Chapter 6: Ecological Resources

A. INTRODUCTION AND SUMMARY OF FINDINGS

This chapter describes the ecological resources within and immediately proximate to the Project Site and the potential impacts to those resources from the construction and operation of the Proposed Project. Existing conditions for groundwater, floodplains, vegetation, wetlands and surface waters, ecological communities, wildlife, and threatened, endangered, and special concern species are summarized from published information identified in literature and databases and site reconnaissance, including but not limited to the following:

- The New York State Department of Environmental Conservation Environmental Resource (ERM) and Environmental Assessment Form (EAF) Mappers;
- NYSDEC 2000–2005 and ongoing 2020–2024 New York State Breeding Bird Atlas; and the 1990–1999 NYSDEC Herp Atlas Project;
- United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) System list of federally listed threatened, endangered, proposed, and candidate species for Westchester County;
- USFWS National Wetland Inventory (NWI) maps;
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs); and
- Results of a reconnaissance investigation conducted by AKRF ecologists on August 23, 2023.

Impacts from construction and operation of the Proposed Project to ecological resources were assessed by considering direct and indirect impacts such as land clearing, forest fragmentation, visual and noise disturbances, and post-construction habitat restoration. The study area for this analysis of ecological resources is defined as the Project Site and its immediate vicinity (the "ER Study Area") (see **Figure 2-1**). The study area for the analysis of threatened and endangered species is the Project Site and the area within 0.5-mile from the Project Site boundaries (the "ES Study Area").

A.1. SUMMARY OF FINDINGS

The Proposed Project would not result in adverse impacts to groundwater resources or floodplains within the Project Site. The construction of the Proposed Project would require the removal of one of the two existing stormwater management ponds; this pond does not meet the United States Army Corps of Engineers (USACE) three parameter (i.e., hydric soils, wetland hydrology, and hydrophytic vegetation) wetland delineation methodology. The Proposed Project includes construction of a 0.46-acre freshwater pond, which would provide similar wetland functions and values as the existing pond, cover a larger area than the existing pond, and result in a benefit to wetland and surface water resources within the Project Site. Under the Proposed Project, approximately 11.65 acres of upland forest would be permanently cleared. This forest clearing would not represent a loss of rare or

unique ecological communities or vegetation, and the Proposed Project would not result in significant adverse impacts to ecological communities or vegetation. Disturbance-intolerant wildlife species would be expected to relocate to similar habitat available nearby and would not be adversely impacted by the Proposed Project. Adjacent areas which provide potential habitat for these species include the Donald J. Trump State Park and Danner Family Preserve, which contain suitable tracts of similar forested habitat to which wildlife could relocate. To minimize bird collisions with windows, the Proposed Project buildings would utilize low-reflectivity glass and, as currently designed, would feature more solid façade surfaces than glass within the first two-stories from the ground. All outdoor lighting fixtures would be shielded and downward-directional to mitigate adverse impacts from light pollution.

Federally and state-listed threatened, endangered, and special concern species that have the potential to occur within the ES Study Area include Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), red-shouldered hawk (*Buteo lineatus*), and eastern box turtle (*Terrapene carolina*). Limiting tree clearing activities to a period between November 1 and March 31 would avoid impacts to nesting birds and roosting bats within the Project Site. The loss of habitat associated with the operation of the Proposed Project represents a negligible reduction in habitat available for wildlife in the surrounding areas, which contains large tracts of similar habitat for potential use by these species. In addition, approximately 15.2 acres of forested upland would be retained under the Proposed Project, and would continue to represent potential habitat for threatened, endangered, and special concern species.

For these reasons, the Proposed Project would not adversely impact threatened, endangered, or special concern species, or critical habitat for these species. Therefore, the Proposed Project would not adversely impact ecological resources.

B. EXISTING CONDITIONS

B.1. GROUNDWATER

The United States Environmental Protection Agency designates aquifers that supply at least 50 percent of the drinking water for an overlying area as Sole Source Aquifers (SSA). To enhance regulatory protection in areas where groundwater resources are most productive and vulnerable, the New York State Department of Health identified 18 Primary Water Supply Aquifers (Primary Aquifers[1]) across the state, excluding Long Island. In addition, NYSDEC designated another type of productive aquifer, the Principal Aquifer[2].

The ER Study Area is not located in an SSA or Primary Aquifer area. There are no public water supply wells located within the Project Site. However, the Project Site is located

[1] The Division of Water Technical & Operational Guidance Series 2.1.3 defines Primary Aquifers as "highly productive aquifers presently utilized as sources of water supply by major municipal water supply systems."

[2] The Division of Water Technical & Operational Guidance Series 2.1.3 defines Principal Aquifers as "aquifers known to be highly productive or whose geology suggests abundant potential water supply, but which are not intensively used as sources of water supply by major municipal systems at the present time."

over a Principal Aquifer, as designated by NYSDEC. Groundwater in the ER Study Area is located approximately 26 feet below surface.

B.2. FLOODPLAINS

FEMA issues FIRMs to delineate the Special Flood Hazard Areas and Base Flood Elevations for communities. FIRMs are used to evaluate flood risks under the National Flood Insurance Program. The FEMA FIRM for the ER Study Area indicates that the entire area is in flood hazard zone X, an area of minimal flood hazard (see **Figure 6-1**) and is not located within the 100-year or 500-year floodplain (i.e., areas of 1 percent and 0.2 percent annual chance flood hazard, respectively).

B.3. WETLANDS AND SURFACE WATER RESOURCES

There are no NWI- or NYSDEC-mapped wetlands or surface waters within the ER Study Area. Two small stormwater management ponds were identified and mapped by AKRF ecologists during the August 23, 2023 reconnaissance investigation. These stormwater management ponds are fed by small culverts which collect stormwater draining from the developed portions of the ER Study Area. At the time of the reconnaissance investigation, the stormwater management ponds were filled with 6 inches or less of water.

The USACE wetland delineation methodology[3] identifies wetlands based upon the presence of the following three characteristics within the potential wetland boundary: hydrologic indicators (e.g., surface water, high water table, inundation on aerial imagery, etc.), hydrophytic vegetation (plant species associated with wetland habitat), and hydric soils (soils which display anaerobic conditions sufficient for the growth of hydrophytic vegetation). Surface hydrology and hydrophytic vegetation were observed within each of the stormwater management ponds; however, the analysis of hydric soils was inconclusive. Therefore, the stormwater management ponds do not meet the USACE criteria for wetlands.

Chapter 178 of the Yorktown Town Code, "Freshwater Wetlands," regulates activities in and around wetlands and watercourses in the Town and defines "wetlands." Approved stormwater management practices (i.e., the two stormwater management ponds) are not classified as wetlands under the Town Code, and therefore a Town wetland permit is not required.

[3] Environmental Laboratory. 1987. "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, Miss; U.S. Army Corps of Engineers. 2011. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (version 2.0), ed. J.S. Wakeley, R.W. Lichvar, C.V. Noble, and J.F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

B.4. TERRESTRIAL RESOURCES

B.4.a. Vegetation and Ecological Communities

Ecological communities within the ER Study Area consist predominantly of Forested Uplands[4] communities, with Terrestrial Cultural[5] communities in the developed portions of the area (see **Figure 6-2**). There are two Forested Uplands communities within the ER Study Area. The successional southern hardwoods[6] community is in the eastern and southern portions of the study area and occupies approximately 5 acres, while the oak-tulip tree forest[7] is in the western and northern portions of the area and occupies approximately 21 acres. The Terrestrial Cultural communities within the ER Study Area include mowed lawn[8], mowed lawn with trees[9], paved road/path[10], rural structure exterior[11], and unpaved road/path[12] communities. These Terrestrial Cultural communities cover approximately 10 acres. The function and value of these ecological communities with respect to wildlife is discussed in more detail under "Wildlife." According

[4] Edinger et al. 2014 describes the Forested Uplands subsystem of ecological communities as "upland communities with more than 60 percent canopy cover of trees (greater than 5 meters tall); these communities occur on substrates with less than 50 percent rock outcrop or shallow soil over bedrock."

[5] Edinger et al. 2014 describes the Terrestrial Cultural subsystem of ecological communities as "communities that are either created and maintained by human activities, or are modified by human influence to such a degree that the physical conformation of the substrate, or the biological composition of the resident community is substantially different from the character of the substrate or community as it existed prior to human influence."

[6] Edinger et al. 2014 describes the successional southern hardwoods community as "a hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed. This is a broadly defined community and several seral or regional variants are known."

[7] Edinger et al. 2014 describes the oak-tulip tree forest community as "a mesophytic hardwood forest that occurs on moist, well-drained sites in southeastern New York. The dominant trees include a mixture of five or more of the following: red oak (*Quercus rubra*), tulip tree (*Liriodendron tulipifera*), American beech (*Fagus grandifolia*), black birch (*Betula lenta*), red maple (*Acer rubrum*), scarlet oak (*Quercus coccinea*), black oak (*Quercus velutina*), and white oak (*Quercus alba*)."

[8] Edinger et al. 2014 describes the mowed lawn community as "residential, recreational, or commercial land, or unpaved airport runways in which the groundcover is dominated by clipped grasses and there is less than 30 percent cover of trees. Ornamental and/or native shrubs may be present, usually with less than 50 percent cover. The groundcover is maintained by mowing and broadleaf herbicide application."

[9] Edinger et al. 2014 describes the mowed lawn with trees community as "residential, recreational, or commercial land in which the groundcover is dominated by clipped grasses and forbs, and is shaded by at least 30 percent cover of trees. Ornamental and/or native shrubs may be present, usually with less than 50 percent cover. The groundcover is maintained by mowing and broadleaf herbicide application."

[10] Edinger et al. 2014 describes the paved road/path community as "a road or pathway that is paved with asphalt, concrete, brick, stone, etc. There may be sparse vegetation rooted in cracks in the paved surface."

[11] Edinger et al. 2014 describes the rural structure exterior community as "the exterior surfaces of metal, wood, or concrete surfaces (such as commercial buildings, barns, houses, bridges) or any structural surface composed of inorganic materials (glass, plastics, etc.) in a rural or sparsely populated suburban area."

[12] Edinger et al. 2014 describes the unpaved road/path community as "a sparsely vegetated road or pathway of gravel, bare soil, or bedrock outcrop. These roads or pathways are maintained by regular trampling or scraping of the land surface. The substrate consists of the soil or parent material at the site, which may be modified by the addition of local organic material (woodchips, logs, etc.) or sand and gravel."

to the NYSDEC ERM, the ER Study Area does not contain rare plants or significant natural communities **Table 6-1** lists the plant species observed during the reconnaissance investigation.

Table 6-1
Vegetation Observed in the ER Study Area

Common Name	Scientific Name	Stratum
Japanese maple	*Acer palmatum*	Tree
Norway maple	*Acer platanoides*	Tree
Red maple	*Acer rubrum*	Tree
Silver maple	*Acer saccharinum*	Tree
Sugar maple	*Acer saccharum*	Tree
Tree of heaven	*Ailanthus altissima*	Tree
Serviceberry	*Amelanchier sp.*	Tree
Black birch	*Betula lenta*	Tree
River birch	*Betula nigra*	Tree
American hornbeam	*Carpinus caroliniana*	Tree
Pignut hickory	*Carya glabra*	Tree
Shagbark hickory	*Carya ovata*	Tree
Flowering dogwood	*Cornus florida*	Tree
Kousa dogwood	*Cornus kousa*	Tree
American beech	*Fagus grandifolia*	Tree
Black walnut	*Juglans nigra*	Tree
Tulip tree	*Liriodendron tulipifera*	Tree
American hophornbeam	*Ostrya virginiana*	Tree
Norway spruce	*Picea alpestris*	Tree
Blue spruce	*Picea pungens*	Tree
Eastern white pine	*Pinus strobus*	Tree
Eastern cottonwood	*Populus deltoides*	Tree
Sweet cherry	*Prunus avium*	Tree
Black cherry	*Prunus serotina*	Tree
Kwanzan cherry	*Prunus serrulata*	Tree
Callery pear	*Pyrus calleryana*	Tree
White oak	*Quercus alba*	Tree
Pin oak	*Quercus palustris*	Tree
Northern red oak	*Quercus rubra*	Tree
Black oak	*Quercus velutina*	Tree
Black locust	*Robinia pseudoacacia*	Tree
Pussy willow	*Salix caprea*	Tree
Littleleaf linden	*Tilia cordata*	Tree
American elm	*Ulmus americana*	Tree
Japanese zelkova	*Zelkova serrata*	Tree
Barberry	*Berberis thunbergii*	Shrub
Boxwood	*Buxus sempervirens*	Shrub
Autumn olive	*Elaeagnus umbellata*	Shrub
Euonymus	*Euonymus fortunei*	Shrub
Pink hydrangea	*Hydrangea macrophylla*	Shrub
Panicled hydrangea	*Hydrangea paniculata*	Shrub
Winterberry	*Ilex verticillata*	Shrub
Juniper	*Juniperus sp.*	Shrub
Privet	*Ligustrum sp.*	Shrub
Lace shrub	*Neillia incisa*	Shrub
Multiflora rose	*Rosa multiflora*	Shrub

Table 6-1 (cont'd)
Vegetation Observed in the ER Study Area

Common Name	Scientific Name	Stratum
Mapleleaf viburnum	*Viburnum acerifolium*	Shrub
Arrowwood viburnum	*Viburnum dentatum*	Shrub
White snakeroot	*Ageratina altissima*	Herb
Garlic mustard	*Alliaria petiolata*	Herb
Mugwort	*Artemisia vulgaris*	Herb
Sedge	*Carex sp.*	Herb
Striped wintergreen	*Chimaphila maculata*	Herb
Thistle	*Cirsium arvense*	Herb
Yellow nutsedge	*Cyperus esculentus*	Herb
Wild carrot	*Daucus carota*	Herb
Hay-scented fern	*Dennstaedtia punctilobula*	Herb
Crabgrass	*Digitaria sanguinalis*	Herb
White wood aster	*Eurybia divaricata*	Herb
Grass-leaved goldenrod	*Euthamia graminifolia*	Herb
Hedge bedstraw	*Galium album*	Herb
American wintergreen	*Gaultheria procumbens*	Herb
Field peppercress	*Lepidium campestre*	Herb
Japanese stiltgrass	*Microstegium vimineum*	Herb
Sensitive fern	*Onoclea sensibilis*	Herb
Southern wood sorrel	*Oxalis dillenii*	Herb
Oriental lady's thumb	*Persicaria longiseta*	Herb
Pokeweed	*Phytolacca americana*	Herb
Christmas fern	*Polystichum acrostichoides*	Herb
Cinquefoil	*Potentilla spp.*	Herb
Canadian black snakeroot	*Sanicula canadensis*	Herb
Carolina horsenettle	*Solanum carolinense*	Herb
Common wrinkle-leaved goldenrod	*Solidago rugosa*	Herb
Dandelion	*Taraxacum sp.*	Herb
White clover	*Trifolium repens*	Herb
Clover	*Trifolium sp.*	Herb
Mullein	*Verbascum thapsus*	Herb
Porcelain berry	*Ampelopsis brevipedunculata*	Vine
Bittersweet	*Celastrus orbiculatus*	Vine
Virginia creeper	*Parthenocissus quinquefolia*	Vine
Allegheny blackberry	*Rubus allegheniensis*	Vine
Wineberry	*Rubus phoenicolasius*	Vine
Poison ivy	*Toxicodendron radicans*	Vine
Wild grape	*Vitis vinifera sylvestris*	Vine

Source: AKRF reconnaissance investigation conducted on August 23, 2023.

B.4.b. Trees

Trees equal to or greater than eight inches in diameter at breast height (dbh) are regulated under Chapter 270 (Trees) of the Yorktown Town Code, which regulates tree removal, with the goal of preserving individual trees and woodlands (see §270-2). The chapter defines a "Protected Tree" as a tree with a dbh of eight inches or greater and defines a "Specimen Tree" as any tree with a dbh of 24 inches or greater (see §270-4).

A tree survey was conducted for the portion of the Project Site with the potential to be disturbed by the Alternative Site Layout to identify the number and type of trees regulated by the Town[13]. Areas outside the potential limit of disturbance were not surveyed as those existing trees would remain. The areas of the Project Site that have the potential to be disturbed by the Proposed Project contain approximately 1,320 Town-regulated trees, 1,256 of which are in good to fair health. Of those trees, approximately 162 are considered "specimen" trees.

B.4.c. Wildlife

The ER Study Area is an approximately 35.5-acre tract of land that includes approximately 3.45 acres of developed and maintained landscapes (i.e., mowed lawns and mowed lawns with trees), approximately 5.2 acres of impervious structures and pathways (i.e., paved roads/paths and rural structure exteriors), and approximately 26.85 acres of second growth oak-tulip tree and southern successional hardwoods forest that borders a heavily forested landscape. The ER Study Area is contiguous or nearly contiguous with hundreds of acres of additional woodland to the north and east, including state parkland, which provides suitable habitat for forest-interior wildlife species and those that have large area requirements and are sensitive to fragmentation. Habitat diversity within the ER Study Area is low, however, and limited to mature, even-aged upland forests, mowed and maintained landscapes and pathways, terrestrial structural exteriors and paved roads, and small, hydrologically isolated surface waters. As such, the ER Study Area lacks habitat to support wildlife associated with meadows and old fields, shrublands, young forests or other early successional habitat types, or those that require expansive bodies of water.

B.4.d. Birds

The 2000–2005 New York State Breeding Bird Atlas documented 54 species as possible, probable, or confirmed breeders in Census Block 5957A, which contains the ER Study Area. The 2020–2024 Breeding Bird Atlas, which is still ongoing, has documented 79 species as possible, probable, or confirmed breeders within the Mohegan Lake NW and CW census blocks containing the ER Study Area. Based on their habitat associations, 41 of the breeding bird species listed in **Table 6-2** below have the potential to nest within the ER Study Area. These are primarily woodland songbirds (Passerines) that breed in a variety of forest types, including mature, upland, deciduous interior forest. Nine bird species were observed within the ER Study Area during the August 23, 2023 reconnaissance investigation (see **Table 6-2**).

Many of the bird species that are known or expected to breed within the ER Study Area are migratory and overwinter at more southern latitudes, while others are year-round residents. Birds that are likely to overwinter within the ER Study Area include American goldfinch (*Spinus tristis*), Carolina wren (*Thryothorus ludovicianus*), red-bellied woodpecker (*Melanerpes carolinus*), tufted titmouse (*Baeolophus bicolor*), wild turkey (*Meleagris gallopavo*), and red-tailed hawk (*Buteo jamaicensis*). During spring and fall migration, additional bird species that

[13] See discussion of the Alternative Site Layout in the "Executive Summary." See Sheet C-107.1A, C-107.2, and 107.3 in **Appendix I**.

do not breed or overwinter in the ER Study Area have the potential to occur there during brief stopovers in between migratory flights. Examples include magnolia warbler (*Setophaga magnolia*), northern parula (*Setophaga americana*), yellow-rumped warbler (*Setophaga coronata*), and northern waterthrush (*Parkesia noveboracensis*).

Table 6-2
Birds Documented during the NYSDEC 2000–2005 Second Breeding Bird Atlas (Block 5957A) and the NYSDEC 2020–2024 Third Breeding Bird Atlas (Mohegan Lake NW and CW Blocks)

Common Name	Scientific Name	2000–2005	2020–2024
Spotted Sandpiper	*Actitis macularius*	X	
Red-winged Blackbird*	*Agelaius phoeniceus*	X	X
Wood Duck	*Aix sponsa*	X	X
Mallard	*Anas platyrhynchos*	X	X
American Black Duck	*Anas rubripes*		X
Ruby-throated Hummingbird*	***Archilochus colubris***		**X**
Great Blue Heron	*Ardea herodias*		X
Tufted Titmouse*	*Baeolophus bicolor*	X	X
Cedar Waxwing	*Bombycilla cedrorum*	X	X
Canada Goose	*Branta canadensis*	X	X
Great horned owl	***Bubo virginianus***		
Red-tailed Hawk*	*Buteo jamaicensis*	X	X
Red-shouldered Hawk	*Buteo lineatus*		X
Broad-winged Hawk	*Buteo platypterus*	X	
Green Heron	*Butorides virescens*		X
Northern Cardinal*	***Cardinalis cardinalis***	**X**	**X**
House Finch*	*Carpodacus mexicanus*	X	X
Turkey Vulture*	*Cathartes aura*	X	
Veery	*Catharus fuscescens*	X	X
Hermit Thrush	*Catharus guttatus*		X
Killdeer	*Charadrius vociferus*		X
Northern Flicker	*Colaptes auratus*	X	X
Rock Pigeon*	*Columba livia*	X	
Eastern Wood-Pewee*	*Contopus virens*		X
Black Vulture	*Coragyps atratus*		X
Ruby-crowned Kinglet	*Corthylio calendula*		X
American Crow*	***Corvus brachyrhynchos***	**X**	**X**
Fish Crow	*Corvus ossifragus*		X
Blue Jay*	***Cyanocitta cristata***	**X**	**X**
Mute Swan	*Cygnus olor*		X
Chestnut-sided Warbler*	*Dendroica pensylvanica*	X	
Yellow Warbler	*Dendroica petechia*	X	X
Hairy Woodpecker*	*Dryobates villosus*		X
Pileated Woodpecker	*Dryocopus pileatus*		X
Gray Catbird*	*Dumetella carolinensis*	X	X
Least Flycatcher*	*Empidonax minimus*		X
Willow Flycatcher	*Empidonax traillii*		X
Common Yellowthroat	*Geothlypis trichas*	X	X
Barn Swallow	*Hirundo rustica*	X	X
Wood Thrush	*Hylocichla mustelina*	X	X
Baltimore Oriole*	*Icterus galbula*	X	X
Orchard Oriole	*Icterus spurius*		X
Red-bellied Woodpecker*	*Melanerpes carolinus*	X	X
Wild Turkey*	*Meleagris gallopavo*	X	X
Song Sparrow	*Melospiza melodia*	X	X
Northern Mockingbird*	*Mimus polyglottos*	X	X
Black-and-white Warbler	*Mniotilta varia*		X

Table 6-2
Birds Documented during the NYSDEC 2000–2005 Second Breeding Bird Atlas (Block 5957A) and the NYSDEC 2020–2024 Third Breeding Bird Atlas (Mohegan Lake NW and CW Blocks)

Common Name	Scientific Name	2000–2005	2020–2024
Brown-headed Cowbird*	*Molothrus ater*	X	X
Great Crested Flycatcher*	***Myiarchus crinitus***	**X**	**X**
Osprey†	*Pandion haliaetus*		X
Louisiana Waterthrush	*Parkesia motacilla*		X
Northern Waterthrush	*Parkesia noveboracensis*		X
House Sparrow*	***Passer domesticus***	**X**	**X**
Indigo Bunting*	*Passerina cyanea*	X	X
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	X	X
Downy Woodpecker*	*Picoides pubescens*	X	X
Scarlet Tanager	*Piranga olivacea*	X	X
Black-capped Chickadee*	*Poecile atricapillus*	X	X
Blue-gray Gnatcatcher*	*Polioptila caerulea*		X
Common Grackle*	*Quiscalus quiscula*	X	X
Eastern Phoebe	*Sayornis phoebe*	X	X
Ovenbird*	*Seiurus aurocapilla*	X	X
Northern Parula	*Setophaga americana*		X
Black-throated Blue Warbler	*Setophaga caerulescens*		X
Yellow-rumped Warbler	*Setophaga coronate*		X
Magnolia Warbler	*Setophaga magnolia*		X
Palm Warbler	*Setophaga palmarum*		X
American Redstart*	*Setophaga ruticilla*		X
Black-throated Green Warbler	*Setophaga virens*		X
Eastern Bluebird*	*Sialia sialis*	X	X
White-breasted Nuthatch*	***Sitta carolinensis***	**X**	**X**
American Goldfinch*	*Spinus tristis*	X	X
Chipping Sparrow*	*Spizella passerina*	X	X
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	X	X
Barred Owl	*Strix varia*		X
European Starling*	*Sturnus vulgaris*	X	X
Tree Swallow	*Tachycineta bicolor*	X	X
Carolina Wren*	*Thryothorus ludovicianus*	X	X
House Wren*	*Troglodytes aedon*	X	X
American Robin*	*Turdus migratorius*	X	X
Eastern Kingbird	*Tyrannus tyrannus*	X	X
Yellow-throated Vireo*	*Vireo flavifrons*	X	X
Warbling Vireo*	*Vireo gilvus*	X	X
Red-eyed Vireo*	*Vireo olivaceus*	X	X
Mourning Dove*	***Zenaida macroura***	**X**	**X**

Notes: The NYSDEC 2020–2024 Third Breeding Bird Atlas (BBA) is ongoing. Available data are uploaded by volunteer citizen scientists and occasionally reviewed by eBird regional reviewers. Survey blocks are roughly 9 square miles and are a subset of the 7.5' USGS Topo Quad in which the survey block is located (the USGS Topo Quads are broken up into six smaller blocks). The survey blocks from the Third BBA do not correlate directly with the Second Breeding BBA survey blocks. As of September 11, 2023, the Mohegan Lake NW and CW Blocks for the 2020–2024 BBA are considered "incomplete." Additional species may be included in the species log for this survey block as the 2020–2024 BBA progresses. Only birds identified to species and with "confirmed," "probable," or "possible" breeding evidence are included in this table.

Species observed during the August 23, 2023 reconnaissance investigation are in bold.

* Denotes species that have the potential to nest within the ER Study Area based on their habitat associations and area requirements.

† Denotes state-listed species of special concern.

Sources:

NYSDEC 2000–2005 Second Breeding Bird Atlas for Block 5957A. Available from dec.ny.gov/cfmx/extapps/bba/ (Accessed September 11, 2023).

NYSDEC 2020–2024 Third Breeding Bird Atlas for Mohegan Lake NW and CW Blocks. Available from: ebird.org/atlasny (Accessed September 11, 2023).

B.4.e. Reptiles and Amphibians

The NYSDEC Herp Atlas Project documented 21 species of reptiles and amphibians in the census block containing the ER Study Area (Mohegan Lake USGS Quadrangle) (see **Table 6-3**). Of these, 11 species are known or considered to have the potential to occur within the ER Study Area based upon their habitat associations and geographic range in New York State. These species include American toad (*Bufo americanus*), green frog (*Rana clamitans*), common garter snake (*Thamnophis sirtalis*), pickerel frog (*Rana palustris*), eastern gray treefrog (*Hyla versicolor*), wood frog (*Rana sylvatica*), rat snake (*Pantherophis alleghaniensis*), spring peeper (*Pseudacris crucifer*), eastern box turtle, northern redback salamander (*Plethodon cinereus*), and bullfrog (*Rana catesbeiana*). Those that require permanent ponds, lakes, rivers, or coldwater streams are not expected to occur within the ER Study Area. Green frogs were observed within the ER Study Area during the August 23, 2023 reconnaissance investigation.

Table 6-3
NYS Reptiles and Amphibians (Herp) Atlas (1990–1999)
for the Mohegan Lake USGS Quadrangle

Common Name	Scientific Name
American toad	***Bufo americanus***
Jefferson salamander complex	*Ambystoma jeffersonianum x laterale*
Blue-spotted salamander complex	*Ambystoma laterale x jeffersonianum*
Spotted salamander	*Ambystoma maculatum*
Marbled salamander†	*Ambystoma opacum*
Painted turtle	*Chrysemys picta*
Spotted turtle†	*Clemmys guttata*
Rat snake	***Elaphe alleganiensis***
Northern two-lined salamander	*Eurycea bislineata*
Eastern gray treefrog	***Hyla versicolor***
Northern water snake	*Nerodia sipedon*
Red-spotted newt	*Notophthalmus viridescens*
Northern redback salamander	***Plethodon cinereus***
Spring peeper	***Pseudacris crucifer***
Bullfrog	***Rana catesbeiana***
Green frog	***Rana clamitans***
Pickerel frog	***Rana palustris***
Wood frog	***Rana sylvatica***
Common musk turtle	*Sternotherus odoratus*
Eastern box turtle†	***Terrapene carolina***
Common garter snake	***Thamnophis sirtalis***

Notes:
† Denotes state-listed species of special concern
Boldface indicates species that have the potential to occur within the ER Study Area based on their habitat associations and area requirements.
Sources:
NYS Herp Atlas (1990–1999) Mohegan Lake USGS Quadrangle. Available from: dec.ny.gov/animals/7140.html (Accessed August 15, 2023).

B.4.f. Mammals

Mammals with the potential to occur within the ER Study Area include raccoon (*Procyon lotor*), white-tailed deer (*Odocoileus virginianus*), eastern cottontail

(*Sylvilagus floridanus*), eastern gray squirrel (*Sciurus carolinensis*), eastern chipmunk (*Tamias striatus*), eastern coyote (*Canis latrans*), groundhog (*Marmota monax*), and striped skunk (*Mephitis mephitis*).

The following mammals (or their tracks or other signs) were observed within the ER Study Area during the August 23, 2023 reconnaissance investigation: raccoon, white-tailed deer, and eastern gray squirrel.

B.5. THREATENED, ENDANGERED, AND SPECIAL CONCERN SPECIES AND SIGNIFICANT NATURAL COMMUNITIES

The USFWS IPaC database identified the following federally threatened, endangered, and candidate species as potentially occurring within the ES Study Area: Indiana bat (federally and state-listed endangered), northern long-eared bat (federally and state-listed endangered), bog turtle (*Glyptemys muhlenbergii*; federally listed threatened, state-listed endangered), and monarch butterfly (*Danaus plexippus*; federally listed candidate) (see **Appendix C**). The NYSDEC EAF mapper, which uses data from the New York Natural Heritage Program, identified the state-listed New England cottontail (*Sylvilagus transitionalis*; state-listed special concern) as having the potential to occur within the ES Study Area. According to the NYSDEC Herp Atlas Project, the following state-listed species have the potential to occur within the Mohegan Lake USGS Quadrangle, which contains the ES Study Area: eastern box turtle (state-listed special concern), marbled salamander (*Ambystoma opacum*; state-listed special concern), and spotted turtle (*Clemmys guttata*, state-listed special concern). The New York State Breeding Bird Atlas identifies the following state-listed species as having the potential to occur within the Mohegan Lake NW and CW Blocks, which contain the ES Study Area: osprey (*Pandion haliaetus*; special concern) and red-shouldered hawk (special concern).

The following section assesses the potential for the above federally and state-listed species to occur in the ES Study Area, based on the presence or absence of suitable habitat. Characterizations of preferred habitat for specific species are based on scientific literature and studies referenced herein. Characterizations of the habitat observed in the ES Study Area are based on the reconnaissance investigation conducted on August 23, 2023. **Table 6-4** below summarizes the potential for each federally and state-listed species to occur within the ES Study Area.

Table 6-4
Inventory of Federally and State-listed Species that may occur within the ES Study Area

Species	Unlikely to Occur within the ES Study Area	May Occur within the ES Study Area
Indiana bat		X
Northern long-eared bat		X
Bog turtle	X	
Monarch butterfly	X	
New England cottontail	X	
Osprey	X	
Red-shouldered hawk		X
Eastern box turtle		X
Marbled salamander	X	
Spotted turtle	X	

B.5.a. Federally Listed Species

B.5.a.i Indiana Bat

Indiana bats are temperate insectivores that hibernate inside caves and mines throughout the winter before emerging in early spring. During the active season in spring, summer, and fall, Indiana bats usually roost beneath loose bark or in tree crevices and have been documented roosting in numerous species of deciduous trees. These trees are often dead, dying, and/or decayed (Menzel et al. 2001, Kitchell 2008). Roosting bats typically occupy large trees with a diameter greater than 16 inches and a height taller than 52 feet, though roosts in smaller trees can occur (Britzke et al. 2006, USFWS 2007). Indiana bats often roost near forest gaps and edges, where trees receive direct sunlight for most of the day (Callahan et al. 1997, Menzel et al. 2001) and may occur in a variety of habitats, including riparian, bottomland/floodplain, and upland forests, often within agricultural landscapes (Humphrey et al. 1977, Britzke et al. 2006, Watrous et al. 2006, Murray and Kurta 2004, Watrous et al. 2006, USFWS 2007). Maternity colonies are typically located in areas with abundant natural or artificial freshwater sources (Carter and Feldhamer 2005, Kurta et al. 2002, Watrous et al. 2006, USFWS 2007). No Indiana bat hibernaculum is known to occur within the ES Study Area. The mature upland forests within the ES Study Area provide suitable roosting or foraging habitat for Indiana bat. Therefore, the Indiana bat has the potential to occur within the ES Study Area.

B.5.a.ii Northern Long-Eared Bat

Northern long-eared bats are temperate insectivores that hibernate in caves and mines during winter months before emerging in early spring. Northern long-eared bats generally inhabit mature, closed-canopy, deciduous or mixed forest within heavily forested landscapes, usually within 60 miles of their hibernaculum (Owen et al. 2003, Carter and Feldhammer 2005, Ford et al. 2005, Caceres and Barclay 2000, USFWS 2014). Foraging activity is greatest in interior areas with a tall and closed canopy, where northern long-eared bats hunt for insects above the understory and below the canopy of forested hillsides and ridges (Brack and Whitaker 2001, Harvey et al. 2011, USFWS 2014, Owen et al. 2003, Patriquin and Barclay 2003, Adams 2013). Northern long-eared bats are forest-dependent and disturbance-intolerant, and avoid habitat edges such as roads, riparian corridors, and linear landscape features (Patriquin and Barclay 2003, Morris et al. 2010, Harvey et al. 2011, USFWS 2014). No northern long-eared bat hibernaculum is known to occur within the ES Study Area. The mature upland forests within the ES Study Area provide suitable roosting or foraging habitat for northern long-eared bats. Therefore, the northern long-eared bat has the potential to occur within the ES Study Area.

B.5.a.iii Bog Turtle

Bog turtles overwinter in densely vegetated areas associated with tree roots and submerged structures along streams or near underground

springs. The turtles emerge in spring when air and water temperatures exceed 50°F (NYSDEC 2023). Bog turtles typically inhabit calcareous fens or wet meadows with cool, shallow, slow-moving water, deep and soft mucky soils, and tussock-forming herbaceous vegetation (Gibbs et al. 2007). Bog turtles require habitats with sufficient sunlight and basking habitat for thermal regulation and are sensitive to human activity. The stormwater management ponds on the Project Site do not meet the habitat requirements for the bog turtle. Based on the results of the reconnaissance investigation, the ES Study Area does not contain suitable habitat for bog turtles. Therefore, the bog turtle does not have the potential to occur within the ES Study Area.

B.5.a.iv Monarch Butterfly

As a candidate species, the monarch butterfly is not currently protected under Section 7 of the Endangered Species Act (ESA). The monarch butterfly is the only butterfly species known to make a two-way migration, overwintering in southern California and northern Mexico before dispersing across North America in the spring and summer. Monarch butterflies are important pollinators, as the adults feed on nectar from a variety of plants. Larvae, however, are dependent upon milkweed (primarily the *Asclepias* genus), the sole host plant of the monarch butterfly. This species is primarily found in open meadows and fields with wildflowers and *Asclepias* milkweeds, coastal dunes and beaches, and butterfly gardens. No *Asclepias* milkweeds or abundant wildflowers were observed within the ES Study Area during the August 23, 2023 reconnaissance investigation. Therefore, the monarch butterfly is unlikely to occur within the ES Study Area.

B.5.b. State-Listed Species

B.5.b.i New England Cottontail

The New England cottontail is the only rabbit native to New England east of the Hudson River (USFWS 2015). New England cottontails require young forests and shrubland, habitats associated abandoned agricultural lands, wetlands, clear-cut woodlands, coastal shrublands, scrub oak barrens, utility right-of ways, and areas associated with disturbance (USFWS 2015, Fergus 2013). They require the thick cover and food from the thick growth of understory plants in these early successional forests and thickets (USFWS 2015). New England cottontails are active at dawn and at dusk or night (USFWS 2015). They eat grasses and other leaves in spring and summer, and in the winter New England cottontails eat bark and twigs (USFWS 2006). Home ranges vary from 0.5 to 8 acres (USFWS 2006). Predators include red foxes, coyotes, fishers, mink, weasels, hawks, owls, large snakes, bobcats, domestic cats and dogs, skunks, and raccoons, as well as humans (Fergus 2013). The primary reason for the decline in rabbit population is habitat loss due to maturing forests and development across New England, which has reduced the range of New England Cottontails by 86 percent (USFWS 2015, Fergus 2013). Another threat is competition from the non-native eastern

cottontail (*Sylvilagus floridanus*), which has replaced the New England cottontail in many areas of its former range (USFWS 2015, Fergus 2013). White-tailed deer also compete with New England cottontail for food, and invasive vegetation has changed the habitat and food available for the rabbit (USFWS 2006). Much of the ES Study Area lacks the dense shrub and herb layer preferred by this species. Therefore, the New England cottontail is unlikely to occur within the ES Study Area.

B.5.b.ii Osprey

Osprey are piscivorous (feeding primarily on fish) birds of prey and thus live near rivers, lakes, or the coast. Female osprey lay between one and four eggs (three eggs on average) during the early spring. Osprey utilize standing dead trees and man-made structures (including nest platforms) as locations to build their nest. Use of the insecticide DDT caused the thinning of raptor eggshells, including osprey, resulting in a sharp decline in populations. DDT was banned during the early 1970s throughout the United States, resulting in the gradual recovery of breeding osprey populations (NYSDEC 2015). The ES Study Area is primarily composed of dry, forested upland and lacks access to the aquatic environments utilized by this species for hunting purposes. Therefore, osprey do not have the potential to occur within the ES Study Area.

B.5.b.iii Red-Shouldered Hawk

The red-shouldered hawk is regionally uncommon in many areas. This species favors large tracts of mature (especially old growth) deciduous and mixed forest in riparian areas or flooded swamps (Dykstra et al. 2008). Breeding Bird Atlas data show a steady increase in red-shouldered hawk populations in New York since the 1980s, as reversion of farmland back to forest has likely increased habitat availability for the species (Crocoll 2008, Dykstra et al. 2008). Red-shouldered hawks now also occasionally nest in suburban areas where forest cover is less contiguous than the species was previously thought to need (Dykstra et al. 2000, 2008). Migration and wintering habitats are similar to breeding habitat preferences, although non-breeding birds occur in fragmented landscapes and open areas more frequently than they do when nesting (Dykstra et al. 2008). Though the ES Study Area lacks the forested riparian areas and swampland preferred by this species, the large tracts of forested upland provide potential habitat for the red-shouldered hawk. Therefore, red-shouldered hawks have the potential to occur within the ES Study Area.

B.5.b.iv Eastern Box Turtle

The eastern box turtle is relatively common in New York State, but populations are in decline (Gibbs et al. 2007). Eastern box turtles inhabit both dry and moist woodlands, but can occasionally be found in pasturelands, meadows, old fields, vegetated dunes, thickets, and bog edges (Mitchell et al. 2006, Tinkle et al. 1979). This species occupies habitat near shallow ponds and streams and requires unshaded nesting sites in sandy, open areas for reproduction (Hyde 1999). Eastern box

turtles have high site fidelity and rarely travel beyond their home ranges, using favored nesting, foraging, and hibernation sites for multiple years (Stickel 1989, Hall et al. 1999). The forested upland present in the ES Study Area provides suitable habitat for eastern box turtles. Therefore, the eastern box turtle has the potential to occur within the ES Study Area.

B.5.b.v Marbled Salamander

Marbled salamanders do not breed until the fall when they lay their eggs in dried up vernal pools that will eventually fill with water again and trigger hatching. Marbled salamander larvae develop throughout the winter, under ice, and metamorphose into juveniles by the summer (Colburn 2004, Gibbs et al. 2007). Marbled salamander emigration from breeding pools usually occurs on rainy nights in June (Klemens 1993). The ES Study Area contains limited surface water habitat (i.e., the stormwater management ponds on the Project Site) and lacks the vernal pools required by this species. Therefore, the marbled salamander is unlikely to occur within the ES Study Area.

B.5.b.vi Spotted Turtle

The spotted turtle is characterized by the yellow spots on its head, neck, legs, and carapace, which are extremely variable between turtles (NYSDEC 2016, Conant and Collins 1998). Spotted turtles are active from March until October, breeding from March until May (NYSDEC 2016, Burke and Feinberg 2013). Their diet consists of snails, worms, slugs, and spiders (NYSDEC 2016). During the day, they eat and bask in the sun, either singly or in groups, and at night submerge and spend the night on the bottom of a pond (NYSDEC 2016, Conant and Collins 1998). Spotted turtles prefer calm, shallow bodies of water and their habitat includes marshy meadows, bogs, swamps, ponds, ditches, brackish marshes and other shallow bodies of still water (NYSDEC 2016, Burke and Feinberg 2013, Conant and Collins 1998). The main threat to spotted turtles is loss of habitat and pollution, as well as pet collection (NYSDEC 2016, Burke and Feinberg 2013). The study area is primarily composed of dry, forested upland and lacks the wetlands and surface waters preferred by this species. Therefore, the spotted turtle does not have the potential to occur within the study area.

C. THE FUTURE WITHOUT THE PROPOSED PROJECT

In the future without the Proposed Project, the ER Study Area and its habitats would remain in the same state as at present. As such, ecological resources in the ER Study Area are expected to remain unchanged. The same federally- and state-listed species that have the potential to occur within the ES Study Area under existing conditions would have the potential to occur in the area in the future without the Proposed Project, and with the same likelihood.

D. THE FUTURE WITH THE PROPOSED PROJECT

D.1. GROUNDWATER

As discussed under "Existing Conditions," the ER Study Area is located above a Principal Aquifer. The Proposed Project would not require new water supply wells or create additional demand on supplies from existing water supply wells, nor would it discharge wastewater to groundwater, store petroleum or chemical products above a groundwater aquifer, or apply pesticides within 100 feet of potable drinking water or irrigation sources. Impervious surface would cover approximately 9.3 acres of the ER Study Area during operation of the Proposed Project. The increase in impervious surfaces would increase the volume of runoff as well as pollutant loads generated by the Project Site, but these increases would be mitigated by the Proposed Project's eight new stormwater management facilities in the form of infiltration basins and underground infiltration chambers. Therefore, the construction and operation of the Proposed Project would not result in adverse impacts to groundwater resources.

D.2. FLOODPLAINS

As discussed under "Existing Conditions," the ER Study Area is entirely located within flood hazard zone X, an area of minimal flood hazard. Therefore, the construction and operation of the Proposed Project would not result in significant changes to flood hazards within the ER Study Area.

D.3. WETLANDS AND SURFACE WATER RESOURCES

The northern of the two existing stormwater management ponds on the Project Site would be removed as part of the Proposed Project. No wetland permits would be required from USACE or NYSDEC because the pond is not regulated by either agency. Under the Proposed Project, an approximately ½-acre freshwater pond would be constructed on the Project Site. The proposed pond would provide similar wetland functions and values and cover a larger area than the existing stormwater pond being removed. Therefore, the Proposed Project would not result in significant adverse impacts to wetland and surface water resources, and the construction of the replacement freshwater pond would result in a benefit to wetland and surface water resources within the ER Study Area.

D.4. TERRESTRIAL RESOURCES

D.4.a. Vegetation and Ecological Communities

The Proposed Project would result in the clearing of approximately 11.65 acres of upland forest. Approximately 15.2 acres of forest would remain on the Project Site. The Proposed Project would result in an increase in impervious surface from approximately 5.2 acres to approximately 9.3 acres (see **Table 6-5**). Construction activities would result in direct impacts through vegetation clearance, and indirect impacts of increased noise and human activity to the area. However, as there is abundant similar forested habitat in the surrounding area, any temporary impacts to the Project Site would not adversely affect the overall ecological communities in the vicinity. Comparable forested areas with minimal human activity and development can be found adjacent to the Project Site in the Donald J. Trump State Park, which borders the northern and eastern forested boundaries of the Project Site, and the Danner Family Preserve to the northeast.

Table 6-5
Land Use Impacts

Land Use or Covertypes	Existing Acreage	Change in Acreage	Acreage with Proposed Project
Roads, buildings, and other paved or impervious surfaces	5.20	+4.10	9.30
Forested	26.85	-11.65	15.20
Meadows, grasslands, or brushlands	3.45	+7.55	11.0
Non-vegetated	0.00	0.00	0.00
Other (Pond)	0.00	+0.46	0.46

Note: Impact numbers have been rounded to the nearest 0.01 acre. The 0.46-acre Pond is part of the 11.0 acres of meadows, grasslands, or brushlands.
Source: Site Design Consultants

Though the Proposed Project would result in an overall loss of forest and gain of impervious coverage, approximately 15.2 acres of forest would remain, and an approximately 0.46-acre pond would be constructed within the ER Study Area. Maintained meadows, grasslands, and brushlands (landscaped areas) on the Project Site would be increased to a total of approximately 11 acres. While the permanent loss of approximately 11.65 acres of forested habitat would permanently alter the composition of ecological communities due to disruption of the contiguous nature of the habitats, the ecological communities present within the study area are not unique within the greater area. As previously mentioned, there is nearby comparable forest within Donald J. Trump State Park, a 436-acre forested park that is officially closed and therefore has minimal human activity, and the Danner Family Preserve, a 28-acre former farm that through successional processes has become a combination of old fields, shrublands, and upland forests. A loss of approximately 11.65 acres of edge habitat in an already developed site is relatively minor considering there is more than 400 acres of comparable, contiguous forest that will remain in the vicinity of the Project Site. Therefore, the loss of approximately 11.65 acres of forested habitat does not have the potential to adversely affect the regional abundance of these forested communities. In addition, as shown above in **Table 6-1**, the vegetation present within the ER Study Area does not include any threatened or endangered native species. Therefore, the Proposed Project would not result in significant adverse impacts to vegetation and ecological communities, as the overall loss of forested habitat is relatively minor and similar resources would be preserved adjacent to the ER Study Area.

D.4.b. Trees

The Proposed Project would require the removal of approximately 1,320 Town-regulated trees, 1,265 of which are in good to fair health (see **Table 6-6**). Pursuant to Section 270-6 of the Town Code, the Proposed Project will require a non-administrative tree removal permit as part of Site Plan approval process Mitigation for the removal of these trees is discussed in Section E, "Mitigation," of this chapter.

Table 6-6
Proposed Project – Tree Removal Quantities

Tree Type or Condition	Total Diameter	Number of Trees To Be Removed	Total Number of Regulated Trees To Be Removed
Protected	10,242	1,103	**1,265**
Specimen	3,475	162	
Invasive	--	--	**55**
Dead/Dying	--	55	
Sources: Site Design Consultants; Dynamic Survey			

D.4.c. Wildlife

The ER Study Area is contiguous or nearly contiguous with hundreds of acres of additional forested land to the north and east, including state parklands. Therefore, the ER Study Area has the potential to support forest-interior wildlife species, and those with large area requirements and are sensitive to fragmentation. There are also two small stormwater management ponds on the Project Site that have the potential to provide aquatic habitat for amphibians and reptiles.

The Proposed Project would clear approximately 11.65 acres of oak-tulip tree and successional hardwood forest within the approximately 35.5-acre Project Site. Impacts from construction include the clearance of trees and other vegetation, and an increased level of noise and human activity to the area, resulting in disturbances to the wildlife. As there is comparable adjacent habitat, the wildlife would likely temporarily relocate to the nearby interior forest during construction activities.

To minimize adverse impacts to wildlife, any necessary tree clearing during construction of the Proposed Project would be limited to the winter hibernation period (November 1 to March 31) when birds are not breeding, and bats are not expected to be present. Silt fencing temporarily installed for sediment and erosion control may also be used as a protective measure to preclude terrestrial wildlife present in the ER Study Area from entering the Project Site during construction. Overall, construction of the Proposed Project would not significantly impact local populations of wildlife.

Operation of the Proposed Project would increase the level of human activity to the Project Site, as the redevelopment of a commercial property to a residential community would result in increased human disturbance. Wildlife species that are tolerant of fragmentation, inhabit forest edges, and benefit from an association with humans, such as those listed above, would benefit from the development of the ER Study Area, and likely increase in abundance through increased fitness, decreased interspecies competition, and/or immigration from other areas. In addition, the development of the approximately ½-acre pond may attract human-tolerant waterfowl species not currently present within the ER Study Area, including mallards and Canada geese.

The Proposed Project would incorporate measures to prevent bird collisions, where appropriate, which includes designing the building with more solid surfaces than glass within the first two stories of the ground surface and using low

reflectivity glass. Therefore, the Proposed Project would not significantly impact populations of birds expected occur within the ER Study Area.

Impacts to wildlife from operation of the Proposed Project would result primarily from the effects of habitat loss and fragmentation caused by the development. Because of the large tracts of contiguous forest in the surrounding areas and the ER Study Area's connectivity to those tracts, displaced forest-interior species would be expected to redistribute away from the ER Study Area. In addition, the southern portions of the approximately 11.65 acres of forest that would be cleared for the Proposed Project, are considered forest-edge rather than forest-interior, due to the proximity to the currently developed area on the Project Site. Therefore, many wildlife species within the ER Study Area are likely to be tolerant of fragmentation. The loss of forest within the ER Study Area would represent a negligible reduction in the availability of habitat in the area to support these species such that the Proposed Project would not adversely affect wildlife populations in the vicinity of the ER Study Area.

Following the development of the Proposed Project, the wildlife community would likely shift and become primarily composed of human-adapted species that are tolerant of disturbance and commonly inhabit areas with human activity. The Proposed Project would result in the displacement of disturbance-intolerant wildlife species on the Project Site due to the permanent loss of approximately 11.65 acres of forested habitat. However, these species would be expected to relocate to the adjacent large tract of interior forest. The loss of this forested acreage and these disturbance-intolerant species from the ER Study Area would not reflect a significant loss of habitat or wildlife in the vicinity of the ER Study Area. Existing species that remain post-construction, or new disturbance-tolerant species which colonize the Project Site after the construction of the Proposed Project, would not be adversely affected by human activity associated with the Proposed Project. Overall, the Proposed Project would not significantly impact local populations of wildlife.

D.5. THREATENED, ENDANGERED, AND SPECIAL CONCERN SPECIES AND SIGNIFICANT NATURAL COMMUNITIES

As discussed under Existing Conditions, federal- or state-listed species that have the potential to occur within the ES Study Area on the basis of their habitat requirements include Indiana bat (federally and state-listed endangered) and northern long-eared bat (federally and state-listed endangered).

D.5.a. Indiana Bat

The Proposed Project would clear approximately 11.65 acres of forest within the Project Site. Much of the ES Study Area is forested edge habitat. Indiana bats roost near and forage along forest edges that border open habitats, such as fields, shrublands, and large water bodies. The potential occurrence of Indiana bats within the ES Study Area is limited to the southern portion of the area, where the forest borders sparsely vegetated mowed lawns that provide linear landscape features which Indiana bats forage and roost near. The permanent loss of habitat in this area would represent a negligible reduction in the amount of roosting habitat available to Indiana bats on the heavily forested surrounding areas.

Moreover, all tree removal for the Proposed Project would be conducted during the November 1 to March 31 hibernation period of Indiana bats, and thus avoid the potential for any direct impacts during construction of the Proposed Project. Therefore, the Proposed Project would not have significant adverse impacts to potential Indiana bat habitat or any Indiana bats potentially occurring in the ES Study Area.

D.5.b. Northern Long-Eared Bat

The approximately 11.65 acres of forested edge habitat that would be cleared is not potential high-quality roosting and foraging habitat for the northern long-eared bat. The loss of habitat would constitute a negligible reduction in the amount of interior forest available to northern long-eared bats in the surrounding areas. Further, roosting and foraging habitat availability is not believed to be a limiting factor in the size of northern long-eared bat populations now that there are so few tree-roosting bats due to White-nose Syndrome (WNS) mortality. Even prior to the recent loss of more than 90 percent of northern long-eared bats to WNS, it was uncertain whether roost tree availability limited population sizes of northern long-eared bats or other eastern North American tree-roosting bats (Sedgeley and O'Donnell 1999, Crampton and Barclay 1998, Kunz and Lumsden, 2003, Hayes and Loeb 2007). Loss of habitat as a result of the Proposed Project is therefore not expected to jeopardize populations or the continued existence of the northern long-eared bat in the near future. To avoid the potential for direct construction impacts to northern long-eared bats, all tree clearing for the Proposed Project would occur during the November 1 to March 31 hibernation period. Therefore, the Proposed Project would not have significant adverse impacts to potential northern long-eared bat habitat or any northern long-eared bats potentially occurring in the ES Study Area.

D.5.c. Red-Shouldered Hawk

The approximately 11.65 acres of forested edge habitat to be removed is potential habitat for red-shouldered hawks. The loss of habitat would constitute a negligible reduction in the amount of forest habitat available to red-shouldered hawks in the surrounding areas. To avoid the potential for direct construction impacts to red-shouldered hawks from the removal of nesting habitat, all tree clearing for the Proposed Project would occur between November 1 and March 31, outside the nesting period. Therefore, the Proposed Project would not have significant adverse impacts to red-shouldered hawks potentially occurring in the ES Study Area.

D.5.d. Eastern Box Turtle

The approximately 11.65 acres of forested edge habitat to be removed is potential habitat for the eastern box turtle. The loss of habitat would constitute a negligible reduction in the amount of forested habitat available to eastern box turtles in the surrounding areas. Furthermore, the Proposed Project would preserve approximately 15.2 acres of woodland on the Project Site that would remain viable habitat for eastern box turtles, given the size of the preserved area and its connectivity to additional tracts of forest. Therefore, the Proposed Project would not have significant adverse impacts to potential eastern box turtle habitat or any eastern box turtles potentially occurring in the ES Study Area.

E. MITIGATION MEASURES

As discussed above, the Proposed Project will remove approximately 1,320 existing trees on the Project Site. As required by the Town Code, the Proposed Project must provide mitigation to offset the proposed tree removal. Pursuant to Section 270-10(C)(1)-(5), preferred mitigation approaches include:

- On-site mitigation;
- Tree Replacement;
- Reducing visual impacts to adjoining properties;
- Use of native species of trees, understory shrubs, and herbaceous ground cover if replanting is required; and
- Replacement of the functions (as described in §270-3) lost due to tree removal and/or disturbance.

Pursuant to Section 270-10(D)(4), Mitigation Plans may include the following measures on their own or in combination:

- Planting replacement trees, understory shrubs and or herbaceous ground cover on-site and/or on Town-owned land;
- Removal of invasive species from the site, and/or on Town-owned land;
- Installation of fencing designed to prevent deer from overgrazing existing or newly planted or naturally regenerating trees and shrubs, consistent with Town regulation; and
- Payment into the Town's Tree Bank Fund.

In the Applicant's opinion, the most feasible mitigation approach would be a combination of the strategies identified in Section 270-10. Specifically, the Applicant proposes the following mitigation measures as part of the Proposed Project:

- Throughout the Project Site there will be extensive native plantings of the deciduous, conifers, shrubs, and herbaceous type. The quantities of the various species to be planted would be confirmed during the Site Plan review phase.
- The Project would remove invasive species and vines, as well as tree litter from dead and fallen limbs, trees, and roots within the area of the Project Site to be disturbed.
- A tree plan will be prepared. Protection of trees during construction using methods identified in the final construction plan will be undertaken. Areas of existing vegetation and tree buffers will be preserved.
- As noted in the Conceptual Landscaping Plan prepared for the Proposed Project, and detailed in Chapter 3, "Visual and Community Character," the Proposed Project would install conifers to provide visual screening.
- The Proposed Project will provide stormwater management to minimize erosion and flooding.
- The Proposed Project would donate trees to the Town nursery stock at Willow Park.
- The Proposed Project would implement Best Management Practices for the protection of root zones of trees and shrubs which will be on the fringe of the construction disturbance.

With these mitigation measures, potential adverse impacts to trees will be mitigated.

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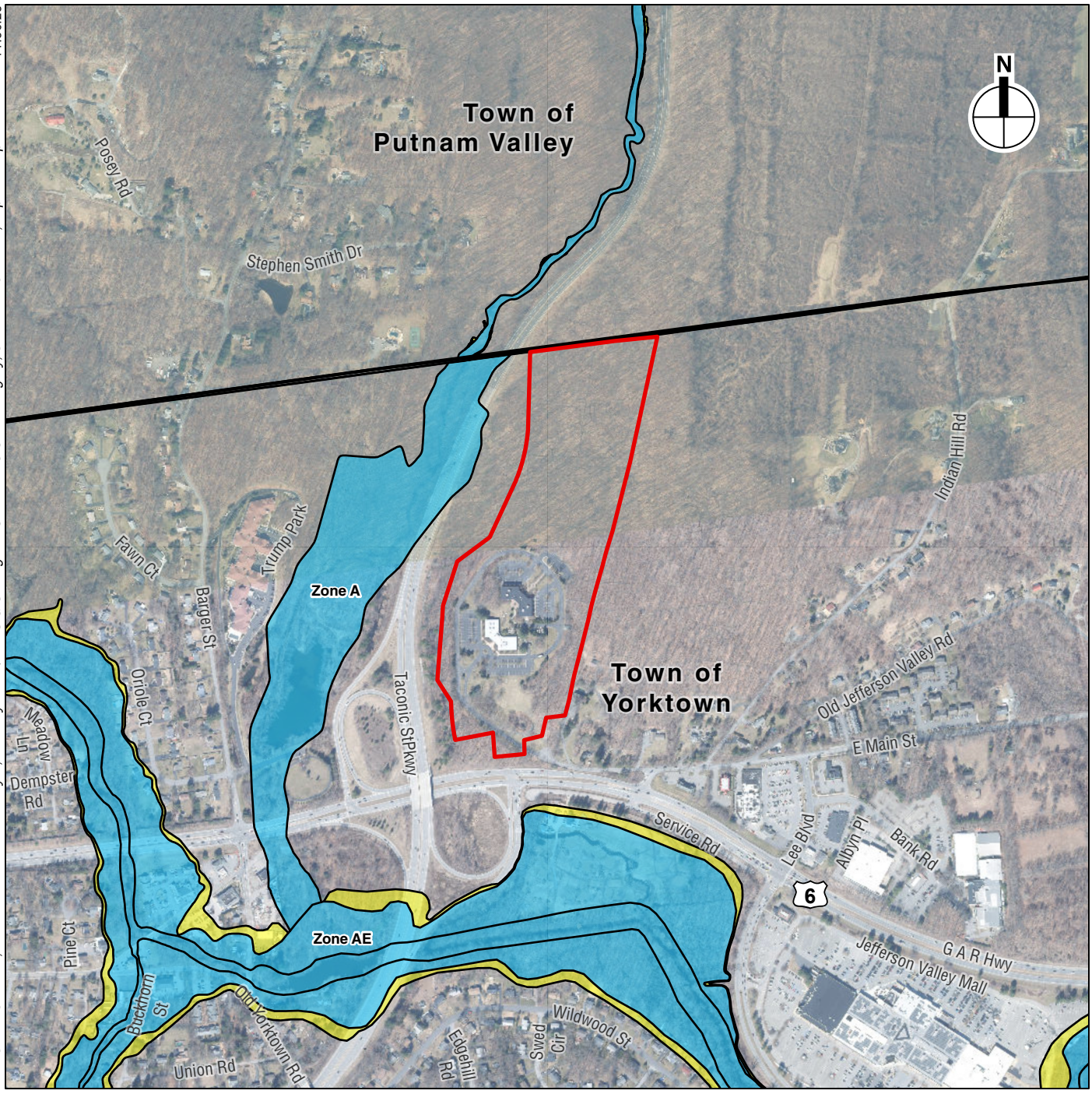


Data sources: FEMA, National Flood Hazard Layer, January 2018 / NYS GIS Program Office. NYC Orthoimagery, six-inch resolution, captured April 2018 11.30.23

Project Site

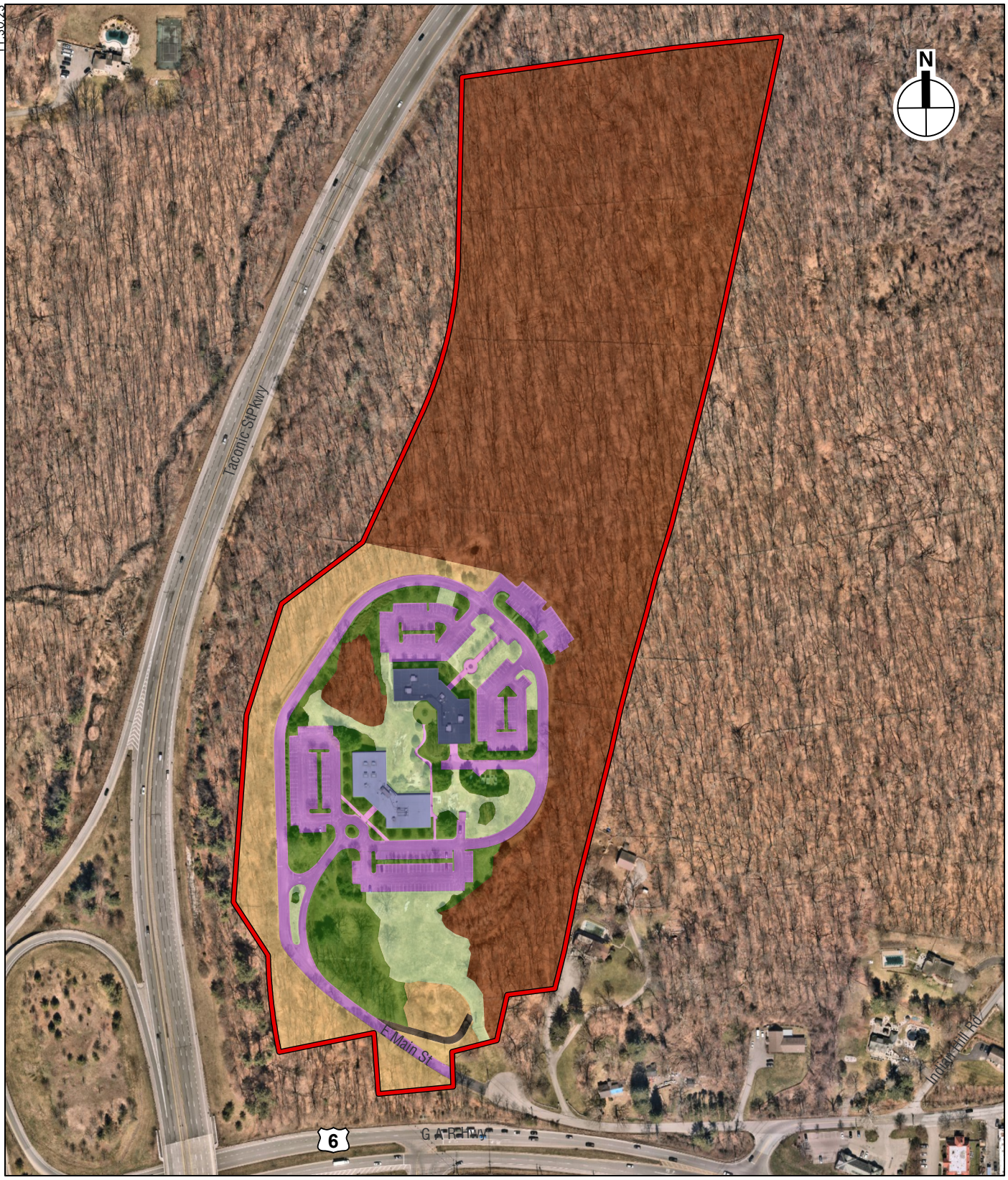
1% Annual Chance of Flooding

0.2% Annual Chance of Flooding

FEMA Effective FIRM 2007

800 EAST MAIN STREET

Figure 6-1



11.30.23

Data source: Orthoimagery via NYS, http://gis.ny.gov/gateway/mg/index.html

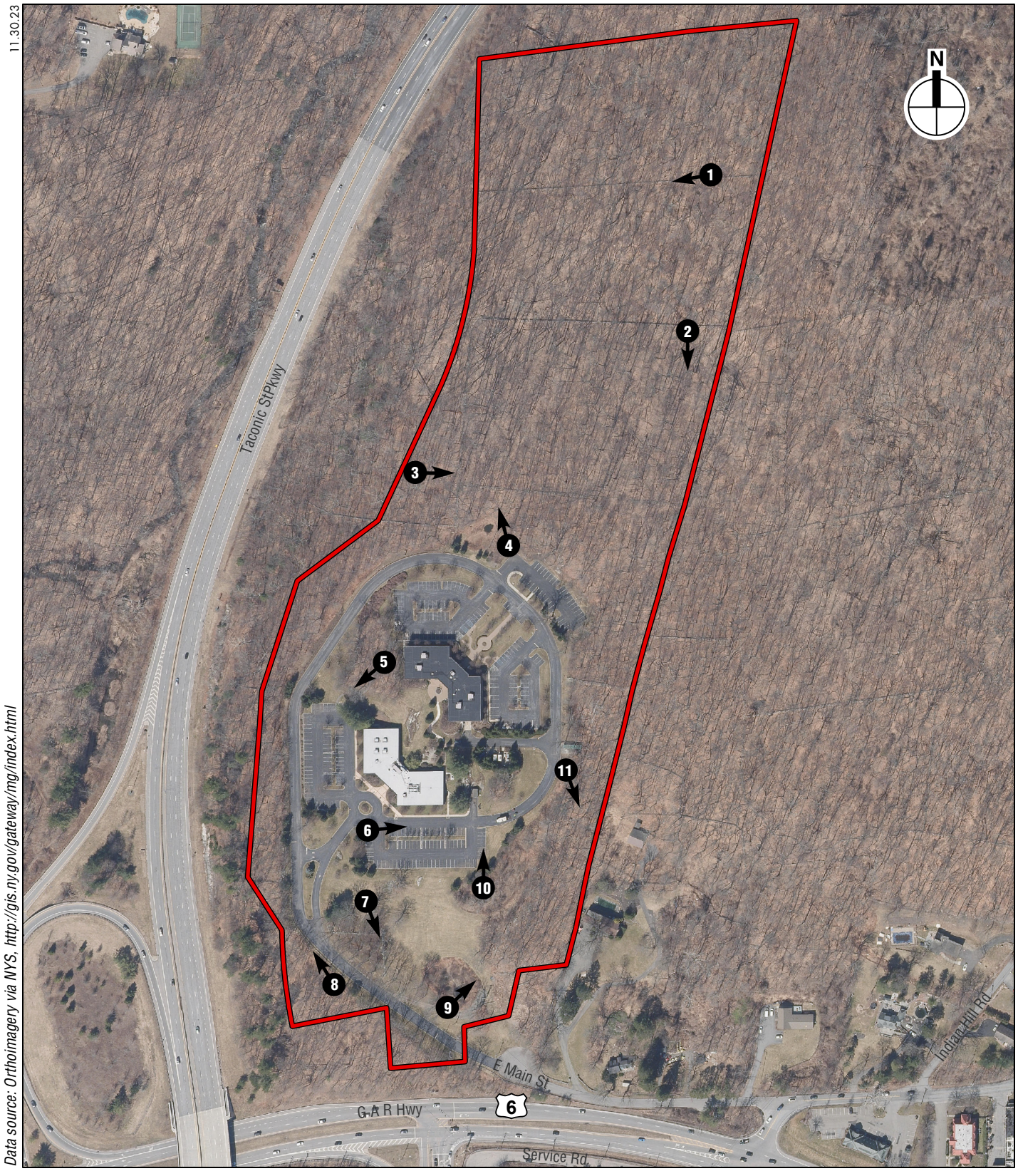
Project Site
Rural Structure Exterior
Paved Road/Path
Mowed Lawn
Mowed Lawn with Trees
Successional Southern Hardwoods
Unpaved Road/Path
Oak-Tulip Tree Forest

0 400 FEET

Ecological Communities

800 EAST MAIN STREET

Figure 6-2



Key to Photographs

800 EAST MAIN STREET

Figure 6-3

Oak-tulip forest ecological community, facing west. Photo taken August 23, 2023 **1**

Oak-tulip forest ecological community, facing south. Photo taken August 23, 2023 **2**

Oak-tulip forest ecological community, facing east. Photo taken August 23, 2023 **3**

Surface water in oak-tulip forest ecological community, facing northwest. Photo taken August 23, 2023 **4**

11.30.23

Paved road/path within oak-tulip forest ecological community, facing southwest. Photo taken August 23, 2023 **5**

Rural structure exterior, paved road/path, and mowed lawn with trees ecological communities, facing east. Photo taken August 23, 2023 **6**

Mowed lawn, and mowed lawn with trees ecological communities, facing southeast. Photo taken August 23, 2023 **7**

Successional southern hardwoods and paved road/path ecological communities, facing northwest. Photo taken August 23, 2023 **8**

Surface water with successional southern hardwoods trees ecological community, facing northeast. Photo taken August 23, 2023 **9**

Successional southern hardwoods and mowed lawn with trees ecological communities, facing north. Photo taken August 23, 2023 **10**

Oak-tulip forest ecological community, facing southeast towards residential area. **11**
Photo taken August 23, 2023