4.0 VEGETATION AND WILDLIFE COMMENTS AND RESPONSES

Comment 4-1 (Ms. Suzannah Glidden, Public Hearing, June 11, 2008): And now that global warming is upon us, we have to consider trees in a different light. They are going to be so important to keep our temperatures cool and to clean our air and it's is it mandatory to clear-cut to provide for septic and for secondary fields? Can't some trees be left? Please consider when you move forward, preserving as many trees as possible.

> ***Response 4-1:*** *The proposed action has been revised to reduce the overall footprint associated with permanent disturbances, i.e. impervious surfaces, of the project. While the total construction disturbance of the current proposed action is equivalent to the former proposed action, it should be noted that for the revised plan, impervious surfaces (buildings and paved surfaces) have been reduced 27 percent. This reduction has been accomplished by eliminating the shorter cul-de-sac road, shortening the length of the main access drive and reducing the widths of all proposed roads. Wetland buffer disturbances not associated with road access to the site, a stormwater discharge pipe, and off-site drainage improvements have been completely eliminated. These revisions result in a 63 percent reduction in on-site buffer disturbance from the prior plan.*
>
> *The plan revisions have also allowed for a greater area within the limits of disturbance to be revegetated to a more natural state than the previous action. Mowed lawn areas have been reduced 46 percent for the current proposed action in favor of meadow (increase of 17 percent) and landscaped areas (increase of 57 percent) that would provide greater benefits to wildlife than impervious areas or manicured lawns. These revisions have been made to preserve as many trees as possible, which in turn preserves habitat for wildlife that currently utilize the project site.*
>
> *Unfortunately, tree roots can cause severe damage to underground septic systems if allowed to grow in designated septic disposal areas. The Health Department does not permit trees in septic fields or the associated expansion areas. Instead of trees, the proposed septic area will be seeded with a native conservation seed mix which will provide cover and forage opportunities for wildlife.*

Comment 4-2 (Letter #9 Mr. Edward Gordon, Resident, July 26, 2008): Regarding the statement that no endangered species are found in the lot: I can recall, from my time on the Town Board, and contact with the CAC that Bog Turtles were to be found in this vicinity. Has there been a determination that this endangered species is indeed not present?

> ***Response 4-2:*** *As referenced in Chapter 4.0 Vegetation and Wildlife of the DEIS, the NYSDEC's Natural Heritage Program (NHP) indicated that it had no records of rare or state-listed animals and plants, significant natural communities, and other significant habitats occurring on or within the vicinity of the site. Ms. Jean Petrusiak of the NHP on January 10, 2008 indicated the NHP surveys their databases for a radius of up to one mile from the requested project site. A copy of this letter is included in Appendix C. Also, multiple surveys have been performed by qualified professional scientists and ecologists from Tim Miller Associates (TMA) and have returned no evidence of bog turtles on the project site. Based on recent studies, it is likely that bog turtles are extirpated in Westchester County.*

Comment 4-3 (Letter #12 Ms. Jessica Bacal, Westchester County Planning Department, July 23, 2008): Close monitoring during and after construction is necessary to protect dense woods, a small watercourse, and a staggering variety of flora and fauna in the area to be protected by a conservation easement.

> ***Response 4-3:*** *Comment noted. Monitoring will be constant during construction, with regular inspection of sedimentation and erosion controls, fences depicting limits of disturbance and identification of trees to be removed prior to clearing. Following construction the preservation of the open space areas will be the responsibility of the Homeowners' Association and the holder of the easement, which group has yet to be determined.*

Comment 4-4 (Letter #12 Ms. Jessica Bacal, Westchester County Planning Department, July 23, 2008): It Is noted that the Issue of wildlife corridors was not considered during scoping and the DEIS states that "modified" wildlife is expected to remain on site. However, a forty acre parcel is likely to be part of a wildlife corridor, and there is no Information as to how wildlife, abundant in Northern Westchester, will be affected by this project. Also, no detail is provided to support the DEIS conclusions pertaining to certain amphibians, reptiles and birds that use the property for breeding, feeding and/or forage and are identified as endangered. If vital wildlife and bird habitat is to be removed, the replacement should be the specific plants and foliage currently on site rather than grass and unspecified "native plants".

> ***Response 4-4:*** *As stated in Section 4.2.2 (Page 4-41) of the DEIS "The Proposed Action will result in the loss of and/or change in forested habitat that connects similar habitat to the west and southeast. The loss of the on site forested uplands will alter the movement of most of the wildlife that may use this property to access the adjacent forested areas. It will also result in the loss of habitat for those individuals that currently use the site. Existing habitat along the edges of the property within the required property boundary setbacks and within the wetlands and wetland buffers would remain largely undisturbed. These areas, in conjunction with the adjacent hedgerows and open and successional fields, would continue to provide resident and local wildlife populations the opportunity, albeit modified, to move around the development to access other undisturbed forest lands in the vicinity". It should also be noted that Section 4.2.5.1, Impacts to Locally Uncommon Fauna, of the DEIS analyzes both on-site and regional impacts to specific protected species that currently utilize the site and species that are known to utilize similar habitats to those found on-site.*
>
> *Refer to Response 4-2 in regards to the presence of endangered wildlife on the project site. The DEIS also contains habitat analysis to determine the potential presence/absence of specific endangered species known to inhabit Northern Westchester.*
>
> *Table 4-25, Regional Upland Condition Landscaping Plantings, of the DEIS indicates native or regionally adaptable landscaping species that would likely be used for landscaping and were selected as they may be beneficial to indigenous wildlife by provided opportunities for nesting, cover and food. Of the species listed in the table, at least 14 were identified to already exist on site while other species listed in the table are very likely to occur on parcels within close proximity of the site.*

Comment 4-5 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): Biological Resource Identification (page 4.2):

a. The methodology employed for documenting biological resources of the project site is only vaguely described and appears to be limited to "multiple day biological surveys" conducted in April and May, 2006. The description should be expanded and the actual dates (and for bird surveys the daily/evening starting time and hours) on which all surveys were conducted (April, May and all subsequent surveys, which are inadequately documented) should be documented.

b. Since many flowering plants such as goldenrods, asters, sedges and members of the parsley family cannot be reliably or confidently identified until late summer or early fall, a number of plant species may not have been identifiable at the times site surveys were conducted. For example, while conducting an inspection of the proposed stormwater discharge line on the east side of June Road, several plant species were observed on the project site that are not included in the site flora list. Thus, the statement that a comprehensive list of all [site] flora has been provided is not supported. It is also likely that some rare sedges (upland and/or wetland species) may have been missed. Additional field investigation at more appropriate times of the year appear warranted.

Response 4-5: *With regard to the dates and times of the bird surveys, as documented in the Biological Survey Report For Salem Hunt, "Bird surveys were conducted on May 5 and 31, 2006 between the hours of 5:30 AM and 10:30 AM to identify avian species utilizing the project site. Weather on the dates of the surveys was fair with cloudy to partly cloudy skies and temperatures ranging from the high fifties (°F) to the low seventies (°F) on both days."*

The following table lists all of the days of the various site inventories and surveys that were conducted on the Salem Hunt site.

Table 4-1
Dates of Site Surveys and Inventories

Survey Date	Target Species
3/14/06	Site habitat evaluation, general observations
3/28/06, 4/4/06, 4/14/06	Vernal pool breeding survey
5/5/06, 5/13/06	Bird survey
5/5/06, 5/16/06, 5/31/06	Non-vernal pool herptiles, mammals and Spring flowering plants
7/21/07	General wildife survey
8/13/07	Tree survey and general wildlife survey
8/29/08	Late summer flowering vegetation

The site was visited on August 29, 2008 to survey for plants that typically flower in the fall, such as goldenrods, asters, some sedges and members of the parsley family. The project site does not contain habitat conducive to goldenrods. Only two species of goldenrod were observed during the August 29 visit that were not previously identified on site; rough-leaf goldenrod (Solidago rugosa) and blue stem goldenrod (Solidago caesia). Few species of asters were observed on site, as well. Few calico aster (Aster lateriflorus) and small white aster (Symphyotrichum racemosum) were observed throughout the site. A small, scattered population of white wood aster (Aster divaricatus)

was seen throughout the upland woods and appeared to be heavily browsed upon. A denser population of white wood aster exists in Wetland D, along with populations of purplestem aster (Symphyotrichum puniceum) and flat-top white aster (Aster umbellatus) along the wetland's eastern edge. A single member of the parsley family, fool's parsley (Aethusa cynapium), that was not previously identified was observed during the survey.

A previously unidentified species of sedge, Carex lurida, was observed during the August 29 survey. The NYSDEC Natural Heritage Program did not identify any protected sedge species as being present in the vicinity of the project site. The site has been surveyed numerous times by qualified biologists who have not found any protected species of sedges to exist on the project site.

A complete list of plants identified during the survey can be seen in Table 4-2.

Table 4-2
August 29, 2008 Vegetation Survey -Observed Species

Common Name	Species	Where Identified				
		June Road	Wetland D	Wetland A	Wetlands B,C	Forested Uplands
Trees, shrubs and vines						
Allegheny blackberry	*Rubus allegheniensis*		X			
Hawthorn	*Crataegus* spp.	X				
Swamp rose	*Rosa palustris*		X			
Maleberry	*Lyonia ligustrina*	X				
Herbaceous plants						
Annual fleabane	*Erigeron annuus*	X				
Black medick	***Medicago lupulina***	X				
Broad-leaved water plantain	*Alisma subcordatum*		X			
Broadleaf dock	*Rumex obtusifolius*		X			
Calico aster	*Symphyotrichum lateriflorum*	X	X			
Cardinal flower	*Lobelia cardinalis* *		X			
Carolina horsenettle	*Solanum carolinense*	X				
Carrion-flower	*Smilax herbacea*	X				
Chicory	***Cichorium intybus***	X				
Clasping-leaf dogbane	*Apocynum cannabinum*	X				
Climbing false buckwheat	*Polygonum scandens*	X				
Common evening primrose	*Oenothera biennis*	X				
Common knotweed	***Polygonum aviculare***	X				
Common St. John's-wort	*Hypericum punctatum*		X			
Curlytop knotweed	*Polygonum lapathifolium*	X				
Dodder	*Cuscuta spp.*		X			
Fool's parsley	***Aethusa cynapium***	X				
Fringed loosestrife	*Lysimachia ciliata*	X				
Hairy willow-herb	*Epilobium ciliatum*		X		X	
Heart-leaved foam flower	*Tiarella cordifolia*		X			
Hedge bindweed	*Calystegia sepium*	X				
Lambs-quarters	***Chenopodium album***	X				
Marsh bedstraw	*Galium palustre*		X	X		
Marsh seedbox	*Ludwigia palustris*		X			
Mild water pepper	*Polygonum hydropiperoides*		X			
Mugwort	*Artemisia vulgaris*	X	X			
Oriental lady's thumb	***Polygonum cespitosum***	X				X
Parasol whitetop aster	*Doellingeria umbellata*		X			
Purplestem aster	*Symphyotrichum puniceum*		X			
Roundleaf goldenrod	*Solidago patula*		X			
Seedbox	*Ludwigia alternifolia*	X				
Shallow sedge	*Carex lurida*		X			

Table 4-2
August 29, 2008 Vegetation Survey -Observed Species

Common Name	Species	Where Identified				
		June Road	Wetland D	Wetland A	Wetlands B,C	Forested Uplands
Swamp beggar-ticks	*Bidens connata*		X			
Swamp loosestrife	*Lysimachia terrestris*		X			
Tall blue lettuce	*Lactuca biennis*	X				
Upright yellow wood-sorrel	*Oxalis stricta*					X
Water smartweed	*Polygonum amphibium*		X			
Waterpepper	***Polygonum hydropiper***		X			
White turtlehead	*Chelone glabra* *		X			
White vervain	*Verbena urticifolia*				X	
Wild peppergrass	*Lepidium virginicum*	X				
Wood nettle	*Laportea canadensis*		X			
Yellow sweetclover	***Melilotus officinalis***	X				
Grasses and Grass-like Plants						
Bottle-brush grass	*Hystrix patula*		X			X
Branched bur-reed	*Sparganium androcladum*		X			
Blue flag iris	*Iris versicolor*		X			
Ferns						
Marsh fern	*Thelypteris palustris* *	X				
Bracken fern	*Pteridium aquilinum*	X				

Source: Tim Miller Associates, Inc., 2008.
* NYS exploitably vulnerable species.
Species in **bold** type are not native to this region.
None of the above observed species are Westchester County-listed species.
Prepared by: Tim Miller Associates, Inc., 2008.
Species observed during previous surveys not included.

None of the Spring or Summer flowering plants identified by the August 29, 2008 survey are listed by the Federal government or by New York State (NYS) or Westchester County as a species that is endangered or threatened The survey did, however, identify three species listed as exploitably vulnerable by the NYSDEC; cardinal flower, white turtlehead and marsh fern.

Plants that are "exploitably vulnerable" are listed as protected species under 6 NYCRR New Part 193, Protected Native Plants, and are defined in the state listing as, "...native plants likely to become threatened in the near future throughout all or a significant portion of their ranges within the state if casual factors continue unchecked [e.g, all orchids, most ferns]." New York State law protects state-listed plants existing on public lands. Right of protection of exploitably vulnerable species are conveyed by the State to the private land owner on which the species are present. With the consent of the land owner, it is not a violation "for any person, anywhere in the state, to pick, pluck, sever, remove, damage by the application of herbicides or defoliants, or carry away...any protected plant."

Cardinal Flower (Lobelia cardinalis)

Cardinal flower is a perennial lobelia native to central and eastern North America that has an elongate cluster of showy, brilliant scarlet flowers. The flower is found in wet places, typically along streambanks and within wetlands.

A small but healthy population of cardinal flower was found along the marsh headwater stream located in Wetland D. This population will not be disturbed for construction of the proposed project as no part of Wetland D will be disturbed.

White Turtlehead (Chelone glabra)

White turtlehead is a perennial herb that thrives in wet meadows, marshes, seeps and streambanks. Flowering from July to October, the snap dragon-esque flowers are rose-white and resemble a turtle's head, from which it gets its' name.

As with the cardinal flower, a small population of turtleheads was observed growing within Wetland D, with most occurring along the marsh headwater stream. As previously stated, Wetland D will not be disturbed for the build-out of the proposed action.

Marsh Fern (Thelypertis palustris)

The marsh fern grows in rich, wet soil on the edge of marshes and wet meadows, ditches, and moist woods.

Several patches of marsh fern were observed along the western edge of June Road, within Wetland D. Wetland D will not be disturbed during construction of the proposed action, therefore no impacts to marsh fern populations are anticipated.

Comment 4-6 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): The rationale ('because cover varied so much an estimate wasn't provided') for not providing an estimate of sub-canopy coverage of the shrub layer and the groundcover layer beneath the project site's wooded communities is unsubstantiated (page 4-5); notably, such cover estimates were provided in the Plot Analyses for trees outside proposed disturbed areas conducted in March, 2008. For vegetation analysis purposes, the DEIS should be revised to provide at least an estimate of cover for these layers during summer (July - August).

Response 4-6: *Sub-canopy coverage of the shrub layer and the groundcover layer located in the Successional Northern Hardwoods forest community on the project site is variable. The sub-canopy layer consists primarily of saplings of the overstory trees as well as spicebush, arrowwood, Japanese barberry and multiflora rose and exhibits a growing-season cover of approximately 25-35 percent throughout most of the western portion of the community. The eastern half of the community exhibits a more sparse sub-canopy, with an estimated growing-season coverage of 10-20 percent. The understory vegetation in the community is generally sparse due to the limited amount of solar penetration through the tree canopy and continuous browsing by deer. Seasonally prominent ground layer vegetation exhibits a coverage of approximately 10-20 percent throughout the community and includes garlic mustard, skunk cabbage, jack-in-the-pulpit, wood anemone, leek, trout lily, virginia stickseed, enchanter's nightshade, jumpseed and various ferns.*

Comment 4-7 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): The DEIS assessment (page 4-11) that Wetland A has "relatively low wetland functional value..." lacks substantive documented support. This wetland is a largely forested headwater tributary to NYSDEC Wetland L-32. As such, it is part of a wetland/watercourse landscape scale biotic corridor for wetland/watercourse dependent wildlife that is connected and discharges to an extensive, largely undisturbed forested wetland system south of the project site. A portion of this intricate wetland system and associated undisturbed bordering forest also crosses the easterly end of the project site and continues into the Town of Southeast. The association of Wetland A with Wetlands B and C also enable wetland dependent fauna to travel across the westerly one-third of the project site in an unimpeded manner. The DEIS reports that green frog, pickerel frog, spring peeper and other amphibian species utilize Wetland A. It is also likely that turtles and numerous species of birds and some small mammals utilize this wildlife corridor such as wood turtle, box turtle, Louisiana water thrush, red-shouldered hawk, American woodcock, veery, wood thrush, American redstart, smoky shrew, masked shrew and star-nosed mole.

While the DEIS acknowledges that Wetland A is part of "a narrow wet corridor" and that it "may provide a habitat connection" to off-site wetlands, the importance of Wetland A in providing this function is substantially under-assessed. Similar comments about the low functional value of Wetlands B and C also under-assess their importance in terms of landscape connectivity and wildlife use. The related DEIS evaluations pertaining to Wetlands A, B and C should be revised and expanded accordingly.

> ***Response 4-7:*** *Comment Noted. Regardless of opinions regarding wetland function, the Proposed Action will not disturb Wetlands A, B, and C or the buffers of Wetlands A and C. Only 200 square feet of the Wetland B would be disturbed., As such, the functionality of these wetlands, and their buffers, will remain intact after construction of the project.*
>
> *The conclusions expressed in the DEIS concerning the relatively low functional value of Wetland A were based upon an assessment of the size of Wetland A, it's elevated position in landscape relative to Wetland L-32, its linear separation from Wetland L-32 and existing physical interruptions in the hydrologic connection between Wetland A and L-32, and Wetland A's hydrologic, linear, and upland separation from Wetlands B and C.*
>
> *Subsequent to the initial delineation of Wetland A, a field assessment with NYSDEC staff confirmed that Wetland A is hydrologically connected to the much larger NYSDEC Wetland L-32, and therefore a part of it. The 0.23 acre Wetland A, which serves as one small headwater area contributing to the 131.19 acre Wetland L-32, occupies the extreme upper limits of the headwater and constitutes only 0.18 percent of Wetland L-32. Refer to Figure 6-9 (Wetland A and NYSDEC Wetland L-32) for the approximate location of Wetland A on the project site, the approximate location of the hydrologic connection between Wetland A and Wetland L-32, and a graphic representation of the area of Wetland A in relation to the area of the remainder of Wetland L-32. Given Wetland A's position in the extreme upper reaches of the headwater, and its remoteness from the remainder of L-32, it is not considered a significant component of the important wetland corridor within the body of the much larger Wetland L-32.*
>
> *The Applicant notes that while a hydrologic connection exists between Wetland A and Wetland L-32, the connection is impacted by an existing abandoned farm road and the existing driveway serving the Havell residence to the south of the project site. These*

interruptions compromise Wetland A's continuity with the Wetland L-32 system and Wetland A's value as a travel corridor for some wetland dependent species. The Applicant also notes that Wetland A, and Wetlands B and C, are located in distinctly separate drainage areas and that no association, in the form of a hydrologic, or wetland vegetation community, link exists among any of these wetlands. In addition, some three hundred linear feet of uplands separate Wetland A from Wetland B, and a greater expanse of upland separates Wetland A from Wetland C. Avian species, such as those noted in the comment, can travel between wetlands, and will continue to be able to do so in the proposed condition. The smaller mammals that are noted may use this corridor, but not as part of a wetland dependent habitat use, but rather as part of a preference for moist woodlands, which include the drier areas of Wetlands A, B and C as well as the moist woods in between.

For the smaller, "wetland dependent" species, this movement is currently more difficult than when these species remain within their existing wetland. However, such movement is possible, and likely does take place occasionally. This would likely result in a higher level of predation from predator species, or higher mortality when such species get caught away from their optimum habitat. Thus the smaller salamanders and those frogs that prefer a more moist environment are less likely to wander from their home wetland.

The turtle species, which are more hardy and adapted to the upland conditions, could use this corridor if it was only the hydrologic condition that was an issue, but it is noted that this site also has many significant stone walls that can serve as a barrier to turtle movement, as noted elsewhere in this FEIS. However, movement between site wetlands by any turtle species on the site (only box turtles have been observed to date) is possible, and the mitigation plan submitted as part of this FEIS establishes corridors that will remain open following construction to ensure that a pathway remains for turtle and other reptile movement.

With respect to the comment concerning the functions of Wetlands B and C, since these wetlands are not hydrologically, or otherwise, connected to any other on-site wetlands, they do not provide an important wetland habitat function when compared to Wetland A/D. While these wetlands likely support some wetland dependent wildlife species, these wetlands are small and tend to the drier side of the hydrology scale, which is not as productive for most wetland dependent species.

Finally, the Applicant reiterates that regardless of the commentor's view on the functions of Wetlands A and C, no disturbance of these wetlands is proposed and only 200 square feet of Wetland B's buffer would be disturbed.

Comment 4-8 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): The DEIS (page 4-22) refers to "edge habitats" present between different "vegetative communities" that increase the complexity of habitat structure and the diversity of niches that wildlife species may exploit. More correctly, areas between distinct ecological communities should be referred to as *ecotones or transitional habitats between two ecological communities.*

The DEIS also does not substantively recognize (or evaluate related impacts) resulting from forest fragmentation, which will occur as a result of the proposed action. The proposed action as planned will create appreciable "edge habitat" consisting of lawn and the large septic treatment area bordering remaining forest patches on the project site. These areas will favor

undesirable wildlife "edge specialists" such as raccoons, skunks, opossum, which species are predatory on turtle and other reptile nests and, along with another edge specialist, brown-headed cowbird (a brood parasite), can locally decimate song bird nests.

The creation of such edge habitat and with the reduction of core areas within the project site's upland forest, patch habitats will be established which will facilitate forest invasion by undesirable wildlife that can seriously impact nesting birds and reptiles. The DEIS should be revised accordingly to address these unidentified and unmitigated impacts. Consideration should be given to reducing the amount of edge habitat (e.g., through project revisions, potential relocation of treatment facilities under parking areas, increased buffers, re-vegetation with native plant species other than lawn grasses, etc).

Response 4-8: *Further reference to "edge habitats" will be referred to as ecotones or transitional habitats between two ecological communities.*

It is purely opinion to consider native species such as raccoon, skunk and opossum, that are likely to already inhabit the site, as undesirable wildlife. Nevertheless, if reptiles currently utilize the site for nesting opportunities, predatory species that could disrupt the nesting activity are likely to be present as well, especially given the residential development to the north, south and east of the project site. Ecotones created by the lawn and septic areas could favor such species, but are not expected to increase local populations of nest predatory wildlife as these nest predatory species (raccoons, skunks, and opossum) would be managed, if necessary, by a licensed pest control specialist upon the addition of the proposed residential development.

The brown-headed cowbird, another edge specialist, was observed to be using on site habitat during formal bird surveys. Populations of brown-headed cowbirds could increase upon addition of edge habitat ecotones by the proposed project. Impacts to resident populations of songbirds due to cowbirds are not expected to be significant.

Brown-headed cowbirds prefer to inhabit and feed in grassland with low or scattered trees, such as woodland edges, fields, pastures, and residential areas. Areas of open field for horse pastures, residential lawns, and sports fields exist on adjacent land that are likely to provide habitat for cowbirds. While the project site is connected to larger tracts of undisturbed forested land, the on site woodlands are still fragmented by surrounding development.

As recommended in the comment, the applicant has proposed mitigation measures to reduce the impact of proposed vegetation removal and to enhance existing native vegetation. The current FEIS Plan will result in approximately 2.5 acres of new manicured lawn area, which is a 46 percent reduction from the 4.6 acres of lawn proposed for the DEIS Plan. Approximately 9.2 acres of the site will be planted with low maintenance native grasses. Areas of meadow and native grasses are proposed for a common area between buildings, as well as for the wastewater disposal field.

The applicant has proposed an invasive species eradication program, as further described in Response 4-10. By reducing exotic vegetation, nearby native plant species will have less competition and more resources available for their own growth.

Buffer enhancement planting is proposed for approximately 0.58 acres in portions of the buffers of Wetland A, B & C and D. The proposed plantings are native species, locally common and are known to provide wildlife food and cover. Many bird and mammal species can make use of the berries, flowers or twigs produced by these plants. Potential impacts to wildlife from the project will be mitigated by increasing the native species and variety of planted vegetation and enhancing the health of existing native vegetation.

Comment 4-9 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): The DEIS (page 4-24) states that the orchid (long-bract green orchis) found on the project site is "relatively non-selective in its habitat requirements..." However, the New York Flora Association and several other literature resources state that the habitat of this orchid is "*Rich mesic to wet-mesic forests and sometimes in seepages.*" While recorded for Westchester County, this species is vouchered in only about half of the State's 62 counties. If a specimen of this orchid was collected by the applicant, it should be made available to the Town for identification. However, based on the habitat description and location where this species was found on the project site, it is more likely that this orchid is the nonnative Eastern helleborine (*Epipactis helleborine*). Its habitat is described as: "*Mesic forests, roadsides, and disturbed soils sometimes in urban settings. Mostly grows in native sites and appears native.*" This latter orchid has been observed in ditches near the project site.

Response 4-9: *As the comment suggests, based on habitat description and the location of the specimen in question was found, the orchid is most likely the nonnative Eastern helleborine (Epipactis helleborine). It is likely the specimen was not in bloom during the spring flowering survey when it was observed, making a definitive identification difficult. The specimen was not collected by the applicant as it was believed to be the native long-bract green orchis and this species, along with all native orchids, is classified as exploitably vulnerable by the NYSDEC. It is a violation for any person, anywhere in New York State, to pick, pluck, sever, remove, damage by the application of herbicides or defoliants, or carry away, without the consent of the owner, any protected plant, including exploitably vulnerable species. The Eastern helleborine is not afforded any protection at the state, federal or local level.*

Comment 4-10 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): According to the DEIS (page 4-26), tree-of-heaven, black locust and Norway maple are all noted as present within the project site. These invasive species favor areas of disturbed soils and edge areas, aspects which will be prevalent with construction of the proposed action as currently designed. As noted above, edge habitat and overall site disturbance should be minimized. Consideration should be given to implementing an invasive species monitoring and manual control program for the duration of construction and development of the project. It would be appropriate for such a program to be designed to carryover into the needed maintenance plans that will need to be developed and implemented by the proposed Homeowners' Association.

Response 4-10: *It is noted that approximately 43 percent of the site (17.3 acres) is proposed to be preserved as open space in a conservation easement, including the on-site watercourses and wetlands. However, these preserved areas are known to support invasive species which are altering the character of the woodlands and represent a long term risk to the native vegetative community.*

By eliminating exotic vegetation, and reducing deer populations due to increased human activity on the site, nearby native plants will have less competition and therefore have more resources available for their own growth. It is recommended that an invasive species eradication program be implemented at the project site as part of the overall development plan. Target species should include the following:

Tree-of-heaven (Ailanthus altissima)
Multiflora rose (Rosa multiflora)
Mugwort (Artemisia vulgaris)
Autumn olive (Eleagnus umbellata)
Garlic mustard (Alliaria petiolata)
Purple loosestrife (Lythrum salicara)
Common reed (Phragmites australis)
Oriental bittersweet (Celastrus orbiculatus)
Porcelainberry (Ampelopsis brevipedunculata)
Japanese Barberry (Berberis thunbergii)
Japanese Stilt Grass (Microstegium vimeneum)
Winged Euonymus (Euonymus alatus)

All invasive non-native plants that are detrimental to the ecology of the project site will be removed during site development to the extent practicable. Invasive species can be removed in several ways, depending on the location and species of the plant:

1. *If a shrub is isolated and does not have its root system entwined with other plants, it may be removed mechanically. As much of the root system as possible should be removed to prevent the possibility of the invasive plant sprouting from root pieces left behind.*
2. *If a shrub is growing amongst other native plants in a way that uprooting it may disturb surrounding native plants warranting preservation, the plant will be most safely and effectively removed by chemical means. To remove by chemical means, the plant should first be cut back to a few stubs and stumps, about twelve inches from the base. A concentrated solution of glyphosate (Round-up or equivalent) should be painted on the ends of the stumps. This technique is most effective in the early fall months but before the approaching dormant period. The use of pesticides in some townships is restricted due to health and safety concerns. Proper notification must be made prior to the application of all pesticides, and application made by a licensed applicator. Only hand-cutting and removal will be allowed within the Controlled Area.*
3. *Highly invasive groundcovers, such as Japanese honeysuckle, are difficult to eliminate due to their habit of rooting along any stem. Groundcovers of this type should be sprayed with glyphosate, using a very close and targeted application during the active growing season. If the plant is growing among other herbaceous or shrub material that would be harmed by spraying, the glyphosate should be applied by brush or mechanical removal should be considered. Repeated treatments may be necessary to remove the plant completely. Only hand-cutting and removal will be allowed within the Controlled Area.*
4. *Highly invasive annuals, such as garlic mustard, are difficult to eliminate due to their growth from seed that is widespread among the soil seed bank where the plants are found. Several methods may be utilized in removing this type of*

invasive plants. If the species is growing densely without other plants, the area may be sprayed with glyphosate during the active growing season, following the manufacturer's recommendations. Species may also be removed by hand. Both methods should be performed before plants set seed. Both methods also may need to be performed multiple times over a season and possibly over several seasons to completely eradicate the target species. Only hand-cutting and removal will be allowed within the Controlled Area.

Following development of the site, a maintenance plan will include the regular inspection of undisturbed areas within 100 feet of the development envelope, and removal of these species as necessary. This represents the transitional areas that are most susceptible to opportunistic settling of invasive species. The Town might also want to enter into an agreement with the entity that will be holding the conservation easement to determine if a regular program for monitoring of the conservation easement areas is also feasible.

Comment 4-11 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): The DEIS (page 4-28) states that the project site offers only moderate wildlife habitat value because it is not connected to significant offset [sic] sources. However, even only a casual inspection of Figure 3-2, Site on 2004 Aerial Photo, shows that the undisturbed forested condition of the property is part of an extensive area of forested land connecting the Eastern Westchester Biotic Corridor to the south-southeast of the project site to one of the Town's most extensive undeveloped forested areas to the west of the subject property.

In addition, the presence of a reported pair of red-tailed hawks near a nest in the central area of the project site, observed American woodcock, sharp-shinned hawk, an owl, two box turtles and numerous amphibians as reported in the DEIS, with potential habitat for a number of State-listed Special Concern species of birds that require extensive forest habitat to be present on the site, are reliable indications that the subject property possesses high habitat value.

Also understated in the DEIS is the potential impact on the project site's protected and most vulnerable species, including for example, eastern box turtle (State-listed Special Concern; Westchester County-listed Threatened) and American woodcock (Westchester County-listed Threatened with only one breeding record of this species reported for the County by the 2000 - 2005 Breeding Bird Survey). The potentially substantial project related impacts to these species should be more thoroughly evaluated and mitigated (the related DEIS environmental setting, impact evaluation and mitigation aspects should be revised accordingly).

Response 4-11: *Comment noted. The proposed development will represent a change to the existing condition on this property and the surrounding area. The Planning Board has the task of balancing decision making for a moderate income housing project (on a site targeted by the Town of North Salem for such residential use) against the effect of altering habitat. While the proposed development has the potential to affect isolated individuals of the noted species, the overall plan mitigates to the extent practicable these potential impacts while weighing the public benefit of the project against these impacts.*

The applicant is proposing a clustered development at a density significantly lower than the current zoning code allows. As shown on Figure 4-2, corridors for wildlife travel will remain available around the perimeters of the site, and will continue to tie to the offsite undeveloped areas. These corridors are at least 400 feet wide, and will allow for

passage of any of the bird species that may utilize the site, including woodcock. On site movement of the box turtle is considered in the Reptile Management Plan as discussed in Response 4-16 below.

It is noted that the site is not currently part of the identified Eastern Westchester Biotic Corridor, and was specifically chosen for the proposed use by the Town Board. As long as local, state and federal policy continue to permit unrestricted population growth and immigration, there will continue to be conflicts between the need to house people and the change in habitat that accompanies land development. There are no state, federal, or local laws protecting corridors that connect larger, undeveloped tracts of land that contain high levels of biodiversity. All resources on site that are regulated on the state, federal, or local level are being protected to the fullest extent practicable consistent with the applicable zoning. The proposed action has been redesigned to remove all disturbances to wetland buffers not associated with gaining access to the interior of the site, a proposed stormwater discharge pipe, and stormwater improvements along June Road. It should also be noted that the proposed action conforms to all zoning laws set forth by the town for the zoning district in which the site is located.

Comment 4-12 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): According to the DEIS (page 4-29) eastern cottontail is said to have been observed directly or indirectly (tracks, droppings, etc.) on the project site. Since the New England cottontail, which looks nearly identical to the eastern cottontail and likely can't be confidently identified visually even by some experts, is being considered for Federal and possibly State listing as a threatened species, the applicant should explain how its identification of eastern cottontail and not the New England cottontail on the project site was determined.

Response 4-12: *As the comment suggests, visually distinguishing the New England cottontail from the eastern cottontail can be extremely difficult. The New England cottontail is considered a habitat specialist, dependent upon early successional habitats typically described as thickets.[1] The project site contains primarily forested communities, none of which would be described as having thickets. In any event, a positive determination has not been made as to the species of cottontail observed on the site. Some information does suggest, however, that New England cottontails will also use wetlands with dense understory vegetation (similar to portions of Wetland D), shrubby power line rights of way (bordering the north end of the site), and the edges of fields and meadows (which border the west side of the site).[2] [3]*

While New England cottontail habitat is not present on site, it is possible that both species could inhabit the project site as their ranges do overlap. The eastern cottontail is not protected at the state, federal or local level, however the New England Cottontail is listed by the US Fish and Wildlife Service (USFWS) as a candidate species and by the NYSDEC as a species of special concern. USFWS candidate species are species that could be listed as threatened or endangered within the near future, but are not yet afforded any protective status. NYSDEC species of special concern are native species for which a welfare concern or risk of endangerment has been documented in New York

---

[1] http://www.fws.gov/home/feature/2006/CNORFR091206.pdf
[2] DeGraaf, R.M. and M. Yamasaki, 2001. New England Wildlife: Habitat, Natural History and Distribution.
[3] Walter, W.D., 2001. The Tale of Two Rabbits: New England or Eastern? In September/October issue of Connecticut Wildlife, CT DEP.

State, but are not yet afforded any protective status associated with the Endangered Species Act.

It should also be noted that the New England cottontail, as well as the eastern cottontail, is a New York State protected game species with a daily bag limit and an open hunting season. Up to six cottontail rabbits (species unspecified) can be harvested per person per day in the southern tier from October 1, 2008 to February 28, 2009. A valid New York State small game hunting license is required to hunt cottontail rabbits.

Comment 4-13 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): Habitat loss, road-kill/maiming and direct loss (burying or maiming) of adult turtles, nest sites and hatchlings likely pose the greatest impacts to the long-term welfare of the eastern box turtle in Westchester County, than does illegal collecting and pesticides as is stated in the DEIS (page 4-30). However, it is acknowledged that illegal collecting and pesticides along with ill-timed mowing [at least from the turtle's perspective], predation by raccoons and free-roaming dogs, fire and severe weather also adversely affect box turtles. All of these impacting elements are additive and pick away at the long-term stability of box turtle populations. The DEIS impact evaluation should be expanded accordingly.

Response 4-13: *Comment Noted. All of these issues may result in a long term decrease in the numbers of box turtles in Westchester County. Mowing, which will only occur within the limited maintained areas of the site, will not likely be an issue with Salem Hunt, nor will free-roaming dogs. The septic area will be mowed once a year at the end of the growing season to control woody growth, but other than that will remain as open meadow. Raccoons are ubiquitous throughout Westchester County, and controls have limited effect, but as stated in Response 4-8, nest predatory species (raccoons, skunks, and opossum) would be managed, if necessary, by a licensed pest control specialist upon the addition of the proposed residential development. Fire will not be an issue with the development of this site, and severe weather is outside of the applicant's control.*

It is noted that the existing stone walls around the perimeters of Wetland B and C likely serve to limit the movement of turtles through the center of the site, but since there are some small openings in this wall there is a possibility that turtles move from Wetlands B and C toward Wetland D (DEC L-32). The applicant acknowledges that the proposed development may affect the ability of the local turtles to move between preferred habitats. Recognizing this, a Reptile Habitat Evaluation Report was submitted with this FEIS, and outlines the measures that are proposed to mitigate the potential impacts of the proposed development. These measures include fencing, a culvert under the proposed road, the establishment of suitable nesting areas and long term monitoring of these areas to evaluate their use. The mitigation plan is discussed in greater detail below in Response 4-16. The recommendations of the Reptile Habitat Evaluation and Management Recommendations report will be implemented prior to, during and following the completion of the project construction activities.

Comment 4-14 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): The DEIS's assessment (page 4-30) that stonewalls on the project site in the vicinity of Wetlands C and D could limit the movement of turtles is unfounded. Multiple literature references and past experience through multiple site studies indicate that when turtles encounter a barrier that blocks their direction of travel, they will invariably move along the length of the barrier until it

can be turned where they will then continue in the direction they were initially heading. This movement pattern is particularly true for female turtles traveling to nesting sites. While the DEIS states that a box turtle home range can be as small as one (1) acre, it should be noted that it's home range may also be as large as 14 acres or more, depending on the surrounding landscape features and the distances turtles may be required to travel between wintering, feeding, aestivating, water sources and nesting areas. In short, box turtles could be moving across the entire project site. Further, there is no evidence provided in the DEIS that the sex and gravidity of the turtles were determined or that they were photographed to record each turtle's unique shell pattern. Doing so would have provided useful information about what areas of the project site they might be using, and if found again on the project site, how far and to where they had moved, or if turtles found later were new individuals.

Response 4-14: *Comment noted. Box turtles may utilize home ranges as large as up to 25 acres. As noted above, there is a possibility that box turtles are moving throughout the site, although this appears unlikely to the biologists from Tim Miller Associates considering the condition of the walls. The two turtles that were observed on the site on May 5, 2006 were within this enclosed area, but unfortunately were not photographed or sexed. No other box turtles were observed on the site during field surveys.*

The proposed management plan considers the turtles' movement habits by using fencing and culverts to guide turtles around development areas. More information is provided below in Response 4-16. While the applicant notes that no turtle nesting areas were observed on the site.

Comment 4-15 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): The statement included in the DEIS (page 4-48) that "Wetland D and the associated marsh headwater stream habitat will be permanently preserved in its existing condition, thereby not impacting potential hunting habitat for the Cooper's hawk..." ignores the general sensitivity of this species to human presence, the potential for window crashes of this species (particularly during the winter) and the fact that Wetland D and its associated buffer are not large enough to buffer the visual and noise impacts of the development that would assure that Cooper's hawks or other raptors and similarly sensitive wildlife would utilize the remaining vestiges of the project site's natural areas. An evaluation of the ability of the site to accommodate a reduced development footprint which maintains/preserves a substantially larger distances away from regulated wetland/watercourse buffer areas of the project site should be provided. Mitigation measures to increase the potential for sensitive wildlife to utilize remaining undisturbed areas of the project site should be considered.

Response 4-15: *Comment Noted. Refer to Response 4-1 in regards to a reduced development footprint that includes the elimination of wetland buffer impacts not associated with site access, a stormwater discharge pipe, or off site drainage improvements. This reduced development footprint reduces the site impacts to the extent practicable while still meeting the objectives of the applicant and the goals of the Town in providing some affordable housing units for moderate income families. It is noted in direct response to this comment that no Cooper's hawks were actually observed during the many hours of field study that was done. Nevertheless, due to the Cooper's hawk's sensitivity to residential development, its potential use of the post-development project site is very low, save for the occasional attacks by Cooper's hawk of songbirds at feeders. Maintaining the septic area as a low maintenance meadow with once a year mowing will also provide some hunting ground for the*

Cooper's and other raptors if they use the site. It is also noted that open space areas at least 500 feet wide will remain to the north, east and west of the development following construction, as shown on Figure 4-2. A detailed mitigation plan has been provided for a species of concern that is known to use the site, i.e., the eastern box turtle, as described below in Response 4-16.

Comment 4-16 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): The statement included in the DEIS (page 4-51) that "Significant impacts to the eastern box turtle are not anticipated" has no merit and is unfounded because the extent of the use of the project site by box turtles has not been substantively determined (as it remains unknown). Given the extent of land clearing and grading proposed, development of the project site as currently planned, in the absence of knowledge about the size of the local turtle population and how turtles use the project site, poses a potential substantial impact to the local box turtle population which could further exacerbate what some turtle experts have referred to as a noncyclic population decline of the box turtle and the wood turtle populations in Westchester County. Box turtles take about 7-10 years to reach sexual maturity, and usually lay only about 4-7 eggs a year, so the loss of only a few female turtles can have serious, long-term repercussions on the sustainability of a local population. Moreover, raccoons, opossums and skunks, which are "development subsidized species," have been documented to exert a significant negative impact on the welfare of box turtles, their nest sites and their hatchlings. The proposed development may create and establish site conditions conducive to and for the increased establishment of such predatory species. Thus, the development as proposed has the potential to become a wildlife sink for species crossing it to connect to off-site areas to the west and south-southeast. In the absence of a qualified turtle specific study documenting movement and habitat use, consideration should be given to protecting larger areas of suitable habitat from proposed development, along with increased separation buffers between prime habitat and proposed development.

Response 4-16: *Comment noted. Refer to Response 4-1 in regards to a reduced development footprint that includes a reduction in wetland buffer impacts. Refer to Response 4-8 in regards to existing species predatory of box turtles.*

Herpetological Associates, Inc. (HA) was contracted by the applicant at the request of the Town's environmental consultant to conduct an Eastern box turtle habitat evaluation of the subject property. The results of HA's evaluation concluded the project site contains foraging and potential hibernating sites for the species. However, the site does not provide suitable nesting locations for the Eastern box turtle. Along with a reduced site plan, additional mitigation measures, as recommended by HA, that are not outlined in the DEIS chapter have been incorporated by the Applicant's engineer into a Herpetile Protection Plan that was created to limit impacts to box turtles and other herpetiles utilizing the project site. The primary intent of this plan is to protect turtles and secondarily some of the larger frogs and toads. These mitigation measures can be seen in Figure 4-1 Reptile Protection Plan and include:

- *Nesting Habitat Creation and Maintenance*

Eastern box turtle nesting habitat will be created on the site as a means to greatly improve the habitat quality outside the development area. A 1,200 square foot turtle nesting area will be created outside of the development area between Wetlands B and C. A second and much larger (approximately 5.05 acres) area that is suitable for

eastern box turtle nesting will be created and maintained above the proposed SSTS area. The soil in these areas will be a soft/loamy mix conducive to digging by nesting females and will be planted with a conservation seed mix, which will include bunch grasses that leave open, exposed areas between clumps. Any regrowth of woody vegetation in either of the two created nesting areas will be cleared every other year to prevent the establishment of tree saplings or thick weedy plants that would shade the ground surface and make it difficult for turtles to dig and lay their eggs. The nesting areas will be mowed once a year and only between November 15th and March 15th to avoid potential harm to turtles.

- *Barriers and Fencing to Keep Turtles and Other Reptiles from Development Areas*

The entire development area will be bounded by a turtle fence to preclude turtles and other herpetiles from entering the developed portions of the property. As detailed in Figure 4-1 Reptile Protection Plan, the turtle fence will consist of a three foot high post and rail fence with 12-18 inch-high wire mesh (with a maximum of one inch mesh opening) attached at the bottom and buried at least six inches into the soil. Burying the fence serves to keep turtles and other small wildlife from crawling under the fence. The primary intent of this plan is to protect turtles and secondarily some of the larger frogs and toads. It is possible that snakes, salamanders and some of the smaller frogs could pass through the wire fence as proposed. It is also noted that areas of the site that are under active construction will be enclosed to the extent practicable with silt fence, which will keep all herpetiles out of the development area during the time they are most susceptible to impacts, i.e., during construction and earth movement. Access to the power line easement along the north boundary of the site will remain in case turtles are using this existing open area for movement. At the openings in the turtle fence for the proposed path, an 8-inch by 8-inch wooden beam or similar material will be placed across the opening to keep turtles from accessing areas that are open to the development.

- *Culvert Under the Roads*

A wildlife tunnel will be placed under the main access road that leads to and from the proposed development. A 24 inch diameter by 60 feet in length high density plastic (HDPE) pipe with a smooth interior will be placed under the entrance road as seen in Figure 4-1 Reptile Protection Plan. Corrugated pipe will not be used as it hinders the ease in which some herpetiles, particularly turtles, can traverse under the road. The culvert location has been carefully engineered and positioned so that it does not serve for drainage during rain events. Due to the requirement that all runoff from road surfaces be captured and treated, the plan does not show a grate or other surface opening for this culvert. However, the distance from one side of the culvert is relatively short, and good light penetration is expected. The fence and rail turtle fencing will be placed flush with the opening of the pipe to direct turtles and other herpetiles into the tunnel under the road. The construction of the tunnel, in conjunction with the turtle fencing, will greatly reduce road mortality of wildlife once the site is developed.

- *Long Term Monitoring of New Nesting Areas*

After completion of the nest site creation and the finalization of the development, the new nesting habitat will be monitored by an experienced biologist. The NYSDEC will be contacted for guidance on how to adequately protect box turtle nest sites from predation and to obtain any special licenses necessary to monitor and/or protect box turtles or their nest sites. This will include inspections of the nesting habitat and nest searches during June and early July, the optimal time of year to find eastern box turtle nests. Additional monitoring will include the monitoring/inspection of the exclusionary turtle fencing to point out breaches in the barrier where box turtles and other herpetiles could enter the housing development and ensure these important barriers are repaired immediately. It is also proposed that the Town and the Homeowners' Association work with local conservation groups or the nearby school to inspect the nesting area during the spring nesting season to determine if nesting is occurring and protect any nests that may be found.

Comment 4-17 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): The DEIS assessment (page 4-52) that the project site's importance as a wildlife corridor to offsite habitats is "...limited due to the surrounding developed properties and roadways," lacks qualified substantive supporting analysis and documentation. Further, the statement that preservation of the wetlands and most of the wetlands buffers will allow wildlife to continue moving across the project site to off-site areas does not take into account that:

The width of the wetland and related buffer areas may be too narrow for use by sensitive wildlife that avoid extensively developed areas.

The Wetland D travel corridor will bottleneck at intersecting roads as a result of the proposed development.

Roads and drives with curbs are potential death traps to turtles that wander onto them (as they cannot get off readily and may become overheated, struck by vehicles or move down the main driveway onto June Road.)

Smaller wildlife may become trapped in storm drains, stormwater basins, open pits, tree and window wells, or be attacked by domestic animals.

The DEIS impact assessment should be revised accordingly and to provide consideration of potential mitigation measures intended to offset these impacts such as use of low-profile road curbs, avoidance for need of tree and window wells, cordoning off stormwater basins and open pits with appropriate fencing, use of narrow-hole storm grates that prevent small amphibian and reptile entrapment, etc.

Response 4-17: *Refer to Responses 4-1, 4-11 and 4-16. It should be noted the site plan has been revised to create a slightly smaller disturbance envelope, but more importantly a significant reduction in impervious areas and an increase in restored green space following development. A significant portion of the new disturbance area is an increase in the number and size of stormwater management facilities per regulatory requirements.*

Comment 4-18 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): The proposed action impacts to site regulated wetland/watercourse buffer areas, which will directly affect and remove an area in close to one (1) acre, have not been substantively mitigated as

purported in the DEIS (page 4-53). The proposed action does not include any provisions of in-kind replacement elsewhere on the project site or any proposed buffer or wetland area enhancements to possibly improve or offset the direct and secondary impacts which the proposed action will cause on the remaining areas of these resources areas. Furthermore, the proposed stormwater management measures, soil erosion and sediment controls, tree protection, anti-tracking aprons and dust suppression are required best management practices and are not considered as mitigation, certainly not wetland/buffer mitigation. The DEIS and proposed action development plan should be revised to provide specific mitigation for the extensive buffer area impacts; noting however, that a reduced and zoning compliant development footprint could be proposed which substantially avoids nearly all wetland buffer area impacts (except for needed site access).

Response 4-18: *Refer to Response 4-1. It should also be noted the proposed buildings and grading have been revised based on a meeting with the Town's Building Inspector and Architect to eliminate the need for any variances. Wetland buffer impacts have been reduced to those necessary for the site access at June Road, disturbance necessary for stormwater and septic field facilities and a temporary disturbance near Wetland B for access to the existing well, which will be restored with plantings following installation of the water main. On-site wetland buffer impacts include 0.3 acres on-site and an additional 0.15 acres off-site, for a project total of 0.45 acres (see summary in Section 1.3 Summary of Proposed Action).*

The following elements have been incorporated in to the plan for mitigating impacts to the Town wetland as a result of buffer disturbance:

1. *The removal of invasive species within wetlands and buffer areas.*
2. *Planting of appropriate native species in select buffer areas. Species will be chosen which are known to be resistant to deer, browsing, which is known to be a serious issue on the Salem Hunt site. It is the intense deer browsing that is occurring at the site which has eliminated many native species, with only resistant invasive species, i.e., japanese barberry left to dominate the shrub layer. The submitted landscape plans show approximately one half acre of buffer where additional plantings will be provided, and identify an additional one half acre of wetland that will be restored with the removal of multifloral rose and phragmites (near June Road and the proposed site access).*
3. *Conservation and other easement agreements will be established for approximately 17.3 acres (43 percent of the site) including buffer and all wetland areas, and are likely to also include a maintenance agreement with the Bridle Trails group.*

Comment 4-19 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): Given that the entire project site is potentially suitable habitat for box turtles for one or more purposes and since the movement patterns and use of the project site by box turtles remains unknown and undetermined, mitigation options to protect this species from adverse project impacts and effective monitoring and site development review is the domain of a professional conservation-oriented herpetologist, not a construction monitor and work crew as proposed in the DEIS (page 4-55). In addition to its listing by the NYSDEC as a special concern species, the NYSDEC has also listed the box turtle as a game species with no open season. As such, it is a State protected species which may not be hunted, taken, pursued, collected, harassed, etc.,

without a special permit or license. Only a properly licensed biologist or properly trained person working under the supervision and license of that biologist is allowed to handle State protected wildlife. The DEIS should be revised to include a pre-construction, construction and post-construction reptile protection plan for the proposed action (with emphasis on the box turtle), prepared and implemented by a professional herpetologist.

> ***Response 4-19:*** *Comment noted. Refer to Response 4-16 in regards to additional mitigation plans to offset impacts to eastern box turtles. As requested by the Town's environmental consultant, a Reptile Protection Plan has been developed based on recommendations by a qualified herpetologist, Herpetological Associates, Inc., for all phases of construction of the Proposed Action to mitigate impacts to box turtles and other herpetile species. It is not proposed for site personnel to hunt, take or in any other way harass box turtles.*
>
> *Project site personnel will be informed of the potential for box turtles to occur on the site. Personnel will be instructed how and where to relocate any box turtles found during construction in order to keep them out of areas of active or proposed construction. A properly licensed biologist associated with the project will be notified immediately whenever a box turtle is found on the site during construction and will be informed of where it was relocated. If the relocation site is deemed inappropriate, the biologist should make an effort to find the turtle and put it in a suitable undisturbed area of the site.*
>
> *The NYSDEC will be contacted for guidance on how to adequately protect box turtle nest sites from predation and to obtain any special licenses necessary to monitor and/or protect box turtles or their nest sites.*

Comment 4-20 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): The proposed mitigation described in the DEIS (page 4-56) to offset impacts to ground-nesting and other species of nesting birds should be expanded. For example, the septic treatment area could be planted as a native low-growing shrub thicket of gray dogwood (*Cornus foemina*) which would provide cover and forage for a number of shrub thicket birds, and further buffer proposed development near Wetland D. Maintaining the septic area as a mown grassland poses potential harm to ground nesting birds and reptiles and will function adversely as a wildlife sink.

> ***Response 4-20:*** *The total area of maintained lawn on the subject property has been reduced from 6.5 acres to approximately 2.5 acres. The maintained lawn area is located directly adjacent to the residential units. This maintained lawn area has been established within approximately 20 feet of the residential units with the areas outside this perimeter to be maintained with landscape plantings and a variety of conservation seed mixes. The proposed septic disposal area ground cover has been modified from a maintained grassed area to an area to be established with native conservation seed mix which will provide cover and forage for a number of ground nesting birds and reptiles. It is proposed to mow this area once a year during its dormant period from November 15 through March 15. All nest monitoring, installation of nest protection measures and handling of box turtles will be conducted under the supervision of a properly licensed biologist.*

Regarding the use of the SSDS area for potential turtle nesting, the new nesting habitat will be monitored by an experienced biologist as discussed in Response 4-16 above. This will include inspections of the nesting habitat and nest searches during June and early July, the optimal time of year to find eastern box turtle nests. Additional monitoring will include the monitoring/inspection of the exclusionary turtle fencing to locate any point breaches in the barrier where box turtles and other herpetiles could enter the housing development and ensure these important barriers are repaired immediately. It is also proposed that the Town and the Homeowners' Association work with local conservation groups or the nearby school to inspect the nesting area during the spring nesting season to determine if nesting is occurring and protect any nests that may be found. No cutting of the SSDS area will occur during seasons when turtles may be laying eggs (June or early July) or the time of year when hatchlings emerge (typically September).

Comment 4-21 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): Planting berry trees and cover trees primarily for landscaping and secondarily for wildlife use, is a mixed concern (page 4-57). Making cover and food resources available to birds (including bird feeders) and small mammals close to residences with domestic pets may support wildlife but they also function as a wildlife sink in terms of increased predation by pets, and window and vehicle collisions. Considerations should be given to developing a smaller project and planting native berry and cover trees and shrubs closer to the outer boundary of proposed development well away from residences, roadways and parking areas.

Response 4-21: *Comment noted. Refer to Response 4-1 in regards to a more compact site plan. Further, native berry and cover trees are proposed to be used in landscaping throughout the project, as well as on the outer boundary of the development. The following species are proposed for the buffer enhancement areas as shown on the landscaping plan:*

Amelanchier canadensis	*Shadblow*
Cornus amomum	*Silky Dogwood*
Cornus racemosa	*Gray Dogwood*
Salix discolor	*Pussy Willow*
Viburnum dentatum	*Arrowwood*
Viburnum lentago	*Nannyberry Viburnum*
Viburnum trilobum	*Cranberrybush*
Hamamelis virginiana	*Witch hazel*
Ilex glabra	*Inkberry*
Lindera benzoin	*Spicebush*
Aronia arbutifolia	*Red chokeberry*
Kalmia latifolia	*Mountain Laurel*

All of these species are native and locally common, and are know to provide wildlife food or cover. Most bird and many of the mammal species that utilize the site can make use of the berries, flowers or twigs produced by these plants.

Comment 4-22 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): The scale of the proposed action development (compounded by the proposed requests for multiple waivers, areas variances and encroachments into protected sensitive resource areas and resulting impacts on protected wildlife species) does not match the site's suitability or feasibility for such

development in consideration of the extent of natural resources that will be directly removed or modified, and become subject to secondary development impacts (few of which have been properly evaluated as noted above), with little or no meaningful mitigation offered to offset the proposed impacts.

Virtually all of the site's upland habitats will be removed/usurped, altered or subject to potential secondary impacts by the proposed action. The type and breadth/intensity of development proposed on the project site will irreversibly alter the microclimate of the property and extensively fragment an important, relatively intact hardwood forest corridor which borders the easterly and southerly boundaries of the Eastern Westchester Biotic Corridor (Miller and Klemens 2002). As shown on Figure 3-2, Site on 2004 Aerial Photo, the undisturbed forested condition of the property forms a critical link for forest dependent wildlife between the Eastern Westchester Biotic Corridor to the south-southeast and one of the Town's most extensive undeveloped forested areas of the Town to the west.

> ***Response 4-22:*** *Comment noted. Refer to Responses 4-1, 4-4, 4-11 and 4-16. The applicant acknowledges that a significant area of uplands forest will be removed for this project, and that there will be some loss of wildlife habitat that can not be directly mitigated. As specifically outlined in Response 4-11, the Planning Board has the task of balancing decision making for a moderate income housing project (on a site targeted by the Town of North Salem for such residential use) against the effect of altering habitat. While the proposed development has the potential to affect isolated individuals of the noted species, the overall plan mitigates to the extent practicable these potential impacts while weighing the public benefit of the project against these impacts.*
>
> *It is noted that the site is not currently part of the identified Eastern Westchester Biotic Corridor, and was specifically chosen for the proposed use by the Town Board. As long as local, state and federal policy continue to permit unrestricted population growth and immigration, there will continue to be conflicts between the need to house people and the change in habitat that accompanies land development. It should also be noted that the proposed action conforms to all zoning laws set forth by the town for the zoning district in which the site is located. The applicant is proposing a clustered development at a density significantly lower than the current zoning code allows.*
>
> *The site is within a broad contiguous forest corridor, and the proposed project will break up that corridor to some extent. However, as shown on Figure 4-2, corridors for wildlife travel will remain available around the perimeters of the site, and will continue to tie to the offsite undeveloped areas. These corridors are at least 400 feet wide, and will allow for passage of any of the bird species that may utilize the site, including woodcock. On site movement of the box turtle is considered in the Reptile Management Plan as discussed in Response 4-16 below.*

Comment 4-23 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): As development throughout the Town proceeds, it becomes increasingly important to maintain large intact natural areas of sustainable biodiversity in order to protect the long-term integrity of the Town's natural resources. Such areas (referred to as biodiversity hubs) encompass hundreds of acres of largely unfragmented natural ecological communities, possess a high interior area to perimeter ratio (limited "edge") and a deep central core area remote from human perturbation.

Equally important is the preservation of broad undeveloped wildlife corridors in the form of intact forests, grasslands, shrublands and stream/wetland/floodplain complexes, which connect biodiversity hubs to one another across the landscape. Wildlife corridors enable plants and animals to disperse throughout the regional landscape in search of new food resources, find mates and allow for the dispersal of new offspring. The subject property, particularly its areas of forest and regulated wetlands and buffers are representative resources of biodiversity importance within the Town.

As such, it is important to avoid these areas to the maximum extent practicable and to enhance where possible these minimum regulatory buffers through project mitigation measures, such as by:

- Minimization of forest loss and fragmentation.
- Avoidance of regulatory buffers.
- Provision for increased buffers, particularly relating to the site's steep slopes with highly erodible soils poised above wetlands such as the extensive Charlton soils (ChD soils; some areas of the site with this soil have slopes greater than 25%) located within the regulated buffer of Wetland D.
- Densification of vegetation and edge areas where proposed development encroaches upon or approaches these buffers.

Response 4-23: *Comment noted. The project has been reduced in scale to the extent practicable while still meeting the goals and objectives of the project sponsor. Responses 4-1, 4-4, 4-11 and 4-16 discuss a variety of mitigation measures that are proposed to offset any significant adverse impacts that have been identified.* While the impervious surface area, and area of proposed lawn has been reduced, the proposed limits of disturbance and attendant tree removal remains essentially unchanged from the DEIS.

Comment 4-24 (Letter #17 Hilary Smith & Joe Bridges, MDRA, July 30, 2008): Too often, the impacts of development on natural areas are perceived solely as a "loss of vegetation and associated wildlife habitat" which is limited to the affected area, with no consideration of secondary effects of development on wildlife (as noted below) that extend well beyond the "limits of disturbance" line shown on the proposed development plan.

These secondary effects of development in turn also result in adverse environmental impacts upon biodiversity hubs and wildlife corridors in several ways, as follows:

- Alteration and conversion, and removal and loss of habitat and biodiversity connections.
- Alteration of microclimate through increased heat sink by development footprint also resulting in adverse drier and warmer forest conditions.
- Establishment of less desirable and less diverse habitat edge conditions, promoting and encouraging the establishment and proliferation of non-native and weed species and wildlife that adversely affects the welfare of more sensitive, prized wildlife. For example, roads cut through a forest enable brown-headed cowbirds to invade the forest interior and to lay its eggs in the nests of valued species of warblers thereby reducing their nesting success.

- Wildlife mortality increases with development, particularly due to roadways and due to increased predation by wild and domestic animals.
- Disorientation of some wildlife occurs due to introduction of increased artificial illumination of streets, driveways, houses and parking areas.
- Increased loss of wildlife through window crashes, pool drowning, window and tree well entrapment, entanglement with plastic materials and pesticide poisoning.
- Restriction and/or loss in the natural movement patterns and trails of wildlife resulting in wildlife sinks or "death traps" for sensitive wildlife attempting to travel their familiar, long-used routes across the landscape.
- Fragmentation of extensive forested wildlife corridor.

An evaluation of secondary effects (impacts), such as noted above, have been substantively evaluated in the DEIS, nor has any related mitigation been discussed or proposed.

Response 4-24: *Comment noted. Refer to Responses 4-1, 4-4, 4-8, 4-11, 4-16, 4-19 and 4-20.*

Comment 4-25 (Letter #8 Mr. Frank Annunziata, Hahn Engineering, July 25, 2008): Trees within the limit of disturbance to remain should be protected. These should be shown on the plan.

***Response 4-25*:** *All trees within the limit of disturbance will be removed during construction and some will be replaced by landscaping with native vegetation. No specific trees within the limit of disturbance are proposed to be preserved.*

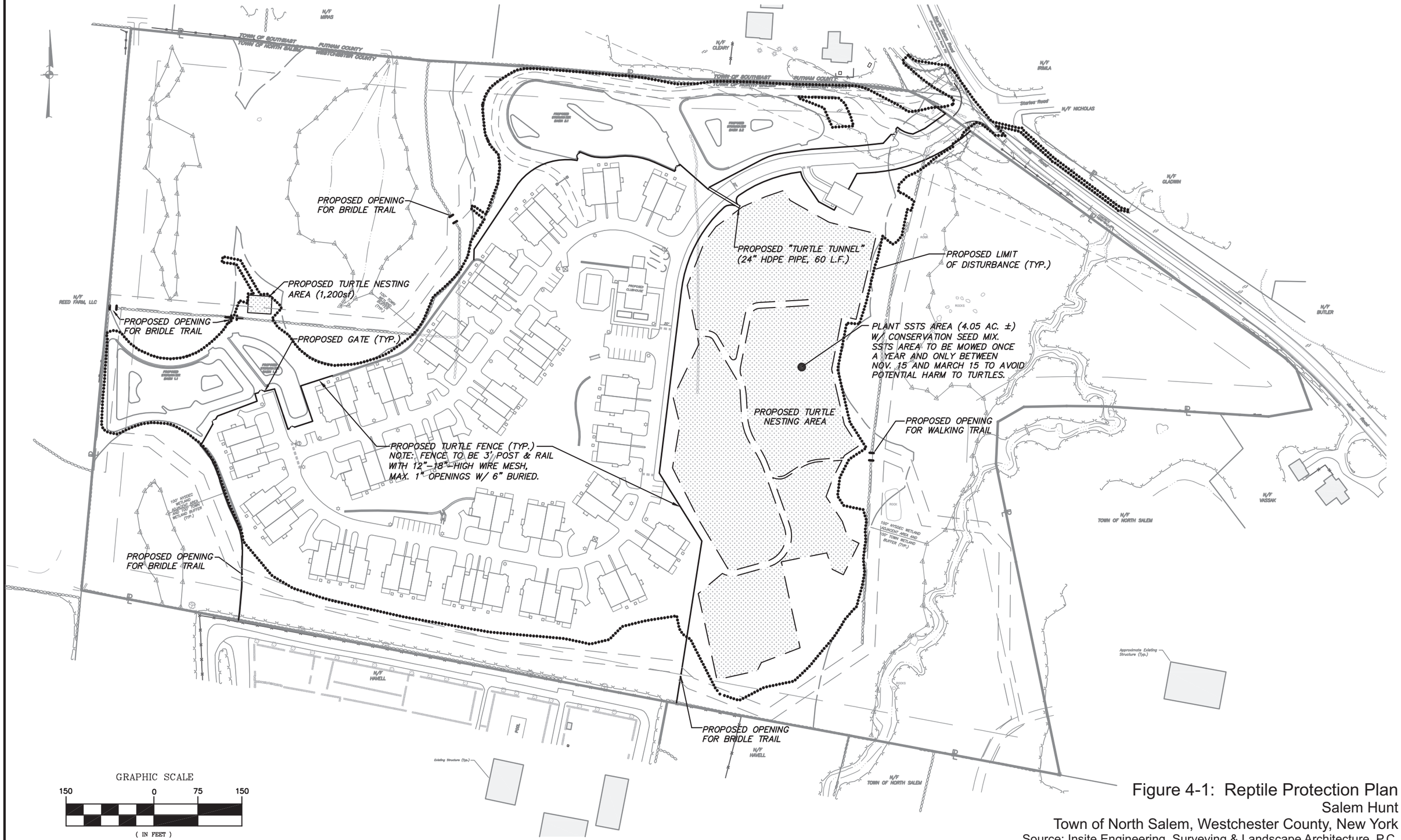
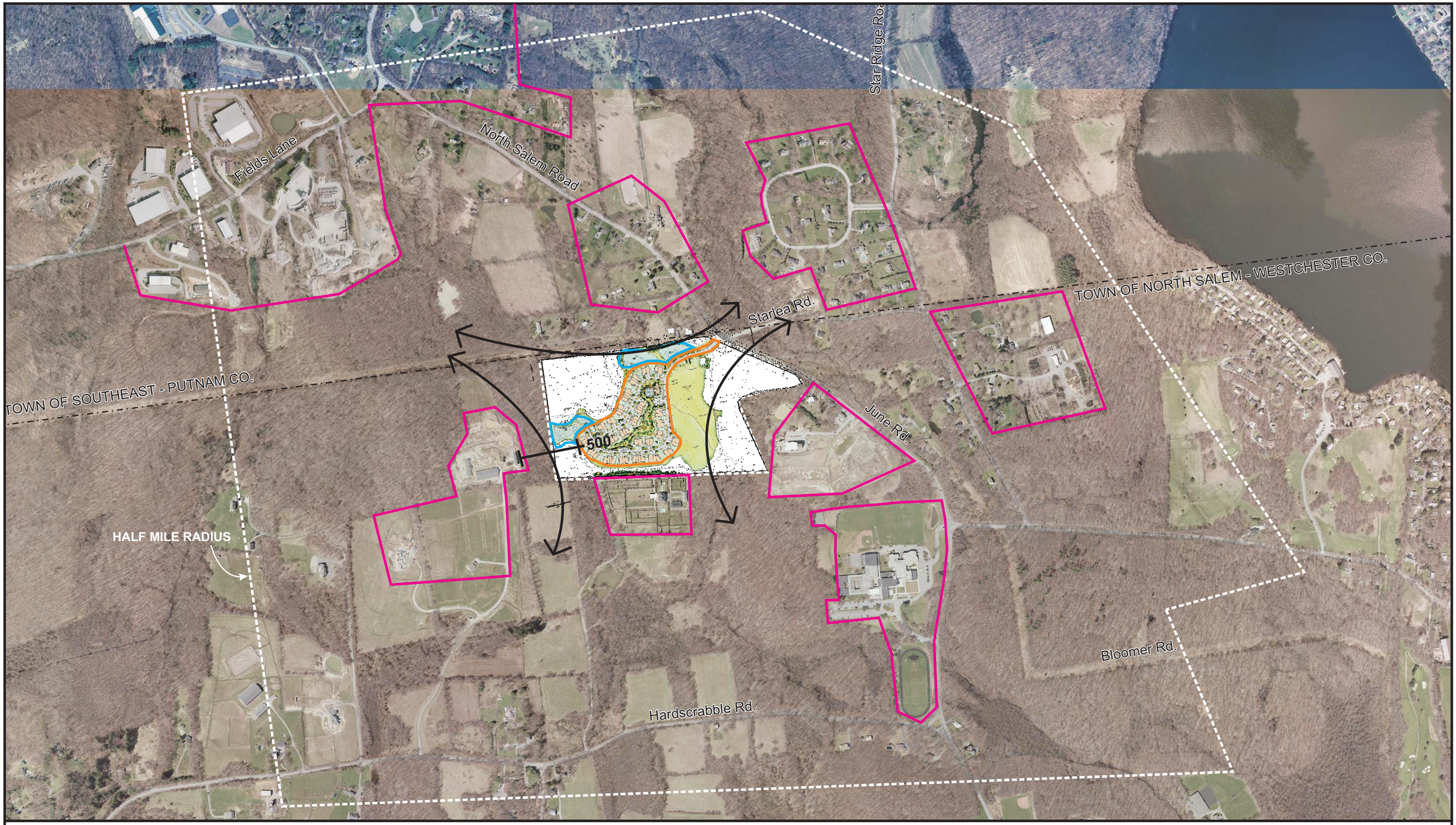


Figure 4-1: Reptile Protection Plan
Salem Hunt
Town of North Salem, Westchester County, New York
Source: Insite Engineering, Surveying & Landscape Architecture, P.C.
Date: 11/28/06, rev. 05/07/08, 11/24/08, 06/24/09
Scale: As shown

File 05196 07/01/09
JS/05196/new figs 7-01-09

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418



N
W E
S

LEGEND

- Potential Wildlife Movement Pattern
- Existing Impediment to Wildlife Movement
- Stormwater Management Area
- Limits of Salem Hunt Development

File 05196 3/17/09
JS/05196

Figure 4-2: Potential Post-Development Wildlife Corridors
Salem Hunt
Town of North Salem, Westchester, New York
Base: NYS GIS Clearinghouse, 2004
Scale: 1" = 725'

Tim Miller Associates, Inc.,10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418