



September 4, 2025

Kevin D. Thatcher, PE, CPESC
Alteration of Terrain Bureau
29 Hazen Drive
Concord, NH 03302

RE: Alteration of Terrain Permit Application #250327-055
Jennesstown Manor
Tax Map 7, Lots 39 & 39-1 -- Warner

Dear Mr. Thatcher:

Our office is in receipt of the Alteration of Terrain review comments dated May 13, 2025 and June 27, 2025. Based on the comments, we have made the required modifications and attached revised plans for review. A response to each comment has been provided below.

May 13, 2025 Comments:

1. General Requirements:

Local Advisory Committee (LAC)

- Provide a copy of any comments received by the Warner River Local Advisory Committee and indicate how they have been addressed. Alternatively, provide correspondence from the LAC that they will not be commenting on this application.

See attached response letter to WRLAC.

Groundwater Monitoring Plan

- The plans indicate removal of ledge outcrops. Provide an estimate of the quantity of blast rock. If the quantity exceeds 5,000 cubic yards, you will be required to identify drinking water wells located within 2,000 feet of the proposed blasting activities and develop a groundwater quality sampling program to monitor for nitrate and nitrite either in the drinking water supply wells or in other wells that are representative of the drinking water supply wells in the area. The plan must be submitted to DES for approval prior to permitting and must include pre and post blast water quality monitoring. The groundwater sampling program must be implemented as approved by DES.

Test pits revealed ledge but the owner is going to use mechanical means to remove ledge encountered. See the Owner's blasting certification on the cover sheet of the plan set.

2. Application:

Section 7.

- Note the project is within ¼ mile of Warner River.

Added to application. See Sheet 3 Note 20.

Section 10.F.

- The stated value of 25,352 square feet is consistent with additional impervious cover not total impervious cover per HydroCAD reports. Clarify and also note total impervious cover.

Application has been updated to include total additional impervious cover of 37,244 SF.

Section 10.J.

- List the name of the receiving water in accordance with Env-Wq 1503.07(n).

Receiving water has been updated to state “Warner River”.

Section 10.N.

- Plans depict the grading of surface ledge outcrops. Therefore, it is assumed that blasting will be required.

The areas hatched with dots on the plan are steep slopes, see legend on Sheet 1. Test pits revealed ledge but the owner is going to use mechanical means to remove ledge encountered. See the Owners blasting certification on the cover sheet.

Section 11.

- Registration and Notification Form for Stormwater Infiltration to Groundwater is not required for surface infiltration practices.

Box has been unchecked.

3. Plans:

Grading, Drainage, & Utilities Plan (Sheet 4 of 11)

- Show driveway stationing and identity profile high point.

The stationing and high point have been added to Sheet 5.

- Review design intent of drainage structures #42 and #44 as manholes versus catch basins.

The structure labels have been revised as catch basins on Sheet 5.

- Define STR #19.

The structure label has been corrected to Headwall #42 on Sheet 5.

- Proposed grading at HW #210 and diversion ditch at northwest corner of the site suggest installation of a level spreader. Clarify design intent.

There is a level spreader at HW #210, see Sheet 5.

- Evaluate need for permanent erosion control measures at discharge from end of curb to swale to Pocket Pond #22P sediment forebay.

A swale calculation section has been added to the drainage report.

- Evaluate need for stone lining in roadside ditches at 15 percent grade.

A swale calculation section has been added to the drainage report. Stone lining will not be needed in the driveway ditches upon establishment of grass.

- Size and define sediment forebay spillways. Earthen berms are not recommended. See following comments on Post-Development HydroCAD model.

Additional construction data for the sediment forebays have been added to Sheet 5 and the details on Sheet 13 updated.

- Revise rim elevation for OCS #22 to be 471.65 feet.

Rim elevation has been revised to 471.65 feet, see Sheet 5.

- Define emergency spillway for Pocket Pond #22P and extend riprap to bottom of Infiltration Basin #21P.

Riprap has been extended, see Sheet 5.

- Evaluate providing level spreader instead of riprap apron at OCS #21P outlet.

Level spreader and riprap are provided at OCS #21P outlet, see Sheet 5.

Erosion Control Plan (Sheet 5 of 11)at

- When project activities are located within 50 feet of a water body or wetland, please show a double row of perimeter controls on the plans.

Silt fence boundary has been updated, see Sheet 6.

- Silt fence is only to be used in areas where erosion will occur only in the form of sheet erosion and there is no concentration of water in a channel or other drainage way above the fence. Discontinue or relocate silt fence as appropriate at proposed pipe and ditch outlets. Provide alternative means of erosion control such as temporary check dams and riprap outlet protection.

The silt fence has been updated and the stone riprap and berms have been provided, see Sheet 6.

- Show stabilized construction entrance.

75-foot construction entrance has been added, see Sheet 6.

- Show temporary check dams in proposed ditches.

Temporary stone check dams have been added to proposed ditches, see Sheet 6.

- Show inlet protection at existing catch basins on NH Route 103.

Temporary inlet controls have been added, see Sheet 6.

Construction Details (Sheet 8 of 11)

- Precast Reinforced Catch Basin
 - Revise relative to project specific conditions.

See precast Reinforced Catch Basin on Sheet 12.

Construction Details (9 of 11)

- Typical Pocket Pond Section
 - Show sediment forebay.

See Sheet 13 for Pocket Pond Cross Section.

- Show outlet control structure.

See Sheet 13 for Pocket Pond Cross Section.

- Show permanent pool.

See Sheet 13 for Pocket Pond Cross Section.

- Evaluate feasibility of loam and seed within permanent pool.

See Sheet 13 for Pocket Pond Cross Section. A specification for wetland/detention seed mix has been added.

- Revise Elevation B for Pond 22P.

See Sheet 13 for Pocket Pond Cross Section.

- Evaluate providing emergency spillway for Pond 41P.

The emergency spillway for the pond is the top of the outlet structure, see Sheet 5 (grate at Inv.In=441.60).

- Typical Infiltration Pond Section
 - Show outlet control structure.

Outlet control structure has been added, see Sheet 13 Typical Infiltration Pond Section Detail.

- Elevation D and stone berm associated with it are not consistent with project design.

See Sheet 13 Typical Infiltration Pond Section Detail.

- Exclude loam and provide a surface treatment consistent with Env-Wq 1508.07(1)(4).

See Sheet 13 Typical Infiltration Pond Section Detail.

- Outlet Control Structures #22P and #41P Details
 - Provide detail for OCS #21P.

See Sheet 13 for Outlet Control Structure #21P Detail.

- Show elevation view of orifice layout as size and elevations overlap.

Orifices have been updated and an elevation view of the orifices has been provided, see Sheet 13 Outlet Control Structure #22 Detail.

- Provide trash rack.

See Sheet 13 for Trash Rack Detail.

- Provide detail for overflow grate.

See Sheet 13 for Halla Grate Detail.

- Review orifice elevations.

See Sheet 13, inverts have been reviewed.

- Emergency Spillway Detail
 - Revise length to be 4 feet consistent with HydroCAD.

See Sheet 14 for Emergency Spillway Detail.

- Revise slope lengths based on depths of 0.25 and 0.35 feet defined in HydroCAD for Ponds 21P and 22P.

See Sheet 14 for Emergency Spillway Detail.

- Provide a cutoff wall at the intended overflow elevation.
 - Alternatively, model the flow through the stone in HydroCAD.

Concrete curbing has been added to provide a cutoff wall and level lip.

Construction Details (Sheet 10 of 11)

- General
 - Provide a temporary check dam detail conforming to Env-Wq 1506.07.

See Stone Check Dam Detail and Stone Check Dam Spacing Detail on Sheet 15.

- Provide an outlet protection apron detail.

See Pipe Outlet to Flat area with No Defined Channel Detail on Sheet 14.

- Stabilized Construction Exit Detail
 - Berm is required when overall length is less than 75 feet per Env-Wq 1506.09(b).

See Stabilized Construction Exit Detail on Sheet 15.

- Construction Specification #1 is not consistent with requirements.

The detail has been revised to correct the stone size, see Sheet 15.

Construction Details (Sheet 11 of 11)

- Test Pit Logs
 - Review depth of test pits noted.
 - Recommend using consistent units of inches.

The dimensions have all been converted to inches, see Sheet 16.

4. Notes:

Please add the following notes to the plan set:

Wildlife Protection Notes (Env-Wq 1504.17)

- All observations of threatened or endangered species shall be reported immediately to the New Hampshire Fish and Game Department Nongame and Endangered Wildlife Environmental Review Program by phone at 603-271-2461 and by email at NHFGreview@wildlife.nh.gov. Email subject line: **NHB24-0767, Jennestown Manor, Wildlife Species Observation.**
- Photographs of the observed species and nearby elements of habitat or areas of land disturbance shall be provided to NHF&G in digital format for verification as feasible;
- In the event a threatened or endangered species is observed on the project site during the term of the permit, the species shall not be disturbed, handled, or harmed in any way prior to consultation with NHF&G and implementation of corrective actions recommended by NHF&G, if any, to assure the project does not appreciably jeopardize the continued existence of threatened and endangered species as defined in Fis 1002.04
- The NHF&G, including its employees and authorized agents, shall have access to the property during the term of the permit.

Note has been added to the Cover Sheet.

Blasting (Env-Wq 1510)

- For any blasting activities, the plans must, at a minimum, require the best management practices contained in Attachment A of the DES document Rock Blasting and Water Quality Measures That Can Be Taken To Protect Water Quality and Mitigate Impacts available at: <https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/wd-19-05.pdf>

The Applicant intends to use mechanical means for clearing ledge and rock. See the blasting certification on the Cover Sheet.

5. Stormwater Management Report:

General

- Provide only node listings and not full reports for 2-year and 50-year design storms consistent with Alteration of Terrain Permit Attachment A: Application Checklist.

The 2-year and 50-year design storms are now node listings instead of full reports, see the revised Hydrocad Report.

BMP Worksheets

- Stormwater Pond Design Criteria
 - Provide Stage-Area-Storage tables for sediment forebays.

See Nodes 23P and 415P for the cumulative storage for each forebay.

- Infiltration Practice Criteria
 - Revise Volume to be 2,942 cubic feet consistent with OCS #21 overflow elevation.

See updated BMP Pond 21P worksheet.

Pre-Development HydroCAD Model

- Review and revise outlet pipe definitions for Ponds 10P, 20P, 30P, and 40P relative to Existing Conditions Plan (Sheet 1 of 11) regarding pipe size and length. Route Pond 30P to Pond 20P.
 - Alternatively, if the intent is to model inflow to the catch basins versus outflow from the outlet pipes, then remove the outlet definitions.

The intent is to model flow to catch basin grates versus outflow from the pipes, see Pre-Development Hydrocad Report (10P, 20P, 30P, and 40P).

Post-Development HydroCAD Model

- Refer to prior comments on Pre-Development HydroCAD Model regarding outlet pipe definitions for Ponds 10P, 20P, 30P, and 40P.

The intent is to model flow to catch basin grates versus outflow from the pipes, see Post-Development Hydrocad Report.

- Split Subcatchment 22S into area tributary to proposed curb line and proposed swale.

The Subcatchment has been split as recommended, see Subcatchment nodes 22S and 23S in Post-Development Report.

- Add pond node for proposed driveway culvert.

46P has been added to model the proposed driveway culvert in the Post-Development Report.

- Provide separate pond nodes for sediment forebays to include proposed outlet definitions.

Sediment forebays are now modeled separately from ponds (23P and 415P).

- Route Device #6 to Device #1 for Pond 22P.

Device #6 is now an emergency overflow and is routed as a primary outflow.

Riprap Apron Sizing Calculations

- Provide sizing for OCS #22 and HW #210.

See updated Riprap Apron Sizing Calculations.

6. Revisions:

Pursuant to Env-Wq 1503.15(b), changes to the revised plans are to be called out and a revision date must be added to each page that has been changed. Graphical revision callouts should be included on the plans. If any changes to the project documents were made other than those identified above, please indicate what additional changes were made in your response letter.

Three sheets have been added per planning board comments: a landscape plan, a lighting plan, and a visibility from road plan. Changes were made in response to Warner Planning Board and WRAC comments as well as in house revisions as marked on the plans.

7. Electronic Files:

Pursuant to Env-Wq 1503.15(e), provide, in electronic format, a copy of all project documents that were modified in response to the request for more information. As a separate document, provide a copy of the complete application with all documents current to reflect any modifications from the original application.

A pdf file of the entire application has been emailed.

June 27, 2025 Comments:

- Regarding revisions, the plans do not have graphical callouts highlighting the changes made in response to the AoT RFMI issued on May 13, 2025.

Callouts highlighting plan changes have been made in red.

- The KNA response notes the addition of 3 sheets per planning board comments. However, 5 sheets were added to the plan set which also included an Easement Plan and an additional Construction Details sheet. The AoT RFMI listed plan comments by sheet title and sheet number. The KNA response does not identify the change in sheet number which makes referencing prior plans more difficult.

Changes are now identified by the updated sheet number in the RFMI responses.

- Also, the KNA response references the drainage report for requested calculations and evaluations. A more specific response would be more helpful as to where to find it and your interpretation of the findings.

Responses now more specifically reference the drainage report.

- As for other unnamed changes, the driveway profile has changed but was not noted. If there are other

design changes, please provide a brief narrative summary

Plan changes are now highlighted in red.

- Regarding electronic files, provide computer generated PDF documents not scans of hard copy documents. The scans create issues with legibility for portions of what was submitted.

Computer generated PDF copies of the plans will be provided, but all other documents will be scanned.

- Sediment forebays – a separate HydroCAD node is requested not only to demonstrate the volume requirement of the practice but the size and function of the outlet. Especially in a case such as this project where the forebay spillway elevation is above the downstream starting storage elevation.

The sediment forebays have been broken out into separate nodes.

- Driveway high point noted on Grading, Drainage, & Utilities Plan does not match Driveway Profile Plan or Post-Development Drain Areas Plan.

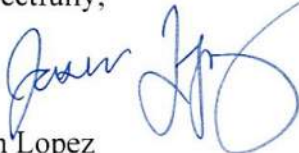
The high point on the Grading, Drainage, & Utility Plan now matches the Driveway Profile Plan and the Post-Development Drainage Areas Plan, see Sheets 5 & 11 and Post-Development Drainage Area Plan for updates.

- Based on final design location, evaluate need for erosion control measures at end of curb to ditch to Pocket Pond #41P sediment forebay.

The end of curb to ditch flow is not sufficient enough to warrant stone riprap prior to the Pocket Pond #41 sediment forebay. Temporary blanket will be sufficient until grass establishment.

I trust the content of this response letter and its attachments will address each of the comments, as noted. Should you have further questions or require additional information, please do not hesitate to contact our office.

Respectfully,



Jason Lopez
Senior Project Manager
Keach-Nordstrom Associates, Inc.



ALTERATION OF TERRAIN PERMIT APPLICATION

Water Division / Land Resources Management

[Check the status of your application](#)



RSA / Rule: RSA 485-A:17, Env-Wq 1500

Administrative Use Only	Administrative Use Only	Administrative Use Only	File Number: Check No. Amount: Initials:
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1. APPLICANT INFORMATION (INTENDED PERMIT HOLDER)			
Applicant Name: Peacock Hill Road, LLC		Contact Name: Gary Fitzgerald	
Email: hotrodda57@hotmail.com		Daytime Telephone: 603-325-3112	
Mailing Address: 145 Old Town Road			
Town/City: Weare		State: NH	ZIP Code: 03281
2. APPLICANT'S AGENT INFORMATION If none, check here: <input type="checkbox"/>			
Agent's Name:		Contact Name:	
Email:		Daytime Telephone:	
Address:			
Town/City:		State:	ZIP Code:
3. PROPERTY OWNER INFORMATION (IF DIFFERENT FROM APPLICANT) Check here if more than one property owner, and attach additional sheets as necessary: <input type="checkbox"/>			
Owner's Name:		Contact Name:	
Email:		Daytime Telephone:	
Mailing Address:			
Town/City:		State:	ZIP Code:
4. PROPERTY OWNER'S AGENT INFORMATION If none, check here: <input type="checkbox"/>			
Business Name:		Contact Name:	
Email:		Daytime Telephone:	
Address:			
Town/City:		State:	ZIP Code:
5. CONSULTANT INFORMATION If none, check here: <input type="checkbox"/>			
Engineering Firm: Keach-Nordstrom Associates, Inc.		Contact Name: Jason Lopez	
Email: jlopez@keachnordstrom.com		Daytime Telephone: 603-627-2881	
Address: 10 Commerce Park N Suite 3B			
Town/City: Bedford		State: NH	ZIP Code: 03110

6. PROJECT TYPE

☐ Excavation Only ☒ Residential ☐ Commercial ☐ Golf Course ☐ School ☐ Municipal
☐ Agricultural ☐ Land Conversion ☐ Other:

7. PROJECT LOCATION INFORMATION

Project Name: Jennesstown Manor

Street/Road Address: Route 103

Town/City: Warner

County: Merrimack

Tax Map: 7

Block:

Lot Number: 39 & 39-1

Unit:

Post-development, will the proposed project withdraw from or directly discharge to any of the following? If yes, identify the purpose.

1. Stream or Wetland Purpose:	<input type="checkbox"/> Yes <input type="checkbox"/> Withdrawal <input type="checkbox"/> Discharge <input checked="" type="checkbox"/> No
2. Artificial pond created by impounding a stream or wetland Purpose:	<input type="checkbox"/> Yes <input type="checkbox"/> Withdrawal <input type="checkbox"/> Discharge <input checked="" type="checkbox"/> No
3. Unlined pond dug into the water table Purpose: Pocket Pond	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Withdrawal <input type="checkbox"/> Discharge <input checked="" type="checkbox"/> No

Post-development, will the proposed project discharge to:

- Within one-quarter mile of a surface water impaired for phosphorus and/or nitrogen? ☒ No ☐ Yes
- Within one-quarter mile of a Class A surface water or within the watershed area of an Outstanding Resource Water?
☒ No ☐ Yes
- Within one-quarter mile of a lake or pond not covered previously? ☒ No ☐ Yes

Is the project a High Load area? ☐ Yes ☒ No

If yes, specify the type of high load land use or activity:

Is the project within a Water Supply Intake Protection Area (WSIPA)? ☐ Yes ☒ No

Is the project within a Groundwater Protection Area (GPA)? ☐ Yes ☒ No

Will the well setbacks identified in Env-Wq 1508.02 be met? ☐ Yes ☒ No

For more details on the restrictions in these areas, read Chapter 3.1 in Volume 2 of the NH Stormwater Manual.

Is any part of the property within the 100-year floodplain? ☐ Yes ☒ No

If yes: Cut volume: cubic feet within the 100-year floodplain.

Fill volume: cubic feet within the 100-year floodplain.

☒ Project is within ¼ mile of a designated river Name of River: Warner River

☐ Project is not within ¼ mile of a designated river.

☐ Project is within a Coastal/Great Bay Region community.

☒ Project is not within a Coastal/Great Bay Region community.

8. BRIEF PROJECT DESCRIPTION (PLEASE DO NOT REPLY "SEE ATTACHED")

Two four unit buildings each with shared driveway and a parking area to take place on Map 7 Lots 39 & 39-1.

9. IF APPLICABLE, DESCRIBE ANY WORK STARTED PRIOR TO RECEIVING PERMIT.

Tree clearing per intent to cut filed with Town.

10. ADDITIONAL REQUIRED INFORMATION

A. Date a copy of the application was sent to the municipality, as required by Env-Wq 1503.05(e) (Env-Wq 1503.05(c)(6), requires proof that a completed application form, checklist, plans and specifications, and all other supporting materials have been sent or delivered to the governing body of each municipality in which the project is proposed):

(Attach proof of delivery)

B. Date a copy of the application was sent to the local river advisory committee, if required by Env-Wq 1503.05(e) (Env-Wq 1503.05(c)(6), requires proof that a completed application form, checklist, plans and specifications, and all other supporting materials have been sent or delivered to the Local River Advisory Committee, if the project is within ¼ mile of a designated river): N/A

(Attach proof of delivery)

C. Type of plan required: ☐ Land Conversion ☒ Detailed Development ☐ Excavation, Grading and Reclamation
☐ Steep Slope

D. Additional plans required: ☒ Stormwater Drainage and Hydrologic Soil Groups ☐ Source Control
☐ Chloride Management

E. Total area of disturbance, in square feet 275,000

F. Additional impervious cover as a result of the project, in square feet (use "-" to indicate a net reduction in impervious coverage).

Total final impervious cover, in square feet 37,244 SF

G. Total undisturbed cover, in square feet 1,317,247

H. Number of lots proposed: 2

I. Total length of roadway, in linear feet: 0

J. Name(s) of receiving water(s): Warner River

K. Identify all other NHDES permits required for the project. For each, indicate whether an application has been filed and is pending. If the required approval has been issued, provide the permit number, registration date, or approval letter number, as applicable.

Type of Approval	Application Filed?	Pending?	If Issued
1. Water Supply Approval	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/>	Permit number:
2. Wetlands Permit	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/>	Permit number:
3. Shoreland Permit	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/>	Registration date:
4. UIC Registration	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/>	Approval letter date:
5. Large/Small Community Well Approval	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/>	Permit number:
6. Large Groundwater Withdrawal Permit	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/>	Permit number:
7. Other:	<input type="checkbox"/> Yes <input type="checkbox"/> No		

L. List all species identified by the Natural Heritage Bureau as threatened or endangered or of concern:

Wood Turtle

M. Using the NHDES [OneStop Data Mapper](#) with the [Surface Water Impairment layer](#) turned on, list the impairments identified for each receiving water. If no pollutants are listed, enter "N/A."

N/A

N. Did the applicant or applicant's agent have a pre-application meeting with Alteration of Terrain Bureau staff?

☐ Yes

☒ No

If yes, name of staff member:

O. Will blasting of bedrock be required? ☐ Yes ☒ No If yes, estimated quantity of blast rock in cubic yards:

If yes, [standard blasting Best Management Practices](#) notes must be placed on the plans.

NOTE: If greater than 5,000 cubic yards of blast rock will be generated, a groundwater monitoring program must be developed and submitted to NHDES. Contact Alteration of Terrain Bureau staff for additional detail.

11. CHECK ALL APPLICATION ATTACHMENTS THAT APPLY (SUBMIT WITH APPLICATION IN THE ORDER LISTED BELOW)**LOOSE:**

- ☒ Signed application form, with attached proof(s) of delivery.
- ☒ Check for the application fee, calculated using the [fee schedule](#) available on the NHDES [Land Development page](#).
- ☒ Color copy of a USGS map with the property boundaries outlined (1" = 2,000' scale).
- ☐ If the applicant is not the property owner, proof that the applicant will have a legal right to undertake the project on the property if a permit is issued to the applicant.

BOUND, IN A REPORT, IN THE FOLLOWING ORDER:

- ☒ Copy of the signed application form and application checklist.
- ☒ Copy of the check.
- ☒ Copy of the USGS map with the property boundaries outlined (1" = 2,000' scale).
- ☒ Narrative of the project with a summary table of the peak discharge rate for the off-site discharge points.
- ☒ Printout of NHDES [OneStop Mapper](#) with "Surface Water Impairments" layer turned on.
- ☒ Printout of NHDES [OneStop Mapper](#) with Alteration of Terrain screening layers turned on.
- ☒ Printout of Natural Heritage Bureau [DataCheck Tool](#) letter and any relevant correspondence with New Hampshire Fish and Game.
- ☒ USDA [Web Soil Survey Map](#) with project's watershed outlined.
- ☒ Aerial photograph (1" = 2,000' scale with the site boundaries outlined).
- ☒ Photographs representative of the site.
- ☒ Groundwater recharge volume calculations (include one [Best Management Practices worksheet](#) per permit application).
- ☒ Drainage analysis, stamped by a professional engineer (see "Application Checklist" at the end of this document).
- ☒ Riprap apron or other energy dissipation or stability calculations.
- ☒ Site Specific Soil Survey report, stamped and with a certification note prepared by the soil scientist that the survey was done in accordance with the [Site Specific Soil Mapping standards](#) of the Society of Soil Scientists of Northern New England.
- ☒ Infiltration Feasibility Report (example online) [Env-Wq 1503.08(f)(3)].
- ☒ [Registration and Notification Form for Stormwater](#) Infiltration to Groundwater (UIC Registration-for underground systems only, including drywells and trenches).
- ☒ Inspection and maintenance manual with, if applicable, long term maintenance agreements [Env-Wq 1503.08(g)].
- ☐ Source control plan.

PLANS:

- ☒ One set of design plans on 34 - 36" by 22 - 24" white paper (see Application Checklist for details).
- ☒ Pre- and post-development color-coded soil plans on 11" x 17" (see Application Checklist for details).
- ☒ Pre- and post-construction drainage area plans on 34 - 36" by 22 - 24" white paper (see Application Checklist for details).

100-YEAR FLOODPLAIN REPORT:

- ☐ All information required in Env-Wq 1503.09, submitted as a separate report.

ADDITIONAL INFORMATION RE: NUTRIENTS, CLIMATE

- ☒ See Application Checklist (Attachment A) for details.

- ☒ **REVIEW APPLICATION FOR COMPLETENESS. CONFIRM INFORMATION LISTED ON THE APPLICATION IS INCLUDED WITH SUBMITTAL.**

12. REQUIRED SIGNATURES

By signing below, I certify that:

- The information contained in or otherwise submitted with this application is true, complete, and not misleading to the best of my knowledge and belief;
- I understand that the submission of false, incomplete, or misleading information constitutes grounds for the department to deny the application, revoke any permit that is granted based on the information, and/or refer the matter to the board of professional engineers established by RSA 310-A:3 if I am a professional engineer; and
- I understand that I am subject to the penalties specified in New Hampshire law for falsification in official matters, currently RSA 641:3.

☒ **APPLICANT**☐ **APPLICANT'S AGENT:**

Signature: _____

Date: 3/13/25

Name (print or type):

GARY Fitzgerald

Title: manager

☒ **PROPERTY OWNER**☐ **PROPERTY OWNER'S AGENT:**

Signature: _____

Date: 3/13/25

Name (print or type):

GARY Fitzgerald

Title:

ALTERATION OF TERRAIN PERMIT ATTACHMENT A: APPLICATION CHECKLIST

Check each box to indicate the item has been provided, or indicate why it does not apply.

DESIGN PLANS

- ☒ Plans printed on 34 - 36" by 22 - 24" white paper.
- ☒ Professional Engineer stamp.
- ☒ Wetland delineation.
- ☒ Temporary erosion control measures.
- ☒ Treatment for all stormwater runoff from impervious surfaces such as roadways (including gravel roadways), parking areas, and nonresidential roof runoff. Guidance on treatment BMPs can be found in Volume 2, Chapter 4 of the New Hampshire Stormwater Management Manual.
- ☒ Pre-existing 2-foot contours.
- ☒ Proposed 2-foot contours.
- ☒ Drainage easements protecting the drainage/treatment structures.
- ☒ Compliance with state statute governing fill and dredge in [wetlands](#), RSA 482- A. Note that artificial detention in wetlands is prohibited.
- ☐ Compliance with the New Hampshire [Shoreland Protection Act](#), RSA 483-B. Site not in Shoreland Zone.
- ☒ Benching – needed if you have more than 20 feet change in elevation on a 2:1 slope, 30 feet change in elevation on a 3:1 slope, 40 feet change in elevation on a 4:1 slope.
- ☐ Check to see if any proposed ponds require [state dam permits](#). No state dam permits required.

DETAILS

- ☒ Typical roadway cross-section.
- ☒ Detention basin with inverts noted on the outlet structure.
- ☒ Stone berm level spreader.
- ☒ Outlet protection – riprap aprons.
- ☒ A general installation detail for an erosion control blanket.
- ☒ Silt fences or mulch berm.
- ☒ Storm drain inlet protection. Note that since hay bales must be embedded 4 inches into the ground, they are not to be used on hard surfaces such as pavement.
- ☐ Hay bale barriers. No hay bale barriers proposed.
- ☐ Stone check dams. No stone check dams proposed.
- ☒ Gravel construction exit.
- ☒ Temporary sediment trap.
- ☒ The treatment BMPs proposed.
- ☐ Any innovative BMPs proposed. No innovative BMPs proposed.

CONSTRUCTION SEQUENCE / EROSION CONTROL

- Note that the project must be managed to meet the requirements and intent of RSA 430:53 and Agr 3800 relative to [invasive species](#).
- Note that perimeter controls shall be installed prior to earth moving operations.
- Note that temporary water diversion (swales, basins, etc.) must be used as necessary until areas are stabilized.
- Note that ponds and swales shall be installed early on in the construction sequence (before rough grading the site).
- Note that all ditches and swales shall be stabilized prior to directing runoff to them.
- Note that all roadways and parking lots shall be stabilized within 72 hours of achieving finished grade.
- Note that all cut and fill slopes shall be seeded or loamed within 72 hours of achieving finished grade
- Note that all erosion controls shall be inspected weekly AND after every half-inch of rainfall.
- Note the limits on the open area allowed, see Env-Wq 1505.02 for detailed information.

Example note: The smallest practical area shall be disturbed during construction, but in no case shall exceed 5 acres at any one time before disturbed areas are stabilized.

- Note the definition of the word “stable.”

Example note: An area shall be considered stable if one of the following has occurred:

- Base course gravels have been installed in areas to be paved.
- A minimum of 85 percent vegetated growth has been established.
- A minimum of 3 inches of non-erosive material such stone or riprap has been installed.
- Or, erosion control blankets have been properly installed.

- Note the limit of time an area may be exposed.

Example note: All areas shall be stabilized within 45 days of initial disturbance.

- Provide temporary and permanent seeding specifications. Note that although reed canary grass is listed in the Green Book; it is a problematic species according to the Wetlands Bureau and therefore should not be specified.
- Provide winter construction notes that meet or exceed our standards.

Standard Winter Notes:

- All proposed vegetated areas that do not exhibit a minimum of 85 percent vegetative growth by October 15, or which are disturbed after October 15, shall be stabilized by seeding and installing erosion control blankets on slopes greater than 3:1, and seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting, elsewhere. The installation of erosion control blankets or mulch and netting shall not occur over accumulated snow or on frozen ground and shall be completed in advance of thaw or spring melt events.
 - All ditches or swales which do not exhibit a minimum of 85 percent vegetative growth by October 15, or which are disturbed after October 15, shall be stabilized temporarily with stone or erosion control blankets appropriate for the design flow conditions.
 - After October 15, incomplete road or parking surfaces where work has stopped for the winter season shall be protected with a minimum of 3 inches of crushed gravel per NHDOT item 304.3.
- Note at the end of the construction sequence that “Lot disturbance, other than that shown on the approved plans, shall not commence until after the roadway has the base course to design elevation and the associated drainage is complete and stable.” – This note is applicable to single/duplex family subdivisions, when lot development is not part of the permit.

DRAINAGE ANALYSES

Please provide double-side 8 ½" × 11" sheets where possible but, **do not** reduce the text such that more than one page fits on one side.

- ☐ Professional Engineer stamp.
- ☐ Rainfall amount obtained from the [Northeast Regional Climate Center](#). Include extreme precipitation table as obtained from this source.
- ☐ Drainage analyses, in the following order:
 - Pre-development analysis: Drainage diagram.
 - Pre-development analysis: Area Listing and Soil Listing.
 - Pre-development analysis: Node listing 1-year (if applicable), 2-year, 10-year and 50-year.
 - Pre-development analysis: Full summary of the 10-year storm.
 - Post-development analysis: Drainage diagram.
 - Post-development analysis: Area Listing and Soil Listing.
 - Post-development analysis: Node listing for the 2-year, 10-year and 50-year.
 - Post-development analysis: Full summary of the 10-year storm.
- ☐ Review the Area Listing and Soil Listing reports
 - Hydrologic Soil Groups (HSG) match the HSGs on the soil maps provided.
 - There is the same or less HSG A soil area after development (check for each HSG).
 - There is the same or less "woods" cover in the post-development.
 - Undeveloped land was assumed to be in "good" condition.
 - The amount of impervious cover in the analyses is correct.

Note: A good check is to subtract the total impervious area used in the pre-analysis from the total impervious area used in the post-analysis. For residential projects without demolition occurring, a good check is to take this change in impervious area, subtract out the roadway and divide the remaining by the number of houses or units proposed. Do these numbers make sense?

- ☐ Check the storage input used to model the ponds.
- ☐ Check to see if the artificial berms pass the 50-year storm, i.e., make sure the constructed berms on ponds are not overtopped.
- ☐ Check the outlet structure proposed and make sure it matches that modeled.
- ☐ Check to see if the total areas in the pre and post analyses are same.
- ☐ Confirm the correct NRCS storm type was modeled (Coos, Carroll and Grafton counties are Type II, all others Type III).

PRE- AND POST-CONSTRUCTION DRAINAGE AREA PLANS

- ☐ Plans printed on 34 - 36" by 22 - 24" on white paper.
- ☐ Submit these plans separate from the soil plans.
- ☐ A north arrow.
- ☐ A scale.
- ☐ Labeled subcatchments, reaches and ponds.

- ☒ Tc lines.
- ☒ A clear delineation of the subcatchment boundaries.
- ☐ Roadway station numbers.
- ☒ Culverts and other conveyance structures.

PRE- AND POST-CONSTRUCTION COLOR-CODED SOIL PLANS

- ☒ 11" × 17" sheets suitable, as long as it is readable.
- ☒ Submit these plans separate from the drainage area plans.
- ☒ A north arrow.
- ☒ A scale.
- ☒ Name of the soil scientist who performed the survey and date the soil survey took place.
- ☒ 2-foot contours (5-foot contours if application is for a gravel pit) as well as other surveyed features.
- ☒ Delineation of the soil boundaries and wetland boundaries.
- ☒ Delineation of the subcatchment boundaries.
- ☒ Soil series symbols (e.g., 26).
- ☒ A key or legend identifying each soil series symbol and its associated soil series name (for example: 26 = Windsor).
- ☒ The hydrologic soil group color coding (A = Green, B = yellow, C= orange, D=red, Water=blue, and Impervious = gray).

Please note that excavation projects (including gravel pits) have similar requirements to those above, with the following common exceptions or additions:

- ☐ Drainage report is not needed if site does not have off-site flow.
- ☐ 5-foot contours are allowed rather than 2-foot.
- ☐ No Professional Engineer stamp is needed on the plans.
- ☐ Add a note to the plans that the applicant must provide NHDES a written update of the project and revised plans documenting the project status every five years from the date of the Alteration of Terrain permit.
- ☐ Add reclamation notes.
- ☐ A description of the subsurface conditions to the planned depth of excavation, including the elevation of the location of the Seasonal High Water Table (SHWT), as observed and described by a certified soil scientist, or an individual holding a valid permit as a permitted designer as issued by the department's Subsurface Systems Bureau.

For more resources, refer to the Natural Resources Conservation Service's [Vegetating New Hampshire Sand and Gravel Pits](#) publication.