunk cabbage sprouts, and few sensitive fern. Patches of sphagnum moss covers some slight hummocks. Poison ivy vines grow on the some portions of the wetland floor. Matted leaves cover some un-vegetated portions of the wetland floor. Wet meadow areas on the northern portion of wetland WL-“B” have a vegetative cover of: goldenrod, sallow sedge, nut sedge, cinnamon fern, sensitive fern, Japanese stilt grass, soft rush, and cinnamon fern. Small trees of goat willow may grow on the outer edges of the wet meadow. Multiflora rose growth is often dense where wet meadow borders swampland.

The central portion of wetland WL-“B” is gently sloped, previously disturbed, old wet meadow areas overgrown with an often dense cover of: few goat willow trees; shrubs of multiflora rose, some silky dogwood; herbaceous cover of Japanese stilt grass, sensitive fern, green bulrush, sallow sedge, soft rush, few phragmites, and goldenrod; vines of porcelain-berry draping shrubs (see *photos 18 & 19* in Appendix I). Some areas of this portion of the wetland are quite difficult to navigate. The wetland ground in the portion of the wetland are uneven and undulating as a consequence of past man-made disturbances. Small more open areas with lush herbaceous cover commonly exhibit matted cover where groups of deer rest.

The southern portion of wetland WL-“B” is gently sloping, locally moderately steep sloping, previously disturbed, old wet meadow and some swampland (see *photo 20* in Appendix I). A small brook with intermittent drainage develops toward the southernmost end of the wetland. The brook flows southwest into the neighboring property to the south (see *photo 21* in Appendix I). Drainage from adjacent property to the west of Sleepy Hollow Road, as well as, from the roadway is piped into the northwest edge of this portion of the wetland. The topography of this southern portion of the wetland may have uneven ground due to past man-made disturbances. The old wet meadow areas have a dense herbaceous cover of goldenrod, Japanese stilt grass, soft rush, local stands of phragmites, mugwort, soft rush, and sensitive fern. The swampland areas have a vegetative cover of: a patchy tree canopy of goat willow and red maple; sometimes dense multiflora rose shrub understory; and herbaceous growth of sensitive fern, cinnamon fern, Japanese stilt grass, and soft rush. Porcelain-berry vines drape the overgrown wet meadow and some swampland borders.

Wetland Buffers

Wetland WL-“B” is buffered by moderate to gently sloped woodlands and some meadow on the eastern, northern, and southern sides, and gently sloped meadow and some raised roadway embankment on the west side.

Wetland Functions

Wetland area WL-“B” functions primarily in two capacities: one as a local ground water recharge area in those more gently to nearly level areas with micro-topography development and good vegetative cover; and a local ground water discharge area in those

more gently to moderately sloped wetlands with little micro-topography development. Wetland WL-“B” meadow areas are utilized by butterfly and dragon fly, as well as, deer, raccoon, squirrel, rabbit, coyote, and song birds. The swampland areas are of wetland WL-“B” provide some habitat opportunities for browsing deer, coyote, raccoon, squirrel, and chipmunks.

Wetland Area WL- “C”

Description

Wetland area WL-“B” is a small, oval-shaped, nearly level, slightly concave, area of wetland meadow located on the central-western edge of the site, approx. 40 ft. northwest of the northernmost end of wetland WL-“B” (see *photo 22* in Appendix I). Wetland WL-“C” is poorly drained and lacks micro-topography. Wetland WL-“C” is hydrologically isolated in that no surface drainage course flows into or out of the wetland, and there is connection to other wetland systems. The wetland soil is undisturbed. The wetland is approx. 40 ft. across west to east, and 20 ft. across north to south. Wetland WL-“C” has a vegetative cover consisting of: Japanese stilt grass and nut sedge.

Wetland Buffers

Wetland WL-“C” is buffered by: gently sloped non-wetland meadow.

Wetland Functions

Wetland WL-“C” functions primarily as a minor ground water recharge area. The wetland does not stand out as being a significant potential wildlife habitat area, any more than surrounding non-wetland meadow areas.

NYSDEC Jurisdiction

Wetlands on the site are not New York State Dept. of Environmental Conservation (NYSDEC) regulated wetlands according to a review of their published maps (see *NYSDEC Wetlands Map* in Appendix II).

Regional Drainage

The site is in the Pocantico River Drainage Basin (see *Regional Drainage Map* in Appendix III). Pocantico Lake is situated to the east of the site.

Soils

Shallow soil borings were taken, using a spade and Dutch auger at selected locations throughout the site in order to identify wetland soils. Soil boring locations (SS-1, SS-2, etc.) were plotted approx. on the enclosed *Wetland and Soils Map*. Soil boring information was logged, noting soil profile color, texture, redoximorphic (wetland soil) indicators, and water table. Detailed descriptions of soil borings taken are provided in Appendix IV.

Soils encountered on the study area include: non-wetland, well drained Charlton-Chatfield complex, rolling, v. rocky (CrC), slopes 2 to 15 % , in the undisturbed, gently sloped areas of the site; non-wetland, well drained Chatfield-Charlton complex, hilly, very rocky (CsD), slopes 15 to 35%, in the undisturbed, moderate to steep-sloped

woodlands across the site; non-wetland, well drained Hollis Rock outcrop complex, very steep (HrF), slopes 35 to 60%, in the undisturbed, steep-sloped woodlands on the southeast portion of the site, and a narrow area on the south-central portion of the site; non-wetland, well drained Udorthents cut, fill, & graded soil (Ud)1, slopes varied, to describe areas around the site, where past man-made disturbances have been carried-out; non-wetland, moderately well drained Udorthents, cut, fill, & graded (Ud2), slopes varied, to describe areas of past man-made disturbance adjacent to some wetland areas; wetland, poorly-drained Aquents soil (Aq), slopes 0-3%, to describe wetland areas where the natural wetland soil profile has been mixed or disturbed by man; and wetland, poorly-drained Leicester loam (LcB), slopes 3 to 8 %, in the undisturbed, gently sloped wetlands on the southern portion of the site. The distribution of these soil-types is depicted on the enclosed *Wetland and Soils Map*.

Appendix I

Selected Site Photos



Photo 1 Looking east from Sleepy Hollow Road and toward driveway providing access to site.



Photo 2 Looking south along driveway crossing central-northern portion of the site.

Oct. 2020- The Zappi Site, 715 Sleepy Hollow Road, Mount Pleasant, NY



Photo 3 Looking south along second driveway leading to residence on the northwest portion of the site.



Photo 4 Looking south along driveway on the east-central portion of the site and toward main residence. Note main residence in far center of photo.

Oct. 2020- The Zappi Site, 715 Sleepy Hollow Road, Mount Pleasant, NY



Photo 5 Looking southwest along driveway and toward main residence on the south-central portion of the site.



Photo 6 Looking northwest along driveway and toward cottage on the south-central portion of the site.

Oct. 2020- The Zappi Site- 715 Sleepy Hollow Road, Mount Pleasant, NY



Photo 7 Looking northwest toward detached garage on the south-central portion of the site.



Photo 8 Looking southwest toward tennis court on the south-central portion of the site. Note cottage and detached garage in background.

Oct. 2020-The Zappi Site, 715 Sleepy Hollow Road, Mount Pleasant, NY



Photo 9 Looking northwest across in-ground swimming pool on the central-southern portion of the site.



Photo 10 Looking south across lawn area on the northwest corner of the site.

Oct. 2020- The Zappi Site, 715 Sleepy Hollow Road, Mount Pleasant, NY



Photo 11 Looking westerly along path cut through meadow on the southwest portion of the site..



Photo 12 Looking west toward concrete vault with manholes on the southwest portion of the site.

Oct. 2020-The Zappi Site, 715 Sleepy Hollow Road, Mount Pleasant, NY



Photo 13 Looking east across gently sloped woodlands with rock outcropping on the northwest portion of the site.



*Photo 14 Looking south and across steep sloped woodlands on the central eastern portion of the site.
Oct. 2020- The Zappi Site, 715 Sleepy Hollow Road, Mount Pleasant, NY*



Photo 15 Looking south across steep sloped woodlands with rock outcropping on the southeast portion of the site. Note Pocantico Lake seen through woods in the left side of photo,



*Photo 16 Looking south across gently sloped swampland on northeast portion of wetland "B".
Oct. 2020- The Zappi Site, 715 Sleepy Hollow Road, Mount Pleasant, NY*



Photo 17 Looking south across gently sloped wet meadow on the northwest portion of wetland WL-“B”.



*Photo 18 Looking west and downslope across overgrown wet meadow on central portion of wetland WL-“B”.
Oct. 2020- The Zuppi Site, 715 Sleepy Hollow Road, Mount Pleasant, NY*



Photo 19 Looking across very gently sloped wet meadow on central portion of wetland WL-“B”.



Photo 20 Looking northerly and upslope across densely overgrown moderately sloped wetland on southern portion of wetland WL-“B”.

Oct. 2020- The Zappi Site, 715 Sleepy Hollow Road, Mount Pleasant, NY



Photo 21 Looking toward small brook draining from wetland WL-“B” on the southwest edge of the site. Note black-colored vinyl fence on property line.

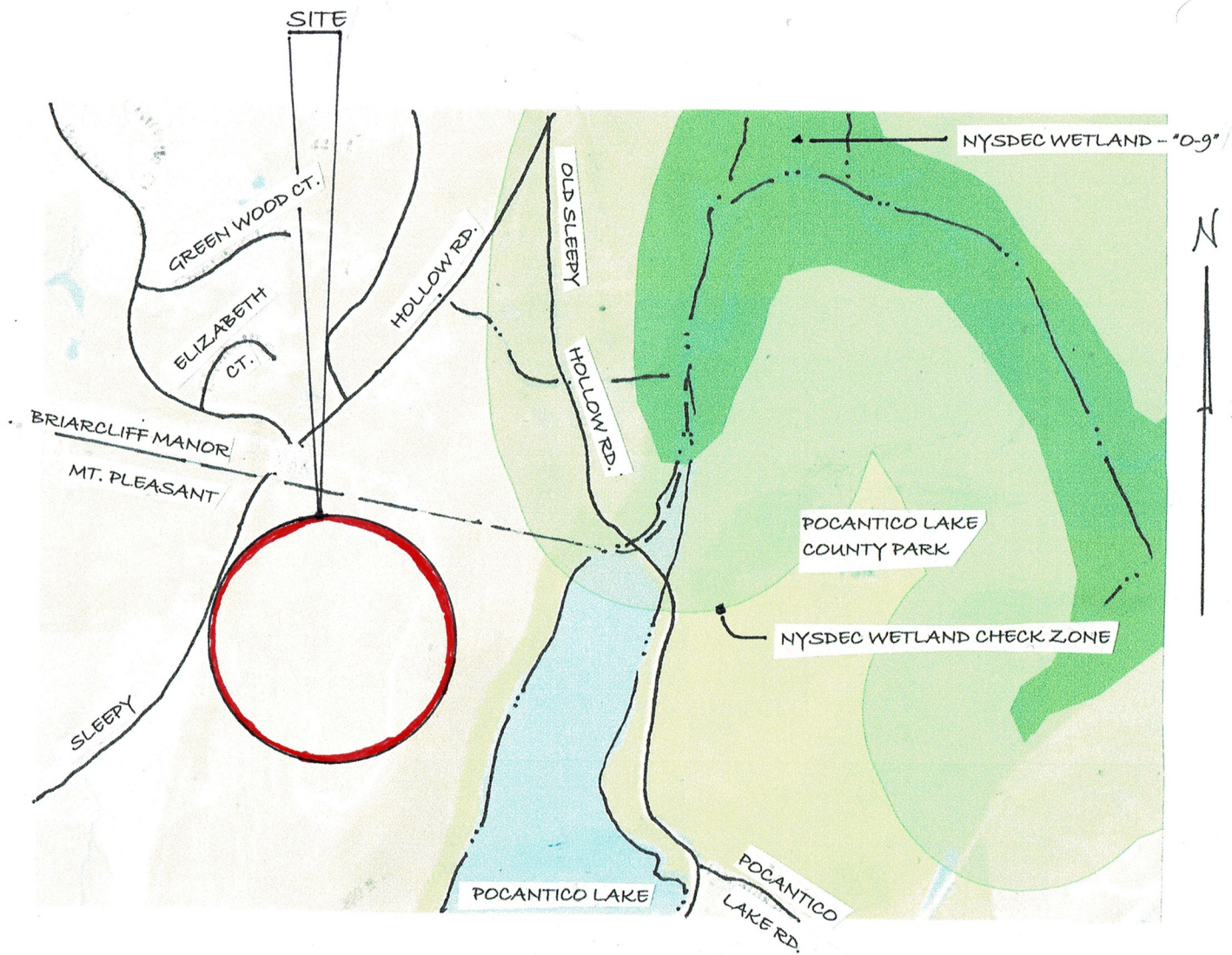


Photo 22 Looking west across wetland WL-“C” on the central-western edge of the site. Note Sleepy Hollow Road in upper background of photo.

Oct. 2020- The Zappi Site, 715 Sleepy Hollow Road, Mount Pleasant, NY

Appendix II

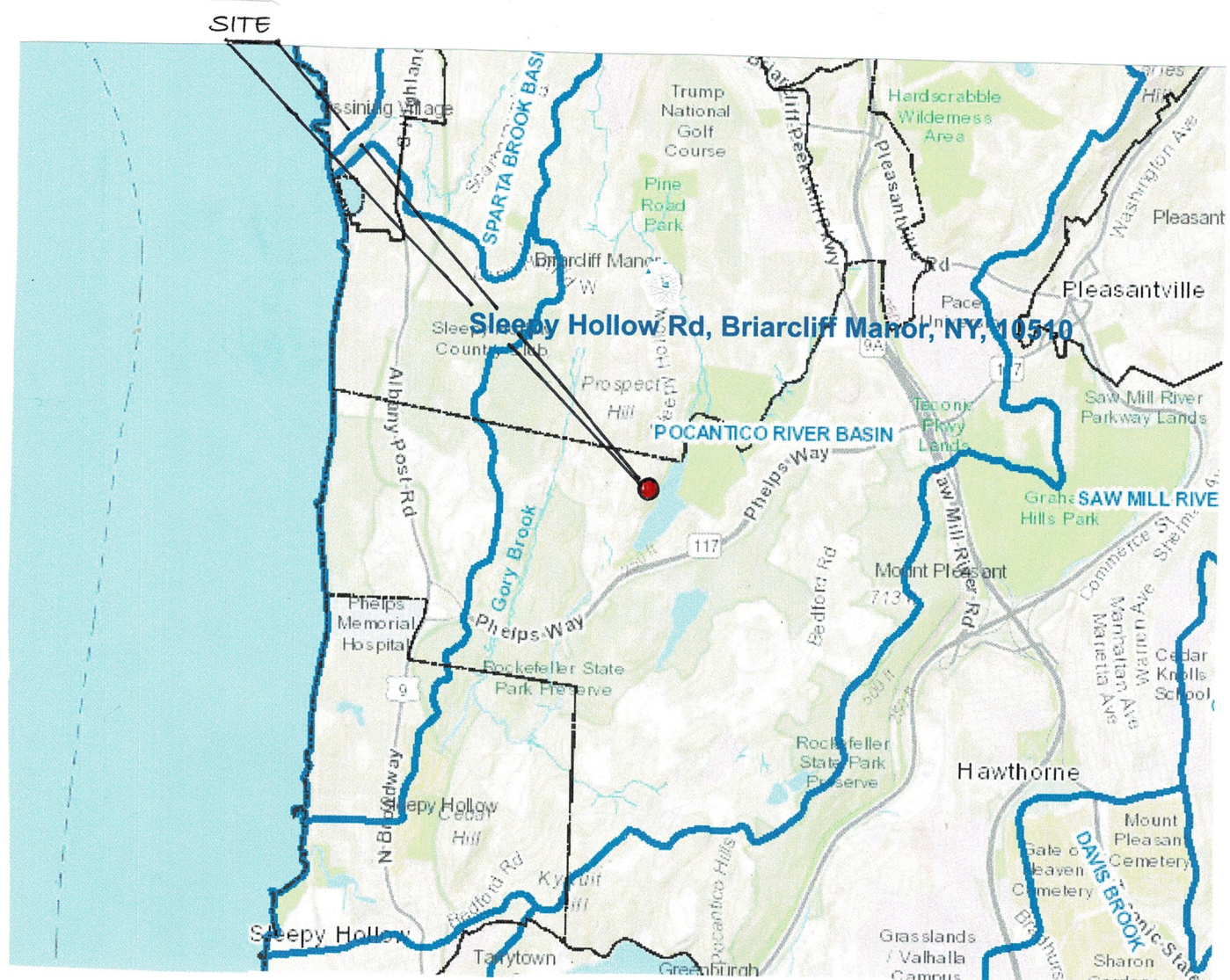
NYSDEC Wetland Map



NYSDEC WETLAND MAP
N.T.S.

Appendix III

Regional Drainage Map



REGIONAL DRAINAGE MAP
N.T.S.

Appendix IV

Soil Boring Logs

KEY TO BORING LOGS

SS-1

SOIL BORING

0-4’’

DEPTH IN INCHES FROM
THE GROUND SURFACE

COLOR

MUNSELL COLOR NOTATION

VERY DARK GRAY

HUE VALUE/ CHROMA
10YR 3 / 1

SS-10

SITE: VERY GENTLY SLOPED LAWN WITH FESCUE AND JAPANESE STILT GRASS.

0-12" BROWN 10YR 4/3 LOAM.

12-28" BROWNISH YELLOW 10YR 6/6 LOAM.

WATER TABLE NOT ENCOUNTERED.

SS-11

SITE: SIMILAR TO SS-10.

0-11" BROWN 10YR 5/3 LOAM.

11-28" BROWNISH YELLOW 10YR 6/6 LOAM.

WATER TABLE NOT ENCOUNTERED.

SS-12

SITE: GENTLY SLOPED WOODLANDS; SHADY TREE CANOPY OF SUGAR MAPLE, NORTHERN RED OAK, BLACK BIRCH, AND FEW BLACK CHERRY; OPEN UNDERSTORY; TWIG AND LEAF LITTER COVERS WOODLAND FLOOR.

0-1/2" VERY DARK GRAY BROWN 10YR 3/2 LOAM.

1/2-2" BROWN 10YR 4/3 LOAM.

2-28" BROWNISH YELLOW 10YR 6/6 LOAM.

WATER TABLE NOT ENCOUNTERED.

SS-13

SITE: GENTLY SLOPED WET MEADOW; HERBACEOUS COVER OF TEAR-THUMB, SOFT RUSH, NUT SEDGE, SALLOW SEDGE, AND JAPANESE STILT GRASS.

0-6" GRAY 10YR 5/1 LOAM WITH 5% BROWN 7.5YR 4/4 MOTTLES (REDOX CONCENTRATIONS).

6-28" GRAY 10YR 6/1 LOAM WITH 30% YELLOW BROWN 10YR 5/6 MOTTLES (REDOX CONCENTRATIONS).

WATER TABLE AT 20".

SS-14

SITE: SIMILAR TO SS-14; WET MEADOW; HERBACEOUS OF JAPANESE STILT GRASS, GOLDENROD; WILD GRAPE DRAPES SOME PLANTS.

0-6" GRAY 10YR 5/1 LOAM WITH 5% BROWN 7.5YR 4/4 MOTTLES (REDOX CONCENTRATIONS).

6-28" GRAY 10YR 6/1 LOAM WITH 20% DARK YELLOW BROWN 10YR 4/6 MOTTLES (REDOX CONCENTRATIONS).

WATER TABLE AT 20".

SS-15

SITE: EDGE OF WET MEADOW AND WOODLANDS; MEADOW PARTLY SHADED BY BLACK BIRCH AND TULIP; MEADOW HAS HERBACEOUS COVER OF CINNAMON FERN, JAPANESE STILT GRASS, AND GOLDENROD.

SOIL: SIMILAR TO SS-14.

WATER TABLE AT 20".

SS-16

SITE: VERY GENTLY SLOPED SWAMPLAND; POORLY DRAINED; WEAK MICRO-TOPOGRAPHY; SHADY TREE CANOPY OF RED MAPLE AND FEW BLACK BIRCH WITH SHALLOW AND EXPOSED ROOTS; FEW MULTIFLORA ROSE SHRUB AS UNDERSTORY; JAPANESE STILT GRASS; MATTED LEAF LITTER COVERS UN-VEGETATED GROUND.

0-4" GRAY 10YR 5/1 LOAM WITH 10% BROWN 7.5YR 4/4 MOTTLES (REDOX CONCENTRATIONS).

4-28" GRAY 10YR 6/1 LOAM WITH 30% DARK YELLOW BROWN 10YR 4/6 MOTTLES (REDOX CONCENTRATIONS).

WATER TABLE AT 20".

SS-17

SITE: GENTLY SLOPED SWAMPLAND; POORLY DRAINED; WEAK MICRO-TOPOGRAPHY; 50% OF GROUND UN-VEGETATED; TREE CANOPY OF RED MAPLES WITH SHALLOW AND EXPOSED ROOTS; FEW MULTIFLORA ROSE SHRUB AS UNDERSTORY; HERBACEOUS GROWTH OF JAPANESE STILT GRASS AND FEW SALLOW SEDGE; MATTED LEAVES COVER UN-VEGETATED GROUND.

SOIL: SIMILAR TO SS-16.

WATER TABLE AT 20".

SS-18

SITE: VERY GENTLY SWAMPLAND; POORLY DRAINED; WEAK MICRO-TOPOGRAPHY; TREE CANOPY OF RED MAPLES WITH SHALLOW AND EXPOSED ROOTS; DENSE UNDERSTORY OF MULTIFLORA ROSE SHRUBS; HERBACEOUS GROWTH OF GOLDENROD; MATTED LEAVES COVER UN-VEGETATED GROUND.

SOIL: SIMILAR TO SS-16.

WATER TABLE AT 20".

SS-19

SITE: NEARLY LEVEL WET MEADOW; HERBACEOUS GROWTH OF JAPANESE STILT GRASS, TEAR-THUMB, SALLOW SEDGE, AND GOLDENROD; MATTED LEAVES COVER UN-VEGETATED GROUND.

SOIL: SIMILAR TO SS-16.

WATER TABLE AT 20".

SS-20

SITE: VERY GENTLY SLOPED MEADOW; GOLDENROD, JAPANESE STILT GRASS; PORCELAIN-BERRY DRAPES PLANTS.

0-7" GRAY BROWN 10YR 5/2 LOAM.

7-28" BROWNISH YELLOW 10YR 6/6 LOAM; COMPACTED.

WATER TABLE NOT ENCOUNTERED.

SS-21

SITE: TRAIL IN MEADOW; GOLDENROD, JAPANESE STILT GRASS, AND ASTERS.

0-1/4" VERY DARK GRAY BROWN 10YR 3/2 LOAM.

1/4-8" BROWN 10YR 4/3 LOAM.

8-28" BROWNISH YELLOW 10YR 6/6 LOAM WITH 5 % GRAVEL.

WATER TABLE NOT ENCOUNTERED.

SS-22

SITE: VERY GENTLY SLOPED OLD MEADOW; MULTIFLORA ROSE SHRUB UNDERSTORY; HERBACEOUS COVER OF JAPANESE STILT GRASS, GOLDENROD, TEAR-THUMB, SOFT RUSH, AND SALLOW SEDGE; PORCELAIN-BERRY DRAPES PLANTS.

0-24" MIXED DARK GRAY BROWN 10YR 4/2 LOAM WITH 30% PROCESSED GRAVEL AND COBBLES; COMPACTED.

WATER TABLE NOT ENCOUNTERED.

SS-23

SITE: SIMILAR TO SS-22.

SOIL: SIMILAR TO SS-22.

WATER TABLE NOT ENCOUNTERED.

SS-24

SITE: VERY GENTLY SLOPED WET MEADOW; HERBACEOUS GROWTH OF JAPANESE STILT GRASS, SOFT RUSH, SALLOW SEDGE, AND GOLDENROD; MEADOW BORDERED BY MULTIFLORA ROSE.

0-20" MIXED DARK GRAY 10YR 4/1 AND GRAY 10YR 5/1 LOAM WITH 5% BROWN 7.5YR 4/4 MOTTLES (REDOX CONCENTRATIONS).

WATER TABLE AT 16".

SS-25

SITE: VERY GENTLY SLOPED WOODLANDS; TREE CANOPY OF BLACK CHERRY AND ASH; SHRUB UNDERSTORY OF MULTIFLORA ROSE SHRUBS; HERBACEOUS GROWTH OF GOLDENROD.

SOIL: SIMILAR TO SS-24.

WATER TABLE AT 19".

SS-26

SITE: SIMILAR TO SS-24; MULTIFLORA ROSE SHRUBS; HERBACEOUS GROWTH OF JAPANESE STILT GRASS, SALLOW SEDGE, GOLDENROD; POISON IVY.

SOIL: SIMILAR TO SS-24.

WATER TABLE AT 18".

SS-27

SITE: VERY GENTLY SLOPED OLD MEADOW; HERBACEOUS GROWTH OF JAPANESE STILT GRASS, TEAR-THUMB, GOLDENROD.

0-8" GRAY 10YR 5/1 LOAM WITH 5% BROWN 7.5YR 4/4 MOTTLES (REDOX CONCENTRATIONS).

8-28" GRAY 10YR 6/1 LOAM WITH 30% DARK YELLOW BROWN 10YR 4/6 MOTTLES (REDOX CONCENTRATIONS).

WATER TABLE AT 18".

SS-28

SITE: GENTLY SLOPED OLD MEADOW; HERBACEOUS COVER OF GOLDENROD, SALLOW SEDGE, AND SOFT RUSH.

0-6" GRAY 10YR 5/1 LOAM WITH 5% BROWN 7.5YR 4/4 MOTTLES (REDOX CONCENTRATIONS).

6-28" MIXED GRAY 10YR 6/1 AND GRAY 10YR 5/1 LOAM WITH 20% DARK YELLOW BROWN 10YR 4/6 MOTTLES (REDOX CONCENTRATIONS).

WATER TABLE AT 18".

SS-29

SITE: GENTLY SLOPED OVERGROWN MEADOW.

0-6" GRAY BROWN 10YR 5/2 LOAM.

6-28" PALE YELLOW 10YR 6/3 LOAM WITH 10% GRAVEL.

WATER TABLE NOT ENCOUNTERED.

SS-30

SITE: VERY GENTLY SLOPED WET MEADOW; JAPANESE STILT GRASS AND NUT SEDGE.

0-6" GRAY 10YR 5/1 LOAM WITH 10% BROWN 7.5YR 4/4 MOTTLES (REDOX CONCENTRATIONS).

6-28" GRAY 10YR 6/1 LOAM WITH 20% YELLOW BROWN 10YR 5/6 MOTTLES (REDOX CONCENTRATIONS).

WATER TABLE AT 18".

SS-31

SITE: GENTLY SLOPED MEADOW.

0-6" BROWN 10YR 4/3 LOAM.

6-28" BROWNISH YELLOW 10YR 6/6 LOAM.

WATER TABLE NOT ENCOUNTERED.

SS-32

SITE: GENTLY SLOPED OVERGROWN MEADOW; MUGWORT AND GOLDENROD; WILD GRAPE COVERS PLANTS.

0-5" BROWN 10YR 4/3 LOAM.

5-28" MIXED BROWNISH YELLOW 10YR 6/6 LOAM WITH 5% GRAVEL.

WATER TABLE NOT ENCOUNTERED.

SS-33

SITE: VERY GENTLY SLOPED WOODLANDS; CROOKED RED MAPLE, SUGAR MAPLE, AND BLACK CHERRY TREE TRUNKS; FEW PRIVET SHRUBS; JAPANESE STILT GRASS; PORCELAIN-BERRY DRAPES PLANTS.

0-6" BROWN 10YR 4/3 LOAM.

6-28" MIXED BROWN 10YR 4/3 AND YELLOWISH BROWN 10YR 6/6 LOAM WITH 10% GRAVEL.

WATER TABLE NOT ENCOUNTERED.

SS-34

SITE: VERY GENTLY SLOPED OVERGROWN MEADOW; DENSE MULTIFLORA ROSE SHRUBS; RAGWEED AND GOLDENROD; PORCELAIN-BERRY DRAPES SHRUBS.

0-7" GRAY BROWN 10YR 5/2 LOAM.

7-28" MIXED PALE YELLOW BROWN 10YR 5/3 LOAM 10YR 6/3 LOAM WITH 5% GRAVEL; COMPACTED.

WATER TABLE NOT ENCOUNTERED.

SS-35

SITE: VERY GENTLY SLOPED WOODLANDS; THIN TREE CANOPY OF RED MAPLE AND GOAT WILLOW; JAPANESE STILT GRASS, GOLDENROD, AND SENSITIVE FERN.

0-6" GRAY 10YR 5/1 LOAM WITH 5% BROWN 7.5YR 4/4 MOTTLES (REDOX CONCENTRATIONS).

6-29" GRAY 10YR 6/1 LOAM WITH 20% DARK YELLOW BROWN 10YR 4/6 MOTTLES (REDOX CONCENTRATIONS).

WATER TABLE AT 17".



United States
Department of
Agriculture

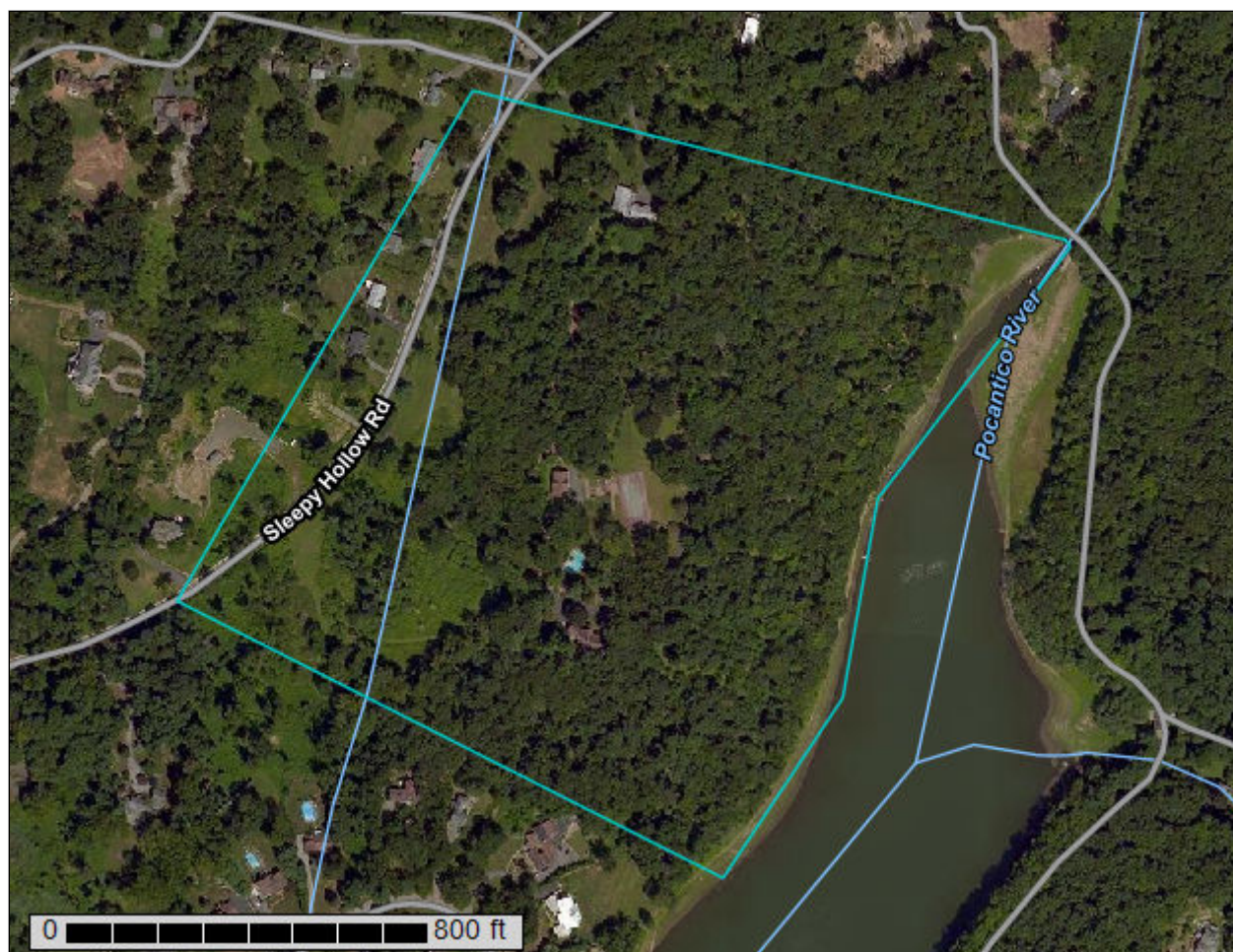
NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Westchester County, New York**

715 Sleepy Hollow Road



January 6, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Preface	2
How Soil Surveys Are Made	5
Soil Map	8
Soil Map (715 Sleepy Hollow Road).....	9
Legend.....	10
Map Unit Legend (715 Sleepy Hollow Road).....	11
Map Unit Descriptions (715 Sleepy Hollow Road).....	11
Westchester County, New York.....	13
CrC—Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky.....	13
CsD—Chatfield-Charlton complex, 15 to 35 percent slopes, very rocky.....	15
LeB—Leicester loam, 2 to 8 percent slopes, very stony.....	17
W—Water.....	19
WdB—Woodbridge loam, 3 to 8 percent slopes.....	19
References	22

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

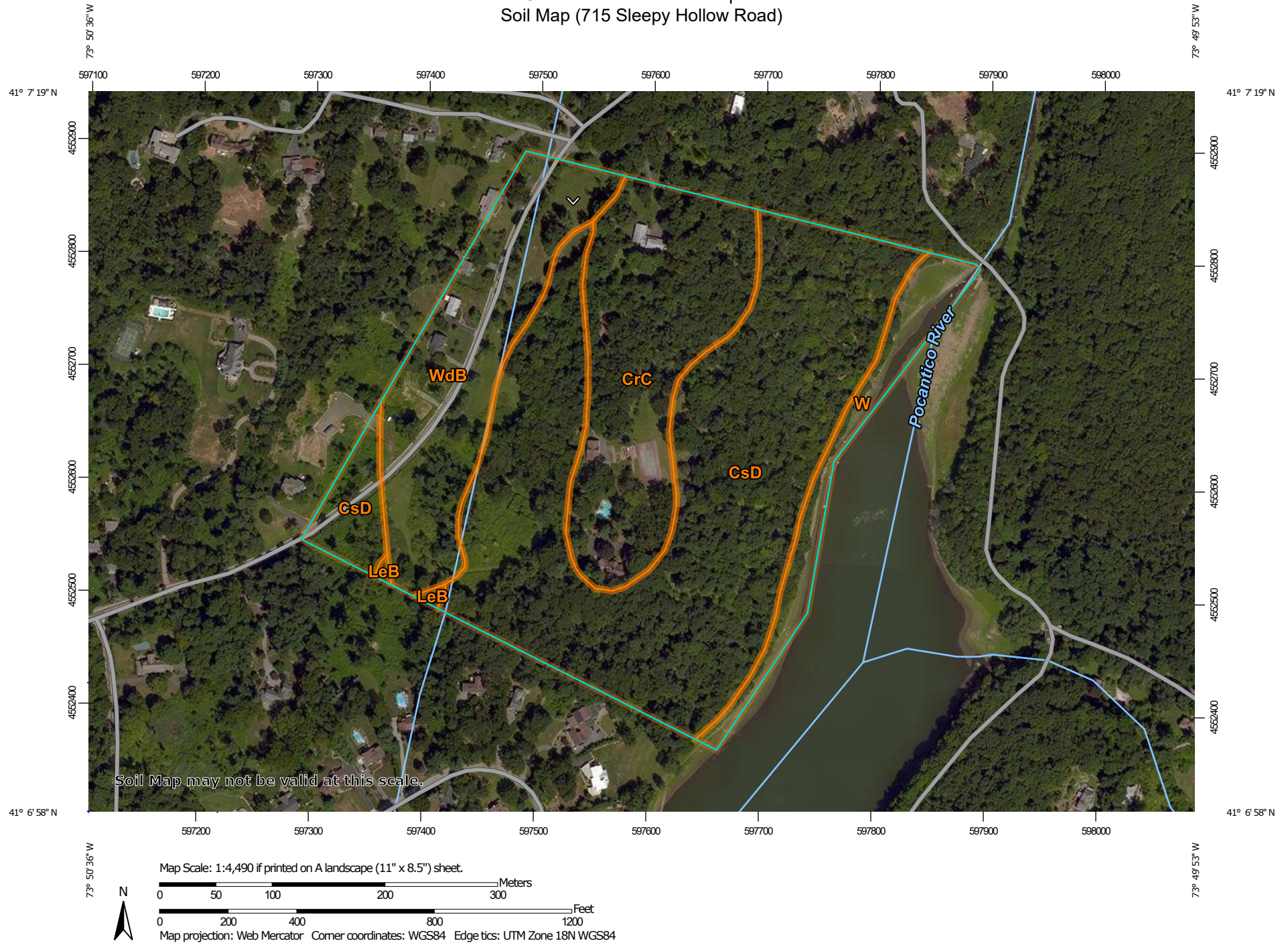
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.


Custom Soil Resource Report Soil Map (715 Sleepy Hollow Road)



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit


 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water


 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole


 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals


Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Westchester County, New York
Survey Area Data: Version 16, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 21, 2014—Aug 27, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (715 Sleepy Hollow Road)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CrC	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	9.3	21.1%
CsD	Chatfield-Charlton complex, 15 to 35 percent slopes, very rocky	23.8	54.0%
LeB	Leicester loam, 2 to 8 percent slopes, very stony	0.1	0.3%
W	Water	2.9	6.5%
WdB	Woodbridge loam, 3 to 8 percent slopes	8.0	18.1%
Totals for Area of Interest		44.0	100.0%

Map Unit Descriptions (715 Sleepy Hollow Road)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not

mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Westchester County, New York

CrC—Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky

Map Unit Setting

National map unit symbol: 2w698
Elevation: 0 to 1,550 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Charlton, very stony, and similar soils: 50 percent
Chatfield, very stony, and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton, Very Stony

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 4 inches: fine sandy loam
Bw - 4 to 27 inches: gravelly fine sandy loam
C - 27 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Chatfield, Very Stony

Setting

Landform: Ridges, hills

Landform position (two-dimensional): Backslope, shoulder, summit

Landform position (three-dimensional): Crest, side slope, nose slope

Down-slope shape: Convex

Across-slope shape: Linear, convex

Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material

A - 1 to 2 inches: fine sandy loam

Bw - 2 to 30 inches: gravelly fine sandy loam

2R - 30 to 40 inches: bedrock

Properties and qualities

Slope: 3 to 15 percent

Surface area covered with cobbles, stones or boulders: 1.6 percent

Depth to restrictive feature: 20 to 41 inches to lithic bedrock

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water capacity: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: B

Ecological site: F144AY034CT - Well Drained Till Uplands

Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 5 percent

Hydric soil rating: No

Sutton, very stony

Percent of map unit: 5 percent

Landform: Ground moraines, hills

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Hollis, very stony

Percent of map unit: 5 percent

Landform: Ridges, hills

Landform position (two-dimensional): Backslope, shoulder, summit

Custom Soil Resource Report

Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Leicester, very stony

Percent of map unit: 5 percent
Landform: Drainageways, depressions
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

CsD—Chatfield-Charlton complex, 15 to 35 percent slopes, very rocky

Map Unit Setting

National map unit symbol: 2w69k
Elevation: 0 to 1,290 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Chatfield, very stony, and similar soils: 45 percent
Charlton, very stony, and similar soils: 35 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chatfield, Very Stony

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 2 inches: fine sandy loam
Bw - 2 to 30 inches: gravelly fine sandy loam
2R - 30 to 40 inches: bedrock

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 41 inches to lithic bedrock
Drainage class: Well drained

Custom Soil Resource Report

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water capacity: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: B

Ecological site: F144AY034CT - Well Drained Till Uplands

Hydric soil rating: No

Description of Charlton, Very Stony

Setting

Landform: Hills, ridges

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Linear, convex

Across-slope shape: Convex

Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material

A - 2 to 4 inches: fine sandy loam

Bw - 4 to 27 inches: gravelly fine sandy loam

C - 27 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 15 to 35 percent

Surface area covered with cobbles, stones or boulders: 1.6 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water capacity: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: B

Ecological site: F144AY034CT - Well Drained Till Uplands

Hydric soil rating: No

Minor Components

Leicester, very stony

Percent of map unit: 6 percent
Landform: Hills, ground moraines, depressions, drainageways
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: Yes

Hollis, very stony

Percent of map unit: 5 percent
Landform: Hills, ridges
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Rock outcrop

Percent of map unit: 5 percent
Landform: Ridges, hills
Hydric soil rating: No

Sutton, very stony

Percent of map unit: 4 percent
Landform: Hills, ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

LeB—Leicester loam, 2 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: bd8x
Elevation: 20 to 1,160 feet
Mean annual precipitation: 46 to 50 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 115 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Leicester, somewhat poorly drained, and similar soils: 50 percent
Leicester, poorly drained, and similar soils: 25 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Leicester, Somewhat Poorly Drained

Setting

Landform: Hills, ridges, till plains

Landform position (two-dimensional): Footslope, summit

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Loamy acid till derived mostly from schist and gneiss

Typical profile

H1 - 0 to 8 inches: loam

H2 - 8 to 26 inches: sandy loam

C - 26 to 60 inches: sandy loam

Properties and qualities

Slope: 2 to 8 percent

Surface area covered with cobbles, stones or boulders: 1.6 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: A/D

Ecological site: F144AY009CT - Wet Till Depressions

Hydric soil rating: No

Description of Leicester, Poorly Drained

Setting

Landform: Hills, till plains, ridges

Landform position (two-dimensional): Footslope, summit

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Loamy acid till derived mostly from schist and gneiss

Typical profile

H1 - 0 to 8 inches: loam

H2 - 8 to 26 inches: sandy loam

C - 26 to 60 inches: sandy loam

Properties and qualities

Slope: 2 to 8 percent

Surface area covered with cobbles, stones or boulders: 1.6 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)

Depth to water table: About 0 to 12 inches

Custom Soil Resource Report

Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A/D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Minor Components

Sun

Percent of map unit: 10 percent
Landform: Depressions
Hydric soil rating: Yes

Sutton

Percent of map unit: 10 percent
Hydric soil rating: No

Charlton

Percent of map unit: 3 percent
Hydric soil rating: No

Leicester, extremely stony

Percent of map unit: 2 percent
Hydric soil rating: No

W—Water

Map Unit Setting

National map unit symbol: bd7z
Mean annual precipitation: 46 to 50 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 115 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

WdB—Woodbridge loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w688

Custom Soil Resource Report

Elevation: 0 to 1,280 feet

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 145 to 240 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Woodbridge, loam, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge, Loam

Setting

Landform: Drumlins, hills, ground moraines

Landform position (two-dimensional): Summit, backslope, footslope

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 6 inches: loam

Bw1 - 6 to 18 inches: gravelly loam

Bw2 - 18 to 29 inches: gravelly loam

Cd - 29 to 65 inches: gravelly loam

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: 20 to 39 inches to densic material

Drainage class: Moderately well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water capacity: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: C/D

Ecological site: F144AY037MA - Moist Dense Till Uplands

Hydric soil rating: No

Minor Components

Ridgebury

Percent of map unit: 7 percent

Landform: Drainageways, hills, ground moraines, depressions, drumlins

Landform position (two-dimensional): Toeslope, footslope

Landform position (three-dimensional): Head slope, base slope

Down-slope shape: Concave

Across-slope shape: Concave

Custom Soil Resource Report

Hydric soil rating: Yes

Paxton

Percent of map unit: 7 percent

Landform: Ground moraines, drumlins, hills

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Crest, side slope

Down-slope shape: Linear, convex

Across-slope shape: Convex

Hydric soil rating: No

Sutton

Percent of map unit: 1 percent

Landform: Hills, ground moraines

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelpdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

*Threatened and Endangered Species
Habitat Suitability Assessment Report*

Zappico Sleepy Hollow LLC Site
715 Sleepy Hollow Road
Town of Mount Pleasant
Westchester County, New York

May 17, 2021

Prepared by:

Michael Nowicki
Ecological Solutions, LLC
121 Leon Stocker Drive
Stratton, VT 05360
(203) 910-4716

1.0 INTRODUCTION

Ecological Solutions, LLC completed a threatened and endangered species habitat assessment on a site totaling about 36+ acres located at 715 Sleepy Hollow Road in the Town of Mount Pleasant, Westchester County, New York (*Figure 1*). The property contains previously developed area including three residences, driveway, and associated features. The natural habitat component is upland hardwood forest and wetlands.

The New York State Department of Environmental Conservation (NYSDEC) Environmental Resource Mapper indicates that there is the potential for Kentucky warbler (*Oporornis formosus*) to be located in the vicinity of the site. The site is in the Pocantico Hills region and is about a mile from the Rockefeller State Park Preserve.

The purpose of the assessment was to determine if potential habitat exists for this species on the site. A field assessment was conducted on May 13, 2021 and habitat on the site was observed and is listed in Table 1.

TABLE 1
COVER TYPES IDENTIFIED ON THE SITE

<u>HABITAT COVER TYPES</u>	
NO.	
1	Upland Hardwood Forest
2	Wetlands

1. Upland Hardwood Forest – The site is well maintained and contains upland hardwood forest consisting of oak, maple, birch, and hickory as dominant.

2. Wetlands – The wetland is located at the front of the site and is associated with a tributary that flows south off the site and then east.

2.0 HABITAT SUITABILITY ASSESSMENT/METHODS

2.1 Kentucky warbler

In New York, Kentucky Warblers prefer rich, moist, flat or preferably hilly woodlands especially with stream-bearing ravines and a dense understory especially for nesting. They will breed in forests of various ages but are most common in medium-aged forests.

In May or June the female builds her well-concealed open cup nest with coarse grasses and oak leaves in dense understory just above the ground often on a slope. She typically anchors the nest to a small shrub. Nesting locations are often in deep, deciduous, moist woodlands with well-developed ground cover. Incubation lasts 11 to 13 days; young fledge from 7 to 10 days. The female sometimes gives distraction displays when the nest is disturbed.

The Kentucky Warbler diet consists of insects, caterpillars, and small spiders during the breeding season. In Mexico during winter it may feed on cecropia fruits. The species leaves its breeding grounds in August to migrate, then returns again beginning in March. It is one of the earlier warblers to arrive back into North America for nesting.

Conclusion - The woodland on the site is not especially dense which is the preferred nesting habitat for Kentucky warblers. Hilly woodlands on the site are associated with ravines but rather with a steep slope to Pocantico Lake which will not be impacted. Rockefeller State Preserve offers more appropriate suitable habitat for this species for foraging and nesting. No Kentucky warbler songs were heard during the site visit and no impacts to this species are expected.

Figure 1 - Location Map



POCANTICO LAKE

(SEGMENT ID 1301-0114)

Waterbody Segment Assessment Factsheet Based on the 2021 CALM

Revised: December 07, 2021

NEEDS VERIFICATION (IR CATEGORY 3)

Introduction

This is the most recent water quality assessment information for this waterbody segment. The assessment is based on water quality data that meet the quality assurance requirements of DEC's Division of Water. An outline of the process used to assess the quality of New York State waters is described in the DEC's Consolidated Assessment and Listing Methodology (CALM) (<https://www.dec.ny.gov/chemical/31290.html>). The CALM describes the assessment and listing process to improve the consistency of assessment and listing decisions.




WATERBODY INFORMATION




- **Water Index Number:** H- 20-P30
- **Classification:** A
- **Waterbody Type:** Lake/Reservoir
- **Size:** 28.6 Acres
- **Drainage Basin:** Lower Hudson River
- **Hydrologic Unit Code:** 0203010104
- **County:** Westchester
- **Segment Description:** Entire lake

Assessment of Best Use

Background

New York State waterbodies are classified to reflect their best use(s) and the assessment of a waterbody is based on the ability of waters to support them. This section lists whether this waterbody segment supports its best use(s). View DEC's CALM (<https://www.dec.ny.gov/chemical/31290.html>) for more information about the terms used below.

Best Use	Use Assessment	Use Assessment Confirmation	Pollutant(s)	Integrated Reporting Category	303(d) Year
 Fishing	Impaired	Unconfirmed	Dissolved Oxygen	IR3	N/A for Assessment Category
 Secondary Contact Recreation	Impaired	Unconfirmed	Dissolved Oxygen	IR3	N/A for Assessment Category
 Primary Contact Recreation	Impaired	Unconfirmed	Dissolved Oxygen	IR3	N/A for Assessment Category

Best Use	Use Assessment	Use Assessment Confirmation	Pollutant(s)	Integrated Reporting Category	303(d) Year
 Source of Water Supply	Impaired	Unconfirmed	Dissolved Oxygen; Iron; Manganese	IR3	N/A for Assessment Category
 Shellfishing	N/A for Waterbody Class	—	—	—	—
 EPA Appended Listing	N/A for Waterbody Class	—	—	—	—

Water Quality Monitoring Data Used

Background

Water quality monitoring data are collected by DEC's Division of Water and community partners. While data are evaluated to assess whether best use(s) are supported, they may not be reflected in the final assessment of best use(s) presented above. The process for conducting assessments of best use(s) is explained in DEC's CALM (<https://www.dec.ny.gov/chemical/31290.html>).

This section lists the data sources for the pollutants listed in the Assessment of Best Use table.

Pollutant(s)	Data Source	Years
Dissolved Oxygen	Division of Water's Lake Monitoring and Assessment Section	2017
Iron	Division of Water's Lake Monitoring and Assessment Section	2017
Manganese	Division of Water's Lake Monitoring and Assessment Section	2017

For more information, or to sign-up for email updates from NYSDEC, visit our website:
<https://www.dec.ny.gov/chemical/36730.html> (<https://www.dec.ny.gov/chemical/36730.html>)



**Department of
Environmental
Conservation**

*Natural Resources Survey/Assessment
for Draft Environmental Impact Statement*

Zappico Sleepy Hollow LLC Site
715 Sleepy Hollow Road
Town of Mount Pleasant
Westchester County, New York

December 31, 2021
Revised December 4, 2022

Prepared by:

Michael Nowicki
Ecological Solutions, LLC
121 Leon Stocker Drive
Stratton, VT 05360
(203) 910-4716

1.0 INTRODUCTION.....	4
2.0 METHODS	5
2.1 Agency Correspondence/Inquiry.....	5
2.2 Ecological Community and Habitat Field Inventory.....	5
2.2.1 Rare Plants	5
2.3 Wildlife Field Inventory	5
3.0 WETLAND IDENTIFICATION	8
3.1 Wetland Delineation	8
3.2 Wetland Functional Evaluation.....	8
3.3 Anticipated Impacts to Wetlands, Wetland Adjacent Area, and Waterbodies	10
3.4 Wetland Mitigation.....	10
4.0 FINDINGS	12
4.1 Habitat.....	12
TABLE 1 HABITAT COVER TYPE IMPACTS.....	12
4.1-1 Terrestrial System	12
4.1-2 PALUSTRINE SYSTEM	13
4.2 Wildlife.....	14
4.2.1 Breeding Birds	14
4.2.2 Mammals.....	14
4.2.3 Amphibians/Reptiles	15
5.0 ANTICIPATED IMPACTS.....	16
5.1 Impacts to Vegetation and Cover Types.....	16
5.2 Impacts to Wildlife.....	17

6.0 MITIGATION MEASURES	19
6.1 Mitigation For Impacts to Vegetation and Cover Types.....	19
6.2 Mitigation for Wildlife Impacts	19
7.0 PHOTOGRAPHS.....	21
8.0 REFERENCES.....	25
Figure 1 Cover Types Map	26
Figure 2 Cover Types Impact Map	27
Attachment 1 - New York State Breeding Bird Atlas	28

1.0 INTRODUCTION

This report has been prepared to document the potential Natural Resource impacts associated with the proposed development of 29 additional single-family homes located on a 36.83-acre site at 715 Sleepy Hollow Road in the Town of Mount Pleasant, Westchester County, New York (the "Project" or the "Proposed Action"). This Natural Resource assessment evaluates both existing and proposed development conditions on and surrounding the site. The anticipated year of completion of this development is 2024.

This report has been prepared as part of the Draft Environmental Impact Statement (DEIS) for the Proposed Action and is in accordance with the requirements of the New York State Environmental Quality Review Act (SEQRA) and the Scoping Document for the Proposed Action. The adopted Scope identifies the inventory of all on-site species, vegetation cover types and habitats, species presence and abundance, distribution, dominance, community types habitat value, seasonal variations, travel corridors, and native/invasive species.

Ecological Solutions, LLC completed a natural resources survey during the spring, summer, and winter of 2021 on a 36(+/-) acres site located at 715 Sleepy Hollow Road in the Town of Mount Pleasant, Westchester County, New York. The Applicant is proposing to construct a residential subdivision and associated infrastructure on the site.

The data contained in this report was gathered on May 12, June 21, September 15, and December 10, 2021. Weather conditions varied during the field visits from cool to hot, humid days. The entire site was reviewed during each of the field visits so that the entire site was extensively evaluated. The purpose of the inventory was to document existing vegetation and habitat cover types, plant species, and wildlife species on the site. The project has been designed to avoid disturbance to the wetlands and wetland buffers.

2.0 METHODS

2.1 Agency Correspondence/Inquiry

As part of the environmental review for the subject site, Ecological Solutions, LLC, reviewed the New York State Department of Environmental Conservation (NYSDEC) Environmental Assessment Form Mapper regarding the status of rare, threatened, or endangered species on the site. The mapper indicates that Kentucky warbler (*Oporornis formosus*) is potentially located on or in the vicinity of the site. This species and habitat was addressed in a separate report which concluded that this species was not utilizing the site.

In addition, the wetlands on the site, were thoroughly investigated to determine if marbled salamander (*Ambystoma opacum*), Jefferson salamander (*Ambystoma jeffersonianum*), and blue spotted salamander (*Ambystoma laterale*) all NYSDEC designated “species of special concern” utilized the wetlands for breeding habitat. Other species of special concern including spotted turtle (*Clemmys guttata*) and wood turtle (*Clemmys insculpta*) were also searched for during the spring and summer surveys. No species of special concern were observed on the site.

2.2 Ecological Community and Habitat Field Inventory

The vegetation inventory included identification of ecological communities or habitat cover types. Cover type surveys were conducted by first reviewing aerial photographs of the site and adjacent properties and subsequently by investigating the habitats on the site to identify and classify each. Within each cover type, visual searches for herbaceous and woody plant species or parts thereof, including leaves, bark, twigs, seeds, flowers, fruits, or other identifiable plant structures were conducted to identify and document vegetation on the site. Trees, shrubs, and fall flowering plants were identified to species levels where possible.

The Plot Transect method was employed for the vegetation inventory. The methods used to search for species on the site are outlined in *Biodiversity Assessment Manual for the Hudson River Estuary Corridor*. All species observed on the site are listed in Section 4.0 Findings.

2.2.1 Rare Plants

Specific surveys for rare plants were conducted during June 2021 in the proposed development areas. There were no listed threatened, endangered, or rare species identified in the development areas.

2.3 Wildlife Field Inventory

Extensive seasonally limited field surveys were conducted for wildlife species including mammals, birds, and herpetiles (reptiles and amphibians). Special surveys were also conducted to identify and locate seasonally active species of special concern such as the marbled salamander, Jefferson salamander, and blue spotted salamander, spotted and wood turtle all NYSDEC designated “species of special concern”.

Multiple methods were used in these surveys, as multiple methodologies increase the potential accuracy of surveys. Methods used are outlined below.

A. **Mammals.** The following survey methods that are outlined in detail in *Biodiversity Assessment Manual for the Hudson River Estuary Corridor* were utilized during the field survey:

1. Sign search, in which the observer records any recognizable signs (tracks, droppings, hair, bones, etc.) of mammal species.
2. Opportunistic mammal sightings, in which the observer identifies mammals encountered in the field at random.

Mammals were identified based on visual encounters, vocalizations, tracks, fur, bones, rubs, scrapes, droppings, and other recognizable signs in habitats throughout the site. Sampling routes were established throughout the site and wildlife was recorded as encountered.

B. **Birds.** Field methods used to survey for avian species were based on methods outlined in *Biodiversity Assessment Manual for the Hudson River Estuary Corridor* and included:

1. Walking transects where the observer records all species encountered (seen/heard) along a trail.
2. Opportunistic bird sighting, where the observer records birds encountered randomly.
3. Sign search, where the observer records signs (feathers, nests, droppings, tracks, etc.) of birds encountered in the field.

Birds were detected and identified by visual encounter with individuals, vocalizations, tracks, feathers, bones, droppings, castings, nests, drillings, or other recognizable signs.

In addition, breeding bird surveys were completed on May 12, and June 21, 2021 and typically began at 5:30 am and ended at 8:30 am. May and June are the months when most birds in New York breed, although a small number of species breed anytime from January through August. June can be especially productive since many adults with food for young and recently fledged young can be seen at that time. The NYS Breeding Bird Atlas (NYSBBA) was consulted to determine avian species that could potentially occupy or use the site. Block 5955C of the NYSBBA is attached to the end of this report.

C. **Herptiles** (Reptiles and Amphibians). Field methods used to survey for herptile species were based on methods outlined in *Biodiversity Assessment Manual for the Hudson River Estuary Corridor* and included:

1. Log rolling (overturning logs, large stones, and other debris to reveal herptiles underneath).
2. Aural surveys were conducted for vocal herptiles. Herptiles were detected and identified by visual encounter, vocalizations, spermatophores, egg masses, and remains.
3. Just about the time most other amphibians are looking for places to hibernate, marbled salamanders are heading to breeding areas. The only fall breeding salamander, they seek out small areas (micro habitats) with temperatures around 60°F. The female will lay an average of 100 eggs in a nest constructed in a shallow depression under leaf litter or in a log. The female remains with the eggs until fall rains fill the nest site. Eggs will hatch within two weeks. In mild winters, larvae can feed and grow and transform in late spring or early summer. If the nest does not flood, eggs will go dormant until the following spring. The salamander larvae that hatch in fall metamorphose into terrestrial adults in late spring or June or July. The habitat they select varies with the season. During the spring and summer, the adults spend their time in sandy upland deciduous forests. They seek shelter under logs or in underground tunnels of other animals. In autumn, they congregate in groups near lowland forested habitat to breed.

3.0 WETLAND IDENTIFICATION

3.1 Wetland Delineation

A wetland delineation was completed on the site by others.

3.2 Wetland Functional Evaluation

An assessment of wetland functions and values was conducted on the wetland that was identified and delineated on the referenced site. Using a widely accepted method for wetland functions and values assessment developed by the New England District, U.S. Army Corps of Engineers (USACE), 13 distinct wetland functions and values were assessed for the delineated wetlands on the site. This method yielded an objective, descriptive quality index of each wetland rather than a subjective quantified rating of each wetland. This assessment had two major objectives:

1. Objectively identify the functions and values provided by the wetland identified on the site, and
2. Provide baseline data with which the Applicant could work in planning land uses, and against which the Applicant could assess potential impacts of proposed development of the site.

The descriptive quality index of the wetland, based on this methodology, is summarized in this report.

Wetland functions are chemical, physical, and biological processes that wetlands naturally perform, such as absorption of nutrients or floodwaters, or provision of habitat for fish and wildlife. Wetland values are the benefits that society derives from wetland functions, such as flood abatement, or water quality maintenance.

The functions and values assessment was based on the method outlined in *The Highway Methodology Workbook Supplement: Wetland Functions and Values, A Descriptive Approach*, by the U.S. Army Corps of Engineers New England District. This method was selected over an arbitrary numeric quantifying assessment scheme because it provides an objective, descriptive approach to functions and values assessment based on professional observation and judgment rather than a simple numeric value rating system. Quantified functions and values assessments do not always provide for descriptive information about wetlands and therefore may overlook important aspects of wetland functions and values.

The Highway Method provides for assessment of each wetland for thirteen defined functions and values. Of these, the first eight are considered wetland functions, and the last five are considered to be wetland values. These are:

1. **Groundwater Recharge/Discharge** – the potential for a wetland to serve as a recharge area for an aquifer or as a surface discharge point for groundwater.

2. **Floodflow Attenuation**– A wetland's ability to store and attenuate floodwaters during prolonged precipitation events, thereby reducing or preventing flood damage.
3. **Fish and Shellfish Habitat** – The ability of permanent or temporary water bodies to provide suitable habitat for fish or shellfish.
4. **Sediment/Toxicant/Pathogen Retention** – The effectiveness of the wetland in trapping sediments, toxicants or pathogens, thereby protecting water quality.
5. **Nutrient Removal/Retention/Transformation** – The effectiveness of the wetland at absorbing, retaining, and transforming or binding excess nutrients, thereby protecting water quality.
6. **Production Export** – The wetland's ability to produce food or usable products for humans or other living organisms.
7. **Sediment/Shoreline Stabilization** – The wetland's ability to prevent erosion and sedimentation by stabilizing soils along stream banks or the shorelines of water bodies.
8. **Wildlife Habitat** – The ability of wetlands to provide food, water, cover, or space for wildlife populations typically associated with wetlands or their adjacent areas, both resident and migratory.
9. **Recreation** – The value placed on a wetland by society for providing consumptive and non-consumptive as well as active or passive recreational opportunities such as canoeing/boating, fishing, hunting, bird/wildlife watching, hiking, etc.
10. **Education/Scientific Value** – The value placed on a wetland by society for providing subjects for scientific study or research or providing a teaching resource for schools.
11. **Uniqueness/Heritage** – The value placed on a wetland by society for having unique characteristics such as archaeological or historical value, unusual aesthetic qualities, or unique plants, animals, or geologic features, etc.
12. **Visual Quality/Aesthetics** – The value placed on a wetland by society for having visual and/or other aesthetic qualities.
13. **Threatened or Endangered Species Habitat** – The value placed on a wetland by society for effectively harboring or providing habitat for threatened or endangered species.

Findings of the assessment are outlined below.

Wetlands– Functions and values provided by the forested wetlands on the site include groundwater recharge, floodflow attenuation, sediment trapping, nutrient removal, production export, wildlife habitat, and

visual quality. Of these, the most significant functions of the based on extent of rationale in identifying functions and values, are floodflow attenuation, sediment trapping, and wildlife habitat.

3.3 Anticipated Impacts to Wetlands, Wetland Adjacent Area, and Waterbodies

The proposed development of the site will not require a Federal Section 404 Nationwide Permit since there is no wetland fill proposed.

The regulated wetlands on the site will continue to provide the same functional benefits after completion of the proposed development of the site including: maintenance of flood, erosion and storm control; control of pollution and sedimentation; and provision of area for wildlife habitat.

Short-term physical impacts to regulated wetlands on the site will be minimized by the use of erosion controls throughout the site especially in critical areas adjacent to regulated wetlands. No regulated watercourse will be impacted as a result of the proposed development.

Pocantico Lake is a NYSDEC Class "A" waterbody that is located more than 300 linear feet from the proposed development. The NYSDEC regulates the bed and banks of this waterbody via Article 15 Protection of Waters. No Article 15 permit is required from the NYSDEC for the proposed project.

3.4 Wetland Mitigation

Avoidance

Construction in regulated wetlands is avoided for the proposed project.

Mitigation

There is no wetland mitigation required by the USACE, NYSDEC, or Town.

Stormwater Measures

A Stormwater Pollution Prevention Plan (SWPPP) details the steps necessary to control stormwater generated on the site as a result of increased impervious surfaces. According to the report, the site has been designed to facilitate stormwater movement and purification. Land areas that are not collected by the stormwater management system will sheet flow off the site through natural patterns and surface conditions. The creation of detention basins will function to maintain post-development peak stormwater discharges to at and below their pre-development levels.

The proposed development is designed to integrate the existing runoff patterns and natural features with little disturbance. The natural features on-site will provide environmentally preferred stormwater management mitigation by improving runoff quality through the use of open-channel/wetland filtration, absorption, and evaporation. The stormwater analysis illustrates that the proposed system will function

properly, provide water quality enhancements, and require minimal maintenance to insure continued performance. During construction appropriate soil erosion and sediment control measures will reduce any potential impacts to these regulated resources.

4.0 FINDINGS

4.1 Habitat

There is several distinct dominant cover types identified on the site (*Figure 1*). Approximate physical impacts to each habitat type are shown and listed in *Table 1 and shown in Figure 2*. The NYSDEC Environmental Resource Mapper indicates that the project site is within 1/2 mile of a significant natural community, oak-tulip tree forest, which is located in the Rockefeller State Preserve located southwest of the site. This habitat type is not on the project site since the dominant trees on this site are oaks and hickories as per field observation and the tree survey.

**TABLE 1
HABITAT COVER TYPE IMPACTS**

NO.	EDINGER 2014	ACRES IDENTIFIED	PROPOSED IMPACTS/CHANGE
1	Appalachian Oak-Hickory Forest	28.19	(6.31) - 21.8
2	Mowed Lawn	3.43	(3.43) - 7.41
3	Wetland	4.00	(0) - 4.00
4	Impervious Cover	1.18	(1.18) - 3.70

4.1-1 Terrestrial System

The terrestrial system consists of upland habitats. These habitats have well-drained soils that are dry to mesic (never hydric), and vegetative cover that is never predominantly hydrophytic, even if the soil surface is occasionally or seasonally flooded or saturated. In other words, this is a broadly defined system that includes everything except aquatic, wetland, and subterranean communities.

Mowed Lawn

The lawn and associated brush areas on the site are dominated by forbs and grasses which are seasonally mowed and therefore impacted especially during the growing season. Characteristic herbs located on the

site include Canada goldenrod (*Solidago canadensis*), bluegrass (*Poa pratensis*), timothy (*Phleum pratense*), quackgrass (*Agropyron repens*), common chickweed (*Cerastium arvense*), wild strawberry (*Fragaria virginiana*), Queen-Anne's lace (*Daucus carota*), hawkweeds (*Hieracium* spp.), and dandelion (*Taraxacum officinale*). Shrubs are present, but collectively they have less than 50% cover in the community. Shrubs identified include gray dogwood (*Cornus foemina* ssp. *racemosa*), raspberries (*Rubus* spp.), and eastern red cedar (*Juniperus virginiana*). This is a relatively short-lived community that will succeed to a shrubland, woodland, or forest community if not maintained. These dominant species are distributed throughout the lawn area. No invasive species were identified in this habitat.

Appalachian Oak-Hickory Forest

A hardwood forest that occurs on this well-drained site. The soils are loams. The dominant trees include the following oaks: red oak (*Quercus rubra*), white oak (*Q. alba*), and black oak (*Q. velutina*). Mixed with the oaks are the following hickories: pignut (*Carya glabra*) and shagbark (*C. ovata*) as well as white ash (*Fraxinus americana*), red maple (*Acer rubrum*), sugar maple (*Acer saccharum*), and hop hornbeam (*Ostrya virginiana*). On this site oaks, hickories, and maples are the most abundant species in the identified forest type. These species are located and distributed throughout the forest area.

Tall shrubs observed included flowering dogwood (*Cornus florida*), hop hornbeam, witch hazel (*Hamamelis virginiana*), serviceberry (*Amelanchier arborea*), and black cherry (*Prunus serotina*). Common low shrubs included maple-leaf viburnum (*Viburnum acerifolium*), lowbush blueberry (*Vaccinium angustifolium*), red raspberry (*Rubus idaeus*), gray dogwood (*Cornus racemosa*), and beaked hazelnut (*Corylus cornuta*). Groundlayer herbs are false Solomon's seal (*Maianthemum racemosum*), Pennsylvania sedge (*Carex pensylvanica*), and tick-trefoil (*Desmodium glutinosum*, *D. paniculatum*).

A tree survey has been completed for the site by the site surveyor and specimen trees have been identified based on the Town of Mount Pleasant code. No invasive species were observed in this habitat type. This Habitat type is not seasonally impacted by any activity except previously completed normal maintenance.

4.1-2 PALUSTRINE SYSTEM

The palustrine system consists of non-tidal, perennial wetlands characterized by emergent vegetation. The system includes wetlands permanently saturated by seepage, permanently flooded wetlands, and wetlands that are seasonally or intermittently flooded (these may be seasonally dry) with vegetative cover that is predominantly hydrophytic with hydric soils. Wetland communities on the site are distinguished by their plant composition (hydrophytes), substrate (hydric soils), and hydrologic regime (frequency of flooding). Depending on the season this habitat type may be seasonally more wet or more dry but the seasonal variation is within inches and would not have an effect on the habitat.

Wetland (Shallow Emergent Marsh/Red Maple Hardwood Swamp)

In general on the site this ecological community is a type of wetland that occurs in poorly drained depressions usually on inorganic soils in New York State. The dominant species of the herbaceous layer

are skunk cabbage (*Symplocarpus foetidus*), sensitive fern (*Onoclea sensibilis*), and reed grass (*Phragmites spp.*) which are evenly distributed throughout the wetland.

Reed grass was the only invasive species observed on the site. This ecological community occurs in the protected wetlands. This ecological community will remain completely undisturbed by the proposed development.

4.2 Wildlife

4.2.1 Breeding Birds

The following lists the species and abundance of breeding birds observed onsite in 2021. The species were found in or flying through/over each of the habitats on the site. The list of observed species includes: 4 wild turkey (*Meleagris gallopavo*), 2 turkey vulture (*Cathartes aura*), 1 red-tailed hawk (*Buteo jamaicensis*), 2 mourning dove (*Zenaida macroura*), 1 yellow-bellied sapsucker (*Sphyrapicus varius*), 2 Northern flicker (*Colaptes auratus*), 4 Eastern phoebe (*Sayornis phoebe*), 2 red-eyed vireo (*Vireo olivaceus*), 5 blue jay (*Cyanocitta cristata*), 1 American crow (*Corvus brachyrhynchos*), 1 barn swallow (*Hirundo rustica*), 4 black-capped chickadee (*Poecile atricapillus*), 3 house wren (*Troglodytes aedon*), 2 Eastern bluebird (*Sialia sialis*), 4 American robin (*Turdus migratorius*), 3 gray catbird (*Dumetella carolinensis*), 1 Northern mockingbird (*Mimus polyglottos*), 2 European starling (*Sturnus vulgaris*), 1 yellow warbler (*Dendroica petechia*), 1 common yellowthroat (*Geothlypis trichas*), 2 field sparrow (*Spizella pusilla*), 2 song sparrow (*Melospiza melodia*), 2 Northern cardinal (*Cardinalis cardinalis*), 4 red-winged blackbird (*Agelaius phoeniceus*), 3 indigo bunting (*Passerina cyanea*), 2 common grackle (*Quiscalus quiscula*), and 3 American goldfinch (*Carduelis tristis*).

Atlantic flyway - The Atlantic Flyway is a major north-south flyway for migratory birds in North America. The route generally starts in Greenland, then follows the Atlantic coast of Canada, then south down the Atlantic Coast to the tropical areas of South America and the Caribbean. The proposed project impacts 5.61 acres of oak-hickory forest and contemplates the addition of native tree species to locations on the site as a friendly forestry practice. Waterfowl that would frequent the area are likely to only be found in Pocantico Lake County Park or Swan Lake in Rockefeller State Park to the south/southwest of the subject site across State Route 117.

4.2.2 Mammals

The following is a list of mammals and their abundance identified on the site in 2021 and includes 2 white tailed deer (*Odocoileus virginianus*), 1 red fox (*Vulpes vulpes*), 1 raccoon (*Procyon lotor*), 3 deer mouse (*Peromyscus maniculatus*), 3 Eastern chipmunk (*Tamias striatus*), and 4 gray squirrel (*Sciurus carolinensis*) (black phase). Other common mammals in this suburban setting are likely nocturnal or hard to detect because they spend time underground (moles, voles, etc.).

4.2.3 Amphibians/Reptiles

The following is a list of amphibians/reptiles identified and their abundance on the site in 2021 and included 3 red backed salamander (*Plethodon cinerea*), 4 wood frog (*Lithobates sylvaticus*), and 1 garter snake (*Thamnophis sirtalis*).

5.0 ANTICIPATED IMPACTS

The proposed development and its appurtenant features will necessarily require clearing of upland forest and successional field habitat. Earth moving (excavation, filling, and grading), operation of heavy machinery, construction, alteration of existing drainage patterns, addition of impervious surfaces, changes in traffic patterns, and increased human activity will occur on the subject site. Anticipated impacts from these activities are outlined below.

5.1 Impacts to Vegetation and Cover Types

1. **Appalachian Oak Hickory Forest Loss.** The proposed activities will require the removal of approximately 6.31 acres or 22 percent of this cover type from the site. This forest area has historically been cleared and allowed to grow back on this site. Specimen trees are shown on the tree survey prepared by the site surveyor.
2. **Lawn/Brush Loss.** The proposed activities require no removal of this cover type from the site.
3. **Wetland.** Development activities have been planned to avoid impacts to wetlands.
4. **Forest Fragmentation.** The canopy of the forested area will be impacted by small clearings that total 6.31 acres of the 28.19 total acres on the site. The remaining 21.88 acres of the forest, however, will be preserved leaving protection for forest interior species from invasion of and competition with edge species. Potential fragmentation of the forest habitat on this site is not anticipated to significantly alter site biodiversity because 21.88 acres or 78 percent of this habitat will remain intact. The remaining forest area and wetland will also continue to provide habitat for travel or resting for wildlife species that can move through this part of Westchester. There is significant habitat in the area of this site including Pocantico County Park and Rockefeller State Park that provide habitat for species in the area so that this site is not the only a refuge for wildlife in the area or a significant refuge for wildlife given the sites relatively small size compared to the local parks.
5. **Habitat Fragmentation.** Habitat fragmentation differs from forest fragmentation in that forest fragmentation is the practice of opening up a densely closed forest canopy, allowing edge-oriented species to penetrate into areas of the forest that they probably would not reach before. While this adversely impacts forest interior species, it potentially benefits edge species. Habitat fragmentation is the separation and isolation of habitats and wildlife populations by placing impenetrable barriers between habitats that prevent mixing formerly connected or adjacent wildlife populations creating "habitat islands". Development barriers can be as minor as a 6-inch curb on a road that prevents movement of amphibians, reptiles, or any small sized wildlife. Private fences around homes or lots if proposed can prevent wildlife movement to and from breeding, nesting, or feeding areas such as the watercourse. Extensive concentrated clearing of overhead vegetation can also hinder summer movement of some wildlife, most notably amphibians, because of possible

exposure to direct sunlight at midday in cleared areas, making it difficult for some species to travel without the risk of becoming desiccated. Habitat fragmentation is not anticipated to result from the proposed project.

6. **Climate Resiliency/Carbon Sequestration.** Several conservation practices increase carbon storage in soil, called carbon sequestration, which buffers climate change and provides benefits by storing more carbon and increasing the organic matter in the soil. A practice that will help maintain soil health will include the addition of native tree species to locations on the site as a friendly forestry practice that will also capture carbon.
7. **Impact to the on-site forest mycorrhizal network.** Mycorrhizal fungi are fungi that exist in soil and live in symbiosis with plants and trees. These fungi live on and in plant roots and help supply plants with water and essential nutrients such as phosphorus and iron. In return, plants provide fungi with carbohydrates that they have sequestered through photosynthesis. The remaining forest area after the project is complete is 78 percent of the current total. The removal of 6.31 acres of forest is not a significant enough disturbance to a 28.19 acres area of forest to have a significant impact to the remaining forest mycorrhizal network especially since the 6.31 acres is in several locations and not one area. The relationship between fungi and the site trees will continue.

5.2 Impacts to Wildlife

A. All Species. All wildlife species require food, water, and cover. Trees and woody plants provide two of these directly. Many wildlife species, particularly birds, shift their food habits seasonally. Many winter seedeaters switch to insects in summer. Some wildlife species are resident (they are present in the same general area all year). Many others are migratory. The main migratory periods in our area are: spring (April 15 through June 1); fall (August 15 through October 1). Migratory species are present only when passing through, or during part of the year. Some species are here only in the summer and leave for warmer climates during the winter. Others breed north of us and are present only during winter. A few species exhibit altitudinal migrations. That is, they spend part of the year at high elevations (summer, usually) and part of the year at low elevations (winter, usually). Direct impacts to wildlife biodiversity from the proposed development will primarily be displacement and some direct loss especially to species that spend a large percentage of their life cycle underground (moles, voles). Most species found on the site are typically found in suburban settings and may have already adapted to proximal human habitation. These species will remain on the developed portion of the site, though possibly in fewer numbers, as availability of basic habitat features (food, cover, and space) may be decreased in the developed areas.

B. General Species Migration Patterns. The impact of habitat modification is most relevant for forest species, which includes most of the key species (forest interior birds, large mammals, amphibians and most reptiles). Of these species classes the less mobile amphibians and reptiles are more vulnerable to migratory barriers. Impacts to a site on a local level will not significantly affect large mammal, or migratory bird species movements since these species are highly mobile and not typically confined to small corridors within a site.

Regulated wetlands on the site are left intact and are considered the most likely migratory corridors for wildlife species on the site, especially the more sensitive species of amphibians and reptiles. The prime migratory corridors and wildlife destinations for breeding found in the regulated wetlands will remain. Birds and mammals require no extraordinary measures to secure passage through this area.

C. Threatened/Endangered Species. Please see separate report which concludes there are no impacts to these species.

D. Species of Special Concern. There were no marbled, blue spotted, or Jefferson salamanders or evidence of breeding by these species on the site. Also no spotted, eastern box, or wood turtle were observed on the site.

E. Impacts to Pocantico Lake and Tributaries. There are no direct impacts proposed to Pocantico Lake or tributaries. Erosion controls utilized on the site will prevent impacts to the Lake and tributaries from the project site. The Applicant via the Homeowner's Association will avoid impacts from fertilizers, herbicides and pesticides by stipulating that these compounds will not be used on the site. Natural fertilizers such as mulch and compost will be acceptable to use. Wildlife that uses Pocantico Lake will remain in the area and will continue to travel between the likely travel corridor from Pocantico Lake and Swam Lake in Rockefeller State Park and surrounding woodlands in the Park.

6.0 MITIGATION MEASURES

Mitigation measures for the potential impacts are outlined below.

6.1 Mitigation For Impacts to Vegetation and Cover Types

The Applicant will minimize impacts by establishing undisturbed, naturally vegetated zones demarcated in the field by orange construction fencing and by clearing only necessary areas within the Limit of Disturbance area.

The upland forest areas impacted by the developments will not be fully replaced but will be enhanced by revegetating corridors with native plant material (white oak and associated species). Native plantings may provide wildlife with some habitat and food source and will contribute to carbon sequestration.

Other habitat aspects of the site should be preserved and include existing stonewalls and standing dead trees (snags). Old stonewalls provide microhabitats for small mammals, herptiles, and invertebrates. Snags provide perching, nesting, and feeding areas for a wide variety of wildlife. These elements or parts thereof should be protected where possible. Impacts from habitat and forest fragmentation can be minimized by maintaining substantial corridors between natural habitat areas. Connecting corridors do not have to be entirely unbroken, as long as breaks in the natural vegetation are not excessive.

The site provides year-round habitat for most of the species located there. The site will continue to be “connected” to adjacent undeveloped properties so that potential wildlife migratory routes remain.

6.2 Mitigation for Wildlife Impacts

Temporary wildlife displacement during construction is a short-term impact that will occur. Although not mitigation for impacts, general amphibian microhabitat requirements that will remain intact on the site include:

- Wetlands which are breeding locations that hold water at least through July,
- Woody debris in remaining forested areas,
- Canopy cover over breeding and foraging areas, and
- Deciduous leaf litter for moisture retention and feeding,

General reptile microhabitat requirements that will remain intact on the site include:

- Woody debris (standing and down),
- Small open patches for basking, mixed with well shaded areas during drought periods,
- Undisturbed areas in and around wetlands for feeding and breeding, and
- Access to safe den areas.

The habitat requirements listed above will remain intact with this proposed development plan and because areas of the site particularly adjacent to wetlands will remain in a more naturalized state.

7.0 PHOTOGRAPHS

Wooded area at site entrance.



Field and Woodline on the site.



Wooded area on the site.



Young successional woods on the site and existing residential neighborhood in background.



8.0 REFERENCES

Habitat Cover Types:

Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, A.M. Olivero. 2018. Ecological communities of New York State, second edition (draft). New York Natural Heritage Program, Albany, New York.

Plants:

Gleason, H.A. and A. Cronquist. 1991. Manual of vascular plants of northeastern United States and adjacent Canada. Second edition. The New York Botanical Garden, Bronx, NY. 910 p.

Mitchell, R.S. 1986. A Checklist of New York State Plants. Bulletin no. 458, New York State Museum, Albany, NY.

Vertebrates:

Banks, R.C., R.W. McDiarmid, and A.L. Gardner. 1987. Checklist of Vertebrates of the United States, the U.S. Territories, and Canada. United States Department of the Interior, Fish and Wildlife Service, Washington, D.C.

Gardner, J.E., J.D. Garner, and J.E. Hofmann. 1991. Summer roost selection and roosting behavior of *Myotis sodalis* (Indiana bat) in Illinois. Unpublished report to Region 3 U.S. Fish and Wildlife Service, Fort Snelling, MN. 56 pp.

Hicks, A.C. 2009. Personal communication. NYSDEC, 625 Broadway, Albany, NY 12233.

Menzel, Michael A.; Menzel, Jennifer M.; Carter, Timothy C.; Ford, W. Mark; Edwards, John W. 2001. Review of the forest habitat relationships of the Indiana bat (*Myotis sodalis*). <http://www.nrs.fs.fed.us/pubs/5934>.

Humphrey, S.R., A.R. Richter and J.B. Cope. 1977. Summer habitat and ecology of the endangered Indiana Bat, *Myotis sodalis*. *J. Mammal.*, 58:334-346.

Kurta, A., D. King, J.A. Teramino, J.M. Stribley and K.J. Williams. 1993. Summer roosts of the endangered Indiana bat (*Myotis sodalis*) on the northern edge of its range. *Am. Midl. Nat.*, 129:132-138.

Birds:

Baichich, P.J. and C.J.O. Harrison. 1997. A Guide to the Nests, Eggs and Nestlings of North American Birds, 2nd Ed.

The Second Atlas of Breeding Birds in New York State. 2008.

Amphibians and Reptiles:

Collins, J.T. 1990. Standard Common and Current Scientific Names for North American Amphibians and Reptiles. Third edition. Society for the Study of Amphibians and Reptiles. Herpetological circular no. 19. Lawrence, KS.

Calhoun, A.J.K. and M. W. Klemens. 2002. Best Development Practices: Conserving pool-breeding amphibians in residential and commercial developments in the Northeastern United States. MCA Technical Paper No. 5, Metropolitan Conservation Alliance, Wildlife Conservation Society, Bronx, New York. 57 pp.

Figure 1 Cover Types Map



Legend

A - Appalachian Oak-Hickory Forest

B - Mowed Lawn

C - Wetland

Figure 2 Cover Types Impact Map



Legend

- A - Appalachian Oak-Hickory Forest
- B - Mowed Lawn
- C - Wetland
- D# - Clearing Area

Attachment 1 - New York State Breeding Bird Atlas

Species Recorded in This Block:
Swans, Geese, & Ducks (<i>Anatidae</i>)
Canada Goose (<i>Branta canadensis</i>)
Wood Duck (<i>Aix sponsa</i>)
Mallard (<i>Anas platyrhynchos</i>)
Partridges, Grouse, & Turkeys (<i>Phasianidae</i>)
NONE
New World Quail (<i>Odontophoridae</i>)
NONE
Loons (<i>Gaviidae</i>)
NONE
Grebes (<i>Podicipedidae</i>)
NONE
Pelicans (<i>Pelicanidae</i>)
NONE
Cormorants (<i>Phalacrocoracidae</i>)
NONE
Bitterns, Herons, & Allies (<i>Ardeidae</i>)
NONE
Ibises & Spoonbills (<i>Threskiornithidae</i>)
NONE
Vultures (<i>Cathartidae</i>)
NONE
Kites, Eagles, Hawks, & Allies (<i>Accipitridae</i>)
NONE
Caracaras & Falcons (<i>Falconidae</i>)
NONE
Rails, Gallinules, & Coots (<i>Rallidae</i>)
NONE
Cranes (<i>Gruidae</i>)
NONE
Plovers & Lapwings (<i>Charidriidae</i>)
NONE
Oystercatchers (<i>Haematopodidae</i>)
NONE
Sandpipers, Phalaropes, & Allies (<i>Scolopacidae</i>)
American Woodcock (<i>Scolopax minor</i>)

Species Recorded in This Block:
Skuas, Gulls, Terns, & Skimmers (<i>Laridae</i>)
NONE
Pigeons & Doves (<i>Columbidae</i>)
Mourning Dove (<i>Zenaida macroura</i>)
Parrots (<i>Psittacidae</i>)
NONE
Cuckoos, Roadrunners, & Anis (<i>Cuculidae</i>)
NONE
Barn Owls (<i>Tytonidae</i>)
NONE
Typical Owls(<i>Strigidae</i>)
Eastern Screech-Owl (<i>Megascops asio</i>)
Goatsuckers (<i>Caprimulgidae</i>)
NONE
Swifts (<i>Apodidae</i>)
Chimney Swift (<i>Chaetura pelagica</i>)
Hummingbirds (<i>Trochilidae</i>)
NONE
Kingfishers (<i>Alcedinidae</i>)
Belted Kingfisher (<i>Megasceryle alcyon</i>)
Woodpeckers & Allies (<i>Picidae</i>)
Red-bellied Woodpecker (<i>Melanerpes carolinus</i>)
Downy Woodpecker (<i>Picoides pubescens</i>)
Hairy Woodpecker (<i>Picoides villosus</i>)
Northern Flicker (<i>Colaptes auratus</i>)
Pileated Woodpecker (<i>Dryocopus pileatus</i>)
Tyrant Flycatchers (<i>Tyrannidae</i>)
Eastern Wood-Pewee (<i>Contopus virens</i>)
Eastern Phoebe (<i>Sayornis phoebe</i>)
Great Crested Flycatcher (<i>Myiarchus crinitus</i>)
Eastern Kingbird (<i>Tyrannus tyrannus</i>)
Shrikes (<i>Laniidae</i>)
NONE
Vireos (<i>Vireonidae</i>)
Yellow-throated Vireo (<i>Vireo flavifrons</i>)
Warbling Vireo (<i>Vireo gilvus</i>)
Red-eyed Vireo (<i>Vireo olivaceus</i>)
Jays, Magpies, & Crows (<i>Corvidae</i>)

Species Recorded in This Block:
Blue Jay (<i>Cyanocitta cristata</i>)
American Crow (<i>Corvus brachyrhynchos</i>)
Larks (<i>Alaudidae</i>)
NONE
Swallows (<i>Hirundinidae</i>)
Barn Swallow (<i>Hirundo rustica</i>)
Chickadees & Titmice (<i>Paridae</i>)
Black-capped Chickadee (<i>Poecile atricapillus</i>)
Tufted Titmouse (<i>Baeolophus bicolor</i>)
Nuthatches (<i>Sittidae</i>)
White-breasted Nuthatch (<i>Sitta carolinensis</i>)
Creepers (<i>Certhiidae</i>)
NONE
Wrens (<i>Troglodytidae</i>)
Carolina Wren (<i>Thryothorus ludovicianus</i>)
Winter Wren (<i>Troglodytes troglodytes</i>)
Kinglets (<i>Regulidae</i>)
NONE
Old World Warblers & Gnatcatchers (<i>Sylviidae</i>)
Blue-gray Gnatcatcher (<i>Polioptila caerulea</i>)
Thrushes (<i>Turdidae</i>)
Eastern Bluebird (<i>Sialia sialis</i>)
Veery (<i>Catharus fuscescens</i>)
Wood Thrush (<i>Hylocichla mustelina</i>)
American Robin (<i>Turdus migratorius</i>)
Mockingbirds, Thrashers, & Allies (<i>Mimidae</i>)
Gray Catbird (<i>Dumetella carolinensis</i>)
Starlings & Allies (<i>Sturnidae</i>)
European Starling (<i>Sturnus vulgaris</i>)
Waxwings (<i>Bombycillidae</i>)
Cedar Waxwing (<i>Bombycilla cedrorum</i>)
Wood Warblers (<i>Parulidae</i>)
Blue-winged Warbler (<i>Vermivora pinus</i>)
Yellow Warbler (<i>Dendroica petechia</i>)
American Redstart (<i>Setophaga ruticilla</i>)
Common Yellowthroat (<i>Geothlypis trichas</i>)
Tanagers (<i>Thraupidae</i>)
Scarlet Tanager (<i>Piranga olivacea</i>)

Species Recorded in This Block:	
Towhees, Buntings, Sparrows, & Allies (<i>Emberizidae</i>)	
Eastern Towhee (<i>Pipilo erythrophthalmus</i>)	
Chipping Sparrow (<i>Spizella passerina</i>)	
Song Sparrow (<i>Melospiza melodia</i>)	
Grosbeaks & Buntings (<i>Cardinalidae</i>)	
Northern Cardinal (<i>Cardinalis cardinalis</i>)	
Rose-breasted Grosbeak (<i>Pheucticus ludovicianus</i>)	
Indigo Bunting (<i>Passerina cyanea</i>)	
Blackbirds (<i>Icteridae</i>)	
Red-winged Blackbird (<i>Agelaius phoeniceus</i>)	
Common Grackle (<i>Quiscalus quiscula</i>)	
Brown-headed Cowbird (<i>Molothrus ater</i>)	
Orchard Oriole (<i>Icterus spurius</i>)	
Baltimore Oriole (<i>Icterus galbula</i>)	
Finches (<i>Fringillidae</i>)	
House Finch (<i>Carpodacus mexicanus</i>)	
American Goldfinch (<i>Carduelis tristis</i>)	
Old World Sparrows (<i>Passeridae</i>)	
House Sparrow (<i>Passer domesticus</i>)	

Local Law Intro No.

16-1989

A LOCAL LAW adding Chapter 694 to the Laws of Westchester County designating specific geographic areas within the boundaries of Westchester County as Critical Environmental Areas.

BE It ENACTED, by the County Board of the County of Westchester as follows:

Section 1. The Laws of Westchester County are hereby amended to add a new Chapter 694 to read as follows:

CHAPTER 694

CRITICAL ENVIRONMENTAL AREAS

§694.01. Purpose .
§694.11. Scope .
§694..21 Findings .
§694..31. Exemptions .
§694..41 Determination .
§694..51 Filing Designations .
§694..61. Severability .

§694..01 Purpose .

The County Board of the County of Westchester hereby finds that certain areas within the boundaries of Westchester County have exceptional and unique characteristics which necessitate their designation as critical environmental areas to ensure that any actions, taking place

wholly or partially within or substantially contiguous to such areas will be considered as Type I actions under the New York State Environmental Quality Review Act, thereby increasing the likelihood that environmental impact statements will have to be prepared for projects and/or actions commenced therein.

§694.11. Scope .

Pursuant to Title Six (6) of the New York Code of Rules and Regulations, Section 617.4(h), the following areas, which shall be further described and shown in the “Westchester County Critical Environmental Area Map,” to be developed, maintained and kept by the Westchester County Department of Planning, are hereby designated as critical environmental areas:

A. All those areas in the Towns of North Castle, Rye and Harrison that lie within the 60 Ldn noise contour around the Westchester County Airport, as computed and depicted in the Environmental Assessment/Final Environmental Impact Statement dated November 1988 for the Westchester County Airport Terminal Facilities Modernization Project;

B. Croton Point Park, and all land within one mile of its border up to the first occurrence of a thirty-foot contour line, as shown on the United States Geological Survey quadrangle map of this area, and including the Croton River and all lands within 500 feet of its shoreline, from the railroad viaduct at Croton Bay to the base of the Cornell Dam at the west end of the Croton Reservoir as well as those lands more than 500 feet from the Croton River in the Village of Croton-on-Hudson and the Towns of New Castle and Cortlandt, that are designated as lying within Zone 3 – Watershed Tributary to Aquifer on the map entitled “Figure 1, Zones of Ground-Water Protection, Croton-on-Hudson by Geraghty and Miller, Ground-Water Hydrologists. Said lands lie within the Town of Cortlandt, the Town of New Castle, the Town of Ossining, and the Village of Croton-on-Hudson;

C. Byram Lake in the Towns of North Castle and Bedford, and all lands within the immediate tributary area thereto, as shown on and calculated from the United States Geological Survey quadrangle for this area;

D. The Tarrytown Lakes Reservoirs and the drainage area immediately tributary thereto in the Towns of Greenburgh and Mt. Pleasant, and the Village of Tarrytown;

E. Long Island Sound, its islands and underwater land and all shore lands within the cultural boundaries of its shoreline as depicted in the July 1989 report of the Westchester County Environmental Management Council on Critical Environmental Area Designations;

F. All County and State park lands as designated by the Westchester County Department of Planning's "Major Open Space" map as amended and revised;

G. The Mianus River and all lands within 500 feet of the shoreline or the edge of the state designated freshwater wetland along the river, whichever is greater. Said lands lie within the Towns of North Castle, Bedford and Pound Ridge;

H. The Mianus Gorge Preserve. Said lands lie within the Towns of North Castle, Bedford and Pound Ridge;

I. The Indian Brook Reservoir and immediate drainage area and all land within 500 feet of the two principal tributaries, and all land within 500 feet from the shoreline of the Reservoir, Little Lake and Clifdale Pond and the wetland in the headwaters of the northeast tributary. Said lands lie within the Towns of Ossining, New Castle and Cortlandt;

J. The Larchmont Reservoir and the James G. Johnson, Jr. Conservancy. Said lands lie within the Town of Mamaroneck and City of New Rochelle;

K. The Pocantico Lakes and Watershed property as depicted in the July 1989 report of the Westchester County Environmental Management Council on Critical Environmental Area Designations. Said lands lie within the Town of Mt. Pleasant and the Village of Briarcliff Manor;

L. The Hudson River, its islands and underwater land and all shore lands within the cultural boundaries of its shoreline as depicted in the September 1989 report of the Westchester County Department of Planning;

M. Peekskill Hollow Brook upstream from its point of intersection with the boundary of the City of Peekskill to the point where the brook enters the County of Putnam, and including all lands on the north side of the brook that are tributary to it above the Peekskill city boundary and are within Westchester County, and including those lands on the south side of the brook that are bounded by the Peekskill city boundary and the centerlines of Oregon Road to its intersection with Peekskill Hollow Road, and thence along Peekskill Hollow Road to its intersection with Trolley Road, and thence along Trolley to the Putnam County line. Said lands lie within the Town of Cortlandt;

N. All watershed properties, except those owned by the City of New York, as designated by the Westchester County Department of Planning's "Major Open Space" map as amended and revised; and

O. All land within 500 feet from the New York City Boundary of the Amawalk Reservoir. Said land lies within the Town of Somers.

§694..31. Exemptions .

This Chapter shall not apply to Type II, Excluded or Exempt actions as defined by the State Environmental Quality Review Act and regulations promulgated thereunder.

§694..41. Determination .

The County Board hereby further finds and determines that this local law could constitute a Type I action but will not have a significant adverse impact on the environment pursuant to 6 N.Y.C.R.R. §617.6(g) for the following reasons:

- 1) the public health will be promoted and benefited by the contemplated designations;
- 2) areas that have inherent ecological, geological and hydrological sensitivities to change, will be favorably affected; and
- 3) enactment of this local law will not result in any changes in use or adverse impact on the environment contemplated by 6 N.Y.C.R.R. §617.11.

§694.51. Filing of Designations .

A copy of this Chapter and the map to be developed, maintained and kept by the County Department of Planning, shall be filed with the Commissioner of the New York State Department of Environmental Conservation, the appropriate regional office of the Department and any other agency regularly involved in approving, undertaking or funding actions in the municipality in which the area has been designated by the Commissioner of Planning as soon as practicable after the development of the required map. Designations pursuant to this Chapter will take effect thirty (30) days after such filing in accordance with 6 N.Y.C.R.R. §617.4.

All County departments, agencies, employees, officers, officials, contractors and consultants shall cooperate fully in implementing the provision of this law.

§694.61. Severability .

If any provision of this Chapter or the application thereof is held invalid, the remainder of this Chapter and the application thereof to other persons or circumstances, shall not be affected by such holding and shall remain in full force and effect.

Section 2. This local law shall take effect immediately.

WESTCHESTER COUNTY

NEW YORK

Description of CEA Designations

Pursuant to Chapter 694, Westchester County Charter

January 1990

CRITICAL ENVIRONMENTAL AREA DESIGNATIONS

- A. WESTCHESTER COUNTY AIRPORT 60 LDN NOISE CONTOUR
- B. CROTON POINT PARK AND RIVER
- C. BYRAM LAKE AND IMMEDIATE DRAINAGE AREA
- D. TARRYTOWN LAKES RESERVOIR AND IMMEDIATE DRAINAGE AREA
- E. LONG ISLAND SOUND
- F. COUNTY AND STATE PARK LANDS
- G. MIANUS RIVER
- H. MIANUS GORGE PRESERVE
- I. INDIAN BROOK RESERVOIR AND IMMEDIATE DRAINAGE AREA
- J. LARCHMONT RESERVOIR AND JAMES G. JOHNSON JR. CONSERVANCY
- K. POCANTICO LAKE AND WATERSHED PROPERTY
- L. HUDSON RIVER AND SHORELINE
- M. PEEKSKILL HOLLOW BROOK
- N. NON-NEW YORK CITY WATERSHED PROPERTIES
 - 1. IRVINGTON RESERVOIR
 - 2. WHITE PLAINS RESERVOIRS
 - 3. GREENWICH-PORT CHESTER WATERWORKS
 - 4. BROWNS RESERVOIR
 - 5. STAMFORD WATER COMPANY LANDS
- O. 500' AREA AROUND AMAWALK RESERVOIR WATERSHED

INFORMATIONAL SUMMARY

CRITICAL ENVIRONMENTAL AREAS – WESTCHESTER COUNTY

On March 1, 1989, the County Executive submitted a proposed local law to the County Board of Legislators designating five critical environmental areas: Croton Point Park and River; Byram Lake and drainage area; Tarrytown Lakes and drainage area; Long Island Sound; and the Airport 60 Ldn. Based on review by the County Board of Legislators Committee on Water Resources and Coastal Regions, recommendations by the County Environmental Management Council, local governments, and environmental groups in the county, several additional CEA areas have been added to the proposal for countywide CEA designation. (See Matrix listing.)

DESCRIPTION OF CEA DESIGNATIONS

Westchester County Airport 60 Ldn Noise Contour – All those areas in the towns of North Castle, Rye and Harrison that lie within the 60 Ldn noise contour around the Westchester County Airport. The designation of the area within the 60 Ldn contour is based on the benefit to human health criteria. The following noise compatibility statement excerpted from the Westchester County Airport Master Plan Update Environmental Assessment/Final Generic Environmental Impact Statement, February 4, 1987, has published guidelines for land use compatibility with aircraft noise. The regulations also permit localities to establish their own criteria. In previous noise work at Westchester County Airport, the area within the Ldn 65 contour was defined as the primary impact area and that within the Ldn 60 contour as a secondary impact area. This definition was established in the County Airport Noise Control and Land Use Compatibility (ANCLUC) Plan, November 1982.

The County CEA designation of the area within the 60 Ldn contour is for the purpose of insuring that the noise impact compatibility of proposed land uses will be assessed. The boundary is depicted on the map attached: Existing (1988) Ldn Noise Contours, Fig. 4.2, Environmental Assessment/Final Environmental Impact Statement, Westchester County Airport Terminal Facilities Modernization Project.

MUNICIPALITIES AFFECTED BY THE DESIGNATION: North Castle, Rye Town, Harrison.

Croton Point Park and River – The Croton Point Park and Croton River are an important point along the Hudson River estuary. The Park contains 504 acres of land and extensive water rights, tidal marshes, significant archaeological and historic areas, and scenic views of the Hudson. The Croton Point is unique in the Westchester Hudson River area as the outstanding example of glacial features and the delta formed by the Croton River in the

ancient freshwater Lake Hudson immediately following the last ice age. This geology is also significant because of more recent changes created by the rise of sea level.

The Gorge portion of the designation is a deep, narrow river valley long valued for its geologic exposures of the underlying bedrock. In addition, a thick sand and gravel zone now serves as the aquifer for a major Croton Village water source. Because of its intermunicipal aspects, the Croton designation has been expanded at the request of the Village to include that area designated as lying within Zone 3 identified in the Geraghty & Miller report, "Aquifer Protection Plan, Croton-on-Hudson Well Field," prepared for the Village of Croton, October 1988.

MUNICIPALITIES AFFECTED BY THE DESIGNATION: Croton, Ossining Town, New Castle, Cortlandt.

Byram Lake and immediate drainage area – as shown on and calculated from the U.S. Geological Survey quadrangle for this area and depicted on the attached map. Byram Lake serves as a water source for the Village of Mt. Kisco, and because of its intermunicipal location beyond the borders of that Village, is included in the County designation for the enhanced procedural requirement that this designation provides.

MUNICIPALITIES AFFECTED BY THE DESIGNATION: Bedford, North Castle.

Tarrytown Lakes Reservoir and immediately drainage area – This area was nominated by the Village of Tarrytown, which had already designated the portion within its own Village as a critical environmental area. Because portions of the watershed include undeveloped lands in the adjacent towns, the designation of this area by the County is proposed in order to preserve and protect the water quality tributary thereto.

MUNICIPALITIES AFFECTED BY THE DESIGNATION: Mt. Pleasant, Greenburgh, Tarrytown, North Tarrytown [Sleepy Hollow].

Long Island Sound – The Long Island Sound shoreline has been designated as a coastal zone as part of the New York State Coastal Management Program and six shoreline communities are preparing or have completed Local Waterfront Revitalization plans under the New York program. The shoreline exhibits many areas of tidal marsh, several areas of scenic and historic interest and many areas of important environmental features such as the Premium River-Pine Brook Wetland Complex, Guion Creek, Otter Creek, Migid Pond and the Van Amringe Mill Pond. The boundary for this designation follows cultural features such as roads to closely reflect the direct land relationship to the Sound.

MUNICIPALITIES AFFECTED BY THE DESIGNATION: Pelham Manor, Pelham Town, New Rochelle, Larchmont, Mamaroneck Village, Mamaroneck Town, Rye Town, Rye City, Port Chester.

County and State Park Lands – There are over 15,000 acres of County and State land in Westchester which through their designation as park land, provide recreational, educational,

social, cultural and ecological value for county residents and visitors. The park lands are as diverse in their natural feature characteristics as they are in the opportunities which they offer for recreation and education. Inappropriate development on lands contiguous to the parks can adversely impact these county resources. The SEQRA Act provides only a portion of the necessary attention to actions which potentially can adversely impact these facilities. The CEA designation provides the additional review procedure to insure all actions are considered in relation to these important resources. The basis for the designation is the County Planning Department's map, "Major Open Spaces," as amended and revised. All new park lands acquired by the County would automatically be added to this category of CEA designation, such as the pending acquisition of Kitchawan Research Field Station in Yorktown, which does not appear on the 1986 map. The list of the parks appearing on the map and included in this category of CEA is provided at the end of this summary.

MUNICIPALITIES AFFECTED BY THE DESIGNATION: all six cities; the villages of Ardsley, Briarcliff Manor, Dobbs Ferry, Harrison, Hastings, Irvington, North Tarrytown [Sleepy Hollow], Ossining, Tuckahoe, Scarsdale and Tarrytown, and all 22 towns.

Mianus River (including the East and West Branch in the Town of North Castle) – The Mianus River runs through the towns of North Castle, Bedford and Pound Ridge. It is a water supply source for the Connecticut-American Water Company which serves residents in Greenwich, Port Chester, Rye City and Rye Brook. The water quality classification of the Mianus River was recently upgraded during a statewide process by the NYS Department of Environmental Conservation to the second highest class, "AA(s)". A major portion of the river is also a State designated Class I wetland with several areas of Class II wetlands. The designation of the river as a CEA would be a benefit to the public health of the communities served by it and through which it runs. The quality of the water for drinking purposes and for fish spawning make this designation critical. The boundary for this CEA designation is: 500 feet on either side of the bank of the river, or the edge of the freshwater wetland, as defined by the NYSDEC, if greater than 500 feet.

MUNICIPALITIES AFFECTED BY THE DESIGNATION: North Castle, Bedford, Pound Ridge.

Mianus Gorge Preserve – The Gorge Preserve is the pioneer land project of The Nature Conservancy, and the first registered Natural History Landmark, so designated by the Secretary of the Interior in 1964, and as such, is an area of both local and national significance. More than 100 varieties of trees, shrubs, vines and more than 150 species of birds, and over 250 wildflowers have been found and identified in the Preserve. This important natural resource can be adversely effected by the cumulative impact of development around it. Its ecological, educational and scenic value will be enhanced by the County designation. In the Gorge Preserve, the boundary is defined as follows: the Gorge Preserve boundary or 500' from the river/reservoir, whichever is greater.

MUNICIPALITIES AFFECTED BY THE DESIGNATION: North Castle, Bedford, Pound Ridge.

Indian Brook Reservoir and immediate drainage area – The 35-acre parcel, including a 26-acre lake is owned by the Village of Ossining, however, the major portion of the Village-owned land is located within the Town of Ossining, with approximately two acres lying to the north in the Town of New Castle. The larger watershed area is north in New Castle. The reservoir, created in 1888 when the dam was constructed, has a capacity of 101 million gallons. Indian Brook water is combined with New York City water to provide water supply for approximately 30,000 residents in the Village and Town of Ossining. ON an annual basis, the reservoir system provides 60% of the water to the service area. The State water classification of the reservoir is “A”.

The reservoir is fed by two tributaries which are important to the quality and quantity of the water supply. The northern tributary is bounded by steep wooded slopes which protect its quality which is classified by the State as “A”. The northeastern tributary is fed by a State-regulated Class II wetland which serves water retention and purification functions. The streams, ponds and adjacent areas, and wetland comprise a habitat complex suitable for a diverse habitat assemblage. The proposed designation and contiguous area are representative of the high quality scenic and aesthetic character of the lower Hudson Valley.

For the purpose of this designation, the immediate drainage area is defined as: the Indian Brook Reservoir including the area within 500 feet of the two principal tributaries; 500 feet from the shore of the reservoir, Little Lake and Cliffdale Pond; and including the wetland in the headwaters of the northeast tributary. This designation is also covered by the CEA category, “Non-New York City Watershed Properties”.

MUNICIPALITIES AFFECTED BY THE DESIGNATION: Ossining Town, New Castle, Cortlandt.

Larchmont Reservoir and James G. Johnson Jr. Conservancy – The 60-acre reservoir and conservancy lie within the Town of Mamaroneck and the City of New Rochelle. The reservoir has been owned by the Village of Larchmont since 1922 when it was acquired for water supply purposes. No longer a water supply for the Village, the area has been dedicated “in perpetuity” by the Village of Larchmont as a “conservation area for activities appropriate to its natural setting and quiet beauty.” The reservoir-conservancy serves as a stand-by water supply for the Village; provides flood control in the Sheldrake watershed; is an outdoor classroom for the study of nature by people of all ages; and is habitat for a variety of flora and fauna.

The boundary of the designation coincides with the boundary of the reservoir/conservancy land. This designation is also included in the CEA category, “Non-New York City Watershed Properties”.

MUNICIPALITIES AFFECTED BY THE DESIGNATION: Town of Mamaroneck, New Rochelle.

Pocantico Lake and Watershed Property – The Pocantico Lake Reservoir provided drinking water to the residents of Hastings, Dobbs Ferry, North Tarrytown [Sleepy Hollow]

and Ardsley until 1977 when it was abandoned as a water supply. The lake has also served a flood control function for downstream properties. Recognized as a potential future alternate water source, the reservoir is one of the waterbodies being studied as part of the County Health Department's ambient water quality monitoring program. The State water quality classification of the Reservoir is "A".

This designation is being proposed because of its potential multi-municipal water source and its locational aspects which are intermunicipal.

MUNICIPALITIES AFFECTED BY THE DESIGNATION: Mt. Pleasant, Briarcliff Manor.

Hudson River and shoreline – The Hudson River is recognized as one of New York's outstanding natural resources. It is one of the nation's most important estuaries, is world renowned for its history and scenery, is ecologically vital to the marine fishery and is one of New York's most important water recreation assets.

The New York State Coastal Management Program recognizes the importance of public access to coastlines in its 44 statewide coastal policies. Public access to the river has been cut off through the years by development, in particular, the ConRail [Metro-North] railroad which occupies the shore lands along much of the river bank. The river value is further emphasized in the Coastal Zone Management Program by the significant coastal fish and wildlife habitat areas designated by the New York State Department of State under provisions of Article 42, Section 910-920 of the State Executive Law. More than 11 miles of shore and adjacent lands border these officially recognized significant habitat water areas. All of the estuary is further recognized by the State designation of the Hudson River Estuarine District pursuant to the Hudson River Estuary Management Act. Section 11-0306 of the Act authorizes the Department of Environmental Conservation to prepare a management program for the District. This work which is now in progress emphasizes many of the characteristics identified by those who have requested that the County establish the Hudson River CEA.

Marshes fed by a mixture of freshwater from streams and saline water from the estuary occur at many locations along the shore and a tidal marsh borders portions of Croton Point, proposed for designation as a separate and distinct CEA.

Four County parks and a number of municipal parks and historic preserves have been established along the shore affording protection and either direct or visual public access to the river along with many marinas which serve water recreation needs.

The near-shore lands contain more than 35 recognized historic sites and an extremely rich archaeological zone reflecting the prehistoric Indian dependency on the Hudson fishery. In addition, the estuary and adjacent landward areas afford a diversity of habitats for wildlife. Of particular significance is the potential return of the peregrine falcon and the bald eagle which once utilized this reach of the river as a preferred habitat and which are designated endangered species by the U.S. Department of the Interior.

Boundaries have been established under the State Coastal Zone Management Plan and the State Local Waterfront Revitalization Act. Certain actions within lands between the shore and the coastal boundary are subject to review by the Department of State to determine their consistency with the 44 policies of statewide coastal concern. Six Westchester County Hudson River municipalities are developing Local Waterfront Revitalization Plans (LWRPs) which when completed will implement the state law and will include local land use regulations.

The CEA designation for the Hudson River will, by providing a more careful assessment of unlisted SEQR actions, assist and support the review of actions for consistency with the coastal zone management plan and municipal LWRPs.

The upland boundaries recommended for the Hudson River CEA are roads which can be easily identified by involved agencies and which encompass lands most significant for the many important characteristics discussed above. The boundary follows Riverdale Avenue from the New York City line northward.

MUNICIPALITIES AFFECTED BY THE DESIGNATION: Cortlandt, Peekskill, Buchanan, Croton, Ossining Village and Town, Briarcliff Manor, Mt. Pleasant, North Tarrytown [Sleepy Hollow], Irvington, Dobbs Ferry, Hastings, Yonkers.

Peekskill Hollow Brook – Peekskill Hollow Brook has been proposed for CEA designation because its drainage area is a public water supply source. The Brook is located at the mouth of the Hudson River at Annsville Creek in Peekskill and continues north through Cortlandt into Putnam County. While much of the area surrounding the Brook has been developed, substantial areas remain in a wooded and undeveloped stage. Portions of the Brook have been classified by the New York State Department of Environmental Conservation as “B”, A(T)” and “C(T)” indicating highest and best usage including drinking water, trout propagation and survival.

MUNICIPALITIES AFFECTED BY THE DESIGNATION: Peekskill, Cortlandt.

Non-New York City Watershed Properties – This category of CEA designation, approximately 2,442 acres, includes public and privately-owned watershed property, specifically the Greenwich/Port Chester Waterworks; Irvington Reservoir; Norwalk Water Company; Peekskill Reservoir; Stamford Water Company; and White Plains Reservoir. These areas are designated for their overall public health benefit as water supplies, their open space value and ecological significance, as well as for intermunicipal characteristics. This designation completes the designation of current and potential water supplies as described above.

MUNICIPALITIES AFFECTED BY THE DESIGNATION: Lewisboro, Pound Ridge, North Castle, Peekskill, Irvington, White Plains.

500' area around Amawalk Reservoir Watershed – The Amawalk Reservoir is a major source of water in County Water District #2 serving Yorktown, portions of Cortlandt and

Somers. It is important to protect the reservoir as a water source, since it has been stressed in recent years by increasing land use development, as well as deicing practices and other cultural activities in the surrounding area. Unlike other water sources, this reservoir does not have a large amount of watershed land to function as a buffer, thus, the CEA designation is important.

MUNICIPALITIES AFFECTED BY THE DESIGNATION: Somers.

WESTCHESTER COUNTY
CRITICAL ENVIRONMENTAL AREAS
January 29, 1996

<u>LOCATION</u>	<u>EFFECTIVE DATE</u>
Westchester, County of	01-30-90
a. Westchester County Airport 60 Ldn Noise Contour	
b. Croton Point Park and River	
c. Byram Lake and Immediate Drainage Area	
d. Tarrytown Lakes Reservoir and Immediate Drainage Area	
e. Long Island Sound	
f. County and State Park Lands	
g. Mianus River	
h. Mianus Gorge Preserve	
i. Indian Brook Reservoir and Immediate Drainage Area	
j. Larchmont Reservoir and James G. Johnson Jr. Conservancy	
k. Pocantico Lakes and Watershed Property	
l. Hudson River and Shoreline	
m. Peekskill Hollow Brook	
n. Non-New York City Watershed Properties	
o. 500' Area Around Amawalk Reservoir Watershed	
Bedford, Town of	
Geographic Area Overlaying the Aquifer within Town	11-03-84
Dobbs Ferry, Village of	
Juhring Estate-76-acre open space owned by Village	01-27-96
Greenburgh, Town of	03-01-79
a. Freshwater Wetlands	03-01-79
b. Floodplains	03-01-79
c. Slopes of 40% or greater	03-01-79
d. Hilltops at or above 400 feet above sea level	07-10-93
Larchmont, Village of	
East Creek	02-21-89
Mamaroneck Town of	
a. Larchmont Reservoir-Sheldrake-Leatherstocking FWW Complex	09-30-89
b. Premium River-Pine Brook Wetlands Complex	09-30-89
c. Hommocks-East Creek Wetlands Complex	09-30-89
Mamaroneck, Village of	12-25-80
a. Otter Creek (42 acres)	
b. Guion Creek (11 acres)	

- c Migid Pond (5 acres)
- d. Van Amringe Mill Pond (25 acres)
- e. Mamaroneck Reservoir (315 acres)
- f. Hampshire Country Club (100 acres)
- g. Hommocks Conservation Area (Village of Mamaroneck Portion) 02-02-85

Somers, Town of	
Baldwin Place Area	9-26-90
Tarrytown, Village of	
Tarrytown Lakes Watershed Area	12-29-83

Dear Applicant:

Enclosed are the required forms for completing an application for a Steep Slope Disturbance Permit with the Town of Mount Pleasant. Each form is designed to be self-explanatory, and when necessary, instructions for completing the forms have been included. If you have any questions, please call the Town of Mount Pleasant Engineering Department at 742-2317. Please submit the completed application to :

**Town of Mount Pleasant
Attn: Engineering Department
One Town Hall Plaza
Valhalla, NY 10595**

Checklist for completing an application for a steep slope disturbance permit:

- ☒ Application Form
- ☐ N/A SEQR - Short Environmental Assessment Form, when application reviewed by Engineering Dept.
- ☒ SEQR - Long Environmental Assessment Form, when application reviewed by Planning Board.
- ☐ N/A Additional project descriptions, if appropriate or required.
- ☒ Complete Site Plans, with original signature and seal of NYS licensed PE or RA.
- ☒ Fee enclosed, payable to the Town of Mount Pleasant. (checks only)
- ☐ Other, please describe: _____

☐ N/A **Note:** A Performance Bond may be required.

THE APPLICANT SHALL SUBMIT THE ABOVE INFORMATION AS FOLLOWS:

A. Engineering Department Review - Five (5) Complete sets.

or

B. Planning Board Review - Twelve (12) Complete sets.

Note: The Planning Board review will follow SEQR requirements, which includes a public hearing.

**APPLICATION FOR STEEP SLOPE
DISTURBANCE PERMIT**

Permit # _____
(ISSUED BY ENGINEERING DEPT.)

1. IDENTIFICATION OF APPLICANT

DATE 3/9/21

Owner Meadows at Briarcliff LLC
Address 17 Saw Mill River Road
Hawthorne, NY 10532
Applicant Zappico Real Estate Development, LLC
(If other than owner)
Address 17 Saw Mill River Road
Hawthorne, NY 10532

Phone (914) 906-5548

Phone (914) 232-1342

Legal Signatures:

Owner

Applicant

2. IDENTIFICATION OF SUBJECT PROPERTY

Address 715 Sleepy Hollow Road
Section 105.17 **Block** 1 **Lot (s)** 15
Zoning District R-40 **Flood Hazard Area** No **Vegetation** grass/impervious
Soil Types Charlton-Chatfield Complex, Very rocky
Total Lot Area 1,604,175 **s.f.**
Area with existing slopes 0% to 14.9% 588,702 **s.f.**
Area with existing slopes 15% to 24.9% 149,441 **s.f.** **Steep Slope** **(Eng. Dept.)**
Area with existing slopes 25% to 34.9% 96,226 **s.f.** **Very Steep Slope (Planning Bd.)**
Area with existing slopes 35% and greater 98,117 **s.f.** **Excessively Steep (Planning Bd)**

3. PURPOSE OF APPLICATION AND RELIEF SOUGHT (Proposed Activity)

Proposed conventional subdivision for 31 single family lots.
Proposed cluster subdivision has been included to reduce
slope disturbance to the least amount possible.

4. APPLICANT HARDSHIPS (If Applicable)

Property is restricted by steep slopes and wetlands. Proposed plans have been designed to
disturb the least amount of slopes possible and disturb zero wetlands.

5. MITIGATING MEASURES PROPOSED BY APPLICANT:

Proposed cluster layout avoids almost all steep slope areas. Disturbance is kept as minimal
as possible. Sediment and erosion control practices have been shown on the plan.

APPLICATION FOR STEEP SLOPE DISTURBANCE PERMIT (cont.)

12. RECOMMENDATIONS: (For Official Use Only)

Engineer:

Planning Board:

13. ACTION TAKEN: (For Official Use Only)



ZAPPICO
REAL ESTATE DEVELOPMENT

STEEP SLOPE PROTECTION NOTES CH.180: § 180-7

1. There is no reasonable alternative for the proposed regulated activity on that portion of the site not containing steep slopes;

THERE IS NO REASONABLE ALTERNATIVE TO THE PROPOSED SITE LAYOUT. PROPOSED CLUSTER PLAN SIGNIFICANTLY REDUCES SLOPE DISTURBANCE.

2. The planning, design and development of buildings and site improvements limits the rate of stormwater runoff to a zero increase with overflow to a municipal drain system where practicable and provides the maximum in structural safety, slope stability, and human enjoyment while adapting the affected site to, and taking advantage of, the best use of the natural terrain and aesthetic character;

THERE WILL BE A ZERO INCREASE IN STORMWATER RUNOFF. PROPOSED STORMWATER MANAGEMENT HAS BEEN SHOWN ON THE PLAN.

3. The terracing of building sites is kept to a minimum;

TERRACING HAS BEEN KEPT TO A MINIMUM.

4. Roads and driveways follow the natural topography to the greatest extent possible in order to minimize the potential for erosion, and they are consistent with other applicable regulations of the Town of Mount Pleasant and current engineering practices;

PROPOSED COMMON DRIVEWAY FOLLOW THE NATURAL TOPO TO THE GREATEST EXTENT POSSIBLE AND HAS BEEN DESIGNED IN ACCORDANCE WITH T/O MT PLEASANT STANDARDS

5. Habitat is quantified and protected, no endangered species of flora or fauna are adversely impacted and any replanting shall be maintained by the applicant for two years and shall consist of indigenous vegetation that at a minimum replicates the original vegetation on the site, in kind;

N/A - NO ENDANGERED SPECIES ON THE SITE

6. The natural elevations and vegetative cover of ridgelines are disturbed only if the crest of a ridge and the tree line at the ridge remain uninterrupted. This will be accomplished either by positioning buildings and areas of disturbance below a ridgeline or by positioning buildings and areas of disturbance at a ridgeline so that the elevation of the roofline of the building is no greater than the elevation of the natural tree line, so long as no more than 100 feet along the ridgeline, to a width of 100 feet generally centered on the ridgeline, is disturbed;

N/A - NO RIDGE LINE ON THE SITE

7. Any regrading blends in with the natural contours and undulations of the land;

PROPOSED GRADES HAVE BEEN SHOWN TO BLEND INTO EXISTING GRADES ON THE SITE

8. Cuts and fills are rounded off to eliminate sharp angles at the top, bottom, and sides of regraded slopes;

ALL THE CUT AND FILL ON SITE HAS BEEN GRADED SO THAT THE SLOPES ARE ROUNDED AND SMOOTH AND THERE ARE NO SHARP ANGLES



ZAPPICO
REAL ESTATE DEVELOPMENT

9.The angle of cut and fill slopes does not exceed a slope of one vertical to two horizontal, except where retaining walls, structural stabilization, or other methods acceptable to the Town Engineer are used;

ALL GRADING ON THE SITE HAS BEEN SHOWN AS 1V:2H OR LESS EXCEPT WHERE RETAINING WALLS OR ROCK CUTS ARE PROPOSED.

10.Tops and bottoms of cut and fill slopes are set back from the structures an adequate distance to ensure the safety of the structures in the event of the collapse of the cut or fill slopes. Generally, such distance is six feet plus 1 /2 the height of the cut or fill;

GRADING AROUND THE STRUCTURES HAS BEEN SETBACK MORE THAN 6'

11.Disturbance of rock outcrops is by means of explosives only if labor and machines are not effective and only if rock blasting is conducted in accordance with all applicable regulations of the Town of Mount Pleasant and the State of New York. The rock shall be effectively stabilized;

ROCK OUTCROPPING THROUGHOUT SITE. CHIPPING AND BLASTING ARE EXPECTED AND WILL BE DONE IN ACCORDANCE WITH THE TOWN OF MOUNT PLEASANT BLASTING REGULATIONS.

12.Disturbance of slopes is undertaken in workable units in which the disturbance can be completed and stabilized in one construction season so that areas are not left bare and exposed during the period from December 15 through April 15;

NO AREAS OF THE SITE WILL BE LEFT BARE OR EXPOSED BETWEEN 12/15 AND 4/15

13.Disturbance of existing vegetative ground cover does not take place more than 15 days prior to grading and construction;

GROUND COVER WILL NOT BE DISTURBED MORE THAN 15 DAYS PRIOR TO SITE GRADING

14.Temporary soil stabilization, including, if appropriate, temporary stabilization measures such as netting or mulching to secure soil during the grow-in period, is applied to an area of disturbance within two days of establishing the final grade, and permanent stabilization is applied within 15 days of establishing the final grade;

NO MORE THAN 2 DAYS WILL PASS WITHOUT HAVING TEMPORARARY STABILAZATION SET IN PLACE FOR THE DISTURBED AREAS

15.Soil stabilization is applied within two days of disturbance if the final grade is not expected to be established within 60 days;

PERMINANT STABILIZATION WILL BE INSTALLED IMEDATLEY AFTER ESTABLISHING THE FINAL GRADE

16.Measures for the control of erosion and sedimentation are undertaken consistent with the Westchester County Soil and Water Conservation District's "Best Management Practices Manual for Erosion and Sediment Control," and the New York State Department of Environmental Conservation's "Guidelines for Urban Erosion and Sediment Control," as amended, or its equivalent satisfactory to the Planning Board;



ZAPPICO
REAL ESTATE DEVELOPMENT

SEDIMENT AND EROSION CONTROL MEASURES ARE CONSISTANT WITH WESTCHESTER COUNTY'S SOIL AND WATER CONSERVATION DISTRICT'S "BEST MANAGEMENT PRACTICES MANUAL FOR EROSION AND SEDIMENT CONTROL,"

17.All proposed disturbance of slopes is undertaken with consideration of the soils limitations characteristics contained in the latest Identification Legend, Westchester County Soils Survey, as prepared by the Westchester County Soil and Water Conservation District, in terms of recognition of limitation of soils on slopes for development and application of all mitigating measures, and as deemed necessary by the Town Engineer;

SOILS ON THE SITE HAVE BEEN IDENTIFIED AND NOTED ON THE PLANS AND ARE SUITABLE

18.Topsoil is removed from all areas of disturbance, stockpiled and stabilized in a manner to minimize erosion and sedimentation, and replaced elsewhere on the site at the time of final grading;

TOPSOIL WILL BE STRIPPED FROM THE DISTURBED AREAS AND STOCKPILED WITH TEMPORARY STABILIZATION AS SHOWN ON THE PLAN

19.Topsoil stockpiling is not permitted on slopes of greater than 10%;

TOPSOIL WILL NOT BE STOCKPILED IN SLOPES OVER 10%. STOCKPILES SHOWN ON PLAN ARE IN FLAT AREAS ON DRIVEWAY.

20.Compaction of fill materials in fill areas is such to ensure support of proposed structures and stabilization for intended uses;

ALL FILL WILL BE TAMPED, ROLLED, OR COMPRESSED TO NOT ONLY SUPPORT THE STRUCTURE BUT PREVENT SETTLING OF FINAL GRADES

21.Structures are designed to fit into the hillside rather than altering the hillside to fit the structure, employing methods such as reduced footprint design, step-down structures, stilt houses, and minimization of grading outside the building footprint;

THE PROPOSED FLOOR PLAN HAVE BEEN DESIGNED SPECIFICALLY TO FIT INTO THE HILLSIDE

22.Development is sited on that portion of the site least likely to impact the natural landforms, geological features, and vegetation;

THERE ARE NO GEOLOGICAL FEATURES ON THE SITE OTHER THAN ROCK OUTCROPPINGS TOWARDS THE REAR OF THE SITE. THE CLUSTER LAYOUT PROPOSES HOMES UP FRONT ALONG THE ROAD AVOIDING THE ROCK.

23.The applicant has provided landscaping plans for after-development;

LANDSCAPING AROUND THE PROPOSED HOMES WILL CONSIST OF AN ASSORTMENT OF FOUNDATION PLANTINGS AS WELL AS SCREENING TREES AND SHRUBS.

24.The development conforms with the requirements set forth in Chapter 218, Zoning, of the Code of the Town of Mount Pleasant;

EXISTING LOT AND PROPOSED SUBDIVISION CONFORMS WITH THE REQUIREMENTS SETFORTH IN THE R-10 ZONE.



ZAPPICO
REAL ESTATE DEVELOPMENT

25. The construction equipment has adequate access so as not to disturb anything outside the approved limit of disturbance that shall be shown on the plan drawings and, when approved, staked in the field.

THE CONSTRUCTION EQUIPMENT HAS ADEQUATE ACCESS TO THE SITE AND WILL NOT DISTURB BEYOND THE LIMITS OF DISTURBANCE.

Dear Applicant:

Enclosed are the required forms for completing an application for a Steep Slope Disturbance Permit with the Town of Mount Pleasant. Each form is designed to be self-explanatory, and when necessary, instructions for completing the forms have been included. If you have any questions, please call the Town of Mount Pleasant Engineering Department at 742-2317. Please submit the completed application to :

**Town of Mount Pleasant
Attn: Engineering Department
One Town Hall Plaza
Valhalla, NY 10595**

Checklist for completing an application for a steep slope disturbance permit:

- ☒ Application Form
- ☐ N/A SEQR - Short Environmental Assessment Form, when application reviewed by Engineering Dept.
- ☒ SEQR - Long Environmental Assessment Form, when application reviewed by Planning Board.
- ☐ N/A Additional project descriptions, if appropriate or required.
- ☒ Complete Site Plans, with original signature and seal of NYS licensed PE or RA.
- ☒ Fee enclosed, payable to the Town of Mount Pleasant. (checks only)
- ☐ Other, please describe: _____

☐ N/A **Note:** A Performance Bond may be required.

THE APPLICANT SHALL SUBMIT THE ABOVE INFORMATION AS FOLLOWS:

A. Engineering Department Review - Five (5) Complete sets.

or

B. Planning Board Review - Twelve (12) Complete sets.

Note: The Planning Board review will follow SEQR requirements, which includes a public hearing.

**APPLICATION FOR STEEP SLOPE
DISTURBANCE PERMIT**

1. IDENTIFICATION OF APPLICANT

Owner	<u>Meadows at Briarcliff LLC</u>	Permit #	<u>(ISSUED BY ENGINEERING DEPT.)</u>
Address	<u>17 Saw Mill River Road</u>	DATE	<u>3/11/21</u>
	<u>Hawthorne, NY 10532</u>	Phone	<u>(914) 906-5548</u>
Applicant	<u>Zappico Real Estate Development, LLC</u>	Phone	<u>(914) 232-1342</u>
	<u>(If other than owner)</u>		
Address	<u>17 Saw Mill River Road</u>		
	<u>Hawthorne, NY 10532</u>		

Legal Signatures:

Owner

Applicant

2. IDENTIFICATION OF SUBJECT PROPERTY

Address	<u>715 Sleepy Hollow Road</u>		
Section	<u>105.17</u>	Block	<u>1</u>
		Lot (s)	<u>15</u>
Zoning District	<u>R-40</u>	Flood Hazard Area	<u>No</u>
		Vegetation	<u>grass/impervious</u>
Soil Types	<u>Charlton-Chatfield Complex, Very rocky</u>		
Total Lot Area	<u>1,604,175</u>		<u>s.f.</u>
Area with existing slopes 0% to 14.9%	<u>19.51 Acres</u>	<u>s.f.</u>	
Area with existing slopes 15% to 24.9%	<u>6.18 Acres</u>	<u>s.f.</u>	Steep Slope (Eng. Dept.)
Area with existing slopes 25% to 34.9%	<u>4.28 Acres</u>	<u>s.f.</u>	Very Steep Slope (Planning Bd.)
Area with existing slopes 35% and greater	<u>6.85 Acres</u>	<u>s.f.</u>	Excessively Steep (Planning Bd)

3. PURPOSE OF APPLICATION AND RELIEF SOUGHT (Proposed Activity)

Proposed Cluster Subdivision for 31 building lots.
Cluster Subdivision has been designed to reduce slope disturbance
to the least amount possible. Cluster Subdivision proposes
1.47 Ac disturbance of Steep Slope, 0.38 Acre Very Steep Slope
0.24 Acre of Excessively Steep Slope.

4. APPLICANT HARDSHIPS (If Applicable)

Property is restricted by steep slopes and wetlands. Proposed plans have been designed to
avoid the predominant portion of the property containing regulated slopes.

5. MITIGATING MEASURES PROPOSED BY APPLICANT:

Proposed cluster layout avoids almost all steep slope areas. Disturbance is kept as minimal
as possible. Sediment and erosion control practices have been shown on the plan. Sediment and erosion
control has been designed in accordance with Westchester County Best Practices as well as DEC Blue
book for sediment and erosion control.

APPLICATION FOR STEEP SLOPE DISTURBANCE PERMIT (cont.)

12. RECOMMENDATIONS: (For Official Use Only)

Engineer:

Planning Board:

13. ACTION TAKEN: (For Official Use Only)



ZAPPICO

REAL ESTATE DEVELOPMENT

Steep Slope Review Standards Ch.180 § 180-7:

1. There is no reasonable alternative for the proposed regulated activity on that portion of the Site not containing steep slopes.

There is no other reasonable alternative to the proposed Site layout. The proposed plan utilizes the flattest areas of the Site reducing regulated slope disturbance to less than 2 percent (1.03% of “Very Steep” and 0.65% of “Excessively Steep” slopes contained on the entire Site.

2. The planning, design and development of buildings and Site improvements limits the rate of stormwater runoff to a zero increase with overflow to a municipal drain system where practicable and provides the maximum in structural safety, slope stability, and human enjoyment while adapting the affected Site to, and taking advantage of, the best use of the natural terrain and aesthetic character.

Building and Site improvements will result in a net reduction of stormwater runoff. As identified in the Stormwater Pollution Prevention Plan (SWPPP), stormwater runoff will be reduced up to and exceeding a 100-year storm event. Proposed stormwater management facilities have been designed in a location which best utilizes the natural terrain.

3. The terracing of building Sites is kept to a minimum

Terracing has been kept to a minimum.

4. Roads and driveways follow the natural topography to the greatest extent possible in order to minimize the potential for erosion, and they are consistent with other applicable regulations of the Town of Mount Pleasant and current engineering practices.

Proposed roads have been designed to follow the natural topography and the alignment of existing driveways to the greatest extent possible with minimal grading. Although the roads are proposed to be private, they have been designed in accordance with the Town of Mount Pleasant design standards.

5. Habitat is quantified and protected, no endangered species of flora or fauna are adversely impacted, and any replanting shall be maintained by the applicant for two years and shall consist of indigenous vegetation that at a minimum replicates the original vegetation on the Site, in kind;



ZAPPICO

REAL ESTATE DEVELOPMENT

No endangered species have been found on the Site. Road design follows the alignment of the existing driveway and clearing areas. The road layout will not disturb regulated wetlands. The proposed landscape plan includes only native species which replicates and enhances the original vegetation on the Site. The Applicant and Homeowner's Association will maintain plantings for a period of two years.

6. The natural elevations and vegetative cover of ridgelines are disturbed only if the crest of a ridge and the tree line at the ridge remain uninterrupted. This will be accomplished either by positioning buildings and areas of disturbance below a ridgeline or by positioning buildings and areas of disturbance at a ridgeline so that the elevation of the roofline of the building is no greater than the elevation of the natural tree line, so long as no more than 100 feet along the ridgeline, to a width of 100 feet generally centered on the ridgeline, is disturbed
This standard does not apply as there are no defined ridgelines on the property.
7. Any regrading blends in with the natural contours and undulations of the land;
Proposed grades have been shown to blend into existing grades on the Site.
8. Cuts and fills are rounded off to eliminate sharp angles at the top, bottom, and sides of regraded slopes;
All proposed grading has been shown at a maximum 2H:1V and blends into the natural contours so that the slopes are rounded and smooth and there are no sharp angles.
9. The angle of cut and fill slopes does not exceed a slope of one vertical to two horizontal, except where retaining walls, structural stabilization, or other methods acceptable to the Town Engineer are used;
Proposed grading on the Site has been shown as 2H:1V or less. In areas where retaining walls are proposed the grading has been tapered on either end so that the grades do not exceed a 2H:1V.
10. Tops and bottoms of cut and fill slopes are set back from the structures an adequate distance to ensure the safety of the structures in the event of the collapse of the cut or fill slopes. Generally, such distance is six feet plus 1/2 the height of the cut or fill;
Structures have been designed to blend into the existing grades. Any proposed structure has been setback in excess of 6' feet..



ZAPPICO

REAL ESTATE DEVELOPMENT

11. Disturbance of rock outcrops is by means of explosives only if labor and machines are not effective and only if rock blasting is conducted in accordance with all applicable regulations of the Town of Mount Pleasant and the State of New York. The rock shall be effectively stabilized.

Rock outcroppings are intermittent throughout the Site. The Site has been designed to import fill to avoid chipping and blasting to the extent practical. Chipping can be expected but blasting is not expected. In the unlikely event blasting is required it will be done in accordance with all applicable regulations in the Town of Mount Pleasant and New York State.

12. Disturbance of slopes is undertaken in workable units in which the disturbance can be completed and stabilized in one construction season so that areas are not left bare and exposed during the period from December 15 through April 15;

The Proposed Action will result in minimal disturbance to Steep Slope areas on Site. Slope disturbance has been designed to limit the amount of disturbance at one time as described in the phasing plan shown on page 5 of the plan set. All disturbed areas shall be stabilized prior to any additional disturbance. Any excavation work occurring between December 15 and April 15 shall implement additional erosion control measures in accordance with the NYSDEC Standards for Sediment and Erosion Control 2016.

13. Disturbance of existing vegetative ground cover does not take place more than 15 days prior to grading and construction.

This standard will be met. No disturbance to existing vegetative ground cover will take place more than 15 days prior to grading and construction. Sediment and erosion control measures shall be in place prior to clearing. Immediately following Site clearing excavation will occur. Ground will then be stabilized.

14. Temporary soil stabilization, including, if appropriate, temporary stabilization measures such as netting or mulching to secure soil during the grow-in period, is applied to an area of disturbance within two days of establishing the final grade, and permanent stabilization is applied within 15 days of establishing the final grade;

This standard will be met. Temporary stabilization will be established in accordance with the sediment erosion control plan. No more than 2 days will pass without having temporary stabilization set in place for the disturbed areas.



ZAPPICO

REAL ESTATE DEVELOPMENT

Any disturbance during the winter months shall be stabilized at the end of each workday. Stabilization includes mulching and erosion control blankets.

15. Soil stabilization is applied within two days of disturbance if the final grade is not expected to be established within 60 days;

Following rough grading permanent stabilization will be implemented on the Site.

16. Measures for the control of erosion and sedimentation are undertaken consistent with the Westchester County Soil and Water Conservation District's "Best Management Practices Manual for Erosion and Sediment Control," and the New York State Department of Environmental Conservation's "Guidelines for Urban Erosion and Sediment Control," as amended, or its equivalent satisfactory to the Planning Board;

Sediment and erosion control measures have been designed in accordance with NYSDEC Standards and Specs for Erosion and Sediment Control November 2016. These practices are consistent with Westchester County "best management practices manual for erosion and sediment control."

17. All proposed disturbance of slopes is undertaken with consideration of the soils limitations characteristics contained in the latest Identification Legend, Westchester County Soils Survey, as prepared by the Westchester County Soil and Water Conservation District, in terms of recognition of limitation of soils on slopes for development and application of all mitigating measures, and as deemed necessary by the Town Engineer;

Soil characteristics on the Site have been identified and are noted on the plans. Underlying soil conditions are predominantly rock at varying depths suitable for development.

18. Topsoil is removed from all areas of disturbance, stockpiled and stabilized in a manner to minimize erosion and sedimentation, and replaced elsewhere on the Site at the time of final grading;

Topsoil will be stripped from the disturbed areas and stockpiled within the Site. Soil stockpiles shall be placed on slopes less than 10%. Silt fence shall be installed around the stockpile and temporary stabilization shall be placed as shown on the Sediment and Erosion Control plan, refer to large scale Site plan drawing set sheet 5.



ZAPPICO

REAL ESTATE DEVELOPMENT

-
19. Topsoil stockpiling is not permitted on slopes of greater than 10%;
Site is predominantly flat allowing stockpiling in various locations. Topsoil or subsoil in no circumstance be stockpiled on slopes over 10%. Soil stockpiles have been identified on the sediment and erosion control plan, refer to large scale Site plan drawing set sheet 5.
20. Compaction of fill materials in fill areas is such to ensure support of proposed structures and stabilization for intended uses;
All fill will be tamped, rolled, or compressed. No structures are proposed on fill. Fill around structures shall be compacted to prevent settling of final grades.
21. Structures are designed to fit into the hillside rather than altering the hillside to fit the structure, employing methods such as reduced footprint design, step-down structures, stilt houses, and minimization of grading outside the building footprint;
The natural contours of the Site allow the proposed homes to have first floor garages on relatively flat lots with walk-out basements. There is minimal grading proposed away from the house.
22. Development is sited on that portion of the Site least likely to impact the natural landforms, geological features, and vegetation;
The development was designed to utilized previously disturbed areas with as minimal impact to the Site as possible. Tree clearing have been minimized and rock out cropping's have been avoided to the maximum extent practicable.
23. The applicant has provided landscaping plans for after-development;
A proposed tree preservation and reforestation plan has been prepared, refer to large scale plan set sheet 8. Post development will implement screening evergreens, street trees and native species will be planted. Landscaping for each of the proposed homes will consist of an assortment of native trees, shrubs and other foundation plantings.
24. The development conforms with the requirements set forth in Chapter 218, Zoning, of the Code of the Town of Mount Pleasant;
The proposed development has demonstrated conformance with the dimensional requirements of the R40 Zone and utilizes the cluster provision of the Subdivision Regulations to reduce impacts from development.
-



ZAPPICO
REAL ESTATE DEVELOPMENT

-
25. The construction equipment has adequate access so as not to disturb anything outside the approved limit of disturbance that shall be shown on the plan drawings and, when approved, staked in the field.

The construction access has been shown on the plan set refer to sheet 5. Workers vehicles, deliveries and equipment have adequate access to the Site for parking, loading and unloading and will not exceed the proposed limits of disturbance.