January 2, 2025

Town of Franklin
Conservation Commission
355 E. Central Street
Franklin, MA 02038

Re: 844 Lincoln Street – Notice of Intent – Response to Peer Review Comments – Lot 2

Dear Agent and Commissioners:

Strong Point Engineering Solutions, LLC. (SPES) is pleased to provide this letter in response to comments provided by BETA Group, Inc., relating to the above referenced Notice of Intent in a letter dated December 30, 2024. Our response to each comment provided is given below:

Comment A1: The Project was filed under the Bylaw only; therefore, no MassDEP file number has been issued.

SPES Response: No response required.

Comment A2: The following plan elements are required:

a. A reference for the North Arrow must be provided per Bylaw Regulation Section 7.18.1.3.

b. Individual trees/shrubs with a diameter greater than 1" proposed for removal should be shown on the Plans per Bylaw Regulation Section 7.18.31.6. It is BETA's understanding that the Commission generally increases the size threshold for tree location based on the Project and therefore defers to the Commission on this matter.

c. The 50-foot Buffer Zone should be labeled on the plan per Bylaw Regulations Section 7.18.1.8.

d. An existing conditions plan with a PLS Stamp should be provided.

e. The Assessor's Reference for the parcel should be provided.

f. The Assessor's Reference for the abutting properties should be provided.

g. A survey benchmark should be provided.

SPES Response:

a. North Arrow reference has been added to the plan.

b. SPES defers to the Commission as suggested but notes that a complete restoration plan meeting the applicable requirements has been included in the application package.

c. The 50-foot buffer zone has been added to the plan.

d. All pertinent existing features are shown on the proposed plans and a PLS Stamp has been added.

e. **The Lot has been newly created through an ANR process and does not have an assessors reference assigned. Notation reflecting this has been added to the plan and the reference to the original parent parcel is included in the title block of the plan. A copy of the signed ANR plan is included for reference.**

f. **Assessor references of abutting parcels is shown on the plan.**

g. **A survey benchmark has been added to the plan.**

Comment A3: The location and quantity of Resource Area impacts to IVW and Buffer Zone should be labeled on the Plans.

SPES Response: Labels corresponding to the impact table provided have been added to the plan to clarify the location of impacts.

Comment A4: BETA defers to the Commission on the approval of the Alternative Analysis provided in regard to the limited project provision at 310 CMR 10.53(3)d and 310 CMR 10.53(3)e.

BETA2: An updated Alternative Analysis detailing 6 alternatives has been provided. BETA defers to the Commission on the approval of the Alternative Analysis.

SPES Response: No response required.

Comment W1: BETA concurs with the boundary of the IVW as delineated by the Applicant. Although upland vegetation including autumn olive (Elaeagnus umbellata) was observed within the IVW, a dominance of hydrophytic vegetation including red osier dogwood (Swida sericea) and sensitive ferns (Onoclea sensibilis) was observed. Hydric soils consisting of saturated, sandy loam soils with redoximorphic concentrations near the surface were also observed.

SPES Response: No response required.

Comment W2: BETA concurs with the determination that the IVW is isolated due to there being no observable surficial hydrologic connections to waterbodies or waterways. It is recommended, however, that the Applicant provide calculations for the record documenting that the IVW does not qualify as Isolated Land Subject to Flooding (ILSF).

SPES Response: The requested calculations have been added to the plan.

Comment W3: Due to the Project proposing to fill 520 sf of IVW, the Project is required to provide a wetland replication area at a 2:1 ratio. The Applicant should provide a wetland replication plan, depict this area on the plan set, and fulfill other requirements set forth in Section 7.14 of the Bylaw Regulations. The IVW appears to contribute to the function of flood control; therefore, grading of the replication area should be conducted accordingly.

BETA2: The wetland replication and wetland restoration narrative submitted with this filing is the same document submitted with the filing for Lot 3 while the areal coverage and planting schematics for both lots differ. The Applicant should submit an independent wetland replication and wetland restoration narrative for Lot 2.

According to the plans, a 1,040-sf wetland replication area has been proposed along the existing IVW. The Applicant should provide the cross sections of altered wetland and proposed replicated area, as well as the groundwater elevation data for the proposed

replication area on the plans (Bylaw Regulation Section 7.14.2). The Applicant should also depict the proposed grade(s) of the replication area on the Restoration Plan.

SPES Response: The Lot 3 Narrative was included in the Lot 2 application package in error. The correct narrative has been included in the revised materials. The cross sections and grading updates requested have been provided on the revised plan.

Comment W4: The Applicant stated plantings will be provided at a 2:1 ratio for plants that were removed from the Resource Areas. The Applicant should provide a planting plan that includes species and locations of proposed plantings.

BETA2: The Applicant has provided species and locations of proposed plantings on the updated plans. Restoration plantings within Buffer Zone and planting within the replication area have been provided and consist solely of native species. BETA defers to the Commission on the acceptance of this mitigation plan.

SPES Response: No response required.

Comment W5: Inlet protection should be shown on the plans for all catch basins within the public right-of-way near the site.

SPES Response: Inlet protection has been added to the plan.

Comment W6: The Applicant should clarify if the installation of all utilities has been included in the impacts to IVW and Buffer Zone. Erosion controls should be depicted to define the limits of work around the sewer and electric/telephone/cable crossing.

BETA2: The Applicant has identified that 130-sf of temporary IVW impacts and 750-sf of temporary Buffer Zone impacts will be required for the installation of utilities. Erosion controls should be depicted to define the limits of work around the sewer and electric/telephone/cable crossing.

SPES Response: Erosion controls have been added to the plan at the limits of the utility installation.

Comment W7: Provide specifications of the proposed seed mixture(s) proposed for the stabilization of disturbed areas within Buffer Zone, including any areas that are proposed to be lawn. All areas of proposed lawn should be demarcated on the Project plans. BETA recommends that native species with wildlife habitat value be proposed within Buffer Zone where lawn is not required as mitigation for Buffer Zone clearing.

BETA2: The Applicant has identified proposed seed mixes for the wetland replication and wetland restoration area. However, the Applicant should depict where lawn is proposed and identify where any native seeding is proposed outside of the wetland replication and wetland restoration areas, if applicable.

SPES Response: The following notation has been added to the plan to define the intended limit of the proposed lawn areas: "*ALL VEGETATED AREAS INSIDE OF THE PROPOSED PERMANANT LIMIT OF DISTURBANCE SHALL BE LAWN AREA WIHT THE EXCEPTION OF RESTORATION AND REPLICATION AREAS. REFER TO PLANTING PLAN FOR ADDITIONAL DETAILS.*"

Comment W8: Material storage and laydown areas should be depicted on the Project plans and located outside of jurisdictional areas to the extent feasible.

SPES Response: The following notation has been added to the plan to define the intended limit of the proposed lawn areas: "A*LL STAGING, STOCKPILING, AND MATERIAL LAYDOWN AREAS SHALL BE LOCATED OUTSIDE OF RESOURCE AREA BUFFER ZONES. ANY SUCH AREAS REQUIRED TO THE WEST OF THE PROPOSED WETLAND CROSSINGS SHALL BE TEMPORARY ONLY AND SHALL BE COORDINATED WITH THE TOWN OF FRANKLIN DPW AND MAINTAINED BY PROPER EROSION AND SEDIMENT CONTROLS*."

Comment W9: Invasive species including bush honeysuckle (*Lonicera spp.*), bittersweet (*Celastrus orbiculatus*), and glossy buckthorn (*Frangula alnus*) are present throughout the area proposed for construction. The Applicant should provide a plan detailing how material containing invasive species plant matter will be managed to ensure no further spread occurs as a result of this Project.

SPES Response: This office takes no exception to providing an invasive species management plan for the construction period of the project. Due to time constraints, we respectfully request that this requirement be made a condition of approval.

Comment W10: It is recommended that the Commission include a Special Condition in perpetuity within the Order of Conditions requiring all future grantees of the property to be responsible for keeping the culvert free of debris and ensuring that the IVW is not used for snow storage.

SPES Response: The applicant takes no exception to such a condition of approval.

Comment W11: A Variance Request should be submitted for work proposed within the on-site 0-25' Buffer Zone to IVW.

BETA2: A Variance request and alternatives analysis have been submitted. BETA defers to the Commission on the provided information.

SPES Response: No response required.

Comment W12: The Applicant should provide an Erosion & Sedimentation Control Plan which includes contact information of the person(s) responsible for inspecting and maintaining erosion control, and all other requirements listed in Section 7.12.1 of the Bylaw Regulations.

SPES Response: The requested information has been added to the plan.

Comment W13: According to the Section 7.9.1 of the Bylaw, the Project Narrative should include the following missing content:

a. The entity performing the work; and

b. When the proposed activities will be completed.

SPES Response: This information is unknown at this time.

If you have any questions or would like to discuss these matters further, please feel free to contact our office at (508) 682-0229 at your leisure.

Kind Regards,

Eric Dias, P.E.
President/Owner

844 Lincoln Street – Lot 2
Notice of Intent Narrative
Revised: January 2, 2025

1.0 Introduction

Strong Point Engineering Solutions, LLC. is pleased to submit this Notice of Intent (NOI) on behalf of the applicant, Mr. Timothy Bobola, for the construction of a proposed single-family house on Lot 2 proposed at 844 Lincoln Street in Franklin, Massachusetts (Map 206 Lot 3).

2.0 Existing Conditions

The existing site totals approximately 6.5 acres and is located at the northern intersection of Lincoln Street and Amy's way. The site currently contains a residential dwelling and multiple accessory structures. The site slopes from east to west and is generally flat through the disturbed areas. Within the existing tree line, the topography slopes steeply toward Amy's way with a vertical relief of approximately 20-feet. Test pits performed by this office in the higher, disturbed areas of the site show well drained underlying soils with groundwater not encountered to depths of 10-feet. The site contains an Isolated Vegetative Wetland along the frontage of Amy's way.

2.1 Wetland Resource Areas & Buffer Zones

An area of Isolated Vegetated Wetland (IVW) exists along the frontage of Amy's Way at the bottom of the steep slope noted above. The IVW appears to be the result of runoff from the slope being trapped by the grade resulting from construction of Amy's Way and is rather sparsely vegetated. The IVW slopes gently south to north with the topography of the adjacent roadway. The IVW is jurisdictional under the Town of Franklin Wetland Protection By-law only.

2.2 Vernal Pool Statement

There are no vernal pools located on or adjacent to the site as observed in the field. There are no Potential and/or Certified Vernal Pools on or adjacent to the site as mapped on the current NHESP atlas.

3.0 Proposed Project & Impacts to Resource Areas/Buffer Zones

The applicant proposes to create "Lot 2" from the subject parcel through an Approval Not Required (ANR) subdivision and proposes to construct a single-family dwelling on the proposed lot. The dwelling will be located at the top of the steep slope noted above and will be situated outside of the 100' buffer zone in the currently disturbed (lawn) area of the site. Frontage for the proposed lot will be on Amy's Way, therefore access and utility services for the site will be on Amy's Way. As defined, the project is considered a limited project under 310 CMR 53.3 (e).

The construction of the driveway proposed to access the site will result in filling approximately 520 SF of the IVW. Please refer to the variance request letter provided in Appendix A of this document. The proposed clearing has been kept to the minimum required to accomplish the proposed work by limiting the driveway width to 14 feet. 3:1 side slopes have been utilized to minimize the area required to return to existing grade while providing manageable slope stabilization. An 18" culvert is proposed under the proposed crossing to maintain the existing hydraulic connection within the resource area.

Water services will be brought to the proposed house through the area to be cleared for the proposed driveway. Sewer and electric/communication services will be routed to the left side of the proposed house through an area of the IVW and associated buffer zone that will be temporarily disturbed. The existing municipal sewer system within Amy's Way does not extend to the proposed driveway location. The existing terminus of the main electric/communication services is located further northward, in front of #7 Amy's Way. Locating the sewer service on the left side of the house allows connection to the municipal sewer

system while minimizing the need for trenching within the paved roadway. Locating the electrical/communications service in this area minimizes the length required to extend the main sources through the right of way. Combining the location of these services will minimize impact to the IVW and buffer zone. Separating their location from the water service allows the required trenching to be narrower as water and sewer services are required to be separated a minimum of 10-feet horizontally.

3.1 Resource Area Impacts

All impacts to the IVW and associated buffer zones have been limited to the maximum extent practicable. The width of the proposed driveway is the minimum practical to provide adequate access to the site. The driveway has also been graded to mimic the existing topography as much as possible and includes 3:1 side slopes to return to existing grade in the smallest area possible while still providing manageable slope stabilization.

Installation of proposed sewer and electric/communications utilities will result in temporary disturbance to the IVW and buffer zone. A complete replication and restoration plan is included herein to address these disturbances. These utilities have been combined in the same location to further minimize disturbance associated with installation. The trench required to install these services is anticipated to be no more than 10-feet wide. The water service is proposed to be located within the permanent area of disturbance for the driveway crossing to further limit the disturbance required. Water and sewer services are required to be separated a minimum of 10-feet horizontally. If the two were to be located in the same area the trench required would be substantially wider.

The following table provides a summary of disturbances associated with the proposed work.

Summary of Proposed Resource Area & Buffer Zone Disturbances				
	Temp. Dist.	Purpose	Perm. Dist.	Purpose
Isolated Vegetated Wetland	130 SF	Sewer/ETC	520 SF	Drive/Water
0 – 25' Buffer Zone	250 SF	Sewer/ETC	1,025 SF	Drive/Water
25' – 100' Buffer Zone	500 SF	Sewer/ETC	7,055 SF	Drive/Lawn/Water

3.2 Resource Area Replication and Restoration Plan Requirements

A complete Resource Area Restoration and Replication Plan has been developed for this project to account for both temporary and permanent disturbances within jurisdictional areas. Please refer to Appendix A of this document for additional information.

3.3 Alternatives Analysis

As noted above, proposed Lot 2 is to be created from the existing parcel located at 844 Lincoln Street through an Approval Not Required (ANR) division of land. Lot 2 is proposed to be one of three residential lots created from the subject parcel through this process. Proposed Lot 1 will contain the existing residential structure and will be retained by the current property owner. Lot 3 is proposed for the development of a single-family dwelling by the Applicant, similar to Lot 2. A Notice of Intent for Lot 3 is being submitted concurrently with this Notice of Intent.

In order to create buildable residential lots, those lots must have legal frontage along a way. The existing subject parcel has legal frontage along both Lincoln Street and Amy's Way. The proposed lots will take their frontage from the portion of the subject parcel that fronts along Amy's Way. The frontage of the proposed lots along Amy's Way is immediately adjacent to the IVW throughout their frontage. By definition, the Town of Franklin Zoning Bylaw requires that residential lots be accessed through their legal frontage.

This requirement means that the only viable access to the developable area of the proposed lots is through the IVW.
Because of the proposed wetland filing associated with this proposal, and in support of the variance required for such, an alternatives analysis consistent with the applicable requirements of 310 CMR 10.58 (4) is provided below as required by Section 7.13.2 of the Town of Franklin Conservation Commission Regulations.

Alternative #1: Construction of a New Roadway – The Town of Franklin Subdivision Regulations require that the centerline of all intersecting streets be offset a minimum of 200 linear feet from each other. If a new roadway were to be constructed on the subject parcel to provide legal frontage for the proposed lots it would have to be located either off of Lincoln Street, at least 200 feet from the intersection of Amy's Way, or off of Amy's Way, a minimum of 200 feet from the intersection of Lincoln Street.

The subject parcel has approximately 230 feet of frontage along Lincoln Street which will remain with proposed Lot #1. With a required minimum width of 56 feet under the Franklin Subdivision Regulation, a way could not be proposed off Lincoln Street to satisfy the intersection offset requirement.

Proposing a roadway connection along the existing frontage of the subject parcel along Amy's Way, outside of the IVW boundary, would result in the area of the two proposed lots being bisected by the Way rendering them non-compliant with the dimensional requirements of the underlying zoning district and therefore, unbuildable.

Proposing a roadway connection along the existing frontage of the subject parcel along Amy's Way, inside of the IVW boundary, would result in a comparable amount of overall permanent disturbance but would likely result in more impervious area within the boundary of the resource area and increased disturbance within buffer zone.

In addition to the above regulatory limitations, the design, permitting, and construction of a new roadway to service two proposed single-family dwellings is economically prohibitive when access is available through existing Ways and would therefore not provide a substantially equivalent economic alternative.

Alternative #2 – Access thru Adjacent Property – The subject parcel is abutted on the east and west sides by existing residential properties and is otherwise landlocked to the north. None of the adjacent properties are known to be available and obtaining such a property to provide access to the subject parcel would be economically infeasible for a proposed project of this scope. Such an acquisition would also require the installation of a new roadway which is infeasible for the reasons stated above.

Alternative #3: Common Driveway – Providing access to both proposed lots through a common driveway would not be allowed by right under the definitions of "frontage" and "driveway" given in the Town of Franklin Zoning Bylaws. A shared access drive would also need to be significantly wider than the drive currently proposed to allow for two-way passage. Lastly, common driveways require an agreement between both parties sharing access which typically devalues the property served and dissuades many potential homeowners. Given the mitigation measures proposed, such an alternative would not provide any substantial benefit.

Alternative #4 – Span Entirety of IVW – An alternative to filing any portion of the IVW is to span the resource area boundary in its entirety. This requires a much larger structure to be installed and results in an equivalent or greater amount of both temporary and permanent disturbance. Additionally, given the proximity of the resource area boundary to the right-of-way of Amy's Way, some portion of such a structural span would need to be installed within the public way which would not be allowed by the municipality.

Alternative #5: Elimination of One Proposed Lot – Elimination of one of the two newly proposed lots would result in a significant loss of value to the current property owner and such a limitation to return on investment would dissuade potential buyers from pursing the proposed project altogether, which would further dimmish the owner's property value. Given the limited impact of the proposed project to the resource area and the mitigation measures proposed the project is anticipated to have no significant adverse impacts to the resource area.

Alternative #6 – No Build – A no build option would be similar to Alternative #5 noted above but would result in greater negative economic impact to the property owner.

Based on analysis of the alternatives enumerated above, it is clear that there are no practicable and substantially equivalent economic alternatives to the proposed project. Furthermore, in consideration of the mitigation measure incorporated with the proposed project, it is anticipated that the work will have no significant adverse impact on the functions and characteristics of the IVW.

4.0 Construction Period Requirements

4.1 Sitework Construction Sequence

The following provides a general protocol for minimum sediment control sequencing and requirements relative to the proposed construction. The details provided are a minimum guide only. Additional controls may be implemented, or sequencing adjusted as appropriate in keeping with the intent of the protocol given.

1. **Install inlet protection (silt sacs) in all existing catch basins within the work area.**
2. Stake the limit of clearing/sediment control barrier.
3. Cut & remove trees within limit of clear.
4. Install temporary crossing stabilization at the permanent crossing of the resource area as necessary (i.e. swamp mats of approved equal).
5. Install sediment control barriers in locations shown.
6. Stump and grub site.
7. Install culvert and backfill for secure passage.
8. Perform rough earthwork cut & fill.
9. Install proposed foundation.
10. Install subsurface utilities.
11. Advance site grading.
12. Install final hardscape features.
13. Loam & seed lawn areas and install landscaping, including restoration plantings.

14. Remove remaining sediment control devices upon complete stabilization as determined by the engineer of record.

In addition to the sequencing above, several steps will be taken to ensure that resource areas are not impacted by site work. These steps include:

- Any refueling of construction vehicles and equipment will take place outside of the BVW and the 100 ft. buffer zones and will not be conducted close to any stormwater conveyance BMP's.
- On-site disposal of solid waste, including building materials, within the BVW and the 100 ft. buffer zones is prohibited.
- No materials shall be disposed of within BVW or its buffers. All contractors will be informed that equipment cleaning is prohibited in areas where wash water will drain directly into wetland resource areas.

4.2 Minimum Requirement for Work within Resource Areas & Buffer Zones

In order to mitigate construction disturbances to the IVW and buffer zone, the following minimum requirements for work within resource areas and buffer zones are proposed:

1. Refer to the project Planting Plan and narrative.
2. Clearing and trenching shall be kept to the minimum necessary to accomplish the proposed work.
3. All excavated material shall be stockpiled as far away from the wetland resource boundary as possible.
4. All excavated spoils shall be removed from the site as appropriate.
5. No trench should be left open longer than the minimum required to perform the required work.
6. Backfill should occur in an expeditious manner as possible to maintain hydrology of the area and excavated materials.
7. Additional erosion controls and sediment control barrier shall be utilized during the installation of utilities as determined necessary by the engineer of record.
8. The contractor shall make every effort to anticipate and respond to inclement weather conditions during the performance of work.
9. The contractor shall make every effort to minimize the number of trips required over temporary access through the resource area.

4.3 Sediment/ Erosion Control

Proposed disturbances shall be kept to the minimum extent practicable to perform the site work, and in no case shall alterations extend beyond the limit of work at the sediment control line. An 8" mulch tube sediment control barrier is located along the proposed limit of work. The barriers shall remain in place until all disturbed areas directing stormwater runoff toward the protected resource areas have been permanently stabilized with vegetation or other means as appropriate. Sediment controls that are damaged or otherwise in need of repair during the construction process shall be replaced in a timely and efficient manner.

4.4 Construction Phase Inspection and Monitoring

The following provides minimum requirements for inspection and monitoring of the site's erosion controls and stormwater systems to be employed during the construction phase. The contractor or other owner's representative will be responsible for compliance with these requirements.

1. Contractor shall make every effort to anticipate possible sources or sediment/debris transport and shall make preemptive efforts to eliminate threats before issues occur. This includes anticipation of, and inspection/reinforcement of controls, prior to significant forecast storm events.

2. All erosion and sediment control measures should be inspected once per week during active construction without fail. All deficiencies or damaged controls shall be reported and corrected within 24 hours.

3. Perimeter controls should be replaced/refreshed when any sediment accumulation exceeds half of the control's height.

4. Public ways shall be kept free of sediment and debris. Any sediment and/or debris tracked to the traveled way should be cleaned at the end of work each day.

5. Any barrier controls necessary around stockpiles should be maintained in the same manner as perimeter controls.

6. Dust control shall be by mechanical means and shall consist of water application only. The use of any treatment chemicals or flocculants is strictly prohibited.

7. All sediment/debris should be disposed of off-site in accord with all applicable state and local regulations.

8. Inlet protection shall be employed at any stormwater conveyance in the vicinity of the proposed work that may be at risk of sediment transport. All such measures shall be monitored and maintained appropriately.

9. Sediment barrier should be employed adjacent to the eastern boundary of the resource area at the crossing location to protect the resource area and allow access to the work area. Sediment barriers in this location may be relocated during construction to accomplish this intent as the work progresses. It may be necessary to employ temporary moveable controls for this purpose.

10. Any sediment inadvertently accumulated within the resource area shall be removed by hand immediately.

11. **Silt sacs in existing catch basins shall be emptied when half full of sediemtn or not functioning effectively. Silt sacs shall be replaced as needed.**

4.5 Standard Dewatering Plan

The following represents minimum requirements for dewatering associated with the proposed project as applicable. Additional requirements or conditions are allowable by the Engineer of Record based upon conditions encountered in the field.

1. If dewatering is required at any time during construction associated with the proposed work, it shall be performed by mechanical means and all discharges shall be upslope of the wetland resource areas.

2. Contractor shall make every effort to ensure that effluent from the dewatering source is dissipated overland rather than concentrated as a point source discharge. Point source discharges are strictly prohibited.

3. Effluent shall be allowed to flow overland toward the BVW so long as proper filtration is provided to remove any suspended sediments to the maximum extent possible prior to reaching the BVW.

4. Proper filtration will be considered, at minimum, to include the use of a sump pit at the dewatering source and filtration controls at the discharge source.

5. At minimum, sump pits shall consist of a 12-in. diameter perforated vertical standpipe backfilled with washed crushed stone positioned on a 2-in. washed crushed stone base. A submersible pump or suction line shall be located within the standpipe and shall pump filtered water to the filtration controls at the discharge source.

6. Minimum filtration controls at the discharge source shall consist of erosion control materials formed in a U-shape around the discharge point with a minimum diameter of 6 ft. The discharge point shall be positioned midway between the ends of the filtration controls in a straight line to allow for adequate disbursement of effluent.

7. Discharge shall be located such that effluent is not directed over areas that are unstable due to the required work whenever possible.

8. All discharges shall be monitored for turbidity. Adjustments for settling shall be made and secondary controls shall be added as necessary.

9. Any accumulated sediment resulting from dewatering filtration shall be removed prior to reuse of the practice.

5.0 Functions and Characteristics

Below is a summary of anticipated impacts of the proposed project to each function and characteristic of the resource area given in the Town of Franklin Notice of Intent Packet.

1. Public Water Supplies – There are no known public water supplies within 0.5 miles of the project site.

2. Private Water Supplies – There are no known private water supplies on or within proximity to the project site as the area is serviced by municipal water.

3. Groundwater – Test pits performed by this office in the vicinity of the proposed dwelling indicate well drained soils and found no evidence of seasonal high groundwater within 10-feet of the ground surface. Runoff from impervious areas will be directed overland along its natural flow path

where it will recharge to groundwater as in the existing condition. As such, it is anticipated that the proposed work will have no adverse impact on groundwater.

4. Flood Control – The subject site is not located in any flood plain. In the event that the storage capacity of the IVW is overwhelmed in the existing condition it would discharge overland to the municipal stormwater collection system in Amy's Way. The area of fill to be located within the IVW associated with this project is di minimus over the total of the resource area. Combined with the inclusion of a proposed culvert to maintain hydraulic connection through the IVW and mitigation measures proposed to offset removal of vegetation and the area of fill, it is anticipated that the proposed project will have no adverse impact on Flood Control.

5. Erosion and Sedimentation Control – Appropriate safeguards for erosion and sedimentation control have been incorporated into this document and the project site plans.

6. Storm Damage Prevention – The subject site is not located in any flood plain. In the event that the storage capacity of the IVW is overwhelmed in the existing condition it would discharge overland to the municipal stormwater collection system in Amy's Way. The area of fill to be located within the IVW associated with this project is di minimus over the total of the resource area. Combined with the inclusion of a proposed culvert to maintain hydraulic connection through the IVW and mitigation measures proposed to offset removal of vegetation and the area of fill, it is anticipated that the proposed project will have no adverse impact on Storm Damage Prevention.

7. Water Quality – Runoff from impervious driveway areas will be directed overland along its natural flow path where undisturbed vegetation of the buffer zone will aid in removal of Total Suspended Solids (TSS) before reaching either the boundary of the IVW or the municipal stormwater system. Runoff from the proposed rooftop is considered clean. As such, it is anticipated that the proposed work will have no adverse impact on groundwater.

8. Water Pollution Control – Appropriate safeguards for water pollution control have been incorporated into this document and the project site plans.

9. Fisheries – Not applicable.

10. Shellfish – Not applicable.

11. Wildlife Habitat – Disturbance to all resource areas and buffer zones have been designed to the minimum allowable to accomplish the proposed work and are proposed to be appropriately mitigated. As such, the proposed project is not anticipated to have any adverse impact on Wildlife Habitat.

12. Rare Species Habitat – The site is not located in any Endangered or Priority Habitat as mapped by the Natural Heritage Endangered Species Program (NHESP).

13. Agriculture – The site is not currently used for any agricultural purpose therefore the proposed work will have no impact on agriculture.

14. Aquaculture – Not applicable.

15. Recreation – The site is currently and is proposed to be privately owned and therefore provides no recreational benefit.

6.0 Conclusion

It is the opinion of this office that the work proposed at Lot 2, 844 Lincoln Street has been designed to meet the applicable standards of the Town of Franklin Wetland Regulation and mitigate all necessary resource area disturbances to the maximum extent practicable such that the work will have no adverse impact to the functions and/or values of the IVW.

Based upon the information above, on behalf of the applicant, our office respectfully requests the issuance of an Order of Conditions for the work proposed herein.

ECR

Environmental Consulting & Restoration, LLC

WETLAND REPLICATION & RESTORATION NARRATIVE
Lot 2 – 884 Lincoln Street, Franklin
Date: October 15, 2024, Rev. January 2, 2025

1.0 Introduction

This wetland replication narrative and accompanying plan have been prepared to accompany the Notice of Intent application for the proposed project located at Lot 2, 884 Lincoln Street in Franklin, Massachusetts (the site). The proposed project includes 520 square feet of permanent wetland disturbance necessary for the proposed driveway crossing. The proposed project also includes 130 square feet of temporary wetland disturbance and 750 square feet of temporary buffer zone disturbance, necessary for the proposed underground utilities. To mitigate these impacts and meet the performance standards set forth by the MA Wetland Protection Regulations (310 CMR 10.00) and the Town of Franklin Wetland Bylaw, the proposed project included 1,040 square feet of wetland replication, 130 square feet of wetland restoration and 750 square feet of buffer zone restoration. This narrative and plan have been designed in accordance with the Massachusetts Inland Wetland Replacement Guidelines, Second Edition (September 2022).

2.0 Existing Conditions

The site consists of a subdivided lot that is mostly undeveloped with an existing barn and shed in the northeastern portion of the property. The site has frontage along Amy's Way and trends significantly upgrade to the northeast. An Isolated Vegetated Wetland (IVW) is located just off Amy's Way through the southwestern portion of the site. The IVW is located along the toe of the slope onsite and appears to function to contain stormwater water that flows from the site and Amy's Way. The existing vegetation within the IVW includes a mix of native and non-native invasive plant species.

3.0 Proposed Replication/Restoration

The proposed project includes the construction of a new single-family home with appurtenances. In order to access the upland portion of the site to develop the new home, the proposed driveway must cross a section of the IVW. The proposed driveway crossing totals 520 square feet of permanent disturbance to the IVW. The wetland replication area has been designed to provide 1,040 square feet of new wetland (2:1 ratio as compared to the area of disturbed wetland) to replace the impacted IVW. The proposed wetland replication has been designed to improve the values/functions of the existing wetland by mimicking the native species present as well as adding additional species to increase biodiversity. Furthermore, the replication area is located adjacent to and hydrologically connected to the disturbed wetland which will increase the wetlands' ability to handle stormwater from nearby areas. The replication area location has been specifically selected to connect to the existing IVW as well as be easily accessible from the proposed driveway, while avoiding the proposed underground utilities.

The replication area has been designed with a diversity of native species to improve native biodiversity and wildlife habitat value as well as enhanced wildlife features such as brush piles, logs, woody debris cover, etc. The replication area will immediately be established as a shrub

swamp with tree species which is then expected to transition into a forested BVW cover type over time. After the excavation and final grading is completed to designated elevations, wetland hydrology will be established. The wetland replication area will be hand-planted with native wetland saplings, shrubs and then seeded with a wetland seed mix. In addition to the wetland species that will be planted, it is anticipated that a broad diversity of native wetland species will become established once appropriate wetland hydrology is established. Additionally, the wetland replication area will include wildlife enhancements to promote a diversity of uses for wildlife as detailed in Section 5.0 below.

The proposed project also includes underground utilities that will connect to the new home from the existing utility lines within Amy's Way. The proposed project includes 130 square feet of the IVW and 750 square feet of buffer zone that will be temporarily disturbed as a result of the utility installation. In order to restore these areas to their pre-existing conditions, restoration activities are being proposed. Once the utilities are installed, these areas will be restored with a variety of native shrub species and seeded with native seed mixes. The methodology is further detailed below.

4.0 Construction Sequence

Construction of the wetland replication area has been designed to minimize erosion, prevent sediment from entering adjacent wetlands, and to minimize the establishment of planted vegetation. The area will be constructed per the following:

1. A survey crew shall stake out the limits of the proposed 1,040 square foot wetland replication area identified on the site plans.

2. The supervising wetland scientist shall flag any existing healthy trees to be saved within the wetland replication area. Only native wetland indicator trees such as Red Maples, Tupelos, etc. shall be flagged for saving.

3. Prior to any earthwork activities, sediment control barriers shall be installed along the limit of the wetland replication area. Please note that a minor amount of vegetation clearing will be necessary to install the erosion control line.

4. Once erosion controls are in place, the vegetation within the wetland replication area shall be cleared to include the removal of tree stumps. Care should be taken to avoid excavation over the root zone of the trees flagged to be saved.

5. Upon clearing of the vegetation within the wetland replication area, the area will be excavated. The area will be excavated to a depth of approximately 6 to 8 inches below the designed level of the wetland replication area. Several test pits within the replication area will be performed by the supervising wetland scientist to determine the elevation of existing subsurface hydric soils so that the construction elevation can be coordinated with the excavator operator (expected to be at or near 256-257 feet, based on the topography on the site plan). The excavated sediment will be removed from the site or used on site within the upland project area as fill. Minor modification to this grading plan may be made in the field by the wetland scientist in response to subsurface hydrologic conditions. The supervising wetland scientist will inspect the sub-grade of the replication area to ensure that the proper hydrology has been established.

6. The replication area will then be backfilled with 6 to 8 inches of wetland soils appropriate for the site. Prior to filling the existing BVW for the proposed project, the top organic layers (O and upper A soil horizons) could be excavated and stockpiled outside of the wetland for use in the wetland replication area. If this soil is not suitable for the replication area, then new high organic soil will be spread over the entire wetland replication area. Clean leaf or commercially available compost may amend the soils to achieve a high organic content. These soils will then be graded to achieve a slight hummock and hollow micro-topography, similar to that of a natural wetland substrate. Please note that the supervising wetland scientist shall evaluate these soils prior to replacement activities.

7. Fallen logs, branches, and other natural debris existing with the upland areas will be relocated to the replication area to provide beneficial habitat features for wildlife. Where possible, fallen logs should be of varying sizes and in varying degrees of decomposition.

8. A sediment control barrier will be placed along the upgradient edge of the wetland replication area.

9. Replication area plantings will take place once the above listed tasks have been completed. The species, size, and quantity of the plantings will follow the Planting Palette found in Table 1 below. The spacing of trees and shrubs are in accordance with the guidelines established in DEP's Massachusetts Inland Wetland Replacement Guidelines, which are 15 feet apart for trees and 10 feet apart for shrubs. Using trees spaced 15 feet on center requires 5 trees to vegetate the 1,040 square foot replication area. Using shrubs spaced 10 feet on center requires 12 shrubs to vegetate the 1,040 square foot replication area. Prior to delivery to the site, the supervising wetland scientist will visit the nursery providing the planting stock to ensure that the specimens are healthy, free from pests, and suitable for use with the replication area. Any planting substitutions must be approved by the wetland scientist. Planting within the wetland replication area will conform to the plans or will be completed in accordance with directions provided in the field. Only plant materials native and indigenous to the region shall be used. Species not specified in the replication plan shall not be used without written approval from the permitting agency. Please note that due to Hemlock Woolly Adelgid, Hemlock trees are not proposed for planting within the replication area.

TABLE 1 – WETLAND REPLICATION PLANTING PALETTE

TREES

SPECIES	**SIZE (height)**	**NUMBER**
Swamp Tupelo (*Nyssa sylvatica*)	5 to 6 feet	3
Red Maple (*Acer rubrum*)	5 to 6 feet	2
	Total	5

SHRUBS

SPECIES	SIZE (height)	NUMBER
Silky Dogwood (*Cornus amomum*)	2-3 feet	4
Northern Arrowwood (*Viburnum recognitum*)	2-3 feet	4
Sweet Pepperbush (*Clethra anifolia*)	2-3 feet	4
	Total	12

SEED MIX

The remaining wetland replication area to be scratched and seeded with the Ernst FACW Wet Meadow Mix (see profile on plan) at the rates specified by the supplier. The side slope from the wetland replication area to the buffer zone (buffer zone area) to be scratched and seeded with Ernst Native Upland Wildlife Forage & Cover Mix (see profile on plan) at the rate specified by the supplier.

10. All plantings to be spaced randomly at the direction of the wetland scientist to simulate natural growth patterns.

11. Upon completion of planting, the root zones of the plants will be mulched with a 1- to 2-inch-thick layer of leaf litter or other natural organic mulch.

12. The sediment control barriers will be disassembled and properly disposed of after the two-fill growing season after the planting of the wetland replication area. Sediment collected by these devices will be removed and disposed of in a manner that prevents erosion and transport to a waterway of wetland.

13. A maintenance schedule for irrigation and pruning (as necessary) will be established by the contractor.

14. The replication area will be inspected each fall for non-native invasive or unwanted plants for a two-year period. If non-native invasive species are found, they will be uprooted and removed from the area.

15. Long-tern monitoring of the wetland replication area will be conducted as directed in the Monitoring section of this report.

The proposed restoration has been designed to restore the temporarily disturbed IVW and buffer zone associated with the proposed underground utilities. The restoration activities include 130 square feet of IVW restoration and 750 square feet of buffer restoration. The area will be constructed per the following:

1. Prior to restoration activities, erosion controls shall be installed along the landward boundary of the IVW. Additionally, the underground utilities shall be staked in the field in accordance with Dig Safe.

2. Following the installation of the proposed utilities, the restoration area shall be hand raked to pre-existing grades and covered with a light layer of clean, organic loam (1-2 inches).

3. Both the wetland and buffer zone restoration areas shall be hand planted with a mix of native shrubs, spaced in accordance with DEP Guidance as described above. Please note, no trees are proposed as part of the restoration area in order to

minimize the risk of roots negatively impacting the underground utility lines. A total of 2 shrubs are proposed to be planted in the wetland restoration area and 9 shrubs within the buffer zone restoration area. Please see Table 2 below:

TABLE 2 – RESTORATION PLANTING PALETTE

SPECIES	SIZE (height)	NUMBER	LOCATION
Northern Arrowwood (*Viburnum recognitum*)	2-3 feet	1	Wetland
Sweet Pepperbush (*Clethra anifolia*)	2-3 feet	1	Wetland
	Total	**2**	Wetland
American Hazelnut (*Corylus americana)*	2-3 feet	3	Buffer
Mountain Laurel *(Kalmia latifolia*)	2-3 feet	3	Buffer
Witch Hazel (*Hamamelis virginiana)*	2-3 feet	3	Buffer
	Total	**9**	Buffer

SEED MIX

The exposed soils within the wetland restoration area shall be scratched and seeded with the Ernst FACW Wet Meadow Mix (see profile on plan) at the rates specified by the supplier. The exposed soils within the buffer zone restoration areas shall be scratched and seeded with Ernst Native Upland Wildlife Forage & Cover Mix (see profile on plan) at the rate specified by the supplier.

4. All plantings to be spaced randomly at the direction of the wetland scientist to simulate natural growth patterns.

5. Upon completion of planting, the root zones of the plants will be mulched with a 1- to 2-inch-thick layer of leaf litter or other natural organic mulch.

6. The maintenance and monitoring of the restoration areas shall follow the methodology outlined for the wetland replication area (see notes 12. to 15. above).

5.0 Planting Requirements

Within the replication and restoration areas all trees will be installed to a depth as measured from the trunk flare to the bottom of the root ball. The shrubs will be installed in a hole 1.5 feet larger than the ball of the plant and the hole will not be deeper than the depth of the root ball. The hole will be backfilled with soil of the same mix as existing within the surrounding area and compost or other organic amendments will be added to the backfill to increase water-holding capacity. Watering will be of sufficient quantity to penetrate the soil to a depth of eight inches, which will meet the moisture needs of the plant without saturating the soil. All plantings will be done by hand during early spring (March 15th to April 30th) or late fall (October 15th to November 15th) seasons and supervised by a qualified wetland scientist. Please note that wetland seed mix germination is optimal in the spring season when soil temperatures are above 45 degrees. If necessary, the plants may require a hand sprayed application of deer repellent to prevent plant death by browsing deer.

6.0 Wildlife Enhancement Proposal

In addition to the wetland replication, several wildlife habitat features are proposed to be established within the replication area to promote use by neighboring wildlife species. Please note the following wildlife enhancement proposals:

- Brush Piles – In order to provide the type of cover habitat that often takes years to occur within a newly created replication area, several small brush piles will be created within the replication area to provide cover for small mammals. Brush pile creation will be directed and overseen by the supervising wetland scientist.

  Brush piles will consist of tree and shrub cutting salvaged from the clearing of the site. The base of the brush pile will consist of large branches or limbs, crisscrossed so they form a firm structure with an open interior. Smaller limbs and branches will then be placed on top of the larger branches and then evergreen boughs will be laid across the top to provide cover for songbirds and other wildlife. Although these structures are not intended to provide permanent wildlife habitat, they are intended to bridge the gap until the planted vegetation can become better established and create more natural habitat features.

- Logs and Woody Debris – Fallen logs and woody debris provide important cover and foraging habitat to a variety of wildlife species. In order to provide this benefit to the replication area, woody debris will be established within the replication area. Logs and smaller woody branches will be identified and collected within the upland areas of the site. This material will be in varying stages of decay and will be randomly placed to provide habitat features. Freshly cut logs will not be the primary source of this feature, but may be utilized if approved by the supervising wetland scientist.

- Flat Stones – Native stones found during construction that are generally flat and small enough in size to be carried by one laborer will be randomly placed throughout the replication area to enhance subterranean habitat for amphibians such as mole salamanders.

7.0 Hydrology

The wetland replication area has been designed to achieve appropriate hydrology to support the proposed plantings. Hydrology for the wetland replication area will be provided primarily through groundwater. The proposed elevations of the replication area will be confirmed by the supervising wetland scientist during the start of excavation activities and will be similar to that of the adjacent wetland areas. It is anticipated that the replicated vegetated wetland will receive the necessary hydrology.

8.0 Sediment Control

The placement of sediment controls will be necessary to ensure protection of the IVW and wetland replication area. The sediment controls shall be monitored and maintained until all exposed surfaces are stabilized.

8.0 Supervision

The construction of successful wetland replication areas often requires minor field adjustments in grading or planting. When directly overseen by an experienced professional, these minor modifications can be made to provide the hydrologic conditions necessary to support wetland vegetation and functions. Construction of the wetland replication area, including fine grading, soils placement, and planting will be done under the supervision of an experienced wetland scientist. The wetland scientist will monitor the phases of the replication area construction work for compliance with all applicable local, state, and federal wetland permits.

9.0 Monitoring

The wetland replication and restoration areas will be monitored in accordance with the anticipated Order of Conditions. At a minimum, the areas will be monitored for the first two growing seasons following construction. Monitoring reports will be submitted to the permitting agency no later than December 15th of each year. The first year of monitoring will be the first year that the site has been through a full growing season after completion of construction and planting. For monitoring purposes, a growing season starts no later than May 31. Each monitoring report should include photographs and recommendations such as remedial actions to maintain plants, additional plantings, etc. The intent of the replication and restoration areas is to achieve 75% re-establishment within two years. In the event that any plantings within the replication and/or restoration areas are found to be unviable or dead, they will be replaced with like kind and size at the expense of the property owner. Replacement of plantings will take place when found or as soon as seasonal weather permits. Any such replacement work will be included in the monitoring reports for that period. Monitoring for invasive species should also be conducted and handpicked before becoming widespread and established. Each monitoring report should project potential succession patterns based on observed establishment of vegetation. The final monitoring report should be accompanied by an as-built plan. The final monitoring report should indicate the conditions at the replication/restoration site and describe in detail how the functions of the impacted wetland have been replaced by the development of the replication/restoration site.

11.0 Conclusion

Based on my education, training and experience, it is my professional opinion that this Wetland Replication & Restoration Narrative & Plan complies with the guidelines established by the Massachusetts Inland Wetland Replacement Guidelines, Second Edition (September 2022) and when properly implemented will improve the values and functions of the IVW proposed to be permanently disturbed as part of the proposed project at the site.

12.0 Attachments

Included with this Wetland Replication Narrative are the following attachments:

1. Wetland Replication & Restoration Plan

Should you require additional information or have questions on the information contained above, please contact ECR, LLC at 617-529-3792.

Sincerely,
Environmental Consulting & Restoration, LLC

Brad Holmes, Professional Wetland Scientist #1464
Manager