

Staff Report

Date: December 15, 2021

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **20 Yankee Lane – Request for Certificate of Compliance – DEP# SE 023-1269, Fairhaven CON 19-007**

DOCUMENTS REVIEWED

- Request for partial certificate of compliance and associated documents
- Amended Order of Conditions issued September 20, 2018
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192) and associated regulations
- Fairhaven Stormwater Bylaw (Chapter 194)

RESOURCE AREAS ON/NEAR SITE

- Inland Bank
- Land Under Water Bodies and Waterways
- Riverfront Area
- Bordering Vegetated Wetland
- Buffer Zone

RELEVANT PERFORMANCE STANDARDS

- No work approved on Inland Bank or Land Under Water Bodies and Waterways
- **Riverfront Area: 10.58(4)**
 - (d) No Significant Adverse Impact
 1. Within 200 foot riverfront areas, the issuing authority may allow the alteration of up to 5000 square feet or 10% of the riverfront area within the lot, whichever is greater ..., provided that:
 - a. At a minimum, a 100' wide area of undisturbed vegetation is provided... preserved or extended to the max. extent feasible....
 - b. Stormwater is managed ...
 - c. Proposed work does not impair the capacity of the riverfront area to provide important wildlife habitat functions. ...
 - d. ... incorporating erosion and sedimentation controls and other measures to attenuate nonpoint source pollution.
- **Bordering Vegetated Wetland: 10.55(4)**
 - (a) work in a Bordering Vegetated Wetland shall not destroy or otherwise impair any portion of the BVW
 - (b) The ConCom may permit the loss of up to 5000 square feet of BVW when said area is replaced IF:
 1. The area is equal;

2. The ground water and surface elevation are approximately equal;
 3. The overall horizontal configuration and location are similar;
 4. There is an unrestricted hydraulic connection to the same water body or waterway;
 5. It is in the same general area of the water body;
 6. At least 75% of the surface of the replacement area shall be reestablished with indigenous wetland plant species within two growing seasons; and
 7. The replacement area is provided in a manner which is consistent with all other regs in 310 CMR 10.00.
- (c) The ConCom may permit the loss of a portion of BVW when;
1. Said portion has a surface area less than 500 square feet;
 2. Said portion extends in a distinct linear configuration ("finger-like") into adjacent uplands; and
 3. In the judgment of the issuing authority it is not reasonable to scale down, redesign or otherwise change the proposal.
- (d) No project may be permitted which will have any adverse effect on specified habitat sites of rare species
- (e) No work shall destroy or otherwise impair any Area of Critical Environmental Concern

PROJECT SUMMARY

- The Order of Conditions approved a 15.1 acre solar development project comprised of two solar arrays, perimeter fencing, photovoltaic solar panels, racking systems, inverters and transformers, with accommodating concrete pads, above and below ground utilities, stormwater facilities, a gravel road to access the solar fields, and a wetland/stream crossing.
- 4,500 square feet of wetland disturbance was approved with a 4,600 sq. ft. replication area.
- An amended order of conditions was issued to address changes to the gravel road location.

COMMENTS

- The applicant has submitted a request for partial certificate of compliance for all aspects of the project except for the wetland replication.
- The wetland replication area was planted in early October 2021 and thus has not yet completed the required two years of monitoring for wetland replications.
- Based on a site visit and a comparison of the as-built plans to the approved plans, the solar array and stormwater facilities appear to have been constructed in substantial compliance with the Order of Conditions.
- The Commission will need to strongly consider whether you feel comfortable releasing almost the entire project when the wetland replication area has only recently been installed and what leverage that will leave the Commission to ensure proper compliance as the project is a leased solar project and the cloud on the property title by an Order of Conditions does not impact the lessee.

RECOMMENDATION

- Until further discussion with the Commission occurs regarding granting a partial certificate of compliance when the replication area monitoring is still outstanding, I cannot make a recommendation.

November 29, 2021

Fairhaven Conservation Commission
Fairhaven Town Hall
40 Center Street
Fairhaven, MA 02719

Re: Wetland Replication Plan
20 Yankee Lane, Fairhaven, MA 02719 (DEP File #SE023-1269)

Dear Conservation Commission:

Goddard Consulting LLC is pleased to submit this Wetland Replication Construction Monitoring Report for 20 Yankee Lane, Fairhaven, MA in accordance with the approved Wetland Replication Plan. The wetland replication area was planted in early October 2021.

The wetland replication area was planted in accordance with the approved Wetland Replication Plan with slight variation due to nursery availability. The Army Corp of Engineers guidelines for wetland replication area planting specifications were followed. See Table 1 below for the planting list.

Table 1. Planting list

Quantity	Common Name	Scientific Name
5	Red Maple	<i>Acer rubrum</i>
4	Swamp White oak	<i>Quercus bicolor</i>
79	High Bush Blueberry	<i>Vaccinium corymbosum</i>
85	Sweet Pepperbush	<i>Clethra alnifolia</i>
85	Northern Arrowwood	<i>Viburnum recognitum</i>
76	Black Chokeberry	<i>Photina melanocarpa</i>
50	Royal Fern	<i>Osmunda regalis</i>



Figure 1. The wetland replication getting ready to be planted looking north.



Figure 2. The wetland replication area looking east.



Figure 3. The completed wetland replication area looking north.



Figure 4. The soil within the replication area. The top 8" of topsoil are 10YR3/2. Wetland soils within the replication area consist of 10YR6/2 (C Horizon as shown above) with 50% redox.

Continued Monitoring

- a. **Seasonal monitoring reports** shall be prepared for the replication area by a qualified wetland scientist for a period of two additional years after replication completion. This monitoring program will consist of early summer and early fall inspections and will include photographs and details about the vitality of the replication area. Monitoring reports shall be submitted to the Commission by November 15th of each year. Monitoring reports shall describe, using narratives, plans, and color photographs, the physical characteristics of the replication area with respect to stability, survival of vegetation and plant mortality, aerial extent and distribution, species diversity and vertical stratification (i.e., herb, shrub, and tree layers). Invasive species will be documented if present within areas impacted by the project, monitored and removed.

- b. **At least 75% survival of installed native plants** shall be observed by the end of the second growing season. If the replication area does not meet the 75% survival requirement by the end of the second growing season after installation, the Applicant shall submit a remediation plan to the Commission for approval that will achieve, under the supervision of a Wetland Specialist, replication goals. This plan must include an analysis of why the areas have not been successful and how the applicant intends to resolve the problem.

The wetland replication area was constructed in accordance with the approved wetland replication plan. The area will continue to be monitored for two years to ensure plant survival and overall stability.

If there are any questions concerning this report, please do not hesitate to contact us.

Very truly yours,



Tim McGuire
Wildlife Biologist and Wetland Scientist

Staff Report

Date: December 8, 2021

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **1 Bella Vista Island – Request for Amended Order of Conditions – DEP# 023-1309, Fairhaven CON 023-110**

DOCUMENTS REVIEWED

- Request for Amended Order of Conditions and associated documents
- MassDEP Administrative Consent Order with Penalty and Notice of Noncompliance dated June 25, 2019
- Previous Notices of Intent, Order of Conditions, Enforcement Orders
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192) and associated regulations

RESOURCE AREAS ON/NEAR SITE

- Salt Marsh
- Coastal Beach
- Coastal Dune
- Coastal Bank
- Land Containing Shellfish
- Land Under the Ocean
- Buffer Zone
- Land Subject to Coastal Storm Flowage (LSCSF)
- Isolated Vegetated Wetlands

PROJECT SUMMARY

- This request does not propose any changes to the scope of work that was approved by the Order of Conditions issued in August. The applicant is looking for clarifications to the special conditions.

COMMENTS

- The applicant's representative submitted an overview of the conditions they are seeking clarification on.
- There are no proposed changes to the project other than asking for clarification on the special conditions.
- The Harbormaster has agreed to a reduced shellfish mitigation fee directly related to the propagation of the shellfish beds on either side of the causeway.
- Based on a meeting among the applicant's representatives, the Agent, and the Chair, and a subsequent meeting with the Agent and the Harbormaster, the special conditions have been revised as outlined on Attachment A showing track changes.

RECOMMENDATION

- If the Commission is amenable to the revisions as proposed, I recommend closing the public hearing for SE 023-1309, CON 023-110, 1 Bella Vista Island, and issuing an Amended Order of Conditions under the Wetlands Protection Act and the Fairhaven Wetlands Bylaw with the conditions outlined in Attachment A.



TOWN OF FAIRHAVEN, MASSACHUSETTS

CONSERVATION COMMISSION

Town Hall · 40 Center Street · Fairhaven, MA 02719

Attachment A

DEP File #: SE 023-1309
Fairhaven File #: CON 023-110
Applicant/Property Owner: Heiam Alsawalhi/Anwar Faisal
Property: 1 Bella Vista Island

Findings, Plans, and Documents

1. This Order is issued under the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00) and the Town of Fairhaven Wetlands Bylaw (Chapter 192). Salt Marsh, Coastal Beach, Coastal Dune, Coastal Bank, Land Containing Shellfish, and Land Subject to Coastal Storm Flowage (LSCSF) have been identified as Resource Areas subject to protection under the Wetlands Protection Act Regulations and the Fairhaven Wetlands Bylaw. The 100-foot buffer zone to each resource area has been identified as a resource area subject to protection under the Fairhaven Wetlands Bylaw (Chapter 192). These Resource Areas are significant to protecting the various interests of the Bylaw and the Act.
2. With regard to Land Containing Shellfish, the Commission is concerned about protecting wildlife habitat, water pollution control, fisheries, and recreation. The area around the subject property has been identified as Land Containing Shellfish. The portion of the project that clears the area underneath the causeway from obstructions has a direct impact on land containing shellfish, and in particular, possibly maintaining the health and functionality of the shellfishery on either side of the causeway. The Commission wants to ensure that the above wetland values of the Act and the Bylaw are protected by ensuring proper connection between and flushing of shellfish habitat on either side of the causeway, which will be reestablished by the dredging portion of this project.
3. This Property Owner and Property is subject to the terms of an Administrative Consent Order with Penalty (ACOP) and Notice of Noncompliance (#00004701) issued by Massachusetts Department of Environmental Protection (MassDEP), dated June 25, 2019 for violations of the State Act and Regulations. The Applicant purchased the property in 2009 and in 2010, the Commission issued three Enforcement Orders (EO) for unpermitted activity. MassDEP also issued EOs in 2010 and 2013. This Order has been issued to permit certain features as required in the ACOP.
4. The project purpose is to address the requirements of an Administrative Consent Order with Penalty (ACOP) and Notice of Noncompliance (#00004701) issued by Massachusetts Department of Environmental Protection (MassDEP), dated June 25, 2019 for violations of the State Act and Regulations.
5. The applicant filed the Notice of Intent on December 27, 2019, 21 days after MassDEP issued their letter approving the Seawall Plan and notification to proceed with the required actions. The Fairhaven Conservation Commission (FCC) opened the public hearing on January 27, 2020. The FCC received many continuance requests from the applicant after requesting additional

information in response to comments from both Division of Marine Fisheries (DMF) and a third-party peer reviewer. Finally, on June 10, 2021, the applicant provided the final information that the FCC had been requesting for the previous 16 months, allowing them to move forward with a decision on the project.

6. This permit authorizes the repair of two existing groins, removal of a portion of an existing groin, the reconstruction of an existing seawall, dredging under the causeway bridge with dredged material disposed offsite, construction of a buried seawall within existing lawn, stabilization of the coastal bank where 70 feet of seawall was removed, after the fact approval of an electric security gate with ancillary equipment and 48 10-in by 10-in granite posts along the causeway, and the placement of 12- to 24-inch stone to protect eroding roadside along the causeway, as shown on the Plan of Record.
7. No other work is approved by this Order.
8. The Plan-of-Record associated with this Order is titled "Proposed Improvements, Bella Vista Island", prepared by Prime Engineering, Inc., dated June 10, 2021, with attached Exhibits as follows:
 - a. "Exhibit A", 4 sheets depicting the seawall plan, prepared by Prime Engineering, Inc., dated June 10, 2021
 - b. "Exhibit B", 1 sheet depicting the causeway detail and dredging plan, prepared by Prime Engineering, Inc., dated June 10, 2021
 - c. "Exhibit C", 2 sheets depicting the groin improvements, prepared by Prime Engineering, Inc., dated June 10, 2021
 - d. "Stockpiling Exhibit," 1 sheet depicting stockpiling and storage locations during the course of the project, prepared by Prime Engineering, Inc., dated November 19, 2021
9. The work depicted on Sheets 4 and 5 of the Plan-of-Record are subject to a separate Order of Conditions under DEP File No. SE 023-1340, Fairhaven File No. SE 023-195. This Order of Conditions does not supersede the Order of Conditions issued on May 28, 2021 for the non-ACOP activities approved by that Order.
10. The Division of Marine Fisheries (MA DMF) provided revised comments dated June 25, 2021.
 - a. The project site lies within mapped shellfish habitat for soft shell clam (*Mya arenaria*), quahog (*Mercenaria mercenaria*), and bay scallop (*Argopecten irradians*). Land containing shellfish is deemed significant to the interest of the Wetlands Protection Act (310 CMR 10.34) and the protection of marine fisheries.
 - b. The area offshore of the project site has been mapped by the Massachusetts Department of Environmental Protection as an eelgrass (*Zostera marina*) meadow.
 - c. MA DMF has identified Round Cove as winter flounder (*Pseudopleuronectes americanus*) spawning habitat. Winter flounder enter the area and spawn from January through May, laying clumps of eggs directly on the substrate. These demersal eggs hatch approximately fifteen to twenty days later. The Atlantic States Marine Fisheries Commission has designated winter flounder spawning habitat as "Habitat Areas of Particular Concern" (HAPC). Because of the winter founder stock status, every effort should be made to protect winter flounder and their spawning habitat.
 - d. The June 10, 2021 Prime Engineering response letter adequately addresses potential impacts to marine resources that were identified previously in MA DMF's January 7, 2020 comment letter. As stated in the response letter, any in-water silt-producing work

should be stated to occur outside the January 15 to May 31 time-of-year (TOY) restriction period to protect winter flounder during spawning and juvenile development life history phases.

- e. The proposed roadside erosion protection (12" to 24" stone) should not displace any existing salt marsh habitat and construction activities should also avoid salt marsh habitat by working from the road.
11. The property contains mapped Priority and Estimated Habitat of Rare Species/Wildlife. The Natural Heritage & Endangered Species Program of the Massachusetts Division of Fisheries & Wildlife determined in their March 11, 2020 letter that "this project, as currently proposed, will not adversely affect the actual Resource Area Habitat of state-protected rare wildlife species...[and] will not result in a prohibited take of state-listed rare species."
 12. The issuance of an Amended Order of Conditions allowed the Fairhaven Conservation Commission to make further clarifications to the special conditions attached to the Order.

Special Conditions

A. General Conditions

1. ACC-1: The Conservation Commission, its employees, and its agents shall have a right of entry to inspect or compliance with the provisions of this Order of Conditions.
2. The Plan-of-Record and this Order of Conditions shall be included in all construction contracts and sub-contracts dealing with the work proposed and shall supersede all other contract requirements.
3. This Order applies only to the scope of work depicted on the Plan-of-Record (Sheets 1-3) and attached Exhibits.
4. All work shall be done in accordance with the Plan-of-Record dated June 10, 2021 and accompanying Exhibits as approved by this Order. Any deviation must be approved by this Commission in writing prior to commencing work involved in this deviation.
5. The work depicted on Sheets 4 and 5 of the Plan-of-Record are subject to a separate Order of Conditions under DEP File No. SE 023-1340, Fairhaven File No. SE 023-195. This Order of Conditions does not supersede the Order of Conditions issued on May 28, 2021 for the non-ACOP activities approved by that Order.
6. ADD-4c: Any changes to the plans identified above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
7. ADD-5: This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this order and to any contractor or other person performing work conditioned by this order.
8. The limit of work for this project is restricted to the scope of work outlined above and shown on the approved plans. No work is permitted beyond the specific activities approved by this Order.
9. Any in-water silt-producing work shall be staged to occur outside of the January 15 to May 31 time-of-year (TOY) restriction period of any year work is occurring to protect winter flounder during spawning and juvenile development life history phases.
10. A qualified professional hired by the Commission at the Property Owner's expense shall provide observations and report on all phases of the project that have the potential to cause direct impact to a resource area to ensure compliance with the issued Order. Updates with associated photographic documentation shall be submitted to the Commission or its Agent before each phase of the project begins, once per week during

each phase, and at the completion of each phase. Phases that have the potential to cause impact to a resource area shall be defined as follows:

- i. Removal of a portion of an existing groin and reconstruction of the remaining existing groins
 - ii. Setting of the boom and silt curtains
 - iii. Work on the base of the seawall on the water side
 - iv. Dredging under the causeway
11. Should any habitat conversion occur during the project, habitat mitigation shall be required at the direction of the Fairhaven Conservation Commission and the Division of Marine Fisheries. Habitat mitigation shall not apply to the dredging area as depicted on the approved plans.
 12. The proposed roadside erosion protection (12" to 24" stone) shall not displace any existing salt marsh habitat and construction activities shall also avoid salt marsh habitat by working from the road.
 13. The section of seawall which has been removed and restored to coastal bank shall be restored to pre-revetment conditions with no artificial material, including filter fabric, left in place.
 14. If after a minimum of two annual dredging events the applicant requests approval from MassDEP to discontinue annual dredging, a copy of any such request shall concurrently be submitted to the Fairhaven Conservation Commission.
 15. Pursuant to Chapter 192-11, any violation of these conditions is an automatic fine of \$300.00 per day until such time as the project has come back into compliance.

B. Prior to Construction

16. The applicant shall submit a one-time shellfish mitigation fee of \$22,000, made payable to the Town of Fairhaven, in accordance with the Commission's fee schedule prior to the start of work. This fee, per the recommendation of the Fairhaven Shellfish Warden, covers seeding the areas on either side of the causeway where dredging is proposed with 800 bushels of shellfish and some staff time to oversee the sweeping and relocation of shellfish, as outlined in condition B17.
17. Prior to any work within Land Containing Shellfish, the area shall be swept by an individual approved by the Fairhaven Harbormaster/Shellfish Warden and all shellfish within the area of work shall be relocated at the direction of the Fairhaven Harbormaster/Shellfish Warden.
18. Copies of the Chapter 91 license, Army Corps of Engineers permit, and 401 Water Quality permit shall be submitted to the Conservation Commission prior to the start of work.
19. REC-3: Job site posting of a sign clearly visible from the road not less than two square feet or more than three square feet with the words,
Massachusetts Department of Environmental Protection [or MassDEP]
File Number SE 023-1309
Fairhaven Conservation Commission [or FCC]
File Number CON 023-110

This order shall be weatherproofed and affixed to the job site sign. The necessary replacement and maintenance of these postings shall be the sole responsibility of the applicant.

20. DER-1: Proof of recording of these approved special conditions, plan of record, and materials at the Bristol County Registry of Deeds shall be provided by the applicant's liaison to the commission enforcement agent prior to the commencement of any work (including site preparation) on the site.

21. PCC-3: The applicant or the applicant's representative shall notify the Commission, in writing, as to the date that the work will commence on the project. Said notification must be received by the Commission no sooner than ten (10) days and no later than five (5) days prior to the commencement of the approved activity.
22. EMC-1: The Applicant shall provide the Commission with the name(s) and telephone numbers of the site contractor and the project manager(s) responsible on site for compliance with this Order. The project manager shall oversee any emergency placement of erosion and sedimentation controls and be responsible for the regular inspection or replacement of control devices and for the proper disposal of waste products. The commission shall be notified in the event that the project manager or site contractor is changed.

C. During Construction

23. REC-2: During the construction phase, the applicant shall be responsible for maintaining a copy of these Orders at the site. The applicant shall be responsible for compliance with the conditions of these Orders.
24. All groin and seawall work shall occur within a 3 hour window on either side of low tide.
25. All dredging work and work along the causeway bridge shall occur from the road to the maximum extent possible. Should any work need to be done that is not accessible from the road, it shall be done by lowering a tracked bobcat under the causeway, limited to the dredging footprint. This work shall occur within a 3 hour window on either side of low tide.
26. Before any dredging work is to begin, the Fairhaven Harbormaster shall be notified in a timely fashion so he or his designated representative can be onsite during all dredging operations.
27. Stockpiling and/or storage of construction materials, soils, fills, sediments, dredging or any other substances shall only be stockpiled in the approved areas shown on the "Stockpiling Exhibit" plan.
28. All equipment used on site must be stored or parked in the non-rock storage area, as depicted on the "Stockpiling Exhibit" plan.
29. STO-4: There shall be no discharge or spillage of petroleum product, hazardous material, or any other pollutant into any area of statutory interest.
30. If fueling or maintenance of any vehicles or equipment on site is necessary, it shall only be conducted in the non-rock storage area, as depicted on the "Stockpiling Exhibit" plan.
31. MAC-3: All mechanized vehicles under contract, subcontract or lease, participating in any manner, in any phase of activity within resource areas, shall carry on board absorbent materials to immediately respond to inadvertent discharge of petrochemicals.
32. Motorized/construction equipment is prohibited from entering or crossing a vegetated wetland, salt marsh, or coastal dune.
33. MAC-8: All equipment shall be inspected regularly for leaks. Any leaking hydraulic lines, cylinders, or any other components shall be fixed immediately.
34. MAC-9: Spill kits shall be maintained on site at all times for the immediate response to any potential spill of anything that could cause harm to resource areas and water bodies.
35. DEB-1: The construction site shall be left in a stable condition at the close of each day. Construction refuse and debris shall be removed daily. The Commission may require specific approval for the disposition of such materials prior to the start of construction.

36. With the exception of the dredge area, if soils are to be disturbed for longer than two (2) months, a temporary cover shall be established, following Natural Resources Conservation Service (NRCS) procedures, to prevent erosion and sedimentation.
 - i. If the season is not appropriate for plant growth, exposed surfaces shall be stabilized by straw, jute netting, or other NRCS-approved methods.
 - ii. Any stabilization materials such as jute netting shall be firmly anchored to prevent them from being washed from slopes by rain or flooding.
37. WAT-3: There shall be no direct discharge of dewatering operations into any wetland, watercourse, or drainage system without the approval of the Commission. Any dewatering discharge shall be passed through a sedimentation control device to remove any solids. The contractor is to maintain said sedimentation control devices throughout the entire dewatering operation and repair deficiencies immediately.
38. DRG-4: Siltation curtains shall be utilized at all times to prevent the intrusion of water-borne sediments into adjacent protected areas. It shall be the sole responsibility of the applicant to ensure the proper placement of this system during dredging, dewatering and spoil transfer activities.
39. All dredged material shall be hauled offsite to be disposed of in an appropriate location over 100 feet from any wetland resource areas and shall not be used for beach nourishment on site. Disposal records for the dredged material shall be submitted to the Commission.

D. After Construction/In Perpetuity

40. Upon completion of the work described herein, written notice shall be submitted to the Conservation Commission notifying them that work has been completed and an as-built plan is forthcoming within 180 days, as outlined in condition D41.
41. Within 180 days of the completion of the work described herein, the applicant shall prepare an As-Built Plan based on instrument survey of the work area and request that a Certificate of Compliance be issued stating that the work has been satisfactorily completed in compliance with this Order and the Plan-of-Record. The Certificate of Compliance request and accompanying as-built plan, signed and stamped by a Massachusetts Registered Professional Engineer, shall include, but is not limited to, the following information:
 - i. Bathymetric contours of the entire dredge footprint
 - ii. Full extent of dredge footprint
 - iii. Disposal records of dredge material
 - iv. Full extent of groin footprint
 - v. Cross-sections of repaired groins
 - vi. Full extent of seawall and associated cross-sections
 - vii. Coastal bank restoration details, including cross-sections and revegetation documentation
 - viii. All resource area boundaries and the date of confirmation of those boundaries
 - ix. Confirmation that no salt marsh habitat has been damaged by the work or displaced by the placement of the 12- to 24-inch stone to stabilize the causeway road
 - x. Confirmation that no habitat conversion below mean high water has occurred beyond the scope of work approved by this Order
 - xi. Documentation that all construction debris and related items, such as boom and silt curtains, have been entirely removed from the site

Perpetual Conditions

The below conditions do not expire upon completion of the project.

42. No additional disturbance of this property to any jurisdictional areas is allowed without authorization from the Conservation Commission, including changes to existing developed areas and existing natural features as of the date of the issuance of this Order. If any activity beyond the scope of this Order occurs prior to the receipt of a Negative Determination or valid Order of Conditions, it shall be removed and restored to pre-construction conditions. This condition shall survive the expiration of this Order, and shall be included as a continuing condition in perpetuity on the Certificate of Compliance.
43. DER-4: The owner of the property described in this Order must advise any potential buyer of the property that any construction or alteration to said property, including brush cutting or clearance, may require approval by the Fairhaven Conservation Commission. Any instrument conveying any or all of the owners' interest in said property or any portion thereof shall contain language similar to the following:
"This property is subject to the Fairhaven Wetlands Bylaw and/or the Massachusetts Wetlands Protection Act. Any construction or maintenance work performed on this property requires an Order of Conditions and/or a Determination of Applicability from the Fairhaven Conservation Commission."
This condition is ongoing and shall not expire with the issuance of a Certificate of Compliance and shall be recorded in the deed.
44. Each time a dredging operation is to occur, the Fairhaven Conservation Commission and the Fairhaven Harbormaster shall be notified, to allow for any additional conditions resulting from modifications in dredging operations in the life of this Order or these perpetual conditions. All dredged material shall be hauled offsite to be disposed of in an appropriate location over 100 feet from any wetland resource areas and shall not be used for beach nourishment on site. Disposal records for the dredged material shall be submitted to the Commission.

Track changes copy showing changes from the original special conditions issued with the OOC to what's included in the proposed draft Attachment A for the Amended OOC.



TOWN OF FAIRHAVEN, MASSACHUSETTS

CONSERVATION COMMISSION

Town Hall · 40 Center Street · Fairhaven, MA 02719

Attachment A

DEP File #: SE 023-1309
Fairhaven File #: CON 023-110
Applicant/Property Owner: Heiam Alsawalhi/Anwar Faisal
Property: 1 Bella Vista Island

Findings, Plans, and Documents

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2. With regard to Land Containing Shellfish, the Commission is concerned about protecting wildlife habitat, water pollution control, fisheries, and recreation. The area around the subject property has been identified as Land Containing Shellfish. The portion of the project that clears the area underneath the causeway from obstructions has a direct impact on land containing shellfish, and in particular, possibly maintaining the health and functionality of the shellfishery on either side of the causeway. The Commission wants to ensure that the above wetland values of the Act and the Bylaw are protected by ensuring proper connection between and flushing of shellfish habitat on either side of the causeway, which will be reestablished by the dredging portion of this project.
- 2-3. This Property Owner and Property is subject to the terms of an Administrative Consent Order with Penalty (ACOP) and Notice of Noncompliance (#00004701) issued by Massachusetts Department of Environmental Protection (MassDEP), dated June 25, 2019 for violations of the State Act and Regulations. The Applicant purchased the property in 2009 and in 2010, the Commission issued three Enforcement Orders (EO) for unpermitted activity. MassDEP also issued EOs in 2010 and 2013. This Order has been issued to permit certain features as required in the ACOP.
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information in response to comments from both Division of Marine Fisheries (DMF) and a third-party peer reviewer. Finally, on June 10, 2021, the applicant provided the final information that the FCC had been requesting for the previous 16 months, allowing them to move forward with a decision on the project.

- ~~5. Due to the Property Owner's track record of repeated violations of the State Regulations and Bylaw, and non-compliance with previously issued Orders, the FCC will closely scrutinize completion of the activities permitted in this Order, including a requirement that the Property Owner fund a consultant working for the FCC to oversee the activities.~~
6. This permit authorizes the repair of two existing groins, removal of a portion of an existing groin, the reconstruction of an existing seawall, dredging under the causeway bridge with dredged material disposed offsite, construction of a buried seawall within existing lawn, stabilization of the coastal bank where 70 feet of seawall was removed, after the fact approval of an electric security gate with ancillary equipment and 48 10-in by 10-in granite posts along the causeway, and the placement of 12- to 24-inch stone to protect eroding roadside along the causeway, as shown on the Plan of Record.
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 - b. "Exhibit B", 1 sheet depicting the causeway detail and dredging plan, prepared by Prime Engineering, Inc., dated June 10, 2021
 - c. "Exhibit C", 2 sheets depicting the groin improvements, prepared by Prime Engineering, Inc., dated June 10, 2021
 - ~~c.d. "Stockpiling Exhibit," 1 sheet depicting stockpiling and storage locations during the course of the project, prepared by Prime Engineering, Inc., dated November 19, 2021~~
9. The work depicted on Sheets 4 and 5 of the Plan-of-Record are subject to a separate Order of Conditions under DEP File No. SE 023-1340, Fairhaven File No. SE 023-195. This Order of Conditions does not supersede the Order of Conditions issued on May 28, 2021 for the non-ACOP activities approved by that Order.
10. The Division of Marine Fisheries (MA DMF) provided revised comments dated June 25, 2021.
 - a. The project site lies within mapped shellfish habitat for soft shell clam (*Mya arenaria*), quahog (*Mercenaria mercenaria*), and bay scallop (*Argopecten irradians*). Land containing shellfish is deemed significant to the interest of the Wetlands Protection Act (310 CMR 10.34) and the protection of marine fisheries.
 - b. The area offshore of the project site has been mapped by the Massachusetts Department of Environmental Protection as an eelgrass (*Zostera marina*) meadow.
 - c. MA DMF has identified Round Cove as winter flounder (*Pseudopleuronectes americanus*) spawning habitat. Winter flounder enter the area and spawn from January through May, laying clumps of eggs directly on the substrate. These demersal eggs hatch approximately fifteen to twenty days later. The Atlantic States Marine Fisheries Commission has designated winter flounder spawning habitat as "Habitat Areas of

Particular Concern" (HAPC). Because of the winter founder stock status, every effort should be made to protect winter flounder and their spawning habitat.

- d. The June 10, 2021 Prime Engineering response letter adequately addresses potential impacts to marine resources that were identified previously in MA DMF's January 7, 2020 comment letter. As stated in the response letter, any in-water silt-producing work should be stated to occur outside the January 15 to May 31 time-of-year (TOY) restriction period to protect winter flounder during spawning and juvenile development life history phases.
- e. The proposed roadside erosion protection (12" to 24" stone) should not displace any existing salt marsh habitat and construction activities should also avoid salt marsh habitat by working from the road.

11. The property contains mapped Priority and Estimated Habitat of Rare Species/Wildlife. The Natural Heritage & Endangered Species Program of the Massachusetts Division of Fisheries & Wildlife determined in their March 11, 2020 letter that "this project, as currently proposed, will not adversely affect the actual Resource Area Habitat of state-protected rare wildlife species...[and] will not result in a prohibited take of state-listed rare species."

12. The issuance of this Amended Order of Conditions allowed the Fairhaven Conservation Commission to make further clarifications to the special conditions attached to the Order.

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Special Conditions

A. General Conditions

- 1. ACC-1: The Conservation Commission, its employees, and its agents shall have a right of entry to inspect or compliance with the provisions of this Order of Conditions.
- ~~2. With respect to all conditions, the Conservation Commission designates the Conservation Agent as its agent with full powers to act on its behalf in administering and enforcing this Order.~~
- ~~3.2.~~ The Plan-of-Record and this Order of Conditions shall be included in all construction contracts and sub-contracts dealing with the work proposed and shall supersede all other contract requirements.
- ~~4. ADD 1: The Commission reserves the right to impose additional conditions on any or all portions of this project that could impact an area of statutory interest under the Act and/or the Fairhaven Wetlands Bylaw.~~
- ~~5.3.~~ This Order applies only to the scope of work depicted on the Plan-of-Record (Sheets 1-3) and attached Exhibits. ~~Any future work not approved within the Order subject to jurisdiction under the Wetlands Protection Act will require the filing, at a minimum, of a Request for Determination or Applicability or a new Notice of Intent with the Commission. Prior to the commencement of any such future work, a receipt of a Negative Determination or valid Order of Conditions will be required. If any activity beyond the scope of this Order occurs prior to the receipt of a Negative Determination or valid Order of Conditions, it shall be removed and restored to pre-construction conditions.~~
- ~~6.4.~~ All work shall be done in accordance with the Plan-of-Record ~~and Exhibits~~ dated June 10, 2021 ~~and accompanying Exhibits~~ as approved by this Order. Any deviation must be approved by this Commission in writing prior to commencing work involved in this deviation.

~~7-5.~~ The work depicted on Sheets 4 and 5 of the Plan-of-Record are subject to a separate Order of Conditions under DEP File No. SE 023-1340, Fairhaven File No. SE 023-195. This Order of Conditions does not supersede the Order of Conditions issued on May 28, 2021 for the non-ACOP activities approved by that Order.

~~8-6.~~ ADD-4c: Any changes to the plans identified above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.

~~9-7.~~ ADD-5: This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this order and to any contractor or other person performing work conditioned by this order.

~~10-8.~~ The limit of work for this project is restricted to the scope of work outlined above and shown on the approved plans. No work is permitted beyond the specific activities approved by this Order.

~~11-9.~~ Any in-water silt-producing work shall be staged to occur outside of the January 15 to May 31 time-of-year (TOY) restriction period of any year work is occurring to protect winter flounder during spawning and juvenile development life history phases.

~~12.~~ A qualified professional hired by the Commission at the Property Owner's expense shall oversee all phases of the project to ensure compliance with the issued Order.

~~10.~~ A qualified professional hired by the Commission at the Property Owner's expense shall provide observations and report on all phases of the project that have the potential to cause direct impact to a resource area to ensure compliance with the issued Order. Updates with associated photographic documentation shall be submitted to the Commission or its Agent before each phase of the project begins, once per week during each phase, and at the completion of each phase. Phases that have the potential to cause impact to a resource area shall be defined as follows:

- ~~i.~~ Removal of a portion of an existing groin and reconstruction of the remaining existing groins
- ~~ii.~~ Setting of the boom and silt curtains
- ~~iii.~~ Work on the base of the seawall on the water side
- ~~iv.~~ Dredging under the causeway

~~13-11.~~ Should any habitat conversion occur during the project, habitat mitigation shall be required at the direction of the Fairhaven Conservation Commission and the Division of Marine Fisheries. Habitat mitigation shall not apply to the dredging area as depicted on the approved plans.

~~12.~~ The proposed roadside erosion protection (12" to 24" stone) shall not displace any existing salt marsh habitat and construction activities shall also avoid salt marsh habitat by working from the road.

~~13.~~ The section of seawall which has been removed and restored to coastal bank shall be restored to pre-revetment conditions with no artificial material, including filter fabric, left in place.

~~14.~~ If after a minimum of two annual dredging events the applicant requests approval from MassDEP to discontinue annual dredging, a copy of any such request shall concurrently be submitted to the Fairhaven Conservation Commission.

15. Pursuant to Chapter 192-11, any violation of these conditions is an automatic fine of \$300.00 per day until such time as the project has come back into compliance.

B. Prior to Construction

~~16.~~ The applicant shall submit a shellfish mitigation fee of \$31,440, made payable to the Town of Fairhaven, in accordance with the Commission's fee schedule prior to the start of work.

- ~~17. Prior to any work within Land Containing Shellfish, all shellfish within the area of work shall be relocated at the direction of the Fairhaven Harbormaster/Shellfish Warden.~~
16. The applicant shall submit a one-time shellfish mitigation fee of \$22,000, made payable to the Town of Fairhaven, in accordance with the Commission's fee schedule prior to the start of work. This fee, per the recommendation of the Fairhaven Shellfish Warden, covers seeding the areas on either side of the causeway where dredging is proposed with 800 bushels of shellfish and some staff time to oversee the sweeping and relocation of shellfish, as outlined in condition B17.
17. Prior to any work within Land Containing Shellfish, the area shall be swept by an individual approved by the Fairhaven Harbormaster/Shellfish Warden and all shellfish within the area of work shall be relocated at the direction of the Fairhaven Harbormaster/Shellfish Warden.
18. Copies of the Chapter 91 license, Army Corps of Engineers permit, and 401 Water Quality permit shall be submitted to the Conservation Commission prior to the start of work.
- ~~18. CAP-3: All required permits, as needed, must be obtained, as needed, from the Army Corps of Engineers, Massachusetts Department of Environmental Protection, Planning Board, Zoning Board of Appeals, Board of Public Works, Board of Health, Building Department, and/or any other appropriate local, state, or federal agencies and proof of appropriate permits submitted to the Conservation Commission prior to the start of the project.~~
19. REC-3: Job site posting of a sign clearly visible from the road not less than two square feet or more than three square feet with the words,
Massachusetts Department of Environmental Protection [or MassDEP]
File Number SE 023-1309
Fairhaven Conservation Commission [or FCC]
File Number CON 023-110
- This order shall be weatherproofed and affixed to the job site sign. The necessary replacement and maintenance of these postings shall be the sole responsibility of the applicant.
- ~~Included shall also be the Commission's office phone number (508) 979-4023 for further information. Special orders of the conditions shall be weatherproofed and posted on all activity sites, including a posting on the job site sign. The necessary replacement and maintenance of these postings shall be the sole responsibility of the applicant.~~
20. DER-1: Proof of recording of these approved special conditions, plan of record, and materials at the Bristol County Registry of Deeds shall be provided by the applicant's liaison to the commission enforcement agent prior to the commencement of any work (including site preparation) on the site.
21. PCC-3: The applicant or the applicant's representative shall notify the Commission, in writing, as to the date that the work will commence on the project. Said notification must be received by the Commission no sooner than ten (10) days and no later than five (5) days prior to the commencement of the approved activity.
22. EMC-1: The Applicant shall provide the Commission with the name(s) and telephone numbers of the site contractor and the project manager(s) responsible on site for compliance with this Order. The project manager shall oversee any emergency placement of erosion and sedimentation controls and be responsible for the regular inspection or replacement of control devices and for the proper disposal of waste products. The commission shall be notified in the event that the project manager or site contractor is changed.

~~23. The 6" x 6" wooden posts in the salt marsh along the property line near the entrance shall be removed before any other work commences.~~

C. During Construction

~~1-23.~~ REC-2: During the construction phase, the applicant shall be responsible for maintaining a copy of these Orders at the site. The applicant shall be responsible for compliance with the conditions of these Orders.

~~2. All groin and seawall work shall occur within a 3 hour window on either side of low tide.~~

~~2. All groin and seawall work shall occur at low tide.~~

~~3. All dredging work and work along the causeway bridge shall occur from the road only. Should any work need to be done that is not accessible from the road, it shall be done by hand only. No equipment is permitted on the resource areas at any time.~~

~~25. All dredging work and work along the causeway bridge shall occur from the road to the maximum extent possible. Should any work need to be done that is not accessible from the road, it shall be done by lowering a tracked bobcat under the causeway, limited to the dredging footprint. This work shall occur within a 3 hour window on either side of low tide.~~

~~4-26.~~ Before any dredging work is to begin, the Fairhaven Harbormaster shall be notified in a timely fashion so he or his designated representative can be onsite during all dredging operations.

~~5. At no time shall any construction materials, soils, fills, sediments, dredging or any other substances be stockpiled or stored within an area of statutory interest.~~

~~27. Stockpiling and/or storage of construction materials, soils, fills, sediments, dredging or any other substances shall only be stockpiled in the approved areas shown on the "Stockpiling Exhibit" plan.~~

~~28. STO 3: All equipment used on site must be stored or parked in an area outside the buffer zone. All equipment used on site must be stored or parked in the non-rock storage area, as depicted on the "Stockpiling Exhibit" plan.~~

~~6.~~

~~7-29.~~ STO-4: There shall be no discharge or spillage of petroleum product, hazardous material, or any other pollutant into any area of statutory interest.

~~8. STO 5: There shall be no fueling or maintenance of any vehicles or equipment in any area of statutory interest.~~

~~30. If fueling or maintenance of any vehicles or equipment on site is necessary, it shall only be conducted in the non-rock storage area, as depicted on the "Stockpiling Exhibit" plan.~~

~~9-31.~~ MAC-3: All mechanized vehicles under contract, subcontract or lease, participating in any manner, in any phase of activity within resource areas, shall carry on board absorbent materials to immediately respond to inadvertent discharge of petrochemicals.

~~10. MAC 7: No motorized/construction equipment is to enter or cross a wetland resource area at any time, unless the location of entry or disturbance is clearly indicated on plans and within information contained within the Notice of Intent and approved with the issuance of this Order of Conditions.~~

~~32. Motorized/construction equipment is prohibited from entering or crossing a vegetated wetland, salt marsh, or coastal dune.~~

~~11-33.~~ MAC-8: All equipment shall be inspected regularly for leaks. Any leaking hydraulic lines, cylinders, or any other components shall be fixed immediately.

~~12-34.~~ MAC-9: Spill kits shall be maintained on site at all times for the immediate response to any potential spill of anything that could cause harm to resource areas and water bodies.

~~13-35.~~ DEB-1: The construction site shall be left in a stable condition at the close of each day. Construction refuse and debris shall be removed daily. The Commission may require specific approval for the disposition of such materials prior to the start of construction.

~~14-36.~~ ~~SH-8:~~ ~~With the exception of the dredge area, if~~ soils are to be disturbed for longer than two (2) months, a temporary cover shall be established, following Natural Resources Conservation Service (NRCS) procedures, to prevent erosion and sedimentation.

- i. If the season is not appropriate for plant growth, exposed surfaces shall be stabilized by straw, jute netting, or other NRCS-approved methods.
- ii. Any stabilization materials such as jute netting shall be firmly anchored to prevent them from being washed from slopes by rain or flooding.

~~15-37.~~ WAT-3: There shall be no direct discharge of dewatering operations into any wetland, watercourse, or drainage system without the approval of the Commission. Any dewatering discharge shall be passed through a sedimentation control device to remove any solids. The contractor is to maintain said sedimentation control devices throughout the entire dewatering operation and repair deficiencies immediately.

~~16-38.~~ DRG-4: Siltation curtains shall be utilized at all times to prevent the intrusion of water-borne sediments into adjacent protected areas. It shall be the sole responsibility of the applicant to ensure the proper placement of this system during dredging, dewatering and spoil transfer activities.

~~17-39.~~ All dredged material shall be hauled offsite to be disposed of in an appropriate location over ~~200-100~~ feet from any wetland resource areas and shall not be used for beach nourishment on site. Disposal records for the dredged material shall be submitted to the Commission.

D. After Construction/In Perpetuity

~~40.~~ Upon completion of the work described herein, written notice shall be submitted to the Conservation Commission notifying them that work has been completed and an as-built plan is forthcoming within 180 days, as outlined in condition D41.

~~1-41.~~ Within ~~60-180~~ days of the completion of the work described herein, the applicant shall prepare an As-Built Plan based on instrument survey of the work area and request that a Certificate of Compliance be issued stating that the work has been satisfactorily completed in compliance with this Order and the Plan-of-Record. The Certificate of Compliance request and accompanying as-built plan, signed and stamped by a Massachusetts Registered Professional Engineer, shall include, but is not limited to, the following information:

- i. Bathymetric contours of the entire dredge footprint
- ii. Full extent of dredge footprint
- iii. Disposal records of dredge material
- iv. Full extent of groin footprint
- v. Cross-sections of repaired groins
- vi. Full extent of seawall and associated cross-sections
- vii. Coastal bank restoration details, including cross-sections and revegetation documentation
- viii. All resource area boundaries and the date of confirmation of those boundaries
- ix. Confirmation that no salt marsh habitat has been damaged by the work or displaced by the placement of the 12- to 24-inch stone to stabilize the causeway road

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- x. Confirmation that no habitat conversion below mean high water has occurred beyond the scope of work approved by this Order
- xi. Documentation that all construction debris and related items, such as boom and silt curtains, have been entirely removed from the site

~~The as-built plan shall be submitted with all information on one sheet as much as possible and in the same dimensions and scale as the approved plans.~~

Perpetual Conditions

The below conditions do not expire upon completion of the project.

2.42. No additional disturbance of this property to any jurisdictional areas is allowed without authorization from the Conservation Commission, including changes to existing developed areas and existing natural features as of the date of the issuance of this Order. If any activity beyond the scope of this Order occurs prior to the receipt of a Negative Determination or valid Order of Conditions, it shall be removed and restored to pre-construction conditions. This condition shall survive the expiration of this Order, and shall be included as a continuing condition in perpetuity on the Certificate of Compliance.

~~3.— 310 CMR 10.30(3), promulgated under M.G.L. c. 131, §40, requires that no coastal engineering structure, such as a bulkhead, revetment, or seawall shall be permitted on an eroding bank at any time in the future to protect the project allowed by this Order of Conditions.~~

~~4.— CHM-2: No liquid or solid chemical lawn fertilizers, pesticides, herbicides or chemical or petroleum dust control agents shall be applied within the area of statutory interest or anywhere that the surface drainage is discharged into an area of statutory interest. This condition shall survive the expiration of this Order, and shall be included as a continuing condition in perpetuity on the Certificate of Compliance.~~

5.43. DER-4: The owner of the property described in this Order must advise any potential buyer of the property that any construction or alteration to said property, including brush cutting or clearance, may require approval by the Fairhaven Conservation Commission. Any instrument conveying any or all of the owners' interest in said property or any portion thereof shall contain language similar to the following:
"This property is subject to the Fairhaven Wetlands Bylaw and/or the Massachusetts Wetlands Protection Act. Any construction or maintenance work performed on this property requires an Order of Conditions and/or a Determination of Applicability from the Fairhaven Conservation Commission."

This condition is ongoing and shall not expire with the issuance of a Certificate of Compliance and shall be recorded in the deed.

~~6.— As required by Chapter 91 License No. 5746, the area underneath the causeway bridge shall be kept clear for the free passage of small craft and maintained at a depth of at least 1 foot below mean low water in perpetuity. Dredging to maintain the opening shall be done in accordance with all applicable Division of Marine Fisheries TOY restriction windows and from the road. No equipment is permitted on the resources areas for the purposes of dredging.~~

7.44. Each time a dredging operation is to occur, the Fairhaven Conservation Commission and the Fairhaven Harbormaster shall be notified, to allow for any additional conditions resulting from modifications in dredging operations in the life of this Order or these perpetual conditions. All dredged material shall be hauled offsite to be disposed of in an appropriate location over 200-100 feet from any wetland resource areas and shall not be used for beach nourishment on site. Disposal records for the dredged material shall be submitted to the Commission.



October 5, 2021

Geoffrey A. Haworth, Chairperson
Fairhaven Conservation Commission
40 Center Street
Fairhaven, MA

**RE: Request to Amend an Order of Conditions – SE23-1309
Heiam Alsawalhi and Anwar Faisal
One Bella Vista Island, Fairhaven, MA
FCC #CON 023-110**

Dear Chairperson Haworth and Commission Members:

Prime Engineering Inc. (“Prime”) on behalf of the owners of Bella Vista Island, Fairhaven, Massachusetts, is submitting this Request to amend the Order of Conditions (“OOC”) issued on August 13, 2021 for the above-referenced project. This Request follows the guidance from the Massachusetts Department of Environmental Protection (“MassDEP”) Wetland Program Policy 85-4 and the Fairhaven Wetlands Bylaw, Chapter 192-6D.

The Fairhaven Conservation Commission shall hold a public hearing on the proposed amendment within twenty-one (21) days after receiving this Request.

The following provides a list of the requested changes to the OOC:

- Special Condition **A-4** is too ambiguous and open-ended, giving the Conservation Commission the ability to amend the recorded Order of Conditions if some of the improvements “could impact areas of statutory interest.” This condition should be stricken. If there is significant impact to a resource area, the Commission has the ability and the obligation to issue an Enforcement Order.
- Condition **A-12** is too ambiguous and open-ended. Having a consultant stop by intermittently to observe the process is reasonable. Having a non-professional engineer overseeing and directing the work 40 hours a week for months of construction is

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not acceptable. We recommend establishing a series of defined inspections such as:

1. When silt curtains have been set.
2. When construction is starting, and then one hour a week to check progress.
3. When each task has been completed.

The word “oversee” could imply “directing.” In no way shall the peer reviewer “direct.” The function should be to “observe” and report to the Commission and to the design engineer.

- **B-16** Submission of what the Commission considers an annual shellfish mitigation fee of \$31,440 is an onerous charge that requires detailed justification.
- **B-19** The requirement to post these special conditions at all activity sites throughout the island is unreasonable. Posting at the entrance to the island to which the public has access would be adequate.
- **C-25** Allowing seawall and groin work to take place three hours before to three hours after low tide is reasonable.
- **C-26** Allowing small equipment such as bobcats to drive on the earth that will be hauled off site is reasonable. Requiring hand labor to excavate the soil under the bridge is merely punitive and does nothing to protect the interests of the Act.
- **C-28** Almost all of the island is a resource area due to the presence of Land Subject to Coastal Flowage and Coastal Bank. Stockpiling material in the floodplain should be allowed. Stockpiling some stone against the seawall is imperative in order to do the work.
- **C-29** There is no area on the island that is outside the buffer zone. This condition should relate solely to “the buffer zone of the saltmarsh.”
- **C-33** This condition should only apply to saltmarsh and/or BVW, since Land Subject to Coastal Storm Flowage is a resource area, and takes up most of the island where work needs to be done.
- **D-41X** Requires confirmation that no habitat conversion has occurred below mean high water, where the work involves the



removal of groin and dredging, both of which are beneficial habitat conversion.

- **D-46** This is a matter regulated by a state agency, and is beyond the Commission's jurisdiction.
- **D-47** This condition is unclear whether it requests an e-mail or letter to let the Commission know that a dredging will occur or whether it requests a Notice of Intent. In addition, requiring the depositing of dredged material to be 200 feet from a floodplain is overly restrictive and unreasonable. Requiring a Notice to the Commission if it will be deposited in areas of their jurisdiction would be reasonable.

If you have any questions, please feel free to contact me. We look forward to discussing this amendment at your next available hearing.

Sincerely,

PRIME ENGINEERING, INC.

Richard J. Rheume, P.E., LSP
Chief Engineer



December 2, 2021

Fairhaven Conservation Commission
40 Center Street
Fairhaven, MA

RE: BELLA VISA ISLAND – AMEND ORDER OF CONDITIONS #SE23-1309

Dear Commission Members:

We request an amendment to the Order of Conditions (File #SE23-1309) issued for Bella Vista Island and suggest the following proposed revisions:

Findings, Plans, and Documents

6. The Commission's concern with prospective violations is not a legally justifiable ground for including Finding No. 6 in the draft amended Order of Conditions (OOC). The Applicant cannot be held hostage in the present as a shield against future violations. To the extent that an enforcement problem may be created in the future, an adequate remedy has been provided by statute. In this case, both the local Wetland Bylaw and the Wetlands Protection Act (the "Act") include enforcement provisions. The Commission's decision on a permit must be separate from enforcement of future violations, if any. The Commission's decision to include Finding No. 6 in the OOC on this ground compels the conclusion that it is arbitrary and that the Commission has exceeded its legitimate authority. We request this finding be removed from the OOC.

Special Conditions

A. General Conditions

2. Condition 2 of OOC exceeds the authority of the Commission. The Legislature delegated authority solely to the Commission to enforce and administer the Act and Bylaw. The Legislature did not delegate to the Commission the authority to subdelegate to its Agent its administration and/or its enforcement authority. We request this condition be removed from the OOC.

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4. We request Condition 4 of OOC be removed. Once a valid OOC is issued, the Commission lacks jurisdiction to modify the conditions absent specific statutory authority. Further, a Commission cannot reserve the right to change an OOC or add conditions at a later time.

5., 8. and 45. Conditions 5, 8 and 45 are superfluous and we request they be removed, because the Applicant remains obligated to comply with any such laws and regulations as would be applicable to the permitted activity at the project site, irrespective of whether these conditions were imposed or not.

12. Forcing the Applicant to fund a professional to observe the construction work full time is an onerous condition. We request this condition be modified to fund a Professional Engineer to observe key aspects of the work. For example, on the first day of seawall work and after silt curtains have been placed. Another example would be the first and last day of dredging.

13. Habitat mitigation shall not apply to the dredging.

15. We request this Condition be deleted. The referenced work has already been completed.

16. The Commission has exceeded its authority in its inclusion of Condition 16, and we request the Condition be removed. The requirement to dredge beneath the causeway bridge is a condition of the Administrative Consent Order with Penalty issued by the Department, which is subject to discontinuation solely by approval of the Department. The Commission is not entitled to challenge this exercise of discretion by the Department.

B. Prior to Construction

18. and 19. This \$22,000 mitigation fee is too high. Because the area to be dredged will be first swept and all shellfish relocated, there is no basis for shellfish mitigation. Funding 800 bushels of shellfish seeds is unreasonable. What is reasonable is instead funding 20 bushels of shellfish seeds and funding the shellfish sweep and relocation program in the dredge area.

20. Condition 20 requires the Applicant to obtain all other applicable permits/approvals by other federal, state and municipal boards or departments prior to the start of the project. This condition is "void for vagueness", and we request the Condition be removed. The very purpose of a OOC and its conditions is to inform the parties as to their rights and responsibilities—not to perplex them with opaque, catch-all provisions. To that end, the "void for vagueness" doctrine exists to prevent a Commission from imposing arbitrary conditions that leave applicants unsure as to whether they are in compliance therewith due to a lack of clarity therein.



25. We request this Condition be deleted because the posts have already been removed.

C. During Construction

30., 31. and 33. These Conditions should include a reference to the plan entitled "Stockpiling Exhibit" identifying where material will be stockpiled and vehicles parked and fueled.

39. We request the following language: "except for the dredging area" be added to the end of the Condition.

43. We request the Condition be revised to state: "Within 180 days of authorized work being completed, an as built plan of that portion of the work shall be submitted to the Commission with a request for a partial Certificate of Compliance. The as built plan by a licensed Surveyor need not show all completed work on one sheet".

46. We request the Condition be revised to state: "Chemicals shall not be applied within 50 feet of the saltmarsh".

If you have any questions, please feel free to contact me.

Sincerely,

PRIME ENGINEERING, INC.

Richard J. Rheume, P.E., LSP
Chief Engineer

Staff Report

Date: December 16, 2021

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **86-88 Middle Street – Request for Amended Order of Conditions – DEP# SE 023-1365, Fairhaven CON 023-250**

DOCUMENTS REVIEWED

- Request for Amended Order of Conditions and associated documents
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192) and associated regulations
- Fairhaven Stormwater Bylaw (Chapter 194)

RESOURCE AREAS ON/NEAR SITE

- Land Subject to Coastal Storm Flowage (LSCSF) Zone AE

RELEVANT PERFORMANCE STANDARDS

- **LSCSF General Provisions:** 10.24(1) “If the issuing authority determines that a resource area is significant to an interest identified in [the Act]...,the issuing authority shall impose such conditions as are necessary to contribute to the protection of such interests.”

PROJECT SUMMARY

- The applicant is requesting to concrete 100% of the lot, including after-the-fact approval for a portion of the work, construct a 4-foot concrete retaining wall with a fence on top, install a permanent structure, and construct associated stormwater as needed.

COMMENTS

- This is part two of a two part filing to address the work that began without permits in October 2019. The Conservation Commission currently has a cease and desist issued for the property due to work beginning without permits.
- The previous filing was withdrawn without prejudice due to lack of a quorum to vote on the project.
- The applicant has been approved to pour a concrete pad to relocate the fuel tanks on the property away from the residential neighbors as required by the Fire Department and the Building Department.
- The applicant has proposed two scenarios related to managing stormwater for the property:
 - Scenario A: The Town installs a stormwater treatment system in the manhole behind the property to treat stormwater from the entire area before it discharges into the Harbor and the applicant will install temporary filtration in the catch basins on his property to manage stormwater runoff in the meantime.

- Scenario B: In the event the Town is unable to install a stormwater treatment system, the applicant will install a stormceptor on their property to treat any stormwater before it discharges to the harbor.
- The additional information submitted by the applicant includes information on the temporary filtration system installed in the catch basins on the property along with a request for a temporary waiver from the stormwater management standards to allow the Town time to pursue treatment of the entire area.
- The applicant’s representative provided the following information on the temporary filtration units: “The filtration units to be installed as shown on sheet 1 absorb heavy metals and petroleum using activated carbon, zeolite and fabric filters”
- The revised plans include a note indicating that if Public Works does not receive funding for Plan A by 2024, the applicant will install treatment on the subject property by December 2024.

RECOMMENDATION

- I recommend closing the public hearing for 86-88 Middle Street, SE 023-1365, CON 023-250, and issuing an Amended Order of Conditions under the Wetlands Protection Act and Fairhaven Wetlands Bylaw with the following recommended conditions:

Approve plan dated December 13, 2021

A. General Conditions

1. ACC-1
2. With respect to all conditions except_____, the Conservation Commission designates the Conservation Agent as its agent with full powers to act on its behalf in administering and enforcing this Order.
3. REC-1
4. ADD-1
5. ADD-2
6. ADD-4b
7. ADD-4c
8. ADD-5
9. If Fairhaven Public Works does not receive funding to either relocate drainage or install a stormceptor to treat the area stormwater by 2024, the applicant is required to install an on-site stormwater treatment system (Plan B) as outlined on Sheet 3 of the approved plans by December 2024.
10. FZ-1

B. Prior to Construction

11. CAP-3
12. REC-3
13. DER-1
14. PCC-3
15. EMC-1
16. PCC-2
17. CAP-1

C. During Construction

18. REC-2
19. MAC-3
20. MAC-8

- 21. MAC-9
- 22. Concrete washout shall occur within a designated area appropriately lined and isolated and no washout or debris is permitted to be washed into the stormwater system at any point.
- D. Stormwater Management
 - 23. SW-1
 - 24. SW-5
- E. After Construction/In Perpetuity
 - 25. COC-3
 - 26. SW-6

Perpetual Conditions

The below conditions do not expire upon completion of the project.

- 27. SW-2
- 28. SW-9
- 29. DER-4

**NARRATIVE IN SUPPORT OF A PETITION FOR AN
AMENDED ORDER OF CONDITIONS FOR
A-1 CRANE
86-88 MIDDLE STREET
FAIRHAVEN, MA**

PREPARED BY:

**PRIME ENGINEERING, INC.
P.O. BOX 1088
LAKEVILLE, MA**

NOVEMBER 11, 2021

1.0 INTRODUCTION

It is proposed to install a 4-foot-high concrete wall with a 5-foot-high steel fence on top along the north, west and south boundaries of the site and to install a large concrete pad on the ground on the west side of the A-1 Crane property. That requires an amendment to the Order of Conditions from the Fairhaven Conservation Commission which allowed a portion of the ground to be covered with a concrete slab. This Narrative has been prepared in support of that petition.

2.0 EXISTING CONDITIONS

The site, which is referenced as Assessor's Map 11, Lot 006E, is a 19,950 square foot parcel located at 86 Middle Street in Fairhaven, MA. It has an approximately 1,800 square foot, single-story masonry block building, and an approximately 1,700 square foot fabric temporary equipment shelter. The majority of the remaining lot area is covered with hydraulic concrete and/or bituminous concrete. West of the building is approximately 4,000 square feet of unpaved area covered with rip rap stone and steel plates.

There are several above-ground fuel tanks with secondary containment. There are also trucks and equipment staged in the western half of the site. There are no wetland resources on site, other than Land Subject to Coastal Storm Flowage. The ocean is 101 feet from the western property line. The site varies in elevation from 4.0 to 5.7 feet above mean sea level where 6.0 feet is the FEMA base flood elevation.

3.0 PROPOSED IMPROVEMENTS

The town has a piped drainage system that carries runoff water from the neighborhood through the subject site without the benefit of an easement. In the recent past, the Fairhaven DPW initiated a request for funding to relocate that drainage to an area south of the site in order to eliminate the unauthorized encroachment on the subject lot. That proposed drainage project would cost the Town hundreds of thousands of dollars while providing no stormwater quality benefit. The DPW has now agreed instead to seek funding to install a stormwater treatment system that will treat all of the stormwater flow from the entire neighborhood in an area west of the subject lot, in exchange for an easement that would allow the Town drainage system to remain on the subject lot. This approach would save the Town money while providing highly beneficial treatment to the stormwater flow from the entire neighborhood.

It is proposed that the Conservation Commission allow the central portion of the site to have a concrete slab installed in the area not currently paved. This would prevent oil and fuel and other contaminants, that could possibly be dripping from the equipment from infiltrating into the ground and potentially impacting groundwater quality. The facility will maintain a spill containment kit, including speedy dry, oil booms, and other absorbent material and containment drums, so any spills onto the proposed concrete slab can be quickly and efficiently cleaned up.

There is a slight possibility that the Town will not secure the funding to install the overall stormwater treatment system. In which case, we have prepared "Plan B" which is shown on a plan (sheet 3 of 3) entitled "Plan B – Onsite Stormwater Treatment System" dated November 5, 2021."

It calls for converting the existing catch basin frame and grate, to a manhole rim and cover, and then installing a storm treatment system that collects and treats only the A-1 Crane storm runoff.

It is proposed that the Conservation Commission allow the applicant to install all of the proposed concrete slab now. If, by the end of 2023, the Town has not secured the funding for the full system treatment, the amended Order of Conditions would mandate that the on-site treatment system be installed as shown on the contingency plan.

It is proposed to pour a 4-foot-high concrete wall with a 5-foot-high steel fence on top along the north, west and south boundaries as shown on the plans. The concrete wall will have flood vents to allow flood waters to be at the same elevation so there is no hydrostatic pressure on the wall. Steel storage containers will be placed inside the wall enclosure as shown on the plans. They will be bolted down to the concrete slab. The existing temporary enclosure that is at the northwest corner of the site will be re-located to sit on top of the steel storage containers. The current fuel tank truck will be removed from the site.

4.0 MASSDEP STORMWATER STANDARDS

This redevelopment project meets all of the stormwater standards to the maximum extent practicable, as detailed in the following subsections.

4.1 NO NEW UNTREATED DISCHARGES

The stormwater from the proposed slab will be treated, therefore, Standard 1 will be met.

4.2 PEAK ATTENUATION

The site's runoff discharges to the ocean which is 101 feet away, so permission to not provide detention is requested.

4.3 RECHARGE

Due to the high-water table, the presence of urban fill and the closeness of the ocean, permission to not provide recharge is requested.

4.4 WATER QUALITY

The proposed treatment system will improve stormwater quality, therefore, Standard 4 will be met.

4.5 LAND WITH HIGHER POLLUTANT LOADS

This is a use with higher potential pollutant loads. The proposed proprietary BMP is suitable for this facility's stormwater, therefore Standard 5 will be met.

4.6 CRITICAL AREAS

The site is not at or near a critical area, therefore, Standard 6 will be met.

4.7 REDEVELOPMENT

This is a redevelopment project and meets the mandated standards, therefore, Standard 7 will be met.

4.8 EROSION CONTROL PLAN

Appendix A presents an Erosion Control Program. Therefore, Standard 8 will be met.

4.9 OPERATION AND MAINTENANCE PLAN

Appendix B presents the Permanent Stormwater Operations and Maintenance Plan. Therefore, Standard 9 will be met.

4.10 ILLICIT DISCHARGE STATEMENT

Appendix C presents the Interim Illicit Discharge Statement. Therefore, Standard 10 will be met.

5.0 CONCLUSION

The proposed slab will help protect the soil and groundwater from potential contaminant impact and the proposed treatment system will improve stormwater quality. Except for groundwater recharge which is not needed, all performance standards will be met.

APPENDIX A

EROSION CONTROL PROGRAM

EROSION AND SEDIMENT CONTROLS

Soil erosion is the process by which the surface of the land is worn away by the action of wind, water, ice, and gravity. Natural or geologic erosion is a factor in creating the topographic features of the earth as we know it today. Except for some cases of shoreline and stream channel erosion, natural erosion occurs at a very slow and uniform rate. Accelerated erosion occurs when the surface of the land is disturbed and vegetation is removed by either natural forces or man's activities. Exposed, unprotected soil is then subject to rapid erosion by the action of wind or water. The erosive action of water can be separated into two categories. Raindrop erosion is the result of the vertical force of falling water; sheet, rill, and gully erosion are the result of the horizontal force of flowing water. Both forces detach and move soil particles.

During construction, the contractor is directed to comply with the precautionary measures provided in the contract documents, and to conduct construction activities in such a manner as to prevent damage or impairment to the environment. It shall be the contractor's responsibility not to undertake at any time, in any particular area, more than that magnitude of work which can be safely and adequately controlled by the forces at their disposal. Failure on the part of the contractor to cooperate with the person whose responsibility it is to regulate the works set forth in the contract documents to successful completion shall constitute grounds for suspension of construction activities of the contract. An emphasis shall be made to control erosion before it occurs. Upon completion of the project, no soil shall be left exposed (bare) in any of the construction areas of the site.

Erosion and Sediment Control Plan

To address the above issues, an Erosion and Sediment Controls Plan has been developed which describes the potential for erosion and sedimentation problems and explains and illustrates the measures which are to be taken to control those issues. The plan is implemented by the project contractor based on requirements as shown on the construction drawings and technical specifications, as well as requirements detailed in permits which become part of the contract between the owner and contractor.

Erosion and Sediment Control Techniques

Erosion and sedimentation controls shall be employed to minimize erosion and transport of sediment into on-site and adjacent resource areas during the earthwork and construction phases of the project. The major erosion control techniques proposed include hay bale barriers, silt fence barriers, inlet sediment traps, a stabilized construction entrance, and erosion control matting. A detailed description of each technique is discussed below.

Temporary Erosion Control Measures

During construction and demolition activities, the following measures shall be employed to minimize the potential impacts to wetlands and water resources within the project area from siltation and sedimentation.

Preservation of Natural Vegetation

Natural vegetation shall be preserved on site where possible. This measure will prevent erosion by providing continuous anchoring of the soil.

Drainage Swale Hay Bale Check Dams

Hay bales shall also be placed across construction ditches during construction to limit the transport of sediment into drainage systems and waterways.

Silt Fences

Silt fences shall be placed at the limits of work where the slope is less than two percent. Typically, they shall be installed adjacent to resource areas, where soil will be exposed due to construction related activities, as depicted on the plans. They shall be placed in a sturdy, upright position and supported/anchored to withstand the forces of the elements and the circumstances of construction activities. The fences shall be installed in a manner that shall prevent runoff from passing over, under or around the fence (i.e. all of the runoff will pass through the fence). They shall be attached to posts (either steel or wood) in sufficient number to support the fence. The posts shall typically be placed 4 to 8 feet apart. It shall be the construction contractor's responsibility to maintain the fence in a functional condition throughout the duration of construction activities. The contractor shall also remove any large accumulations of sediment in a timely manner and dispose the material appropriately.

Hay Bales

Hay bales shall be placed, in conjunction with silt fences, at the limit of work on steep slopes only. Steep slopes for this project are those which are greater than six percent. The hay bales shall be staked with metal or wood stakes to anchor them to the ground. The contractor shall be responsible for maintaining the hay bales in good condition and replacing them as necessary. Bales that deteriorate and are no longer intact or that become plugged with sediment shall be removed and disposed. They shall be replaced with new hay bales installed as described above.

Erosion and Sediment Control - Maintenance

The contractor shall have primary responsibility for implementing temporary and permanent controls described in the plan and shall be responsible for assuring contractor compliance with contract documents including erosion and sediment control measures.

Once construction in a particular area has been completed and the areas have been stabilized, these temporary devices shall be removed.

1. The on-site contractor shall inspect sediment and erosion control structures weekly and after each rainfall event greater than one-half inch. Records of the inspections shall be prepared and maintained on site by the contractor (see Attachment A).
2. Silt shall be removed from behind barriers if greater than 6 inches deep or as needed to ensure the stability of the control device.
3. Damaged or deteriorated items shall be repaired or replaced immediately after identification.

4. The underside of hay bales shall be kept in close contact with the earth and reset as necessary.

**PERMANENT STORMWATER OPERATIONS AND MAINTENANCE PROGRAM
A-1 CRANE COMPANY
86-88 MIDDLE STREET
FAIRHAVEN, MA**

PREPARED FOR:

**A-1 CRANE COMPANY
86-88 MIDDLE STREET
FAIRHAVEN, MA**

PREPARED BY:

**PRIME ENGINEERING, INC.
P.O. BOX 1088
LAKEVILLE, MA 02347**

NOVEMBER 11, 2021

1.0 INTRODUCTION

The plans for the A-1 Crane Company at 86-88 Middle Street in Fairhaven have been designed to protect stormwater quality. In order for this to continue in the long term, it is necessary to implement the following Long-Term Operation and Maintenance Program.

I agree to implement this program.

Patrick Carr, signature

2.0 RESPONSIBLE PARTY

Responsible Party: Patrick Carr
A-1 Crane Company, Inc.
86-88 Middle Street
Fairhaven, MA
508-999-2050
info@a1crane.com

3.0 SIZING FLOW BASED MANUFACTURED PROPRIETARY STORMWATER TREATMENT PRACTICES

Stormwater Standard No. 4 also required structural stormwater management practices to be sized to capture the required Water Quality Volume (WQV) in accordance with the Massachusetts Stormwater Handbook (310 CMR 10.05(6)(k)(4) and 310 CMR 9.06(6)(a)(4)). Stormwater Standard No. 4 requires that the full WQV be captured and treated to remove 80% of the Total Suspended Solid (TSS) load.

1. Use Curve Number (CN) 98 to represent the runoff potential for impervious surface.

11,520 SF impervious area

2. Compute the time of concentration (t_c) using the methods described in TR-55 1986, Chapter 3.

6 minutes

3. Refer to Ia/P Curve = 0.034 (Figure 3) Determine unit peak discharge using Figure 3 or 4. Figure 4 is in tabular form so is preferred. Using the t_c determined in STEP 8, read the unit peak discharge (q_u) from Figure 2 or from Table in Figure 4. q_u is expressed in the following units: cfs/mi²/watershed inches (csm/in).

$q_u=774$ csm/in

4. Compute the water quality flow (WQF) using the following equation:

$$Q_1 = (q_u)(A)(WQV)$$

Where:

Q_1 = peak flow rate associated with first 1-inch of runoff
 q_u = the unit peak discharge, in csm/in.

A = impervious surface drainage area (in square miles)
WQV = water quality volume in watershed inches (1.0-inches in this case)

$Q_1 = (774 \text{ csm/in}) (0.000413223 \text{ mi}^2) (1 \text{ in})$

Q₁=0.320 CFS

Stormceptor Model 900 will meet the required TSS removal.

4.0 SOURCE CONTROL MEASURES

The most effective means of providing clean runoff is to prevent pollutants from coming into contact with stormwater in the first place. This involves the following:

- Keeping fuel, lubricants, stockpiles, etc. covered at all times. All such products shall be stored indoors.
- Landscaping, fertilization, and other grounds maintenance, if necessary, shall be performed by personnel who are informed on how to maintain the grounds.
- Periodic removal of windblown debris and litter from the property.

5.0 MAINTENANCE OF STORM SYSTEM

This section presents the periodic maintenance that must be completed:

- The Stormceptor shall be inspected and cleaned in accordance with the manufacturer's recommendations:
 - .1 Inspect post construction, prior to being put into service.
 - .2 Inspect every 6 months for the first year to determine the oil and sediment accumulation rate. In subsequent years, inspections are based based on first-year observations or local requirements.
 - .3 Inspect immediately after an oil, fuel or chemical spill. A licensed waste management company should remove oil and sediment and dispose responsibly.
 - .4 Maintenance is performed quickly and inexpensively with a standard vacuum truck.
 - .5 With no moving parts, servicing is quick and performed at the street level.
- Sweeping the paved areas, a minimum of twice per year.
- Inspecting the catch basin 4 times per year and cleaning as needed.

6.0 SPILL PREVENTION AND RESPONSE PLAN

The Responsible Party shall train employees in the proper handling and cleanup of spilled hazardous substances or oil. No spilled hazardous substances or oil shall be allowed to come in contact with stormwater discharges. If such contact occurs, the stormwater discharge shall be contained on site until appropriate measures, in compliance with state and federal regulations, are taken to dispose such contaminated stormwater. The Responsible Party shall train personnel in spill prevention and cleanup procedures.

In order to prevent or minimize the potential for a spill of hazardous substances or oil to come into contact with stormwater, the following steps shall be implemented:

- A spill control and containment kit (containing, for example, absorbent materials, rags, gloves, plastic and metal trash containers, etc.) is maintained on-site.
- Manufacturer's recommended methods for spill cleanup shall be known and maintenance personnel shall be trained regarding these procedures and the location of the information

and cleanup supplies.

- The Responsible Party shall ensure that hazardous waste discovered or generated at the site is disposed properly by a licensed hazardous material disposal company. The Responsible Party shall not exceed hazardous waste storage requirements mandated by the EPA or state and local authorities.

In the event of a spill of hazardous substances or oil, the following procedures must be followed:

- Measures must be taken to contain and abate the spill and to prevent discharge of the hazardous substance or oil to stormwater or off-site.
- For spills of less than a quarter gallon of material, proceed with source control and containment, clean-up with absorbent materials or other applicable means, unless an imminent hazard or other circumstances dictate that the spill should be treated by a professional emergency response contractor.
- For spills greater than a quarter gallon of material, immediately contact Richard J. Rheume, L.S.P., Prime Engineering, Inc., P.O. Box 1088, Lakeville, MA 02347 at (508) 947-0050. Provide information on the type of material spilled, the location of the spill, the quantity spilled, the time of the spill and proceed with the prevention, containment and/or clean-up.
- Spills of amounts that exceed reportable quantities of certain substances specifically mentioned in federal regulations 40 CFR 110, 40 CFR 117, 40 CFR 302 must be immediately reported to the EPA National Response Center by telephone at (800) 242-8802.

The Responsible Party shall be the spill prevention and response coordinator. She/he shall designate the individuals who shall receive spill prevention and response training. These individuals shall each become responsible for a particular phase of prevention and response. The names of these personnel should be posted in the material storage area and in the property office.

Any spill that occurs shall be documented on a Spill Report form that is enclosed an Attachment.

7.0 SNOW AND ICE REMOVAL

Snow and ice shall be removed primarily by mechanical means. Salt and de-icing chemicals shall be used sparingly and only when required to protect safety.

8.0 BUDGET

Sweeping	\$1,000
CB inspector's cleaning	\$1,000
Stormceptor cleaning	<u>\$1,000</u>
Total	\$3,000

APPENDIX C

INTERIM ILLICITT DISCHARGE STATEMENT

INTERIM ILLICIT DISCHARGE STATEMENT

1.0 INTRODUCTION

The following is an Interim Illicit Discharge Statement based on existing conditions and design conditions. Once construction is complete, a final illicit discharge statement shall be issued to the Fairhaven Conservation Commission based on as-built conditions.

2.0 EXISTING CONDITIONS

The existing facility is a developed parcel with a single-story building and temporary equipment shelter, with the remaining area covered either with concrete or is unpaved with rip rap stone and steel plates. There are no known illicit connections in this area. No sources of illicit discharges were uncovered when this system was recently surveyed. Based on this investigation, to the best of my knowledge, there are no current illicit discharges to the storm drainage system. If during construction, an illicit discharge is discovered, it shall be removed immediately.

3.0 PROPOSED DESIGN

The proposed design calls for a Town drainage system, if funded; or the Applicant will install a stormwater treatment system. There are no points in the proposed storm drainage system where illicit discharges are likely to occur.

Certain types of discharges are allowable under the U.S. Environmental Protection Agency Construction General Permit and it is the intent of the site's Long-Term Pollution Prevention Plan to allow such discharges. These types of discharges shall be allowed under the conditions that no pollutants shall be allowed to come in contact with the water prior to or after its discharge. The control measures which have been outlined in the Long-Term Pollution Prevention Plan shall be strictly followed to ensure that no contamination of these non-stormwater discharges takes place.

I hereby certify that the preceding is accurate.

A handwritten signature in cursive script that reads "Richard J. Rheume".

Richard J. Rheume, P.E., LSP
Prime Engineering, Inc.

Staff Report

Date: December 14, 2021

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **10 Littleneck Road – Notice of Intent – DEP# 023-1372, Fairhaven CON 023-259**

DOCUMENTS REVIEWED

- Notice of Intent and associated documents
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192) and associated regulations
- Fairhaven Stormwater Bylaw (Chapter 194)

RESOURCE AREAS ON/NEAR SITE

- Land Subject to Coastal Storm Flowage (LSCSF) Zone AE

RELEVANT PERFORMANCE STANDARDS

- **LSCSF General Provisions:** 10.24(1) “If the issuing authority determines that a resource area is significant to an interest identified in [the Act]...,the issuing authority shall impose such conditions as are necessary to contribute to the protection of such interests.”

PROJECT SUMMARY

- The applicant is proposing to elevate the existing house and re-set onto a newly constructed flood zone-compliant foundation as well as construct a small expansion and deck.

COMMENTS

- This property previously came before the Commission as a Request for Determination when the addition and deck were going to be limited to sonotubes only.
- Further changes to the project resulted in needing to raise the house to comply with FEMA flood zone regulations, necessitating a Notice of Intent.
- Some fill will be needed to bring the existing grade level for the foundation. Flood vents will be used to comply with FEMA requirements.
- This is not a velocity flood zone.
- The footprint of the previously approved addition and deck is not changing, just the foundation underneath the house.
- There is a temporary house location noted on the plans where the house will be stored during construction of the foundation.
- Utilities will be rerun once the house is reset on the foundation.
- No vegetation is proposed to be removed.
- The project does need a variance from Zoning, which is in the process of being filed.

RECOMMENDATION

- I recommend closing the public hearing for 10 Littleneck Road, SE 023-1372, CON 023-259, and issuing an Order of Conditions under the Wetlands Protection Act and Fairhaven Wetlands Bylaw with the following conditions:

Approve plan dated November 16, 2021

A. General Conditions

1. ACC-1
2. With respect to all conditions except_____, the Conservation Commission designates the Conservation Agent as its agent with full powers to act on its behalf in administering and enforcing this Order.
3. REC-1
4. ADD-1
5. ADD-2
6. ADD-4b
7. ADD-4c
8. ADD-5
9. The limit of work shall be the depicted scope of work on the plans. No vegetation is permitted to be removed.
10. FZ-1
11. FZ-2
12. Driveway is to remain crushed shells.

B. Prior to Construction

13. CAP-3
14. REC-3
15. DER-1
16. PCC-3
17. EMC-1
18. TRP-3
19. PCC-1

C. During Construction

20. REC-2
21. TRP-1
22. MAC-3
23. MAC-8
24. MAC-9
25. DEB-1
26. DEB-5
27. BLD-3
28. BLD-4
29. SIL-8
30. WAS-2
31. WAT-3
32. EC-1
33. EC-2

D. After Construction/In Perpetuity

34. REV-1

- 35. COC-1
- 36. COC-2

Perpetual Conditions

The below conditions do not expire upon completion of the project.

- 37. CHM-1 This condition shall survive the expiration of this Order, and shall be included as a continuing condition in perpetuity on the Certificate of Compliance.
- 38. DER-4

Staff Report

Date: December 20, 2021

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **89 Akin Street – Notice of Intent – DEP# 023-____, Fairhaven CON 023-258**

DOCUMENTS REVIEWED

- Notice of Intent and associated documents
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192) and associated regulations
- Fairhaven Stormwater Bylaw (Chapter 194)

RESOURCE AREAS ON/NEAR SITE

- Riverfront Area
- Bordering Vegetated Wetland (no work proposed within BVW)
- Buffer Zone

RELEVANT PERFORMANCE STANDARDS

- **Riverfront Area:** 10.58(5) Redevelopment
 - (a) At a minimum, proposed work shall result in an improvement over existing conditions
 - (b) Stormwater management is provided according to standards established by the Department
 - (c) Within 200 foot riverfront areas, proposed work shall not be located closer to the river than existing conditions or 100 feet, whichever is less
 - (d) Proposed work, including expansion of existing structures, shall be located outside the riverfront area or toward the riverfront area boundary and away from the river
 - (e) The area of proposed work shall not exceed the amount of degraded area, provided that the proposed work may alter up to 10% if the degraded area is less than 10% of the riverfront area
- **Buffer Zone General Provisions:** 10.53(1) “For work in the Buffer Zone subject to review under 310 CMR 10.02(2)(b)3., the Issuing Authority shall impose conditions to protect the interests of the Act identified for the adjacent Resource Area. ... where prior development is extensive, may consider measures such as the restoration of natural vegetation adjacent to a Resource Area to protect the interest of [the Act]. ... The purpose of preconstruction review of work in the Buffer Zone is to ensure that adjacent Resource Areas are not adversely affected during or after completion of the work.”
- **Buffer Zone Wetlands Bylaw Regulations (Chapter 192 Regulations):**
 - 4.0 0 to 25 Foot Buffer Zone Resource Area
 - 4.1 An applicant shall demonstrate that no alteration is proposed within the 0-25 foot buffer zone resource area.
 - 5.0 25 to 50 Foot Buffer Zone Resource Area

- 5.1 Any applicant proposing a project within the 25-50 foot buffer zone resource area shall indicate that there are no structures including, but not limited to, concrete, stone, or other impervious foundations and/or slabs for construction purposes that would significantly increase runoff.
- 5.2 Alteration of the 25-50 foot buffer zone resource area is limited to grading, tree clearing, stormwater management system components, lawns, gardens, and other low-impact uses as determined by the Commission or otherwise approved by the Commission by the variance procedures set forth in Section 8.0 of this regulation. Footings for building structures, such as a deck, as opposed to slabs or foundations, shall be used when technically feasible.
- 6.0 50 to 100 Foot Buffer Zone Resource Area
 - 6.1 Alterations including structures are allowed in the 50-100 foot buffer zone resource area. The Commission may require additional mitigation offsets when the slope within the buffer zone is steeper than 10%. Additionally, mitigation offsets may be required by the Commission when the applicant proposes that more than 30% of the 50-100 foot buffer zone resource area is proposed to be impervious surface.

PROJECT SUMMARY

- The applicant is proposing to redevelop the existing site, including the removal of the existing house, construction of a new residence with town sewer and water connections, and associated site grading.

COMMENTS

- Work proposed to occur within the 0-25 foot buffer zone:
 - Installation of erosion control
- Work proposed to occur within the 25-50 foot buffer zone:
 - Relocation of storage containers
- Work proposed to occur within the 50-100 foot buffer zone:
 - Small portion of the house
 - Deck attached to the house
 - Site grading
- Work proposed to occur within the 0-100 foot Riverfront Area
 - Installation of erosion control
 - Removal of storage containers
- Work proposed to occur within the 100-200 foot Riverfront Area
 - Relocation of storage containers
 - Site grading
 - Installation of utilities
 - Approximately half of the house
 - Deck attached to the house
- Overall, the applicant is working within previously degraded riverfront area and is working to minimize impacts closer to resource areas.
- Two storage containers, a boat, and a trailer are currently being stored in the area of lawn that has been flagged as wetland. The applicant will be removing those items as well as debris that has been dumped at the edge of the lawn as part of this project.

- During the site visit on December 7, the members of the Commission present discussed the following:
 - What is the path into the woods currently used for? There was some concern over ATVs crossing the wetland and stream.
 - Add a line of shrub plantings at the BVW edge between the property lines so the area of lawn that is wetland will be clearly separated and not liable to continue getting mowed.
 - Seed the area of wetland to be disturbed by removing the storage containers with a wetland seed mix
- The applicant's representative submitted the following comments in response to the above questions/comments:
 - The woods path is within the Akin Street layout and not owned by the applicant, who says it's mostly walkers and hunters who use it.
 - The applicant would like to plant wildflower mix in the disturbed areas under the containers.
 - The applicant wants to know if they can use large stones or rail fence to demarcate the edge of wetlands rather than shrub plantings.
- A native wildflower seed mix would be an acceptable alternative for the area of lawn that is currently wetland to help stabilize the area once it is disturbed by removing the containers.
- A post-and-rail fence would also demarcate the edge of the wetland that is currently lawn. The Commission has utilized post-and-rail fences in the past to demarcate a resource area edge. A post-and-rail fence has the benefit of not running the risk of being removed by a future property owner who does not realize where the wetland is on the property.
- Additionally, a conversation with MassDEP indicated that an alternatives analysis is required for Riverfront Area projects and one has not yet been submitted.
- MassDEP has not yet issued a file number for this filing, so the public hearing cannot be closed until they've done so.

RECOMMENDATION

- I recommend a continuance to a future meeting until an alternatives analysis has been submitted and a file number has been issued by MassDEP.

Staff Report

Date: December 20, 2021

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **182 Ebony Street – Notice of Intent – DEP# 023-1373, Fairhaven CON 023-260**

DOCUMENTS REVIEWED

- Notice of Intent and associated documents
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192) and associated regulations
- Fairhaven Stormwater Bylaw (Chapter 194)

RESOURCE AREAS ON/NEAR SITE

- Land Subject to Coastal Storm Flowage (LSCSF) Zones VE and AE
- Salt Marsh
- Buffer Zone

RELEVANT PERFORMANCE STANDARDS

- No work proposed within 100 feet of salt marsh
- **LSCSF General Provisions:** 10.24(1) “If the issuing authority determines that a resource area is significant to an interest identified in [the Act]...,the issuing authority shall impose such conditions as are necessary to contribute to the protection of such interests.”

PROJECT SUMMARY

- The applicant is proposing to demolish the existing house and construct a flood-zone compliant dwelling with associated utilities, grading, and site work.

COMMENTS

- One tree is proposed to be removed, at the southeast corner of the house. Other than that, the applicant would like to preserve all of the mature trees on the property.
- The driveway is going to be expanded slightly, but remain shells.
- A self-supporting deck is proposed to connect the existing garage to the new dwelling. The Building Commissioner has a slight concern that this may not meet FEMA flood zone standards and/or state building code standards for construction in a velocity flood zone.
- The structure is proposed to be elevated on pilings two feet above the base flood elevation.
- Some fill will be brought in for site grading, but it does not appear that fill is proposed for structural purposes.
- No work is proposed within 100 feet of the salt marsh and erosion control will be set outside the 100-foot buffer zone line.

RECOMMENDATION

- I recommend closing the public hearing for 182 Ebony Street, SE 023-1373, CON 023-260, and issuing an Order of Conditions under the Wetlands Protection Act and Fairhaven Wetlands Bylaw with the following conditions:

Approve plan dated November 3, 2021

A. General Conditions

1. ACC-1
2. With respect to all conditions except_____, the Conservation Commission designates the Conservation Agent as its agent with full powers to act on its behalf in administering and enforcing this Order.
3. REC-1
4. ADD-1
5. ADD-2
6. ADD-4b
7. ADD-4c
8. ADD-5
9. LOW-2
10. SIL-5
11. SIL-9
12. SIL-10
13. WET-1
14. FZ-1
15. FZ-2

B. Prior to Construction

16. CAP-3
17. REC-3
18. DER-1
19. PCC-3
20. EMC-1
21. TRP-2
22. TRP-3
23. PCC-1
24. SIL-7

C. During Construction

25. CAP-1
26. REC-2
27. The only mature tree on site permitted to be removed is located at the southeast corner of the proposed house. The applicant is required to plant a native replacement tree somewhere on the property.
28. TRP-1
29. At no time shall any construction materials, soils, fills, sediments, dredging or any other substances be stockpiled or stored outside the erosion control line.
30. STO-3
31. There shall be no discharge or spillage of petroleum product, hazardous material, or any other pollutant into any area that can flow into the salt marsh.

32. There shall be no fueling or maintenance of any vehicles or equipment within 100 feet of the salt marsh.

33. MAC-3

34. MAC-8

35. MAC-9

36. DEB-1

37. DEB-5

38. BLD-3

39. BLD-4

40. SIL-3

41. SIL-4

42. SIL-8

43. WAS-2

44. WAT-3

45. EC-1

46. EC-2

D. After Construction/In Perpetuity

47. REV-1

48. COC-1

49. COC-2

50. FZ-3

Perpetual Conditions

The below conditions do not expire upon completion of the project.

51. FZ-4

52. CHM-2 This condition shall survive the expiration of this Order, and shall be included as a continuing condition in perpetuity on the Certificate of Compliance.

53. DER-4

SCHNEIDER, DAVIGNON & LEONE, INC.

PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS

N. DOUGLAS SCHNEIDER, P.E., P.L.S.
MATTHEW C. LEONE, P.L.S.



DAVID M. DAVIGNON, P.E.
JAY MCKINNON, E.I.T.

December 8, 2021

Re: Notice of Intent – Project Narrative

Applicants/Owners: Enrico G. & Linda M. Picozza

Site Location: 182 Ebony Street

Lots #260, #262, #264, #266 & #268 on Fairhaven Assessors Map #43B

Project Purpose:

The purpose of the project is to demolish the existing ground-level cottage and construct a dwelling in compliance with FEMA and Mass Building Code for construction within a Velocity Zone.

Site Background:

The lot is 30,000 sq. ft. in size and is bordered easterly by Ebony Street, westerly and southerly by developed residential properties and northerly by vacant (salt marsh) property. The property contains a cottage which was constructed circa 1950 according to the Assessors records and an accessory garage which was constructed circa 2011.

Wetland Resource Areas:

The entire site falls within Land Subject to Coastal Storm Flowage, Flood Zones AE (El. 14) and VE (El. 16). There are no inland or coastal wetland resource areas which exist on the site; however Salt Marsh exists immediately offsite towards the north and a Bordering Vegetated Wetland exists offsite easterly and northeasterly of the property. Therefore the northerly portion of the site falls within the 100 ft. Buffer Zone of said resource areas.

Project Description:

Proposed Dwelling:

The Applicants proposes to demolish the existing ground level cottage and then build a 2-story single family dwelling in compliance with FEMA and Mass Building Code requirements for construction within a Velocity Zone. The dwelling will be built on an open concrete foundation with a finish slab set at elevation 10.0 and a bottom of beam set at elevation 18.1 (2.1 ft. above the base flood elevation of 16.0). The house will be constructed with a 1st floor porch on the north side, an access deck along the west and south sides and a staircase along the east side. Additionally a 4 ft. wide walkway will be constructed to provide access from the first floor of the house to the second floor of the existing garage. The garage will have a 4 ft. wide balcony constructed to accomplish this concept. The ground level area of the house will be utilized for storage and garage space, therefore break-away panels will be installed in compliance with FEMA regulations.

Proposed Driveway:

The existing driveway contains a crushed shell surface which shall remain. The project requires a small expansion of said driveway to provide access into drive-under garage.

Proposed Fill:

The project will require the placement of approximately 240 cubic yards of fill to level the site for the construction of the concrete slab and perimeter fill to properly grade the site.

Proposed Utilities:

The existing house is serviced by municipal water and sewer. New service lines will be installed from the existing curb stops at the sideline of Ebony Street to the house. Additionally underground conduits will be installed for electric, cable and telephone service lines from the existing utility pole located in Ebony Street to the house.

SCHNEIDER, DAVIGNON & LEONE, INC.
PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS

Erosion Control:

The Applicants propose to install erosion control consisting of siltation fence, straw wattles or silt socks along the down-gradient (northerly) side of the proposed work to serve as the limits of work.

Trees Removal:

The Applicants propose to remove one tree currently located at the southeasterly corner of the house. Additionally there may be another tree on the site that may be removed due to its health status. Both trees will be replaced with their respective locations to be field determined.

Proposed Stabilization Measures:

Upon completion of the project, the entire site will be stabilized with loam and seed, mulch, pea-stone or other acceptable stabilization methods.

Attachments:

- 100-foot Abutters List
- DEP Abutter Notification Form
- Figure 1: U.S.G.S. Quadrangle
- Figure 2: Estimated Habitat Map
- Figure 3: Assessors Map #43B
- Figure 4: Fairhaven FIRM
- 100-foot Abutters List
- DEP Abutter Notification Form
- Site Plan

Staff Report

Date: December 20, 2021

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **Fisherman's Road – Notice of Intent – DEP# 023-____, Fairhaven CON 023-261**

DOCUMENTS REVIEWED

- Notice of Intent and associated documents
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192) and associated regulations
- Fairhaven Stormwater Bylaw (Chapter 194)

RESOURCE AREAS ON/NEAR SITE

- Land Subject to Coastal Storm Flowage (LSCSF) Zones VE and AE
- Bordering Vegetated Wetland
- Buffer Zone

RELEVANT PERFORMANCE STANDARDS

- **LSCSF General Provisions:** 10.24(1) "If the issuing authority determines that a resource area is significant to an interest identified in [the Act]...,the issuing authority shall impose such conditions as are necessary to contribute to the protection of such interests."
- **Bordering Vegetated Wetland:** 10.55(4)
 - (a) work in a Bordering Vegetated Wetland shall not destroy or otherwise impair any portion of the BVW
 - (b) The ConCom may permit the loss of up to 5000 square feet of BVW when said area is replaced IF:
 1. The area is equal;
 2. The ground water and surface elevation are approximately equal;
 3. The overall horizontal configuration and location are similar;
 4. There is an unrestricted hydraulic connection to the same water body or waterway;
 5. It is in the same general area of the water body;
 6. At least 75% of the surface of the replacement area shall be reestablished with indigenous wetland plant species within two growing seasons; and
 7. The replacement area is provided in a manner which is consistent with all other regs in 310 CMR 10.00.
 - (c) The ConCom may permit the loss of a portion of BVW when;
 1. Said portion has a surface area less than 500 square feet;

2. Said portion extends in a distinct linear configuration ("finger-like") into adjacent uplands; and
 3. In the judgment of the issuing authority it is not reasonable to scale down, redesign or otherwise change the proposal.
- (d) No project may be permitted which will have any adverse effect on specified habitat sites of rare species
- (e) No work shall destroy or otherwise impair any Area of Critical Environmental Concern
- **Buffer Zone Wetlands Bylaw Regulations (Chapter 192 Regulations):**
 - 4.0 0 to 25 Foot Buffer Zone Resource Area
 - 4.1 An applicant shall demonstrate that no alteration is proposed within the 0-25 foot buffer zone resource area.
 - 5.0 25 to 50 Foot Buffer Zone Resource Area
 - 5.1 Any applicant proposing a project within the 25-50 foot buffer zone resource area shall indicate that there are no structures including, but not limited to, concrete, stone, or other impervious foundations and/or slabs for construction purposes that would significantly increase runoff.
 - 5.2 Alteration of the 25-50 foot buffer zone resource area is limited to grading, tree clearing, stormwater management system components, lawns, gardens, and other low-impact uses as determined by the Commission or otherwise approved by the Commission by the variance procedures set forth in Section 8.0 of this regulation. Footings for building structures, such as a deck, as opposed to slabs or foundations, shall be used when technically feasible.
 - 5.4 Previously disturbed areas: When there is a pre-existing disturbance (disturbed as part of a previously recorded Certificate of Compliance or Determination of Applicability or disturbed prior to the enactment of the Massachusetts Wetlands Protection Act (MGL Ch. 131 §40) and the Fairhaven Wetlands Bylaw (Chapter 192)), and the work proposed is entirely within this previously disturbed area, an applicant may propose impervious surfaces or other uses, such as pools, buildings, porches, and sheds within the 25-50 foot buffer zone resource area. The Commission shall evaluate the proposed uses based on the demonstration by the applicant that the functions, characteristics, and values of the resource area will not be adversely impacted.

PROJECT SUMMARY

- The applicant is proposing to improve existing drainage infrastructure along Fisherman's Road and pave it between Balsam Street and Fir Street.

COMMENTS

- Fisherman's Road between Balsam Street and Cottonwood Street falls within the velocity flood zone and a very small portion of Fisherman's Road just past Cottonwood Street falls within the 100-year floodplain (AE flood zone).
- The section of Fisherman's Road between Ebony Street and Fir Street falls within the 100-foot buffer zone to Bordering Vegetated Wetland.

- The existing gravel road is considered impervious based on compaction. The proposed pavement area will result in a slight increase in peak runoff rate and volume and a waiver is requested for this requirement of the Mass. Stormwater Standards.
- The project qualifies as a limited project under maintenance and improvement of public roadways.
- The applicant has provided information on the drainage improvements and their compliance with Massachusetts Stormwater Standards as well as local stormwater standards. They identify the project as a major improvement over existing conditions, stating “the current gravel road requires gravel replenishment every few years, which means the fine materials are being washed/eroded into the drainage structure or bypassed into the ocean. The proposed pavement and cape cod berms will prevent these erosion situations.”
- The project will better connect the existing drainage system to the stormceptor treatment unit at the bottom of Fisherman’s Road, allowing better overall water quality treatment before stormwater discharges to the ocean.
- It appears the project will provide an improvement for wildlife habitat and land containing shellfish and have negligible impact on storm damage prevention and flood control.
- Currently, MassDEP has not yet issued a file number for this project. If there is no file number by the January 3 meeting, the public hearing is unable to be closed.

RECOMMENDATION

- If MassDEP has issued a file number, I recommend closing the public hearing for Fisherman’s Road, SE 023-____, CON 023-261, and issuing an Order of Conditions under the Wetlands Protection Act and Fairhaven Wetlands Bylaw with the following conditions:

Approve plan dated December 16, 2021

A. General Conditions

1. With respect to all conditions except____, the Conservation Commission designates the Conservation Agent as its agent with full powers to act on its behalf in administering and enforcing this Order.
2. REC-1
3. ADD-2
4. ADD-4b
5. ADD-4c
6. ADD-5
7. The limit of work shall be within the road layout and no work shall occur beyond any installed erosion and sedimentation control.
8. SIL-5
9. SIL-9
10. SIL-10

B. Prior to Construction

11. CAP-3
12. REC-3
13. PCC-3
14. PCC-1

C. During Construction

15. REC-2

16. There shall be no discharge or spillage of petroleum product, hazardous material, or any other pollutant into a wetland or an area that drains to a watercourse.
 17. MAC-3
 18. MAC-8
 19. MAC-9
 20. SIL-3
 21. SIL-4
 22. SIL-8
 23. EC-1
 24. EC-2
- D. Stormwater Management
25. SW-1
 26. SW-3
 27. SW-5
 28. SW-6
 29. SW-7
- E. After Construction/In Perpetuity
30. REV-1
 31. COC-1
 32. COC-2

Perpetual Conditions

The below conditions do not expire upon completion of the project.

33. SW-2
34. SW-9

Fishermans Road – Proposed Drainage Improvements – Fairhaven, Massachusetts

MassDEP Stormwater Management Standards

Date: December 10, 2021

This project is a “re-development project” per MSH Standard #7 and a “limited project” per 310 CMR 10.24(7)(c)1 – ‘Maintenance and improvement of existing public roadways, but limited to widening less than a single lane, adding shoulders, correcting substandard intersections, and improving drainage systems.’ Fishermans Road is a Town road, the proposed work does not create any new uses nor new building structures. The existing compacted gravel road has a CN value of 96 in comparison with pavement’s CN value of 98. Hence, the gravel road is considered as impervious. This proposed pavement area will have a slight increase in the runoff peak flow rate (Standard #2) and runoff volume in all four study storm events. Since this project qualified for Limited Project and the standards requirements are subject to the maximum extent practicable.

Stormwater Management Requirements. (For New and Redevelopment and Limited Project)

Standard #1 - no new outfall untreated. The existing 18” diameter outfall is located at the end of Fishermans Road, an existing Stormceptor treatment unit was installed with capacity to treat the entire Fishermans Road watershed runoff Therefore, the project conforms with standard #1.

Standards #2 – no increase of peak runoff, (maximum extent practicable for re-development project). There are slight increase of peak runoff rate and volume (as required by the Fairhaven Stormwater Management regulations). A waiver for meeting Standards #2 under Limited Project to the maximum extent practicable is hereby requested, see attached HydroCAD report and summary table.

Standard #3 – Groundwater Recharge, (maximum extent practicable for re-development project). Fishermans Road is located within the HSG ‘C/D’ and ‘D’ soil per NRCS Web Soil Survey Report, attached; However, the down steam discharge point is in also within the FEMA Costal Velocity Flood Zone, HSG ‘D’ and with the limited right-of-way width. Therefore, groundwater recharge is unfeasible and hence a waiver is requested.

Standard #4 – TSS removal – The existing Stormceptor STC 900 and combined with the existing and proposed deep sump hooded catch basins treatment chain meets the 80% TSS removal standards.

Standard #5 – LUHPPL. Not applicable.

Standard #6 - Zone II. Not applicable.

Standard #7 – This project is a new and redevelopment project, no new uses and dwelling/building created. This is a roadway improvement project converting existing gravel roadway to pavement with drainage improvement.

Standard #8 - Construction period O&M plan is included in the NOI package, (copy attached).

Standard #9 – The O&M operator is the Town of Fairhaven DPW. Long term O&M Plan is under the town wide operation and maintenance schedule per MS4 permit.

Standard #10 – No Illicit discharge – a Statement is included in the NOI package, (copy attached).

Fishermans Road – Roadway Improvements – Fairhaven, Massachusetts

Date: December 10, 2021

Project Narrative:

Fishermans Road is an existing gravel road connecting between Balsam Street and Fir Street Weybridge (Waybridge) Road in Fairhaven, MA. The road has a 40-foot width right-of-way. The lower portion of the Fishermans Road (middle of Balsam Street and Cottonwood Street and westward) are within the Coastal Velocity Flood Zone per FIRM Panel 250054 – 0504, effective date July 7, 2009.

The intersecting Balsam and Cottonwood Streets are both paved. Therefore, the Fishermans Road, Balsam Street and Cottonwood Street intersections are partially paved. Fishermans Road serves approximately 22 residential dwellings, there are existing drainage trunk lines (15" to 18" diameter) beneath the gravel roadway between Dogwood Street and Balsam Street and discharges westward to the coastal beach area. A proprietary treatment (Stormceptor STC 900) unit was installed at the downstream end of the trunk line to treat the surface runoff. Based on the size of the Stormceptor unit, which has the capacity to treat the entire surface runoff from the entire Fishermans Road.

Fishermans Road consists of 40 feet wide right-of-way and the gravel road width approximately 20' between Ebony Street to Balsam Street and approximately 14' wide from Ebony Street to Fir Street length.

This project proposed to pave the Fishermans gravel road to 20' width including cape cod berm on both sides (curb to curb width 18') and install additional deep sump catch basins and extend the drainage trunk line to Fir Street. The drainage and pavement improvements will capture the entire roadway surface runoff through the existing Stormceptor unit for treatments. See Checklist for Stormwater Report for compliance standards.

Slight increases of peak runoff and volume occurred due to the new pavement surface. However, the increased peak runoff rate is allowed by 310 CMR 10.24-7(c)(1) under Limited Project.

**STORMWATER AND DRAINAGE
OPERATION AND MAINTENANCE PLAN**

Name of Project: Proposed Drainage Improvements

Location: Fisherman's Road, Fairhaven, Massachusetts

Name of Owner/Operator: Fairhaven BPW, 5 Arsene Street, Fairhaven, MA 02719

Owner/Operator Signature: _____, Date _____

I. INTRODUCTION

The maintenance program below provides for a general plan with specific requirements for stormwater management controls for **Fisherman's Road, Fairhaven, MA**. The program is based on the recommended standards presented in the DEP Stormwater Management Policy Handbook Volume 2, Chapter 2 and Guidelines for Stormwater Management and Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs, by Thomas R. Schueler, July 1987.

II. RESPONSIBILITY AND IMPLEMENTATION

The property owner is the owner of all components of the drainage system as listed in Section III below, The implementation, execution, and financing of this maintenance program and emergency repairs shall be the responsibility of the property owner.

III. GENERAL REQUIREMENTS

Construction activities shall conform to the approved site plans and any other regulations or requirements of the Town of Fairhaven. Mulch filter tubes, silt fence and construction entrance shall be installed at the limit of work prior to construction. All sediment controls shall be in place before construction shall begin and shall be properly maintained throughout the course of construction. During construction, silt laden runoff shall not be permitted to enter the nearby wetlands or abutting properties.

All BMPs and sediment controls shall be inspected, by the Applicant and/or assignee during construction, on a weekly basis and within 24 hours of a rain event that generates more than ½" of rain in a 24 hour period. Once construction is complete, it shall be operated and maintained in accordance with the existing Operation & Maintenance Plan.

Should any dewatering activities be required, the Applicant shall make certain that the all pumped water is free of sediment prior to discharging to the nearby wetlands. The methods for removing any sediment shall be approved by the Town prior to any dewatering activities commence.

IV. BMP MAINTENANCE

Maintenance of Facilities: The Owner agrees to comply with a minimum maintenance schedule as follows:

- A. Street Sweeping: Street sweeping roadways and parking areas as necessary during construction.

- B. Install sediment control silt sacks to all catch basins (existing and proposed) during construction.
- C. Inspect erosion control weekly and repair eroded areas during inspection. Re-mulch or re-vegetate void areas as needed. Remove litter and debris weekly.
- D. Grassed Area: Maintain vegetation; mow or cut back if impedes water movement or grass health. Inspect eroded areas repair and reseed as needed.

V. GENERAL

Dispose of the collected grit, sediment and debris in accordance with current Town/City State and Federal guidelines and regulations.

Long Term Operation and Maintenance

Deep Sump Hooded Catch Basins – Inspect and clean grate and sump four times per year and/or per Fairhaven DPW town wide O&M schedule standards under MS4 permit requirements.

Stormceptor Unit – Inspected and clean twice per year and/or per Fairhaven DPW town wide O&M schedule standards under MS4 permit requirements.

Operation and Maintenance Budget

Inspection: \$300 per year

Mowing: \$300 per year

Cleaning and remove sediment: \$300 per year

Total annual budget = \$900



Whitney McClees <wmcclees@fairhaven-ma.gov>

Fishermans Road - NOI

Tony Ma <tma@gcgassociates.net>

Fri, Dec 17, 2021 at 11:12 AM

To: Whitney McClees <wmcclees@fairhaven-ma.gov>

Cc: Mike Carter <mike.carter@gcgassociates.net>, Jim Coe <jcoe@gcgassociates.net>, Lucas Brinkman <lbrinkman@gcgassociates.net>, "vfurtado@fairhaven-ma.gov" <vfurtado@fairhaven-ma.gov>

Hi Whitney,

Attached please find the revised Drainage Improvements plan set for the Fishermans Road NOI application. We altered the TEC plan and added the new Zone VE (2009) at Sta. 124+25+/-, with the converted vertical datum to match the TEC plan. Erosion control silt sack and straw wattle and details have been added to the plan set with GCG's P.E. stamp and signature.

Per Article 37, Chapter 198-31.1, this project qualified as 310 CMR 10.53 (3)(f) "Limited Project" status - (Maintenance & Improvement of existing public roadways, but limited to widening less than a single lane,). Same paragraph/wording is also classified as "re-development" project under Massachusetts Stormwater Handbook (MSH) Vol. 2, Ch.3, Pg. 3 – Checklist for Redevelopment Projects. Both MSH and 310 CMR 10.00 call for Stormwater Management standards to be applied to the maximum extent practicable for this type of project. Similar wording was stated under Chapter 198-31.1 (3) (c), "Redevelopment activities that are exclusively limited to maintenance and improvement of existing roadways, (including widening less than a single lane, adding shoulders, correcting substandard intersections, improving existing drainage systems, and repaving projects) shall improve existing conditions unless infeasible and are exempt from Section 1.b." Therefore this project is exempt from Section 1.b. and no Waiver required.

Regardless of the exempt status, this project provided the TSS removal rating as follow:

For the Fishermans Road project, we have very limited site data based on the TEC plan and MassGIS (30') contours layer. The immediate watershed of Fishermans Road is approximately 1 acres. I have also expanded the watershed to up to 3 acres. The Contech Stormceptor sizing program claims that the STC 900 will capture between 87% and 81% TSS removal, for the 1 acres and 3 acres watershed, respectively. Combining with the Deep Sump Hooded Catch Basin pretreatments. The TSS removal rate are calculated as follow:

100% – 25% (Deep Sump Hooded Catch Basin) = 75% remain

75% x 87% (Stormceptor STC 900) = 65.25% (1 Ac. Watershed)

Combined = 25% + 65.25% = 90.25%

75% x 81% (Stormceptor STC 900) = 60.75% (3 Ac. Watershed)

Combined = 25% + 60.75% = 85.75%

Based on the manufacturers design tool, the treatment chain would provide 90.25% to 85.75% TSS removal. However, there is also an expired (September 1, 2013) NJDEP approval letter (401-02B) dated August 31, 2011, which credited

TSS Removal Rate of 50% for all Stormceptor units. (Which provides total TSS removal rate of 62.5%, CB with Stormceptor).

Conservatively, I would state that the proposed deep sump hooded catch basin pre-treatment combining with the existing STC 900 Stormceptor unit has provided the required TSS removal rate of (85%) and in compliance with the requirements at the time of the STC 900 unit installed back in 2002. And the treatment chain meets the intent of the stormwater management to the maximum extent practicable standards. However, I do not have sufficient data to provide an estimate of the Total Phosphorus (TP) removal, which normally requires surface or sub-surface retention treatments.

GCG does not normally given more than 50% TSS removal credit for proprietary stormwater treatment unit. However, this Stormceptor STC 900 is a step up of the basic STC 450i, with double the storage capacity of the 450i unit, and considered as oversized for this application.

The project is a major improvements over the existing conditions. The current gravel road requires gravel replenish every few years, which means the fine materials being washed/eroded into the drainage structure or bypassed onto the ocean. The proposed pavement and cape cod berms will prevent the erosion situations.

I believe we have addressed all your concerns. If you have any questions please let me know. Have a nice vacation and Merry Christmas.

[Quoted text hidden]

3 attachments



(1 AC) Detailed Stormceptor Sizing Report Fishermans Road.pdf

339K



(3 AC) Detailed Stormceptor Sizing Report Fishermans Road Watershed.pdf

342K



Fishermans Road NOI Plans-revised.pdf

1701K

Staff Report

Date: December 16, 2021

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **20 Yankee Lane – Violation/Enforcement – Fairhaven EO 023-014**

DOCUMENTS REVIEWED

- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192) and associated regulations
- Fairhaven Stormwater Bylaw (Chapter 194)
- Revised restoration plan dated December 14, 2021

RESOURCE AREAS ON/NEAR SITE

- Riverfront Area
- Inland Bank
- Land Under Water Bodies and Waterways
- Bordering Vegetated Wetland
- Buffer Zone

RELEVANT PERFORMANCE STANDARDS

- **Bank:** 310 CMR 10.54(4)
 - (a) ...Work on a Bank shall not impair the following:
 1. The physical stability of the Bank;
 2. The water carrying capacity of the existing channel within the Bank;
 3. Ground water and surface water quality;
 4. The capacity of the Bank to provide breeding habitat, escape cover and food for fisheries;
 5. The capacity of the Bank to provide important wildlife habitat functions. A project or projects on a single lot, for which Notice(s) of Intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 50 feet (whichever is less) of the length of the bank found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. In the case of a bank of a river or an intermittent stream, the impact shall be measured on each side of the stream or river. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures contained in 310 CMR 10.60.
 6. Work on a stream crossing shall be presumed to meet the performance standard set forth in 310 CMR 10.54(4)(a) provided the work is performed in compliance with the Massachusetts Stream Crossing Standards by consisting of a span or embedded culvert in which, at a minimum, the bottom of a span

structure or the upper surface of an embedded culvert is above the elevation of the top of the bank, and the structure spans the channel width by a minimum of 1.2 times the bankfull width. This presumption is rebuttable and may be overcome by the submittal of credible evidence from a competent source. Notwithstanding the requirement of 310 CMR 10.54(4)(a)5., the impact on bank caused by the installation of a stream crossing is exempt from the requirement to perform a habitat evaluation in accordance with the procedures contained in 310 CMR 10.60.

(b) Structures may be permitted in or on a Bank when required to prevent flood damage, including the renovation or reconstruction (but not substantial enlargement) of such facilities, buildings and roads,...

(c) No project may be permitted which will have any adverse effect on specified habitat sites of Rare Species.

- **Land under Water Bodies and Waterways (under any Creek, River, Stream, Pond, or Lake)**

10.56 (4)

(a) Work shall not impair the following:

1. The water carrying capacity within the defined channel, which is provided by said land in conjunction with the banks;

2. Ground and surface water quality;

3. The capacity of said land to provide breeding habitat, escape cover and food for fisheries; and

4. The capacity of said land to provide important wildlife habitat functions. A project or projects on a single lot, for which Notice(s) of intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 5,000 square feet (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures established under 310 CMR 10.60.

5. Work on a stream crossing shall be presumed to meet the performance standard set forth in 310 CMR 10.56(4)(a) provided the work is performed in compliance with the Massachusetts Stream Crossing Standards by consisting of a span or embedded culvert in which, at a minimum, the bottom of a span structure or the upper surface of an embedded culvert is above the elevation of the top of the bank, and the structure spans the channel width by a minimum of 1.2 times the bankfull width. This presumption is rebuttable and may be overcome by the submittal of credible evidence from a competent source. Notwithstanding the requirements of 310 CMR 10.56(4)(a)4., the impact on Land under Water Bodies and Waterways caused by the installation of a stream crossing is exempt from the requirement to perform a habitat evaluation in accordance with the procedures established under 310 CMR 10.60.

(b) ...the issuing authority may issue an Order...to maintain or improve boat channels

(c) ...no project may be permitted which will have any adverse effect on [rare species].

- **Bordering Vegetated Wetland: 10.55(4)**

(a) work in a Bordering Vegetated Wetland shall not destroy or otherwise impair any portion of the BVW

(b) The ConCom may permit the loss of up to 5000 square feet of BVW when said area is replaced IF:

1. The area is equal;

2. The ground water and surface elevation are approximately equal;
 3. The overall horizontal configuration and location are similar;
 4. There is an unrestricted hydraulic connection to the same water body or waterway;
 5. It is in the same general area of the water body;
 6. At least 75% of the surface of the replacement area shall be reestablished with indigenous wetland plant species within two growing seasons; and
 7. The replacement area is provided in a manner which is consistent with all other regs in 310 CMR 10.00.
- (c) The ConCom may permit the loss of a portion of BVW when;
1. Said portion has a surface area less than 500 square feet;
 2. Said portion extends in a distinct linear configuration ("finger-like") into adjacent uplands; and
 3. In the judgment of the issuing authority it is not reasonable to scale down, redesign or otherwise change the proposal.
- (d) No project may be permitted which will have any adverse effect on specified habitat sites of rare species
- (e) No work shall destroy or otherwise impair any Area of Critical Environmental Concern

VIOLATION SUMMARY

- Evidence of work without permits was observed during an erosion control inspection for a permitted solar array project. The observed activities are located on the resource area side of the erosion control barrier and are not affiliated with the approved solar array project. The following was observed:
 - Significant vegetation clearing and grubbing within Riverfront Area and Bordering Vegetated Wetland
 - Evidence of machinery within Riverfront Area and Bordering Vegetated Wetland
 - Removal of large amounts of debris from Riverfront Area and Bordering Vegetated Wetland
 - Impact to bank of perennial stream
- Based on the depicted edge of vegetation on the approved plans for the solar array (SE 023-1269), approximately 2.41 acres of Riverfront Area and approximately 6.88 acres of Bordering Vegetated Wetland (BVW) have been impacted.

COMMENTS

- The wetland scientist submitted a revised restoration plan for the first half of the project on December 15, 2021 responding to comments by members of the Commission as well as comments from the Agent.
- This restoration plan addresses the first two phases of the project, scheduled to occur between January and April 2022:
 - Removal of the man-made stream and restoration of the area to BVW and removal of fill and brush piles
 - Invasive species management
- The submitted revision addresses the comments previously made for the first half of the project and will begin to address the violations on the property.

RECOMMENDATION

- I recommend approving the Phase 1 and 2 restoration plan dated December 14, 2021 for 20 Yankee Lane, EO 023-014, with the following conditions:
 1. The approved restoration plan dated December 14, 2021 addresses a portion of the required work. A restoration plan addressing the remaining required work shall be submitted no later than the end of February 2022.
 2. ACC-1
 3. ADD-1
 4. ADD-4b
 5. This Restoration Plan and associated Enforcement Order shall apply to any successor in interest or successor in control of the property subject to this order and to any contractor or other person performing work conditioned by this order.
 6. No work beyond what is outlined in the restoration plan shall be done on the property without seeking an Order of Conditions or Negative Determination of Applicability from the Conservation Commission.
 7. PCC-2
 8. Prior to the pre-work site conference, the boundaries of wetland resource areas and restoration areas addressed in the first two phases shall be identified by clearly marked flagging and/or stakes, spaced at intervals not greater than 25 feet apart. Flagging used to identify wetland resource areas shall be a color different from any other flagging used on the site.
 9. MAC-3
 10. MAC-8
 11. MAC-9
 12. Any non-native invasive plant species (e.g. Phragmites, purple loosestrife, buckthorns, etc...) shall be removed from the replication area under the supervision of the wetland scientist in accordance with the approved restoration plan.
 13. REP-3
 14. REP-9
 15. REP-11
 16. Access for the approved phases of the project shall be as identified on the approved plans. Effort shall be made to minimize further damage to the resource areas on site.
 17. All fill and topsoil used for this project shall be clean fill and free of any invasive species, debris, or other non-natural material.
 18. Items to be reused onsite during the restoration shall be stored in the stockpile area as depicted in Figure 5 in the approved restoration plan.
 19. Where machinery is necessary within an area of statutory interest that does not have stable ground, use of swamp mats or other measures to diffuse the weight of the machinery is required.
 20. INV-1: Invasive species monitoring shall be conducted for three years after site stabilization to ensure no non-native or invasive species have been introduced to the site or are spreading on site.

REVISED: 12/14/21

Fairhaven Conservation Commission
Fairhaven Town Hall
40 Center Street
Fairhaven, MA 02719

Re: Phase 1 & 2 Wetland Replication, Buffer Zone, & Stream Restoration Plan
20 Yankee Lane, Fairhaven, MA 02719 (Fairhaven Enforcement Order 023-014)

Dear Conservation Commission:

Goddard Consulting is pleased to submit this Wetland Replication, Buffer Zone, & Stream Restoration Plan for 20 Yankee Lane, Fairhaven, MA. This portion of the plan addresses Phases 1 & 2 of the multi-step restoration plan. Please note that Phases 3 and 4 will be addressed in a separate document, to be submitted to the Commission shortly.

An Enforcement Order (Fairhaven File # EO 023-014) was issued on 5/6/21 to Brian Lopes for clearing within Buffer Zone to Bordering Vegetated Wetlands (BVW) and Riverfront Area. Upon receipt of the Enforcement Order, Mr. Lopes immediately ceased all ongoing unpermitted activities on-site. The purpose of this plan is to restore on-site wetlands, buffer zone areas, and improve the function of the perennial stream.



Figure 1. The on-site stream and proposed location of the restoration area. Existing solar panels under construction are shown in the background.

Since the unpermitted clearing that has occurred on-site, much of the native vegetation has naturally re-established. Aerial imagery coupled with site inspections have been used to estimate the extent of on-site impacted areas. Based on our calculations, there is approximately $\pm 514,000$ sf of wetland areas and $\pm 221,000$ sf of upland areas within riverfront area and the 100' buffer zone. The onsite wetlands are predominantly vegetated with sedges, rushes, and goldenrods, cattails, and smartweed. Adjacent upland fields are dominated by upland grasses, goldenrod, and clover.

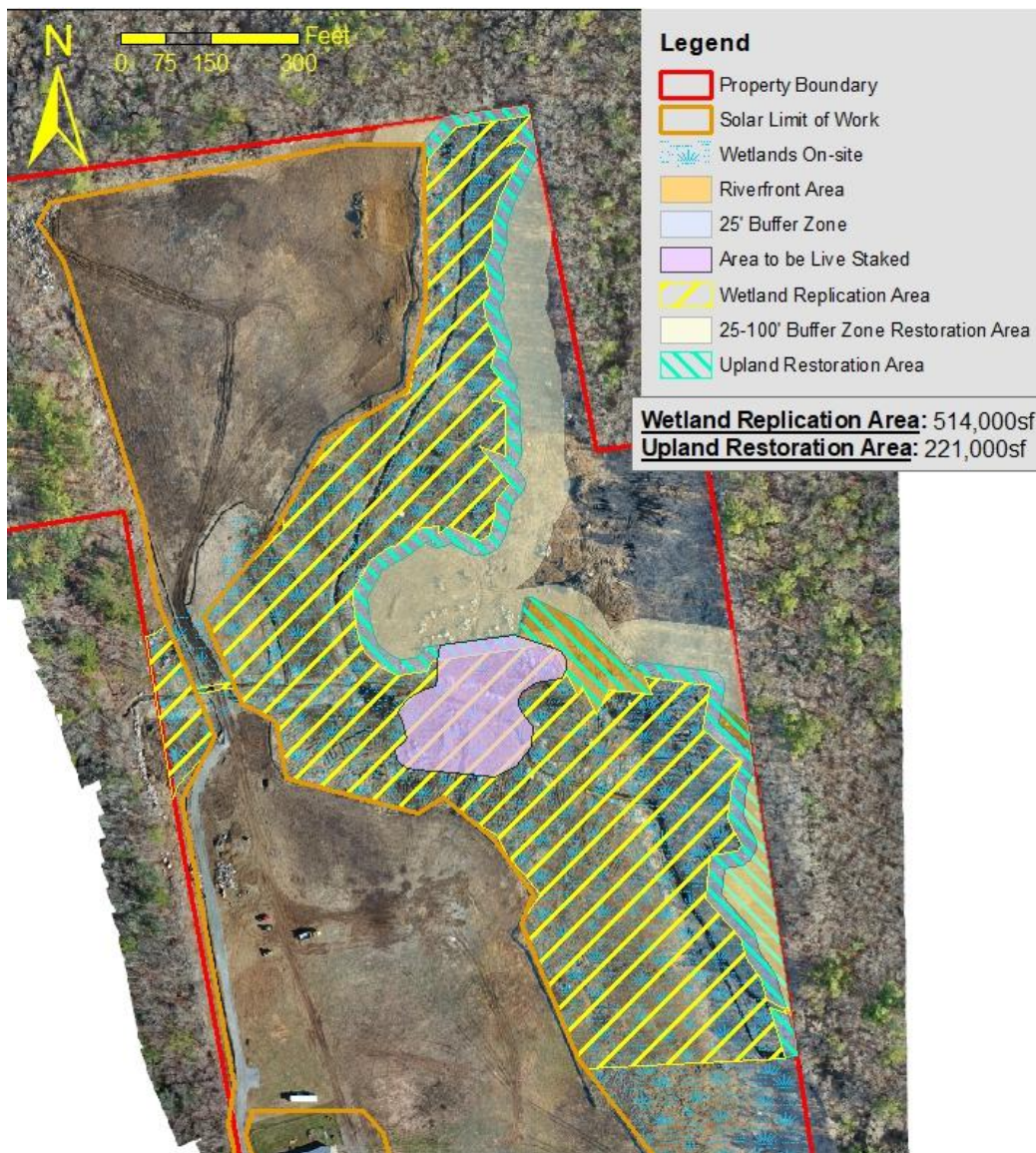


Figure 2. The locations of the proposed Wetland Replication and Buffer Zone Restoration Area. See Phase 4 below for further detail on the planting and seeding of this area.

This restoration plan proposes the following phased work schedule:

Phase 1.1: Remove the Man-Made Stream

Estimated Timeframe: ~January 2021 – April 2022 (exact months may slightly vary)

There is a man-made stream on-site that was constructed. The current status of the man-made stream is shown in Figure 3. There is very little water currently occurring in the stream, with little to no flow. This stream will be filled in in order to allow the hydrology of the surrounding wetland to re-establish (see Figure 4). In our professional opinion, we do not anticipate impacts to the natural stream that flows west to east as a result of this stream's removal. Contrarily, we anticipate the removal of this stream facilitating improved hydrology to the natural stream and surrounding wetlands. Efforts will be made to minimize impact to the natural stream throughout the phases. Access points as described below have been designed to avoid stream crossings. This will prevent both soil compaction along the bank of the stream and impacts to the natural stream itself.



Figure 3. The man-made stream on-site.

The stream will be filled in by excavator with appropriate subsoils as approved by the supervising wetland scientist. Subsoils will be used to fill in the stream bank to bank, with topsoils added after. The excavator and a dump truck to carry soils are anticipated to be the only machinery required for this phase. Machinery used in the stream removal will access

the stream by way of the existing road used for the on-site solar development, as shown in Figure 4.

Once filled in, 6" of nutrient rich organic topsoil (50:50 loam/compost mix) will be added to the area of the former stream and New England wetland seed mix will be spread (see attached spec sheet & Phase 4.3 for more information). Discretion in the field will be exercised by the supervising wetland scientist to assess the amount of existing topsoil that can be reused. Any additional required topsoil will be trucked onto the site, as approved by the supervising scientist.

On-site grades in the area of the man-made stream will be restored to those as shown on Atlantic Design Engineers' *Overall Wetland Location Plan* (11/22/17) where applicable. These plans show grades of the site prior to the disturbances and represent a more natural condition for the site. An on-the-ground assessment of these areas by the supervising wetland scientist will occur during the restoration to determine the extent of grade restoration that is needed. Surveyors will verify these locations in the field.

If wetland conditions are noted to be present in certain areas already, they will not be regraded in accordance with the 11/22/17 wetland plan. This is to avoid causing unnecessary damage to the area through the grading process. In these areas that are deemed to be natural wetlands by the supervising wetland scientist, the grade should be left as is and monitored to ensure wetland conditions are maintaining.

Areas that are deemed to have been so impacted by machinery that no native wetland soils exist, or that have been so compacted that wetland hydrology has been permanently disrupted will be restored to the grades shown in the 11/22/17 wetland plan (see Phase 3 in separate document for more information).

To prevent the compacting of soils after machinery passes through the areas, subsoil will be scarified using the excavator, with topsoil placed shortly after. Machinery is to not pass over areas that have had topsoil added after the topsoil is in place to prevent compaction. This work will occur starting at the outermost extents of work back towards the access point in order to eliminate the need to travel over areas completed.

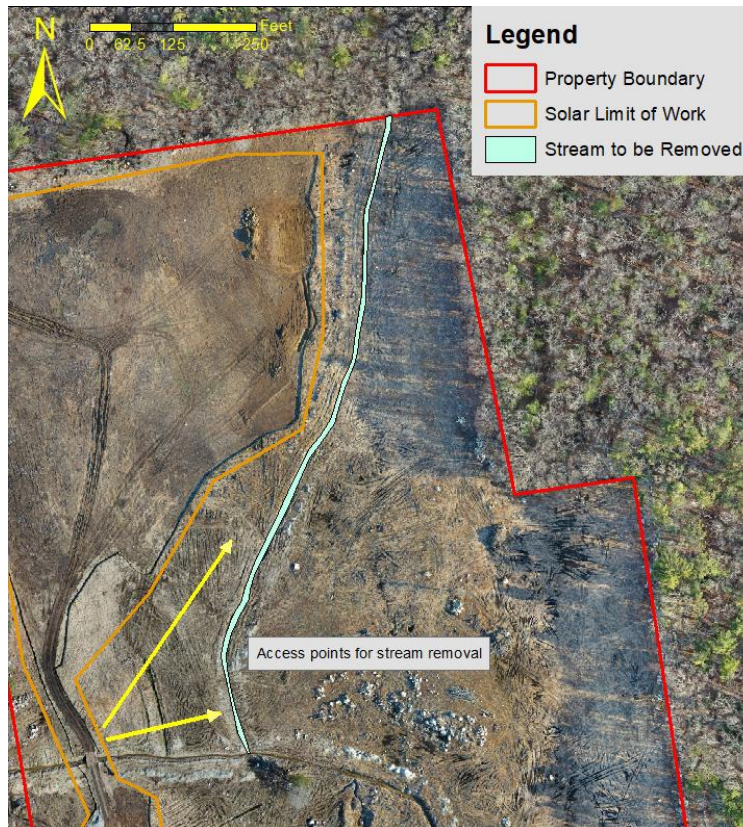


Figure 4. The location of the man-made stream to be removed.

Phase 1.2: Remove Fill & Brush Piles

Estimated Timeframe: ~January 2021 – April 2022 (exact months may slightly vary)

This phase will happen simultaneously with stream removal to maintain use of the proposed access paths. On-site fill and brush piles that exist within the footprint of the restoration areas will be removed. Access points are shown and have been designed to avoid the crossing of the on-site stream. Brush piles and rocks will be stockpiled in the upland area to the east of the restoration areas until they can be spread prior to and during Phase 4.1 to ensure further compaction and damage is not done to the resource area. This area has been selected as it occurs outside of the buffer zone and riverfront area. There is very limited area to the west of the restoration areas, as these areas are being used for the solar field.

Contents of the fill piles to be spread include brush piles and rocks. These materials are well known to provide a variety of habitat features for small mammals, birds, reptiles, and amphibians including cover and nesting habitat. The spreading of the brush and rocks will provide wildlife habitat within the restored areas. No invasive species are known to be present in these piles. If the supervising wetland scientist notes any invasives in this area, materials will not be spread, with a great effort to remove all invasives from the piles.

Access paths as shown in Figure 5 will be used to access the stockpiling area during the spreading. Similar paths will be followed during the spreading of the materials post restoration. Efforts will be made to limit disturbance to restored areas during this phase. The ground that is gone over by any machinery to spread these materials will be scarified and seeded after the machinery work is complete. An effort will be made to spread as much of the materials by hand as possible to limit ground disturbances and to prevent soil compaction.

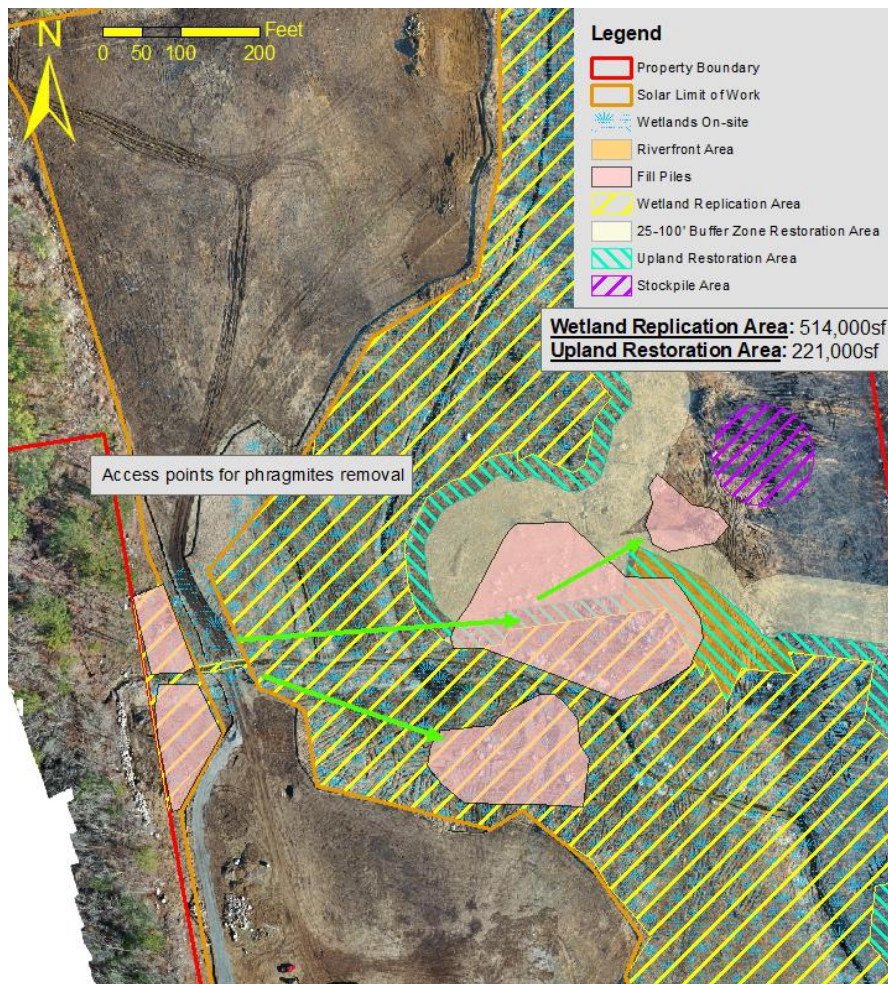


Figure 5. The location of the fill and brush piles within the restoration areas to be removed.

Phase 2: Invasive Species Management

Estimated Timeframe: ~January 2021 – April 2022 (exact months may slightly vary)

This phase will occur within and concurrently with Phase 1. Phragmites have been observed to be present on-site in several locations (see Figure 6). These plants will be removed by an excavator and brought off-site to an approved facility for invasive species removal prior to any grading on-site. Any phragmites that occur within the restoration areas in subsequent inspections will be removed by hand or through the application of glyphosate by spot treatment by a licensed herbicide applicator, as approved by the supervising wetland scientist.



Figure 6. Phragmites on-site.

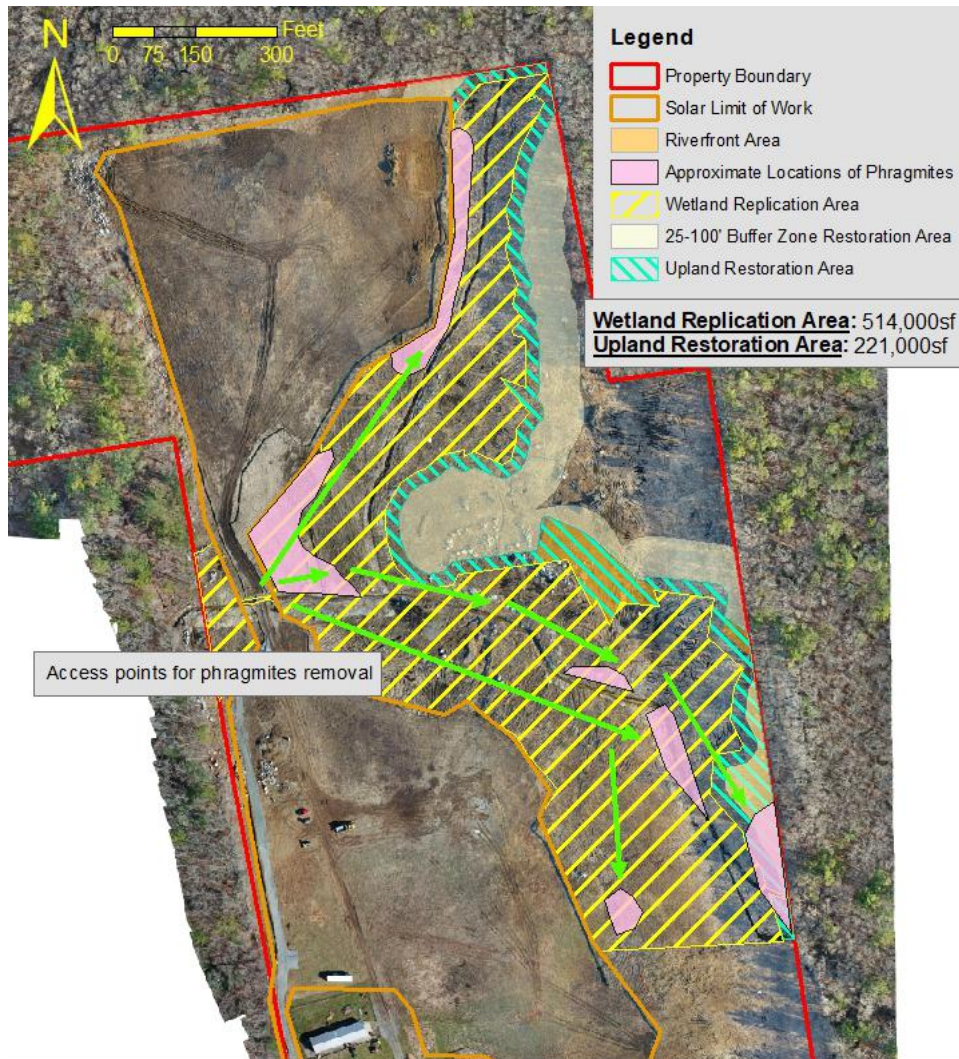


Figure 7. The approximate locations of phragmites observed on-site to be removed.

Please note that Phases 3 and 4 will be addressed in a separate document, to be submitted to the Commission shortly.

If there are any questions concerning this report, please do not hesitate to contact us.

Very truly yours,

Scott Goddard,
Principal & PWS

NEW ENGLAND WETLAND PLANTS, INC

820 WEST STREET, AMHERST, MA 01002

PHONE: 413-548-8000 FAX 413-549-4000

EMAIL: INFO@NEWP.COM WEB ADDRESS: WWW.NEWP.COM

New England Conservation/Wildlife Mix

Botanical Name	Common Name	Indicator
<i>Elymus virginicus</i>	Virginia Wild Rye	FACW-
<i>Schizachyrium scoparium</i>	Little Bluestem	FACU
<i>Andropogon gerardii</i>	Big Bluestem	FAC
<i>Festuca rubra</i>	Red Fescue	FACU
<i>Sorghastrum nutans</i>	Indian Grass	UPL
<i>Panicum virgatum</i>	Switch Grass	FAC
<i>Chamaecrista fasciculata</i>	Partridge Pea	FACU
<i>Desmodium canadense</i>	Showy Tick Trefoil	FAC
<i>Asclepias tuberosa</i>	Butterfly Milkweed	NI
<i>Bidens frondosa</i>	Beggar Ticks	FACW
<i>Eupatorium purpureum (Eutrochium maculatum)</i>	Purple Joe Pye Weed	FAC
<i>Rudbeckia hirta</i>	Black Eyed Susan	FACU-
<i>Aster pilosus (Symphyotrichum pilosum)</i>	Heath (or Hairy) Aster	UPL
<i>Solidago juncea</i>	Early Goldenrod	

PRICE PER LB. \$39.50 MIN. QUANTITY 2 LBS. TOTAL: \$79.00

APPLY: 25 LBS/ACRE :1750 sq ft/lb

The New England Conservation/Wildlife Mix provides a permanent cover of grasses, wildflowers, and legumes

For both good erosion control and wildlife habitat value. The mix is designed to be a no maintenance seeding, and is appropriate for cut and fill slopes, detention basin side slopes, and disturbed areas adjacent to commercial and residential projects.

New England Wetland Plants, Inc. may modify seed mixes at any time depending upon seed availability. The design criteria and ecological function of the mix will remain unchanged. Price is \$/bulk pound, FOB warehouse, Plus SH and applicable taxes.

NEW ENGLAND WETLAND PLANTS, INC

820 WEST STREET, AMHERST, MA 01002

PHONE: 413-548-8000 FAX 413-549-4000

EMAIL: INFO@NEWP.COM WEB ADDRESS: WWW.NEWP.COM

New England Wetmix (Wetland Seed Mix)

Botanical Name	Common Name	Indicator
<i>Carex vulpinoidea</i>	Fox Sedge	OBL
<i>Carex scoparia</i>	Blunt Broom Sedge	FACW
<i>Carex lurida</i>	Lurid Sedge	OBL
<i>Carex lupulina</i>	Hop Sedge	OBL
<i>Poa palustris</i>	Fowl Bluegrass	FACW
<i>Bidens frondosa</i>	Beggar Ticks	FACW
<i>Scirpus atrovirens</i>	Green Bulrush	OBL
<i>Asclepias incarnata</i>	Swamp Milkweed	OBL
<i>Carex crinita</i>	Fringed Sedge	OBL
<i>Vernonia noveboracensis</i>	New York Ironweed	FACW+
<i>Juncus effusus</i>	Soft Rush	FACW+
<i>Aster lateriflorus (Symphyotrichum lateriflorum)</i>	Starved/Calico Aster	FACW
<i>Iris versicolor</i>	Blue Flag	OBL
<i>Glyceria grandis</i>	American Mannagrass	OBL
<i>Mimulus ringens</i>	Square Stemmed Monkey Flower	OBL
<i>Eupatorium maculatum (Eutrochium maculatum)</i>	Spotted Joe Pye Weed	OBL

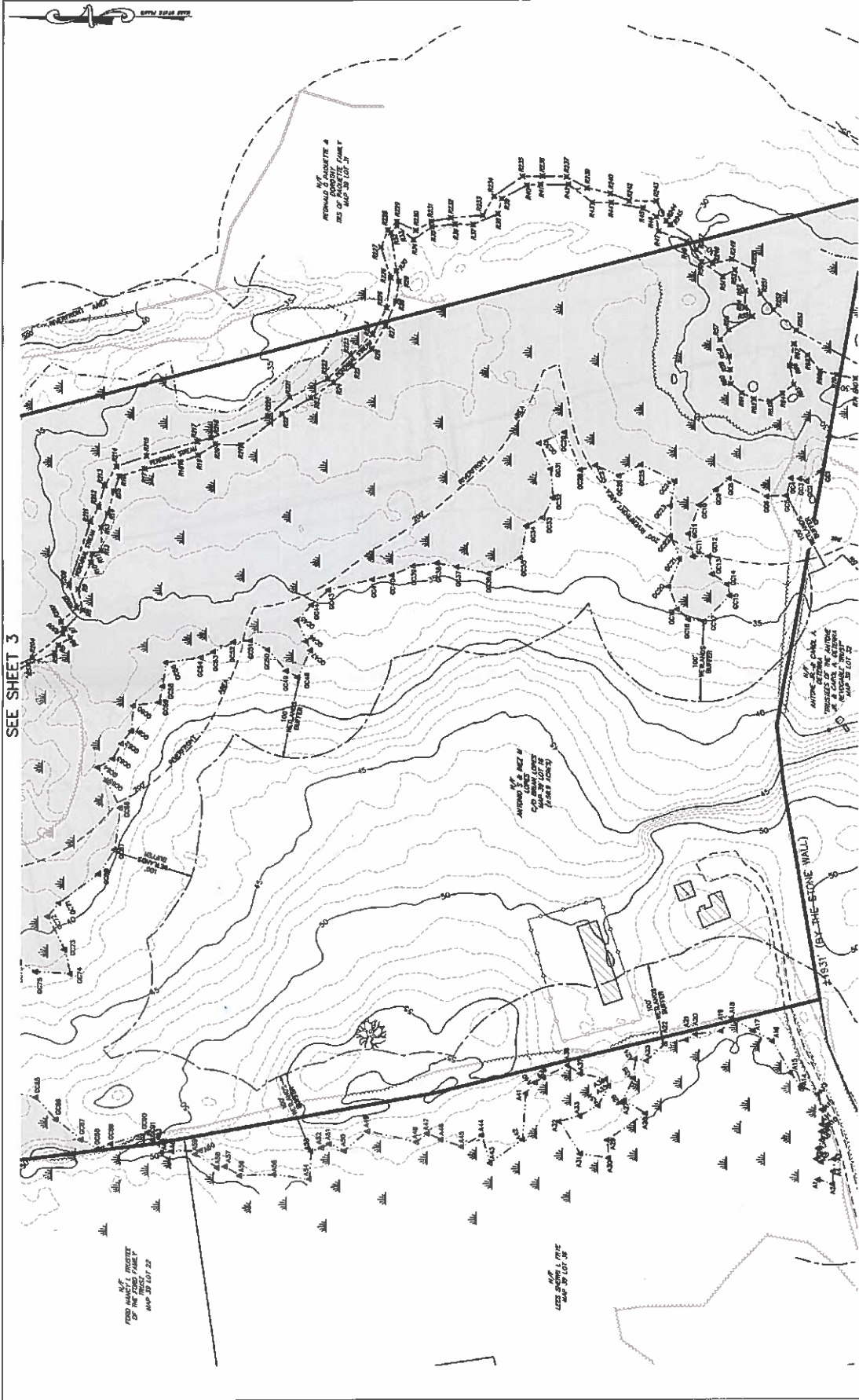
PRICE PER LB. \$135.00 MIN. QUANTITY 1 LBS. TOTAL: \$135.00

APPLY: 18 LBS/ACRE :2500 sq ft/lb

The New England Wetmix (Wetland Seed Mix) contains a wide variety of native seeds that are suitable for most wetland restoration sites that are not permanently flooded. All species are best suited to moist ground as found in most wet meadows, scrub shrub, or forested wetland restoration areas. The mix is well suited for detention basin borders and the bottom of detention basins not generally under standing water. The seeds will not germinate under inundated conditions. If planted during the fall months the seed mix will germinate the following spring. During the first season of growth several species will produce seeds while other species will produce seeds after the second growing season. Not all species will grow in all wetland situations. This mix is comprised of the wetland species most likely to grow in created/restored wetlands and should produce more than 75% ground cover in two full growing seasons.

The wetland seeds in this mix can be sown by hand, with a hand-held spreader, or hydro-seeded on large or hard to reach sites. Lightly rake to insure good seed-to-soil contact. Seeding can take place on frozen soil, as the freezing and thawing weather of late fall and late winter will work the seed into the soil. If spring conditions are drier than usual watering may be required. If sowing during the summer months supplemental watering will likely be required until germination. A light mulch of clean, weed free straw is recommended.

New England Wetland Plants, Inc. may modify seed mixes at any time depending upon seed availability. The design criteria and ecological function of the mix will remain unchanged. Price is \$/bulk pound, FOB warehouse, Plus SH and applicable taxes.



SEE SHEET 3



Atlantic
 P.O. Box 1051, Sandwich, MA 02563 (508) 888 - 9282

Prepared by: _____
 Drawn by: _____
 Surveyed by: _____
 Approved by: _____

SCALE 1" = 50'

NO.	BY	DATE	REVISION

PREPARED FOR:
CLEAN ENERGY COLLECTIVE
 148 WEST BOULSTON DRIVE
 WORCESTER, MASSACHUSETTS 01606

WETLAND LOCATION PLAN
 OF
20 YANKEE LANE SOLAR PROJECT
 FAIRHAVEN, MASSACHUSETTS
 NOVEMBER 27, 2017

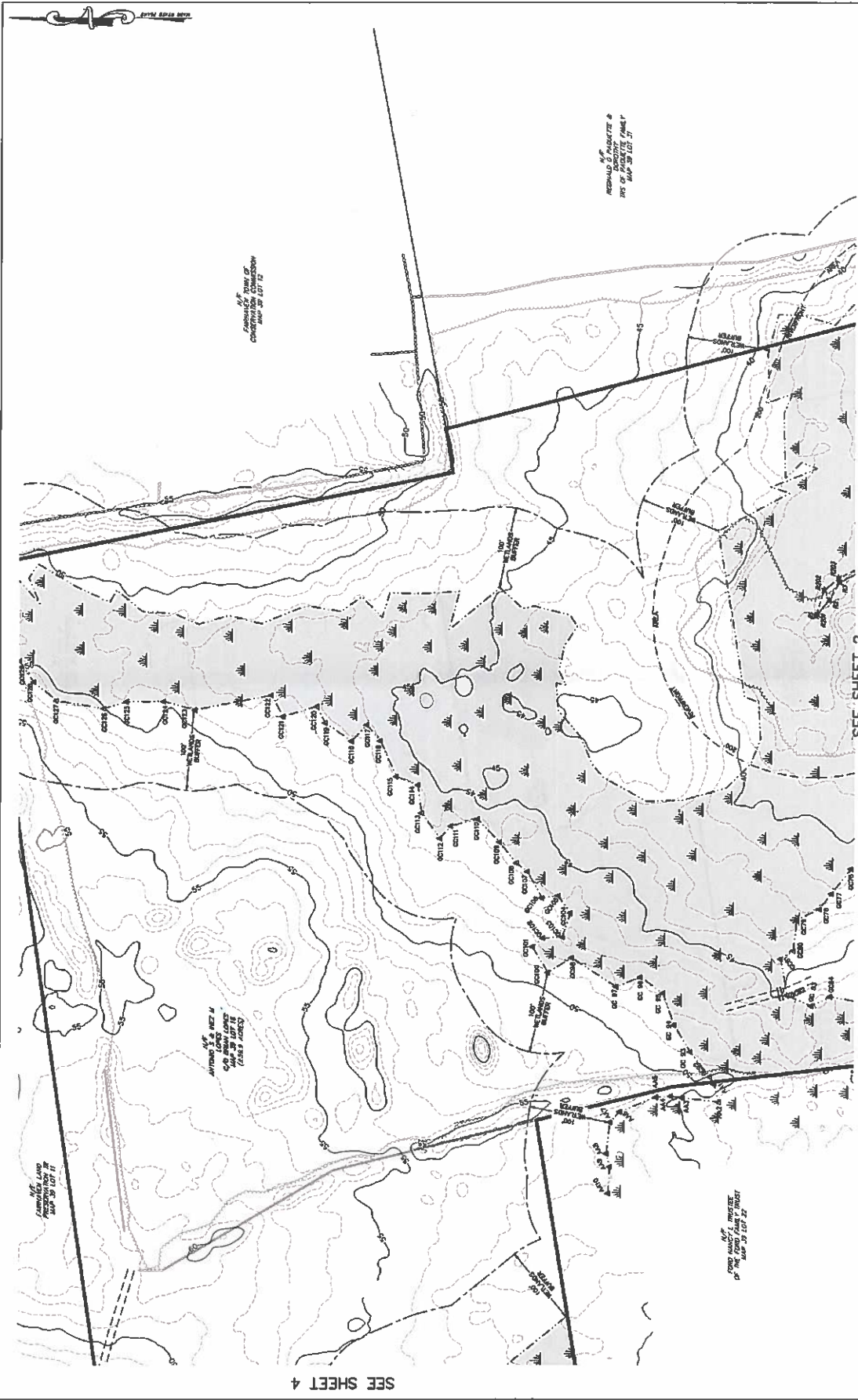
SHEET NO. 2 OF 4
 DATE PLOTTED 2893.03

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SEE SHEET 2

NO.	BY	DATE	REVISION				

PREPARED FOR:
CLEAN ENERGY COLLECTIVE
 148 WEST BOLSTON DRIVE
 WORCESTER, MASSACHUSETTS 01608

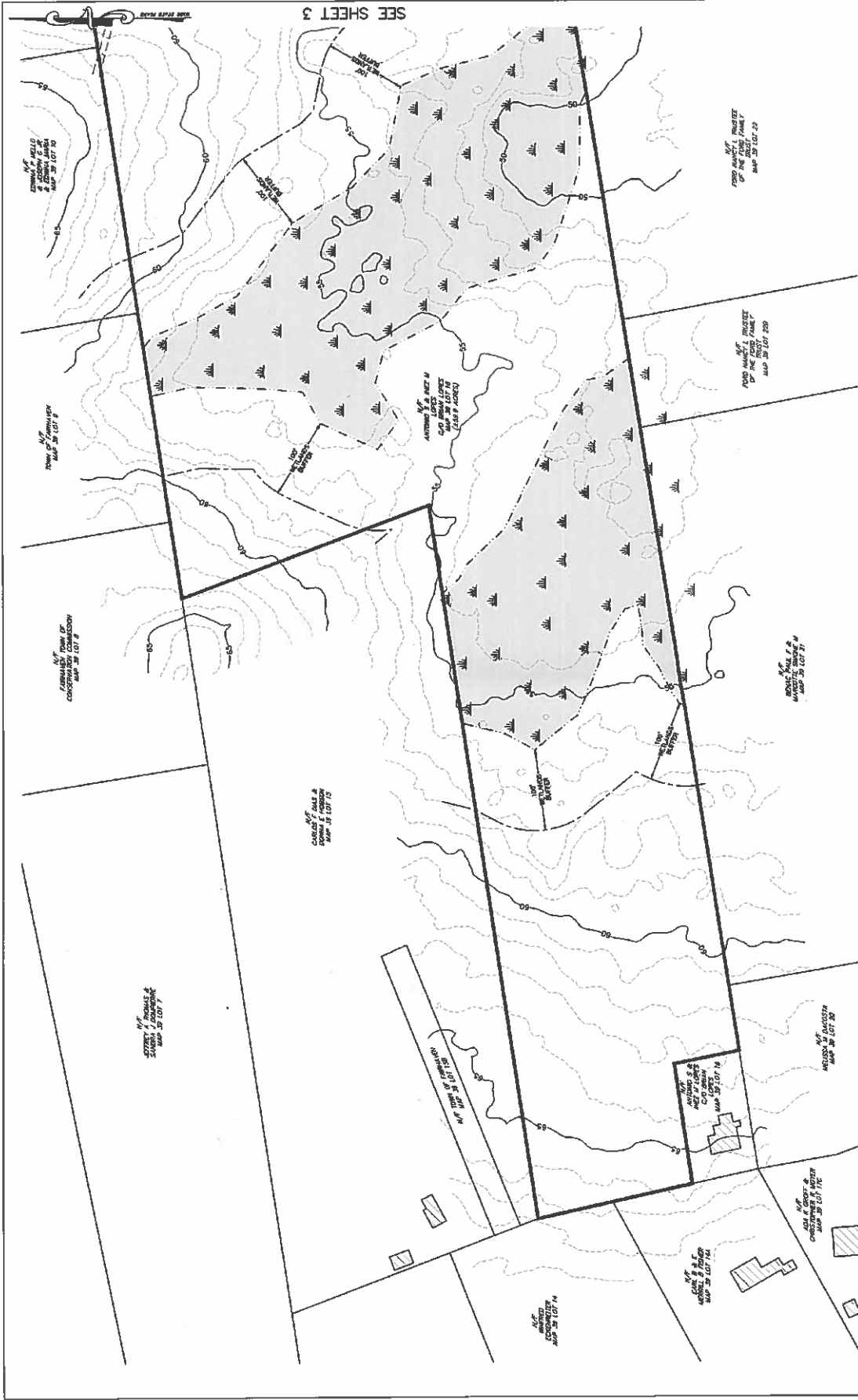
WETLAND LOCATION PLAN
20 YANKEE LANE SOLAR PROJECT
 FAIRHAVEN, MASSACHUSETTS
 NOVEMBER 22, 2017

SCALE
 SCALE 1" = 50'

Checked by: _____
 Drawn by: _____
 Surveyed by: _____
 Approved by: _____

Atlantic DESIGN ENGINEERS, INC.
 P.O. Box 1031, Sandwich, MA 02563 (508) 888 - 9282

SEE SHEET 1
 SHEET 3
 SHEET 4
 JOB NUMBER
 2893.03



SEE SHEET 3

Atlantic DESIGN ENGINEERS, INC. P.O. Box 1051, Sandwich, MA 02563 (508) 888 - 9282	Prepared by: Drawn by: Checked by: Survey date by: Indexed by:	SCALE SCALE 1" = 50' 	NO. BY DATE REVISION
	PREPARED FOR: CLEAN ENERGY COLLECTIVE 146 WEST BOLSTON DRIVE WORCESTER, MASSACHUSETTS 01606		
WEILAND LOCATION PLAN FOR 20 YANKEE LANE SOLAR PROJECT FAIRHAVEN, MASSACHUSETTS NOVEMBER 22, 2017		SHEET NO. OF 4 OF 4 JOB NUMBER 2893.03	

Staff Report

Date: December 16, 2021

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **25 & 29 Mangham Way – Violation/Enforcement**

DOCUMENTS REVIEWED

- Previous permitting history for 25 & 29 Mangham Way
- Restoration plan dated December 15, 2021
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192) and associated regulations
- Fairhaven Stormwater Bylaw (Chapter 194)

RESOURCE AREAS ON/NEAR SITE

- Bordering Vegetated Wetland
- Buffer Zone

COMMENTS

- A cease and desist was issued to the property owner of 29 Mangham Way for a pile of fill placed in the buffer zone, to be spread in a wetland resource area.
- A subsequent site visit revealed a large cleared area within a Bordering Vegetated Wetland. The cleared area appears to span both 25 and 29 Mangham Way. The property owner of 29 Mangham Way indicated he has been utilizing it for his camper.
- The property owner of 29 Mangham Way indicated there was a lot of debris in the resource area from the developer of the house.
- No additional fill can be placed in the resource area and the existing fill will need to be removed and the wetland possibly restored.
- No permits were ever filed for the clearing and fill in the wetland on either property.
- The wetland line from the Order of Conditions permitting the construction of the house appears to be fairly accurate, with the approximate edge of the wetland being at the edge of the yard.
- The restoration plan responds to the issued enforcement orders for both properties and outlines the following:
 - Disturbed area of buffer zone – 2,500 square feet
 - Disturbed area of wetlands – 2,400 square feet
 - Removal of fill from wetlands, excavation to original wetland grade, reintroduction of clean topsoil
 - Plantings in the wetland restoration area and seeding in both the wetland and buffer zone restoration areas
 - Removal/treatment of invasive species on site

- The overall restoration plan appears to address many of the concerns the Commission had in discussing the initial violation. The property owner of 29 Mangham Way will need to get permission from the property of 25 Mangham Way to conduct any restoration activities on that property.
- The Commission expressed the desire for a site visit once a restoration plan was submitted to provide a better understanding of what is proposed and whether it is sufficient to address the violation. Additionally, that will allow the Agent to walk the wetland line and area of disturbance now that both have been flagged.

RECOMMENDATION

- I recommend scheduling a site visit for the second week of January to allow members who have expressed interest in visiting the site prior to voting on a restoration plan to do so.



Ecosystem Solutions, Inc.

100 Centerville Rd., Suite 4
Warwick, RI 02886

RI: 401-741-3263
MA: 508-997-0268
www.ecosystem-solutions.com

December 15, 2021

Project no. W21-1589

Geoffrey A. Haworth, Chair
Conservation Commission
40 Center Street
Fairhaven, MA 02719

**RE: Restoration Plan
25 & 29 Mangham Way; Map 31A, Lots 300 & 300A
Fairhaven, Massachusetts**

Mr. Haworth:

Ecosystem Solutions, Inc. presents the following restoration plan for the above-referenced properties (Properties). A site investigation for wetland resource areas was conducted by a professional wetland scientist on April 5, 2021, and was performed in accordance with the Massachusetts Wetlands Protection Act (M.G.L. 131, §40) (Act), the Massachusetts Wetlands Regulations (310CMR 10.00), Department of Environmental Protection (DEP) Policy 95-1, the US Army Corps of Engineers (ACOE) 1987 Wetland Delineation Manual, and its 2009 Supplement for the Northeast Region. Policy 95-1 specifically outlines the current DEP criteria and methodology for defining BVW's in Massachusetts. Both the ACOE Manual and Policy 95-1 allow for the use of the environmental characteristics of hydrophytic vegetation, hydric soils and hydrology in order to identify wetland areas.

Background

A complaint was received by the Fairhaven Conservation Commission that unpermitted work was taking place in the wetland resource area on the Properties. An Enforcement Order (EO) was issued on 10/5/2021 to owners of both 25 Mangham Way and 29 Mangham Way. The EO stipulated that our client (Client), the Property owner of 29 Mangham Way, retain a wetland scientist to assess wetland resource areas on the Properties, and to provide a restoration plan to Conservation Commission by January 3, 2022. The Client approached us in October, with the first site inspection taking place on October 8, 2021. A full wetland delineation was performed on November 23, 2021.

It must be mentioned that the violation took place on two neighboring properties, 25 & 29 Mangham Way, which are owned by two separate individuals. Our client, the Property owner of 29 Mangham Way was the individual who conducted the wetland violation on both Properties. This was not done out of malice, but a lack of knowledge of wetland legislation, and a desire to utilize their property while cleaning unwanted refuse out of the wetland. While written permission was received to conduct the wetland delineation on the neighboring property of 25 Mangham Way, further written permission will be required to conduct restoration work at 25 Mangham Way.

Current Disturbance

Within the current area of disturbance (Disturbance), scrub vegetation has been removed and fill material has been placed within Bordering Vegetated Wetland (BVW) just south of the current lawn area, as well as a small area adjacent to the wetland within the 100' Buffer zone of the BVW. The area where this occurred was intended by the homeowner to be used as a gravel pad for storing a recreational trailer, and as a general outdoor recreation area. The area of disturbance is relatively small, consisting of a small path area leading to an oval shaped open area within the forested BVW. Gravel was placed on the path and most of the open area, and a table and chairs placed within the open area for small social gatherings. At one point a travel trailer was also present. As the purpose was not new construction or lawn, the nature of the clearing/fill activity was minimal. Tree clearing was minimal. As shown in the accompanying photos, there were/are numerous dead trees both standing and on the ground within the wetland. The photos also show the presence of invasive Multiflora rose (*Rosa multiflora*) and Japanese knotweed (*Polygonum cuspidatum*) within the wetland. The majority of Buffer zone had previously been disturbed, and had existed as maintained lawn. There are also areas within the BVW and Buffer where clearing of vegetation has occurred at various times in the past, pre-dating the current homeowner's ownership of 29 Mangham Way, as shown in aerial photos. These areas have already begun to revegetate with predominantly wetland species, we propose allowing the natural succession of wetland vegetation to continue.

Historic Disturbance

From a review of aerial photography, historic refuse deposited in and near the wetland, and of soil sampling on site, it is clear this area is historically degraded. Much of the glass and metal found onsite in/near the wetland suggests the area of the violation had previously been a "farm dump", and existed as such prior to 1983. During the homeowner's efforts to create the recreational area within the wetland, they had removed old refuse such as farming implements from the wetland. The path to the oval shaped clearing, and a majority of the portion of the clearing itself appear as disturbed in aerial photos dating to 1996. The Buffer zone north of the delineated wetland line also shows photographic evidence of being disturbed, with the lawn being expanded towards the wetland line in 2010, prior to the current homeowner having purchased the house. It appears that the majority of fill material deposited within the BVW was actually placed on top of earlier fill.

Restoration Plan

Restoration of the site will be accomplished by removing deposited fill from within the area of disturbance, placing organic soil within the excavated area to restore elevation and hydrology, planting 4 Red maple trees (*Acer rubrum*), 5 Sweet pepperbush (*Clethra alnifolia*), and 5 Highbush blueberry (*Vaccinium corymbosum*) within the area of disturbance, and the application of New England Wetmix (Wetmix) at the rate of 1lb per 2500 square feet. Trees will be planted at 25' on center, and shrubs will be planted at 15' on center. Shrubs may be substituted with another native wetland species, with the commission's approval, depending on nursery availability. We believe that with the minimal nature of clearing which took place, the removal of the fill the Client has placed in the wetland, and the proposed plantings and Wetmix, along with the proposed invasive control plan will not only restore wetland function to this site, but improve it.

The Buffer Zone adjacent to the disturbed area within the wetland had previously existed as grass/maintained lawn or as upland herbaceous species. We propose that the disturbed area be stabilized by seeding the area between the wetland boundary and the 25' no touch line with New England Conservation/Wildlife mix, at the rate of 1 lb per 1750 square feet. Any disturbance outside the 25' no touch line is to be stabilized with grass seed of the Client's choice. The remainder of the Buffer zone shall continue to exist as previously maintained lawn.

Erosion control in the form of 8" straw wattle will be staked in along the edge of disturbance in the wetland and upland. 8" straw wattle will also be staked along the limit of disturbance. These will remain in place until the site has stabilized.

Table 1: Planting List

Red maple	Acer rubrum	4
Sweet pepperbush	Clethra alnifolia	5
Highbush blueberry	Vaccinium corymbosom	5
New England Wetmix	Various spp.	1lb/2500 sq ft

Invasive Control

Both the BVW and Buffer have large stands of invasive Japanese knotweed (*Polygonum cuspidatum*). Given it's propensity for rapidly spreading and becoming dominant in disturbed soils, we propose that Both the BVW and Buffer contained several invasive plant species before the alteration took place. This includes Japanese knotweed (*Polygonum cuspidatum*), Multiflora rose (*Rosa multiflora*), and Oriental bittersweet (*Celastrus orbiculatus*), which are all considered invasive in Massachusetts. As part of this restoration plan, we propose an invasive species restoration plan to control the Japanese knotweed and Multiflora rose on the Property, both in the wetland and upland areas. This will restore and improve wetland functionality and habitat values. We believe the Oriental bittersweet on site is minimal enough to not pose a risk to meeting 75% coverage. The existing invasive plant species will be cut at ground level where practical, and then if necessary may have a wetland use approved systemic herbicide applied to the cut stem. Examples of herbicides approved for use in wetlands include glyphosate based compositions such as Rodeo or triclopyr based compositions such as Garlon. The herbicide may be applied directly to the invasive species in question, if this method minimizes impact to the BVW or buffer zones, and uses the least practicable amount of herbicide necessary to remove the invasive species. This application shall be done by a Massachusetts licensed herbicide applicator. Vegetative debris from the invasives control shall be removed as is practicable.

Phases of Restoration

1. The restoration area shall be clearly marked with wooden stakes prior to the start of the project, if not done so already.
2. All work is to take place from the upland side and avoid possible impacts on wetland.

-
3. Erosion control shall be installed in areas most susceptible to erosion. Erosion control fencing shall be inspected on a regular basis and maintained in good condition. All erosion control fencing shall remain in place until all exposed soils are vegetated and stable.
 4. All pre 1983 Fill within the 2,400 sq ft restoration area shall be removed. A bottom inspection performed by an ESI scientist shall be required.
 5. Any organic topsoil brought from off the Property shall be inspected before deposition.
 6. The appropriate organic soils shall be spread to the prescribed depth.
 7. Plantings shall be conducted in accordance with the restoration plan. Appropriate substitutions may be allowed with the approval of the wetland consultant and/or the Conservation Commission. Any substitutions must ultimately be approved by the Commission. Planting trees, shrubs, and herbaceous ground cover shall be performed at the appropriate time of year to ensure successful germination and establishment.
 - a. Plants shall be from healthy nursery stock and free from disease. If required during drought periods, the plants placed in the restoration area shall be watered as needed.
 - b. The applicant shall cut herbaceous vegetation immediately around planted shrubs and trees that may be shading them in an excessive manner, inhibiting their growth, or even endangering the plant's survival.
 - c. Plants shall be watered as necessary to assure survival.
 8. A final inspection shall be performed by an ESI scientist, with a completion report to be submitted to the FCC.

Post restoration report

One year after the first and second full growing seasons after restoration is complete, ESI or a qualified wetland scientist retained by the applicant shall submit a report to the FCC indicating the status of the restoration area. This report will include colored photographs from established reference points, the plant species present at these reference points as well as their percent cover, and the rate of survival for the planted trees and shrubs. Performance standards used in 310 CMR 10.55(4)(b) shall be used for determining success of the restoration area.

Conclusion

Given the history of disturbance at this site, we feel this restoration plan offers the best way forward to restoring wetland function. We feel that the plan to remove fill and restore the vegetation serves the public interest and meets the goals of CMR 310, and hope to work with the Conservation Commission to resolve this situation.

Should you have any questions regarding this letter, or would like to conduct a site walk with me, please do not hesitate to call at (401) 741-3263 or by using the other contact information above.

Sincerely,

Ecosystem Solutions, Inc.

Brandon B. Faneuf, M.S., Principal

PWS, RPSS, CWB, CPESC

BF/hw

enclosures





	Ecosystem Solutions, Inc. 100 Centerville Road, Suite 4 Warwick, RI 02893	FIGURE 1								
		Wetland Boundary & Restoration Map 25 Mangham Way / Map 31A, Lots 300 & 300A Fairhaven, Massachusetts								
2019 Aerial Orthophoto		<table border="1" style="width: 100%;"> <tr> <td>DATE:</td> <td>12-14-2021</td> <td>PROJECT #:</td> <td>W21-1589</td> </tr> <tr> <td>CREATED BY:</td> <td>BF</td> <td>SCALE:</td> <td>1 inch = 50 feet</td> </tr> </table> <div style="text-align: center;"> </div>	DATE:	12-14-2021	PROJECT #:	W21-1589	CREATED BY:	BF	SCALE:	1 inch = 50 feet
DATE:	12-14-2021	PROJECT #:	W21-1589							
CREATED BY:	BF	SCALE:	1 inch = 50 feet							



Disturbed area in wetland with fill material and table with chairs.



Trailer in disturbed area.

25 & 29 Mangham Way / Map 31A, Lots 300,
300A
Fairhaven, Massachusetts

SITE PHOTOGRAPHS



Ecosystem Solutions, Inc.

100 Centerville Rd., Ste. 4 Warwick, Rhode Island 02886

Project no. W21-1589

Pictures 1-2



Historic refuse collected in the BVW, clearly predates 1983.



In situ historic refuse within the wetland, adjacent to disturbed area.

25 & 29 Mangham Way / Map 31A, Lots 300,
300A
Fairhaven, Massachusetts

SITE PHOTOGRAPHS



Ecosystem Solutions, Inc.
100 Centerville Rd., Ste. 4 Warwick, Rhode Island
02886

Project no. W21-1589

Pictures 3-5



Wetland with fallen dead tree (right) and standing snags/deadwood (left).



Fallen trunks in place in the wetland.

25 & 29 Mangham Way / Map 31A, Lots 300,
300A
Fairhaven, Massachusetts

SITE PHOTOGRAPHS



Ecosystem Solutions, Inc.
100 Centerville Rd., Ste. 4 Warwick, Rhode Island
02886

Project no. W21-1589


Picture 6-8



Aerial image from 1996, showing cleared and disturbed areas at 25 & 29 Mangham Way.



Aerial image from 2010, predating Client's ownership of the property, showing disturbed area along west property line and expanded lawn area along east property line.

<p>25 & 29 Mangham Way / Map 31A, Lots 300, 300A Fairhaven, Massachusetts</p>	<p>SITE PHOTOGRAPHS</p>	
<p> Ecosystem Solutions, Inc. 100 Centerville Rd., Ste. 4 Warwick, Rhode Island 02886</p>	<p>Project no. W21-1589</p>	<p>Picture 9-10</p>