

# Notice of Intent Application



November 16, 2022

Subject Property

113-115 Boston Post Road  
Assessors Map 30, Lots 70 and 71  
Wayland, Massachusetts

Applicant and Property Owner

Cascade Development Associates, LLC  
831 Beacon Street, #268  
Newton Center, MA 02459

**LEC Environmental Consultants, Inc.**

380 Lowell Street  
Suite 101  
Wakefield, MA 01880  
781-245-2500

[www.lecenvironmental.com](http://www.lecenvironmental.com)





November 16, 2022

## Hand Delivery

Wayland Conservation Commission  
Wayland Town Hall  
41 Cochituate Road  
Wayland MA 01778

**Re: Notice of Intent Application**  
**113-115 Boston Post Road**  
**Assessors Map 30, Lots 70 and 71**  
**Wayland, Massachusetts**

[LEC File #: CDALLC\22-051.02]

Dear Members of the Conservation Commission:

On behalf of the Applicant and Property Owner, Cascade Development Associates, LLC, LEC Environmental Consultants, Inc., (LEC) is filing the enclosed Notice of Intent (NOI) Application with the Wayland Conservation Commission to demolish existing structures, driveways, parking lots, and impervious and gravel areas associated with an abandoned garden center and single-family dwelling, and construct a 60-unit, 4-story affordable housing development (under chapter 40B) with associated access drives, parking lots, sediment forebay, stormwater retention basin, wastewater treatment facility, and mitigation. Portions of the proposed project are located within 200-foot Riverfront Area and Bordering Land Subject to Flooding associated with Pine Brook and within the 100-foot Buffer Zone to Bordering Vegetated Wetlands.

This NOI Application is being filed only under the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40) and its implementing Regulations (310 CMR 10.00), as the Wayland Zoning Board of Appeals administered the approvals under the *Town of Wayland Stormwater and Land Disturbance Bylaw* (Chapter 193) and the *Town of Wayland Wetlands and Water Resources Protection Bylaw* (Chapter 194) during the Comprehensive Permit process.

C1.0 Engineering & Development has prepared the enclosed *Cascade Residential Housing Development Plan Set* dated November 14, 2022 showing the existing and proposed conditions (attached), and the *Post Construction Stormwater Management Report* also dated November 14, 2022 (attached).

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**LEC Environmental Consultants, Inc.**

[www.lecenvironmental.com](http://www.lecenvironmental.com)

12 Resnik Road  
Suite 1  
Plymouth, MA 02360  
508.746.9491

380 Lowell Street  
Suite 101  
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781.245.2500

100 Grove Street  
Suite 302  
Worcester, MA 01605  
508.753.3077

P.O. Box 590  
Rindge, NH 03461  
603.899.6726

680 Warren Avenue  
Suite 3  
East Providence, RI 02914  
401.685.3109

**PLYMOUTH, MA**

**WAKEFIELD, MA**

**WORCESTER, MA**

**RINDGE, NH**

**EAST PROVIDENCE, RI**





Enclosed please find a check made payable to the Town of Wayland in the amount of Eight Hundred Dollars (\$800.00) for the purpose of filing this Application under State guidelines. A check payable to the Commonwealth of Massachusetts in the amount of Seven Hundred, Seventy-Five Dollars (\$775.00) has been processed via eDEP.

Thank you for considering this NOI Application. We look forward to meeting with you at the November 30, 2022 Public Hearing. Should you have any questions, please do not hesitate to contact me in our Wakefield office at 781-245-2500 or at [rkirby@lecenvironmental.com](mailto:rkirby@lecenvironmental.com).

Sincerely,

**LEC Environmental Consultants, Inc.**

A handwritten signature in black ink, appearing to read "Richard A. Kirby", with a long horizontal flourish extending to the right.

Richard A. Kirby  
Senior Wetland Scientist

cc: DEP, Northeast Region  
Cascade Development Associates, LLC  
Paul Haverty, Attorney  
C1.0 Engineering & Development

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rak: projects\22-051.02\NOIReport.doc



|      |   |  |
|------|---|--|
| i.   | WPA Form 3 – Notice of Intent                 |  |
| ii.  | WPA Appendix B – Wetland Fee Transmittal Form |  |
| iii. | Affidavit of Service                          |  |
| iv.  | Letter to Abutters                            |  |
| v.   | Abutter Notification Form                     |  |
| vi.  | Certified List of Abutters                    |  |

## Notice of Intent Report

|           |   |           |
|-----------|---|-----------|
| <b>1.</b> | <b>Introduction</b>   | <b>1</b>  |
| <b>2.</b> | <b>General Site Description</b>                             | <b>2</b>  |
| 2.1       | Natural Heritage and Endangered Species Program Designation | 3         |
| <b>3.</b> | <b>Wetland Resource Areas</b>                               | <b>3</b>  |
| 3.1       | Bordering Vegetated Wetlands                                | 4         |
| 3.2       | Bank-Mean Annual High Water                                 | 5         |
| 3.3       | Riverfront Area   | 5         |
| 3.4       | Bordering Land Subject to Flooding                          | 6         |
| <b>4.</b> | <b>Proposed Activities</b>                                  | <b>6</b>  |
| 4.1       | Structure, Access, and Parking                              | 7         |
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| <b>5.</b> | <b>Mitigation Measures</b>                                  | <b>8</b>  |
| 5.1       | Erosion and Sedimentation Control                           | 8         |
| 5.2       | Stormwater Management                                       | 9         |
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| 5.3.1     | Invasive Species Management and Revegetation                | 10        |
| 5.3.2     | Supervision, Monitoring, and Stewardship                    | 12        |
| <b>6.</b> | <b>Regulatory Performance Standards</b>                     | <b>12</b> |
| 6.1       | Riverfront Area Performance Standards                       | 13        |
| 6.1.1     | 310 CMR 10.58 (5)   | 14        |
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|           |  |           |
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| 6.1.2.1   | Alternatives Analysis                                    | 16        |
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## **Literature Cited**

## **Appendices**

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### **Appendix A**

Locus Maps

Figure 1: USGS Topographic Quadrangle

Figure 2: FEMA Flood Insurance Rate Map

Figure 3: MassGIS Orthophoto & NHESP Estimated Habitat Map

### **Appendix B**

*Riverfront Area Plans*, dated November 14, 2022, prepared by C1.0 Engineering & Development

### **Appendix C**

*DEP Approval of Supplemental Hydrogeological Evaluation Report* dated August 31, 2021

## **Attachments**

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*Cascade Residential Housing Development Plan Set*, dated November 14, 2022, prepared by C1.0 Engineering & Development

*Post Construction Stormwater Management Report*, dated November 14, 2022, prepared by C1.0 Engineering & Development





**Massachusetts Department of Environmental Protection**  
Bureau of Resource Protection - Wetlands

**WPA Form 3 – Notice of Intent**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Wayland

City/Town

**Important:**

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Note:  
Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

**A. General Information**

1. Project Location (**Note:** electronic filers will click on button to locate project site):

113-115 Boston Post Road

a. Street Address

Wayland

b. City/Town

01778

c. Zip Code

Latitude and Longitude:

42.359250 N

d. Latitude

-71.341150 W

e. Longitude

Map 30

f. Assessors Map/Plat Number

Lots 70 and 71

g. Parcel /Lot Number

2. Applicant:

Dean

a. First Name

Hickey

b. Last Name

Cascade Development Associates, LLC

c. Organization

831 Beacon Street, #268

d. Street Address

Newton Center

e. City/Town

MA

f. State

02459

g. Zip Code

617-213-0432

h. Phone Number

n/a

i. Fax Number

dean@westportcapitalinc.com

j. Email Address

3. Property owner (required if different from applicant): ☐ Check if more than one owner

Same as Applicant

a. First Name

b. Last Name

c. Organization

d. Street Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

4. Representative (if any):

Richard

a. First Name

Kirby

b. Last Name

LEC Environmental Consultants, Inc.

c. Company

380 Lowell Street, Suite 101

d. Street Address

Wakefield

e. City/Town

MA

f. State

01880

g. Zip Code

781-245-2500

h. Phone Number

781-245-6677

i. Fax Number

rkirby@lecenvironmental.com

j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

\$1,575.00

a. Total Fee Paid

\$775.00

b. State Fee Paid

\$800.00

c. City/Town Fee Paid





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**A. General Information (continued)**

6. General Project Description:

The Applicant proposes to demolish structures, driveways, parking lots, and impervious and gravel areas associated with an abandoned garden center and dwelling, and construct a 60-unit, 4-story affordable housing development (under chapter 40B) with associated access drives, parking areas, wastewater treatment facility, and stormwater management basin. Portions of the proposed project are located within Riverfront Area and BLSF associated with Pine Brook and within the 100-foot Buffer Zone to BVW. Site grading, a retaining wall, erosion controls, invasive species management, native revegetation, a meadow, and stormwater management are proposed.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Single Family Home                               | 2. <input type="checkbox"/> Residential Subdivision       |
| 3. <input type="checkbox"/> Commercial/Industrial                            | 4. <input type="checkbox"/> Dock/Pier                     |
| 5. <input type="checkbox"/> Utilities  | 6. <input type="checkbox"/> Coastal engineering Structure |
| 7. <input type="checkbox"/> Agriculture (e.g., cranberries, forestry)        | 8. <input type="checkbox"/> Transportation                |
| 9. <input checked="" type="checkbox"/> Other: Affordable Housing Development |   |

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. ☐ Yes ☒ No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR 10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Middlesex South

a. County

80325

c. Book

n/a

b. Certificate # (if registered land)

106

d. Page Number

**B. Buffer Zone & Resource Area Impacts (temporary & permanent)**

- ☐ Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
- ☒ Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.





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**B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)**

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

| Resource Area  | Size of Proposed Alteration              | Proposed Replacement (if any) |
|--|--|-------------------------------|
| a. <input type="checkbox"/> Bank                                 | 1. linear feet                           | 2. linear feet                |
| b. <input type="checkbox"/> Bordering Vegetated Wetland          | 1. square feet                           | 2. square feet                |
| c. <input type="checkbox"/> Land Under Waterbodies and Waterways | 1. square feet<br>3. cubic yards dredged | 2. square feet                |

| Resource Area   | Size of Proposed Alteration   | Proposed Replacement (if any)                                    |
|---|---|--|
| d. <input checked="" type="checkbox"/> Bordering Land Subject to Flooding | 2,462±<br>1. square feet<br>0<br>3. cubic feet of flood storage lost                | 2,462 (in-kind)<br>2. square feet<br>0<br>4. cubic feet replaced |
| e. <input type="checkbox"/> Isolated Land Subject to Flooding             | 1. square feet<br>2. cubic feet of flood storage lost                               | 3. cubic feet replaced   |
| f. <input type="checkbox"/> Riverfront Area                               | Pine Brook<br>1. Name of Waterway (if available) - <b>specify coastal or inland</b> |  |

2. Width of Riverfront Area (check one):

- ☐ 25 ft. - Designated Densely Developed Areas only
- ☐ 100 ft. - New agricultural projects only
- ☒ 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: 209,448±  
square feet

4. Proposed alteration of the Riverfront Area:

66,545±      2,658±      63,887±  
a. total square feet      b. square feet within 100 ft.      c. square feet between 100 ft. and 200 ft.

5. Has an alternatives analysis been done and is it attached to this NOI? ☒ Yes ☐ No

6. Was the lot where the activity is proposed created prior to August 1, 1996? ☒ Yes ☐ No

3. ☐ Coastal Resource Areas: (See 310 CMR 10.25-10.35)

**Note:** for coastal riverfront areas, please complete **Section B.2.f.** above.





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**B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)**

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users:  
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

| <u>Resource Area</u>  | <u>Size of Proposed Alteration</u>  | <u>Proposed Replacement (if any)</u>         |
|---|---|--|
| a. <input type="checkbox"/> Designated Port Areas   | Indicate size under Land Under the Ocean, below   |  |
| b. <input type="checkbox"/> Land Under the Ocean  | 1. square feet _____<br>2. cubic yards dredged _____  |  |
| c. <input type="checkbox"/> Barrier Beach   | Indicate size under Coastal Beaches and/or Coastal Dunes below  |  |
| d. <input type="checkbox"/> Coastal Beaches   | 1. square feet _____  | 2. cubic yards beach nourishment _____       |
| e. <input type="checkbox"/> Coastal Dunes   | 1. square feet _____  | 2. cubic yards dune nourishment _____        |
|   | <u>Size of Proposed Alteration</u>  | <u>Proposed Replacement (if any)</u>         |
| f. <input type="checkbox"/> Coastal Banks   | 1. linear feet _____  |  |
| g. <input type="checkbox"/> Rocky Intertidal Shores   | 1. square feet _____  |  |
| h. <input type="checkbox"/> Salt Marshes  | 1. square feet _____  | 2. sq ft restoration, rehab., creation _____ |
| i. <input type="checkbox"/> Land Under Salt Ponds   | 1. square feet _____  |  |
|   | 2. cubic yards dredged _____  |  |
| j. <input type="checkbox"/> Land Containing Shellfish   | 1. square feet _____  |  |
| k. <input type="checkbox"/> Fish Runs   | Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above |  |
|   | 1. cubic yards dredged _____  |  |
| l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage   | 1. square feet _____  |  |
| 4. <input type="checkbox"/> Restoration/Enhancement   |   |  |
| If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here. |   |  |
| a. square feet of BVW _____   | b. square feet of Salt Marsh _____  |  |

5. ☐ Project Involves Stream Crossings

a. number of new stream crossings \_\_\_\_\_

b. number of replacement stream crossings \_\_\_\_\_





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**C. Other Applicable Standards and Requirements**

- ☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

**Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review**

1. Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to [http://maps.massgis.state.ma.us/PRI\\_EST\\_HAB/viewer.htm](http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm).

a. ☐ Yes ☒ No

**If yes, include proof of mailing or hand delivery of NOI to:**

**Natural Heritage and Endangered Species Program**  
**Division of Fisheries and Wildlife**  
**1 Rabbit Hill Road**  
**Westborough, MA 01581**

2021

b. Date of map

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

- c. Submit Supplemental Information for Endangered Species Review\*

1. ☐ Percentage/acreage of property to be altered:

(a) within wetland Resource Area

percentage/acreage

(b) outside Resource Area

percentage/acreage

2. ☐ Assessor's Map or right-of-way plan of site

2. ☐ Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work \*\*

(a) ☐ Project description (including description of impacts outside of wetland resource area & buffer zone)

(b) ☐ Photographs representative of the site

\* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <https://www.mass.gov/ma-endangered-species-act-mesa-regulatory-review>).

Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

\*\* MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.





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**C. Other Applicable Standards and Requirements (cont'd)**

- (c) ☐ MESA filing fee (fee information available at <https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review>).

Make check payable to "Commonwealth of Massachusetts - NHESP" and **mail to NHESP** at above address

*Projects altering 10 or more acres of land, also submit:*

- (d) ☐ Vegetation cover type map of site

- (e) ☐ Project plans showing Priority & Estimated Habitat boundaries

- (f) OR Check One of the Following

1. ☐ Project is exempt from MESA review.  
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, <https://www.mass.gov/service-details/exemptions-from-review-for-projectsactivities-in-priority-habitat>; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. ☐ Separate MESA review ongoing.

a. NHESP Tracking #

b. Date submitted to NHESP

3. ☐ Separate MESA review completed.

Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

- a. ☒ Not applicable – project is in inland resource area only      b. ☐ Yes    ☐ No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -  
Southeast Marine Fisheries Station  
Attn: Environmental Reviewer  
836 South Rodney French Blvd.  
New Bedford, MA 02744  
Email: [dmf.envreview-south@mass.gov](mailto:dmf.envreview-south@mass.gov)

Division of Marine Fisheries -  
North Shore Office  
Attn: Environmental Reviewer  
30 Emerson Avenue  
Gloucester, MA 01930  
Email: [dmf.envreview-north@mass.gov](mailto:dmf.envreview-north@mass.gov)

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.

- c. ☐ Is this an aquaculture project?

- d. ☐ Yes    ☐ No

If yes, include a copy of the Division of Marine Fisheries Certification Letter (M.G.L. c. 130, § 57).





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**C. Other Applicable Standards and Requirements (cont'd)**

**Online Users:**

Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?  
a. ☐ Yes ☒ No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.
- b. ACEC
5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?  
a. ☐ Yes ☒ No
6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?  
a. ☐ Yes ☒ No
7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?  
a. ☒ Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:  
1. ☐ Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)  
2. ☒ A portion of the site constitutes redevelopment  
3. ☒ Proprietary BMPs are included in the Stormwater Management System.  
b. ☐ No. Check why the project is exempt:  
1. ☐ Single-family house  
2. ☐ Emergency road repair  
3. ☐ Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

**D. Additional Information**

- ☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

**Online Users:** Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. ☒ USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2. ☒ Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.





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**D. Additional Information (cont'd)**

3. ☒ Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4. ☒ List the titles and dates for all plans and other materials submitted with this NOI.

Cascade Residential Housing Development

a. Plan Title

C1.0 Engineering & Development

William Doyle, PE

b. Prepared By

c. Signed and Stamped by

November 14, 2022

1" = 30'

d. Final Revision Date

e. Scale

Post Construction Stormwater Management Report prepared by C1.0 Engineering & Development

November 14, 2022

f. Additional Plan or Document Title

g. Date

5. ☐ If there is more than one property owner, please attach a list of these property owners not listed on this form.
6. ☐ Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.
7. ☐ Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.
8. ☒ Attach NOI Wetland Fee Transmittal Form
9. ☒ Attach Stormwater Report, if needed.

**E. Fees**

1. ☐ Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

40631

2. Municipal Check Number

11/15/2022

3. Check date

Paid electronically via eDEP

4. State Check Number

5. Check date

LEC Environmental Consultants, Inc.

6. Payor name on check: First Name

7. Payor name on check: Last Name





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City/Town

**F. Signatures and Submittal Requirements**

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

1. Signature of Applicant

2. Date

11/15/2022

3. Signature of Property Owner (if different)

4. Date

*Richard Kirby*

11/15/2022

5. Signature of Representative (if any)

6. Date

**For Conservation Commission:**

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

**For MassDEP:**

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

**Other:**

If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.





Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands  
**NOI Wetland Fee Transmittal Form**  
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

## A. Applicant Information

### 1. Location of Project:

113-119 Boston Post Road

a. Street Address

Wayland

b. City/Town

Paid electronically via eDEP

\$775.00

c. Check number

d. Fee amount

### 2. Applicant Mailing Address:

Dean

a. First Name

Hickey

b. Last Name

Cascade Development Associates, Inc.

c. Organization

831 Beacon Street, #268

d. Mailing Address

Newton Center

e. City/Town

MA

f. State

02459

g. Zip Code

617-213-0432

h. Phone Number

n/a

i. Fax Number

dean@westportcapitalinc.com

j. Email Address

### 3. Property Owner (if different):

Same as Applicant

a. First Name

b. Last Name

c. Organization

d. Mailing Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email Address

## B. Fees

Fee should be calculated using the following process & worksheet. **Please see Instructions before filling out worksheet.**

**Step 1/Type of Activity:** Describe each type of activity that will occur in wetland resource area and buffer zone.

**Step 2/Number of Activities:** Identify the number of each type of activity.

**Step 3/Individual Activity Fee:** Identify each activity fee from the six project categories listed in the instructions.

**Step 4/Subtotal Activity Fee:** Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

**Step 5/Total Project Fee:** Determine the total project fee by adding the subtotal amounts from Step 4.

**Step 6/Fee Payments:** To calculate the state share of the fee, divide the total fee in half and subtract \$12.50. To calculate the city/town share of the fee, divide the total fee in half and add \$12.50.





**Massachusetts Department of Environmental Protection**

Bureau of Resource Protection - Wetlands

# NOI Wetland Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

### B. Fees (continued)

| Step 1/Type of Activity          | Step 2/Number of Activities | Step 3/Individual Activity Fee | Step 4/Subtotal Activity Fee |
|----------------------------------|-----------------------------|--------------------------------|------------------------------|
| Category 3b: Multi-unit Dwelling | 1 (x1.5 Riverfront Area)    | \$1,050.00                     | \$1,575.00                   |
|                                  |                             |                                |                              |
|                                  |                             |                                |                              |
|                                  |                             |                                |                              |
|                                  |                             |                                |                              |
|                                  |                             |                                |                              |
|                                  |                             |                                |                              |
|                                  |                             |                                |                              |
| Step 5/Total Project Fee:        |                             |                                | \$1,575.00                   |

### Step 6/Fee Payments:

|                                 |                                      |
|---------------------------------|--------------------------------------|
| Total Project Fee:              | <u>\$1,575.00</u>                    |
|                                 | a. Total Fee from Step 5             |
| State share of filing Fee:      | <u>\$775.00</u>                      |
|                                 | b. 1/2 Total Fee <b>less</b> \$12.50 |
| City/Town share of filling Fee: | <u>\$800.00</u>                      |
|                                 | c. 1/2 Total Fee <b>plus</b> \$12.50 |

### C. Submittal Requirements

- a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection  
Box 4062  
Boston, MA 02211

- b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

**To MassDEP Regional Office** (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)



## AFFIDAVIT OF SERVICE

### Under the *Massachusetts Wetlands Protection Act*

I, Sharon A. Sullivan, on behalf of Cascade Development Associates, LLC, hereby certify under the pains and penalties of perjury that on November 16, 2022 I gave notification to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40 and 310 CMR 10.05 (4) (a), in connection with the following matter:

A Notice of Intent Application filed under the *Massachusetts Wetlands Protection Act* by LEC Environmental Consultants, Inc., on behalf of the Applicant, Cascade Development Associates, LLC, with the Town of Wayland Conservation Commission on November 16, 2022 for property located at 113 and 115 Boston Post Road (Parcel IDs: 30-70 and 30-71) in Wayland, Massachusetts.

The form of notification, and a list of the abutters to whom it was given and their addresses, are attached to this Affidavit of Service.

\_\_\_\_\_

Sharon A. Sullivan  
Permitting Technician

11/16/2022  
Date





November 16, 2022

**CERTIFIED MAIL**

«Name»

«Name2»

«Address»

«City» «State» «Zip»

**Re: Notice of Intent Application**  
**113 and 115 Boston Post Road (Parcel IDs: 30-70 and 30-71)**  
**Wayland, Massachusetts**

[LEC File #: CDALLC\220-051.02]

Dear Abutter:

On behalf of the Applicant, Cascade Development Associates, LLC, LEC Environmental Consultants, Inc., (LEC) has filed a Notice of Intent (NOI) Application with the Wayland Conservation Commission to demolish structures, driveways, parking lots, and impervious and gravel areas associated with an abandoned nursery, and construct a 60-unit, 4-story affordable housing development (under Chapter 40B) with associated access drives, parking areas, wastewater treatment facility, and stormwater management basin. Portions of the proposed project are located within Riverfront Area and Bordering Land Subject to Flooding associated with Pine Brook and within the 100-foot Buffer Zone to Bordering Vegetated Wetlands. Erosion controls, invasive species management, native revegetation, a pollinator meadow, and stormwater management are proposed.

This NOI Application is being filed only under the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40) and its implementing Regulations (310 CMR 10.00), as the Wayland Zoning Board of Appeals administered the approvals under the *Town of Wayland Stormwater and Land Disturbance Bylaw* (Chapter 193) and the *Town of Wayland Wetlands and Water Resources Protection Bylaw* (Chapter 194) during the Comprehensive Permit process.

The *NOI Application* and site plan are available for review by the public by contacting the Wayland Conservation Commission. Further information regarding this application and the date and time of the public hearing will be published at least five (5) days in advance in the *Wayland Town Crier* or *MetroWest Daily News*. Notice of the Public Hearing will also be posted at the Wayland Town Hall at least 48 hours in advance.

A remote Public Hearing is scheduled for November 30, 2022 at 6:30 p.m., in accordance with the provisions of the *Massachusetts Wetlands Protection Act* (M.G.L. Ch. 131, s. 40, as amended) and its implementing Regulations (310 CMR 10.00). Please check the Town's website and the Board/Committee's page for any updated information on the meeting.

Please do not hesitate to review the materials and/or attend the public hearing should you have questions or concerns about the proposed project.

Sincerely,

**LEC Environmental Consultants, Inc.**

Richard A. Kirby  
Senior Wetland Scientist

**LEC Environmental Consultants, Inc.**

**[www.lecenvironmental.com](http://www.lecenvironmental.com)**

12 Resnik Road  
Suite 1  
Plymouth, MA 02360  
508.746.9491

380 Lowell Street  
Suite 101  
Wakefield, MA 01880  
781.245.2500

100 Grove Street  
Suite 302  
Worcester, MA 01605  
508.753.3077

P.O. Box 590  
Rindge, NH 03461  
603.899.6726

680 Warren Avenue  
Suite 3  
East Providence, RI 02914  
401.685.3109

**PLYMOUTH, MA**

**WAKEFIELD, MA**

**WORCESTER, MA**

**RINDGE, NH**

**EAST PROVIDENCE, RI**



## **Notification to Abutters Under the**

### *Massachusetts Wetlands Protection Act*

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, you are hereby notified of the following:

- A. The name of the Applicant is Cascade Development Associates, LLC, 831 Beacon Street, #268, Newton Center, Massachusetts.
- B. The Applicant has filed a Notice of Intent Application with the Conservation Commission for the municipality of Wayland, Massachusetts seeking permission to remove, fill, dredge or alter an Area Subject to Protection Under the Wetlands Protection Act (General Laws Chapter 131, Section 40).
- C. The addresses of the lots where the activities are proposed are 113 and 115 Boston Post Road (Parcel IDs: 30-70 and 30-71), Wayland, Massachusetts.
- D. Copies of the Notice of Intent Application may be examined by contacting the Wayland Conservation Commission at (508) 358-3669 between 8:00 a.m. and 4:00 p.m., Monday through Thursday, and 8:00 a.m. and 12:30 p.m., Friday.  
  
For more information, call: LEC Environmental Consultants, Inc. (the applicant's representative) at (781) 245-2500.
- E. Copies of the Notice of Intent may be obtained from LEC Environmental Consultants, Inc. (the applicant's representative) by calling (781) 245-2500 between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. A fee may be charged for each copy requested.
- F. Information regarding the public hearing may be obtained from the Wayland Conservation Commission (the regulatory agency) by calling (508) 358-3669 between 8:00 a.m. and 4:00 p.m., Monday through Thursday, and 8:00 a.m. and 12:30 p.m., Friday.

NOTE: Notice of the Public Hearing, including its date, time, and place, will be published at least five (5) days in advance in the Wayland Town Crier or MetroWest Daily News.

NOTE: Notice of the public hearing will also be posted at the Wayland Town Hall not less than 48 hours in advance.

NOTE: You also may contact the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call:

**Northeast Region: 978-694-3200**





**Town of Wayland**  
 41 COCHITUATE ROAD  
 WAYLAND MASSACHUSETTS 01778  
 www.wayland.ma.us TEL. 508-358-3788

WAYLAND ASSESSORS  
 RCVD 2022 NOV 8 AM 9:30

OFFICE STAFF  
 Rob Leroux, Director of Assessing  
 Mary-Ann Wohlfarth, Sr. Admin. Coordinator

BOARD OF ASSESSORS  
 Zachariah Ventress, Chair  
 Vice Chair John A. Todd  
 Molly Upton, Secretary  
 Philip Parks  
 Massimo Taurisano

## Certification of Abutters

Date of request November 7, 2022

Please plan your submission accordingly. The Assessors' office has 10 business days to certify an abutters list Per MGL Ch. 66, S.10

Address to be certified 113 & 115 Boston Post Road Parcel ID 30-70 & 30-71  
 (Map/Lot)

Owner's Name Cascade Development Associates, LLC  
 (PLEASE PRINT)

Owner's Mailing Address 831 Beacon Street, #268, Newton Center, MA 02459

Name of Applicant Cascade Development Associates, LLC Telephone: (781) 245-2500 (LEC)  
 (PLEASE PRINT) c/o LEC Environmental Consultants, Inc.

380 Lowell Street, Suite 101 Wakefield MA 01880  
 Mailing Address of Applicant City/Town State Zip

Signature of Applicant *Brown A Sullivan*

Reason for List (check one) ☒ Conservation ☐ Health ☐ Planning ☐ Zoning ☐ Board of Selectmen

**\*\*Please check with the Board/Commission for their guidelines regarding the number of feet required for notification. Each Board/Commission has its own regulations for their abutters listing. There's no fee for certification, however the list/s of abutters must be provided by the person or company requesting certification.**

For use by Assessors

This is to certify that at the time of the last assessment for taxation made by the Town of Wayland, the names and addresses are the assessed owners to these parcels.

Certified By: *[Signature]*

Date: 15 NOV 2022

CC: ☒ Conservation ☐ Health ☐ Planning ☐ Zoning ☐ Board of Selectmen





# 100 foot Abutters List Report

Wayland, MA  
November 15, 2022

## Subject Properties:

Parcel Number: 30-070  
CAMA Number: 30-070  
Property Address: 113 BOSTON POST RD

Mailing Address: CASCADE DEVELOPMENT ASSOCIATES LLC  
831 BEACON ST #268  
NEWTON CENTER, MA 02459

Parcel Number: 30-071  
CAMA Number: 30-071  
Property Address: 115 BOSTON POST RD

Mailing Address: CASCADE DEVELOPMENT ASSOCIATES LLC  
831 BEACON ST #268  
NEWTON CENTER, MA 02459

## Abutters:

Parcel Number: 30-052  
CAMA Number: 30-052  
Property Address: 8 PINEBROOK RD

Mailing Address: BURNS CATHERINE & BURNS TODD G  
8 PINEBROOK RD  
WAYLAND, MA 01778

Parcel Number: 30-052A  
CAMA Number: 30-052A  
Property Address: 10 PINEBROOK RD

Mailing Address: GRUMMAN CAROL B  
10 PINEBROOK RD  
WAYLAND, MA 01778

Parcel Number: 30-053  
CAMA Number: 30-053  
Property Address: 14 PINEBROOK RD

Mailing Address: ADAMS JOHN W & YOUNG SARAH  
14 PINEBROOK RD  
WAYLAND, MA 01778

Parcel Number: 30-054  
CAMA Number: 30-054  
Property Address: 18 PINEBROOK RD

Mailing Address: GAO AARON H & SAMANTHA N  
18 PINEBROOK RD  
WAYLAND, MA 01778

Parcel Number: 30-055  
CAMA Number: 30-055  
Property Address: 20 PINEBROOK RD

Mailing Address: ENO ELLIOTT & MARSHA  
20 PINEBROOK RD  
WAYLAND, MA 01778

Parcel Number: 30-057F  
CAMA Number: 30-057F  
Property Address: 6 DAIRY FARM LN

Mailing Address: SHADDAY RENAE & PETER  
6 DAIRY FARM LN  
WAYLAND, MA 01778

Parcel Number: 30-068  
CAMA Number: 30-068  
Property Address: 105 BOSTON POST RD

Mailing Address: MCLAUGHLIN STEPHEN  
105 BOSTON POST RD  
WAYLAND, MA 01778

Parcel Number: 30-069  
CAMA Number: 30-069  
Property Address: 107 BOSTON POST RD

Mailing Address: DRAGONETTI CLUDIO & ADELINA & RAFFAELE  
107 BOSTON POST RD  
WAYLAND, MA 01778



[www.cai-tech.com](http://www.cai-tech.com)

11/15/2022

Data shown on this report is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this report.

Page 1 of 2





# 100 foot Abutters List Report

Wayland, MA  
November 15, 2022

Parcel Number: 30-073  
CAMA Number: 30-073  
Property Address: 125 BOSTON POST RD

Mailing Address: LYONS ROBERT J TRUSTEE  
BOSTON POST ROAD REALTY TR  
216 OXBOW RD  
WAYLAND, MA 01778

Parcel Number: 30-074  
CAMA Number: 30-074  
Property Address: 126 BOSTON POST RD

Mailing Address: ISLAMIC CENTER OF BOSTON INC  
126 BOSTON POST RD  
WAYLAND, MA 01778

Parcel Number: 30-075  
CAMA Number: 30-075  
Property Address: 120 BOSTON POST RD

Mailing Address: ISLAMIC CENTER OF BOSTON INC  
120 BOSTON POST RD  
WAYLAND, MA 01778

Parcel Number: 30-079  
CAMA Number: 30-079  
Property Address: 114 BOSTON POST RD

Mailing Address: KELLER SUSAN & PETER M  
114 BOSTON POST RD  
WAYLAND, MA 01778

Parcel Number: 30-080  
CAMA Number: 30-080  
Property Address: 110 BOSTON POST RD

Mailing Address: FITZPATRICK KRISTEN & KEVIN  
110 BOSTON POST RD  
WAYLAND, MA 01778



[www.cai-tech.com](http://www.cai-tech.com)

11/15/2022

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Page 2 of 2





Wayland, MA

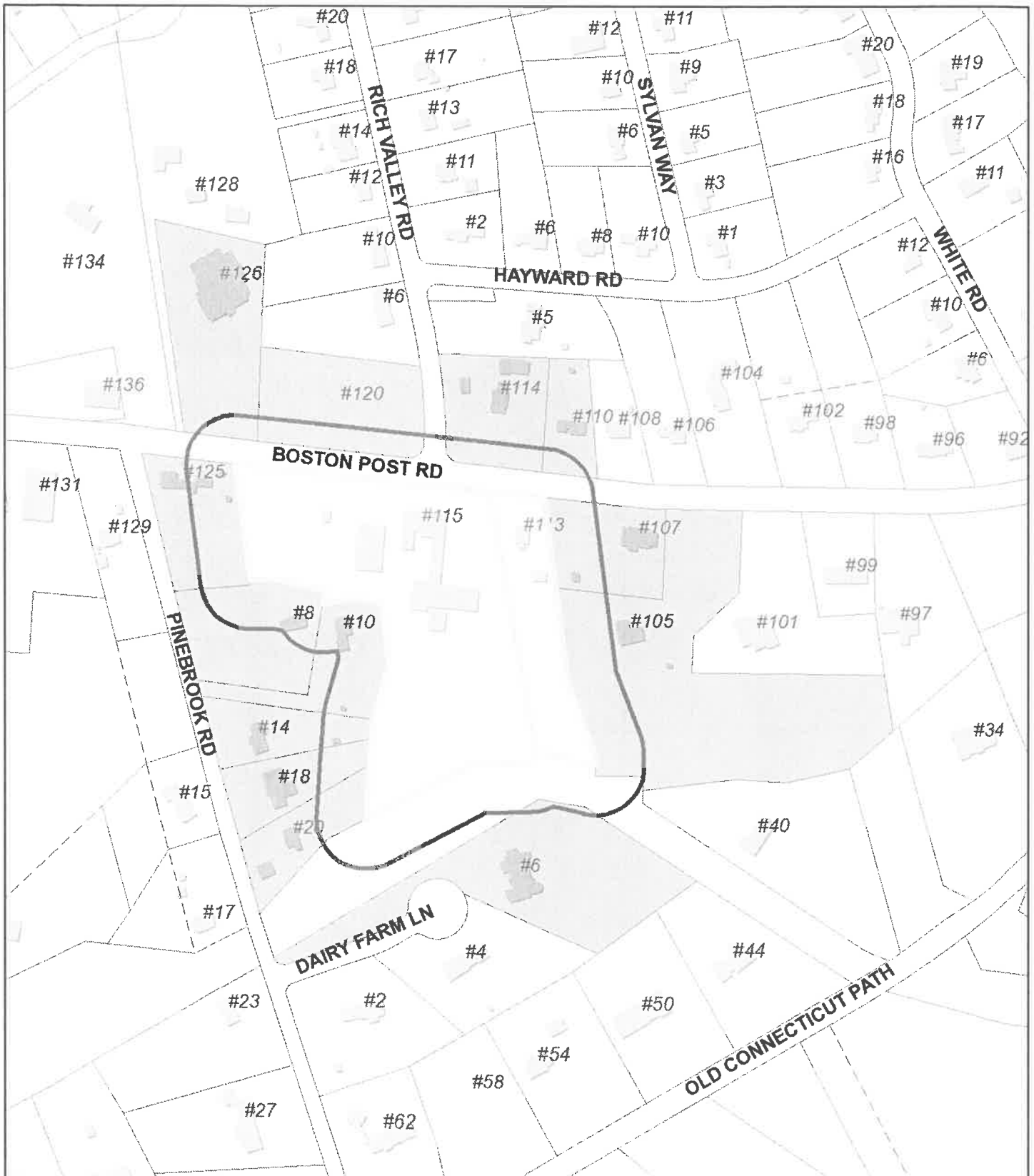
**CAI Technologies**  
Eradicating Mireytting, Gneptatid Solitaries

November 15, 2022

1 inch = 278 Feet

www.cai-tech.com

0 278 556 835



Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.





## **Notice of Intent Application**

113-115 Boston Post Road  
Assessors Map 30, Lots 70 and 71  
Wayland, Massachusetts

November 16, 2022

---



## 1. Introduction

On behalf of the Applicant and Property Owner, Cascade Development Associates, LLC, LEC Environmental Consultants, Inc., (LEC) is filing the enclosed Notice of Intent (NOI) Application with the Wayland Conservation Commission to demolish existing structures, driveways, parking lots, and impervious and gravel areas associated with an abandoned garden center and single-family dwelling, and construct a 60-unit, 4-story affordable housing development (under chapter 40B) with associated access drives, parking lots, sediment forebay, stormwater retention basin, wastewater treatment facility, and mitigation. Portions of the proposed project are located within 200-foot Riverfront Area and Bordering Land Subject to Flooding (BLSF) associated with Pine Brook and within the 100-foot Buffer Zone to Bordering Vegetated Wetlands (BVW).

This NOI Application is being filed only under the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40, the *Act*) and its implementing Regulations (310 CMR 10.00, the *Act Regulations*), as the Wayland Zoning Board of Appeals (ZBA) administered the approvals under the *Town of Wayland Stormwater and Land Disturbance Bylaw* (Chapter 193) and the *Town of Wayland Wetlands and Water Resources Protection Bylaw* (Chapter 194) during the Comprehensive Permit review process. The ZBA issued a Comprehensive Permit on January 15, 2019. The Comprehensive Permit was appealed by the Applicant to the Housing Appeals Committee (HAC), and the HAC issued a Decision on Stipulation and Entry of Judgement (No. 2019-3) approving the development. As part of the HAC approval, the wastewater treatment facility was added to the project.

C1.0 Engineering & Development has prepared the enclosed *Riverfront Area Plans* (Appendix B) detailing the Riverfront Area calculations associated with the site; *Cascade Residential Housing Development Plan Set* (attached, *Plan Set*) detailing existing and proposed site conditions; and *Post Construction Stormwater Management Report* (attached, *Stormwater Report*) containing stormwater management calculations, the DEP Stormwater Checklist, a Project Site Owner's Manual, and other details, all dated November 14, 2022. Also, included in the *Plan Set* is a *Riverfront Area Restoration Planting Plan* dated November 14, 2022 prepared by LEC (*Planting Plan*).



## 2. General Site Description

The 6.483± acre property contains two parcels located south of Boston Post Road (Route 20), roughly 1,500 linear feet west of the Route 20/Old Connecticut Path intersection, within the eastern portion of Wayland, Massachusetts. Residential and commercial development along Route 20 occurs east and west of the site, while residential development associated with Rich Valley Road, Pine Brook Road, and intersecting side streets occurs north and south of the site. The larger, 5.217±-acre property comprises the majority of the site, and contains the former Mahoney's Garden Center. The smaller, 1.266±-acre property comprises the eastern portion of the site and contains an abandoned single-family dwelling.

The garden center property was developed roughly 100 years ago and contains various structures, including a store, garage, and greenhouses, some of which have been dismantled, leaving behind concrete and gravel pads. Gravel parking occurs along Route 20, and a gravel access road extends around the store, garage, and greenhouses. Additional gravel areas occur amongst and adjacent to the above site appurtenances (see EX.1 of the *Plan Set*, attached).

The single-family dwelling property contains the abandoned dwelling with covered porch, deck, and a 2-story carriage house that has been dismantled. A stone foundation of a former structure occurs within the southeastern portion of this property. Land between the dwelling and the stone foundation appears to have been continually altered since 1957 according to [www.historicaerials.com](http://www.historicaerials.com) and lacks topsoil based on our observations using a hand-held, Dutch-style soil auger.

Both parcels contain a portion of Pine Brook, a perennial stream that flows westerly through the sites toward its eventual convergence with the Sudbury River, and wooded land south of Pine Brook. Site topography on both parcels generally descends westerly-southwesterly toward Pine Brook, with a roughly 30-foot elevation gradient through both parcels. A retaining wall also occurs along the southern edge of the garden center parking lot within the western portion of the site.

Wooded uplands primarily occur south of Pine Brook, and occur sporadically north of Pine Brook. The canopy contains patches of Norway maple (*Acer platanoides*), oaks (*Quercus* spp.), scattered patches of eastern hemlock (*Tsuga canadensis*), and individuals of black cherry (*Prunus serotina*). The understory contains patches of European



buckthorn (*Frangula alnus*), Tartarian honeysuckle (*Lonicera tartarica*), and multiflora rose (*Rosa multiflora*), with scattered individuals of saplings from the canopy. A stand of bamboo (subfamily: *Bambusoideae*) occurs along the western property boundary, and extends off-site to the west. Groundcover plants include garlic mustard (*Alliaria petiolata*), Virginia creeper (*Parthenocissus quinquefolia*), poison ivy (*Toxicodendron radicans*), and Oriental bittersweet (*Celastrus orbiculatus*).

The remainder of the site contains developed land and fallow gravel areas with herbaceous and scattered woody vegetation populating the land. Specifically, LEC observed entanglements of poison sumac (*Toxicodendron vernix*), and scattered patches of porcelain berry (*Ampelopsis* sp.), multiflora rose, and Oriental bittersweet (*Celastrus orbiculatus*) growing amongst wild carrot (*Daucus carota*), goldenrods (*Solidago* spp.), mugwort (*Artemisia* sp.), clover (*Trifolium* spp.), and grasses (families *Poaceae* and *Gramineae*).

Utilizing a hand-held, Dutch-style soil auger, LEC inspected soil conditions within the uplands adjacent to the BVW boundary, and generally observed a 12-inch thick, loamy sand topsoil (A horizon) with a soil matrix color ranging between 10YR 3/2 and 3/3. The topsoil is underlain by a weathered, loamy sand subsoil (B<sub>w</sub> horizon) with a soil matrix color of 10YR 4/6. No redoximorphic features or other indicators of hydrology were observed in the upper part of the upland soil profile, and the profile is not considered hydric according to the *Field Indicators for Identifying Hydric Soils in New England* (Version 4, 2020, the *Field Indicators Guide*).

2.1

### **Natural Heritage and Endangered Species Program Designation**

According to the 15<sup>th</sup> Edition of the *Massachusetts Natural Heritage Atlas* (effective August 1, 2021) published by the Natural Heritage & Endangered Species Program (NHESP), no areas of Estimated Habitats of Rare Wildlife or Priority Habitat of Rare Species, or Potential or Certified Vernal Pools exist on the site (Appendix A, Figure 3).

## **3.**

### **Wetland Resource Areas**

Wetland Resource Areas, including Bordering Vegetated Wetlands (BVW) and the Bank-Mean Annual High Water (MAHW) Line, were delineated by others prior to the submittal of the Comprehensive Permit application. These boundaries were re-established at the site by Feldman Land Surveyors, and LEC conducted a site evaluation



on September 8, 2022 to review and confirm the BVW and Bank-MAHW boundaries, with no flag modifications. The extent of these Wetland Resource Areas was determined through observations of existing plant communities, hydrologic indicators, and Bankfull indicators in accordance with the *Act* and the *Act Regulations*. The 100-foot Buffer Zone extends from the BVW and Bank boundaries, and the 200-foot Riverfront Area extends from the Bank-MAHW Line to Pine Brook. LEC also delineated the extent of 'Degraded' Riverfront Area on August 11, 2022 using pink flagging and grade stakes across the entire site, as further described below. A portion of the site also is located within the Zone A FEMA Floodplain, and land within the Zone A boundary (upgradient of the BVW or Bank boundaries) is jurisdictional as BLSF.

## 3.1

**Bordering Vegetated Wetlands**

According to 310 CMR 10.55(2), BVW is defined as: *freshwater wetlands which border on creeks, rivers, streams, ponds, and lakes...Bordering Vegetated Wetlands are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants...The boundary of Bordering Vegetated Wetlands is the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist.*

Wooded wetlands flank the Banks of Pine Brook within the southeastern portion of the site. Only the BVW boundary north of Pine Brook was delineated, as it relates to the proposed development. The canopy contains patches of Norway maple, red maple (*Acer rubrum*), scattered oaks (*Quercus* spp.) and ash (*Fraxinus* sp.), and individuals of yellow birch (*Betula alleghaniensis*). The understory contains patches of silky dogwood (*Cornus amomum*) and European buckthorn (*Frangula alnus*), with individual saplings from the canopy and scattered entanglements of grape (*Vitis* sp.). Groundcover plants include scattered patches of cinnamon fern (*Osmunda cinnamomea*), sensitive fern (*Onoclea sensibilis*), poison ivy, and jewelweed (*Impatiens capensis*), skunk cabbage (*Symplocarpus foetidus*), wood aster (*Aster* sp.), grasses, and a patch of *Pachysandra* sp.

Utilizing a hand-held, Dutch-style auger, LEC inspected soil conditions within the BVW and observed a 14 to 16-inch thick, gravelly loamy sand topsoil (A horizon) with redoximorphic concentrations of 10YR 4/6 observed within 12 inches of the soil surface. Refusal (stones) was typically encountered below the topsoil. The observed soil profile within the BVW qualifies as hydric according to the *Field Indicators Guide*.



The BVW boundary is delineated with flagging stations 1 through 7 as depicted on Sheet EX.1 of the *Plan Set*.

3.2

### **Bank-Mean Annual High Water**

According to 310 CMR 10.58 (2) (a) 2., *Mean Annual High-water Line of a river is the line that is apparent from visible markings or changes in the character of soils or vegetation due to the prolonged presence of water and that distinguishes between predominantly aquatic and predominantly terrestrial land. Field indicators of bankfull conditions shall be used to determine the mean annual high-water line. Bankfull field indicators include but are not limited to: changes in slope, changes in vegetation, stain lines, top of pointbars, changes in bank materials, or bank undercuts.*

The Bank-MAHW Line associated with Pine Brook was determined through observation of multiple corroborating Bankfull Indicators, including scouring, Bank undercuts, wrack deposition, changes in vegetation, and a relatively distinct separation between predominantly aquatic and terrestrial land. The Bank-MAHW boundary is delineated with flagging stations MAHW 1 through MAHW 21 and MAHW 1A through MAHW 1E as depicted on Sheet EX.1 of the *Plan Set*.

3.3

### **Riverfront Area**

According to 310 CMR 10.58 (2) (a), *A Riverfront Area is the area of land between a river's mean annual high water line and a parallel line measured horizontally. The riverfront area may include or overlap other resource areas or their buffer zones. The riverfront area does not have a buffer zone.*

Riverfront Area includes land within 200 feet of the Bank-MAHW line associated with Pine Brook and encompasses wooded wetlands and uplands north and south of the brook, most of the abandoned garden center north of the brook, and land south of the single-family dwelling. Specifically, the entire property contains 209,448± square feet of Riverfront Area (see *Area 1 Plan* in Appendix B). In order to determine the extent of 'Degraded' Riverfront Area on the site in accordance with 310 CMR 10.58 (5), LEC conducted a site evaluation on August 11, 2022 to identify and delineate areas containing structures, impervious surface, gravel, and other land absent of topsoil (see *Area 3 Plan* in Appendix B). DRA flagging stations 1 through 52 were established along the Degraded Riverfront Area boundary as depicted on Sheet EX.1 of the *Plan Set* (attached). While most of the site north of Pine Brook contains these Degraded conditions, a corridor of land immediately north of Pine Brook contains a layer of developing topsoil over the



gravel. Conservatively, land containing this thin layer of topsoil was excluded from the Degraded Riverfront Area delineation. Also excluded from the Degraded Riverfront Area delineation is a roughly 7,014 square-foot patch of land containing wooded uplands and a compost pile located within the southeastern portion of the site. Of the 209,448± square feet of Riverfront Area on the site, 90,693± square feet, or 43.3%, qualify as 'Degraded.'

3.4

### **Bordering Land Subject to Flooding**

According to 310 CMR 10.57 (2) (a) 1, *Bordering Land Subject to Flooding (BLSF)* is an area with low, flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds or lakes. It extends from the banks of these waterways and water bodies; where a bordering vegetated wetland occurs, it extends from said wetland.

According to the July 7, 2014 *Federal Emergency Management Agency Flood Insurance Rate Map* for Middlesex County, Massachusetts (Map No: 25017C0527F), the majority of the site is located within Zone X (not shaded): – *Areas determined to be outside the 1% Annual Chance Floodplain* (Appendix A, Figure 2). Zone A: *Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood – No Base Flood Elevations Determined*, occurs adjacent to Pine Brook, with no elevation assigned. However, the project engineer located FEMA flood profile data and included these data on Sheet FL1.0 of the *Plan Set*. The flood profile data includes 1% Annual Chance Flood elevations ranging from 163.19 to 163.27 immediately upstream of a stone culvert located along the southern property boundary (western portion of the site), and 1% Annual Chance Flood elevations ranging from 166.98 to 169.44 within the south-central portion of the site. Land extending from the Zone A boundary and the FEMA flood profile elevations to the BVW or Bank boundaries is jurisdictional as BLSF.

4.

### **Proposed Activities**

The Applicant proposes to demolish the existing structures, driveways, parking lots, and impervious and gravel areas associated with the abandoned garden center and dwelling, and construct a 60-unit, 4-story affordable housing development with associated access drives, parking areas, sediment forebay, stormwater retention basin, and wastewater treatment facility. Portions of the proposed project are located within Riverfront Area and BLSF associated with Pine Brook and within the 100-foot Buffer Zone to BVW/Bank. The development will result in a roughly 64.2% decrease in Degraded



Riverfront Area on the site (from 90,693± square feet to 32,427± square feet), will be farther from Pine Brook compared to the existing development, and will result in a significant improvement to the Riverfront Area functions and values compared to existing conditions.

#### 4.1 **Structure, Access, and Parking**

The proposed structure measures 20,031± square feet, 15,368± of which are proposed within the outer 100-200 foot Riverfront Area. The structure is proposed 136± linear feet from Pine Brook at its closest point, or 97± linear feet farther from the brook than the existing closest greenhouse. The structure will contain 60 residential units, and be accessed via two, 24-foot wide paved driveway entrances off Route 20. The western driveway entrance will extend to 64 proposed parking spaces beneath the structure, with 13 surface parking spaces along the southwestern edge of the driveway. The eastern entrance extends to a looped roadway with 29 surface parking spaces along the eastern and internal roadway edges. A concrete sidewalk will provide access from the eastern surface parking to the eastern structure entrance. An 18-foot wide gravel emergency access is proposed south of the structure, connecting the eastern and western surface parking. A portion of this emergency access represents the closest ‘Degraded’ Riverfront Area in the proposed condition, at 87± linear feet from Pine Brook, 66± linear feet farther than the existing Degraded Riverfront Area. Utility connections will extend from Route 20 as needed to service the building.

#### 4.2 **Wastewater Treatment Facility**

As part of the HAC review of the Comprehensive Permit, the Applicant committed to installing a wastewater treatment facility in order to treat wastewater from the site instead of installing a traditional septic system as originally proposed in the Comprehensive Permit. The wastewater treatment facility was designed by On-Site Engineering, Inc., and DEP completed its review of the Hydrogeologic Report prepared by Geosphere, authorizing the Applicant to apply for a Groundwater Discharge Permit (Appendix C). The Applicant will prepare and submit the Groundwater Discharge Permit application to DEP for approval following issuance of the Order of Conditions.

The wastewater treatment facility is proposed within the eastern portion of the site, south of the eastern looped access driveway, within the outer portion of Riverfront Area, portions of which are Degraded. The system will comprise of infrastructure designed to filter out solid waste, which will be collected from the site and appropriately disposed of



on a scheduled basis. Treated water will then infiltrate through the leaching field, which will contain 10 infiltration rows of infiltration chambers. The infiltrated groundwater will migrate westerly, toward its convergence with Pine Brook. The wastewater treatment facility design will be finalized as part of the Groundwater Discharge Permit application with DEP.

4.3

### **Site Grading**

Site grading will be required to accommodate the proposed development. Filling of up to roughly 7 feet is generally proposed within the eastern portion of the site as part of the proposed wastewater treatment facility leaching field, and cutting of up to roughly 5 feet is generally proposed within the northwestern portion of the site as part of the proposed stormwater management basin. While a portion of the development is proposed within BLSF, care has been taken to ensure that elevations within the BLSF footprint are lowered, not raised, to avoid floodwater displacement, and provide a nominal increase in flood storage capacity. Two retaining walls also are proposed to minimize site grading: one south of the proposed structure (eastern portion); and another within the southwest corner of the leaching field.

## **5.**

### **Mitigation Measures**

The Applicant intends to implement erosion controls to protect adjacent Resource Areas and properties during construction, provide stormwater management, in accordance with DEP requirements, provide Riverfront restoration and enhancement through invasive species management, re-vegetation, and establishing a pollinator meadow as part of the proposed project. These mitigating measures are intended to meet or exceed the regulatory requirements enumerated in the *Act Regulations*. A description of each of these mitigating measures is provided below.

5.1

### **Erosion and Sedimentation Control**

The Applicant proposes to implement an erosion control program to protect Pine Brook and associated BVW, and adjacent properties from sedimentation during construction activities. The plan for the control of potential impacts to the adjacent Wetland Resource Areas is based on DEP guidelines and will be comprised of staked compost filter tubes along the Limit-of-Work lines. Erosion controls will be installed along the Limit-of-Work line associated with the site development, and along the Limit-of-Work line



associated with the Riverfront Area restoration and enhancement effort. Additionally, the site will contain two (2) rip-rap construction entrances to limit sedimentation onto Route 20, and silt sacs will be installed within the Route 20 catch basins along the site frontage, and immediately west of the site. All erosion control measures will remain in place until disturbed areas are stabilized by vegetation. The location of the proposed erosion controls and details are shown on Sheet C2.0 of the *Plan Set* (attached).

## 5.2 **Stormwater Management**

Under existing conditions, the site contains no stormwater management measures. The Applicant proposes a comprehensive stormwater management system in accordance with DEP standards and the *Act Regulations*. A stormwater retention basin is proposed within the northwestern portion of the site, and a sediment forebay is proposed within the northern portion of the site along Route 20. Stormwater run-off from the proposed roof area will discharge directly to the stormwater basin, while stormwater run-off from paved areas will be collected by a series of catch basins equipped with deep sumps and hoods, and then directed to a Contech CDS Hydrodynamic Separator for further Total Suspended Solid (TSS) and pollutant removal. Stormwater will then be directed to the sediment forebay for additional TSS attenuation, followed by retention in the stormwater basin. Treated stormwater will then discharge to Pine Brook. The design results in a decrease in the peak rates and volumes of stormwater run-off from the site resulting from the 2, 10, and 100-year statistical storm events.

In addition to treating stormwater from the proposed development, the design also collects and treats stormwater run-off from a portion of Route 20. Under existing conditions, a drain pipe discharges untreated stormwater run-off from Route 20 directly into Pine Brook. The proposed design directs this untreated stormwater through the sediment forebay and retention basin for treatment prior to discharge to Pine Brook.

Further details of the proposed design, stormwater management calculations, the DEP Stormwater Checklist, a Project Site Owner's Manual, and other details are provided on Sheet C1.0 of the *Plan Set* (attached) and included in the *Stormwater Report* (attached).

## 5.3 **Riverfront Area Restoration and Enhancement**

The redevelopment project provides a significant opportunity to improve Riverfront Area functions and values. The project reduces the amount of Degraded Riverfront Area on the site by roughly 64.2% (from 90,693± square feet to 32,427± square feet), and the Applicant proposes to restore and enhance the Riverfront Area by removing invasive



plants, restoring a natural soil profile where not present or where grading within the Riverfront Area is proposed, by planting native sapling trees and shrubs, and sowing native groundcover seed mixtures to establish a variety of cover types. Where possible, these restored/planted areas extend beyond the Riverfront Area. Permanent Conservation Markers are proposed to demarcate the restored land, limiting the potential for future encroachment into the protected areas. Details and specifications are included on the *Riverfront Area Restoration Planting Plan* dated November 14, 2022 and prepared by LEC (*Plan Set*, attached). Specifically, the Applicant proposes to:

- Restore 26,000± square feet of Degraded Riverfront Area (existing structures, concrete pads, and gravel areas);
- Enhance 22,100± square feet of Previously Developed (but not Degraded) Riverfront Area (land that has been historically utilized as part of the garden center, but contains a thin layer of topsoil and therefore does not qualify as Degraded);
- Establish and maintain a 21,170± square-foot pollinator meadow, 18,396± square feet of which are located within the Riverfront Area (proposed over the footprint of the wastewater treatment facility leaching field); and
- Establish and maintain 12,090± square feet of naturally-vegetated sediment forebay/stormwater management basin, 10,305± square feet of which are in the Riverfront Area.

The above effort results in 76,800± square feet of Riverfront Area mitigation and is intended to off-set any potential impacts of the proposed development (structure, impervious, and gravel areas) that will comprise 32,427± square feet of the Riverfront Area.

### 5.3.1

## **Invasive Species Management and Revegetation**

As described above, the Previously Developed (but not Degraded) Riverfront Area along Pine Brook (red hatch on the *Planting Plan*) contains scattered inclusions of invasive shrubs and vines including porcelain berry (*Ampelopsis* sp.), multiflora rose, and Oriental bittersweet (*Celastrus orbiculatus*). These plants (including roots) will be removed using hand tools when feasible and if not using a small backhoe, and appropriately disposed of at an off-site facility.



A natural soil profile will be established within the Degraded Riverfront Area (orange hatch on the *Planting Plan*) by removing 4-6 inches of gravel, and replacing with loamy sand topsoil (5% minimum organic content). Similarly, when installing sapling trees and shrubs within the Previously Developed and Degraded Riverfront Area, the holes will be excavated twice as wide and twice as deep as the root ball, and amended with the specified topsoil. These measures will establish an appropriate planting medium for native plantings to survive.

The Previously Developed and Degraded Riverfront Area to be restored/enhanced will be planted with 70 native sapling trees and 300 native shrubs as follows:

Trees:

- 10 black gum (*Nyssa sylvatica*)
- 10 northern red oak (*Quercus rubra*)
- 10 ash-leaf maple (*Acer negundo*)
- 10 sugar maple (*Acer saccharinum*)
- 10 eastern red cedar (*Juniperus virginiana*)
- 10 tulip tree (*Liriodendron tulipifera*)
- 10 eastern white pine (*Pinus strobus*)

Shrubs:

- 30 giant rhododendron (*Rhododendron maximum*)
- 30 gray dogwood (*Cornus racemosa*)
- 30 northern arrowwood (*Viburnum dentatum*)
- 30 witch hazel (*Hamamelis virginiana*)
- 30 sweet pepperbush (*Clethra alnifolia*)
- 30 shadbush (*Amelanchier canadensis*)
- 30 nannyberry (*Viburnum lentago*)
- 30 sweet fern (*Comptonia peregrina*)
- 30 Black chokeberry (*Aronia melanocarpa*)
- 30 American hazelnut (*Corylus americana*)

The planting effort is intended to provide clusters of sapling trees and shrubs throughout the restoration and enhancement areas. Following installation of woody plants, several native seed mixtures will be applied to the site, including:

- The *Native Pollinator Seed Mix* from Ernst Conservation Seeds. This seed mix will be applied to the 25,750± square-foot Degraded Riverfront Area and the



21,170± square-foot pollinator meadow. The pollinator meadow will be mowed once annually between October 15 and April 1 to inhibit the establishment of invasive woody plants and to promote native seed dispersal in the meadow;

- The *New England Erosion Control Mix* from New England Wetland Plants, Inc. This seed mix will be applied to the 8,690± square feet of slopes comprising the stormwater detention basin and sediment forebay; and
- The *New England Erosion Control Mix for Moist Sites* from New England Wetland Plants, Inc. This seed mix will be applied to the 3,400± square feet of detention basin and sediment forebay bottoms.

All seed mixtures will be applied using either the hydroseed method, or by hand – followed by a light mulching of straw or salt marsh hay. All slopes at or near 3:1 (stormwater basin slopes and grading slopes along the emergency access roadway and wastewater treatment facility leaching field) will be stabilized with erosion control blankets following seeding.

Permanent conservation markers with signage or placards will be established along the edge of restored/enhanced Riverfront Area as depicted on the *Planting Plan*. The markers will either read, “Conservation Area – Do Not Disturb” or “Conservation Meadow: Once Annual Mowing Allowed Between October 15 and April 1” for the markers adjacent to the pollinator meadow.

### 5.3.2

## **Supervision, Monitoring, and Stewardship**

All Riverfront Area restoration and enhancement efforts will be supervised by a qualified wetland scientist and will be monitored by the wetland scientist for two (2) growing seasons to document restoration/enhancement success, identify any re-growth of invasive/exotic plants to be managed, and/or identify any re-planting efforts required due to mortality. The wetland scientist shall prepare annual monitoring reports describing the success of the restoration/enhancement effort and any required management efforts, and shall include representative site photographs. Annual reports shall be submitted to the Commission by November 30.

## **6.**

## **Regulatory Performance Standards**

The proposed project is largely a redevelopment of existing Degraded Riverfront Area, and proposes significant improvements to the Riverfront Area functions and values in



order to protect Pine Brook. These include reducing the extent of Degraded Riverfront Area on the site by roughly 64.2% (from 90,693± square feet to 32,427± square feet); siting the redevelopment farther from Pine Brook compared to existing conditions (from 39± linear feet to 136± linear feet for structures, and 21± linear feet to 87± linear feet for Degraded Riverfront Area). This mitigation will establish and maintain a 100+ foot corridor (on average) of natural vegetation along Pine Brook. Additionally, the project will mitigate untreated Route 20 stormwater run-off that currently discharges directly to Pine Brook.

The 1997 *Riverfront Area Regulatory Preface* recognizes these opportunities and flexibility within the *Act Regulations* as they relate to redeveloping Previously Developed and Degraded Riverfront Area, stating:

*Redevelopment of previously developed riverfront areas brings opportunities for restoration and other forms of mitigation. Rather than to stem the tide of further deterioration of water quality, the regulations provide an opportunity to improve our rivers by allowing issuing authorities to require on-site restoration of riverfront areas in exchange for approving additional development farther away from the river. Mitigation, such as preservation of riverfront land or improving an existing adverse impact on-site or within the watershed, also may be approved in exchange for additional development. The regulations include ratios limiting the amount of additional development that an issuing authority can permit to ensure that there will be no significant adverse impact from these projects. Based on comments received on the proposed regulations, the final regulations allow for a broader range of redevelopment projects to qualify for the restoration and mitigation option, and also clarify the standards required of those projects. Restoration and other mitigation opportunities offer applicants greater flexibility without compromising environmental protection.*

The *Act Regulations* provide specific performance standards for work within Riverfront Area and BLSF. Citations of the pertinent performance standards are provided below, along with a description of how the project meets these standards.

6.1

## **Riverfront Area Performance Standards**

The proposed project is largely considered a ‘Redevelopment’ within ‘Previously Developed’ and ‘Degraded’ Riverfront Area in accordance with 310 CMR 10.58 (5); however, a portion of the project also occurs within partially wooded and ‘Previously Developed’ Riverfront Area that does not qualify as ‘Degraded.’ Therefore, compliance



with both Riverfront Area Regulations at 310 CMR 10.58 (5) and 10.58 (4) are provided below.

6.1.1

**310 CMR 10.58 (5)**

*Redevelopment Within Previously Developed Riverfront Areas: Restoration and Mitigation.* Notwithstanding the provisions of 310 CMR 10.58 (4) (c) and (d), the issuing authority may allow work to redevelop a previously developed riverfront area, provided the proposed work improves existing conditions. Redevelopment means replacement, rehabilitation, or expansion of existing structures...A previously developed riverfront area contains areas degraded prior to August 7, 1996 by impervious surfaces from existing structures or pavement, absence of topsoil... Work to redevelop previously developed riverfront area shall conform to the following criteria:

- (a) *At a minimum, proposed work shall result in an improvement over existing conditions of the capacity of the riverfront area to protect the interests identified in M.G.L. c. 131, s. 40. When a lot is previously developed but no portion of the riverfront area is degraded, the requirements of 310 CMR 10.58 (4) shall be met.*

Native restoration and enhancement plantings are proposed to restore Previously Developed and Degraded Riverfront Area. Specifically, 70 native sapling trees and 300 native shrubs are proposed, along with several native groundcover seed mixtures to restore and enhance the Previously Developed and Degraded Riverfront Area on the site.

- (b) *Stormwater management is provided according to standards established by the Department.*

Stormwater management in accordance with DEP requirements is proposed by collecting, treating, and retaining stormwater run-off from impervious areas using deep sump and hooded catch basins, a hydrodynamic separator, a sediment forebay, and stormwater retention basin. Further, existing untreated stormwater run-off from Route 20 will be directed to the sediment forebay and retention basin for treatment and retention prior to discharge to Pine Brook.

- (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....*

The proposed project is located significantly farther from Pine Brook compared to the existing, abandoned garden center. Under existing conditions, the closest



structure measures 39± linear feet from the Pine Brook, and Degraded Riverfront Area measures as close as 21± linear feet to Pine Brook. The proposed structure measures 136± linear feet from Pine Brook at its closest point, and proposed Degraded Riverfront Area (the emergency access roadway) measures 87± linear feet from Pine Brook at its closest point. This represents a significant shift of development away from Pine Brook compared to existing conditions.

- (d) *Proposed work, including expansion of structures, shall be located outside the riverfront area or toward the riverfront area boundary and away from the river, except in accordance with 310 CMR 10.58 (5) (f) or (g).*

As further detailed in the above Section 6, the proposed development is located significantly farther from Pine Brook compared to the existing development.

- (e) *The area of proposed work shall not exceed the amount of the degraded area, provided that the proposed work may alter up to 10% if the degraded area is less than 10% of the riverfront area, except in accordance with 310 CMR 10.58 (5) (f) or (g).*

The project site contains 90,623± square feet of Degraded Riverfront Area. The proposed project results in a roughly 64.2% decrease in Degraded Riverfront Area on the site, from 90,693± square feet to 32,427± square feet.

- (f) *When an applicant proposes restoration on-site of degraded riverfront area, alteration may be allowed notwithstanding the criteria of 310 CMR 10.58 (5) (c), (d), and (e) at a ratio in square feet of at least 1:1 of restored area to area of alteration not conforming to the criteria. Areas immediately along the river shall be selected for restoration...*
- (g) *When an applicant proposes mitigation either on-site or in the riverfront area within the same general area of the river basin, alteration may be allowed notwithstanding the criteria of 310 CMR 10.58(5)(c), (d), or (e) at a ratio in square feet of at least 2:1 of mitigation area to area of alteration not conforming to the criteria or an equivalent level of environmental protection where square footage is not a relevant measure. Alteration not conforming to the criteria shall begin at the riverfront area boundary...*

With regard to (f) and (g), the Applicant proposes on-site restoration of Degraded Riverfront Area, and enhancement of Previously Developed Riverfront Area to the maximum extent practicable for this site, resulting in a 64.2% reduction of Degraded



Riverfront Area on the site. Details of the proposed restoration and enhancement effort are described above in Section 5.3.

6.1.2

### **310 CMR 10.58 (4)**

The performance standards outlined in 310 CMR 10.58 (4) include:

- (a) Protection of Other Resource Areas: Work is proposed within BLSF, and compliance with the BLSF performance standards is provided below in Section 7.2;
- (b) Protection of Rare Species: The site is not within Rare Species Habitat as noted above in Section 2.1;
- (c) Practicable and Substantially Equivalent Economic Alternatives: An Alternatives Analysis is provided below; and
- (d) No Significant Adverse Impact: A discussion of Significant Adverse Impacts is provided below.

6.1.1

### **Alternatives Analysis**

The purpose of this project is to construct an affordable housing development in Wayland. Alternative designs were considered and discussed during the ZBA Comprehensive Permit review process, and a wastewater treatment facility was added to the project design during the HAC review process. DEP has completed its review of the Hydrogeologic Report prepared by Geosphere, authorizing the Applicant to submit the Groundwater Discharge Permit application. The Applicant has evaluated a no build alternative; other locations in town; a larger building footprint with fewer stories; a smaller building footprint with less units; and the preferred alternative, as further described below.

#### **No Build Alternative**

A No-Build Alternative does not contribute to the need for affordable housing in Wayland, and does not include the significant mitigating measures intended to improve the Riverfront Area functions and values compared to existing conditions, including invasive species management and restoration and enhancement with native plants and seed mixtures, stormwater management where none exists today, and mitigating stormwater run-off from a portion of Route 20.

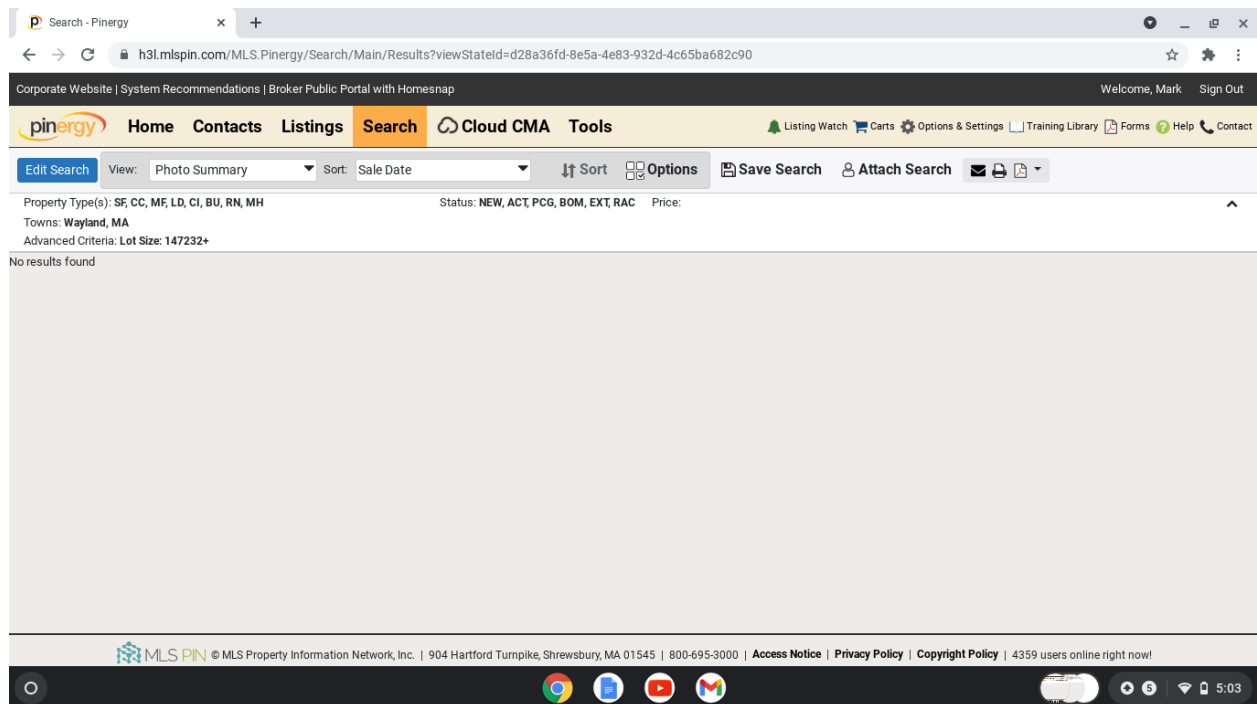
#### **Alternative Locations in Wayland**

The Act Regulations at 310 CMR 10.58 (4) (c) 2. c. state: *...the area under consideration for practicable alternatives extends to the original parcel and the subdivided parcels, any*



*adjacent parcels, and any other land which can reasonably be obtained within the municipality for: i. activities associated with residential subdivision or housing complexes, institutional, industrial, or commercial projects...*

On November 8, 2022, the Applicant's real estate agent (Sotheby's) conducted an MLS search for alternative land opportunities. The criteria for the search were limited to land 3.8 acres or more (the size of the proposed development footprint) within the town of Wayland, with zero results. A screen shot of the search results is provided below.



Based on this MLS search, there are no viable alternative land parcels to the properties at 113-115 Boston Post Road for the proposed development.

### Larger Building Footprint with Fewer Stories

During the Comprehensive Permit review process by the ZBA, multiple building and parking configurations were considered, including a 3-story building with a larger footprint. This design was ultimately revised to the current design based in part on the increased Riverfront Area alteration that would result and the height increased from 3 to 4 stories (with a 3-story façade along Route 20). Further, subsurface parking beneath the building was added to reduce impervious area associated with surface parking.

Constructing a building taller than proposed would not be appropriate for the neighborhood with respect to scale and massing, and would require additional relief from



the ZBA that is unlikely to be granted, as the ZBA denied the original height waiver requested for the project and only relented after the wastewater treatment facility was included as part of the modified project.

#### Smaller Building Footprint with Less Units

The Applicant also explored reducing the number of units for the project and making the building smaller to reduce the area of Riverfront Area alteration. However, given the acquisition cost for the parcels, and construction costs, in particular the cost of the wastewater treatment facility, the project will not be able to attain a rate of return on total cost of 15%, and thus will be uneconomic as that term is defined pursuant to the applicable regulations, and could hinder the Applicant's ability to obtain financing for the project.

#### Preferred Alternative

The preferred alternative balances the requirement for a 60-unit count with an acceptable amount of Riverfront Area alteration that meets the regulatory performance standards, and includes significant mitigating measures that significantly improve the functions and values of the Riverfront Area compared to existing conditions. These include a 64.2% reduction of Degraded Riverfront Area on the site; a robust invasive species management and revegetation plan; a pollinator meadow; a stormwater management system where none exists today; and treating and retaining stormwater run-off from a portion of Route 20 that currently discharges directly to Pine Brook. The preferred alternative also includes interior subsurface parking, which reduces the required number of surface parking spaces.

6.1.2

#### **No Significant Adverse Impact**

As described above, 7,014± square-feet of Riverfront Area to be altered does not qualify as Degraded in accordance with 310 CMR 10.58 (5). This 7,014± square-foot area is proposed to be altered in large part to accommodate the wastewater treatment leaching field and for a small portion of the gravel emergency access road. Much of this alteration footprint will be converted to a pollinator meadow following installation of the leaching facility in accordance with the *Planting Plan*.

310 CMR 10.58 (4) (d) states:

*The work, including proposed mitigating measures, must have no significant adverse impact on the riverfront area to protect the interests identified in M.G.L. c. 131, s. 40...*



310 CMR 10.58 (4) (d) 1. states:

*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, on a lot recorded on or before October 6, 1997 or lots recorded after October 6, 1997 subject to the restrictions of 310 CMR 10.58 (4) (c) 2.b.vi., or up to 10% of the riverfront area within a lot recorded after October 6, 1997, provided that:*

According to the deed research conducted by LEC, the properties were established in 1946 (garden center property) and 1985 (dwelling property) and together contain 209,448± square feet of Riverfront Area, 10% of which is 20,945± square feet. While the Applicant proposes to alter more than 20,945± square feet of Riverfront Area for the project, most of the alteration is within existing Degraded Riverfront Area. Only 7,014± square feet of alteration are proposed within non-Degraded Riverfront Area which is below the 10% threshold. This number does not include the alteration footprints for stormwater management or restoration/enhancement, as the *Act Regulations* at 310 CMR 10.58 (4) (d) 1. d. state:

*...The calculation of square footage of alteration shall **exclude areas of replication or compensatory flood storage required to meet performance standards for other resource areas, or any area of restoration within the riverfront area. The calculation also shall exclude areas used for structural stormwater management measures**, provided there is no practicable alternative to siting these structures within the riverfront area and provided a wildlife corridor is maintained (e.g. detention basins shall not be fenced) [Emphasis added].*

The Applicant has proposed the stormwater retention basin within the northwestern portion of the site, and a sediment forebay within the northern portion of the site, as far away from Pine Brook as possible. Situating the stormwater basin and forebay elsewhere on the property (such as along Boston Post Road) would result in relocating and/or reconfiguring the building closer to Pine Brook. Accordingly, the 14,183± square feet of alteration associated with the stormwater basin and forebay are excluded from the calculation of Riverfront Area alteration.

*(a) At a minimum, a 100-foot wide area of undisturbed vegetation is provided...If there is not a 100-foot wide area of undisturbed vegetation within the riverfront area, existing vegetative cover shall be preserved or extended to the maximum extent feasible to approximate a 100-foot wide corridor of natural vegetation...*



As described above, much of the existing site development occurs within the 0 to 100-foot Riverfront Area, with existing structures as close as 39± linear feet to Pine Brook, and Degraded Riverfront Area as close as 21 linear feet to Pine Brook. The proposed project shifts the structure 136± from Pine Brook, and the vast majority of the 0 to 100-foot Riverfront Area will be restored, enhanced, and preserved in perpetuity by permanent demarcation, including land beyond the 200-foot Riverfront Area boundary.

- (b) *Stormwater is managed according to the standards established by the Department in its Stormwater Policy.*

Stormwater management in accordance with DEP requirements is proposed by collecting, treating, and retaining stormwater run-off from impervious areas using deep sump and hooded catch basins, a hydrodynamic separator, a sediment forebay, and stormwater retention basin.

- (c) *Proposed work does not impair the capacity of the riverfront area to provide important wildlife habitat functions...*

The Applicant proposes improvements to the existing Riverfront Area by restoring and enhancing Previously Developed and Degraded Riverfront Area through invasive species management, planting 70 native sapling trees and 300 native shrubs, and establishing a pollinator meadow and other groundcovers to improve wildlife habitat function and value associated with the site. Further, the Applicant proposes to improve water quality and aquatic wildlife habitat by redirecting untreated stormwater from Route 20 through the sediment forebay and retention basin for treatment prior to discharge to Pine Brook.

- (d) *Proposed work shall not impair groundwater or surface water quality by incorporating erosion and sedimentation controls and other measures to attenuate nonpoint source pollution.*

Erosion controls will be installed along the Limit-of-Work line, and stormwater management in accordance with DEP requirements is proposed to collect and retain stormwater runoff from impervious areas. The project provides groundwater and surface water quality by providing stormwater management where none exists today, and by providing a wastewater treatment facility – a significant upgrade compared to traditional septic design.



6.2

## **BLSF Performance Standards**

The project results in roughly 2,462 square feet of work within BLSF for a portion of the western access driveway and parking, and a portion of the emergency access roadway; however, no displacement of flood storage volume is proposed. Rather, the proposed grading within the BLSF results in a nominal increase in flood storage. The *Act Regulations* at 310 CMR 10.57 (4) state that *work within BLSF shall conform to the following criteria:*

(a) *Bordering Land Subject to Flooding*

- (1) *Compensatory storage shall be provided for all flood storage volume that will be lost as a result of the proposed work.*

The project will result in a nominal increase of flood storage volume compared to existing conditions, as depicted on Sheet FL1.0 of the *Plan Set*. No displacement of flood storage is proposed.

- (2) *Work within BLSF...shall not restrict flows so as to cause an increase in flood stage or velocity.*

Proposed work in the floodplain will not restrict flows or cause an increase in flood storage.

- (3) *within BLSF shall not impair its capacity to provide important wildlife habitat functions.*

According to the BLSF Preamble at 310 CMR 10.57 (1) (a) 3:

*Certain portions of Bordering Land Subject to Flooding are also likely to be significant to the protection of wildlife habitat. These include all areas on the ten year floodplain or within 100 feet of the bank or bordering vegetated wetland (whichever is further from the water body or waterway, so long as such area is contained within the 100 year floodplain), and all vernal pool habitat on the 100 year floodplain, except for those portions of which have been so extensively altered by human activity that their important wildlife habitat functions have been effectively eliminated (such "altered" areas include paved and graveled areas, golf courses, cemeteries, playgrounds, landfills, fairgrounds, quarries, gravel pits, buildings, lawns, gardens, roadways (including median strips, areas enclosed within highway interchanges, shoulders, and embankments), railroad*



*tracks (including ballast and embankments), and similar areas lawfully existing on November 1, 1987 and maintained as such since that time).*

The portion of land located within BLSF is “altered” and is therefore not significant to the protection of wildlife habitat. The Riverfront Area restoration and enhancement proposed as part of the project overlaps the BLSF on the site, resulting in an improvement to the BLSF functions and values, including wildlife habitat.

(b) Protection of Rare Wildlife Species

*(1) Notwithstanding the provisions of 310 CMR 10.57(4)(a) or (b), no project may be permitted which will have any adverse effect on specified wildlife habitat sites of rare vertebrate or invertebrate species.*

There are no specified wildlife habitat sites of rare vertebrate or invertebrate species located on the project site; therefore, the proposed project will have no adverse effect on any such sites.

## 7. Summary

On behalf of the Applicant and Property Owner, Cascade Development Associates, LLC, LEC is filing the enclosed NOI Application with the Wayland Conservation Commission to demolish existing structures, driveways, parking lots, and impervious and gravel areas associated with the abandoned former Mahoney’s garden center and the single-family dwelling, and construct a 60-unit, 4-story 40B affordable housing development with associated access drives, parking, sediment forebay, stormwater retention basin, and wastewater treatment facility. Portions of the proposed project are located within Riverfront Area and BLSF associated with Pine Brook and within the 100-foot Buffer Zone to BVW. The Applicant proposes site grading, a retaining wall, erosion controls, invasive species management, Riverfront Area restoration and enhancement, a pollinator meadow, and stormwater management.

This NOI Application is being filed only under the *Act* and *Act Regulations*, as the Wayland Zoning Board of Appeals administered the approvals under the *Town of Wayland Stormwater and Land Disturbance Bylaw* (Chapter 193) and the *Town of Wayland Wetlands and Water Resources Protection Bylaw* (Chapter 194) during the Comprehensive Permit review process. The Comprehensive Permit was appealed to the



Housing Appeals Committee (HAC), and the HAC issued a Decision on Stipulation and Entry of Judgement (No. 2019-3) approving the development.

The project results in significant improvements to the Riverfront Area functions and values by reducing Degraded Riverfront Area by 64.2%; providing invasive species management, restoration and enhancement of the Riverfront Area, providing stormwater management where none exists today, and by treating and retaining untreated stormwater run-off from Route 20 that currently discharges directly to Pine Brook. While a portion of work is proposed within BLSF, the project results in a slight increase in flood storage compared to existing conditions. Accordingly, the Applicant requests that the Commission issue an Order of Conditions approving the project as proposed herein.



Massachusetts Department of Environmental Protection, Division of Wetlands and Waterways 1995. *Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act, A Handbook*. 89 pp.

Massachusetts Natural Heritage and Endangered Species Program Atlas of Estimated Habitat of State-listed Rare Wetlands Wildlife, Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife, Route 135, Westborough, MA 01581, [www.state.ma.us/dfwele/dfw](http://www.state.ma.us/dfwele/dfw)

Massachusetts Wetlands Protection Act (M.G.L. c. 131, §. 40), [www.state.ma.us/dep](http://www.state.ma.us/dep)  
Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00),  
[www.state.ma.us/dep](http://www.state.ma.us/dep)

National Flood Insurance Program, Federal Emergency Management Agency Flood Insurance Rate Map (Map Number 25017C0527F), Middlesex County, July 7, 2014.

New England Hydric Soils Technical Committee. 2020, 4<sup>th</sup> ed., *Field Indicators for Identifying Hydric Soils in New England*, New England Interstate Water Pollution Control Commission, Lowell, MA.

Reed, P.B. 1988. *National List of Plant Species that Occur in Wetlands: 1988 Massachusetts*. U.S. Department of the Interior, Fish and Wildlife Service. NERC-88/18.21

Wayland Conservation Commission. *Town of Wayland Stormwater and Land Disturbance Bylaw* (Chapter 193) and the *Town of Wayland Wetlands and Water Resources Protection Bylaw* (Chapter 194). Wayland, Massachusetts.



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## **Appendix A**

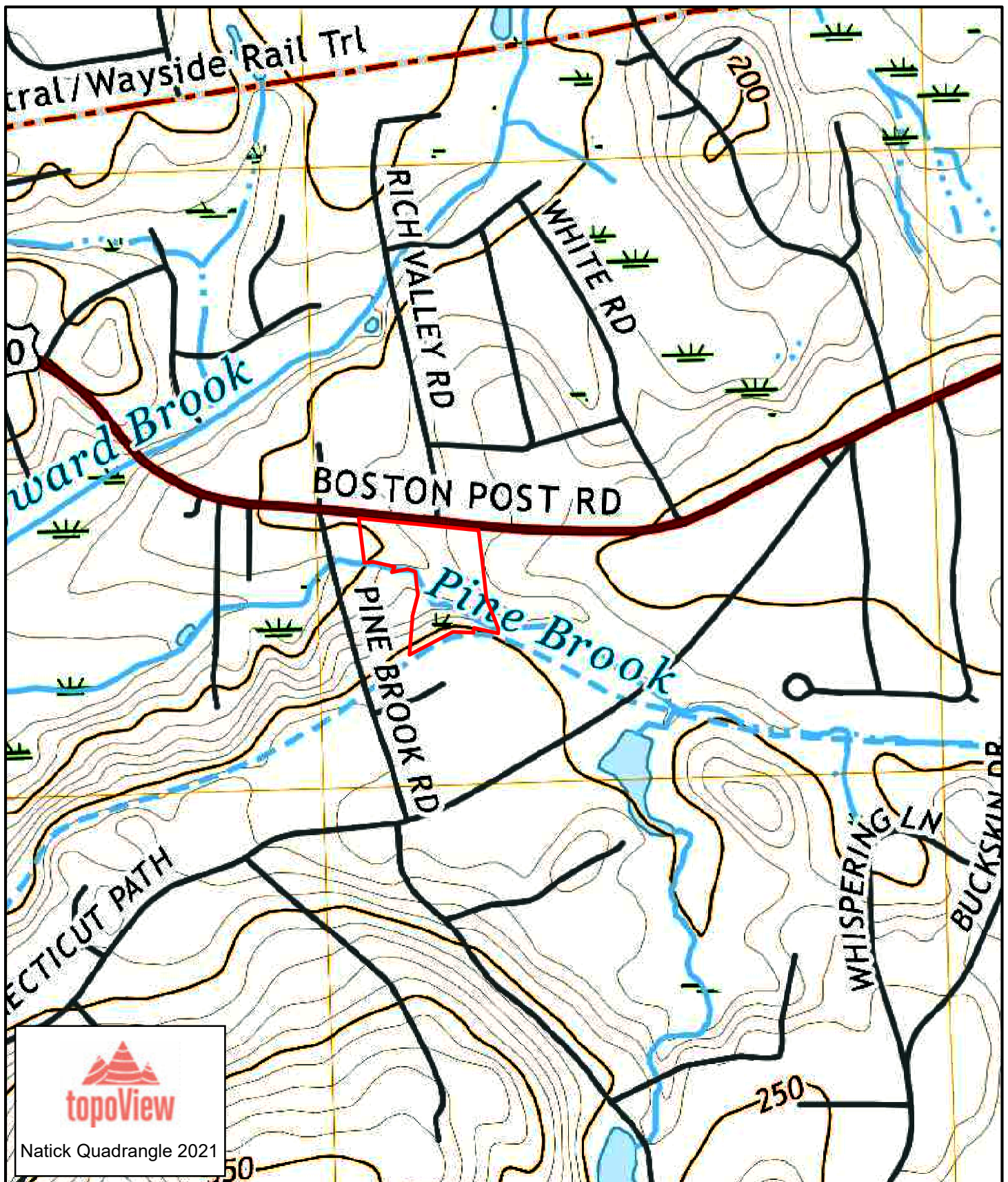
### Locus Maps

Figure 1: USGS Topographic Quadrangle

Figure 2: FEMA Flood Insurance Rate Map

Figure 3: MassGIS Orthophoto & NHESP Estimated Habitat Map





**LEC**

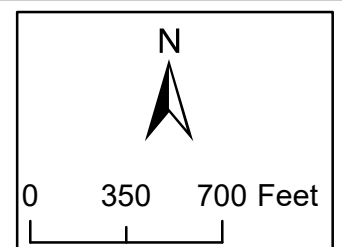
Environmental Consultants, Inc.

Wakefield, MA  
781.245.2500

[www.lecenvironmental.com](http://www.lecenvironmental.com)

Figure 1: USGS Topographic Map  
113 & 115 Boston Post Road  
Wayland, MA

November 16, 2022





# National Flood Hazard Layer FIRMette Figure 2



71°20'48"W 42°21'47"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000 71°20'11"W 42°21'20"N  
Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

|                             |  |   |
|-----------------------------|--|---|
| SPECIAL FLOOD HAZARD AREAS  |  | Without Base Flood Elevation (BFE)<br>Zone A, V, A99  |
|                             |  | With BFE or Depth Zone AE, AO, AH, VE, AR   |
|                             |  | Regulatory Floodway   |
| OTHER AREAS OF FLOOD HAZARD |  | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X |
|                             |  | Future Conditions 1% Annual Chance Flood Hazard Zone X  |
|                             |  | Area with Reduced Flood Risk due to Levee. See Notes. Zone X  |
|                             |  | Area with Flood Risk due to Levee Zone D  |
| OTHER AREAS                 |  | NO SCREEN Area of Minimal Flood Hazard Zone X   |
|                             |  | Effective LOMRs   |
| GENERAL STRUCTURES          |  | Area of Undetermined Flood Hazard Zone D  |
|                             |  | Channel, Culvert, or Storm Sewer  |
| OTHER FEATURES              |  | Levee, Dike, or Floodwall   |
|                             |  | Cross Sections with 1% Annual Chance Water Surface Elevation  |
| OTHER FEATURES              |  | Coastal Transect  |
|                             |  | Base Flood Elevation Line (BFE)   |
| OTHER FEATURES              |  | Limit of Study  |
|                             |  | Jurisdiction Boundary   |
| OTHER FEATURES              |  | Coastal Transect Baseline   |
|                             |  | Profile Baseline  |
| OTHER FEATURES              |  | Hydrographic Feature  |
| MAP PANELS                  |  | Digital Data Available  |
|                             |  | No Digital Data Available   |
|                             |  | Unmapped  |



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **11/8/2022 at 12:40 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.





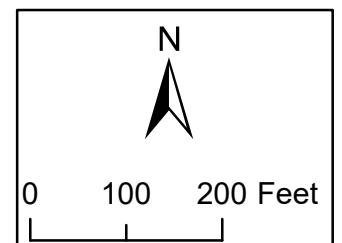
Environmental Consultants, Inc.

Wakefield, MA  
781.245.2500

[www.lecenvironmental.com](http://www.lecenvironmental.com)

Figure 3: MassGIS Orthophoto & NHESP Map  
113 & 115 Boston Post Road  
Wayland, MA

November 16, 2022



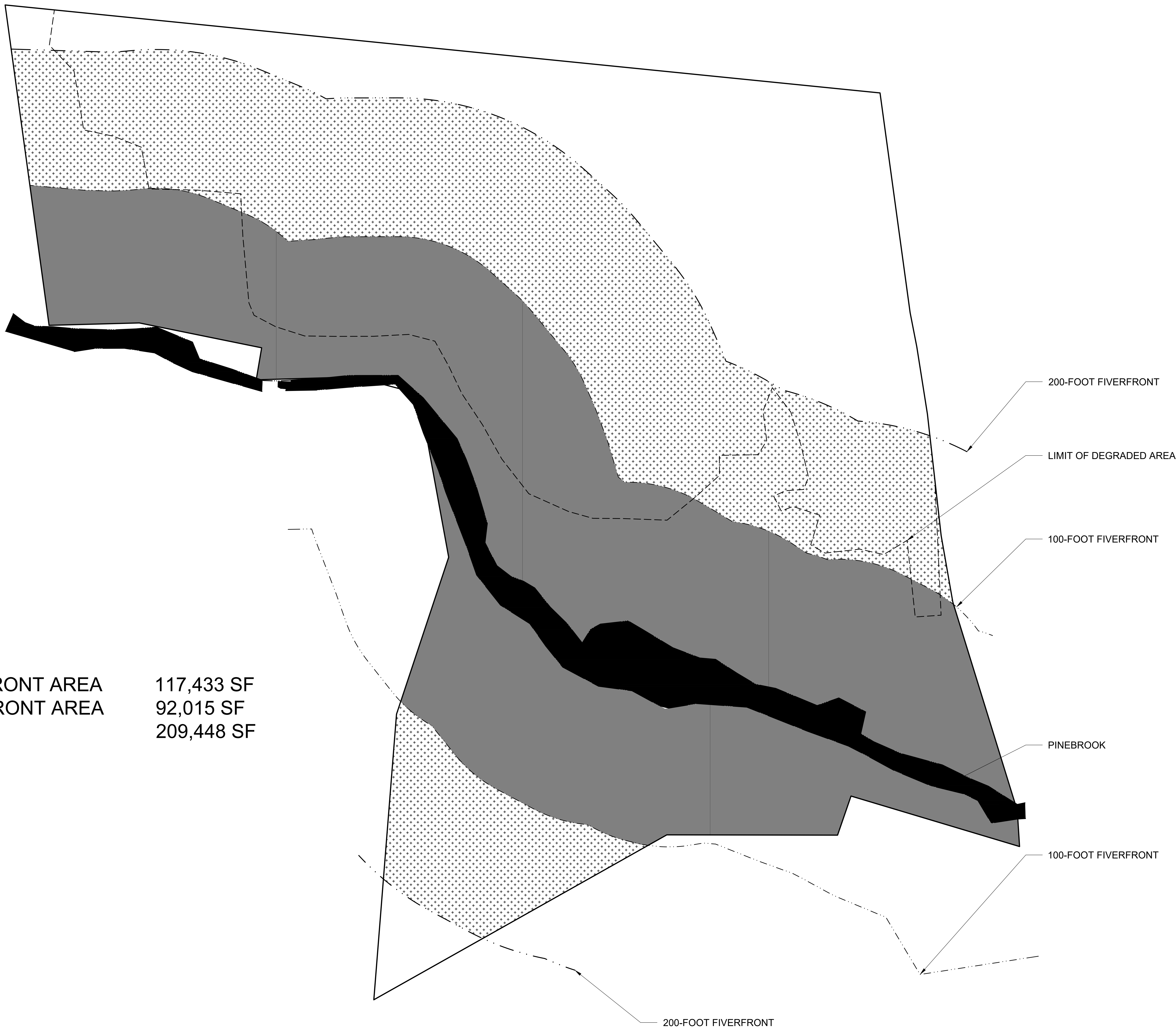


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## **Appendix B**

*Riverfront Area Plans,*  
dated November 14, 2022, prepared by C1.0 Engineering & Development





100 FOOT RIVERFRONT AREA 117,433 SF  
200 FOOT RIVERFRONT AREA 92,015 SF  
TOTAL 209,448 SF

|     |             |      |
|-----|-------------|------|
|     |             |      |
| No. | Description | Date |

DWG ISSUE & REVISION HISTORY

Stamp



Key Plan

Project Title:

CASCADE WAYLAND  
NOTICE OF INTENT

Drawing Title:

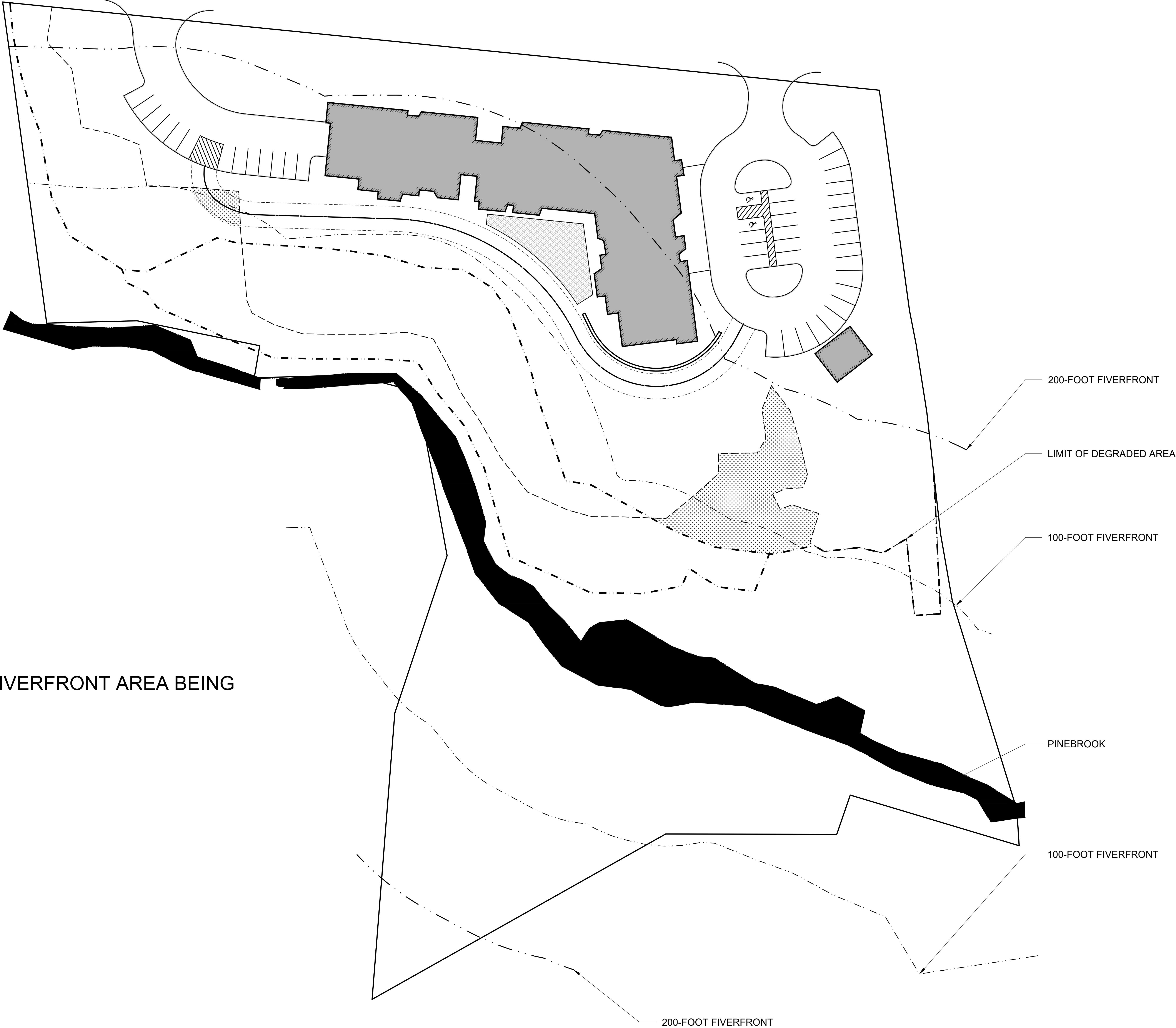
TOTAL RIVERFRONT  
AREA

Project No.: 160012 Scale: 1"=30'  
Drawn By: SJ  
Checked By: WAD  
Approved By: WAD  
Date: NOVEMBER 14, 2022

Drawing No.

AREA 1





NON-DEGRADED RIVERFRONT AREA BEING  
ALTERED 7,014 SF

|     |             |      |
|-----|-------------|------|
|     |             |      |
| No. | Description | Date |

DWG ISSUE & REVISION HISTORY

Stamp



Key Plan

Project Title:

CASCADE WAYLAND  
NOTICE OF INTENT

Drawing Title:

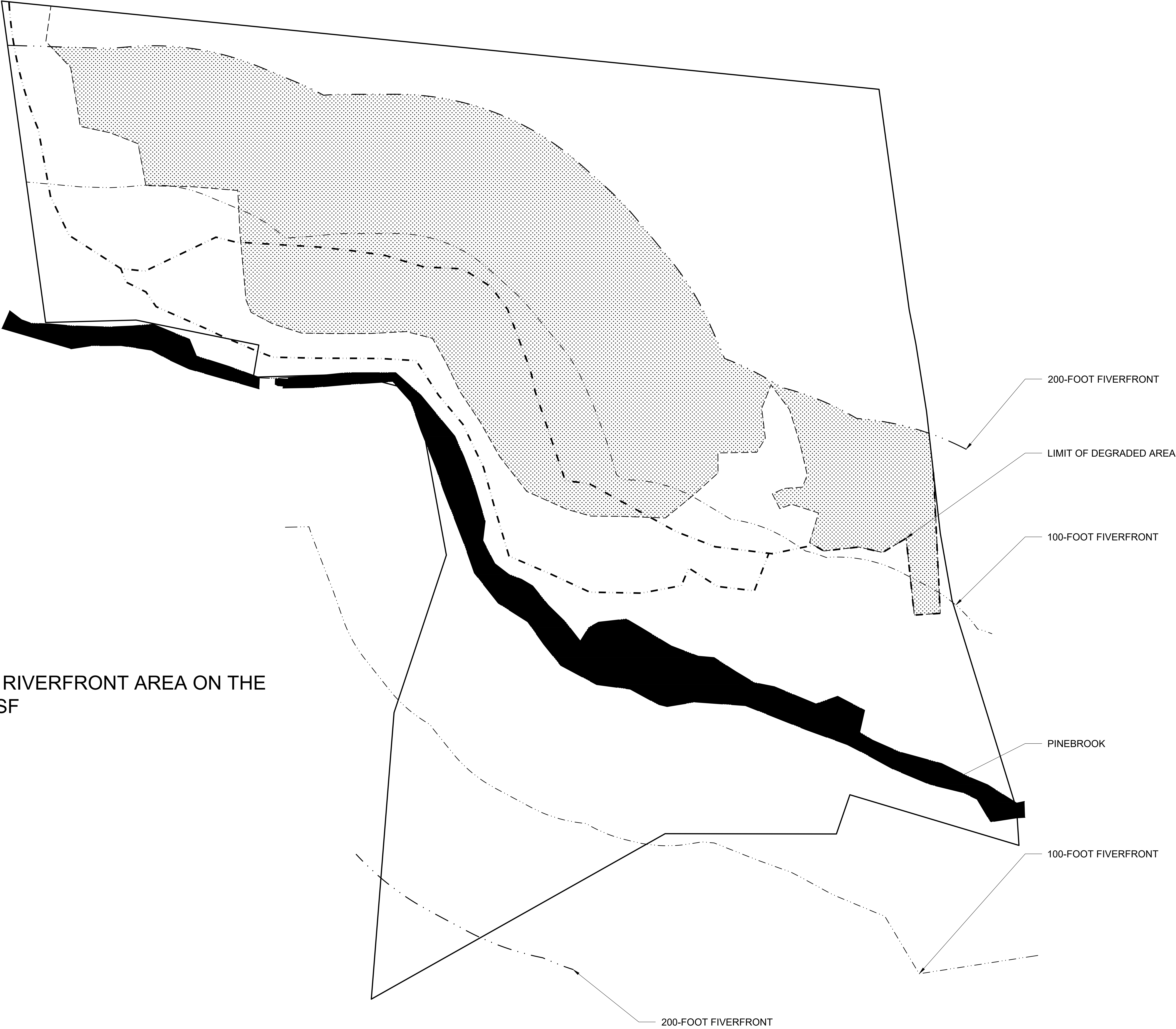
NON-DEGRADED  
RIVERFRONT BEING  
ALTERED

Project No.: 160012 Scale: 1"=30'  
Drawn By: SJ  
Checked By: WAD  
Approved By: WAD  
Date: NOVEMBER 14, 2022

Drawing No.

AREA 2





|     |             |      |
|-----|-------------|------|
|     |             |      |
| No. | Description | Date |

DWG ISSUE & REVISION HISTORY

Stamp



Key Plan

Project Title:

CASCADE WAYLAND  
NOTICE OF INTENT

Drawing Title:

EXISTING DEGRADED  
RIVERFRONT AREA ON  
THE PROPERTY

Project No.: 160012 Scale: 1"=30'  
Drawn By: SJ  
Checked By: WAD  
Approved By: WAD  
Date: NOVEMBER 14, 2022

Drawing No.

AREA 3







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## **Appendix C**

*DEP Approval of Supplemental Hydrogeological Evaluation Report*

dated August 31, 2021





Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

Northeast Regional Office • 205B Lowell Street, Wilmington MA 01887 • 978-694-3200

Charles D. Baker  
Governor

Kathleen A. Theoharides  
Secretary

Karyn E. Polito  
Lieutenant Governor

Martin Suuberg  
Commissioner

August 31, 2021

Mr. Steven Zieff  
Cascade Development Associates LLC  
c/o Eden Management Inc.  
80 Hope Avenue #512  
Waltham, MA 02453

RE: Approval of Supplemental Hydrogeological Evaluation Report  
WP83 Application: Hydrogeologic Report  
Cascade Wayland, Wayland, Massachusetts  
Transmittal number: X287221

Dear Mr. Zieff:

The Massachusetts Department of Environmental Protection (MassDEP) has completed its review of a report titled *Revised Hydrogeologic Report: Groundwater Mounding Analysis for Proposed Subsurface Disposal System* ("Report") that was submitted by Geosphere Environmental Management, Inc. (Geosphere) and received by MassDEP on February 3, 2021. Subsequently, additional information was provided by Geosphere via email on July 12, 2021 addressing the technical deficiencies issued on April 14, 2021. The report summarizes the results of a hydrogeologic evaluation conducted by Geosphere to support a future Groundwater Discharge Permit Application to be located at 115 Boston Post Road in Wayland, MA. The evaluation was conducted in accordance with the scope of work submitted by Geosphere during the pre-application meeting with MassDEP on March 4, 2020. Notice of the availability of the scope of work was published in the Environmental Monitor on May 6, 2020.

The proposed project is a planned residential subdivision located at 115 Boston Post Road in Wayland, MA which is comprised of Wayland Assessor's Map 30, Lots 70 and 71. Lot 70 is occupied by a two-story private residence and two-story barn, and Lot 71 is where the greenhouses and showroom are located for the former Mahoney Garden Center. The project proponent proposes to develop an apartment building with 97 bedrooms and a wastewater discharge design flow rate of 11,000 gallons per day (GPD) which will be pressure dosed to a proposed primary subsurface absorption system (SAS) of 4,153 square feet. The SAS will consist of 10 infiltration rows composed of standard high density plastic leaching chamber



spaced with three times their effective width of 34-inches between them to account for the ability to install a future reserve area. The facility is bisected by Pine Brook, which flows westward, towards the Sudbury River. The proposed SAS will be located a minimum of 100 ft. from Pine Brook. The site is not located within a Zone II. The groundwater elevation data obtained on April 6, 2018 from monitoring wells MW-3 and MW-7 indicates that the groundwater generally flows in the westerly direction, as shown in Figure 4 titled *Observed Groundwater Contours* of the report.

Soils test and borings included 9 monitoring wells, 28 test pits, 16 surface water locations, and 10 percolation tests were performed within and around the footprint of the proposed SAS. The monitoring/boring well data indicates that outwash deposits consist of mostly sand and gravel deposits, below which, a layer of very compact, cohesive silt exists in the eastern portion of the site. It is assumed that soil boring refusal depths are due to encountering weathered bedrock (ledge) or dense glacial till. Test pit OSE-TP-10, located slightly north of the northern boundary of the SAS footprint, was found to have less than 4 ft of natural pervious material before encountering refusal. The percolation test results range from less than 2 minutes per inch (mpi) to 33 mpi. A hydraulic conductivity of 2 feet/day was estimated for the site which is appropriate for the soils that were evidenced in the boring logs and test pits.

Redoximorphic features indicative of seasonal high groundwater were observed in 23 of the test pits during the soils tests. In addition, maximum groundwater elevation from data gathered on April 6, 2018 and April 28, 2020 from the monitoring wells were compiled to calibrate the MODFLOW model resulting in a simulated Estimated Seasonal High Groundwater (ESHGW) elevation from 168.85 to 172.6 ft across the SAS. At the ESHGW, with 80% of the discharge, the groundwater mound is expected to be at 0.36 ft above the existing groundwater elevations beneath the leach field. However, with the construction of raised leaching bed, the possibility of actual breakout under these modeled conditions are eliminated. Through the groundwater model simulation, a 5% increase of the Pine Brook volume of water from 10,101 cubic foot per day (cfd) to 10,593 cfd, is predicted with the addition of the proposed groundwater discharge.

Based on the proposed groundwater monitoring well and surface water monitoring locations shown in Figure 3 *Revised Site Plan* in the July 12, 2021 submission, MassDEP agrees that the groundwater monitoring wells (MW-3, MW-5R, and MW-6) and the surface water monitoring locations (SW-U and SW-M) are appropriately located. MW-3 should be upgradient outside of the influence of the proposed discharge and MW-5R and MW-6 are downgradient of the proposed SAS location.

Pursuant to 314 CMR 5.09(l)(f), MassDEP hereby approves the hydrogeologic report submitted by Geosphere and authorizes the applicant to apply for an Individual Groundwater Discharge Permit (BRPWP79) subject to the following conditions:

- 1) The design flow to the proposed subsurface absorption system shall not exceed 11,000 gallons per day.
- 2) The long-term application rate to the SAS shall not be greater than 3 gallons/day/square foot.



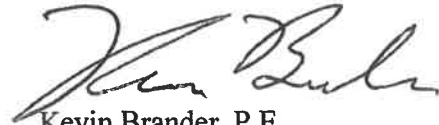
- 3) The proposed SAS shall not be constructed until a Groundwater Discharge Permit has been obtained from MassDEP. The proposed SAS shall be constructed within the footprint indicated on Figure B titled *Groundwater Discharge Permit Site Plan* that was included with the response to MassDEP deficiencies dated July 12, 2021.
- 4) The bottom elevation of the proposed SAS shall be constructed at elevations shown on Figure A titled *Effluent Disposal System Cross Section A-A* that was included with the response to MassDEP deficiencies dated July 12, 2021. Unsuitable organics shall be removed, and the excavation shall be backfilled with Title 5 fill.
- 5) MassDEP approved the use of monitoring well locations as shown in Figure 3 titled *Revised Site Plan* that was included with the response to MassDEP deficiencies dated July 12, 2021 and understands they will remain unchanged. Any changes to the monitoring well network are to be submitted to this office for approval prior to well installation.
- 6) An Initial Groundwater Monitoring Well and Groundwater Quality Report must be submitted to this office prior to any discharge of wastewater. This report must include:
  - a. A final surveyed site plan with the location of the SAS, monitoring wells, the appropriate surveyed elevation data including top-of-casing and top-of-PVC elevations for all monitoring wells, location of cultural features such as buildings, roads, athletic fields, leach fields, and groundwater flow direction;
  - b. Boring logs and well construction details for all monitoring wells; and
  - c. Analytical results of the groundwater samples collected from the final groundwater monitoring wells. These results will establish the baseline groundwater quality for the site.

Please be advised that this approval **is not** a Groundwater Discharge Permit. It does, however, authorize the project proponent to submit a MassDEP Individual Groundwater Discharge Permit application for the project site. MassDEP requires that the Individual Groundwater Discharge Permit application (BRP 79) be accompanied by a MassDEP Transmittal form and include all required supporting documentation. Included in the supporting documentation shall be a certification from a Massachusetts Registered Professional Engineer that the approved Hydrogeological Report has been reviewed and accurately reflects site conditions as of the date of the permit application. Information on any changes noted during the review shall be included in the Engineering Report that accompanies the application.



If you have questions regarding the comments and conditions of this approval, please contact Tenzin Lama of my staff via email at Tenzin.Lama@mass.gov.

Sincerely,



Kevin Brander, P.E.  
Section Chief  
Wastewater Management Section

KB/JN/JC/TL

Enclosure

cc (via email): Raymond Talkington, Ph.D., Geosphere Environmental Management, Inc.  
Dave Formato, P.E., Onsite Engineering, Inc.  
Julia Junghanns, Town of Wayland Board of Health  
Joe Cerruti/Bureau of Water Resources/MassDEP/Boston  
Marybeth Chubb/Wastewater Management Program/MassDEP/Boston



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## **Attachments**

*Cascade Residential Housing Development Plan Set,*  
dated November 14, 2022, prepared by C1.0 Engineering & Development

*Post Construction Stormwater Management Report,*  
dated November 14, 2022, prepared by C1.0 Engineering & Development