

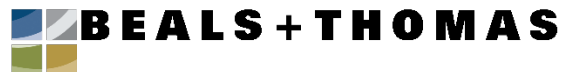
Notice of Intent

Course-wide Drainage Improvements

**326 Fuller Street
West Newton, Massachusetts**

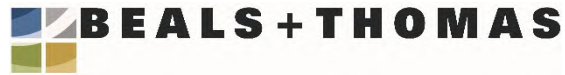
Prepared for:
**Brae Burn Country Club
326 Fuller Street
West Newton, Massachusetts 02465**

Prepared by:



***Submitted in Compliance with the
Massachusetts Wetlands Protection Act and
the City of Newton Floodplain Ordinance***

August 16, 2022



August 16, 2022

Daniel Green, Chair
c/o Jennifer Steel, Chief Environmental Planner
Newton Conservation Commission
1000 Commonwealth Avenue
Newton, Massachusetts 02459

Via: NewGov Online Platform

Reference: Notice of Intent
Course-wide Drainage Improvements
Brae Burn Country Club
Newton, Massachusetts
B+T Project No. 0797.49

Dear Commissioners:

On behalf of the Applicant, Brae Burn Country Club (the Club), Beals and Thomas, Inc. (B+T) respectfully submits this Notice of Intent (NOI) for subsurface drainage improvements at the existing a 27-hole golf course located at 326 Fuller Street West Newton, Massachusetts. It was recently announced that the Club will host the 2024 U.S. Women’s Mid-Amateur Championship and the 2028 U.S. Women’s Amateur Championship. The Club is proud to support the golf industry, and specifically, these exciting women’s events and will continue to be a responsible steward of the property for daily use as well as long term sustainability, which includes periodic improvement projects such as that proposed herein.

This filing is submitted in accordance with the Massachusetts Wetlands Protection Act, MGL, Chapter 131, Section 40 and associated Regulations at 310 CMR 10.00 (collectively referred to as the Act) and the City of Newton Floodplain Ordinance (the Ordinance).

Existing Conditions

The Club includes 27 holes, consisting of the 18-hole Championship Course and 9-hole Highland Course, and various related recreational amenities. The Property is bisected by Cheesecake Brook, a stream with numerous intermittent tributaries, which flows north within the Property to a pond located near Fuller Street. A resource area in the form of Bank is associated with Cheesecake Brook and its tributaries. The Ordinance also establishes a 30-foot Floodplain District along portions of Cheesecake Brook.

Civil Engineering ▪ Land Surveying ▪ Landscape Architecture ▪ Land Use Permitting ▪ Environmental Planning ▪ Wetland Science

Corporate Office
144 Turnpike Road
Southborough, MA 01772

T 508.366.0560 | www.bealsandthomas.com | F 508.366.4391

Regional Office
32 Court Street
Plymouth, MA 02360

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In addition to the previously described resource areas, the City of Newton also maintains a policy of protecting a 25-Foot Naturally Vegetated Buffer (NVB) around regulated resource areas (adopted by the Newton Conservation Commission on June 20, 2019). The area within 25 feet of the Bank is largely part of the existing golf grounds and primarily consists of maintained turf and gravel paths.

The areas subject to this NOI consists of existing managed landscape areas associated with golf courses, including fairways, greens, scattered trees and cart paths.

Under existing conditions, drainage issues throughout the course have resulted in the closures of holes during heavy storm events, as well as difficulty in play and maintenance. The property, particularly within Drainage Areas 1 and 4 noted on the plans included herein, is a receiving area and filter of stormwater runoff from adjacent developed land, exacerbating inundation after storm events. The Club engaged Turf Drainage Co. of America, to conduct a comprehensive drainage evaluation. Saturated soil conditions in play areas were identified in the vicinity of Championship Course holes 9, 10, 13, 14, and 17, and Highland Course Holes 1 and 5. The conditions of saturation, as photographed below, have resulted in temporary restrictions on play and access within portions of the course during large rain events.



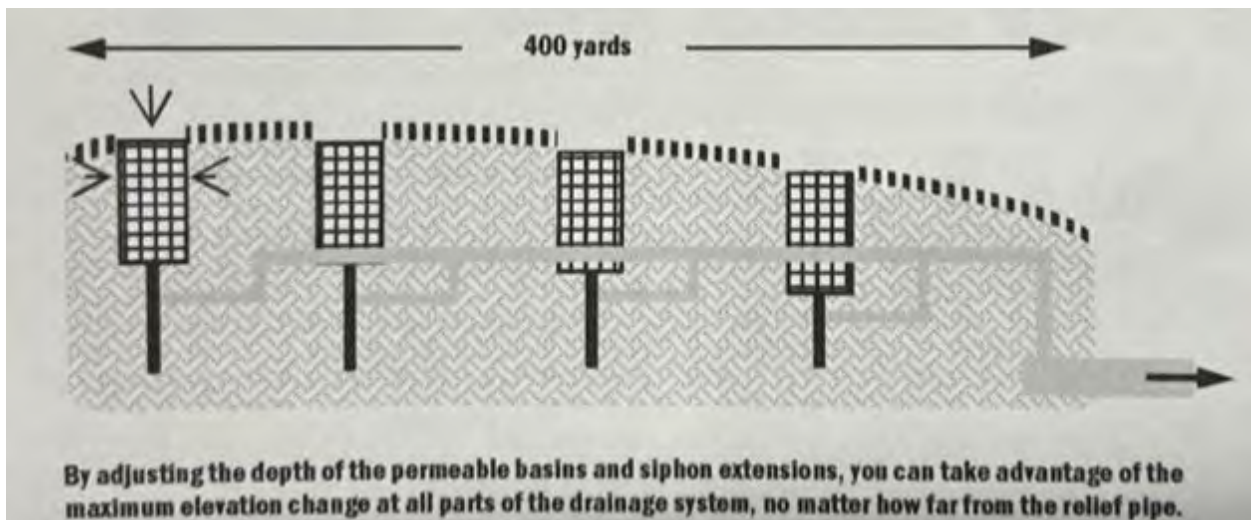
Sample of saturated soil conditions



Sample of saturated soil conditions

Proposed Conditions

The Club proposes the implementation of drainage improvements to alleviate inundation impacting the usability of certain parts of the course. Work consists of construction of trenching channel drains and basins laid in areas of heavy surface flow in four drainage areas. These channel drains will convey surface runoff into nearby intermittent streams and water features. The basins and drains will allow collection of seepage water through sidewalls. The Club proposes to conduct the work in fall of 2022, such that they can evaluate the effectiveness of the drainage during periods of rainfall in spring 2023. This improvement work is proposed in association with preparation of the course for hosting the 2024 U.S. Women's Mid-Amateur Championship and the 2028 U.S. Women's Amateur Championship as well as daily play conditions.



Sample detail of catchment system

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Excavation of trenches for installation of the drains and basins will be conducted with a trencher or an excavator in the event rock is discovered. Trenches will range in depth from two to four feet. Turf will be removed with a sod harvester, and will be saved for reinstallation within 24 hours of excavation. Trench drains and basins will be installed as indicated on the enclosed plans, and the trenches will be backfilled with sand. Existing drain lines will be abandoned in place.



Examples of sod harvesting



Examples of trenching



Backfilling trenching with sand

Work within the Conservation Commission's jurisdiction includes work within the 100-foot Buffer Zone to Bordering Vegetated Wetlands (BVW) and Bank as depicted on the enclosed plans. Portions of the trench drains discharging to the streams will require temporary work on Bank.

As mitigation for work within the 100-foot buffer zone and on Bank, the Club proposes to provide a three-foot wide no-mow strip adjacent to the intermittent stream between Highland Course Holes 1 and 5, as depicted on the enclosed plan. This 850-linear foot no-mow strip will be vegetated with low-growing native species and will result in a total of 5,300 sf of land area reverted to natural conditions.

According to the Club's Superintendent, the proposed drainage improvements are anticipated to improve water quality discharging to streams. The current failed system keeps the surrounding soil saturated, where pore spaces are continually inundated with water. This inundation promotes anerobic conditions, while not allowing the introduction of any new precipitation. During heavy rain events with the current drainage system, the precipitation will travel to lowest point (Cheesecake Brook) after overtopping the saturated areas without any filtration and with a higher risk of nutrient loading.

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The proposed replacement system is anticipated to improve the anerobic saturated soil by allowing more airspace. With the proposed system, precipitation events can now percolate through the soil which acts as natural filter before it reaches the gravity pipes. The drainage improvements will result in a more consistent volume of flow to Cheesecake Brook.

Sedimentation controls will be implemented as shown on the enclosed plans. A turbidity curtain is proposed within the stream between Highland Course Holes 1 and 5. These erosion and sedimentation control barriers will be removed after completion and stabilization of disturbed areas following approval of the Conservation Commission.

Notice of Intent Submission Documents

As required, enclosed are the below-listed components of the NOI submission package in electronic format (PDF). The following information is included for your review:

- Section 1.0: Notice of Intent Forms;
- Section 2.0: Project Narrative;
- Section 3.0: Plans and Exhibits

As required, a copy of this filing has been provided to the Northeast Regional Office of the Massachusetts Department of Environmental Protection (MassDEP). Pursuant to 310 CMR 10.05(4)(a), *An applicant who proposes work solely within Land Under Water Bodies or Waterways, or solely within a Lot with an area greater than 50 acres, is required to provide notification only to Abutters whose Lot is within one hundred feet from the Project Site.* Accordingly, there are no abutters within 100 feet of the proposed work within the buffer zone.

Enclosed is a check payable to the City of Newton in the amount of \$262.50 for the appropriate filing fee as required by the Act. A separate check in the amount of \$237.50 has been forwarded to the MassDEP Lock Box to cover the state portion of the filing fee. An additional check in the amount of \$50.00 is included as required by the City of Newton for the City's filing fee.

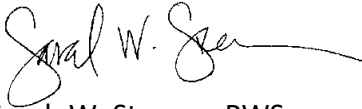
We understand that the Conservation Office will place a legal advertisement and the Applicant will be billed directly for this service.

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Should you have any questions regarding this matter or require additional information, please contact us at (508) 366-0560. We thank you for your consideration of this NOI and look forward to meeting with the Commission at the September 1, 2022 hearing.

Very truly yours,

BEALS AND THOMAS, INC.



Sarah W. Stearns, PWS
Associate



Andrew Gorman, CESSWI
Senior Environmental Planning Specialist

Enclosures

cc: MassDEP Northeast Regional Office (1 copy via Certified Mail and email)
Sean McLaughlin, Brae Burn Country Club (via email)
Sean Nolan, Brae Burn Country Club (via email)

MKS/amg/sws/aak/079749NI001

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Section 1.0
Notice of Intent Forms

Notice of Intent (WPA Form 3)

Wetland Fee Transmittal Form

Newton Conservation Commission Application Form and Checklist



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

Newton

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):

<u>326 Fuller Street</u>	<u>Newton</u>	<u>02465</u>
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:		
<u>42° 20' 5.10" N</u>	<u>71° 14' 8.81" W</u>	
d. Latitude	e. Longitude	
<u>53040; 43045</u>	<u>0013; 0027</u>	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant:

<u>Sean</u>	<u>McLaughlin</u>	
a. First Name	b. Last Name	
<u>Brae Burn Country Club</u>		
c. Organization		
<u>326 Fuller Street</u>		
d. Street Address		
<u>West Newton</u>	<u>MA</u>	<u>02465</u>
e. City/Town	f. State	g. Zip Code
<u>617-244-0680</u>	<u>seanpmclaughlin@braeburngolf.com</u>	
h. Phone Number	i. Fax Number	j. Email Address

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

<u></u>	<u></u>	
a. First Name	b. Last Name	
<u></u>		
c. Organization		
<u></u>		
d. Street Address		
<u></u>	<u></u>	<u></u>
e. City/Town	f. State	g. Zip Code
<u></u>	<u></u>	<u></u>
h. Phone Number	i. Fax Number	j. Email address

4. Representative (if any):

<u>Sarah</u>	<u>Stearns</u>	
a. First Name	b. Last Name	
<u>Beals and Thomas, Inc.</u>		
c. Company		
<u>144 Turnpike Road</u>		
d. Street Address		
<u>Southborough</u>	<u>MA</u>	<u>01772</u>
e. City/Town	f. State	g. Zip Code
<u>508-366-0560</u>	<u>sstearns@bealsandthomas.com</u>	
h. Phone Number	i. Fax Number	j. Email address

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

<u>\$500.00</u>	<u>\$237.50</u>	<u>\$262.50</u>
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid



WPA Form 3 – Notice of Intent

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

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A. General Information (continued)

6. General Project Description:

Drainage improvements to an existing golf course to alleviate inundation impacting the usability of certain parts of the course following large rain events

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

- 1. Single Family Home
- 2. Residential Subdivision
- 3. Commercial/Industrial
- 4. Dock/Pier
- 5. Utilities
- 6. Coastal engineering Structure
- 7. Agriculture (e.g., cranberries, forestry)
- 8. Transportation
- 9. Other

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 CMR10.24(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

a. County

3599; 3780

c. Book

b. Certificate # (if registered land)

417; 269

d. Page Number

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

- 1. 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.
- 2. 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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Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

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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	2. square feet
	3. cubic yards dredged	

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

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: _____ square feet

4. Proposed alteration of the Riverfront Area:

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

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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.

Resource Area, Size of Proposed Alteration, Proposed Replacement (if any)
a. Designated Port Areas
b. Land Under the Ocean
c. Barrier Beach
d. Coastal Beaches
e. Coastal Dunes
f. Coastal Banks
g. Rocky Intertidal Shores
h. Salt Marshes
i. Land Under Salt Ponds
j. Land Containing Shellfish
k. Fish Runs
l. Land Subject to Coastal Storm Flowage
4. Restoration/Enhancement
5. Project Involves Stream Crossings



WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

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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.

- 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**

July 26, 2022
(MassGIS)

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

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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

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: 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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Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

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

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: No significant change in cover type/drainage system
 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.

<u>Course-Wide Drainage Improvements, West Newton, Massachusetts</u>	
a. Plan Title	
<u>Beals and Thomas, Inc.</u>	<u>Kenneth Conte, PLS</u>
b. Prepared By	c. Signed and Stamped by
<u>August 11, 2022</u>	<u>As Noted</u>
d. Final Revision Date	e. Scale
<u>Notice of Intent Narrative</u>	
f. Additional Plan or Document Title	<u>August 16, 2022</u>
	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:

<u>32776</u>	<u>August 10, 2022</u>
2. Municipal Check Number	3. Check date
<u>32757</u>	<u>August 10, 2022</u>
4. State Check Number	5. Check date
<u>Beals and Thomas, Inc.</u>	
6. Payor name on check: First Name	7. Payor name on check: Last Name



**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

Newton

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.

Sean J. McLaughlin
1. Signature of Applicant

8/16/2022
2. Date

3. Signature of Property Owner (if different)

4. Date

Sybil W. Ser
5. Signature of Representative (if any)

8/16/2022

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.



A. Applicant Information

1. Location of Project:

<u>326 Fuller Street</u>	<u>Newton</u>
a. Street Address	b. City/Town
<u>32757</u>	<u>\$237.50</u>
c. Check number	d. Fee amount

2. Applicant Mailing Address:

<u>Sean</u>	<u>McLaughlin</u>	
a. First Name	b. Last Name	
<u>Brae Burn Country Club</u>		
c. Organization		
<u>326 Fuller Street</u>		
d. Mailing Address		
<u>West Newton</u>	<u>MA</u>	<u>02465</u>
e. City/Town	f. State	g. Zip Code
<u>617-244-0680</u>	<u>seanpmclaughlin@braeburngolf.com</u>	
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

<u></u>	<u></u>	
a. First Name	b. Last Name	
<u></u>		
c. Organization		
<u></u>		
d. Mailing Address		
<u></u>	<u></u>	<u></u>
e. City/Town	f. State	g. Zip Code
<u></u>	<u></u>	<u></u>
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.

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

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Category 2 j.) any other activity not in Category 1, 3, 4, 5, or 6	1	\$500.00	\$500.00
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Step 5/Total Project Fee:			\$500.00
Step 6/Fee Payments:			
Total Project Fee:			\$500.00
			a. Total Fee from Step 5
State share of filing Fee:			\$237.50
			b. 1/2 Total Fee less \$12.50
City/Town share of filing Fee:			\$262.50
			c. 1/2 Total Fee plus \$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.)



Ruthanne Fuller
Mayor

City of Newton, Massachusetts
 Department of Planning and Development
 1000 Commonwealth Avenue Newton, Massachusetts 02459

Telephone
(617) 796-1120
 Telefax
(617) 796-1086
 www.newtonma.gov

Barney S. Heath
Director

Conservation Commission Wetland Application Coversheet/Checklist

Date **July 27, 2022**

↑ Fill in all white cells completely ↓

Parcel Address Sec/Block/Lot Book & Page	43045 0027; 53040 0013	Applicant name Address Email Phone	Brae Burn Country Club 326 Fuller Street West Newton, MA 02465 seanpmclaughlin@braeburngolf.com (617)244-0680
Owner name Address Email Phone	Brae Burn Country Club 326 Fuller Street West Newton, MA seanpmclaughlin@braeburngolf.com (617)244-0680	Representative Address Email Phone	Sarah W. Stearns, PWS 144 Turnpike Road Southorough, MA 01772 sstearns@bealsandthomas.com (508)366-0560

Wetland type	Buffer Zone only	sf/cf affected		Relevant Perf. Standards	10. _____
Wetland type		sf/cf affected		Relevant Perf. Standards	10. _____
Wetland type		sf/cf affected		Relevant Perf. Standards	10. _____

↑ Components of a Complete NOI Application ↓

State Form: NOI Form 3	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Engineered Plan* title(s) Plan date Plan stamped by <small>*if legible, plans should be 11"x17"</small>	"Course-Wide Drainage Improvements, West Newton, Massachusetts" August 11, 2022 Kenneth Conte, PLS
Narrative	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Proof that all relevant perf. standards are met	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Locus map	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Delineation lines (backup material)	Included? <input type="checkbox"/> Yes <input type="checkbox"/> No
Fees ● Fee Transmittal form ● City portion of state filing fee <u>\$ 262.50</u> ● City's separate filing fee <u>\$50</u>	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Abutter Information ● Certified abutters list (within 100') ● Newton's Abutter notification form ● Affidavit & proof -- bring to hearing	Included? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Included? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>Present them at the hearing</i> Project is located within lot greater than 50 acres
Other Attachments, e.g.	
Planting Plan	Included? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable
Floodplain analysis	Included? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable
Stormwater analysis	Included? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable
Riverfront Area Alternatives Analysis	Included? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable
Restoration or mitigation summary	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable
Phasing/Sequencing plan, O&M plan, etc.	Included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable

Conservation Commission Wetland Permit Process

RDA	NOI	Steps in Permitting Process		
1.	1.	Get a certified list of all abutters within 100' of property lines from the Newton Assessor's Office.		
	2.	Submit applications by noon of the Tuesday deadline (16 days before the desired hearing) to: <ol style="list-style-type: none"> a. <u>Newton Conservation Commission</u>: <ul style="list-style-type: none"> • Complete NOI or RDA application packet <u>via electronic submission through NewGov</u>. For NOIs use the application checklist to ensure completeness. <ul style="list-style-type: none"> • Application coversheet, state forms, narrative, photocopies of checks, ALL attachments • Plans (11"x17" if legible) stamped by engineer if any aspect of the project requires engineering. • Application fees <u>via mail to Newton Conservation Office, 1000 Commonwealth Ave., Newton, MA 02459</u>. For NOIs use the application checklist to ensure completeness. <ul style="list-style-type: none"> • Check to City of Newton for city portion of the state filing fee • \$50 check to City of Newton for city filing fee b. <u>Mass DEP Northeast Regional Office</u>: 205B Lowell Street, Wilmington, MA 01887 (1 paper copy) <ul style="list-style-type: none"> • Complete NOI or RDA application packet (hard copy) AND Photocopy of the two state filing fee checks c. <u>DEP Lock Box</u>: Box 4062, Boston MA 02211 <ul style="list-style-type: none"> • Check to Commonwealth of Mass. for state portion of the state fee <u>AND Fee transmittal form</u> 		
			<i>The Conservation Agent will determine application completeness and assign a public hearing/meeting date and time.</i>	
	3.	Once you have the date and time of the hearing, using the City's " Notification to Abutters Form ", notify all abutters within 100' of the property line via certified mail, certificate of mailing, or hand delivery with signatures .		
			<i>The Conservation Agent will place a legal ad in the Boston Herald and the Applicant will receive an email with instructions to pay.</i>	
	4.	Stake the project. 2 weeks in advance of the public hearing, stake all proposed structures, erosion control barriers, stormwater systems, etc. within Con Com jurisdiction.		
			<i>The Conservation Agent will perform a site visit before the public hearing to confirm existing conditions and proposed work. If you wish to be informed of the time of the visit, please contact the Con Com office.</i>	
			<i>One week prior to the meeting, when the agenda is posted, the Conservation Agent will send all Applicants detailed Conservation staff notes and recommendations (from the Conservation Commission's detailed agenda).</i>	
	5.	Applicants may submit revised materials (via NewGov) by the Tuesday prior to the meeting (to be reviewed and discussed at the meeting) or may request a continuation to a future Conservation Commission meeting.		
	2.	6.	Attend the public hearing/meeting. The applicant or representative is expected to provide proof of abutter notification , briefly present the project , and answer any questions about possible impacts on wetlands . At the end of the hearing, the Con Com will either: <ul style="list-style-type: none"> • Issue a Determination of Applicability ("negative" determination means no further permitting is needed), • Issue an Order of Conditions (OOC) approving or denying the project, or • Approve a continuation of the public hearing, to allow time for additional information to be provided. 	
	3.	7.	Receive and read the decision and understand the conditions. Contact the Con Com if you have any questions. Some conditions are temporary (such as maintaining erosion controls), and some are perpetual (such maintaining restoration planting areas or limiting the use of fertilizers and outdoor lighting).	
			8.	Wait-out the 10-Day appeal period. A decision of the Con Com can be appealed to MassDEP by any abutter, applicant, or 10-citizen group within 10 business days of the decision.
			9.	Record the Order at the Registry of Deeds. Provide proof of recording to the Conservation office.
		10.	Install MassDEP file number sign and erosion controls.	
		11.	Schedule and attend a pre-construction site visit. Contact the Conservation office to schedule the site visit.	
4.	12.	Execute the project. The project must be completed within 3 years, unless an extension of the permit is issued.		
		13.	Request a Certificate of Compliance (COC) via NewGov. Once the project is complete and all conditions have been satisfied, request a COC from the Conservation office by submitting: (1) DEP Form 8a , (2) a stamped as-built plan , and (3) a letter from the engineer stating that everything is in substantial compliance with the approved plans and OOC.	
		<i>The Con Com will perform a site visit to ensure compliance, and will issue a COC if appropriate.</i>		
		14.	Record the Certificate of Compliance (COC) at the Registry of Deeds to remove the cloud from the title. Provide proof of recording to the Conservation office.	

Section 2.0
Drainage Information

Drainage Plan prepare by Turf Drainage Co. of America, dated May 6, 2022

Brae Burn CC 2022

Revised Plan May 2022

Drainage Plan
prepared by
Turf Drainage Co. of America

May 6, 2022

***TURF DRAINAGE CO OF
AMERICA***

PLAN NOTES

PLAN NOTES SUMMARY Brae Burn Country Club, Newton, MA

This comprehensive drainage plan was developed after a thorough review of holes 9, 10, 11, 13, 14, 15, and 17 by Mickey McCord, Turf Drainage Co. of America, on December 7 and 8, 2021. The main objective of the plan is to design a system that will allow the course to recover quickly after rain events, and provide the firm playing conditions members desire. A secondary objective is to control flooding at the brook (burn) that runs between holes 13 and 14.

Although all of these holes exhibited areas that need to be addressed, the low, flat ground around the burn, and the restriction of the burn going through the culvert under holes 9 and 10, creates a particularly difficult drainage problem on holes 13 and 14. The right side of 13 and right side of 14 are unplayable and unmanageable, due to almost constantly saturated soil conditions.



Figure 1- Super saturated fescue rough

Another significant factor affecting drainage at Brae Burn CC is the runoff from housing above holes 11 and 16. This water eventually makes its way to the burn and contributes to the drainage problems at 13 and 14, but also infiltrates the soil on holes 9, 10, 11, and 15.



Figure 2- Runoff from housing above #11

The combination of low, flat terrain, with insufficient elevation change for gravity drainage, and heavy runoff from higher ground, is resulting in sloppy playing conditions, plugged balls, and cart restrictions, preventing the maintenance crew from mowing fairways and performing other maintenance practices. The longer a course remains saturated, the more the golf course will start to deteriorate. Any equipment or cart traffic over these areas, even foot traffic, will cause rutting and surface disruptions that will cause even more surface water to collect in these areas at the next rainfall. In addition, compacting of soils is hundreds of times worse in a saturated profile, as opposed to a soil that is well drained.



All successful drainage systems are a combination of **collection** and **transportation** of excess water. The collection system should consist of **open inlets to collect surface water**, as well as **seepage drainage that can remove water that has become trapped in the profile** (for more information on this topic, see webinar: [The Inherent Differences Between Surface Water and Seepage Water](#)). The transportation system should be of an adequate size to handle the watershed that is collected by the inlets, and deep enough that it can [provide an airspace](#) that is far enough below the surface to collect the water from the seepage drainage.

Water Collection – surface water

By far the most efficient, and cost-effective way to remove water from the golf course, is using open inlet basins to collect surface water before it has a chance to enter the soil.

In our assessment, we do not simply recommend the installation of drainage materials in the problem areas, but seek to determine the root cause of the problem. Often times, we determine that saturation problems are a result of concentrations of flow from the watershed above. Addressing this involves the placement of surface collection inlets at locations higher in the watershed, such as Channel Drains. Channel Drains are designed specifically to intercept streaming water, and are built to the width of the surface stream in order to collect the most water. Their patented design not only allows them to collect surface water, but also seepage water through the sidewalls. These inlets will never lose efficiency. As long as the grate is open, they will collect the surface water as effectively 30 years from now, as the day they were installed.

We have planned for the addition of 66 channel drains to be placed where the surface flow is the heaviest, and the collection provided by the basin would be the most effective. Many of these basins are placed higher in the watershed, reducing the concentrations of flow, and collecting surface water before it saturates the profile.



Figure 3- Channel Drain

Here is a picture of a channel drain collecting water at Valhalla Golf Club.



Figure 4- Channel Drain at Valhalla Golf Club

We are also adding 63 Perma Basins as additional collection points, strategically placed so the collection provided by the basin will be the most effective. Like the Channel Drain, the Perma Basin's patented design also allows seepage water collection through the sidewalls.



Figure 5- Perma Basin

In some areas, where the water flow is too large for a Perma Basin (above 11 tee), we suggest a larger, 24" Special basin, and recommend building a slight berm to direct water into the basin.

Water Collection – seepage water

No system of surface collection alone can adequately drain a golf course. It is impossible to provide the firm conditions desired by top courses without removing water that has saturated the soil profile. One of the key features of this plan is the creation of large seepage drain fields using approximately 30,000 feet of our Turf Drain.



This product has [45 x more airspace per linear foot than perforated pipe](#), and is the fastest, and most efficient product available for seepage drainage. Turf Drain will be installed, to our specifications, around each basin. TurfDrain's permeability, and depth of installation, will quickly return saturated soils to field capacity, creating the seepage collection component that this property needs.

Water Transportation

It is always our objective to use gravity pipe as the transportation system when we can obtain adequate depth and self-cleaning velocity. However, when that is not possible, we use an alternative system, such as a siphon or a pump. This is the case on holes 13, 14, and the left side of 17. There is no point that can be accessed by gravity relief that is low enough to provide enough air space (minimum 2 feet) for adequate seepage drainage. The Turf Drain Siphon System has been used on many of the top 100 courses in America (Augusta, Seminole, Wade Hampton, East Lake, etc.). This is the first system that allows for the installation of drainage without the need to grade pipe. Because this system is used in areas where [self-cleaning velocity](#) is not possible, the system is built so that it can be automatically flushed to remove the contaminants periodically. The system doesn't require any electrical service to operate.

On 13 and 14, the siphon system will transport water to a pump located near the tee complex on 14. This allows us to create 3 to 4 feet of airspace (depth) to drain the surrounding areas. We are using our Irrigation Driven Pump (IDP) at location 1402 to transport the water collected at 13 and 14 to a free-flowing point in the burn, to the right of hole number 9. We've planned for a duplex pump operation that uses two different size pumps. The smaller pump will cycle on between rain events to help control the height of the water table. The larger pump will only activate in flood events. The IDP uses the energy of the irrigation system to pump water to a higher elevation and does not require the running of electrical service to the pump site. The IDP does require a pressurized irrigation system, therefore, it does not function during the winter. An electric pump can be substituted if you need the system to operate through the winter. The cost for the electric pump is approximately an additional \$5,000. In addition, the club will need to get an estimate to run electrical service to the pump site from a local electrician.

This combination of surface and seepage collection, along with the expanded transportation system, will give the club the ability to not only remove ponded water, but also to create a firm playing surface that is not saturated with water. Not only will water from a rain event be removed more rapidly, but the soil profile will have more capacity (airspace) prior to the event. A good example is the difference in the amount of water a dry sponge can absorb, versus an already saturated sponge. Unless the water that keeps the soil profile saturated is removed, the club will never eliminate the current conditions.

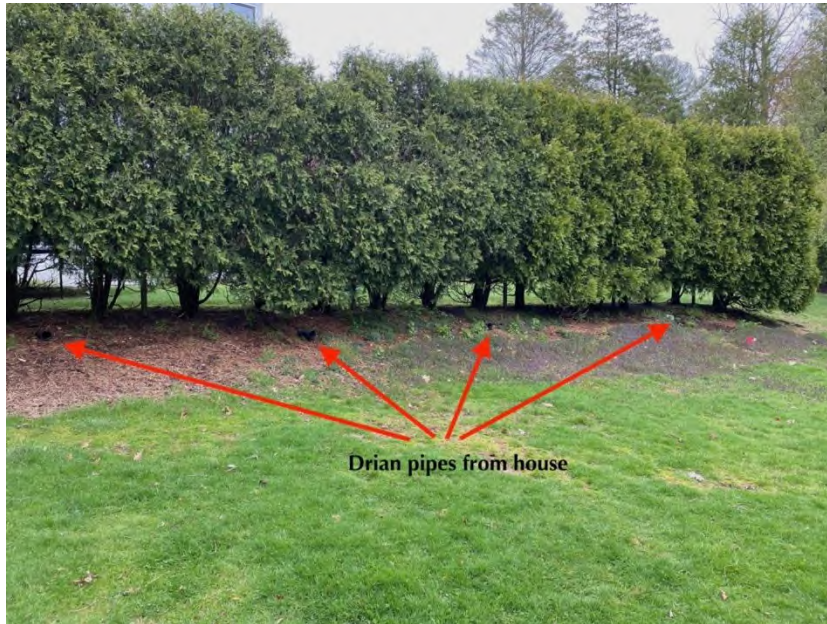
Additional Plan Notes Highlands Course Holes 1, 2, 5, 6, Practice Range

These holes were added to the plan after an initial follow up visit on March 10, by Dennis Hurley and Mickey McCord, Turf Drainage Co. of America, and a more in-depth survey on April 19. The same issues affecting holes 9, 10, 11, 13, 14; low flat ground with little elevation change, and runoff from surround housing, are present here.

We have designed a system using 27 Channel Drains to intercept water flowing onto the golf course from above the practice area, and other points of streaming surface water. There are also an additional 32 Perma Basins for surface water collection.



We observed drain pipes dumping water on the golf course from at least one house above the practice area. These pipes, along with any others that can be located, should be connected directly into the transportation pipe for our system.



Water that is saturating the soil, and even ponding on the surface, in the lowest areas adjacent to the burn running between holes 1 and 5/6, will be transported to a pump utilizing a series of siphons. We have planned for one of our Irrigation Driven Pumps, but an electric pump might work best here if you can get electrical service to location 1905.



We also recommend curbing installed along the cart path at Highlands #2 to direct water on the path to a new Channel Basin installed at the edge of the cart path.



This curbing should extend all the way up to #2 green, and back approximately 40 feet toward #1 green.

Section 3.0
Plans and Exhibits

Locus Map

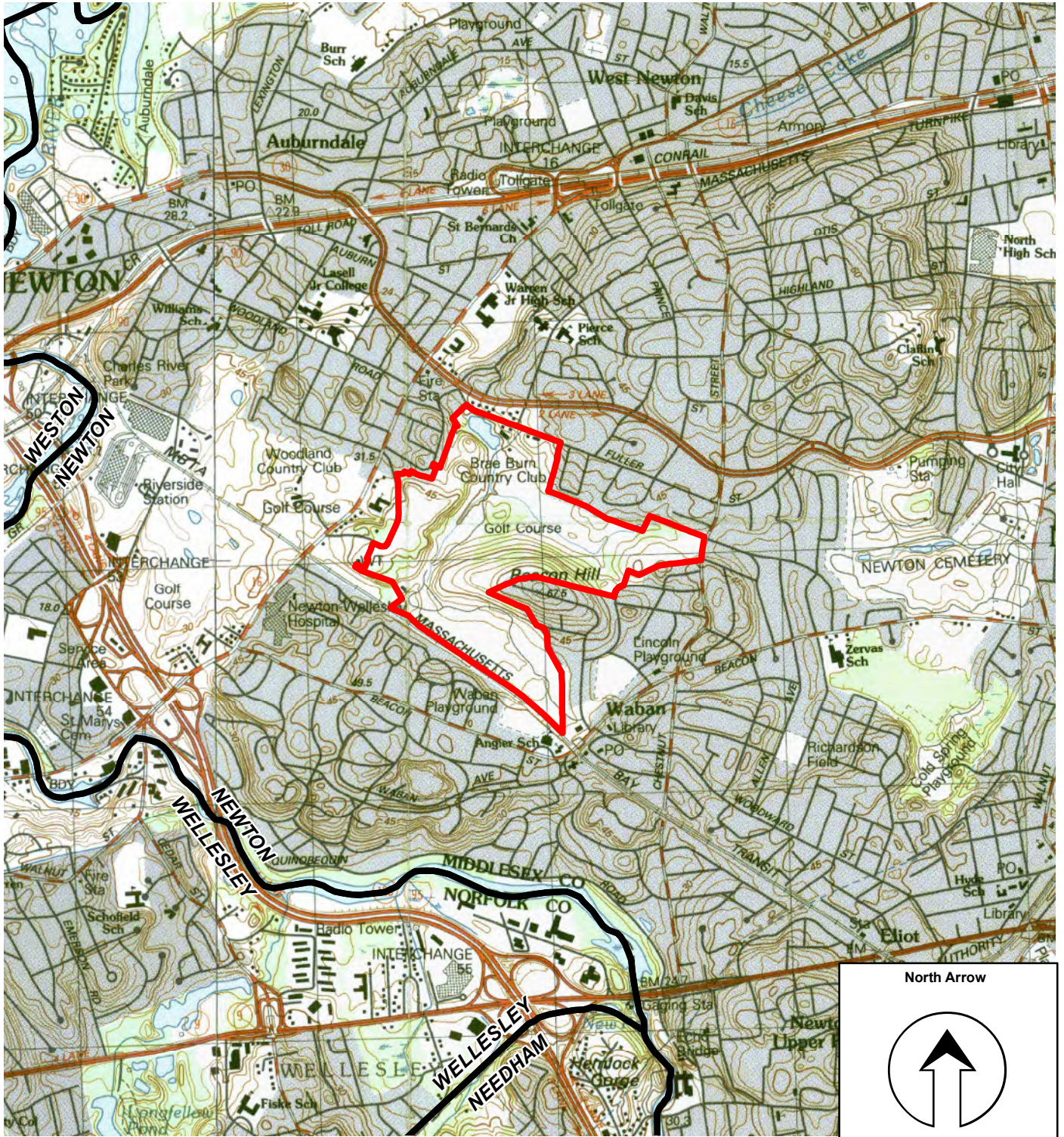
Aerial Map

Entitled "Course-Wide Drainage Improvements, West Newton, Massachusetts"

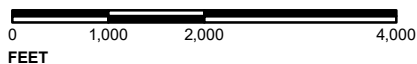
Prepared by Beals and Thomas, Inc.

In 5 Sheets

Dated August 11, 2022



Digital USGS Map of Newton, MA, dated 1987, provided by the Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services.



North Arrow

NORTH

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PROJECT:
Course-wide Drainage Improvements
 Newton, Massachusetts

PREPARED FOR:
Brae Burn Country Club
 326 Fuller Street
 West Newton, Massachusetts

Locus Map
 Figure 1

Scale: 1" = 2,000'

Date: August 8, 2022

Source File 079749P094A.mxd

B+T Project No. 0797.49



Digital orthophotograph, dated 2021, provided by the Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services.

0 400 800 1,600
FEET

North Arrow

NORTH

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PROJECT:
Course-wide Drainage Improvements
 Newton, Massachusetts

PREPARED FOR:
Brae Burn Country Club
 326 Fuller Street
 West Newton, Massachusetts

Aerial Map
 Figure 2

Scale: 1" = 800' Date: August 8, 2022

Source File 079749P094A.mxd
 B+T Project No. 0797.49