

Southborough Zoning Board of Appeals
9 Cordaville Road
Southborough, MA 01772

July 1, 2025

Re: Response to Review Memorandum #3
250 Turnpike Road, Southborough, MA 01772 (Map: 27, Parcel: 2A)

Dear Southborough Zoning Board of Appeals,

Goddard Consulting, LLC, (Goddard) is pleased to submit this response letter on behalf of Ferris Development Group / FD 250 Turnpike (the Applicant), to provide responses to the Comprehensive Permit Review comments issued by Joe Orzel of Lucas Environmental, on June 16, 2025, in regard to the Comprehensive Permit filed for 250 Turnpike Road in Southborough, MA. Goddard has provided responses to each comment in the following report.

The format of this report will be as follows:

Lucas Environmental, (LE) Comments: *Italics*
Goddard Consulting (GC) Responses: **Bold**

Vernal Pool Migration Study

LE 1. LE requests the Applicant provide the dates the Vernal Pool Study was started and ended, as this information was not found in the GC Study.

GC 1. The vernal pool study began on the night of Saturday, March 15th, 2025. Based on the predicted high humidity, temperature, and potential precipitation, Goddard Consulting anticipated the first migration activity to take place on March 16th, 2025. To properly prepare for the first night, Goddard Consulting removed the pitfall trap covers one night early to resolve any unforeseen issues. The study concluded after 21 days of data collection on Friday, April 4th, 2025.

LE 2. The GC Study refers to the pool in question as a Potential Vernal Pool. LE notes that the pool is in fact a Vernal Pool, as it has been demonstrated to provide breeding habitat for two obligate Vernal Pool species and meets both biological and physical requirements to be considered a Vernal Pool, providing Vernal Pool habitat.

GC 2. Goddard Consulting acknowledges the stormwater detention basin supports breeding activity for obligate vernal pool species. We agree the basin meets the biological and physical criteria outlined by the Natural Heritage & Endangered Species Program (NHESP). Goddard agrees with the statement that Lucas Environmental made during the 6/16/25 ZBA hearing that, although the basin meets the criteria, NHESP may be unwilling to certify as a vernal pool an area that is a detention basin and part of a stormwater management system.

*LE 3. LE acknowledges that the Vernal Pool in question is not a pristine or exemplary example of a Vernal Pool. It is a stormwater basin created approximately 35 years ago that receives parking lot runoff, that was determined to be a jurisdictional Bordering Vegetated Wetland (BVW) by the Town of Southborough Conservation Commission. However, based on observed evidence of use by two species of obligate Vernal Pool amphibians: wood frog (*Lithobates sylvaticus*) and spotted salamander (*Ambystoma maculatum*), and two species of facultative vernal pool amphibians: springer peeper (*Pseudacris crucifer*) and American toad (*Anaxyrus americanus*), it is apparent that the biological conditions at the pool are sufficient to provide Vernal Pool habitat. In addition, the pool provides habitat for other amphibians, such as the observed green frog (*Rana clamitans*) and pickerel frog (*Lithobates palustris*), as well as other wildlife species.*

GC 3. Goddard Consulting has no additional comment.

LE 4. LE notes that the observation of nineteen egg masses (12 wood frog and 7 spotted salamander) at this pool is almost four times greater than the five egg masses required to have a Vernal Pool certified under the Guidelines for the Certification of Vernal Pool Habitat, March 2009, published by the Massachusetts Natural Heritage & Endangered Species Program (NHESP). Given that NHESP considers pools with five egg masses as sufficiently significant for Certification (i.e., protection), it suggests that this pool should be considered as providing more than “minimal ecological capacity for the long-term viability of obligate vernal pool amphibian populations,” or “minimal reproductive activity,” or “little habitat value.”

GC 4. Goddard Consulting acknowledges the basin meets the criteria for vernal pool certification by the NHESP. The basin is capable of providing vernal pool breeding habitat, assuming water temperature and quality fluctuations do not interfere with the proper development of eggs and larvae. Based on the vernal pool assessment guidelines outlined in the Best Development Practices, the basin is a Tier II vernal pool due to the small percentage of adjacent ecologically intact upland forests. In comparison to similar-sized natural vernal pools with a fully intact forested buffer, the basin may have limited ecological value in an increasingly developed landscape.

LE 5. LE notes that the GC Study references the document “Calhoun, A. J. K., and M. W. Klemens. 2002. Best development practices: Conserving pool-breeding amphibians in residential and commercial developments in the northeastern United States. MCA Technical Paper No. 5, Metropolitan Conservation Alliance, Wildlife Conservation Society, Bronx, New York” (hereafter “Best Development Practices”). LE concurs that this is an appropriate reference document for Vernal Pool habitat evaluations.

GC 5. Goddard Consulting has no additional comment.

LE 6. LE notes that per Best Development Practices, the Vernal Pool in question meets “Tier II” criteria based on the biological assessment (i.e., use by two or more Vernal Pool indicator species) and the condition of the Critical Terrestrial Habitat (i.e., at least 75% of the Vernal Pool envelope within 100 feet of the pool is undeveloped). Best Development Practices state that for Vernal Pools meeting Tier II criteria “Management Recommendations should be applied at these sites to the maximum extent practicable.” The Applicant did not include that the Vernal Pool in question meets the Tier II Criteria. The project does not meet the Management Recommendations to the maximum extent practicable.

GC 6. Goddard Consulting acknowledges the basin meets the “Tier II” criteria. Based on the values provided in GC 7b and GC 7f, the detention basin will continue to be a Tier II vernal pool post project completion, assuming two or more vernal pool indicator species continue to breed in the basin.

The Best Development Practices referenced in our study do not align with local or state regulations. We used this document as a guideline to assess the impacts of the proposed project, and explore potential mitigation strategies. We maximized our use of the best development practices, while also taking into account the design limitations inherent to the project.

LE 7. The following Management Recommendations are provided in Best Development Practices:

- a. “Maintain the pool basin, associated vegetation and the pool water quality in an undisturbed state.”

This recommendation cannot be completely met as the basin is a functioning stormwater basin. However, the Southborough Conservation Commission has conditioned the maintenance of the basin to maintain Vernal Pool habitat features to the extent practicable.

GC 7a. Goddard Consulting agrees the vernal pool will continue to be used as a stormwater detention basin. The use of the basin will result in the disturbance of the vernal pool. The basin will be restored with woody debris to enhance the vernal pool habitat following any maintenance work. The proposed project has met this Management Recommendation to the maximum extent possible. Additionally, maintenance work on the basin may not happen between March 1st through July 1st of any given year.

- b. “Maintain undeveloped forested habitat within the Vernal Pool Envelope (100 feet of the pool), including both canopy and understory.”

LE notes that a portion of the undeveloped Vernal Pool Envelope is proposed to be developed. LE recommends that the Applicant provide the percentage of the undeveloped Vernal Pool Envelope that is proposed to be developed.

GC 7b. State jurisdictional vernal pool habitat does not exist in the case of this vernal pool because it is not located within an area subject to protection under the WPA. Local jurisdiction for this wetland extends out to 20 feet (no disturb). No work is proposed within 20 feet of this basin/wetland. The proposed project will result in the alteration of approximately 0.15 acres, or 6,620 square feet, of the undeveloped Vernal Pool Envelope (± 1.16 acres). In other words, the proposed project will alter 12.9% of the undeveloped Vernal Pool Envelope and will leave 87.1% of the undeveloped Vernal Pool Envelope undisturbed.

According to the Best Development Practices, at least 75% of the vernal pool envelope (100 ft) should remain undeveloped. Currently, 89% of the vernal pool envelope is undeveloped. Following the proposed project, 78% of the vernal pool envelope will be undeveloped. Based on these metrics, we are above the threshold to maintain an ecologically beneficial vernal pool envelope.

The proposed project has met this Management Recommendation to the maximum extent possible.

- c. “Avoid barriers to amphibian dispersal (emigration, immigration) within the Vernal Pool Envelope.”

The project should be conditioned to avoid barriers to amphibian dispersal to the maximum extent practicable. LE notes that the proposed development will create barriers to amphibian dispersal within the Vernal Pool Envelope in the areas of Units 20, 21, 28, 29, and 30.

GC 7c. The project team is actively working on wildlife crossing concepts (between units 29 and 30) and potential layout reconfigurations to meet this Management Recommendation.

- d. “Protect and maintain pool hydrology and water quality.”

This recommendation can be met to a limited extent due to the fact that the pool is also a stormwater basin. The GC Study states that the pool water quality is poor because it functions as a stormwater basin. However, no water quality data has been provided, and the water is apparently of sufficient quality to provide Vernal Pool breeding habitat. The Applicant should provide empirical evidence that the water quality is poor.

GC 7d. Goddard Consulting agrees this recommendation cannot be met due to the pool’s function as a stormwater detention basin. To clarify, the stormwater runoff into the basin may cause many contaminants from the parking lot (including sediment, salts, gas, oils, etc.) to enter the pool. Goddard Consulting predicts the contaminated water entering the basin may cause fluctuations in water quality.

For the proposed project, no additional drainage is proposed to enter the basin. Therefore, no new impacts are proposed to the hydrology and water quality of the basin. The proposed project has met this Management Recommendation to the maximum extent possible.

- e. “Maintain a pesticide-free environment within the Vernal Pool Envelope.”

The project could be conditioned to meet this recommendation. However, as noted in the GC Study, much of the area within 100 feet of the pool contains dense invasive vegetation and the GC Study proposes targeted removal of invasive species and replacement with native species as potential mitigation. Therefore, any Invasive Species Management Plan (ISMP) would likely require the use of herbicides to effectively manage the invasive species at the site. LE recommends that the existing ISMP for portions of the site

issued by the Southborough Conservation Commission under MassDEP File #190-1107, including the use of herbicides, be used as a template for an ISMP for the entire site.

GC 7e. Goddard Consulting has previously agreed to extend the ISMP to include the entire site. This recommendation cannot be met due to the proposed restoration of the Vernal Pool Envelope. The ISMP does include provisions for the use of herbicides that are approved by the EPA for aquatic use. The proposed project has met this Management Recommendation to the maximum extent possible.

- f. “Maintain or restore a minimum of 75% of the Critical Terrestrial Habitat (i.e., within 750 feet of the pool) in contiguous (i.e., unfragmented) forest with undisturbed ground cover.”

This recommendation cannot be met as only approximately 36 to 40 percent of the Critical Terrestrial Habitat is currently undeveloped. However, the proposed project will develop a large portion of the remaining Critical Terrestrial Habitat and will bisect the on-site Critical Terrestrial Habitat with the proposed road. LE recommends that the Applicant provide the percentage of the Critical Terrestrial Habitat that is proposed to remain undeveloped.

GC 7f. The proposed project will result in the alteration of approximately 3.34 acres of the undeveloped Critical Terrestrial Habitat (± 16.09 acres). In other words, the proposed project will alter 20.75% of the undeveloped Critical Terrestrial Habitat and will leave 79.25% of the undeveloped Critical Terrestrial Habitat undisturbed.

According to the vernal pool assessment sheet in the Best Development Practices, at least 50% of the critical terrestrial habitat (100-750 ft) should remain undeveloped to support a Tier II or Tier III vernal pool. Currently, 36.9% of the total critical terrestrial habitat is undeveloped (63.1% developed currently). Following the proposed project, 29.3% of the critical terrestrial habitat will be undeveloped (70.7% developed), resulting in a 7.6% decrease in undeveloped areas. Considering the existing conditions are already much below the threshold for a good condition critical terrestrial habitat, this change should have little effect on the value of the vernal pool.

The proposed project has met this Management Recommendation to the maximum extent possible.

- g. “Maintain or restore forested corridors connecting wetlands or vernal pools.”

LE recommends that the project be designed to maintain forested corridors between the pool and adjacent wetlands to the extent practicable, and further explore design alternatives to achieve this.

GC 7g. The project team is actively working on a wildlife crossing concept and potential layout reconfiguration to meet this Management Recommendation. Some of the forested areas will be restored after invasive species management.

- h. “Provide suitable terrestrial habitat for pool-breeding amphibian populations by maintaining or encouraging at least a partially closed-canopy stand that will provide shade, deep litter, and woody debris.”

LE notes that the GC Study describes replanting native trees and shrubs and increasing coarse woody debris in adjacent upland and wetland areas as potential mitigation. LE supports this mitigation.

GC 7h. Goddard Consulting has no additional comment.

- i. “Minimize disturbance to the forest floor.”

LE recommends that the project be conditioned to minimize disturbance to the forest floor to the extent practicable.

GC 7i. Goddard Consulting has no additional comment.

- j. “Where possible, maintain native understory vegetation (e.g., shrubs and herbs).”

As noted above, the GC Study describes replanting native trees and shrubs as potential mitigation, which LE supports.

GC 7j. Goddard Consulting has no additional comment.

- k. “Roads and driveways should be excluded from the vernal pool depression and vernal pool envelope.”

It appears that the proposed project meets this recommendation, and LE recommends that the Applicant verify that this the case.

GC 7k. No roads or driveways are proposed within the vernal pool depression or vernal pool envelope. The proposed project has met this Management Recommendation to the maximum extent possible.

- l. “Roads and driveways with projected traffic volumes in excess of 5-10 cars per hour should not be sited within 750 feet of a vernal pool (Windmiller 1996). Regardless of traffic volumes, the total length of roads within the critical terrestrial habitat should be limited to the greatest extent possible (Egan and Paton, in prep.).”

LE recommends that the Applicant provide the projected traffic volume with respect to this Best Development Practice recommendation but notes that the entire property is located within 750 feet of the Vernal Pool; therefore, it is impossible not to site the road within 750 feet of the Vernal Pool. LE recommends that the total length of road within the critical terrestrial habitat be limited to the extent practicable and wildlife crossings be examined as previously recommended.

GC 7l. The project team is actively working on a wildlife crossing concept and potential layout reconfiguration to meet this Management Recommendation.

- m. “Use Cape Cod-style curbing (see Figure 10) or no-curb alternatives on low capacity roads.”

LE notes that the GC Study indicates the use of Cape Cod berms throughout the development as a potential mitigation measure. LE supports this mitigation measure.

GC 7m. Goddard Consulting has no additional comment.

- n. “Use oversize square box culverts (2 feet wide x 3 feet high) near wetlands and known amphibian migration routes to facilitate amphibian movement under roads. These should be spaced at 20-foot intervals and use curbing to deflect amphibians toward the box culverts.”

LE notes that the GC Vernal Pool Migration Study describes the use of a wildlife crossing and fencing as a potential mitigation measure. However, the Study concludes that “large scale mitigation strategies, such as wildlife underpasses, are not warranted due to the limited ecological value or conservation benefit they would provide for the site.” See LE Comment #9. a-f. below.

GC 7n. See Goddard responses to LE Comment #9. a-f. below.

- o. “Use cantilevered roadways (i.e., elevated roads that maximize light and space underneath) to cross low areas, streams, and ravines that may be important amphibian migratory routes.”

See LE Comment #9. a-f. below.

GC 7o. See Goddard responses to LE Comment #9. a-f. below.

- p. “Cluster development to reduce the amount of roadway needed and place housing as far from vernal pools as possible.”

LE recommends that the Applicant meet this recommendation to the maximum extent practicable.

GC 7p. The project team is actively working on a potential layout reconfiguration to meet this Management Recommendation.

LE 8. LE notes the following from the GC Study:

- a. *LE notes that the results of the drift fence and pitfall traps indicated that 21 wood frogs (*Lithobates sylvaticus*) were captured entering the pool at the drift fence around the pool. Fewer were observed exiting the pool, which is not unexpected since not all the individuals would necessarily have left the pool area at the time the Study ended. Of the wood frogs entering the pool, nine entered generally from the east (42.9%), seven generally from the south (33.3%), five generally from the west (23.8%), and two generally from the north (9.5%). LE notes that most of the wood frogs were captured entering from the east and south, with a relatively high percentage also entering from the west. Few entered from the north, which is not unexpected since this is the most highly developed portion of the site.*

GC 8a. Goddard Consulting has no additional comment.

- b. *The results of the drift fence and pitfall traps indicated that 13 spotted salamanders (*Ambystoma maculatum*) were captured entering the pool at the drift fence around the pool. Of these, nine entered generally from the east (69.2%), two generally from the south (15.4%), one generally from the west (7.7%), and one generally from the north (7.7%). LE notes that over two-thirds of the spotted salamanders were captured entering from the east.*

GC 8b. Goddard Consulting has no additional comment.

- c. *In addition, 22 other amphibians including green frogs (*Rana clamitans*), pickerel frogs (*Lithobates palustris*), spring peeper (*Pseudacris crucifer*), and American toad (*Anaxyrus americanus*) were captured entering the pool at this drift fence. Of these, fourteen entered generally from the east (63.6%), one generally from the south (4.5%), six generally from the west (27.3%), and one generally from the north (4.5%). LE notes that almost two-thirds of the other amphibians were captured entering from the east.*

GC 8c. Goddard Consulting has no additional comment.

- d. *With respect to the drift fence installed along the approximate location of the proposed road, four wood frogs, two spotted salamanders, and eighteen other amphibians were captured moving east between wetlands and toward the vernal pool.*

GC 8d. Goddard Consulting has no additional comment.

- e. *The above results indicate that the majority of the amphibians utilizing the Vernal Pool are entering generally from the east, with a number of those captured, primarily “other” amphibians, crossing between wetlands in the general area of the proposed road. Therefore, the data indicates that there is amphibian migration occurring from the wetlands located east of the Vernal Pool to the Vernal Pool, and to a lesser extent observed migration from the Vernal Pool back to these wetlands.*

GC 8e. Goddard Consulting has no additional comment.

LE 9. LE has the following comments regarding the conclusions of the GC Migration Study:

- a. *The GC Study concludes that the pool supports a relatively small number of obligate and facultative amphibian species. LE agrees that the number of individuals and egg masses reported in the GC Study are fairly small related to larger pools in more*

rural areas; however, LE also notes that the number of egg masses reported is almost four times the number of egg masses required by NHESP for Vernal Pool certification.

GC 9a. Goddard Consulting agrees the numbers of individuals and egg masses reported in the study are fairly small in contrast with larger pools in more rural areas. Goddard Consulting also agrees the detention basin meets the criteria for certification by the NHESP, however NHESP may not certify this because the basin is part of a stormwater management system.

- b. *The GC Study concludes that the pool's "artificial origin, degraded water quality, and fragmented surrounding habitat substantially limits its ecological value." LE disagrees that the pool's artificial origin necessarily limits its ecological value as there are numerous examples of created wetlands that provide Vernal Pool habitat. LE agrees that degraded water quality generally limits a pool's ecological value; however, the Applicant has not provided empirical data indicating the water quality is unsuitable, and based on its observed use appears that the water quality is sufficient to provide breeding habitat for Vernal Pool amphibians. LE agrees that the fragmented surrounding habitat limits the pool's ecological value, and further fragmentation from development will further limit the pool's ecological value.*

GC 9b. The artificial origin of the basin limits the ecological value because as a detention basin, there must be maintenance to allow the basin to function as it was designed for stormwater management. This maintenance limits the ecological value of the pool. Although no water quality data has been taken, a detention basin is designed to collect runoff from parking lots, roadways, buildings, and other areas which often contain various contaminants (road salt, gas, oil, sediment, etc.). These contaminants degrade water quality and therefore limit the ecological value. During some breeding seasons, the contaminant load may degrade water quality to the extent it negatively affects the reproduction of the vernal pool species. The current water quality may not be negatively affecting species this breeding season, however, future water quality may create unsuitable egg development conditions. These fluctuations create an unreliable breeding pool with limited ecological value.

- c. *The GC Study concludes that the "presence of only 19 egg masses and fewer than 45 observed breeding amphibians indicates minimal reproductive activity, far below thresholds typically associated with ecologically significant Vernal Pool systems." LE agrees that these are modest numbers; however, as noted previously, the number of egg masses reported is almost four times the number of egg masses required by NHESP for Vernal Pool certification. In LE's opinion, this indicates that this pool should be considered to provide more than de minimis or minor Vernal Pool habitat value. LE requests the Applicant to provide additional information on the "thresholds typically associated with ecologically significant Vernal Pool systems" and provide the source/citation of the data.*

GC 9c. The study primarily utilized information provided in the *Best Development Practices for Conserving Pool-Breeding Amphibians in Residential and Commercial Developments in the Northeastern United States* by Aram J. K. Calhoun, Ph.D. and Michael W. Klemens, Ph.D. and Chapter 12 "Conserving Vernal Pool Wildlife in Urbanizing Landscapes" of the book, *Science and Conservation of Vernal Pools in Northeastern North America*, authored by Bryan Windmiller and Aram J.K. Calhoun. The reference to "thresholds typically associated with ecologically significant Vernal Pool systems" refers to the thresholds provided on the "Vernal Pool Assessment Sheet" from the Best Development Practices.

- d. *The GC Study concludes that "the critical terrestrial habitat surrounding the pool is largely developed and fails to meet state-recommended thresholds for undeveloped support area." LE agrees that the critical terrestrial habitat is largely developed; however, requests that the Applicant provide additional information on the "state-recommended thresholds" referenced above and provide the source/citation of the data.*

GC 9d. The study primarily utilized information provided in the *Best Development Practices for Conserving Pool-Breeding Amphibians in Residential and Commercial Developments in the Northeastern United States* by Aram J. K. Calhoun, Ph.D. and Michael W. Klemens, Ph.D. and Chapter 12 “Conserving Vernal Pool Wildlife in Urbanizing Landscapes” of the book, *Science and Conservation of Vernal Pools in Northeastern North America*, authored by Bryan Windmiller and Aram J.K. Calhoun. The reference to “state-recommended thresholds” incorrectly refers to the state instead of the Best Development Practices.

- e. *The GC Study concludes that the above noted factors “collectively suggest that the basin offers little habitat value, likely acting as a secondary or opportunistic breeding site.” As stated previously, LE acknowledges that the Vernal Pool in question is not pristine or an exemplary example of a Vernal Pool; however, based on observed evidence it is apparent that the pool provides Vernal Pool habitat that is of sufficient value to meet NHESP certification criteria, indicating that this pool should be considered to provide more than minor habitat value.*

LE agrees that the pool may act as a secondary or opportunistic breeding site, to some extent. However, LE also believes that there is likely a local population of wood frogs and spotted salamanders, as well as other amphibians, utilizing the pool. The closest mapped Certified or Potential Vernal Pool is located approximately 3,000 feet southwest of the site. As the maximum migration distances reported in Best Development Practices for spotted salamanders is up to 817 feet and for wood frogs up to 3,835 feet, in LE’s opinion it is unlikely that the numbers observed were solely individuals that came across this pool while migrating to another pool.

GC 9e. Goddard Consulting agrees there are no mapped Certified or Potential Vernal Pools located near the site. However, many vernal pools are unmapped by the NHESP. A large wetland system is mapped east of the site adjacent to Parkerville Road. If suitable breeding habitat is present here, an amphibian may only need to wander approximately 800 feet to encounter a potential vernal pool. Furthermore, this theory excludes additional unmapped wetlands adjacent to the site. The majority of the wetlands on our site are not mapped by MassGIS, so without surveys of surrounding parcels, Goddard Consulting cannot conclude there are no natural vernal pools within close proximity of the site.

- f. *The GC Study concludes that “therefore, large-scale mitigation strategies, such as wildlife underpasses, are not warranted due to the limited ecological value or conservation benefit they would provide for this site.” LE notes that although the pool at the site is likely not significant on a regional basis since it is relatively small and is apparently not part of a larger interconnected Vernal Pool complex, it is significant for the local population of Vernal Pool organisms that breed in and otherwise utilize this pool in this developed area. Therefore, LE disagrees that mitigation strategies such as a wildlife underpass are completely unwarranted and recommends that the ZBA consider requiring a wildlife underpass at a location between the two wetlands that will be bisected by the proposed road.*

GC 9f. The project team is actively working on a wildlife crossing concept to meet this recommendation.

Wildlife Habitat Evaluation

LE 10. *LE is in general agreement with the methodology of the Wildlife Habitat Evaluation.*

GC 10. Goddard Consulting has no additional comment.

LE 11. *The WHE states that the proposed project is not expected to significantly disrupt ecological connectivity with adjacent natural habitats. LE concurs, as several potential wooded connections would remain outside the property bounds. However, it is LE’s opinion that the proposed project will disrupt the connectivity of habitats within the property bounds as it will bisect the property.*

GC 11. Goddard Consulting agrees the proposed project may disrupt ecological connectivity with adjacent natural habitats. However, with the proposed native landscaping and the restoration of the remaining forested areas, the ecological connectivity will be maintained to the greatest extent possible.

LE 12. The WHE states “The proposed residential development will impact a portion of the remaining undisturbed upland forest; however, these areas are limited and already affected by surrounding development. With careful planning, including selective clearing, invasive species control, and restoration of native vegetation, the project can minimize its impact on local wildlife habitat while supporting the overall ecological health of the site.” LE concurs and recommends that all the above mitigation measures be implemented.

GC 12. Goddard Consulting has no additional comment.

LE 13. The WHE states that the northernmost BVW on-site is bisected by a pedestrian bridge. This area was excluded from the Undeveloped Critical Terrestrial Habitat. LE notes that this is an elevated bridge over the wetland and does not create a barrier to wildlife movement through this area, and although there is development on three sides, the pedestrian bridge should not exclude this area from being considered Undeveloped Critical Terrestrial Habitat.

GC 13. Goddard Consulting agrees this area may be considered undeveloped Critical Terrestrial Habitat. The addition of this area would result in less than half an acre of changes to the calculations. This area is not proposed to be developed due to the area being almost entirely Bordering Vegetated Wetlands.

LE 14. The WHE states “By designing the development within previously disturbed areas and maintaining natural vegetation along site edges, the project can preserve what remains of these localized migratory pathways and ecological connections.” LE notes that maintaining natural vegetation along the road edges does not fully preserve localized migration pathways and would require crossing of the roadway by species utilizing these pathways.

GC 14. The project team is actively working on a wildlife crossing concept and potential layout reconfiguration to address migratory barriers.

LE 15. The WHE stated that no special or unique habitats or habitat features were found on or proximal to the areas of impact. LE would argue that the Vernal Pool is considered a special habitat.

GC 15. Goddard Consulting agrees the potential vernal pool is a unique habitat feature. The limit of work is not located within the potential vernal pool and is largely outside of the vernal pool envelope. The proposed work also meets all local and state regulations for work near vernal pools.

LE 16. The WHE states that “Overall, the effects on amphibians are likely small.” LE disagrees, based on the large area of upland Critical Habitat that is proposed to be impacted and the migration corridor impacted with the proposed roadway.

GC 16. The proposed project will alter approximately 3.34 acres of the total ± 43.58 -acre Critical Terrestrial Habitat. In other words, the proposed project will impact 7-8% of the total vernal pool’s Critical Terrestrial Habitat. Approximately 16.09 acres of the total Critical Terrestrial Habitat is currently undeveloped. Post-development, approximately 20.8% of this area will be developed. Compared to larger-sized developments, these numbers are small and will most likely not have major impacts on the amphibian populations, especially considering the implementation of Best Development Practices.

The project team is actively working on a wildlife crossing concept to address any potential migratory barriers which would further decrease any negative effects on amphibians and other wildlife.

LE 17. LE agrees that the potential mitigation measures listed in the WHE are acceptable, which include replanting native trees and shrubs, placement of nest boxes, targeted removal of invasive species, and increasing coarse woody debris in upland and wetland areas.

GC 17. Goddard Consulting has no additional comment.

LE 18. The WHE summary states "The loss of some upland forest cover, including mature trees and understory vegetation, will reduce local habitat quality, primarily affecting small and large mammals as well as some forest-nesting birds." LE concurs and recommends the mitigation measures described in the WHE.

GC 18. Goddard Consulting has no additional comment.

LE 19. The WHE summary states "The proposed access road may slightly disrupt amphibian movement between upland areas and potential vernal pool habitats, though these effects are limited in scale and can be mitigated. While the site does contribute to localized ecological connectivity, the project is not expected to significantly alter migratory patterns or the site's overall ability to support common wildlife species." LE disagrees. The proposed project will bisect the site, requiring alterations in migratory pathways, and although many common wildlife species may not be significantly impacted, it is LE's opinion that the Vernal Pool amphibian species, particularly the spotted salamander and wood frog which require suitable upland habitat, will be impacted. Therefore, the project should meet Best Development Practices management recommendations to the maximum extent practicable.

GC 19. The project team is actively working on a wildlife crossing concept and potential layout reconfiguration to address migratory barriers and ensure the project has met the Best Development Practices recommendations to the greatest extent practicable.

LE 20. Based upon the potential impacts to the Vernal Pool amphibian species with the proposed roadway bisecting a migratory corridor, and the impacts to the undeveloped areas of the site and Vernal Pool Envelope, the ZBA should consider the importance of maintaining the Conservation Commission's local 20-Foot No Work Zone for this site.

GC 20. No work is proposed within 20 feet of the vernal pool.

If you have any questions, please do not hesitate to reach out.

Sincerely,

Goddard Consulting, LLC



Steven Riberdy, MS, PWS, CWB, CERP, CE, PSS
Principal Ecologist



Ryan Roseen
Lead Wildlife Biologist