City of Laconia Technical Review Committee
Tuesday February 17th 2026 - 10:00 AM
City Hall - Armand A. Bolduc City Council Chamber
AGENDA

1. CALL TO ORDER
2. ROLL CALL
3. RECORDING SECRETARY
4. ACCEPTANCE OF MINUTES FROM PREVIOUS MEETINGS

4.I. Technical Review Committee (PDF)

Prior draft minutes from Decembers meeting.

Documents:

DECEMBER MEETING MINUTES.PDF

5. REVIEW OF CONTINUED PLANNING BOARD APPLICATIONS
6. REVIEW OF NEW PLANNING BOARD APPLICATIONS

6.I. PB2026-028 191 & 193 Court St (450/45 &46)

The applicant has requested a boundary line of adjustment.

Documents:

PB2026-028 APPLICATION.PDF
PB2026-028 SITE PLAN.PDF

6.II. PB2026-031 33 White Oaks Rd (278-241-29)

The applicant is requesting a site plan and subdivision review.

Documents:

PB2026-031 APPLICATION.PDF
PB2026-031 COVER LETTER.PDF
PB2026-031 ABUTTER LIST.PDF
PB2026-031 CHECKLIST.PDF
PB2026-031 DRAINAGE ANALYSIS.PDF
PB2026-031 PLAN SET.PDF

6.III. PB2026-032 Pickerel Pond Rd (13/183/16)

The applicant is seeking a site plan review

Documents:

PB2026-032 APPLICATION.PDF
PB2026-032 SITE PLAN.PDF

6.IV. PB2026-033 651 Union Ave (371 / 220 / 21)

The applicant is seeking a CUP for an automotive dealership.

Documents:

PB2026-033 APPLICATION.PDF
PB2026-033 PROPERTY CARD.PDF
PB2026-033 SITE PLAN.PDF

7. MINOR SITE PLAN PUBLIC HEARINGS, CONSIDERATION, AND POSSIBLE VOTE
8. OTHER BUSINESS
9. ADJOURNMENT

Laconia Technical Review Committee

Tuesday 12/16/2025

10:00 AM

12/16/2025 - Minutes

1. CALL TO ORDER

   Planning Director Rob Mora brought the meeting to order at 10:09AM

2. ROLL CALL

   Scott Pelchat gave roll call in attendance Ben Crawford Water Department, Rob Mora Planning Department, Nate Guerette DPW, Tara Baker Assessing Department. Absent from todays TRC Deputy Chief Louis Loutrel, Building Inspector Joe Gray, Assistant Planning Director Tyler Carmichael.

3. RECORDING SECRETARY

   Planner Technician Scott Pelchat took minutes for the TRC meeting.

4. ACCEPTANCE OF MINUTES FROM PREVIOUS MEETINGS

   4.I. TRC MInutes

   The prior meeting minutes were accepted as written.

5. REVIEW OF CONTINUED PLANNING BOARD APPLICATIONS

   5.I. PB2026-022 1206 Old North Main St

   Craig Bailey Summarized the proposal for 1206 Old North Main St. Representing The owners Cal Dunn and Susan Turcotte.

   Craig Summarized the comments for the TRC II stating a response letter was submitted and he than reviewed the comments as they were submitted. Added a second waiver to the application to not construct sidewalks Rob advised Craig after speaking with DPW a letter supporting that waiver would be forthcoming. Craig also a waiver to not construct curbing Which would be undesired by DPW. Also Craig went further to reference the lack of curbing has now factored into the drainage patterns.

   Craig went through the items starting with Planning buildable area has been computed and is now referenced on the sheet #4. Proposed utility's shown and proposed to be underground and are shown on sheet 7-14.

   New items for consideration decided to take all the power out of the State Right Of Way and placing it all on the property which caused a change in the easement and place it all upon the property owners. Craig stated the applicants would need to deal with shared services and easements.

   The Fire Department comments a proposed hydrant and its connection was needed and i now show one at station 0 + 75 meets the 600 foot requirement and it turns out the limiting factor is not lot 1 but lot 5 so that house must be placed to the 600 foot rule and Craig stated he has referenced that on the

plans. Craig stated that this hydrant would be less than the 800 feet required from Old North Main to route 106.

Regarding Water comments Craig stated he was still to meet with Ben to go over plans with the water department Craig continued to explain to water the way ownership would look regarding the water and how it would look over the 5 land owners. Craig referenced the change in electrical as it was to run along the driveway instead of the right of way.

Craig mentioned meeting with Wes regarding and we understood they would support both waivers and our drainage was a compromise and what is shown on this plan is the capture of this runoff to be then sent to the north end of the wetland. Craig finished this summary with the elevation of the road to allow for the runoff to be recaptured or redirected. Wes and i spoke regarding the amount of complaints that come in regarding care of these items. Craig stated a base of river rock be found as the base to allow for there crew to reference a stopping point.

Craig advised Tara of the abutter to be added to the plan set. and apologized that he missed one. Tara stated it would be on her comments sheet.

Ben From the Water department gave Craig his comments regarding mains and access for how water would be accessed and also the Hydrant once it is installed.

Nate Guerette asked questions and the first was regarding an abutting tent. Nate spoke at length with Craig regarding the Road and stated he would like a study regarding this road before it might go to council for acceptance. Nate and Craig discussed care and concern over what this may look like when it is a road. Nate claimed he felt the drainage would work and agreed it would go towards the wetlands and pitching it back towards the wetlands instead of Old North Main would be better. Craig advised Nate that his discussion with Wes was the catalyst for the elevation. Craig stated the lower elevation proposal is not enough to get the water to the North side of the wetland. Nate stated the elevations would struggle maintaining the road unless the elevation is reduced. Nate and Craig spoke about what exists now and it was assumed to be CMP. Nate further referenced some of the drainage profiles look good. Tara referenced some lot number subdivision numbers to be corrected. Rob requested a copy of the drainage analysis and Craig referenced he would attend Wednesdays Conservation Commission Meeting. Rob asked Ben and Craig if there parts of the proposal could be worked out prior and Craig referenced to Rob some of the updates the planning board would see referenced on the updated plan set and if so that could put him on track to attend the January 6th Planning Board Meeting.

6. REVIEW OF NEW PLANNING BOARD APPLICATIONS

7. MINOR SITE PLAN PUBLIC HEARINGS, CONSIDERATION, AND POSSIBLE VOTE

8. OTHER BUSINESS

9. ADJOURNMENT

This meeting was adjourned at 10:25 PM

RECEIVED
JAN 14 2026
City of Laconia
Planning/Zoning

Application(s) #: PB2026-028

Fees Paid: $300.00
Check #: 4810
Receipt #:

PLANNING BOARD APPLICATION

Project Name: 191 & 193 Court Street Subdivision

Project Address: 191 & 193 Court Street, Laconia, NH 03246

Tax Map/ Lot # (s): 450/45 & 46 Zoning District (s): UC Parcel Size Acres: .15 & .23

Number of Lots: 2 Total Developed Land Area: 1226 & 3768 sq ft Building(s) and/or additions Total Sq. Ft. 2 buildings

Submittal Request (Check all that apply):

- ☐ Alternative Parking CUP
- ☐ Amendment
- ☐ Boundary Line Adjustment
- ☐ Boundary Line Agreement
- ☐ Change of Use
- ☐ Cluster Development CUP
- ☐ Cluster Subdivision
- ☐ Condominium Subdivision
- ☐ Conventional Subdivision
- ☐ Discretionary Easement
- ☐ Marinas and Yacht Club CUP
- ☐ Minor Site Plan
- ☐ Performance Zoning CUP
- ☐ Site Plan (Commercial)
- ☐ Site Plan (Multi-family)
- ☐ Steep Slope CUP
- ☐ Wetland/Wetland Buffer CUP
- ☐ Other _____

Proposal Description: In October 2025 the City of Laconia Zoning Board voted to approve our request for Variance from the minimum lot size size to adjust the boundary line between two lots containing one commercial building and one single family home. Lakes Region Community Developers (LRCD) now respectfully requests approval from the Planning Board for a Boundary Line Adjustment for 191 & 193 Court Street. The proposed adjustment would result in one lot containing the existing commercial building and another containing the single-family residence. This request will not change the existing uses of either property; it is simply intended to create a clear boundary between the two buildings.

I hereby make application to the City of Laconia for the above-referenced property(ies) and the development as described. To the best of my knowledge the information provided herein is accurate and is in accordance with the Zoning Ordinance and land use regulations of the City, except where waivers are requested. The City of Laconia Planning Board, Minor Site Plan Committee, Technical Review Committee and/or city employees are authorized to enter the property(ies) for purposes of reviewing this proposal and for inspecting improvements as a result of an approval of this proposal. I understand that I am responsible for appearing, or having someone appear on my behalf, at any and all meetings before the Planning Board, Minor Site Plan Committee or Technical Review Committee.

Sign as appropriate (If agent or non-person please attach certification)
NOTE: Please attach an Applicant Contact Worksheet

	PROPERTY OWNER 1	PROPERTY OWNER 2	AGENT / APPLICANT
Printed Name:			
Signature:			
Date:			

Laconia
CITY ON THE LAKES

DEPARTMENT OF PLANNING, ZONING & CODE
45 BEACON STREET, EAST
☎603-527-1264
🖷603-524-2164

CERTIFIED LIST OF ABUTTERS

RSA 672:3 "Abutter" means any person whose property is located in New Hampshire and adjoins or is directly across the street or stream from the land under consideration by the local land use board. For purposes of receiving testimony only, and not for purposes of notification, the term "abutter" shall include any person who is able to demonstrate that his land will be directly affected by the proposal under consideration. For purposes of receipt of notification by a municipality of a local land use board hearing, in the case of an abutting property being under a condominium or other collective form of ownership, the term abutter means the officers of the collective or association, as defined in RSA 356-B:3, XXIII. For purposes of receipt of notification by a municipality of a local land use board hearing, in the case of an abutting property being under a manufactured housing park form of ownership as defined in RSA 205-A:1, II, the term "abutter" includes the manufactured housing park owner and the tenants who own manufactured housing which adjoins or is directly across the street or stream from the land under consideration by the local land use board.

The following information must be completed by the applicant in order to begin the application process to the Planning Board or Zoning Board of Adjustment. Below, list the verified names and mailing addresses of the applicant, authorized agent(s), engineer, architect, land surveyor, soil scientist, consultant, abutter, holders of conservation easements or restrictions on adjacent lands, municipal/regional planning commissions (if a regional notice is required), associations, etc., not more than five (5) days prior to submission, per RSA 676:4,I(b). Abutters' names and mailing addresses must be verified against the records kept in the Laconia Assessor's Office. Attach additional copies of this form if necessary. Include an addressed #10 envelope and certified mail receipt for each person/professional listed below.

Map/Block/Lot	Name of Property Owner/Professional	Mailing Address of Owner/Professional
450-13-16	Griffin George H & Tammy	18 Bay Street, Laconia, NH 03246
450-13-44	Letarte Forrest	173 Jack Frost Lane, Conway, NH 03818
450-54-15	Filaroski Janet C 1998 Trust	184 Court Street, Laconia, NH 03246
450-54-47	Tellier Elizabeth	187 Court Street, Laconia, NH 03246
450-54-48	Tutt Dora E 1998 Trst	37 Lake Country Rd, Meredith, NH 03253
450-74-52	McCarthy Daniel J IV & Lynda M	78 Fair Street, Laconia, NH 03246
450-74-53	Watson Douglas	84 Fair Street, Laconia, NH 03246
455-13-67	Greer Property Management LLC	305 Gilford Av, Gilford, NH 03249
455-54-23	Belknap House	200 Court Street, Laconia, NH 03246
455-54-3	Filaroski Janet C 1998 Trust	184 Court Street, Laconia, NH 03246
455-54-66	Matias Ezequiel Perez	6 Sunshine Drive, Belmont, NH 03220

Name of Person Preparing List Caitlin Meaney Date Prepared 1/13/2025
Preparer's Signature _____ Date 1/13/2025

***Fee per Abutter $10.00**

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General Conditional Use Permits Requirements

1. The Use is authorized in the Table of Permitted Uses as a conditional use. N/A

2. Any specific conditions or standards are met. The setback requirement is not met but the ZBA has approved our variance request for this.

3. Public safety or health will not be materially endangered. Correct, public safety or health will not be endangered.

4. The value of adjoining or abutting properties will not be substantially affected. The value of abutting properties will not be substantially affected.

5. Compatibility with uses of adjoining or abutting properties and the neighborhood. This will further clarify the uses of the two properties.

6. Highway or pedestrian safety will not be substantially adversely impacted. Highway and pedestrian safety will not be impacted.

7. Natural resources of the city will not be substantially adversely impacted. Natural resources will not be impacted.

8. Adequate public facilities and utilities are available or will be provided by the applicant. No public facilities and utilities will be needed for this request.

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Wetlands Conservation Overlay District
Conditional Use Requirements

Documentation must be submitted to support that the activity or use (waiver requests should be submitted on the appropriate form):

1. Ensures the protection of wetland resources from activities that would adversely affect their functions and values [see 235-17B.(1)(a)-(h), (2)(a)-(e), and (3)]; [submittal of erosion and sedimentation control plan, list of fish/wildlife habitat affected, location of surface/ground water locations, listing of any representative or rare examples of wetland plants or animals, unique characteristics of the wetland/buffer, existing use of the site for recreational or educational purposes, and picture of the wetlands site] N/A

2. Minimizes the degradation to or loss of wetlands or wetlands buffer; an evaluation may be required using the New Hampshire Method, authored by the Audubon Society [The applicant should demonstrate that an evaluation is not warranted if a waiver is requested]; N/A

3. Minimizes the environmental impact to abutting or downstream property and/or hydrologically connected water and/or wetland resources [drainage analysis and watershed map should be included to show wetland located in the local watershed]; N/A

4. Cannot be practically located elsewhere on the site to eliminate or reduce the impact to the wetland and/or its buffer area [applicant should demonstrate that the avoidance, minimization, mitigation method has been utilized in site design]; and N/A

DEPARTMENT OF PLANNING, ZONING & CODE
45 BEACON STREET, EAST
☎603-527-1264
🖷603-524-2164

Wetlands Conservation Overlay District
Conditional Use Requirements

5. Is or is in the process of permitting for any other applicable state or federal permits [copies of the applications should be submitted with this application]. N/A

Lakes Region Community Developers

January 13, 2026

Dear Members of the Laconia Planning Board,

Lakes Region Community Developers respectfully submits the enclosed application requesting approval of a Boundary Line Adjustment for consideration at the Planning Board's March 3, 2026 meeting.

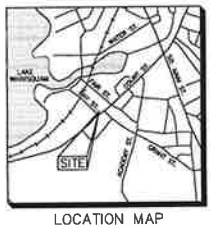
In October 2025, the City of Laconia Zoning Board of Adjustment approved Lakes Region Community Developers' request for a variance from the minimum lot size requirements to permit an adjustment of the boundary line between two adjacent properties located at 191 and 193 Court Street. These parcels currently contain one commercial building, which serves as LRCD's administrative office, and one single-family residential structure.

Pursuant to that approval, Lakes Region Community Developers now respectfully requests Planning Board approval of the corresponding Boundary Line Adjustment. The proposed adjustment would result in one parcel containing the existing commercial building and a separate parcel containing the single-family residence. This request will not result in any change to the existing use of either property and is intended solely to establish a clear and appropriate boundary between the two structures.

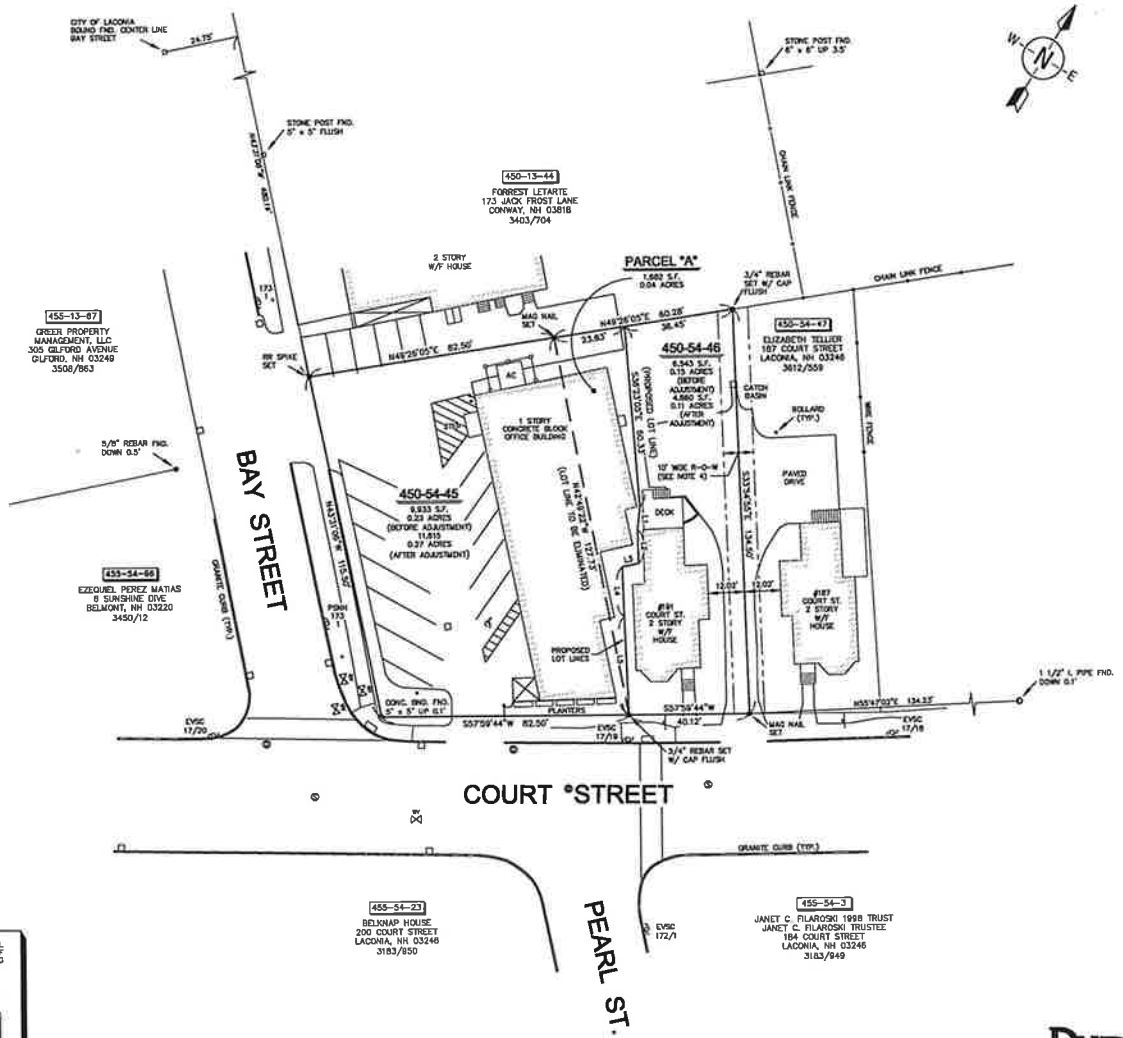
Thank you for your time and consideration of this request. Please do not hesitate to contact us should additional information or clarification be required.

Respectfully submitted,

Caitlin Meaney
Lakes Region Community Developers



LOCATION MAP



NOTES:

1) OWNER OF RECORD: LACONIA AREA COMMUNITY LAND TRUST, INC.
D/B/A LACONIA REGION COMMUNITY DEVELOPERS
193 COURT STREET
LACONIA, NH 03246

2) DEED REFERENCE TO BOTH PARCELS IS BOOK 3227 PAGE 095 BELKNAP COUNTY REGISTRY OF DEEDS.

3) PARCELS LIE IN THE (UC) URBAN COMMERCIAL ZONING DISTRICT
SETBACKS ARE: FRONT – 5'
SIDE – 5'
REAR – 5'

4) SEE RIGHT TO PASS AND REPASS OVER A STRIP OF LAND TEN FEET IN WIDTH, FIVE FEET ON EACH SIDE OF LINE BEING EQUAL DISTANT BETWEEN #191 AND #187 COURT STREET IN BOOK 3227 PAGE 095, B.C.R.D.

5) THE INTENT OF THIS PLAN IS TO ADJUST THE BOUNDARY LINE BETWEEN TAX MAP 450, BLOCK 54, LOT 45 AND TAX MAP 450, BLOCK 54, LOT 46 TO MAKE THE BUILDINGS MORE CONFORMING.

REFERENCE PLANS:

1) PLAN OF "MORRISON FIELD" TRACED MARCH 8, 1935 BY L.K. PERLEY, C.E. RECORDED B.C.R.D. PLAN BOOK 1, PAGE 25.

2) PLAN OF "BAY STREET" DATED SEPT. 1919, SCALE 1" = 40' ON FILE AT THE CITY OF LACONIA DEPT. OF PUBLIC WORKS.

LINE TABLE		
LINE	BEARING	DIST.
L1	S25°49'09"E	7.61'
L2	S33°11'32"E	11.16'
L3	S45°54'36"W	5.55'
L4	S33°54'54"E	10.41'
L5	S34°18'53"E	32.58'

LEGEND

⊡	BOUND FOUND
○	IRON PIPE FOUND
◆	REBAR FOUND OR SET
	UTILITY POLE
	GUY WIRE
	BOLLARD
	WATER VALVE
	GAS VALVE
	CATCH BASIN
	DRAIN MANHOLE
	SEWER MANHOLE

I HEREBY CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY AND HAS A MAXIMUM ERROR OF CLOSURE OF 1:15,000 ON ALL PROPERTY LINES WITHIN AND BORDERING THE SUBJECT PROPERTY.

DATE _____ LICENSED LAND SURVEYOR # 795

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 795 FRANK P. YERKES

NO.	DATE	DESCRIPTION	BY

BOUNDARY LINE ADJUSTMENT PLAN

PREPARED FOR

LACONIA AREA COMMUNITY LAND TRUST, INC.

TAX MAP 450, BLOCK 54, LOT 45
(193 COURT STREET)
AND
TAX MAP 450, BLOCK 54, LOT 46
(191 COURT STREET)
LACONIA, (BELKNAP COUNTY) NH

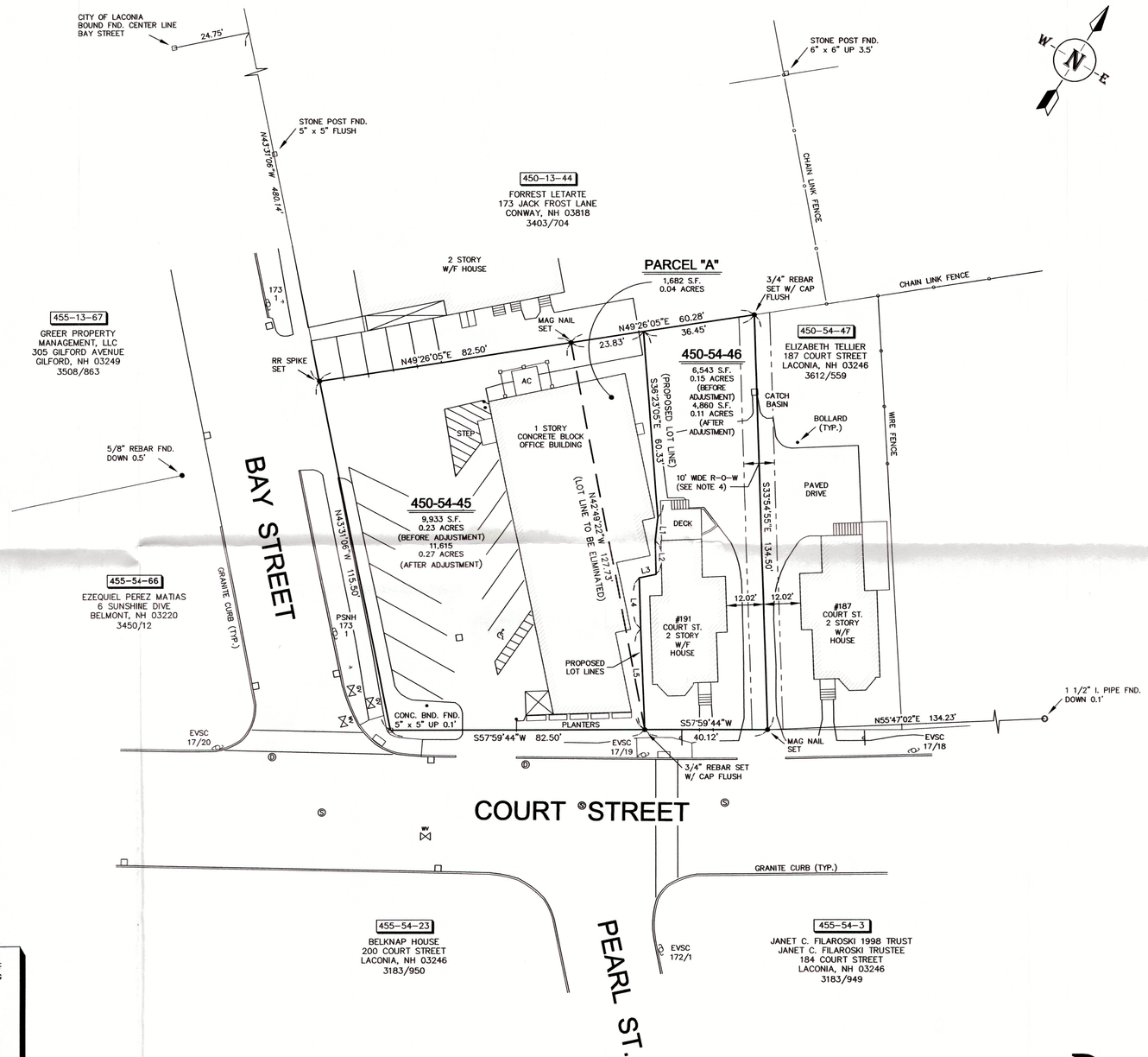
JULY 24, 2025

DuBois & King inc.
www.dubois-king.com

20' 0 20' 40'
SCALE IN FEET

JN 430958

LOCATION MAP



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LEGEND

- BOUND FOUND
- IRON PIPE FOUND
- REBAR FOUND OR SET
- UTILITY POLE
- GUY WIRE
- BOLLARD
- WATER VALVE
- GAS VALVE
- CATCH BASIN
- DRAIN MANHOLE
- SEWER MANHOLE

I HEREBY CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY AND HAS A MAXIMUM ERROR OF CLOSURE OF 1:10,000 ON ALL PROPERTY LINES WITHIN AND BORDERING THE SUBJECT PROPERTY.

DATE LICENSED LAND SURVEYOR # 798

STATE OF NEW HAMPSHIRE No. 798 FRANK P. YERKES LICENSED LAND SURVEYOR
SIGNATURE

NO.	DATE	DESCRIPTION	BY

DuBois & King inc.
www.dubois-king.com

BOUNDARY LINE ADJUSTMENT PLAN

PREPARED FOR

LACONIA AREA COMMUNITY LAND TRUST, INC.

TAX MAP 450, BLOCK 54, LOT 45
(193 COURT STREET)
AND
TAX MAP 450, BLOCK 54, LOT 46
(191 COURT STREET)
LACONIA, (BELKNAP COUNTY) NH
JULY 24, 2025

20' 0 20' 40'
SCALE IN FEET

JN 430958

Laconia
CITY ON THE LAKES

Application(s) #: _____

Fees Paid: _____
Check #: _____
Receipt #: _____

PLANNING BOARD APPLICATION

Project Name: 33 White Oaks Subdivision

Project Address: 33 White Oaks Rd, Laconia, NH

Tax Map/ Lot # (s): 278/241/29 Zoning District (s): CR/RR-1 Parcel Size Acres: 16.28

Number of Lots: 25 Total Developed Land Area: 7.46 Building(s) and/or additions Total Sq. Ft. 24

Submittal Request (Check all that apply):

- ☐ Alternative Parking CUP
- ☐ Amendment
- ☐ Boundary Line Adjustment
- ☐ Boundary Line Agreement
- ☐ Change of Use
- ☐ Cluster Development CUP
- ☐ Cluster Subdivision
- ☐ Condominium Subdivision
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- ☒ Site Plan (Multi-family)
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- ☐ Wetland/Wetland Buffer CUP
- ☐ Other _____

Proposal Description: Please see enclosed Cover Letter

I hereby make application to the City of Laconia for the above-referenced property(ies) and the development as described. To the best of my knowledge the information provided herein is accurate and is in accordance with the Zoning Ordinance and land use regulations of the City, except where waivers are requested. The City of Laconia Planning Board, Minor Site Plan Committee, Technical Review Committee and/or city employees are authorized to enter the property(ies) for purposes of reviewing this proposal and for inspecting improvements as a result of an approval of this proposal. I understand that I am responsible for appearing, or having someone appear on my behalf, at any and all meetings before the Planning Board, Minor Site Plan Committee or Technical Review Committee.

Sign as appropriate (If agent or non-person please attach certification)
NOTE: Please attach an Applicant Contact Worksheet

	PROPERTY OWNER 1	PROPERTY OWNER 2	AGENT / APPLICANT
Printed Name:	Daniel A. Greenhalgh		Scott Buonopane
Signature:			
Date:	1/28/26		1/28/26

R5089-0278
January 30, 2026

Mr. Rob Mora
Director of Planning Department
City of Laconia Planning Department
45 Beacon Street E
Laconia, NH 03246

Re: Site Plan Review & Subdivision Permit Application
33 White Oaks Subdivision – 33 White Oaks Road, Laconia, NH

Dear Rob:

On behalf of Daniel H Greenhalgh (Owner) and Scott Buonopane (Applicant), we are pleased to submit the following material to the Technical Review Committee (TRC) in support of a Site Plan Review & Subdivision Permit Application for the above reference project:

- Site Plan Set, dated January 30, 2026;
- Planning Board Application, dated January 30, 2026;
- Site Plan Checklist, dated January 30, 2026;
- Subdivision Checklist, dated January 30, 2026;
- Drainage Analysis, dated January 30, 2026;
- Trip Generation Analysis, dated January 30, 2026;
- Wetland Delineation Memorandum, dated December 2, 2025;
- Application Fee Calculation Form, dated January 30, 2026;
- Abutters Mailing Labels

The proposed project is located along White Oaks Road on a parcel of land identified as Tax Map 278 Block 241 Lot 29 on the City of Laconia Tax Maps. The project includes the subdivision of the existing parcel into twenty-five (25) lots, consisting of twenty-four (24) single-family residential building lots and one (1) lot for the remainder of the existing parcel. The proposed work includes the construction of two (2) new public roadways and associated infrastructure improvements, including stormwater management and utilities. The proposed lots and roadway have been designed to meet or exceed applicable zoning and subdivision requirements.

On November 17, 2025, the Laconia Zoning Board of Adjustments granted zoning relief for the proposed project relative to dimensional requirements associated with the Commercial Resort (CR) district boundary on the subject parcel. The approved variance allows for the application of the CR zoning district dimensional requirements for a distance of 500 FT from the district boundary, whereas 100 FT is otherwise allowed.

Under separate cover, a permit application fee in the amount of $3,595.00 will be delivered to the Planning Department. A copy of the application fee calculation form is enclosed.

177 Corporate Drive
Portsmouth, NH 03801

T 603.433.8818

TIGHEBOND.COM

We respectfully request to be placed on the Technical Review Committee meeting agenda for February 17, 2026. If you have any questions or need any additional information, please contact Neil Hansen by phone at (603) 294-9213 or by email at nahansen@tighebond.com.

Sincerely,
Tighe & Bond, Inc.

Patrick M. Crimmins, PE
Vice President

Neil A. Hansen, PE
Project Manager

Copy: Scot Buonopane (via email)

J:\R\R5089 Residential\0278 - 33 White Oaks Rd, Laconia, NH\Report\Applications\City of Laconia\20260130_TRC Submission\20260130 TRC Cover Letter.docx

Laconia
CITY ON THE LAKES

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CERTIFIED LIST OF ABUTTERS

RSA 672:3 "Abutter" means any person whose property is located in New Hampshire and adjoins or is directly across the street or stream from the land under consideration by the local land use board. For purposes of receiving testimony only, and not for purposes of notification, the term "abutter" shall include any person who is able to demonstrate that his land will be directly affected by the proposal under consideration. For purposes of receipt of notification by a municipality of a local land use board hearing, in the case of an abutting property being under a condominium or other collective form of ownership, the term abutter means the officers of the collective or association, as defined in RSA 356-B:3, XXIII. For purposes of receipt of notification by a municipality of a local land use board hearing, in the case of an abutting property being under a manufactured housing park form of ownership as defined in RSA 205-A:1, II, the term "abutter" includes the manufactured housing park owner and the tenants who own manufactured housing which adjoins or is directly across the street or stream from the land under consideration by the local land use board.

The following information must be completed by the applicant in order to begin the application process to the Planning Board or Zoning Board of Adjustment. Below, list the verified names and mailing addresses of the applicant, authorized agent(s), engineer, architect, land surveyor, soil scientist, consultant, abutter, holders of conservation easements or restrictions on adjacent lands, municipal/regional planning commissions (if a regional notice is required), associations, etc., not more than five (5) days prior to submission, per RSA 676:4,I(b). Abutters' names and mailing addresses must be verified against the records kept in the Laconia Assessor's Office. Attach additional copies of this form if necessary. Include an addressed #10 envelope and certified mail receipt for each person/professional listed below.

Map/Block/Lot	Name of Property Owner/Professional	Mailing Address of Owner/Professional
Applicant	Scott Buonopane	217 Middlesex Turnpike, Burlington, MA 01803
Agent	Neil A. Hansen, Tighe & Bond	177 Corporate Drive, Portsmouth, NH 03801
278/241/29	Daniel H Greenhalgh	18 Tenney Rd, Pelham, NH 03076
278/241/4	PAUGUS VIEW CONDOMINIUM ASSOCIATION C/O PATRICK MULHOLLAND	27 QUAKER LN, SEABROOK, NH 03874
282/241/2	GILFORD OUTPARCEL LLC C/O WS DEVELOPMENT ASSOCI	33 BOYLSTON ST STE 3000, CHESTNUT HILL, MA 02467
282/241/1	GILFORD ROUTE 11 REALTY T C/O WS ASSET MANAGEMENT I	33 BOYLSTON ST SUITE 3000, CHESTNUT HILL, MA 02467
283/23/5	HALEY KIMBERLY BETH	147 LAKE ST, LACONIA, NH 03246
278/241/28	HOSA LLC C/O PATRICIA MARCHETTI &	PO BOX 5243, LACONIA, NH 03247
283/23/4	3 WAY REALTY GROUP LLC	45 FOLLIAGE LN, LACONIA, NH 03247
201/009 (Gilford)	BULL BROOK LLC	PO BOX 1767, SEABROOK, NH 03874
213/23 (Gilford)	GILFORD OUTPARCEL LLC WS ASSET MANAGEMENT INC	33 BOYLSTON STREET, SUITE 3000, CHESTNUT HILL, MA 02467
201/1 (Gilford)	PAUGUS BAY PLAZA CONDO ASC MSTRCRD C/O DAVID SALANITRO	91 TATE RD, GILFORD, NH 03249

Name of Person Preparing List Neil Hansen Date Prepared 1/29/2026
Preparer's Signature _____ Date 1/29/2026

***Fee per Abutter $10.00**

SITE PLAN

Office Use Only

Tax Map ____ Block ____ Lot ____

Date Reviewed _____

Applicant Name Scott Buonopane

For Staff Use Only

PLAT REQUIREMENTS FOR SITE PLAN	Enclosed	Plan Site #	Waiver Req.	None Found	N/A		Submitted	Rec. Waiver	Not Submitted	Acceptable	Required
Application Properly Executed	X										
Filing Fee	X										
Abutter Information	X										
Authorization from Property Owner	X										
Plans (properly distributed)	X										
Existing Conditions	X										
Proposed Site Plan	X										
Architectural Plan					X						
Landscape Plan					X						
Reduced Plan Set (After PRC II for PB distribution)					X						
PLAN FORMAT											
Size (11" x 17" to 24" x 36")	X										
Scale: (No greater than 1" = 150')	X										
Bound if More than One Page	X										
Locus (No Greater than 1" = 1000')	X										
Legend	X										
Title Box	X										
(Lower Right Hand Corner)	X										
Owner Name and Address	X										
Project Name	X										
Project Location and Address	X										
Tax Map Number(s)	X										
Deed Book and Page Numbers	X										
Zone Designation/Boundaries	X										
Draft Date & Revision Dates	X										
Preparer Name & Address	X										
Original P.E./LLS Stamp & Signature	X										
North Arrow	X										

PLAT REQUIREMENTS FOR SITE PLAN

	Enclosed	Plan Sht #	Waiver Req.	None found	N/A		Submitted	Rec. Waiver	Not Submitted	Acceptable	Required
Measurements	X										
Bearings	X										
Error of Closure Statement	X										
Signature Block (lower right hand corner)	X										

NATURAL FEATURES

Topographic Contours (2 ft. intervals)	X										
Wetland Delineation/CSS Stamp & Signature	X										
Water Bodies & Water Courses					X						
Ledge Outcroppings					X						
Significant Tree Stands	X										
FEMA Floodplain Boundary					X						
Steep Slope Areas > 25%	X										

Existing Condition Plan

Lot Sizes in Square Feet	X										
Lot Lines/Monumentation - Location	X										
Green Space Calculation	X										
Easements or Rights-of-way/Location & Width	X										
Structures - Location, Footprint & Use	X										
Curb Cuts & Driveways - location, layout & dimen.	X										
Access Street - location, pavement, & Row widths	X										
Sewer/Septic Disposal Facilities-location, line size	X										
Water Supply - location, line size	X										
Non-municipal utilities, elect., cable, alarm etc.	X										
Signage - location & size					X						
Outdoor Lighting - location & type					X						
Dock or Mooring Sites					X						

PROPOSED LAYOUT

Lot Lines	X										
Easements & Rights of Way	X										
Structures & Additions - location, footprint & use	X										
Building Dimensions/Height	X										
Parking & Loading areas -location, layout & dimen.					X						
Curb Cuts & Driveways - location, layout & dimen.	X										

PLAT REQUIREMENTS FOR SITE PLAN

	Enclosed	Plan Sht #	Waiver Req.	None found	N/A		Submitted	Rec. Waiver	Not Submitted	Acceptable	Required
Handicapped spaces - location, layout & dimensions					X						
Parking Requirement Calculation based on Use (s)					X						
Signs - Location & Size					X						
Finished First Floor Elevations	X										
Solid Waste Disposal - location & type					X						
Outdoor Lighting - location & type					X						
Fire Lanes & Other Emergency Access					X						
Walkways - location & width					X						
Fences, walls - location, type & height	X										
Phasing Delineation					X						
Street Improvements - plans, profiles & cross-section	X										
911 Street Name Designation (DPW)	X										
Non-municipal Utility Connection Locations:	X										
I.e. electric, fire alarm	X										
Well Location					X						
Septic Disposal Facilities					X						
Drainage Improvements - location & Layout	X										
Grading Plan - contours @ 2 ft. intervals with	X										
finished grade elevations	X										
Municipal Utility Extensions - plan & profiles	X										
Sewer - locations, size & invert elevations of manhole	X										
Water Mains - location/size & invert of hydrants,	X										
gates, valves & blowoffs	X										
Pump Station Locations					X						
Erosion & Sediment Control Plan View & Detail	X										
Dock or Mooring Sites					X						
LANDSCAPE PLAN											
Plan View & Planting Schedule					X						
Location, site & type of new, retained & relocated plantings					X						
Street Tree Layout					X						
Greenspace/Landscape Calculations					X						
ARCHITECTURAL PLAN											
Preparer of plan					X						
All Elevations Shown					X						
Scale (minimum 1/8" = 1')					X						

PLAT REQUIREMENTS FOR SITE PLAN	Enclosed	Plan Sht #	Waiver Req.	None found	N/A		Submitted	Rec. Waiver	Not Submitted	Acceptable	Required
Building Colors					X						
Roof Type & Pitch					X						
Location of Windows & Doors					X						
Towers, Antennaes - size, type & location					X						
Bulk/Height Relationship to Abutting Structures					X						
Building Height					X						
ABUTTING PROPERTIES											
Owner Name & Address	X										
Tax Map Number	X										
Location & Use of Buildings/Property	X										
OFF-SITE PROPROSED IMPROVEMENTS											
Streets					X						
Utilities					X						
Parks					X						
Others					X						
DOCUMENTS											
Articles of Agreement					X						
Association By-Laws					X						
Restrictive Covenants					X						
Construction Estimates					X						
Easements					X						
Consultant Review Agreement					X						
Declaration of Condominium					X						
Traffic Impact Study	X										
Wetlands/Watercourse Impact Analysis	X										
Drainage Analysis for 10-Year Flow	X										
Groundwater Analysis					X						
TOWN, STATE & FEDERAL APPROVALS											
Dredge and Fill (482-A)					X						
Army Corp. of Engineers					X						
Significant Alteration of Terrain (485-A:17) (Pending)	X										
Energy Facility (162h)					X						
State Public Works and Highways (236:13) - Driveway					X						
Condominium Development (356-B)					X						
Land Disclosure (356-A) if over 16 Lots					X						
HUD Land Disclosure (15 USC 1701), if over 50 Lots					X						
Conditional Use Permit for Wetlands Crossing					X						
Shoreline Protection (483-B)					X						

SUBDIVISION PLAN

Office Use Only

Tax Map ____ Block ____ Lot ____

Date Reviewed _____

Applicant Name Scott Buonopane

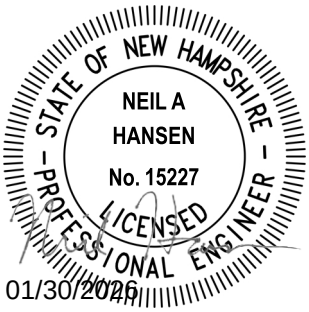
PLAT REQUIREMENTS FOR SUBDIVISION PLAN	Enclosed	Plan Sht #	Waiver Req.	None Found	N/A		Submitted	Rec. Waiver	Not Submitted	Acceptable	Required
Application Properly Executed	X										
Filing Fee	X										
Abutter Information	X										
Authorization from Property Owner	X										
Plans (distributed properly)	X										
Reduced Plan Set (After PRC II for PB distribution)					X						
PLAN FORMAT											
Size (11" x 17" to 24" x 36")	X										
Scale: (No greater than 1" = 100')	X										
Bound if More than One Page	X										
Locus (No Greater than 1" = 1000')	X										
Legend	X										
Title Box - Subdivision/Lot Line Adjustment	X										
(Lower Right Hand Corner)	X										
Owner Name and Address	X										
Project Name	X										
Project Location	X										
Tax Map Number(s)	X										
Deed book and page	X										
Zone Designation/Boundaries	X										
Draft Date & Revision Dates	X										
Preparer Name & Address	X										
Original Surveyor Stamp & Signature	X										
North Arrow	X										
Measurements	X										
Bearings	X										
Error of Closure	X										
Planning Board Signature Block	X										
(Lower Right Hand Corner)	X										

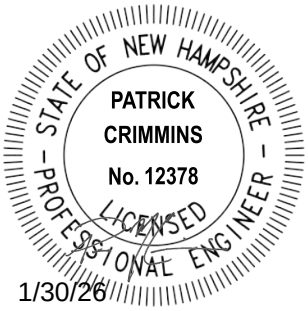
PLAT REQUIREMENTS FOR SUBDIVISION PLAN	Enclosed	Plan Sht #	Waiver Req.	None found	N/A		Submitted	Rec. Waiver	Not Submitted	Acceptable	Required
NATURAL FEATURES											
Topographic Contours (2 ft. intervals)	X										
Wetland Delineation/CSS Stamp & Signature	X										
Water Bodies & Water Courses	X										
Ledge Outcroppings					X						
Significant Tree Stands	X										
FEMA Foodplain Boundary					X						
Steep Slope Areas > 25%	X										
EXISTING CONDITIONS PLAN											
Lot Sizes in Square Feet	X										
Lot Lines	X										
Easements or Rights-of-way/Location & width	X										
Septic Disposal Facilities					X						
Water Supply	X										
Buildings	X										
Roads	X										
Driveways	X										
Drainage Improvements	X										
PROPOSED LAYOUT											
Lot Lines	X										
Setback Lines	X										
Easements or Rights-of-way/Location & Width	X										
Septic Disposal Facilities/Sewer Design/Plan-Profile	X										
Water Supply/Water System Design/Plan & Profile	X										
Buildings	X										
Driveways	X										
Drainage Improvements/Plan & Profile	X										
Road Engineering/Road Cross Section/Plan & Profile	X										
911 Street Name Designation (DPW)	X										
Street Design	X										
Sidewalks					X						
Curbing					X						
Street Lighting					X						

PLAT REQUIREMENTS FOR SUBDIVISION PLAN	Enclosed	Plan Sht #	Waiver Req.	None found	N/A		Submitted	Rec. Waiver	Not Submitted	Acceptable	Required
Street Trees					X						
Street Grades	X										
Erosion & Sediment Control Plan/View & Detail	X										
Dock Site/Mooring Locations					X						
Topography/Grading Plan	X										
Monumentation	X										
Common/Limited Common Areas					X						
Open Space/Public Sites					X						
Conservation Easements					X						
ABUTTING PROPERTIES											
Owner Name & Address	X										
Tax Map Number	X										
Wells within 75 feet	X										
Subdivision Names	X										
Roads/Road Names	X										
Building Lines within 200 Feet	X										
OFF-SITE PROPOSED IMPROVEMENTS											
Streets					X						
Utilities					X						
Parks					X						
Other					X						
DOCUMENTS											
Articles of Agreement					X						
Association By-Laws					X						
Restrictive Covenants					X						
Construction Estimates					X						
Easements					X						
Consultant Review Agreement					X						
Declaration of Condominium					X						

PLAT REQUIREMENTS FOR SUBDIVISION PLAN	Enclosed	Plan Sht #	Waiver Req.	None found	N/A		Submitted	Rec. Waiver	Not Submitted	Acceptable	Required
STUDIES											
Traffic Impact Study > 10 Lots	X										
Wetlands/Watercourse Impact Analysis	X										
Master Plan Compatability Statement					X						
Drainage Analysis for 50 Year Flow	X										
Groundwater Analysis					X						
TOWN, STATE & FEDERAL APPROVALS											
Dredge and Fill (482-A)					X						
Army Corp. of Engineers					X						
Significant Alteration of Terrain (485-A:17) (Pending)	X										
Subdivision Approval (485-A:29)					X						
Energy Facility (162h)					X						
State Public Works and Highways (236:13) - Driveway					X						
Condominium Development (356-B)					X						
Land Disclosure (356-A) if over 16 Lots					X						
HUD Land Disclosure (15 USC 1701), if over 50 Lots					X						
Conditional Use Permit for Wetland Crossings					X						
Shoreland Protection (483-B)					X						

Tighe & Bond





33 White Oaks Subdivision
Laconia, NH

Drainage Analysis

Scott Buonopane

January 30, 2026

Table of Contents

Appendices

SECTION 1 | Narrative

The proposed project is located along White Oaks Road on a parcel of land identified as Tax Map 278 Block 241 Lot 29 on the City of Laconia Tax Maps. The project includes the subdivision of the existing parcel into twenty-five (25) lots, consisting of twenty-four (24) single-family residential building lots and one (1) lot for the remainder of the existing parcel. The proposed work includes the construction of two (2) new public roadways and associated infrastructure improvements, including stormwater management and utilities. The proposed lots and roadway have been designed to meet or exceed applicable zoning and subdivision requirements.

1.1 On-Site Soil Description

The site consists of terrain that generally slopes from the north of the property to the south. The existing parcel has an approximate high point elevation of 592 along the norther parcel limits and a low point with a low point of approximately 554 to the south.

A Web Soil Survey for the subject parcel as obtained from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) website and can be found in Appendix A of this report. The runoff analyzed within these studies has been modeled using Hydrologic Soil Group C soils. The site is comprised of Canterbury Soils with drainage classifications of moderate-drained soils.

1.2 Pre- & Post-Development Flow Comparison

For the purposes of this analysis, runoff generated by the site has been analyzed at two (2) distinct points of analysis (PA-1 & PA-2). These points of analysis were chosen to compare the Pre and Post-development flows. PA-1 is located along White Oaks Rd to the west of the proposed development lot. PA-2 is located at the on-site forested wetland to the east of the proposed work. Runoff from this wetland generally flows to the southwest along the abutting commercial property and ultimately to White Oaks Rd.

The peak discharge rates at this point of analysis were determined by analyzing Type III 24-hour storm events. The rainfall data for these storm events were obtained from the data published by the Northeast Regional Climate Center (NRCC) at Cornell University, which can be found in Appendix B.

TABLE 1-1 Comparison of Pre and Post Development Flows

Point of Analysis	Pre/**Post** 2-Year Storm (cfs)	Pre/**Post** 10-Year Storm (cfs)	Pre/**Post** 25-Year Storm (cfs)	Pre/**Post** 50-Year Storm (cfs)
PA-1	1.15/**0.76**	2.90/**1.91**	4.44/**2.83**	5.93/**4.91**
PA-2	3.12/**1.98**	8.42/**7.17**	13.18/**9.63**	17.87/**12.09**

1.3 Best Management Practices

All soil erosion and sediment control measures have been designed in accordance with the New Hampshire Stormwater Manual. The intent of the outlined measures is to minimize erosion and sedimentation during construction, stabilize and protect the site from erosion after construction is complete and improve stormwater quality from the site. Best Management Practices for this project include:

- Temporary erosion and sediment control practices to be implemented during construction;
- Permanent stabilization practices to be implemented prior to the completion of construction;
- Stormwater treatment practices including Sediment Forebays and Pretreatment Swales;
- Stormwater detention practices including Bioretention Rain Gardens;

SECTION 2 | Drainage Analysis

2.1 Calculation Methods

The design storms analyzed in this study are the 2-year, 10-year, 25-year and 50-year 24-hour duration storm events. The stormwater modeling system, HydroCAD 10.0 was utilized to predict the peak runoff rates from these storm events. A Type III storm pattern was used in the model.

The time of concentration was computed using the TR-55 Method, which provides a means of determining the time for an entire watershed to contribute runoff to a specific location via sheet flows, shallow concentrated flow and channel flow. Runoff curve numbers were calculated by estimating the coverage areas and then summing the curve number for the coverage area as a percent of the entire watershed.

References:

1. HydroCAD Stormwater Modeling System, by HydroCAD Software Solutions LLC, Chocorua, New Hampshire.
2. New Hampshire Stormwater Management Manual, Volume 2, Post-Construction Best Management Practices Selection and Design, December 2008.
3. "Extreme Precipitation in New York & New England." Extreme Precipitation in New York & New England by Northeast Regional Climate Center (NRCC), 26 June 2012.

2.2 Pre-Development Conditions

To analyze the pre-development condition, the site has been modeled utilizing two distinct points of analysis (PA-1 & PA-2). These points of analysis and watersheds are depicted on the plan entitled "Pre-Development Watershed Plan", Sheet C-801.

The points of analysis and their contributing watershed areas are described below:

Point of Analysis One (PA-1)

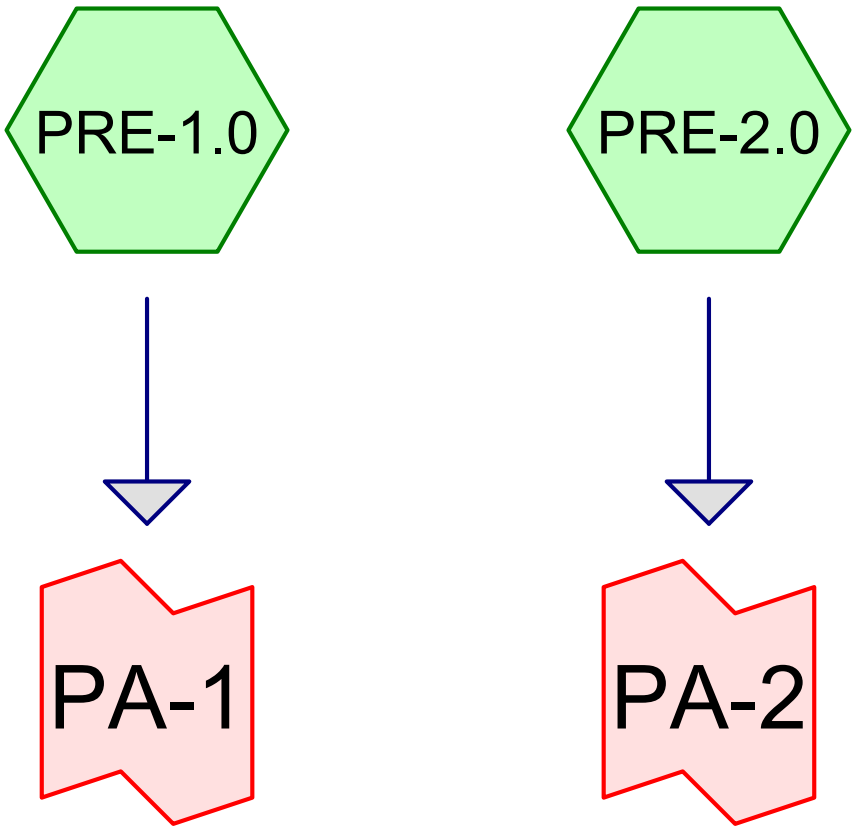
Point of Analysis 1 is comprised of one subcatchment area (PRE-1.0). This area includes two existing buildings, various residential driveways, a small portions of grass, and woods. Runoff from this area travels southwest via overland flow to Point of Analysis 1.

Point of Analysis One (PA-2)

Point of Analysis 2 is comprised of one subcatchment area (PRE-2.0). This area includes portions of an existing residential building to the north of the subject parcel and is comprised mainly of woodland and small portions of grass. Runoff from this area travels south via overland flow to Point of Analysis 2.

2.2.1 Pre-Development Calculations

2.2.2 Pre-Development Watershed Plan



Subcat Reach Pond Link

Routing Diagram for R5089-0278_PRE
Prepared by Tighe & Bond, Printed 1/29/2026

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.856	74	>75% Grass cover, Good, HSG C (PRE-1.0, PRE-2.0)
0.029	98	Unconnected pavement, HSG C (PRE-1.0)
0.077	98	Unconnected roofs, HSG C (PRE-1.0, PRE-2.0)
8.164	70	Woods, Good, HSG C (PRE-1.0, PRE-2.0)
9.125	**71**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
9.125	HSG C	PRE-1.0, PRE-2.0
0.000	HSG D	
0.000	Other	
9.125		**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE-1.0: Runoff Area=89,588 sf 3.29% Impervious Runoff Depth>0.66"
Flow Length=561' Tc=11.1 min CN=72 Runoff=1.15 cfs 0.113 af

SubcatchmentPRE-2.0: Runoff Area=307,898 sf 0.53% Impervious Runoff Depth>0.58"
Flow Length=698' Slope=0.0700 '/' Tc=13.1 min CN=70 Runoff=3.12 cfs 0.340 af

Link PA-1: Inflow=1.15 cfs 0.113 af
Primary=1.15 cfs 0.113 af

Link PA-2: Inflow=3.12 cfs 0.340 af
Primary=3.12 cfs 0.340 af

Total Runoff Area = 9.125 ac Runoff Volume = 0.454 af Average Runoff Depth = 0.60"
98.85% Pervious = 9.020 ac 1.15% Impervious = 0.105 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE-1.0: Runoff Area=89,588 sf 3.29% Impervious Runoff Depth>1.48"
Flow Length=561' Tc=11.1 min CN=72 Runoff=2.90 cfs 0.254 af

SubcatchmentPRE-2.0: Runoff Area=307,898 sf 0.53% Impervious Runoff Depth>1.35"
Flow Length=698' Slope=0.0700 '/' Tc=13.1 min CN=70 Runoff=8.42 cfs 0.797 af

Link PA-1: Inflow=2.90 cfs 0.254 af
Primary=2.90 cfs 0.254 af

Link PA-2: Inflow=8.42 cfs 0.797 af
Primary=8.42 cfs 0.797 af

Total Runoff Area = 9.125 ac Runoff Volume = 1.051 af Average Runoff Depth = 1.38"
98.85% Pervious = 9.020 ac 1.15% Impervious = 0.105 ac

Summary for Subcatchment PRE-1.0:

Runoff = 2.90 cfs @ 12.16 hrs, Volume= 0.254 af, Depth> 1.48"
Routed to Link PA-1 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.04"

Area (sf)	CN	Description
1,703	98	Unconnected roofs, HSG C
33,291	74	>75% Grass cover, Good, HSG C
53,346	70	Woods, Good, HSG C
1,248	98	Unconnected pavement, HSG C
89,588	72	Weighted Average
86,637		96.71% Pervious Area
2,951		3.29% Impervious Area
2,951		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	25	0.0500	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.75"
1.1	73	0.0500	1.12		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.5	60	0.0700	1.85		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.9	100	0.1400	1.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.1	140	0.0900	2.10		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
2.2	163	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
11.1	561	Total			

Summary for Subcatchment PRE-2.0:

Runoff = 8.42 cfs @ 12.20 hrs, Volume= 0.797 af, Depth> 1.35"
Routed to Link PA-2 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.04"

Area (sf)	CN	Description
1,632	98	Unconnected roofs, HSG C
4,003	74	>75% Grass cover, Good, HSG C
302,263	70	Woods, Good, HSG C
307,898	70	Weighted Average
306,266		99.47% Pervious Area
1,632		0.53% Impervious Area
1,632		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	25	0.0700	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.75"
8.5	673	0.0700	1.32		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
13.1	698	Total			

Summary for Link PA-1:

Inflow Area = 2.057 ac, 3.29% Impervious, Inflow Depth > 1.48" for 10-YR event
Inflow = 2.90 cfs @ 12.16 hrs, Volume= 0.254 af
Primary = 2.90 cfs @ 12.16 hrs, Volume= 0.254 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link PA-2:

Inflow Area = 7.068 ac, 0.53% Impervious, Inflow Depth > 1.35" for 10-YR event
Inflow = 8.42 cfs @ 12.20 hrs, Volume= 0.797 af
Primary = 8.42 cfs @ 12.20 hrs, Volume= 0.797 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE-1.0: Runoff Area=89,588 sf 3.29% Impervious Runoff Depth>2.22"
Flow Length=561' Tc=11.1 min CN=72 Runoff=4.44 cfs 0.380 af

SubcatchmentPRE-2.0: Runoff Area=307,898 sf 0.53% Impervious Runoff Depth>2.05"
Flow Length=698' Slope=0.0700 '/' Tc=13.1 min CN=70 Runoff=13.18 cfs 1.209 af

Link PA-1: Inflow=4.44 cfs 0.380 af
Primary=4.44 cfs 0.380 af

Link PA-2: Inflow=13.18 cfs 1.209 af
Primary=13.18 cfs 1.209 af

Total Runoff Area = 9.125 ac Runoff Volume = 1.589 af Average Runoff Depth = 2.09"
98.85% Pervious = 9.020 ac 1.15% Impervious = 0.105 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE-1.0: Runoff Area=89,588 sf 3.29% Impervious Runoff Depth>2.94"
Flow Length=561' Tc=11.1 min CN=72 Runoff=5.93 cfs 0.504 af

SubcatchmentPRE-2.0: Runoff Area=307,898 sf 0.53% Impervious Runoff Depth>2.75"
Flow Length=698' Slope=0.0700 '/' Tc=13.1 min CN=70 Runoff=17.87 cfs 1.620 af

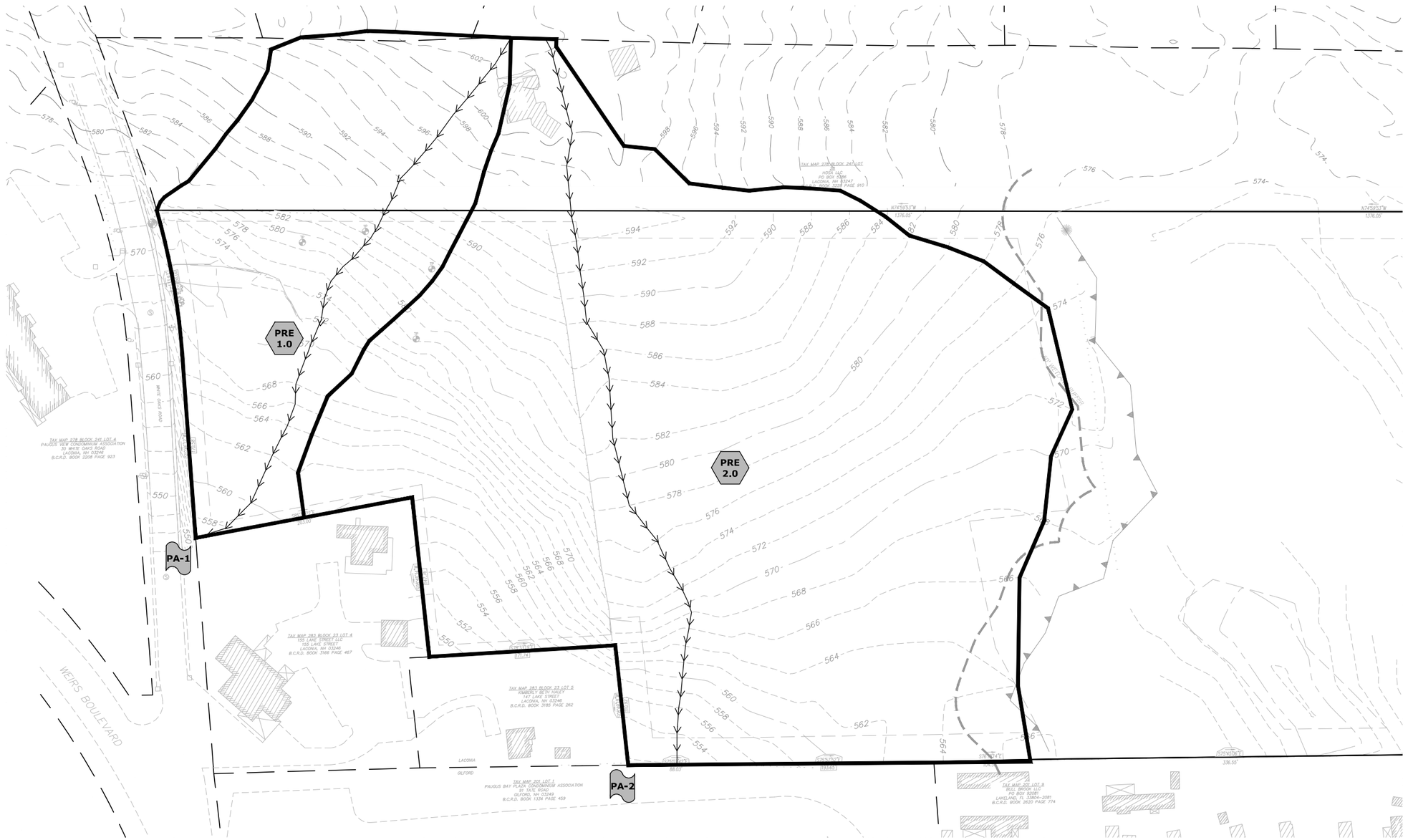
Link PA-1: Inflow=5.93 cfs 0.504 af
Primary=5.93 cfs 0.504 af

Link PA-2: Inflow=17.87 cfs 1.620 af
Primary=17.87 cfs 1.620 af

Total Runoff Area = 9.125 ac Runoff Volume = 2.124 af Average Runoff Depth = 2.79"
98.85% Pervious = 9.020 ac 1.15% Impervious = 0.105 ac

PRE-DEVELOPMENT WATERSHED LEGEND

- PRE-DEVELOPMENT WATERSHED BOUNDARY
- LONGEST FLOW PATH
- PRE 1.0 — PRE DEVELOPMENT WATERSHED AREA DESIGNATION
- PRE POND 1 — PRE-DEVELOPMENT POND DESIGNATION
- PA-1 — POINT OF ANALYSIS



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Tighe&Bond
177 Corporate Drive
Portsmouth, NH 03801
T 603.433.8818

33 WHITE OAKS SUBDIVISION

33 White Oaks Road

Laconia, New Hampshire

MARK	DATE	DESCRIPTION
1	1/30/2026	TRC Submission

PROJECT NO:	R5089-027B
DATE:	01/30/2026
FILE:	R5089-0278-C-HYDRO.dwg
DRAWN BY:	M.CURLEY, C.KRZCUIK
DESIGNED BY:	C.KRZCUIK
CHECKED BY:	N.HANSEN
APPROVED BY:	P.CRIMMINS

PRE-DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-801

2.3 Post-Development Conditions

To analyze the post-development condition, the site has been modeled utilizing the same two distinct points of analysis (PA-1 & PA-2) as the pre-development conditions. These points of analysis and watersheds are depicted on the plan entitled "Post-Development Watershed Plan", Sheet C-802.

The points of analysis and their contributing watershed areas are described below:

Point of Analysis One (PA-1)

Point of Analysis 1 is comprised of two Subcatchment area (POST-1.0 & POST-1.1) POST-1.0 includes a combination of grassed, wooded areas to the north and west of the proposed work along White Oaks Rd. Runoff from this area travels southwest via overland flow to Point of Analysis 1.

POST-1.1 is comprised of a portion of the proposed street, proposed residential houses and the surrounding grassed lawn area. Additionally this area captures runoff from the neighboring residential lot consisting of the residential building, woods, and grass cover. Runoff from this subcatchment travels via overland flow to a closed drainage system ultimately discharging to a surface sediment forebay and Rain Garden (RG-1). This treated stormwater is discharged to the ground surface adjacent to White Oaks Rd.

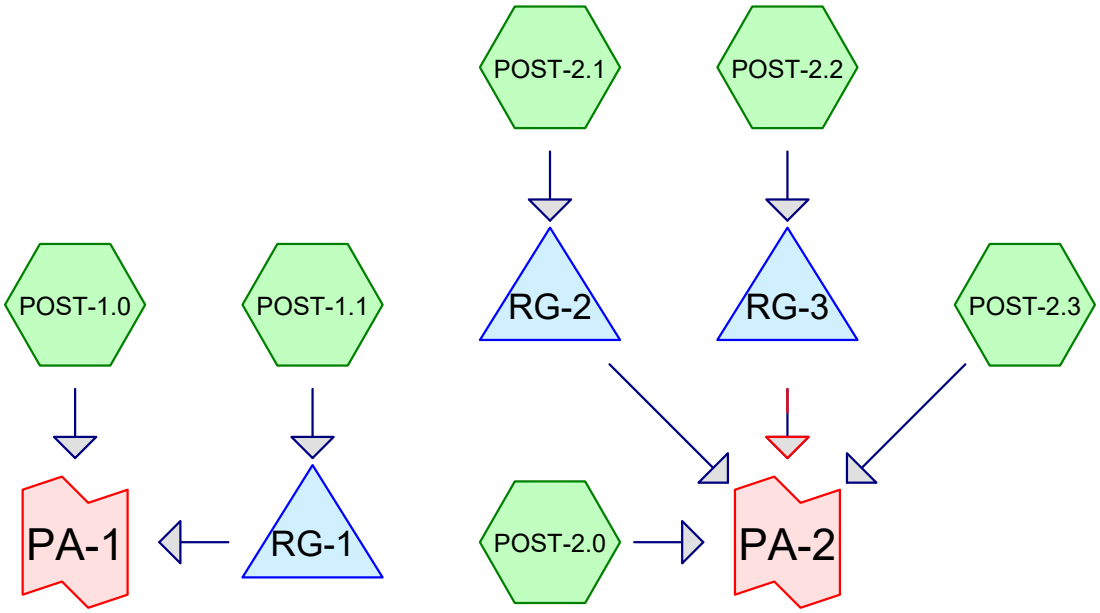
Point of Analysis One (PA-2)

Point of Analysis 2 is comprised of four subcatchment areas (POST-2.0, POST-2.1, POST-2.2, & POST-2.3). POST-2.0 and POST-2.3 are very similar in nature and include the area surrounding the proposed development which comprise of residential buildings, grass, and wooded areas. Runoff from these areas travels via overland flow to either the southeast or southwest to Point of Analysis 2.

POST-2.1 and POST-2.2 are very similar in nature to POST-1.1 and are comprised of the main project area including the proposed streets, residential buildings, driveways and surrounding grassed lawns. Runoff from these areas travels via grass lines swales along the proposed streets to a closed drainage system and ultimately their own bioretention rain gardens (RG-2 & RG-3). A sediment forebay is proposed for RG-2 for the purposes of pre treatment, whereas RG-3 proposes a pretreatment swale between the subject parcels. Runoff from these rain gardens discharges to the southwest and southeast to Point of Analysis 2.

2.3.1 Post-Development Calculations

2.3.2 Post-Development Watershed Plan



Subcat Reach Pond Link

Routing Diagram for R5089-0278_POST
Prepared by Tighe & Bond, Printed 1/29/2026

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
6.161	74	>75% Grass cover, Good, HSG C (POST-1.0, POST-1.1, POST-2.0, POST-2.1, POST-2.2, POST-2.3)
1.247	98	Unconnected pavement, HSG C (POST-1.0, POST-1.1, POST-2.1, POST-2.2)
1.034	98	Unconnected roofs, HSG C (POST-1.1, POST-2.0, POST-2.1, POST-2.2, POST-2.3)
0.683	70	Woods, Good, HSG C (POST-1.0, POST-2.0, POST-2.3)
9.125	**80**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
9.125	HSG C	POST-1.0, POST-1.1, POST-2.0, POST-2.1, POST-2.2, POST-2.3
0.000	HSG D	
0.000	Other	
9.125		**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST-1.0: Runoff Area=9,807 sf 5.62% Impervious Runoff Depth>0.75"
Flow Length=329' Tc=6.5 min CN=74 Runoff=0.18 cfs 0.014 af

SubcatchmentPOST-1.1: Runoff Area=136,983 sf 23.52% Impervious Runoff Depth>0.90"
Flow Length=404' Tc=7.9 min UI Adjusted CN=77 Runoff=2.91 cfs 0.236 af

SubcatchmentPOST-2.0: Runoff Area=29,499 sf 11.75% Impervious Runoff Depth>0.80"
Flow Length=145' Tc=6.0 min UI Adjusted CN=75 Runoff=0.58 cfs 0.045 af

SubcatchmentPOST-2.1: Runoff Area=69,620 sf 44.00% Impervious Runoff Depth>1.38"
Flow Length=308' Tc=6.0 min CN=85 Runoff=2.53 cfs 0.184 af

SubcatchmentPOST-2.2: Runoff Area=77,713 sf 41.08% Impervious Runoff Depth>1.31"
Flow Length=197' Tc=6.0 min CN=84 Runoff=2.68 cfs 0.195 af

SubcatchmentPOST-2.3: Runoff Area=73,864 sf 0.74% Impervious Runoff Depth>0.71"
Flow Length=486' Tc=9.8 min CN=73 Runoff=1.09 cfs 0.100 af

Pond RG-1: Peak Elev=558.03' Storage=3,843 cf Inflow=2.91 cfs 0.236 af
Outflow=0.72 cfs 0.196 af

Pond RG-2: Peak Elev=559.99' Storage=3,183 cf Inflow=2.53 cfs 0.184 af
Outflow=0.85 cfs 0.157 af

Pond RG-3: Peak Elev=573.73' Storage=4,442 cf Inflow=2.68 cfs 0.195 af
Primary=0.23 cfs 0.140 af Secondary=0.00 cfs 0.000 af Outflow=0.23 cfs 0.140 af

Link PA-1: Inflow=0.76 cfs 0.210 af
Primary=0.76 cfs 0.210 af

Link PA-2: Inflow=1.98 cfs 0.442 af
Primary=1.98 cfs 0.442 af

Total Runoff Area = 9.125 ac Runoff Volume = 0.774 af Average Runoff Depth = 1.02"
75.01% Pervious = 6.844 ac 24.99% Impervious = 2.281 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST-1.0: Runoff Area=9,807 sf 5.62% Impervious Runoff Depth>1.62"
Flow Length=329' Tc=6.5 min CN=74 Runoff=0.41 cfs 0.030 af

SubcatchmentPOST-1.1: Runoff Area=136,983 sf 23.52% Impervious Runoff Depth>1.84"
Flow Length=404' Tc=7.9 min UI Adjusted CN=77 Runoff=6.23 cfs 0.482 af

SubcatchmentPOST-2.0: Runoff Area=29,499 sf 11.75% Impervious Runoff Depth>1.69"
Flow Length=145' Tc=6.0 min UI Adjusted CN=75 Runoff=1.30 cfs 0.096 af

SubcatchmentPOST-2.1: Runoff Area=69,620 sf 44.00% Impervious Runoff Depth>2.49"
Flow Length=308' Tc=6.0 min CN=85 Runoff=4.56 cfs 0.332 af

SubcatchmentPOST-2.2: Runoff Area=77,713 sf 41.08% Impervious Runoff Depth>2.40"
Flow Length=197' Tc=6.0 min CN=84 Runoff=4.93 cfs 0.357 af

SubcatchmentPOST-2.3: Runoff Area=73,864 sf 0.74% Impervious Runoff Depth>1.55"
Flow Length=486' Tc=9.8 min CN=73 Runoff=2.62 cfs 0.219 af

Pond RG-1: Peak Elev=559.35' Storage=7,593 cf Inflow=6.23 cfs 0.482 af
Outflow=1.79 cfs 0.428 af

Pond RG-2: Peak Elev=560.84' Storage=4,843 cf Inflow=4.56 cfs 0.332 af
Outflow=1.98 cfs 0.298 af

Pond RG-3: Peak Elev=574.10' Storage=6,017 cf Inflow=4.93 cfs 0.357 af
Primary=1.70 cfs 0.294 af Secondary=0.00 cfs 0.000 af Outflow=1.70 cfs 0.294 af

Link PA-1: Inflow=1.91 cfs 0.459 af
Primary=1.91 cfs 0.459 af

Link PA-2: Inflow=7.17 cfs 0.907 af
Primary=7.17 cfs 0.907 af

Total Runoff Area = 9.125 ac Runoff Volume = 1.517 af Average Runoff Depth = 2.00"
75.01% Pervious = 6.844 ac 24.99% Impervious = 2.281 ac

Summary for Subcatchment POST-1.0:

Runoff = 0.41 cfs @ 12.10 hrs, Volume= 0.030 af, Depth> 1.62"
Routed to Link PA-1 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.04"

Area (sf)	CN	Description
0	98	Unconnected roofs, HSG C
7,158	74	>75% Grass cover, Good, HSG C
2,098	70	Woods, Good, HSG C
551	98	Unconnected pavement, HSG C
9,807	74	Weighted Average
9,256		94.38% Pervious Area
551		5.62% Impervious Area
551		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	25	0.0885	0.10		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.75"
0.3	23	0.0885	1.49		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.8	97	0.0927	2.13		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	49	0.0612	1.24		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.1	30	0.2333	3.38		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.4	105	0.0952	4.63		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
6.5	329	Total			

Summary for Subcatchment POST-1.1:

Runoff = 6.23 cfs @ 12.12 hrs, Volume= 0.482 af, Depth> 1.84"
Routed to Pond RG-1 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.04"

Area (sf)	CN	Adj	Description
17,066	98		Unconnected roofs, HSG C
104,758	74		>75% Grass cover, Good, HSG C
0	70		Woods, Good, HSG C
15,159	98		Unconnected pavement, HSG C
136,983	80	77	Weighted Average, UI Adjusted
104,758			76.48% Pervious Area
32,225			23.52% Impervious Area
32,225			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	25	0.0689	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.75"
0.8	62	0.0689	1.31		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.7	82	0.0823	2.01		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.6	58	0.1200	1.73		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.2	39	0.2307	3.36		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.9	138	0.0289	2.55		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
7.9	404	Total			

Summary for Subcatchment POST-2.0:

Runoff = 1.30 cfs @ 12.10 hrs, Volume= 0.096 af, Depth> 1.69"
Routed to Link PA-2 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.04"

Area (sf)	CN	Adj	Description
3,465	98		Unconnected roofs, HSG C
23,163	74		>75% Grass cover, Good, HSG C
2,871	70		Woods, Good, HSG C
0	98		Unconnected pavement, HSG C
29,499	76	75	Weighted Average, UI Adjusted
26,034			88.25% Pervious Area
3,465			11.75% Impervious Area
3,465			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	36	0.1940	0.32		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.75"
0.3	39	0.0890	2.09		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	45	0.2889	3.76		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	25	0.0847	1.46		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.7	145	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment POST-2.1:

Runoff = 4.56 cfs @ 12.09 hrs, Volume= 0.332 af, Depth> 2.49"
Routed to Pond RG-2 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.04"

Area (sf)	CN	Description
8,418	98	Unconnected roofs, HSG C
38,989	74	>75% Grass cover, Good, HSG C
0	70	Woods, Good, HSG C
22,213	98	Unconnected pavement, HSG C
69,620	85	Weighted Average
38,989		56.00% Pervious Area
30,631		44.00% Impervious Area
30,631		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	15	0.3850	0.35		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.75"
2.1	293	0.0247	2.36		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
2.8	308	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment POST-2.2:

Runoff = 4.93 cfs @ 12.09 hrs, Volume= 0.357 af, Depth> 2.40"
Routed to Pond RG-3 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.04"

Area (sf)	CN	Description
15,535	98	Unconnected roofs, HSG C
45,787	74	>75% Grass cover, Good, HSG C
0	70	Woods, Good, HSG C
16,391	98	Unconnected pavement, HSG C
77,713	84	Weighted Average
45,787		58.92% Pervious Area
31,926		41.08% Impervious Area
31,926		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	50	0.0714	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.75"
0.4	48	0.0714	1.87		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.6	99	0.0050	1.06		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
5.6	197	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment POST-2.3:

Runoff = 2.62 cfs @ 12.15 hrs, Volume= 0.219 af, Depth> 1.55"
Routed to Link PA-2 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=4.04"

Area (sf)	CN	Description
550	98	Unconnected roofs, HSG C
48,519	74	>75% Grass cover, Good, HSG C
24,795	70	Woods, Good, HSG C
0	98	Unconnected pavement, HSG C
73,864	73	Weighted Average
73,314		99.26% Pervious Area
550		0.74% Impervious Area
550		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	25	0.0964	0.10		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.75"
0.6	51	0.0764	1.38		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.3	358	0.0391	1.38		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.8	52	0.0519	1.14		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.8	486	Total			

Summary for Pond RG-1:

Inflow Area = 3.145 ac, 23.52% Impervious, Inflow Depth > 1.84" for 10-YR event
Inflow = 6.23 cfs @ 12.12 hrs, Volume= 0.482 af
Outflow = 1.79 cfs @ 12.52 hrs, Volume= 0.428 af, Atten= 71%, Lag= 24.1 min
Primary = 1.79 cfs @ 12.52 hrs, Volume= 0.428 af
Routed to Link PA-1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 559.35' @ 12.52 hrs Surf.Area= 3,654 sf Storage= 7,593 cf
Flood Elev= 562.50' Surf.Area= 6,132 sf Storage= 20,801 cf

Plug-Flow detention time= 114.4 min calculated for 0.428 af (89% of inflow)
Center-of-Mass det. time= 61.7 min (902.5 - 840.9)

Volume	Invert	Avail.Storage	Storage Description
#1	553.17'	20,801 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
553.17	1,107	0.0	0	0
554.25	1,107	40.0	478	478
556.00	1,107	10.0	194	672
558.00	1,995	100.0	3,102	3,774
560.00	4,450	100.0	6,445	10,219
562.00	6,132	100.0	10,582	20,801

Device	Routing	Invert	Outlet Devices
#1	Primary	553.17'	**12.0" Round Culvert** L= 41.0' Ke= 0.500 Inlet / Outlet Invert= 553.17' / 552.25' S= 0.0224 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Device 1	553.17'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 2	556.00'	**10.000 in/hr Exfiltration over Surface area above 556.00'** Excluded Surface area = 1,107 sf
#4	Device 1	557.50'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Primary	560.00'	**15.0" W x 18.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.78 cfs @ 12.52 hrs HW=559.35' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 1.78 cfs of 9.01 cfs potential flow)
  - **2=Orifice/Grate** (Passes 0.59 cfs of 2.30 cfs potential flow)
    - **3=Exfiltration** (Exfiltration Controls 0.59 cfs)
  - **4=Orifice/Grate** (Orifice Controls 1.20 cfs @ 6.09 fps)
- **5=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond RG-2:

Inflow Area = 1.598 ac, 44.00% Impervious, Inflow Depth > 2.49" for 10-YR event
Inflow = 4.56 cfs @ 12.09 hrs, Volume= 0.332 af
Outflow = 1.98 cfs @ 12.31 hrs, Volume= 0.298 af, Atten= 57%, Lag= 12.9 min
Primary = 1.98 cfs @ 12.31 hrs, Volume= 0.298 af
Routed to Link PA-2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 560.84' @ 12.31 hrs Surf.Area= 2,175 sf Storage= 4,843 cf
Flood Elev= 562.50' Surf.Area= 2,781 sf Storage= 7,711 cf

Plug-Flow detention time= 120.4 min calculated for 0.298 af (90% of inflow)
Center-of-Mass det. time= 71.4 min (887.0 - 815.5)

Volume	Invert	Avail.Storage	Storage Description
#1	555.17'	7,711 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
555.17	911	0.0	0	0
556.25	911	40.0	394	394
558.00	911	10.0	159	553
560.00	1,733	100.0	2,644	3,197
562.00	2,781	100.0	4,514	7,711

Device	Routing	Invert	Outlet Devices
#1	Primary	555.17'	**12.0" Round Culvert** L= 37.0' Ke= 0.500 Inlet / Outlet Invert= 555.17' / 554.50' S= 0.0181 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Device 1	555.17'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 2	558.00'	**10.000 in/hr Exfiltration over Surface area above 558.00'** Excluded Surface area = 911 sf
#4	Device 1	559.50'	**8.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Device 1	561.50'	**15.0" W x 18.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.98 cfs @ 12.31 hrs HW=560.84' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 1.98 cfs of 8.60 cfs potential flow)
  - **2=Orifice/Grate** (Passes 0.29 cfs of 2.20 cfs potential flow)
    - **3=Exfiltration** (Exfiltration Controls 0.29 cfs)
  - **4=Orifice/Grate** (Orifice Controls 1.69 cfs @ 4.83 fps)
  - **5=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond RG-3:

[92] Warning: Device #5 is above defined storage

Inflow Area = 1.784 ac, 41.08% Impervious, Inflow Depth > 2.40" for 10-YR event
Inflow = 4.93 cfs @ 12.09 hrs, Volume= 0.357 af
Outflow = 1.70 cfs @ 12.39 hrs, Volume= 0.294 af, Atten= 65%, Lag= 18.1 min
Primary = 1.70 cfs @ 12.39 hrs, Volume= 0.294 af
Routed to Link PA-2 :
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link PA-2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 574.10' @ 12.39 hrs Surf.Area= 4,614 sf Storage= 6,017 cf
Flood Elev= 576.25' Surf.Area= 6,526 sf Storage= 11,045 cf

Plug-Flow detention time= 167.8 min calculated for 0.294 af (82% of inflow)
Center-of-Mass det. time= 96.7 min (915.5 - 818.7)

Volume	Invert	Avail.Storage	Storage Description
#1	570.17'	11,045 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
570.17	3,048	0.0	0	0
571.25	3,048	40.0	1,317	1,317
573.00	3,048	10.0	533	1,850
574.00	4,408	100.0	3,728	5,578
575.00	6,526	100.0	5,467	11,045

Device	Routing	Invert	Outlet Devices
#1	Primary	570.17'	**6.0" Round Culvert** L= 30.0' Ke= 0.500 Inlet / Outlet Invert= 570.17' / 569.50' S= 0.0223 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.20 sf
#2	Device 1	570.17'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 2	573.00'	**10.000 in/hr Exfiltration over Surface area above 573.00'** Excluded Surface area = 3,048 sf
#4	Device 1	573.75'	**15.0" W x 18.0" H Vert. Orifice/Grate X 104.00** C= 0.600 Limited to weir flow at low heads
#5	Secondary	576.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 0.50 Width (feet) 4.00 7.00

Primary OutFlow Max=1.70 cfs @ 12.39 hrs HW=574.10' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Barrel Controls 1.70 cfs @ 8.66 fps)
  - **2=Orifice/Grate** (Passes < 1.81 cfs potential flow)
    - **3=Exfiltration** (Passes < 0.36 cfs potential flow)
  - **4=Orifice/Grate** (Passes < 85.19 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=570.17' TW=0.00' (Dynamic Tailwater)
- **5=Custom Weir/Orifice** (Controls 0.00 cfs)

Summary for Link PA-1:

Inflow Area = 3.370 ac, 22.33% Impervious, Inflow Depth > 1.63" for 10-YR event
Inflow = 1.91 cfs @ 12.43 hrs, Volume= 0.459 af
Primary = 1.91 cfs @ 12.43 hrs, Volume= 0.459 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link PA-2:

Inflow Area = 5.755 ac, 26.55% Impervious, Inflow Depth > 1.89" for 10-YR event
Inflow = 7.17 cfs @ 12.15 hrs, Volume= 0.907 af
Primary = 7.17 cfs @ 12.15 hrs, Volume= 0.907 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST-1.0: Runoff Area=9,807 sf 5.62% Impervious Runoff Depth>2.39"
Flow Length=329' Tc=6.5 min CN=74 Runoff=0.61 cfs 0.045 af

SubcatchmentPOST-1.1: Runoff Area=136,983 sf 23.52% Impervious Runoff Depth>2.64"
Flow Length=404' Tc=7.9 min UI Adjusted CN=77 Runoff=9.02 cfs 0.693 af

SubcatchmentPOST-2.0: Runoff Area=29,499 sf 11.75% Impervious Runoff Depth>2.47"
Flow Length=145' Tc=6.0 min UI Adjusted CN=75 Runoff=1.92 cfs 0.139 af

SubcatchmentPOST-2.1: Runoff Area=69,620 sf 44.00% Impervious Runoff Depth>3.39"
Flow Length=308' Tc=6.0 min CN=85 Runoff=6.16 cfs 0.452 af

SubcatchmentPOST-2.2: Runoff Area=77,713 sf 41.08% Impervious Runoff Depth>3.30"
Flow Length=197' Tc=6.0 min CN=84 Runoff=6.70 cfs 0.490 af

SubcatchmentPOST-2.3: Runoff Area=73,864 sf 0.74% Impervious Runoff Depth>2.30"
Flow Length=486' Tc=9.8 min CN=73 Runoff=3.95 cfs 0.325 af

Pond RG-1: Peak Elev=560.20' Storage=11,140 cf Inflow=9.02 cfs 0.693 af
Outflow=2.66 cfs 0.631 af

Pond RG-2: Peak Elev=561.47' Storage=6,315 cf Inflow=6.16 cfs 0.452 af
Outflow=2.52 cfs 0.413 af

Pond RG-3: Peak Elev=574.60' Storage=8,630 cf Inflow=6.70 cfs 0.490 af
Primary=1.80 cfs 0.421 af Secondary=0.00 cfs 0.000 af Outflow=1.80 cfs 0.421 af

Link PA-1: Inflow=2.83 cfs 0.675 af
Primary=2.83 cfs 0.675 af

Link PA-2: Inflow=9.63 cfs 1.298 af
Primary=9.63 cfs 1.298 af

Total Runoff Area = 9.125 ac Runoff Volume = 2.144 af Average Runoff Depth = 2.82"
75.01% Pervious = 6.844 ac 24.99% Impervious = 2.281 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST-1.0: Runoff Area=9,807 sf 5.62% Impervious Runoff Depth>3.13"
Flow Length=329' Tc=6.5 min CN=74 Runoff=0.80 cfs 0.059 af

SubcatchmentPOST-1.1: Runoff Area=136,983 sf 23.52% Impervious Runoff Depth>3.42"
Flow Length=404' Tc=7.9 min UI Adjusted CN=77 Runoff=11.68 cfs 0.897 af

SubcatchmentPOST-2.0: Runoff Area=29,499 sf 11.75% Impervious Runoff Depth>3.23"
Flow Length=145' Tc=6.0 min UI Adjusted CN=75 Runoff=2.52 cfs 0.182 af

SubcatchmentPOST-2.1: Runoff Area=69,620 sf 44.00% Impervious Runoff Depth>4.24"
Flow Length=308' Tc=6.0 min CN=85 Runoff=7.64 cfs 0.565 af

SubcatchmentPOST-2.2: Runoff Area=77,713 sf 41.08% Impervious Runoff Depth>4.14"
Flow Length=197' Tc=6.0 min CN=84 Runoff=8.35 cfs 0.615 af

SubcatchmentPOST-2.3: Runoff Area=73,864 sf 0.74% Impervious Runoff Depth>3.03"
Flow Length=486' Tc=9.8 min CN=73 Runoff=5.24 cfs 0.429 af

Pond RG-1: Peak Elev=560.65' Storage=13,295 cf Inflow=11.68 cfs 0.897 af
Outflow=4.62 cfs 0.831 af

Pond RG-2: Peak Elev=561.86' Storage=7,331 cf Inflow=7.64 cfs 0.565 af
Outflow=3.68 cfs 0.521 af

Pond RG-3: Peak Elev=574.99' Storage=10,975 cf Inflow=8.35 cfs 0.615 af
Primary=1.88 cfs 0.542 af Secondary=0.00 cfs 0.000 af Outflow=1.88 cfs 0.542 af

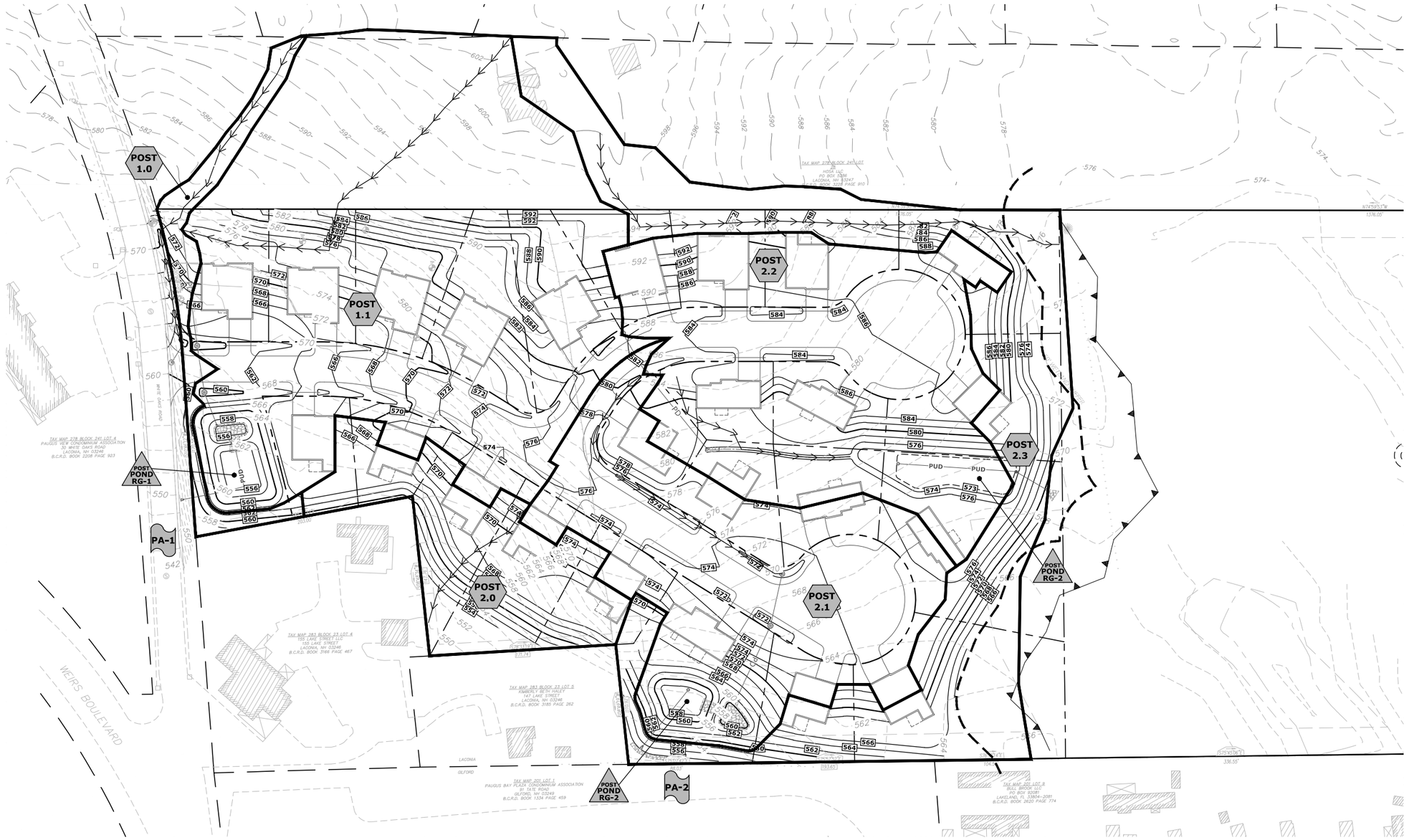
Link PA-1: Inflow=4.91 cfs 0.889 af
Primary=4.91 cfs 0.889 af

Link PA-2: Inflow=12.09 cfs 1.673 af
Primary=12.09 cfs 1.673 af

Total Runoff Area = 9.125 ac Runoff Volume = 2.747 af Average Runoff Depth = 3.61"
75.01% Pervious = 6.844 ac 24.99% Impervious = 2.281 ac

POST-DEVELOPMENT WATERSHED LEGEND

- POST-DEVELOPMENT WATERSHED BOUNDARY
- POST-DEVELOPMENT LONGEST FLOW PATH
- POST 1.0 — POST-DEVELOPMENT WATERSHED AREA DESIGNATION
- POST POND 1 — POST-DEVELOPMENT POND DESIGNATION
- PA-1 — POINT OF ANALYSIS



Tighe&Bond
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Portsmouth, NH 03801
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33 WHITE OAKS SUBDIVISION

33 White Oaks Road

Laconia, New Hampshire

MARK	DATE	DESCRIPTION
1	1/30/2026	TRC Submission

PROJECT NO:	R5089-027B
DATE:	01/30/2026
FILE:	R5089-0278-C-HYDRO.dwg
DRAWN BY:	M.CURLEY/C.KRZCUIK
DESIGNED BY:	C.KRZCUIK
CHECKED BY:	N.HANSEN
APPROVED BY:	P.CRIMMINS

POST-DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-803

Last Saved: 1/29/2026
Printed: Jan 29, 2026 - 3:47pm By: MCurley
Tighe & Bond J:\R\R5089 Residential\0278 - 33 White Oaks Rd. Laconia, NH\Drawings\AutoCAD\Sheet\R5089-0278-C-HYDRO.dwg

2.4 Peak Rate Comparisons

The following table summarizes and compares the pre- and post-development peak runoff rates from the 2-year, 10-year, 25- year, and 50-year storm events at each point of analysis.

TABLE 2-1 Comparison of Pre and Post Development Flows

Point of Analysis	Pre/**Post** 2-Year Storm (cfs)	Pre/**Post** 10-Year Storm (cfs)	Pre/**Post** 25-Year Storm (cfs)	Pre/**Post** 50-Year Storm (cfs)
PA-1	1.15/**0.76**	2.90/**1.91**	4.44/**2.83**	5.93/**4.91**
PA-2	3.12/**1.98**	8.42/**7.17**	13.18/**9.63**	17.87/**12.09**

2.5 Mitigation Description

2.5.1 Mitigation Calculations

The proposed project area has been evaluated to treat the required water quality volume (WQV) per the requirements of Env-Wq 1500. These calculations have been provided in Section 3 of this report (BMP Worksheets).

2.5.2 Pre-Treatment Methods for Protecting Water Quality

Pretreatment methods for protecting water quality on this site include sediment forebays and pretreatment swales.

2.5.3 Treatment Methods for Protecting Water Quality

Treatment for the site is provided by means of three surface bioretention rain gardens. Each rain garden has been sized to treat the required Water Quality Volume for its respective subcatchment areas. The BMP Worksheets for these treatment practices have been included in Section 3 of this report.

SECTION 3 | BMP Worksheets

FILTRATION PRACTICE DESIGN CRITERIA
(Env-Wq 1508.08)

Type/Node Name: **RG 1**

Enter the type of filtration practice (e.g., bioretention system) and the node name in the drainage analysis, if applicable.

		Check if you reviewed the restrictions on unlined systems outlined in Env-Wq 1508.08(a).	
3.15	ac	A = Area draining to the practice	
0.73	ac	A_I = Impervious area draining to the practice	
0.23	decimal	I = Percent impervious area draining to the practice, in decimal form	
0.26	unitless	Rv = Runoff coefficient = 0.05 + (0.9 x I)	
0.81	ac-in	WQV= 1" x Rv x A	
2,956	cf	WQV conversion (ac-in x 43,560 sf/ac x 1ft/12")	
739	cf	25% x WQV (check calc for sediment forebay volume)	
2,217	cf	75% x WQV (check calc for surface sand filter volume)	
		Method of Pretreatment? (not required for clean or roof runoff)	
1,036	cf	V_{SED} = Sediment forebay volume, if used for pretreatment	**≥ 25%WQV**
Calculate time to drain if system IS NOT underdrained:			
1,107	sf	A_{SA} = Surface area of the practice	
N/A	iph	$Ksat_{DESIGN}$ = Design infiltration rate[1]	
		If Ksat (prior to factor of safety) is < 0.50 iph, has an underdrain been provided?	
Yes	Yes/No	(Use the calculations below)	
-	hours	T_{DRAIN} = Drain time = V / (A_{SA} * I_{DESIGN})	**≤ 72-hrs**
Calculate time to drain if system IS underdrained:			
557.47	ft	E_{WQV} = Elevation of WQV (attach stage-storage table)	
0.15	cfs	Q_{WQV} = Discharge at the E_{WQV} (attach stage-discharge table)	
10.95	hours	T_{DRAIN} = Drain time = 2WQV/Q_{WQV}	**≤ 72-hrs**
554.25	feet	E_{FC} = Elevation of the bottom of the filter course material[2]	
553.17	feet	E_{UD} = Invert elevation of the underdrain (UD), if applicable	
	feet	E_{SHWT} = Elevation of SHWT (if none found, enter the lowest elevation of the test pit)	
	feet	E_{ROCK} = Elevation of bedrock (if none found, enter the lowest elevation of the test pit)	
1.08	feet	$D_{FC\ to\ UD}$ = Depth to UD from the bottom of the filter course	**≥ 1'**
554.25	feet	$D_{FC\ to\ ROCK}$ = Depth to bedrock from the bottom of the filter course	**≥ 1'**
554.25	feet	$D_{FC\ to\ SHWT}$ = Depth to SHWT from the bottom of the filter course	**≥ 1'**
560.65	ft	Peak elevation of the 50-year storm event (infiltration can be used in analysis)	
562.50	ft	Elevation of the top of the practice	
YES		50 peak elevation ≤ Elevation of the top of the practice	**← yes**
If a surface sand filter or underground sand filter is proposed:			
YES	ac	Drainage Area check.	**< 10 ac**
	cf	V = Volume of storage[3] (attach a stage-storage table)	**≥ 75%WQV**
	inches	D_{FC} = Filter course thickness	**18", or 24" if within GPA**
Sheet		Note what sheet in the plan set contains the filter course specification.	
	Yes/No	Access grate provided?	**← yes**

If a bioretention area is proposed:			
YES	ac	Drainage Area no larger than 5 ac?	**← yes**
2,299	cf	V = Volume of storage[3] (attach a stage-storage table)	**≥ WQV**
18.0	inches	D_{FC} = Filter course thickness	**18", or 24" if within GPA**
Sheet	C-605	Note what sheet in the plan set contains the filter course specification	
3.0	:1	Pond side slopes	**≥ 3:1**
Sheet	C-605	Note what sheet in the plan set contains the planting plans and surface cover	
If porous pavement is proposed:			
		Type of pavement proposed (Concrete? Asphalt? Pavers? Etc.)	
	acres	A_{SA} = Surface area of the pervious pavement	
	:1	Ratio of the contributing area to the pervious surface area	**≤ 5:1**
	inches	D_{FC} = Filter course thickness	**12", or 18" if within GPA mod. 304.1 (see spec)**
Sheet		Note what sheet in the plan set contains the filter course spec.	

1. Rate of the limiting layer (either the filter course or the underlying soil). $Ksat_{design}$ includes factor of safey. See Env-Wq 1504.14 for guidance on determining the infiltration rate.

2. See lines 34, 40 and 48 for required depths of filter media.

3. Volume without depending on infiltration. The volume includes the storage above the filter (but below the invert of the outlet stucture, if any), the filter media voids, and the pretreatment area. The storage above the filter media shall not include the volume above the outlet structure, if any.

Designer's Notes:

Stage-Area-Storage for Pond RG-1:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
553.17	1,107	0
553.27	1,107	44
553.37	1,107	89
553.47	1,107	133
553.57	1,107	177
553.67	1,107	221
553.77	1,107	266
553.87	1,107	310
553.97	1,107	354
554.07	1,107	399
554.17	1,107	443
554.27	1,107	480
554.37	1,107	492
554.47	1,107	503
554.57	1,107	514
554.67	1,107	525
554.77	1,107	536
554.87	1,107	547
554.97	1,107	558
555.07	1,107	569
555.17	1,107	580
555.27	1,107	591
555.37	1,107	602
555.47	1,107	613
555.57	1,107	624
555.67	1,107	635
555.77	1,107	646
555.87	1,107	658
555.97	1,107	669
556.07	1,138	751
556.17	1,182	867
556.27	1,227	987
556.37	1,271	1,112
556.47	1,316	1,241
556.57	1,360	1,375
556.67	1,404	1,513
556.77	1,449	1,656
556.87	1,493	1,803
556.97	1,538	1,955
557.07	1,582	2,111
557.17	1,626	2,271
557.27	1,671	2,436
557.37	1,715	2,605
557.47	1,760	2,779
557.57	1,804	2,957
557.67	1,848	3,140
557.77	1,893	3,327
557.87	1,937	3,518
557.97	1,982	3,714
558.07	2,081	3,917
558.17	2,204	4,131
558.27	2,326	4,357
558.37	2,449	4,596
558.47	2,572	4,847
558.57	2,695	5,111
558.67	2,817	5,386
558.77	2,940	5,674
[illegible]	[illegible]063	5,974
[illegible]	[illegible]186	6,287
[illegible]	[illegible]308	6,611
559.17	3,431	6,948
559.27	3,554	7,298
559.37	3,677	7,659
559.47	3,799	8,033
559.57	3,922	8,419
559.67	4,045	8,817
559.77	4,168	9,228
559.87	4,290	9,651
559.97	4,413	10,086
560.07	4,509	10,533
560.17	4,593	10,988
560.27	4,677	11,451
560.37	4,761	11,923
560.47	4,845	12,403
560.57	4,929	12,892
560.67	5,013	13,389
560.77	5,098	13,895
560.87	5,182	14,409
560.97	5,266	14,931
561.07	5,350	15,462
561.17	5,434	16,001
561.27	5,518	16,549
561.37	5,602	17,105
561.47	5,686	17,669
561.57	5,770	18,242
561.67	5,854	18,823
561.77	5,939	19,413
561.87	6,023	20,011
561.97	**6,107**	**20,617**
562.07	**6,132**	**20,801**
562.17	6,132	20,801
562.27	6,132	20,801
562.37	6,132	20,801
562.47	6,132	20,801

Volume below Filter Media

Volume at Lowest Outlet

Stage-Discharge for Pond RG-1:

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
553.17	0.00	555.77	0.00	558.37	1.06	560.97	6.49
553.22	0.00	555.82	0.00	558.42	1.10	561.02	6.82
553.27	0.00	555.87	0.00	558.47	1.14	561.07	7.15
553.32	0.00	555.92	0.00	558.52	1.18	561.12	7.48
553.37	0.00	555.97	0.00	558.57	1.22	561.17	7.83
553.42	0.00	556.02	0.00	558.62	1.26	561.22	8.18
553.47	0.00	556.07	0.01	558.67	1.30	561.27	8.54
553.52	0.00	556.12	0.01	558.72	1.34	561.32	8.90
553.57	0.00	556.17	0.02	558.77	1.38	561.37	9.27
553.62	0.00	556.22	0.02	558.82	1.42	561.42	9.65
553.67	0.00	556.27	0.03	558.87	1.45	561.47	10.03
553.72	0.00	556.32	0.03	558.92	1.49	561.52	10.41
553.77	0.00	556.37	0.04	558.97	1.53	561.57	10.75
553.82	0.00	556.42	0.04	559.02	1.56	561.62	11.06
553.87	0.00	556.47	0.05	559.07	1.60	561.67	11.35
553.92	0.00	556.52	0.05	559.12	1.63	561.72	11.63
553.97	0.00	556.57	0.06	559.17	1.66	561.77	11.90
554.02	0.00	556.62	0.06	559.22	1.70	561.82	12.16
554.07	0.00	556.67	0.07	559.27	1.73	561.87	12.41
554.12	0.00	556.72	0.07	559.32	1.77	561.92	12.66
554.17	0.00	556.77	0.08	559.37	1.80	561.97	12.90
554.22	0.00	556.82	0.08	559.42	1.83	562.02	13.13
554.27	0.00	556.87	0.09	559.47	1.86	562.07	13.35
554.32	0.00	556.92	0.09	559.52	1.90	562.12	13.57
554.37	0.00	556.97	0.10	559.57	1.93	562.17	13.78
554.42	0.00	557.02	0.10	559.62	1.96	562.22	13.98
554.47	0.00	557.07	0.11	559.67	1.99	562.27	14.19
554.52	0.00	557.12	0.12	559.72	2.02	562.32	14.38
554.57	0.00	557.17	0.12	559.77	2.05	562.37	14.58
554.62	0.00	557.22	0.13	559.82	2.08	562.42	14.77
554.67	0.00	557.27	0.13	559.87	2.11	562.47	**14.96**
554.72	0.00	557.32	0.14	559.92	2.14		
554.77	0.00	557.37	0.14	559.97	2.17		
554.82	0.00	557.42	0.15	560.02	2.21		
554.87	0.00	557.47	0.15	560.07	2.30		
554.92	0.00	557.52	0.16	560.12	2.42		
554.97	0.00	557.57	0.18	560.17	2.56		
555.02	0.00	557.62	0.21	560.22	2.72		
555.07	0.00	557.67	0.25	560.27	2.89		
555.12	0.00	557.72	0.31	560.32	3.08		
555.17	0.00	557.77	0.37	560.37	3.28		
555.22	0.00	557.82	0.44	560.42	3.49		
555.27	0.00	557.87	0.51	560.47	3.72		
555.32	0.00	557.92	0.59	560.52	3.95		
555.37	0.00	557.97	0.65	560.57	4.20		
555.42	0.00	558.02	0.70	560.62	4.46		
555.47	0.00	558.07	0.76	560.67	4.72		
555.52	0.00	558.12	0.81	560.72	4.99		
555.57	0.00	558.17	0.87	560.77	5.28		
555.62	0.00	558.22	0.92	560.82	5.57		
555.67	0.00	558.27	0.96	560.87	5.87		
555.72	0.00	558.32	1.01	560.92	6.18		

Discharge at WQV

FILTRATION PRACTICE DESIGN CRITERIA
(Env-Wq 1508.08)

Type/Node Name: **RG 2**

Enter the type of filtration practice (e.g., bioretention system) and the node name in the drainage analysis, if applicable.

		Check if you reviewed the restrictions on unlined systems outlined in Env-Wq 1508.08(a).	
1.60	ac	A = Area draining to the practice	
0.70	ac	A_I = Impervious area draining to the practice	
0.44	decimal	I = Percent impervious area draining to the practice, in decimal form	
0.44	unitless	Rv = Runoff coefficient = 0.05 + (0.9 x I)	
0.71	ac-in	WQV= 1" x Rv x A	
2,577	cf	WQV conversion (ac-in x 43,560 sf/ac x 1ft/12")	
644	cf	25% x WQV (check calc for sediment forebay volume)	
1,933	cf	75% x WQV (check calc for surface sand filter volume)	
		Method of Pretreatment? (not required for clean or roof runoff)	
1,022	cf	V_{SED} = Sediment forebay volume, if used for pretreatment	**≥ 25%WQV**
Calculate time to drain if system IS NOT underdrained:			
911	sf	A_{SA} = Surface area of the practice	
N/A	iph	$Ksat_{DESIGN}$ = Design infiltration rate[1]	
		If Ksat (prior to factor of safety) is < 0.50 iph, has an underdrain been provided?	
Yes	Yes/No	(Use the calculations below)	
-	hours	T_{DRAIN} = Drain time = V / (A_{SA} * I_{DESIGN})	**≤ 72-hrs**
Calculate time to drain if system IS underdrained:			
559.47	ft	E_{WQV} = Elevation of WQV (attach stage-storage table)	
0.14	cfs	Q_{WQV} = Discharge at the E_{WQV} (attach stage-discharge table)	
10.23	hours	T_{DRAIN} = Drain time = 2WQV/Q_{WQV}	**≤ 72-hrs**
556.25	feet	E_{FC} = Elevation of the bottom of the filter course material[2]	
555.17	feet	E_{UD} = Invert elevation of the underdrain (UD), if applicable	
	feet	E_{SHWT} = Elevation of SHWT (if none found, enter the lowest elevation of the test pit)	
	feet	E_{ROCK} = Elevation of bedrock (if none found, enter the lowest elevation of the test pit)	
1.08	feet	$D_{FC\ to\ UD}$ = Depth to UD from the bottom of the filter course	**≥ 1'**
556.25	feet	$D_{FC\ to\ ROCK}$ = Depth to bedrock from the bottom of the filter course	**≥ 1'**
556.25	feet	$D_{FC\ to\ SHWT}$ = Depth to SHWT from the bottom of the filter course	**≥ 1'**
561.86	ft	Peak elevation of the 50-year storm event (infiltration can be used in analysis)	
562.50	ft	Elevation of the top of the practice	
YES		50 peak elevation ≤ Elevation of the top of the practice	**← yes**
If a surface sand filter or underground sand filter is proposed:			
YES	ac	Drainage Area check.	**< 10 ac**
	cf	V = Volume of storage[3] (attach a stage-storage table)	**≥ 75%WQV**
	inches	D_{FC} = Filter course thickness	**18", or 24" if within GPA**
Sheet		Note what sheet in the plan set contains the filter course specification.	
	Yes/No	Access grate provided?	**← yes**

If a bioretention area is proposed:			
YES	ac	Drainage Area no larger than 5 ac?	**← yes**
1,941	cf	V = Volume of storage[3] (attach a stage-storage table)	**≥ WQV**
18.0	inches	D_{FC} = Filter course thickness	**18", or 24" if within GPA**
Sheet	C-605	Note what sheet in the plan set contains the filter course specification	
3.0	:1	Pond side slopes	**≥ 3:1**
Sheet	C-605	Note what sheet in the plan set contains the planting plans and surface cover	
If porous pavement is proposed:			
		Type of pavement proposed (Concrete? Asphalt? Pavers? Etc.)	
	acres	A_{SA} = Surface area of the pervious pavement	
	:1	Ratio of the contributing area to the pervious surface area	**≤ 5:1**
	inches	D_{FC} = Filter course thickness	**12", or 18" if within GPA mod. 304.1 (see spec)**
Sheet		Note what sheet in the plan set contains the filter course spec.	

1. Rate of the limiting layer (either the filter course or the underlying soil). $Ksat_{design}$ includes factor of safey. See Env-Wq 1504.14 for guidance on determining the infiltration rate.

2. See lines 34, 40 and 48 for required depths of filter media.

3. Volume without depending on infiltration. The volume includes the storage above the filter (but below the invert of the outlet stucture, if any), the filter media voids, and the pretreatment area. The storage above the filter media shall not include the volume above the outlet structure, if any.

Designer's Notes:

Stage-Area-Storage for Pond RG-2:

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
555.17	911	0
555.27	911	36
555.37	911	73
555.47	911	109
555.57	911	146
555.67	911	182
555.77	911	219
555.87	911	255
555.97	911	292
556.07	911	328
556.17	911	364
556.27	911	395
556.37	911	404
556.47	911	414
556.57	911	423
556.67	911	432
556.77	911	441
556.87	911	450
556.97	911	459
557.07	911	468
557.17	911	477
557.27	911	486
557.37	911	496
557.47	911	505
557.57	911	514
557.67	911	523
557.77	911	532
557.87	911	541
557.97	911	550
558.07	940	618
558.17	981	714
558.27	1,022	814
558.37	1,063	918
558.47	1,104	1,027
558.57	1,145	1,139
558.67	1,186	1,256
558.77	1,227	1,376
558.87	1,269	1,501
558.97	1,310	1,630
559.07	1,351	1,763
559.17	1,392	1,900
559.27	1,433	2,041
559.37	1,474	2,187
559.47	1,515	2,336
559.57	1,556	2,490
559.67	1,597	2,647
559.77	1,638	2,809
559.87	1,680	2,975
559.97	1,721	3,145
560.07	1,770	3,320
560.17	1,822	3,499
560.27	1,874	3,684

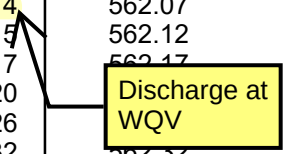
Volume below Filter Media

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
560.37	1,927	3,874
560.47	1,979	4,069
560.57	2,032	4,270
560.67	2,084	4,476
560.77	2,136	4,687
[illegible]	[illegible]189	4,903
[illegible]	[illegible]241	5,125
[illegible]	[illegible]294	5,351
561.17	2,346	5,583
561.27	2,398	5,820
561.37	2,451	6,063
561.47	2,503	6,311
561.57	2,556	6,564
561.67	2,608	6,822
561.77	2,660	7,085
561.87	2,713	7,354
561.97	**2,765**	**7,628**
562.07	**2,781**	**7,711**
562.17	2,781	7,711
562.27	2,781	7,711
562.37	2,781	7,711
562.47	2,781	7,711
562.57	2,781	7,711
562.67	2,781	7,711
562.77	2,781	7,711
562.87	2,781	7,711
562.97	2,781	7,711

Volume at Lowest Outlet

Stage-Discharge for Pond RG-2:

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
555.17	0.00	557.77	0.00	560.37	1.47	562.97	**10.22**
555.22	0.00	557.82	0.00	560.42	1.53		
555.27	0.00	557.87	0.00	560.47	1.59		
555.32	0.00	557.92	0.00	560.52	1.65		
555.37	0.00	557.97	0.00	560.57	1.70		
555.42	0.00	558.02	0.00	560.62	1.76		
555.47	0.00	558.07	0.01	560.67	1.81		
555.52	0.00	558.12	0.01	560.72	1.86		
555.57	0.00	558.17	0.02	560.77	1.91		
555.62	0.00	558.22	0.02	560.82	1.96		
555.67	0.00	558.27	0.03	560.87	2.01		
555.72	0.00	558.32	0.03	560.92	2.05		
555.77	0.00	558.37	0.04	560.97	2.10		
555.82	0.00	558.42	0.04	561.02	2.14		
555.87	0.00	558.47	0.04	561.07	2.19		
555.92	0.00	558.52	0.05	561.12	2.23		
555.97	0.00	558.57	0.05	561.17	2.28		
556.02	0.00	558.62	0.06	561.22	2.32		
556.07	0.00	558.67	0.06	561.27	2.36		
556.12	0.00	558.72	0.07	561.32	2.40		
556.17	0.00	558.77	0.07	561.37	2.44		
556.22	0.00	558.82	0.08	561.42	2.48		
556.27	0.00	558.87	0.08	561.47	2.52		
556.32	0.00	558.92	0.09	561.52	2.57		
556.37	0.00	558.97	0.09	561.57	2.67		
556.42	0.00	559.02	0.10	561.62	2.80		
556.47	0.00	559.07	0.10	561.67	2.95		
556.52	0.00	559.12	0.11	561.72	3.12		
556.57	0.00	559.17	0.11	561.77	3.31		
556.62	0.00	559.22	0.12	561.82	3.51		
556.67	0.00	559.27	0.12	561.87	3.72		
556.72	0.00	559.32	0.13	561.92	3.94		
556.77	0.00	559.37	0.13	561.97	4.18		
556.82	0.00	559.42	0.14	562.02	4.42		
556.87	0.00	559.47	0.14	562.07	4.67		
556.92	0.00	559.52	0.15	562.12	4.93		
556.97	0.00	559.57	0.17	562.17	5.20		
557.02	0.00	559.62	0.20	562.22	5.48		
557.07	0.00	559.67	0.26	562.27	5.77		
557.12	0.00	559.72	0.32	562.32	6.06		
557.17	0.00	559.77	0.40	562.37	6.37		
557.22	0.00	559.82	0.49	562.42	6.68		
557.27	0.00	559.87	0.59	562.47	7.00		
557.32	0.00	559.92	0.69	562.52	7.32		
557.37	0.00	559.97	0.80	562.57	7.65		
557.42	0.00	560.02	0.91	562.62	7.99		
557.47	0.00	560.07	1.02	562.67	8.34		
557.52	0.00	560.12	1.11	562.72	8.70		
557.57	0.00	560.17	1.19	562.77	9.06		
557.62	0.00	560.22	1.26	562.82	9.42		
557.67	0.00	560.27	1.33	562.87	9.80		
557.72	0.00	560.32	1.40	562.92	10.18		



FILTRATION PRACTICE DESIGN CRITERIA
(Env-Wq 1508.08)

Type/Node Name: **RG 3**

Enter the type of filtration practice (e.g., bioretention system) and the node name in the drainage analysis, if applicable.

		Check if you reviewed the restrictions on unlined systems outlined in Env-Wq 1508.08(a).	
1.78	ac	A = Area draining to the practice	
0.73	ac	A_I = Impervious area draining to the practice	
0.41	decimal	I = Percent impervious area draining to the practice, in decimal form	
0.42	unitless	Rv = Runoff coefficient = 0.05 + (0.9 x I)	
0.75	ac-in	WQV= 1" x Rv x A	
2,709	cf	WQV conversion (ac-in x 43,560 sf/ac x 1ft/12")	
677	cf	25% x WQV (check calc for sediment forebay volume)	
2,032	cf	75% x WQV (check calc for surface sand filter volume)	
		Method of Pretreatment? (not required for clean or roof runoff)	
N/A	cf	V_{SED} = Sediment forebay volume, if used for pretreatment	**≥ 25%WQV**
Calculate time to drain if system IS NOT underdrained:			
3,048	sf	A_{SA} = Surface area of the practice	
N/A	iph	$Ksat_{DESIGN}$ = Design infiltration rate[1]	
		If Ksat (prior to factor of safety) is < 0.50 iph, has an underdrain been provided?	
Yes	Yes/No	(Use the calculations below)	
-	hours	T_{DRAIN} = Drain time = V / (A_{SA} * I_{DESIGN})	**≤ 72-hrs**
Calculate time to drain if system IS underdrained:			
573.77	ft	E_{WQV} = Elevation of WQV (attach stage-storage table)	
0.21	cfs	Q_{WQV} = Discharge at the E_{WQV} (attach stage-discharge table)	
7.17	hours	T_{DRAIN} = Drain time = 2WQV/Q_{WQV}	**≤ 72-hrs**
571.25	feet	E_{FC} = Elevation of the bottom of the filter course material[2]	
570.17	feet	E_{UD} = Invert elevation of the underdrain (UD), if applicable	
	feet	E_{SHWT} = Elevation of SHWT (if none found, enter the lowest elevation of the test pit)	
	feet	E_{ROCK} = Elevation of bedrock (if none found, enter the lowest elevation of the test pit)	
1.08	feet	$D_{FC\ to\ UD}$ = Depth to UD from the bottom of the filter course	**≥ 1'**
571.25	feet	$D_{FC\ to\ ROCK}$ = Depth to bedrock from the bottom of the filter course	**≥ 1'**
571.25	feet	$D_{FC\ to\ SHWT}$ = Depth to SHWT from the bottom of the filter course	**≥ 1'**
574.99	ft	Peak elevation of the 50-year storm event (infiltration can be used in analysis)	
576.00	ft	Elevation of the top of the practice	
YES		50 peak elevation ≤ Elevation of the top of the practice	**← yes**
If a surface sand filter or underground sand filter is proposed:			
YES	ac	Drainage Area check.	**< 10 ac**
	cf	V = Volume of storage[3] (attach a stage-storage table)	**≥ 75%WQV**
	inches	D_{FC} = Filter course thickness	**18", or 24" if within GPA**
Sheet		Note what sheet in the plan set contains the filter course specification.	
	Yes/No	Access grate provided?	**← yes**

If a bioretention area is proposed:			
YES	ac	Drainage Area no larger than 5 ac?	**← yes**
3,277	cf	V = Volume of storage[3] (attach a stage-storage table)	**≥ WQV**
18.0	inches	D_{FC} = Filter course thickness	**18", or 24" if within GPA**
Sheet	C-606	Note what sheet in the plan set contains the filter course specification	
3.0	:1	Pond side slopes	**≥ 3:1**
Sheet	C-605	Note what sheet in the plan set contains the planting plans and surface cover	
If porous pavement is proposed:			
		Type of pavement proposed (Concrete? Asphalt? Pavers? Etc.)	
	acres	A_{SA} = Surface area of the pervious pavement	
	:1	Ratio of the contributing area to the pervious surface area	**≤ 5:1**
	inches	D_{FC} = Filter course thickness	**12", or 18" if within GPA mod. 304.1 (see spec)**
Sheet		Note what sheet in the plan set contains the filter course spec.	

1. Rate of the limiting layer (either the filter course or the underlying soil). $Ksat_{design}$ includes factor of safey. See Env-Wq 1504.14 for guidance on determining the infiltration rate.

2. See lines 34, 40 and 48 for required depths of filter media.

3. Volume without depending on infiltration. The volume includes the storage above the filter (but below the invert of the outlet stucture, if any), the filter media voids, and the pretreatment area. The storage above the filter media shall not include the volume above the outlet structure, if any.

Designer's Notes:

Stage-Area-Storage for Pond RG-3:

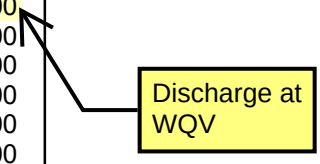
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
570.17	3,048	0
570.27	3,048	122
570.37	3,048	244
570.47	3,048	366
570.57	3,048	488
570.67	3,048	610
570.77	3,048	732
570.87	3,048	853
570.97	3,048	975
571.07	3,048	1,097
571.17	3,048	1,219
571.27	3,048	1,323
571.37	3,048	1,353
571.47	3,048	1,384
571.57	3,048	1,414
571.67	3,048	1,445
571.77	3,048	1,475
571.87	3,048	1,506
571.97	3,048	1,536
572.07	3,048	1,567
572.17	3,048	1,597
572.27	3,048	1,628
572.37	3,048	1,658
572.47	3,048	1,689
572.57	3,048	1,719
572.67	3,048	1,750
572.77	3,048	1,780
572.87	3,048	1,811
572.97	3,048	1,841
573.07	3,143	2,067
573.17	3,279	2,388
573.27	3,415	2,723
573.37	3,551	3,071
573.47	3,687	3,433
573.57	3,823	3,808
573.67	3,959	4,198
573.77	4,095	4,600
573.87	4,231	5,017
573.97	4,367	5,447
574.07	4,556	5,892
574.17	4,768	6,358
574.27	4,980	6,845
574.37	5,192	7,354
574.47	5,403	7,884
574.57	5,615	8,435
574.67	5,827	9,007
574.77	6,039	9,600
574.87	6,251	10,215
574.97	**6,462**	**10,850**
575.07	**6,526**	**11,045**
575.17	6,526	11,045
575.27	6,526	11,045
575.37	6,526	11,045
575.47	6,526	11,045
575.57	6,526	11,045
575.67	6,526	11,045
575.77	6,526	11,045
575.87	6,526	11,045
575.97	6,526	11,045
[illegible]	[illegible]26	11,045
[illegible]	[illegible]26	11,045
[illegible]	[illegible]26	11,045
576.37	6,526	11,045
576.47	6,526	11,045

Volume below Filter Media

Volume at Lowest Outlet

Stage-Discharge for Pond RG-3:

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
570.17	0.00	0.00	0.00
570.27	0.00	0.00	0.00
570.37	0.00	0.00	0.00
570.47	0.00	0.00	0.00
570.57	0.00	0.00	0.00
570.67	0.00	0.00	0.00
570.77	0.00	0.00	0.00
570.87	0.00	0.00	0.00
570.97	0.00	0.00	0.00
571.07	0.00	0.00	0.00
571.17	0.00	0.00	0.00
571.27	0.00	0.00	0.00
571.37	0.00	0.00	0.00
571.47	0.00	0.00	0.00
571.57	0.00	0.00	0.00
571.67	0.00	0.00	0.00
571.77	0.00	0.00	0.00
571.87	0.00	0.00	0.00
571.97	0.00	0.00	0.00
572.07	0.00	0.00	0.00
572.17	0.00	0.00	0.00
572.27	0.00	0.00	0.00
572.37	0.00	0.00	0.00
572.47	0.00	0.00	0.00
572.57	0.00	0.00	0.00
572.67	0.00	0.00	0.00
572.77	0.00	0.00	0.00
572.87	0.00	0.00	0.00
572.97	0.00	0.00	0.00
573.07	0.02	0.02	0.00
573.17	0.05	0.05	0.00
573.27	0.08	0.08	0.00
573.37	0.12	0.12	0.00
573.47	0.15	0.15	0.00
573.57	0.18	0.18	0.00
573.67	0.21	0.21	0.00
573.77	1.42	1.42	0.00
573.87	1.65	1.65	0.00
573.97	1.67	1.67	0.00
574.07	1.69	1.69	0.00
574.17	1.71	1.71	0.00
574.27	1.73	1.73	0.00
574.37	1.76	1.76	0.00
574.47	1.78	1.78	0.00
574.57	1.79	1.79	0.00
574.67	1.81	1.81	0.00
574.77	1.83	1.83	0.00
574.87	1.85	1.85	0.00
574.97	1.87	1.87	0.00
575.07	1.89	1.89	0.00
575.17	1.91	1.91	0.00
575.27	1.93	1.93	0.00
575.37	1.95	1.95	0.00
575.47	1.96	1.96	0.00
575.57	1.98	1.98	0.00
575.67	2.00	2.00	0.00
575.77	2.02	2.02	0.00
575.87	2.03	2.03	0.00
575.97	2.05	2.05	0.00
576.07	2.32	2.07	0.25
576.17	3.10	2.09	1.01
576.27	4.24	2.10	2.14
576.37	5.72	2.12	3.60
576.47	**7.55**	**2.14**	**5.41**



Tighe & Bond

Appendix A:
NRCS Web Soil Survey

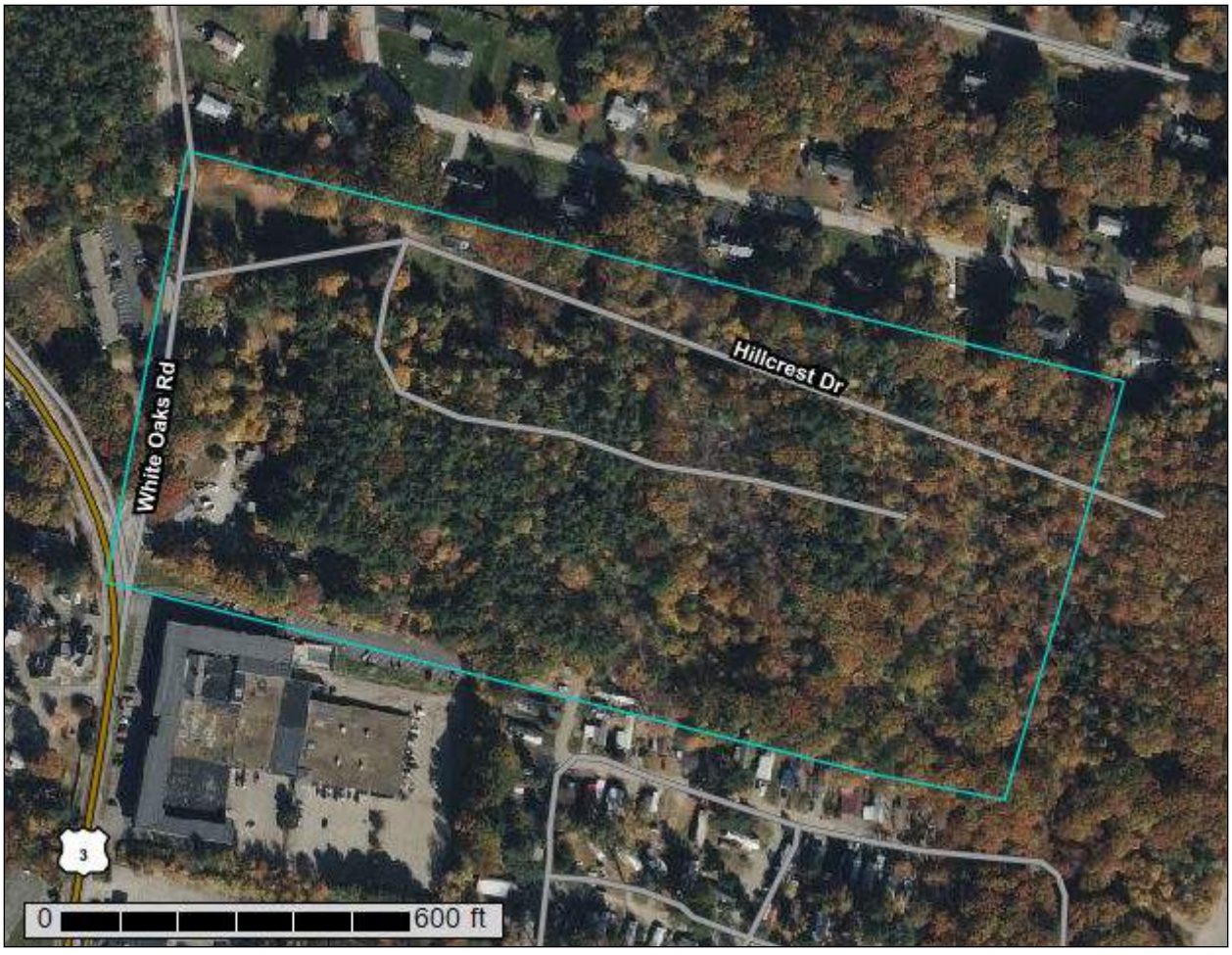
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Merrimack and Belknap Counties, New Hampshire



December 8, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:2,940 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Merrimack and Belknap Counties, New Hampshire
Survey Area Data: Version 31, Sep 10, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 6, 2022—Oct 22, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
166B	Canterbury fine sandy loam, 3 to 8 percent slopes	6.2	21.9%
167C	Canterbury fine sandy loam, 8 to 15 percent slopes, very stony	8.3	29.3%
167D	Canterbury fine sandy loam, 15 to 25 percent slopes, very stony	8.2	28.8%
479B	Gilmanton fine sandy loam, 3 to 8 percent slopes, very stony	4.1	14.4%
680C	Henniker-Urban land complex, 0 to 15 percent slopes	0.9	3.2%
789B	Champlain-Urban land complex, 0 to 8 percent slopes	0.7	2.4%
Totals for Area of Interest		**28.3**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit

descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Merrimack and Belknap Counties, New Hampshire

166B—Canterbury fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9dnr
Elevation: 250 to 2,940 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 90 to 135 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Canterbury and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canterbury

Setting

Landform: Drumlins
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lodgement till derived from granite, gneiss, or schist

Typical profile

Oe - 0 to 2 inches: slightly decomposed plant material
H1 - 2 to 6 inches: fine sandy loam
H2 - 6 to 28 inches: fine sandy loam
H3 - 28 to 65 inches: fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods), F144BY601ME - Dry Sand
Hydric soil rating: No

Minor Components

Gilmanton

Percent of map unit: 5 percent
Landform: Hillslopes

Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Henniker

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Metacomet

Percent of map unit: 3 percent
Landform: Hillslopes
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Pillsbury

Percent of map unit: 3 percent
Landform: Ground moraines
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: Yes

Marlow

Percent of map unit: 2 percent
Landform: Drumlins
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Pillsbury

Percent of map unit: 2 percent
Landform: Ground moraines
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: Yes

167C—Canterbury fine sandy loam, 8 to 15 percent slopes, very stony

Map Unit Setting

National map unit symbol: 9dnv
Elevation: 250 to 2,940 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 90 to 135 days
Farmland classification: Farmland of local importance

Map Unit Composition

Canterbury and similar soils: 75 percent

Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canterbury

Setting
Landform: Drumlins
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lodgement till derived from granite, gneiss, or schist

Typical profile
Oe - 0 to 2 inches: slightly decomposed plant material
H1 - 2 to 6 inches: fine sandy loam
H2 - 6 to 28 inches: fine sandy loam
H3 - 28 to 65 inches: fine sandy loam

Properties and qualities
Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods), F144BY601ME - Dry Sand
Hydric soil rating: No

Minor Components

Gilmanton
Percent of map unit: 5 percent
Landform: Hillslopes
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Henniker
Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Chichester
Percent of map unit: 5 percent
Landform: Hillslopes
Down-slope shape: Linear

Across-slope shape: Linear
Hydric soil rating: No

Marlow
Percent of map unit: 5 percent
Landform: Drumlins
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Metacomet
Percent of map unit: 3 percent
Landform: Hillslopes
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Metacomet
Percent of map unit: 2 percent
Landform: Hillslopes
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

167D—Canterbury fine sandy loam, 15 to 25 percent slopes, very stony

Map Unit Setting
National map unit symbol: 9dnt
Elevation: 250 to 2,940 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 90 to 135 days
Farmland classification: Farmland of local importance

Map Unit Composition
Canterbury and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canterbury

Setting
Landform: Drumlins
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lodgement till derived from granite, gneiss, or schist

Typical profile
Oe - 0 to 2 inches: slightly decomposed plant material
H1 - 2 to 6 inches: fine sandy loam
H2 - 6 to 28 inches: fine sandy loam

H3 - 28 to 65 inches: fine sandy loam

Properties and qualities

Slope: 15 to 25 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods), F144BY601ME - Dry Sand
Hydric soil rating: No

Minor Components

Gilmanton

Percent of map unit: 5 percent
Landform: Hillslopes
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Henniker

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Marlow

Percent of map unit: 5 percent
Landform: Drumlins
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Metacomet

Percent of map unit: 4 percent
Landform: Hillslopes
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Chichester

Percent of map unit: 3 percent
Landform: Hillslopes
Down-slope shape: Linear
Across-slope shape: Linear

Hydric soil rating: No

Millsite

Percent of map unit: 3 percent
Landform: Hillslopes
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

479B—Gilmanton fine sandy loam, 3 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: bpmj
Elevation: 250 to 2,940 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 90 to 135 days
Farmland classification: Farmland of local importance

Map Unit Composition

Gilmanton and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gilmanton

Setting

Landform: Hillslopes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lodgement till derived from granite, gneiss, or schist; lodgement till derived from granite, gneiss, or schist

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
Oa - 2 to 3 inches: slightly decomposed plant material
H1 - 3 to 8 inches: fine sandy loam
H2 - 8 to 24 inches: fine sandy loam
H3 - 24 to 65 inches: fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 16 to 30 inches
Frequency of flooding: None
Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C/D
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods), F144BY602ME - Sandy Toeslope
Hydric soil rating: No

Minor Components

Pillsbury

Percent of map unit: 10 percent
Landform: Ground moraines
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: Yes

Canterbury

Percent of map unit: 5 percent
Landform: Drumlins
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Metacomet

Percent of map unit: 4 percent
Landform: Hillslopes
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Peacham

Percent of map unit: 2 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Henniker

Percent of map unit: 2 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Peru

Percent of map unit: 2 percent
Landform: Hillslopes
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

680C—Henniker-Urban land complex, 0 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9dql
Elevation: 200 to 2,940 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 90 to 135 days
Farmland classification: Not prime farmland

Map Unit Composition

Henniker and similar soils: 41 percent
Urban land: 39 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Henniker

Setting

Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Basal melt-out till derived from granite, gneiss, or schist

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
H1 - 1 to 4 inches: fine sandy loam
H2 - 4 to 34 inches: fine sandy loam
H3 - 34 to 65 inches: fine sandy loam

Properties and qualities

Slope: 0 to 15 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 18 to 38 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods)
Hydric soil rating: No

Description of Urban Land

Typical profile

H1 - 0 to 6 inches: variable

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

Minor Components

Becket

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Canterbury

Percent of map unit: 5 percent
Landform: Drumlins
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Metacomet

Percent of map unit: 4 percent
Landform: Hillslopes
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Moosilauke

Percent of map unit: 4 percent
Landform: Ground moraines
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: Yes

Chichester

Percent of map unit: 2 percent
Landform: Hillslopes
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

789B—Champlain-Urban land complex, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 1hb2y
Elevation: 200 to 2,940 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 80 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Champlain and similar soils: 41 percent
Urban land: 39 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Champlain

Setting

Landform: Terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy outwash derived mainly from granite, gneiss and schist

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
H1 - 1 to 6 inches: loamy fine sand
H2 - 6 to 22 inches: loamy fine sand
H3 - 22 to 65 inches: loamy fine sand

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F144BY601ME - Dry Sand
Hydric soil rating: No

Description of Urban Land

Typical profile

H1 - 0 to 6 inches: variable

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

Minor Components

Croghan

Percent of map unit: 5 percent
Landform: Terraces
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Naumburg

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: Yes

Ondawa

Percent of map unit: 3 percent
Landform: Flood plains
Hydric soil rating: No

Adams

Percent of map unit: 3 percent
Landform: Outwash terraces
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Rumney

Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: Yes

Colton

Percent of map unit: 2 percent
Landform: Terraces
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

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Appendix B:
NRCC Rainfall Data

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point

Smoothing	Yes
State	
Location	
Latitude	43.569 degrees North
Longitude	71.447 degrees West
Elevation	170 feet
Date/Time	Tue Dec 16 2025 09:52:32 GMT-0500 (Eastern Standard Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.39	0.49	0.64	0.80	1.01	**1yr**	0.69	0.95	1.16	1.46	1.83	2.31	2.59	**1yr**	2.05	2.49	2.90	3.54	4.12	**1yr**
2yr	0.31	0.48	0.60	0.79	0.99	1.25	**2yr**	0.86	1.14	1.44	1.79	2.22	2.75	3.10	**2yr**	2.44	2.98	3.45	4.16	4.75	**2yr**
5yr	0.37	0.58	0.72	0.97	1.23	1.56	**5yr**	1.07	1.43	1.81	2.25	2.78	3.42	3.89	**5yr**	3.03	3.74	4.32	5.11	5.80	**5yr**
10yr	0.41	0.65	0.82	1.12	1.46	1.86	**10yr**	1.26	1.71	2.16	2.68	3.30	4.04	4.62	**10yr**	3.57	4.45	5.12	5.97	6.75	**10yr**
25yr	0.49	0.78	0.99	1.37	1.82	2.34	**25yr**	1.57	2.15	2.71	3.37	4.14	5.03	5.81	**25yr**	4.45	5.59	6.42	7.34	8.25	**25yr**
50yr	0.56	0.89	1.14	1.60	2.15	2.78	**50yr**	1.86	2.57	3.24	4.02	4.91	5.94	6.92	**50yr**	5.25	6.65	7.63	8.58	9.61	**50yr**
100yr	0.63	1.02	1.32	1.87	2.55	3.32	**100yr**	2.20	3.07	3.87	4.79	5.83	7.02	8.23	**100yr**	6.21	7.92	9.06	10.04	11.20	**100yr**
200yr	0.72	1.18	1.53	2.19	3.02	3.94	**200yr**	2.60	3.67	4.60	5.70	6.93	8.29	9.81	**200yr**	7.34	9.43	10.77	11.75	13.06	**200yr**
500yr	0.87	1.42	1.86	2.70	3.78	4.97	**500yr**	3.26	4.65	5.80	7.18	8.69	10.36	12.37	**500yr**	9.17	11.89	13.54	14.48	16.01	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.23	0.35	0.43	0.58	0.71	0.90	**1yr**	0.61	0.88	0.97	1.27	1.53	1.97	2.26	**1yr**	1.74	2.17	2.36	2.91	3.67	**1yr**
2yr	0.30	0.47	0.57	0.78	0.96	1.14	**2yr**	0.83	1.12	1.30	1.72	2.21	2.67	3.00	**2yr**	2.37	2.89	3.35	4.04	4.61	**2yr**
5yr	0.34	0.53	0.66	0.90	1.15	1.37	**5yr**	0.99	1.34	1.55	2.02	2.61	3.15	3.59	**5yr**	2.79	3.46	3.97	4.78	5.42	**5yr**
10yr	0.38	0.58	0.72	1.01	1.30	1.55	**10yr**	1.12	1.52	1.77	2.26	2.92	3.57	4.10	**10yr**	3.16	3.94	4.52	5.41	6.11	**10yr**
25yr	0.43	0.66	0.82	1.16	1.53	1.85	**25yr**	1.32	1.81	2.10	2.65	3.37	4.20	4.86	**25yr**	3.71	4.67	5.35	6.30	7.11	**25yr**
50yr	0.47	0.72	0.90	1.29	1.74	2.10	**50yr**	1.50	2.06	2.39	2.98	3.74	4.72	5.53	**50yr**	4.18	5.32	6.07	7.10	8.02	**50yr**
100yr	0.52	0.79	0.99	1.43	1.97	2.39	**100yr**	1.70	2.33	2.74	3.48	4.16	5.30	6.28	**100yr**	4.69	6.04	6.87	8.01	8.99	**100yr**
200yr	0.58	0.87	1.10	1.60	2.23	2.71	**200yr**	1.93	2.65	3.13	3.96	4.59	5.93	7.11	**200yr**	5.25	6.84	7.76	8.99	10.11	**200yr**
500yr	0.67	0.99	1.27	1.85	2.63	3.20	**500yr**	2.27	3.13	3.75	4.70	5.23	6.82	8.33	**500yr**	6.04	8.01	9.10	10.50	11.80	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.43	0.53	0.71	0.87	1.04	**1yr**	0.75	1.02	1.19	1.57	1.98	2.53	2.83	**1yr**	2.24	2.72	3.17	3.79	4.42	**1yr**
2yr	0.33	0.50	0.62	0.84	1.03	1.22	**2yr**	0.89	1.19	1.39	1.83	2.42	2.86	3.23	**2yr**	2.54	3.10	3.58	4.30	4.89	**2yr**
5yr	0.40	0.61	0.76	1.04	1.32	1.59	**5yr**	1.14	1.55	1.80	2.35	2.99	3.72	4.20	**5yr**	3.29	4.04	4.64	5.47	6.19	**5yr**
10yr	0.47	0.73	0.90	1.26	1.63	1.95	**10yr**	1.40	1.91	2.21	2.80	3.55	4.55	5.15	**10yr**	4.03	4.95	5.68	6.59	7.42	**10yr**
25yr	0.60	0.91	1.14	1.62	2.14	2.58	**25yr**	1.84	2.52	2.90	3.63	4.55	5.98	6.77	**25yr**	5.29	6.51	7.43	8.56	9.44	**25yr**
50yr	0.72	1.09	1.36	1.95	2.63	3.19	**50yr**	2.27	3.12	3.56	4.38	5.51	7.37	8.35	**50yr**	6.52	8.03	9.11	10.38	11.44	**50yr**
100yr	0.87	1.31	1.64	2.37	3.25	3.96	**100yr**	2.80	3.87	4.38	5.56	6.66	9.10	10.28	**100yr**	8.05	9.88	11.19	12.59	13.75	**100yr**
200yr	1.04	1.57	1.99	2.88	4.01	4.92	**200yr**	3.46	4.81	5.38	6.77	8.81	11.26	12.71	**200yr**	9.96	12.22	13.75	15.29	16.56	**200yr**
500yr	1.33	1.98	2.55	3.70	5.26	6.60	**500yr**	4.54	6.45	7.07	8.78	11.53	14.96	16.87	**500yr**	13.24	16.22	18.13	19.81	21.21	**500yr**

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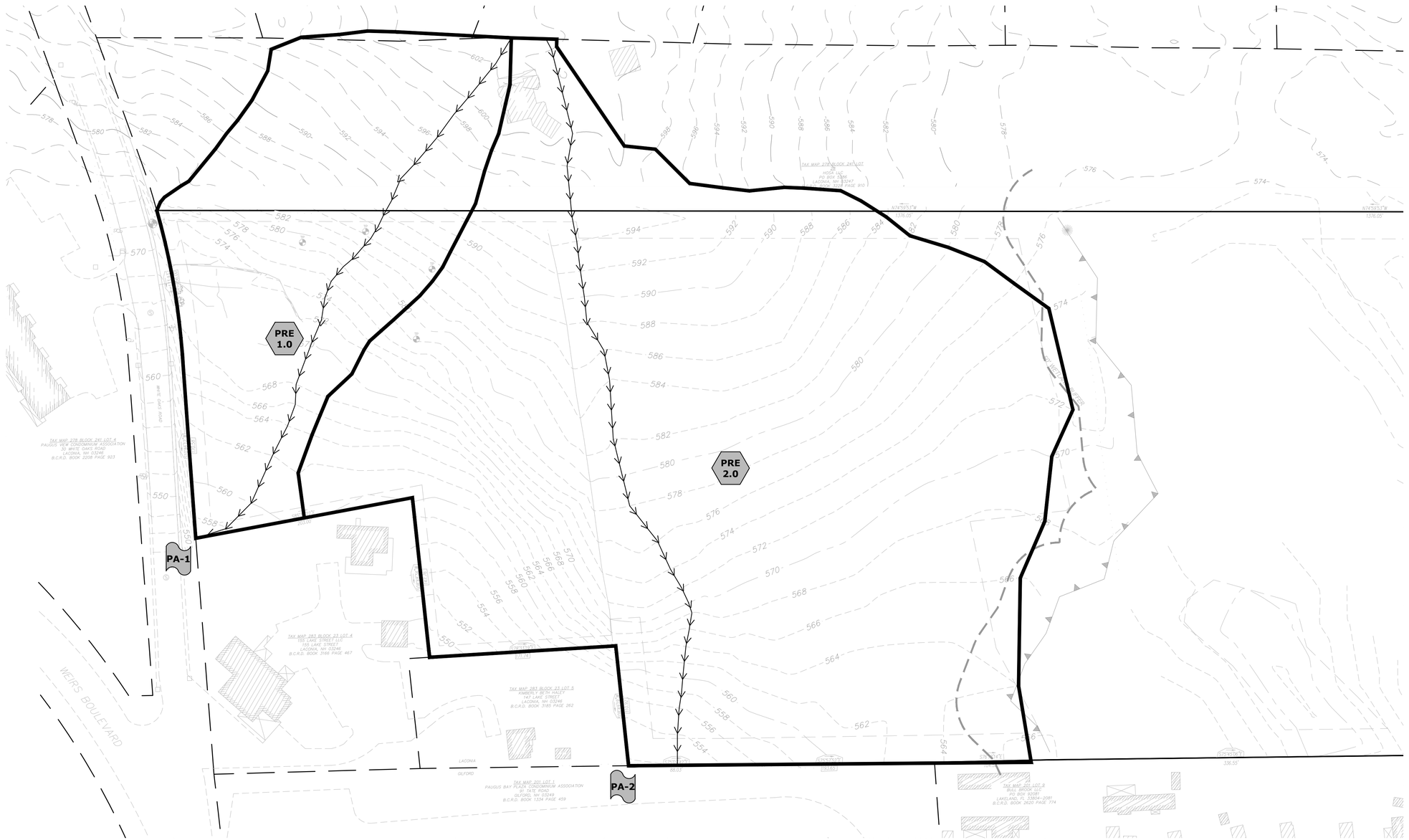
Appendix C:
Full-Size Watershed Plans

PRE-DEVELOPMENT WATERSHED LEGEND

- PRE-DEVELOPMENT WATERSHED BOUNDARY
- LONGEST FLOW PATH
- PRE 1.0 — PRE DEVELOPMENT WATERSHED AREA DESIGNATION
- PRE POND 1 — PRE-DEVELOPMENT POND DESIGNATION
- PA-1 — POINT OF ANALYSIS



0 50' 100'

SCALE: 1" = 50'

Tighe&Bond

177 Corporate Drive
Portsmouth, NH 03801
T 603.433.8818

33 WHITE OAKS SUBDIVISION

33 White Oaks Road

Laconia, New Hampshire

MARK	DATE	DESCRIPTION
1	1/30/2026	TRC Submission

PROJECT NO:	R5089-027B
DATE:	01/30/2026
FILE:	R5089-0278-C-HYDRO.dwg
DRAWN BY:	M.CURLEY, C.KRZCUIK
DESIGNED BY:	C.KRZCUIK
CHECKED BY:	N.HANSEN
APPROVED BY:	P.CRIMMINS

PRE-DEVELOPMENT WATERSHED PLAN

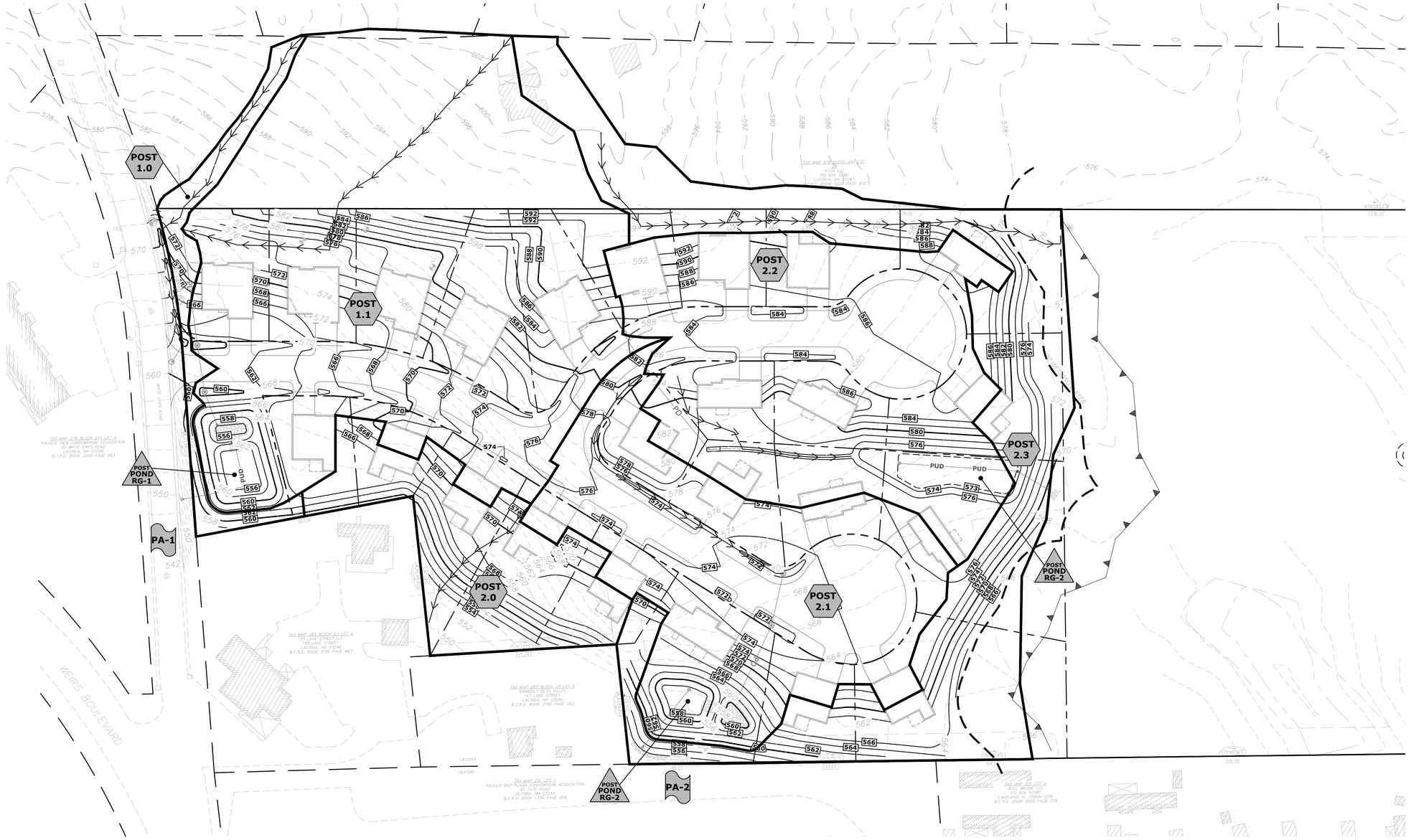
SCALE: AS SHOWN

C-801

Last Saved: 1/29/2026
Plotted: 01/30/2026 3:46pm By: MCurley
Tighe & Bond:J:\R\R5089 Residential\0278 - 33 White Oaks Rd, Laconia, NH\Drawings\AutoCAD\Sheet\R5089-0278-C-HYDRO.dwg

POST-DEVELOPMENT WATERSHED LEGEND

- POST-DEVELOPMENT WATERSHED BOUNDARY
- POST-DEVELOPMENT LONGEST FLOW PATH
- POST 1.0 — POST-DEVELOPMENT WATERSHED AREA DESIGNATION
- POST POND 1 — POST-DEVELOPMENT POND DESIGNATION
- PA-1 — POINT OF ANALYSIS



N

0 50' 100'

SCALE: 1" = 50'

Tighe & Bond

177 Corporate Drive
Portsmouth, NH 03801
T 603.433.8818

33 WHITE OAKS SUBDIVISION

33 White Oaks Road

Laconia, New Hampshire

MARK	DATE	DESCRIPTION
1	1/30/2026	TRC Submission

PROJECT NO:	R5089-027B
DATE:	01/30/2026
FILE:	R5089-0278-C-HYDRO.dwg
DRAWN BY:	M.CURLEY/C.KRZCUIK
DESIGNED BY:	C.KRZCUIK
CHECKED BY:	N.HANSEN
APPROVED BY:	P.CRIMMINS

POST-DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-803

Last Saved: 1/29/2026
Plotted: Jan 29, 2026-3:47pm By: MCurley
Tighe & Bond:J:\R\R5089 Residential\0278 - 33 White Oaks Rd, Laconia, NH\Drawings\AutoCAD\Sheet\R5089-0278-C-HYDRO.dwg

R5089-0278
January 30, 2026

Mr. Rob Mora
Director of Planning Department
City of Laconia Planning Department
45 Beacon Street E
Laconia, NH 03246

Re: Trip Generation Analysis
33 White Oaks Subdivision – 33 White Oaks Road, Laconia, NH

Dear Rob:

Tighe & Bond has performed a trip generation analysis related to the proposed White Oaks Rise Subdivision located at 33 White Oaks Road in Laconia, New Hampshire. The project consists of a 25-lot subdivision, including 24 single-family residential building lots and one lot dedicated to drainage improvements.

The project site is located in an area characterized by single-family residential development. The surrounding roadway network includes White Oaks Road, a local residential roadway providing one lane of travel in each direction with a posted speed limit of 35 miles per hour. There are no existing sidewalks or pedestrian facilities in the vicinity of the project site, and sidewalks are not proposed as part of this subdivision, consistent with existing roadway conditions and development patterns in the area. No signalized intersections are located immediately adjacent to the site.

Vehicular access to the proposed subdivision will be provided via a new public roadway constructed within a dedicated public right-of-way, as shown on the proposed site plan. The new public street will intersect White Oaks Road and provide access to all proposed residential lots within the subdivision.

Based on the posted speed limit of 35 mph on White Oaks Road, a minimum stopping sight distance of 250 feet is required in accordance with the American Association of State Highway and Transportation Officials (AASHTO) Policy on Geometric Design of Highways and Streets. Adequate stopping sight distance will be provided at the proposed roadway intersection to meet or exceed this requirement.

This analysis was performed utilizing the Institute of Transportation Engineers (ITE) Trip Generation Manual, latest edition. For the purposes of analysis, trip generation was calculated using ITE Land Use Code 210 – Single-Family Detached Housing. Average weekday AM and PM peak hour trip generation rates were used to estimate the number of vehicle trips anticipated to be generated by the proposed development.

Proposed 24 Residential Units – LUC 210

Weekday AM Peak Hour		
	Trips Entering	6
	Trips Exiting	16
	Total Vehicle Trips	**22**
Weekday PM Peak Hour		
	Trips Entering	16
	Trips Exiting	10
	Total Vehicle Trips	**26**
Saturday Peak Hour		
	Trips Entering	17
	Trips Exiting	16
	Total Vehicle Trips	**33**

Source: Institute of Transportation Engineers, Trip Generation, 12th Edition, 2025

Based on the relatively low number of peak-hour vehicle trips anticipated to be generated by the proposed subdivision, traffic impacts to White Oaks Road and nearby intersections are expected to be minimal. The projected increase in traffic is not anticipated to result in a noticeable change in overall traffic operations within the surrounding roadway network.

Given the residential nature of the surrounding area, low existing traffic volumes, and limited peak-hour trip generation associated with the proposed development, the subdivision is not anticipated to result in adverse impacts to traffic operations or roadway safety in the project vicinity.

Sincerely,
Tighe & Bond, Inc.

Patrick M. Crimmins, PE
Vice President

Neil A. Hansen, PE
Project Manager

Copy: Scot Buonopane (via email)

33 White Oaks Road, Laconia, New Hampshire
Wetland Delineation Memorandum

TO: Scott Buonopane

FROM: Jeremy Degler CWB, CWS, PWS, Project Environmental Scientist, Tighe & Bond

COPY: Neil Hansen, PE, Project Manager, Tighe & Bond; Stefanie Tetreault, CWS, PWS, Project Manager, Tighe & Bond

DATE: December 2, 2025

The following technical memorandum describes the wetland delineation conducted by Tighe & Bond on November 7, 2025, in support of the initial Feasibility Study being conducted for a proposed multi-family development project at 33 White Oaks Road in Laconia, New Hampshire. A topographic site location map and wetland delineation map are provided in Attachment 1, site photographs are provided in Attachment 2, and US Army Corps of Engineers (USACE) wetland delineation datasheets are provided in Attachment 3.

Site Location and Project Background

The subject property is located at 33 White Oaks Road in the Town of Laconia, New Hampshire (Tax Map 278, Block 241, Lot 29). Tighe & Bond has been requested to provide services related to an initial Feasibility Study for a proposed multi-family development project. As part of this assessment, a wetland delineation was conducted to identify potential jurisdictional resource areas within the proposed project area, as well as classification and assessment to allow for strategic planning and informed decision making. This delineation effort encompassed approximately 10 acres surrounding the anticipated project area within the western half of the subject parcel.

The western portion of the parcel is in the Commercial Resort (CR) district, while the eastern portion of the parcel is located in the Rural Residential (RR1) district. The parcel currently consists of a single-family residential home. The proposed project would subdivide the western portion of the parcel into individual single family home lots, with appurtenant access, parking, pedestrian connections, stormwater management, utilities, and landscaping.

Local, state, and federal jurisdictions may apply to delineated wetlands and established buffer areas. Pursuant to the City of Laconia's Wetlands Conservation and Water Quality Overlay District (Zoning Ordinance, Chapter 235, Article IV, Section 235-17), the only buffer applicable to this site is the 50-foot setback from non-prime wetlands exceeding 3,000 square feet, although additional buffer requirements apply to other wetland types elsewhere in the city. Dredge and fill activities within jurisdictional wetlands are regulated by the New Hampshire Department of Environmental Services (NHDES) under RSA 482-A and by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act.

Wetland Delineation

On November 7, 2025, a NH Certified Wetland Scientist (CWS) from Tighe & Bond delineated jurisdictional resource areas within the western portion of the subject property. Weather during the delineation was overcast with a high temperature of approximately 37°F. Local

weather yielded 0.22 inches of rain in the week prior to the field delineation.[1] The site conditions were considered atypical and/or problematic at the time due to the status of Severe Drought (D2). The New Hampshire Department of Environmental Services (NHDES) declared a State of Severe Drought in Belknap County effective as of September 2025.[2]

The wetland delineation followed the methodologies outlined in NH Administrative Rule Env-Wt 406, the *US Army Corps of Engineers Wetland Delineation Manual Technical Report* (Y-87-1; January 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Version 2.0, January 2012). Wetlands were classified based on the *Classification of Wetlands and Deepwater Habitats of the United States.*[3]

The wetland boundaries were located using a hand-held Eos Skadi GPS unit with sub-meter accuracy and were marked within the delineation area using sequentially numbered pink flagging tape.

Summary of Delineated Natural Resource Areas

Flag Series 1A demarcates the limits of one palustrine wetland located within the delineation area. A summary of the delineated resource area is provided below. No other jurisdictional wetland resource areas were identified during the site investigation or desktop review.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM; Panel No. 3300050002B, effective August 15, 1980) was consulted to evaluate the presence of floodplains within the vicinity of the proposed project; no portion of the subject property is within a FEMA-mapped floodplain.

Wetland 1

Wetland 1 (Flag Series 1A; Photographs 4 and 5) bisects the subject property from north to south near the parcel's east-west midpoint. The central portion of the wetland boundary generally follows the alignment of an adjacent stone wall and extends onto both neighboring properties. The western boundary of Wetland 1 was delineated in the field with pink flagging labeled 1A-1 through 1A-14. Representative wetland and upland data plots were taken near Wetland Flag 1A-8. The eastern wetland boundary was not field delineated as it is outside the scope of the delineation area.

[1] Weather Station ID: KNHGILFO37 (43.55° N, 71.42° W; Gilford, NH). Accessed via Weather Underground on September 12, 2025; https://www. https://www.wunderground.com/weather/us/nh/gilford/KNHGILFO37.

[2] National Integrated Drought Information System: https://www.drought.gov/states/new-hampshire/county/belknap

[3] Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.

Dominant wetland vegetation consisted of winterberry (*Ilex verticillata*; FACW), sensitive fern (*Onoclea sensibilis*; FACW), several hydrophytic species of sedge (*Carex* spp.), and purpleleaf willowherb (*Epilobium coloratum*; OBL). The plant community also passes the FAC-neutral test, which is an indicator of wetland hydrology.[4] Soils within the wetland consisted of thin organic (10YR 2/1) and depleted mineral horizons (10YR 4/1) with prominent redox concentrations throughout (5YR 3/4), overlying a restrictive layer of stony subsoils on a hummock-and-hollow landform. Observed indicators of hydrology included areas of sparsely vegetated concave surface, water-stained leaves, drainage patterns, stunted or stressed plants, geomorphic position, and microtopographic relief. Based on the prevalence of a hydrophytic plant community and observed indicators of hydrology, soil saturation is likely present during wetter months and when not in a state of Severe Drought. This wetland is classified as a mixture of palustrine emergent (persistent), scrub-shrub (broad-leaved deciduous), and forested (broad-leaved deciduous), with a seasonally flooded/saturated hydroperiod (PEM1E/PSS1E/PFO1E).[2] Wetland 1 is less than 3,000 square feet in size, does not contain a stream, and based on aerial imagery and site review, is not contiguous to public surface waters. The delineation occurred outside the vernal pool amphibian breeding season; however, no physical features indicative of potential vernal pools were observed during the field delineation.

Priority Resource Areas

Priority Resource Areas (PRAs) are defined in Env-Wt 103.68 (effective April 27, 2024) as bogs; wetlands located in a river floodplain with a drainage area of at least one square mile or in a tidal area; designated prime wetlands or duly-established 100-foot buffers to prime wetlands; and sand dunes, tidal wetlands, tidal waters, or undeveloped tidal buffer zones.

The delineation confirmed that none of these PRA categories apply. There are no bogs located on-site; the wetland is not situated in a river floodplain with a drainage area of at least one square mile and is not in a tidal area; the site is neither a designated prime wetland nor within a duly-established 100-foot buffer to a prime wetland; and the site does not include any sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone.

PRAs also include rare, threatened, or endangered species, or protected habitats. As a next step, we recommend completing a DataCheck request with the NHDES Ecological Review Section to determine if any of these species have been identified within or surrounding the subject property.

Summary

In November 2025, a Tighe & Bond NH Certified Wetland Scientist delineated wetlands and jurisdictional areas within the vicinity of the project area, including one palustrine wetland. Pending review for protected species or habitat by NHDES, this wetland is not classified as a Priority Resource Area, but the proposed development activities may be subject to federal, state, and local permitting jurisdiction if dredging or filling is proposed to occur within the wetland or within 50-feet of the delineated boundary.

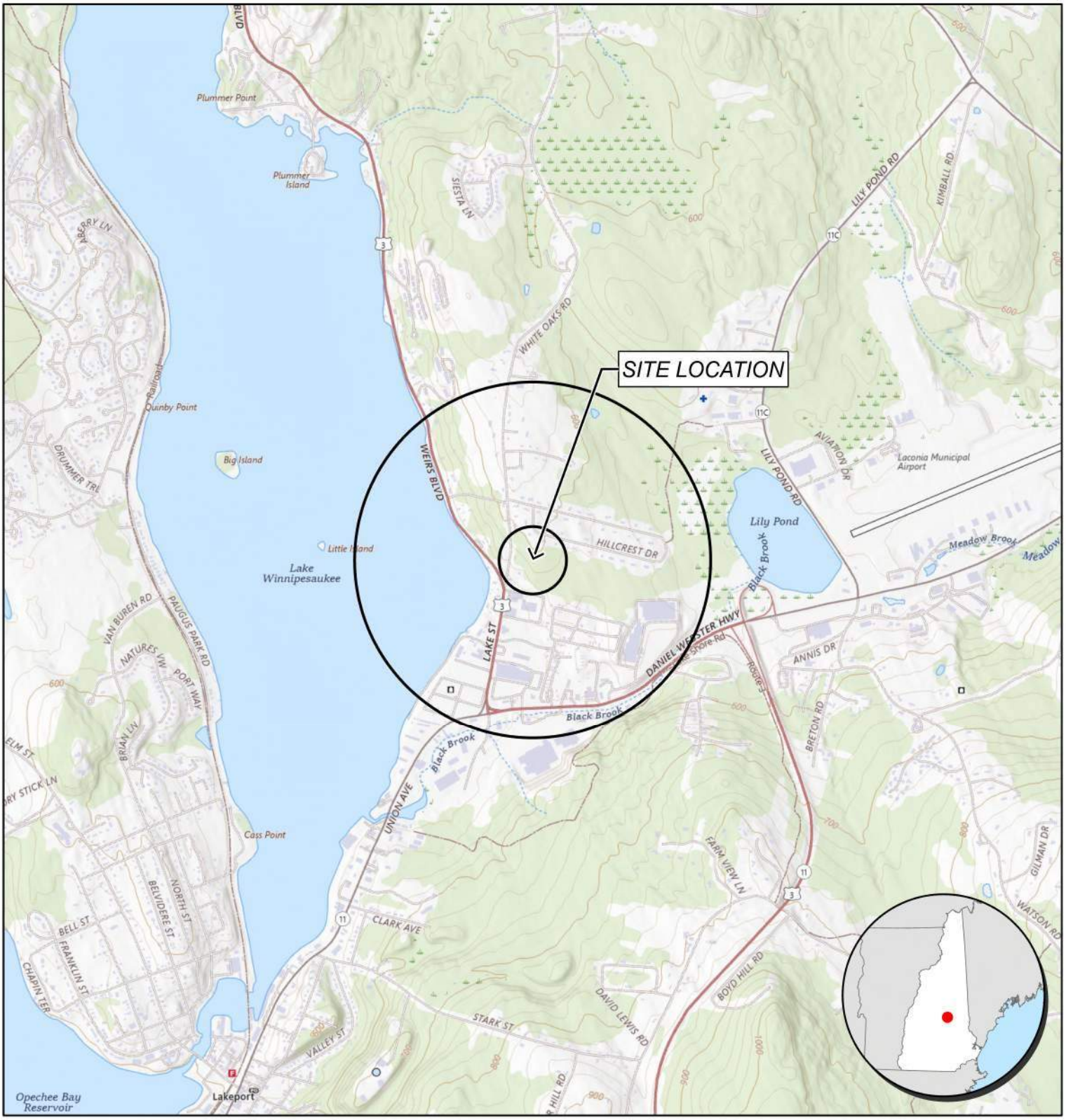
[4] Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0, January 2012).

Tighe&Bond

ATTACHMENT 1

FIGURE 1
SITE LOCATION
November 2025

33 White Oaks Road
Laconia, New Hampshire



Tighe&Bond

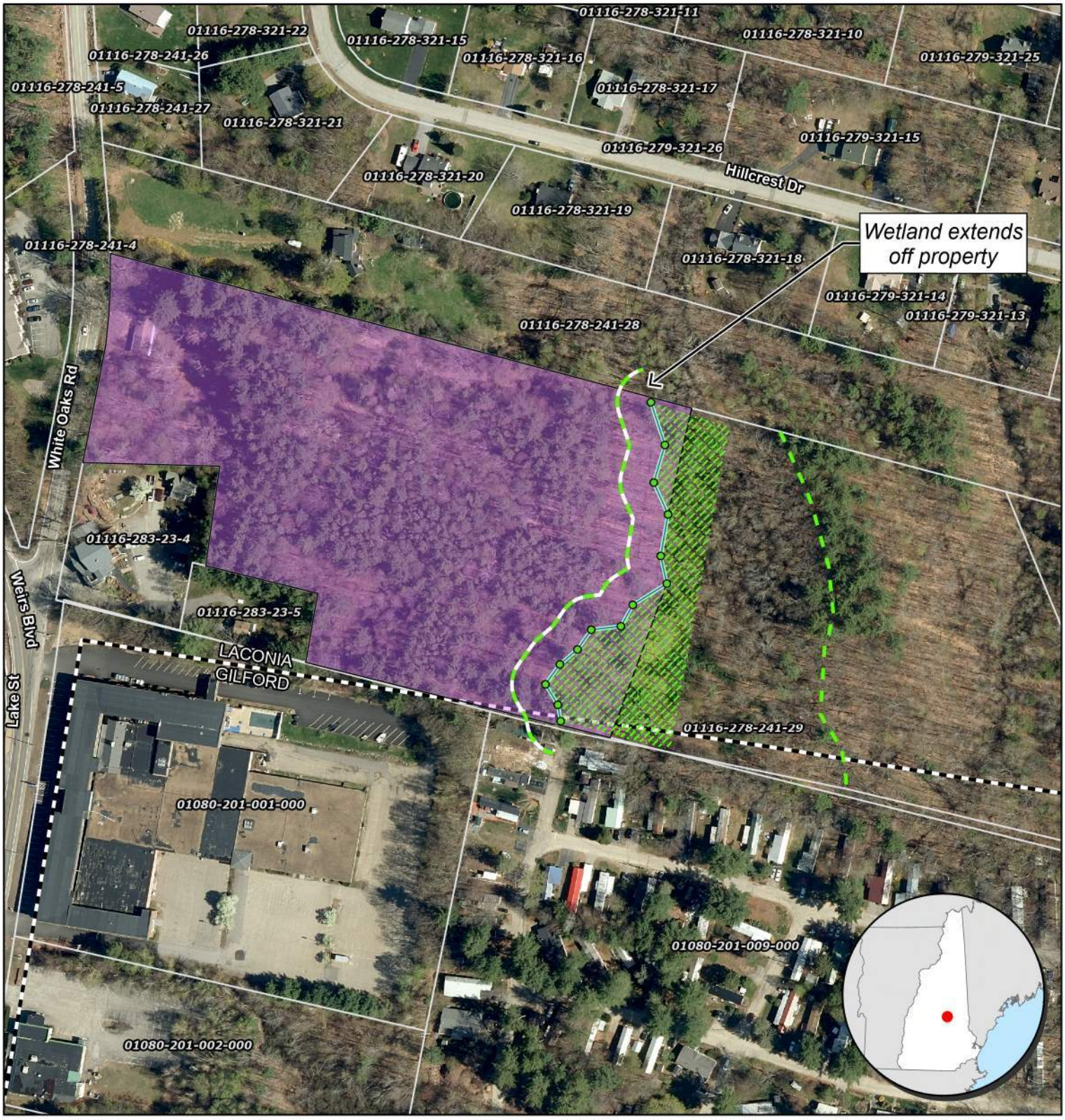
Based on USGS The National Map Topo Basemap.
Contour Interval Equals 10 Feet.
Circles indicate 500-foot and half-mile radii.

N

1:24,000
0 1,000 2,000
Feet

FIGURE 2
AERIAL
November 2025

33 White Oaks Road
Laconia, New Hampshire



- Wetland Flag
- Delineated Wetland Boundary
- Approximate Wetland Boundary (Not Field Delienated)
- 50-Foot Buffer Zone
- Delineated Wetland
- Limit of Delineation Area
- Approximate Parcel Boundary
- Town Boundary

N

1:2,400
0 100 200
Feet

Tighe&Bond

Based on NH GRANIT Color Orthophotography (2021-2022).

Tighe&Bond

ATTACHMENT 2

Photographic Log

Client: Scott Buonopane
Job Number: R5089-0278
Site: 33 White Oaks Road, Laconia, New Hampshire

Photograph No.: 1	**Date:** 11/07/2025	**Direction Taken:** Southeast
Description: Overview of the western portion of the delineation area within the subject property, where the existing single-family residential home is located.		

Photograph No.: 2	**Date:** 11/07/2025	**Direction Taken:** South
Description: Representative overview of the upland forest located within the central portion of the delineation area, behind (east of) the existing single-family residential home.		

Photographic Log

Client: Scott Buonopane
Job Number: R5089-0278
Site: 33 White Oaks Road, Laconia, New Hampshire

Photograph No.: 3	**Date:** 11/07/2025	**Direction Taken:** West
Description: Representative overview of the upland forest located within the central portion of the delineation area, behind (east of) the existing single-family residential home.		

Photograph No.: 4	**Date:** 11/07/2025	**Direction Taken:** Northeast
Description: Overview of Wetland 1 (PEM1E/PSS1E/PFO1E), located at the eastern edge of the delineation area.		

Photographic Log

Client: Scott Buonopane
Job Number: R5089-0278
Site: 33 White Oaks Road, Laconia, New Hampshire

Photograph No.: 5	**Date:** 11/07/2025	**Direction Taken:** Southeast
Description: Overview of Wetland 1 (PEM1E/PSS1E/PFO1E), located at the eastern edge of the delineation area.		

Tighe&Bond

ATTACHMENT 3

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 33 White Oaks Road City/County: Laconia / Belknap Sampling Date: 11/7/2025

Applicant/Owner: Scott Buonopane State: NH Sampling Point: W1-Wet

Investigator(s): Jeremy Degler, CWB, CWS, PWS - Tighe & Bond Section, Township, Range: N/A

Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope %: 8-15

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 43.567890 Long: -71.444215 Datum: NAD83

Soil Map Unit Name: Canterbury fine sandy loam, 8 to 15 percent slopes, very stony (167C) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

This datapoint was taken within the boundaries of Wetland 1, near flagging point 1A-8.

The site conditions were considered atypical and/or problematic at the time due to the status of Severe Drought (D2). The New Hampshire Department of Environmental Services (NHDES) declared a State of Severe Drought in Belknap County effective as of September 2025.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- X Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Mulitple wetland hydrology indicators were observed at the time of the site assessment. Soil saturation is likely present during wetter months and when not in Severe Drought status.

VEGETATION – Use scientific names of plants.

Sampling Point: W1-Wet

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. *Ilex verticillata*	20	Yes	FACW
2. *Euonymus alatus*	10	Yes	UPL
3.			
4.			
5.			
6.			
7.			
	30 =Total Cover		
Herb Stratum (Plot size:)			
1. *Onoclea sensibilis*	40	Yes	FACW
2. *Tiarella stolonifera*	30	Yes	FACU
3. *Carex spp.*	10	No	FACW
4. *Pinus strobus (seedlings)*	10	No	FACU
5. *Epilobium coloratum*	5	No	OBL
6. Unknown scenesced aster	5	No	
7.			
8.			
9.			
10.			
11.			
12.			
	100 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	70	x 2 =	140
FAC species	0	x 3 =	0
FACU species	40	x 4 =	160
UPL species	10	x 5 =	50
Column Totals:	125 (A)		355 (B)

Prevalence Index = B/A = 2.84

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

Hydrophytic vegetation was prevalent but not dominant at the time of the site assessment.

SOIL

Sampling Point W1-Wet

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100					Mucky Loam/Clay	Highly organic.
2-11	10YR 4/1	90	5YR 3/4	10	C	PL/M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Stone

Depth (inches): 11

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Hummock/hollow landform with very stony subsoils. Multiple hydric soil indicators were observed at the time of the site assessment.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 33 White Oaks Road City/County: Laconia / Belknap Sampling Date: 11/7/2025

Applicant/Owner: Scott Buonopane State: NH Sampling Point: W1-Upl

Investigator(s): Jeremy Degler, CWB, CWS, PWS - Tighe & Bond Section, Township, Range: N/A

Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope %: 15-25

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 43.567991 Long: -71.444243 Datum: NAD83

Soil Map Unit Name: Canterbury fine sandy loam, 15 to 25 percent slopes, very stony (167D) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

This datapoint was taken upslope and outside of the boundaries of Wetland 1, near flagging point 1A-8.

The site conditions were considered atypical and/or problematic at the time due to the status of Severe Drought (D2). The New Hampshire Department of Environmental Services (NHDES) declared a State of Severe Drought in Belknap County effective as of September 2025.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ? Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators were observed at the time of the site assessment.

VEGETATION – Use scientific names of plants. Sampling Point: W1-Upl

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fagus grandifolia*	40	Yes	FACU
2. *Pinus strobus*	15	Yes	FACU
3. *Quercus rubra*	10	No	FACU
4.			
5.			
6.			
7.			
	65	=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Pinus strobus (seedlings)*	10	Yes	FACU
2. *Onoclea sensibilis*	5	Yes	FACW
3. *Carex spp.*	5	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	75	x 4 =	300
UPL species	0	x 5 =	0
Column Totals:	85 (A)		320 (B)

Prevalence Index = B/A = 3.76

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

Hydrophytic vegetation was not dominant nor prevalent at the time of the site assessment. Approximately 80% of the plot surface was unvegetated and covered with leaf litter.

SOIL

Sampling Point W1-Upl

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/3	100					Loamy/Clayey	Very friable soils.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Stone

Depth (inches): 8

Hydric Soil Present? **Yes** ___ **No** X

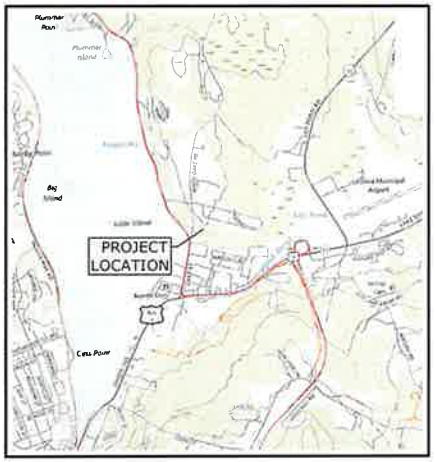
Remarks:

Hummock/hollow landform with very stony subsoils. No hydric soil indicators were observed at the time of the site assessment.

33 WHITE OAKS SUBDIVISION
33 WHITE OAKS ROAD
TAX MAP 278 BLOCK 241 LOT 29
LACONIA, NEW HAMPSHIRE
DATE: JANUARY 30, 2026

LIST OF DRAWINGS		
DRAWING NO.	DRAWING TITLE	LAST REVISED
-	COVER SHEET	01/30/2026
G-001	GENERAL NOTES AND LEGEND	01/30/2026
C-101	EXISTING CONDITIONS AND DEMOLITION PLAN	01/30/2026
C-201	OVERALL SITE PLAN	01/30/2026
C-201.1	SITE PLAN	01/30/2026
C-301	GRADING, DRAINAGE, AND EROSION CONTROL PLAN	01/30/2026
C-401	UTILITIES PLAN	01/30/2026
C-501	ROADWAY PLAN AND PROFILE	01/30/2026
C-502	ROADWAY PLAN AND PROFILE	01/30/2026
C-601	EROSION CONTROL NOTES AND DETAILS	01/30/2026
C-602	DETAILS SHEET	01/30/2026
C-603	DETAILS SHEET	01/30/2026
C-604	DETAILS SHEET	01/30/2026
C-605	DETAILS SHEET	01/30/2026
C-606	DETAILS SHEET	01/30/2026

LIST OF PERMITS		
LOCAL	STATUS	DATE
SUBDIVISION PERMIT	PENDING	
STATE		
NHDES - SEWER CONNECTION PERMIT	PENDING	
NHDES - ALTERATION OF TERRAIN PERMIT	PENDING	
FEDERAL		
NPDES - CONSTRUCTION GENERAL PERMIT	PENDING	



SITE LOCATION MAP
SCALE: 1" = 2,000'

CONSTRUCTION NOTES:
1. THE CONTRACTOR SHALL NOT RELY ON SCALED DIMENSIONS AND SHALL CONTACT THE ENGINEER FOR CLARIFICATION IF A REQUIRED DIMENSION IS NOT PROVIDED ON THE PLANS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS, AND FOR SITE CONDITIONS THROUGHOUT CONSTRUCTION. NEITHER THE PLANS NOR THE SEAL OF THE ENGINEER AFFIXED HEREON EXTEND TO OR INCLUDE SYSTEMS REQUIRED FOR THE SAFETY OF THE CONTRACTOR, THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND IMPLEMENTING SAFETY PROCEDURES AND SYSTEMS AS REQUIRED BY THE UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), AND ANY STATE OR LOCAL SAFETY REGULATIONS.
3. TIGHE & BOND ASSUMES NO RESPONSIBILITY FOR ANY ISSUES LEGAL OR OTHERWISE, RESULTING FROM CHANGES MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION OF TIGHE & BOND.

PREPARED BY:
Tighe & Bond
177 Corporate Drive
Portsmouth, NH 03801
T 603 433 8818

APPLICANT:
SCOTT BUONOPANE
217 Middlesex Turnpike
Burlington, MA 01803

OWNER:
DANIEL H GREENHALGH
18 Tenney Rd
Pelham, NH 03076

THIS DOCUMENT IS RELEASED TEMPORARILY FOR PROGRESS REVIEW ONLY IT IS NOT INTENDED FOR BIDDING OR CONSTRUCTION PURPOSES

TRC SUBMISSION
COMPLETE SET 15 SHEETS

EXISTING CONDITIONS PLAN NOTES:

1. EXISTING CONDITIONS ARE BASED ON A FIELD SURVEY COMPLETED DECEMBER 2020 & JANUARY 2021
2. WETLAND DELINEATION BY TIGHE & BOND ON NOVEMBER 7, 2025, AND FIELD LOCATED USING A HAND HELD EOS SKADI GPS UNIT WITH SUB METER ACCURACY

GENERAL NOTES:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. THE CONTRACTOR SHALL OBTAIN AND PAY FOR AND COMPLY WITH ADDITIONAL PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION
8. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES & SPECIFICATIONS
9. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAY WITH THE CITY OF LACONIA
10. ALL WORK SHALL CONFORM TO THE CITY OF LACONIA DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" CURRENT EDITION
11. THE CONTRACTOR SHALL SUBMIT AS BUILT PLANS IN DIGITAL FORMAT (DWG AND PDF FILES) TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR AND SHALL INCLUDE A FULL TOPOGRAPHY SURVEY WITHIN THE LIMITS OF WORK INCLUDING BUT NOT LIMITED TO SITE TOPOGRAPHY, SITE FEATURES, (BUILDINGS, ROADS, CURBS, SIDEWALK, ETC.), STORM DRAINAGE, AND SURFACE & SUBSURFACE UTILITIES
12. BEFORE ANY DEWATERING IS PERFORMED A TEMPORARY DISCHARGE PERMIT FROM THE NHDES IS REQUIRED
13. THE CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY TRAFFIC CONTROL/SAFETY DEVICES TO ENSURE SAFE VEHICULAR AND PEDESTRIAN ACCESS THROUGH THE WORK AREA, OR FOR SAFELY IMPLEMENTING DETOURS AROUND THE WORK AREA. PERFORM TRAFFIC CONTROL IN ACCORDANCE WITH THE CONTRACTOR'S APPROVED TRAFFIC CONTROL PLAN
14. WHEN WORKING IN THE RIGHT OF WAY, THE CONTRACTOR SHALL PROVIDE THE OWNER AND LOCAL FIRE/POLICE/SCHOOL AUTHORITIES A DETAILED PLAN OF APPROACH INDICATING METHODS OF PROPOSED TRAFFIC ROUTING ON A DAILY BASIS, AND COORDINATION TO ENSURE COMMUNICATION AND COORDINATION BETWEEN THE OWNER, THE CONTRACTOR AND LOCAL FIRE/POLICE/SCHOOL AUTHORITIES THROUGHOUT THE CONSTRUCTION PERIOD
15. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL PROPERTIES WITHIN THE PROJECT AREA AT ALL TIMES DURING CONSTRUCTION
16. NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICT, ERROR, AMBIGUITY, OR DISCREPANCY WITH THE PLANS OR BETWEEN THE PLANS AND ANY APPLICABLE LAW, REGULATION, CODE, STANDARD SPECIFICATION, OR MANUFACTURER'S INSTRUCTIONS
17. TIGHE & BOND ASSUMES NO RESPONSIBILITY FOR ANY ISSUES, LEGAL OR OTHERWISE, RESULTING FROM CHANGES MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION FROM TIGHE & BOND

DEMOLITION NOTES:

1. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES
2. [illegible]
3. [illegible]
4. CONTRACTOR SHALL VERIFY [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS
9. THE CONTRACTOR SHALL COORDINATE REMOVAL, RELOCATION, DISPOSAL, ABANDONMENT, OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY
10. UTILITIES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY STANDARDS. THE CONTRACTOR SHALL REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK, UNLESS SPECIFICALLY IDENTIFIED OTHERWISE
11. SAW CUT AND REMOVE PAVEMENT ONE (1) FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN
12. PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT REMOVAL PRIOR TO BID
13. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL UTILITIES TO BE REMOVED AND PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN
14. [illegible]
15. [illegible]
16. [illegible]
17. [illegible]
18. [illegible]

SITE NOTES:

1. PAVEMENT MARKINGS, INCLUDING BUT NOT LIMITED TO, PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, CROSS WALKS, ARROWS, LEGENDS, AND CENTERLINES, SHALL BE CONSTRUCTED AS SHOWN ON THE DRAWINGS AND DETAILS, AND SHALL MEET THE FOLLOWING REQUIREMENTS
   - ALL ON SITE PAVEMENT MARKINGS EXCEPT CENTERLINES, MEDIAN ISLANDS, FOG/SHOULDER LINES, AND LANE LINES SHALL BE CONSTRUCTED USING WHITE TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248 TYPE "F"
   - ALL ON SITE CENTERLINES AND MEDIAN ISLANDS SHALL BE CONSTRUCTED USING YELLOW THERMOPLASTIC STRIPING MATERIAL, MEETING THE REQUIREMENTS OF AASHTO M249
   - ALL ON SITE FOG/SHOULDER LINES AND LANE LINES SHALL BE CONSTRUCTED USING WHITE THERMOPLASTIC STRIPING MATERIAL, MEETING THE REQUIREMENTS OF AASHTO M249
   - ALL PAVEMENT MARKINGS WITHIN PUBLIC RIGHT OF WAY SHALL CONFORM TO THE CITY OF LACONIA DEPARTMENT OF PUBLIC WORKS, AND APPLICABLE DEPARTMENT OF TRANSPORTATION (DOT), STANDARD SPECIFICATIONS
2. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" CURRENT EDITION, "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" CURRENT EDITION, AND THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA), THE ARCHITECTURAL BARRIERS ACT (ABA), AND THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (AAB), AS APPLICABLE
3. THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED LAND SURVEYOR TO DETERMINE ALL LINES AND GRADES
4. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAW CUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE
5. COORDINATE ALL WORK ADJACENT TO BUILDINGS WITH BUILDING DRAWINGS/CONTRACTOR
6. SEE ARCHITECTURAL/BUILDING DRAWINGS FOR ALL CONCRETE PADS & SIDEWALKS ADJACENT TO BUILDING
7. ALL LIGHT POLE BASES NOT PROTECTED BY A RAISED CURB SHALL BE PAINTED YELLOW

GRADING AND DRAINAGE NOTES:

1. GENERAL COMPACTION REQUIREMENTS
   - BELOW PAVED OR CONCRETE AREAS 95%
   - TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL 95%
   - BELOW LOAM AND SEED AREAS 90%

   * ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D 1557, METHOD C. FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D 1556 OR ASTM 2922
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]

(GENERAL NOTES, CONTINUED)

6. THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCH BASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION
7. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES
8. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH
9. ALL PROPOSED CATCH BASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4' SUMPS
10. THE CONTRACTOR SHALL VERIFY INVERTS OF EXISTING DRAIN LINES AND STRUCTURES AT PROPOSED DRAINAGE CONNECTION LOCATIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES

GENERAL EROSION CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL VOLUME, LATEST EDITION
2. SEE SHEET C-501 AND C-502 FOR ADDITIONAL EROSION CONTROL REQUIREMENTS AND DETAILS
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL EROSION AND SEDIMENT CONTROL MEASURES FOR APPROVAL
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. [illegible]
9. [illegible]
10. [illegible]
11. [illegible]
12. [illegible]
13. [illegible]
14. [illegible]
15. [illegible]
16. [illegible]
17. [illegible]

UTILITY NOTES:

1. COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY
   - NATURAL GAS - LIBERTY UTILITIES
   - WATER - CITY OF LACONIA
   - SEWER - CITY OF LACONIA
   - ELECTRIC - EVERSOURCE
   - COMMUNICATIONS - [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible] STANDARDS
8. HYDRANTS, GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE CITY OF LACONIA FIRE AND/OR WATER DEPARTMENT
9. ALL SEWER PIPE SHALL BE PVC SDR 35 UNLESS OTHERWISE STATED
10. THE CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO ABUTTING PROPERTIES THROUGHOUT CONSTRUCTION
11. EXISTING WATER AND SEWER UTILITIES TO BE REMOVED SHALL BE CAPPED AT THE PROPERTY LINE PER THE CITY OF LACONIA WATER DEPARTMENT AND CITY OF LACONIA SEWER DEPARTMENT STANDARDS. ALL OTHER UTILITIES TO BE REMOVED SHALL BE CUT AND CAPPED PER EACH UTILITY COMPANY STANDARDS
12. ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, CURRENT EDITION, AND ALL APPLICABLE STATE AND LOCAL CODES
13. THE EXACT LOCATION OF NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE BUILDING DRAWINGS AND THE APPLICABLE UTILITY COMPANIES
14. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE
15. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES
16. THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO THE COMPLETION OF THIS PROJECT
17. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL
18. [illegible]
19. [illegible]
20. [illegible]
21. [illegible]
22. [illegible]
23. [illegible]
24. [illegible]
25. [illegible]
26. [illegible]
27. [illegible]
28. [illegible]
29. ALL WATER SERVICE LINES SHALL BE [illegible] RIGHT OF WAY

ABBREVIATIONS

ABDN(D)	ABANDON(ED)	FF	FINISH FLOOR	[illegible]	[illegible] CURVATURE
AC	ASBESTOS CEMENT PIPE	FM	FORCE MAIN	PROT	PROTECT
APPROX	APPROXIMATE	G	GAS	PSF	POUNDS PER SQUARE FOOT
BC	BITUMINOUS CURB	GG	GAS GATE	PSI	POUNDS PER SQUARE INCH
BFP	BACK FLOW PREVENTOR	GRAN	GRANITE	PT	POINT OF TANGENCY
BIT	BITUMINOUS	HC	HANDICAP	PVC	POLYVINYLCHLORIDE
BL	BASELINE	HDPE	HIGH DENSITY POLYETHYLENE	PVMT	PAVEMENT
BLDG	BUILDING	HMA	HOT MIX ASPHALT	R	RADIUS
BND	BOUND	HYD	HYDRANT	RCP	REINFORCED CONCRETE PIPE
BOC	BOTTOM OF CURB	IN	INCHES	RD	ROOF DRAIN
BOT	BOTTOM	INV	INVERT	REV	REVISION
BS	BOTTOM OF STEP	IP	IRON PIN	ROW	RIGHT OF WAY
BW	BOTTOM OF WALL	L	LENGTH OF CURB	RT	RIGHT
CATV	CABLE TELEVISION	LP	LIGHT POLE	R&D	REMOVE AND DISPOSE
CB	CATCH BASIN	LT	LEFT	R&R	REMOVE AND RESET
CCW	CEMENT CONCRETE WALK	MAX	MAXIMUM	R&S	REMOVE AND STACK
CEM	CEMENT	MH	MANHOLE	S	SOUTH
CI	CAST IRON PIPE	MIN	MINIMUM	SAN	SANITARY
CL	CENTERLINE	MISC	MISCELLANEOUS	SCH	SCHEDULE
CLF	CHAIN LINK FENCE	MON	MONUMENT	SF	SQUARE FOOT
CO	CLEAN OUT	MJ	MECHANICAL JOINT	SMH	SEWER MANHOLE
CONC	CONCRETE	N	NORTH	SS	STAINLESS STEEL
CPP	CORRUGATED POLYETHYLENE PIPE	NITC	NOT IN THIS CONTRACT	STA	STATION
CY	CUBIC YARD	NTS	NOT TO SCALE	STL	STEEL
DH	DRILL HOLE	N/A	NOT APPLICABLE	STRM	STORM
DI	DUCTILE IRON PIPE	N/F	NOW OR FORMERLY	T	TANGENT LENGTH
DIA	DIAMETER	OC	ON CENTER	TC	TOP OF CURB
DMH	DRAIN MANHOLE	OCS	OUTLET CONTROL STRUCTURE	TEL	TEL DATA
E	EAST	OH	OVERHEAD	TP	TEST PIT
EF	EACH FACE	PB	PLANT BED	TS	TOP OF STEP
EG	EXISTING GRADE	PC	POINT OF CURVATURE	TW	TOP OF WALL
EL/ELEV	ELEVATION	PCC	POINT OF COMPOUND CURVATURE	TYP	TYPICAL
ELEC	ELECTRIC	PCPP	PERFORATED CORRUGATED POLYETHYLENE PIPE	UP	UTILITY POLE
EMH	ELECTRIC MANHOLE	PERF	PERFORATED	W	WATER
EOP	EDGE OF PAVEMENT	PI	POINT OF INTERSECTION	WG	WATER GATE
EW	EACH WAY			WV	WATER VALVE
EXIST	EXISTING			XFMR	TRANSFORMER
FES	FLARED END SECTION				

LEGEND

EXISTING | PROPOSED | DESCRIPTION

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- RIGHT OF WAY (ROW) LINE
- EASEMENT LINE
- ZONING DISTRICT BOUNDARY LINE (APPROX)
- BUILDING SETBACK LINE
- INTERMEDIATE CONTOURS
- INDEX CONTOURS
- SPOT / APPROX SPOT GRADE
- MAGNITUDE & DIRECTION OF SLOPE
- LIMIT OF WETLANDS WATER COURSE
- LIMIT OF VEGETATED WETLAND
- LIMIT OF LOCAL WETLAND BUFFER (ZONE 1 – 50 FEET)
- LOCATION OF BORING (APPROX)
- LOCATION OF TEST PIT (APPROX)
- LIMIT OF WORK (APPROX)
- LIMIT OF SAWCUT (APPROX)
- LIMIT OF EROSION CONTROL (APPROX)
- INLET PROTECTION
- PAVEMENT / CONCRETE SECTION TO BE REMOVED (APPROX)
- LIMIT OF CLEARING & GRUBBING (APPROX)
- LIMIT OF BUILDING(S) / STRUCTURE(S) TO BE REMOVED (APPROX)
- LIMIT OF UTILITY / SITE FEATURE TO BE REMOVED (APPROX)
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- SLOPED GRANITE CURB
- CURB RADIUS
- PAVEMENT SECTION
- CONCRETE SIDEWALK & TIP DOWN RAMP
- FENCE
- GUARDRAIL
- LIGHT POLE / BASE
- SIGN
- BOLLARD
- SNOW STORAGE (APPROX)
- PAVEMENT STRIPING
- TREE LINE (APPROX)
- STONE WALL
- RETAINING WALL
- STORM DRAIN
- STORM DRAIN (APPROX)
- STORM UNDERDRAIN
- STORM DRAIN MANHOLE
- STORM DRAIN INLETS
- FLARED END SECTION & RIP RAP APRON
- GRAVITY SANITARY SEWER
- GRAVITY SANITARY SEWER (APPROX)
- SANITARY SEWER FORCE MAIN
- SANITARY SEWER STRUCTURES
- WATER SERVICE
- WATER SERVICE (APPROX)
- WATER SERVICE STRUCTURES
- UNDERGROUND ELECTRIC
- UNDERGROUND ELECTRIC (APPROX)
- OVERHEAD UTILITY (UNSPECIFIED)
- UNDERGROUND COMMUNICATIONS SERVICE
- UNDERGROUND ELECTRIC & COMMUNICATION SERVICES
- UNDERGROUND ELECTRIC / COMMUNICATIONS SERVICE STRUCTURES
- ELECTRIC / COMMUNICATION SERVICE STRUCTURES
- GAS SERVICE
- GAS SERVICE (APPROX)
- GAS SERVICE STRUCTURES
- DECIDUOUS TREE
- EVERGREEN TREE
- ORNAMENTAL TREE
- SHRUBS / GROUND COVERS

Tighe & Bond
[illegible] Corporate Drive
[illegible]

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33 WHITE OAKS SUBDIVISION

33 White Oaks Road

Laconia, New Hampshire

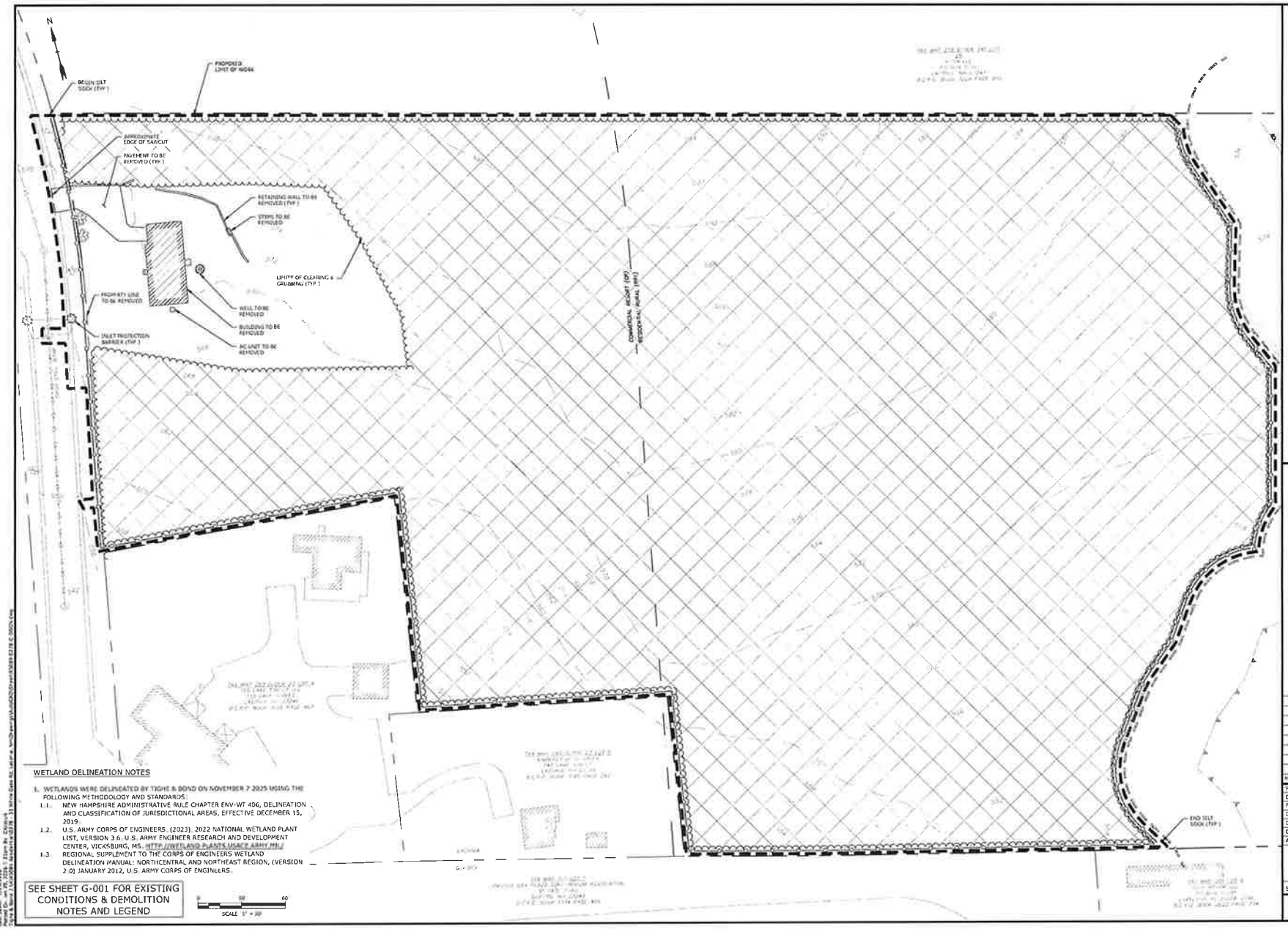
MARK	DATE	DESCRIPTION
1	1/30/2026	TRC Submission

PROJECT NO	[illegible]
DATE	[illegible]
FILE	[illegible]
DRAWN BY	[illegible]
DESIGNED BY	[illegible]
CHECKED BY	[illegible]
APPROVED BY	[illegible]

GENERAL NOTES AND LEGEND

SCALE: AS SHOWN

G-001



WETLAND DELINEATION NOTES

1. WETLANDS WERE DELINEATED BY TIGHE & BOND ON NOVEMBER 7 2025 USING THE FOLLOWING METHODOLOGY AND STANDARDS:
   - 1.1. NEW HAMPSHIRE ADMINISTRATIVE RULE CHAPTER ENV-WT 406, DELINEATION AND CLASSIFICATION OF JURISDICTIONAL AREAS, EFFECTIVE DECEMBER 15, 2019.
   - 1.2. U.S. ARMY CORPS OF ENGINEERS. (2023). 2022 NATIONAL WETLAND PLANT LIST, VERSION 3.6. U.S. ARMY ENGINEER RESEARCH AND DEVELOPMENT CENTER, VICKSBURG, MS. HTTP://WETLAND-PLANTS.USACE.ARMY.MIL/
   - 1.3. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS.

Tighe&Bond

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33 WHITE OAKS SUBDIVISION

33 White Oaks Road

Laconia, New Hampshire

No.	Date	Description
1	1/30/2026	PNC Submission

PROJECT NO	R5019.0278
DATE	01/30/2026
FILE	R5019 0278 C DSGN.dwg
DRAWN BY	M CURLEY/C KRZCUIK
DESIGNED BY	C KRZCUIK
CHECKED BY	N HANSEN
APPROVED BY	P CRIMMINS

EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: AS SHOWN

C-101

SITE DATA:

LOCATION	TAX MAP 278, BLOCK 241, LOT 29
OWNER	DANIEL H GREENHALGH 18 TENNEY RD PELHAM, NH 03076
APPLICANT	SCOTT BUONOPANE 217 MIDDLESEX TURNPIKE BURLINGTON, MA 01803
ZONING DISTRICT	COMMERCIAL RESORT (CR) & RESIDENTIAL RURAL (RRU)
PROPOSED USE	SINGLE FAMILY RESIDENTIAL
PROPOSED LOT SIZE	±3.192 ACRES (±139,087 SF)

DIMENSIONAL REQUIREMENTS	REQUIRED (CR)	PROPOSED
MAXIMUM RESIDENTIAL DENSITY UNITS/ACRE	6	±3.2
MINIMUM LOT FRONTAGE	80 FT	>80 FT
FRONT YARD SETBACKS		
MINIMUM FRONT SETBACK	15 FT	>15 FT
MINIMUM SIDE SETBACK	10 FT	>10 FT
MINIMUM REAR SETBACK	15 FT	>15 FT
MAXIMUM STRUCTURE HEIGHT		
MINIMUM GREEN AREA (%)	60%	±85%

NOTE:
1. ON NOVEMBER 17, 2025, THE LACONIA ZONING BOARD OF ADJUSTMENTS GRANTED RELIEF FROM ARTICLE 235 SECTION 15 C(2) TO INCREASE THE APPLICATION OF THE CR DISTRICT BOUNDARY DIMENSIONAL REQUIREMENTS FROM 100 TO 500'

SEE SHEET G-001 FOR SITE NOTES AND LEGEND

SCALE 1" = 40'

Tighe&Bond

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33 WHITE OAKS SUBDIVISION

33 White Oaks Road

Laconia, New Hampshire

MARK	DATE	DESCRIPTION
1	1/30/2026	TRC Submission

PROJECT NO	R5089.0278
DATE	01/30/2026
FILE	R5089.0278 C 0501.dwg
DRAWN BY	M CURLEY/C KRZCUIK
DESIGNED BY	C KRZCUIK
CHECKED BY	N HANSEN
APPROVED BY	P CRIMMINS

OVERALL SITE PLAN

SCALE: AS SHOWN

C-201

SEE SHEET G-001 FOR SITE NOTES AND LEGEND

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33 White Oaks Road

Laconia, New Hampshire

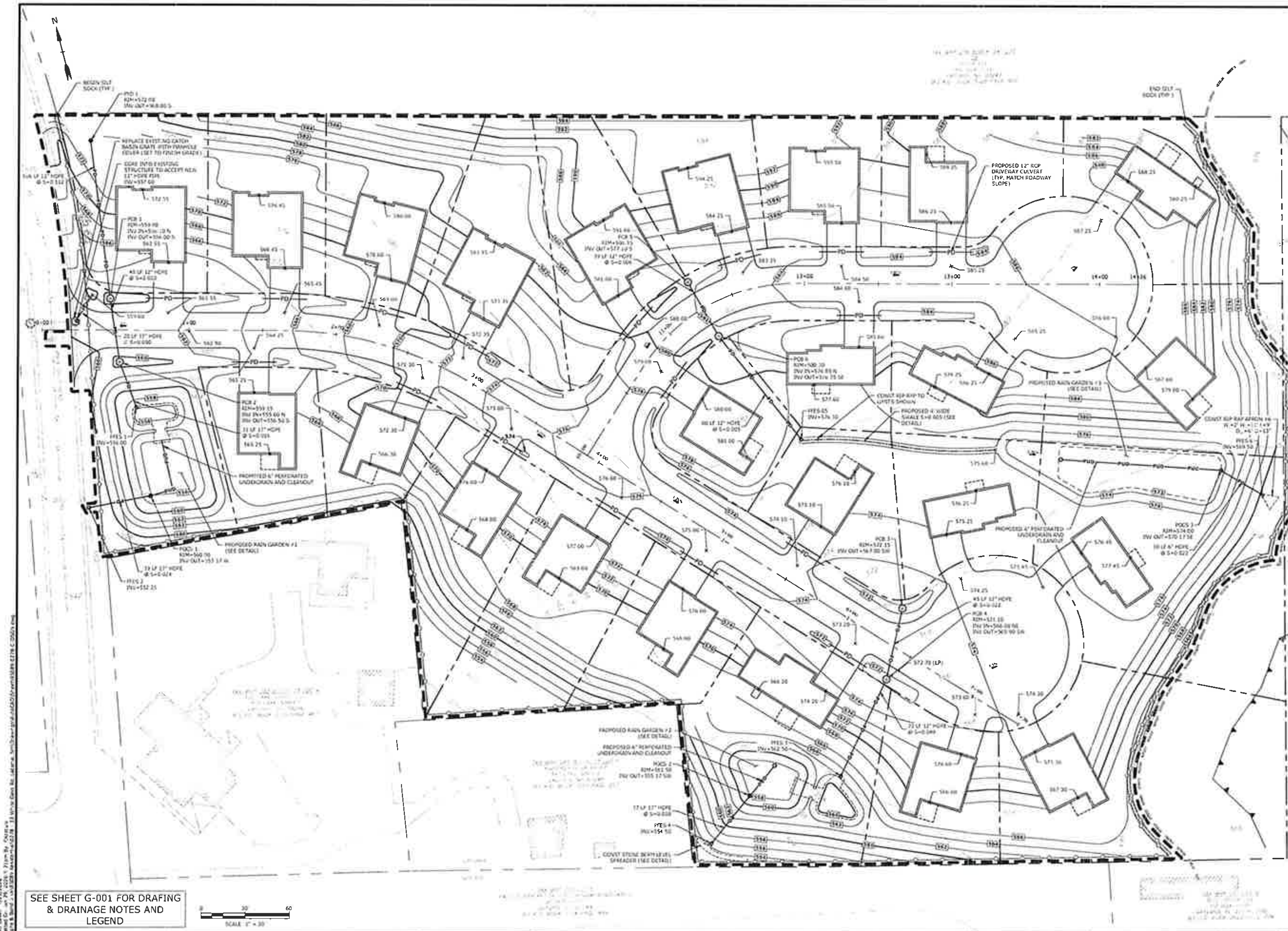
MARK	DATE	DESCRIPTION
1	1/30/2026	TRC Submission

PROJECT NO	R5089-0278
DATE	01/30/2026
FILE	R5089-0278-C-DSGN.dwg
DRAWN BY	M CURLEY/C KRZCUIK
DESIGNED BY	C KRZCUIK
CHECKED BY	N HANSEN
APPROVED BY	P CRIMMINS

SITE PLAN

SCALE: AS SHOWN

C-201.1



SEE SHEET G-001 FOR DRAFING & DRAINAGE NOTES AND LEGEND

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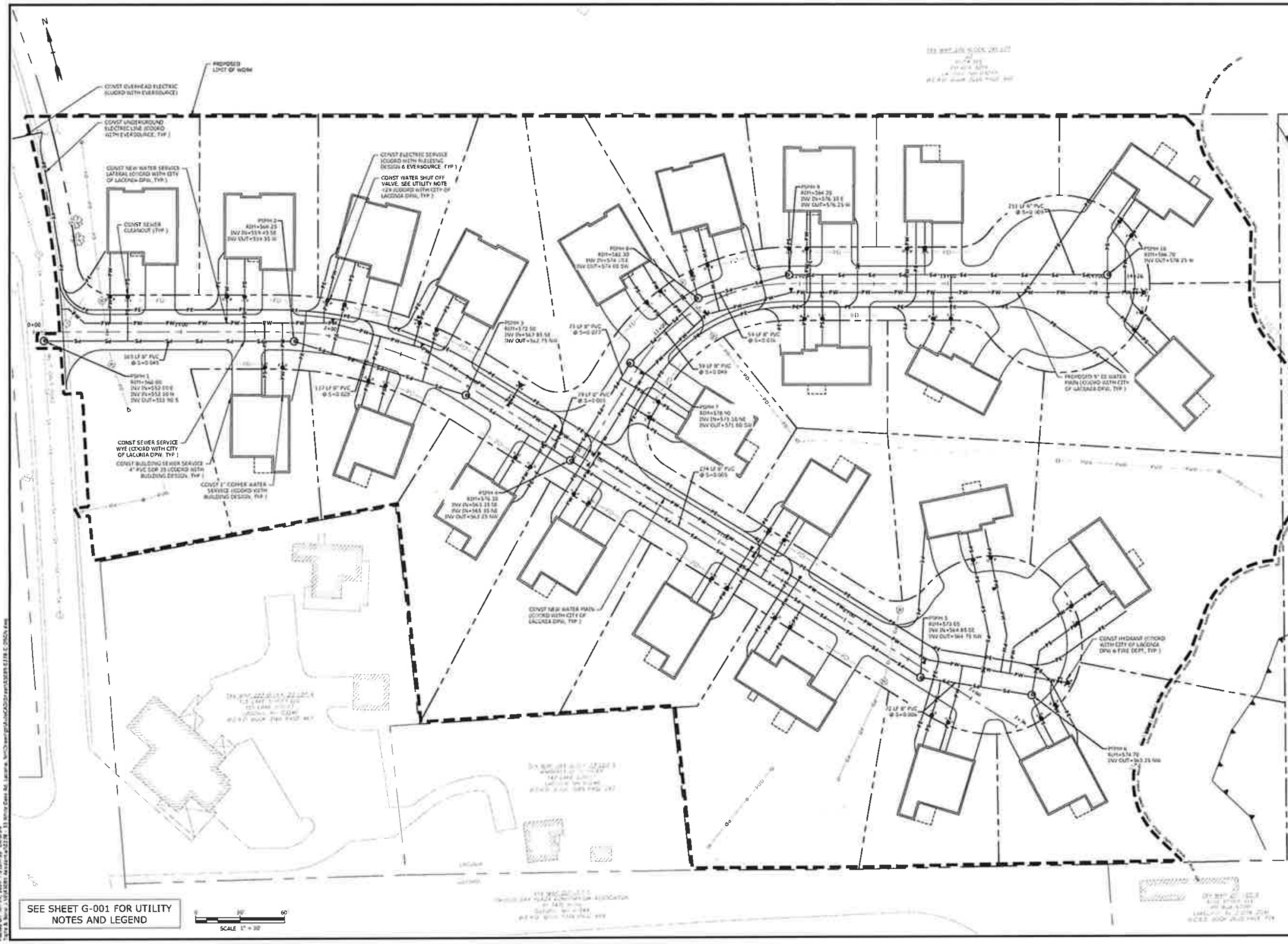
Laconia, New Hampshire

GRADING, DRAINAGE, AND EROSION CONTROL PLAN

SCALE: AS SHOWN

C-301



SEE SHEET G-001 FOR UTILITY NOTES AND LEGEND

Tighe&Bond

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33 WHITE OAKS SUBDIVISION

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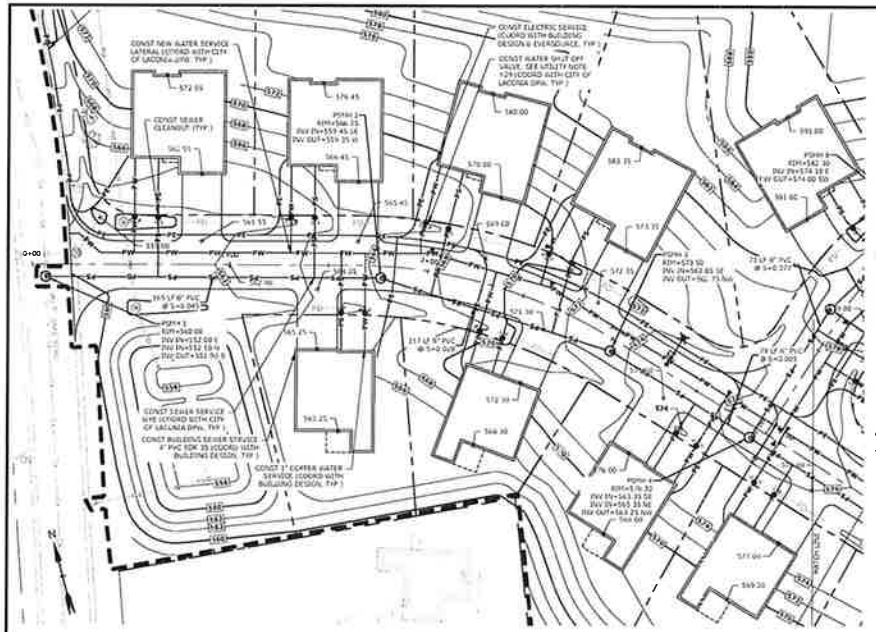
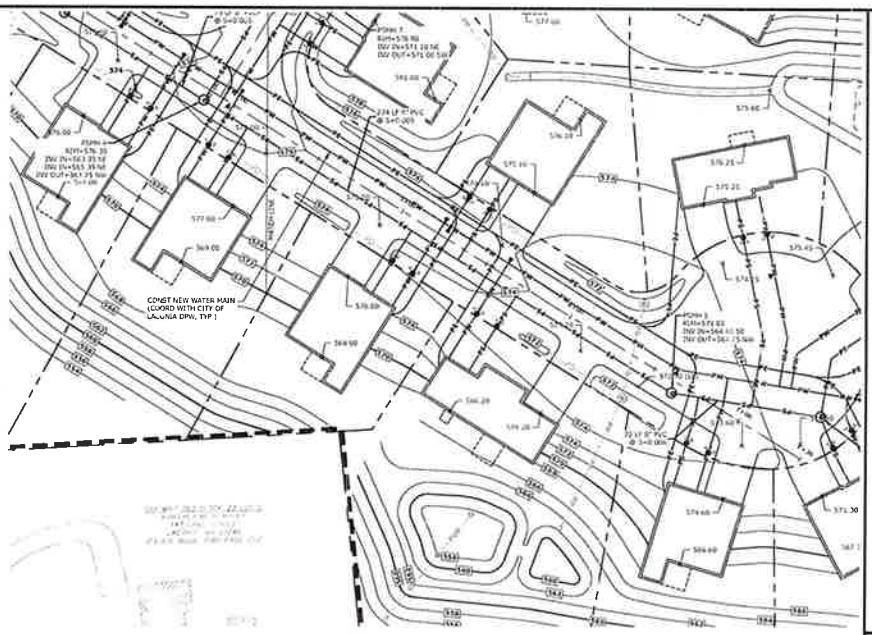
Laconia, New Hampshire

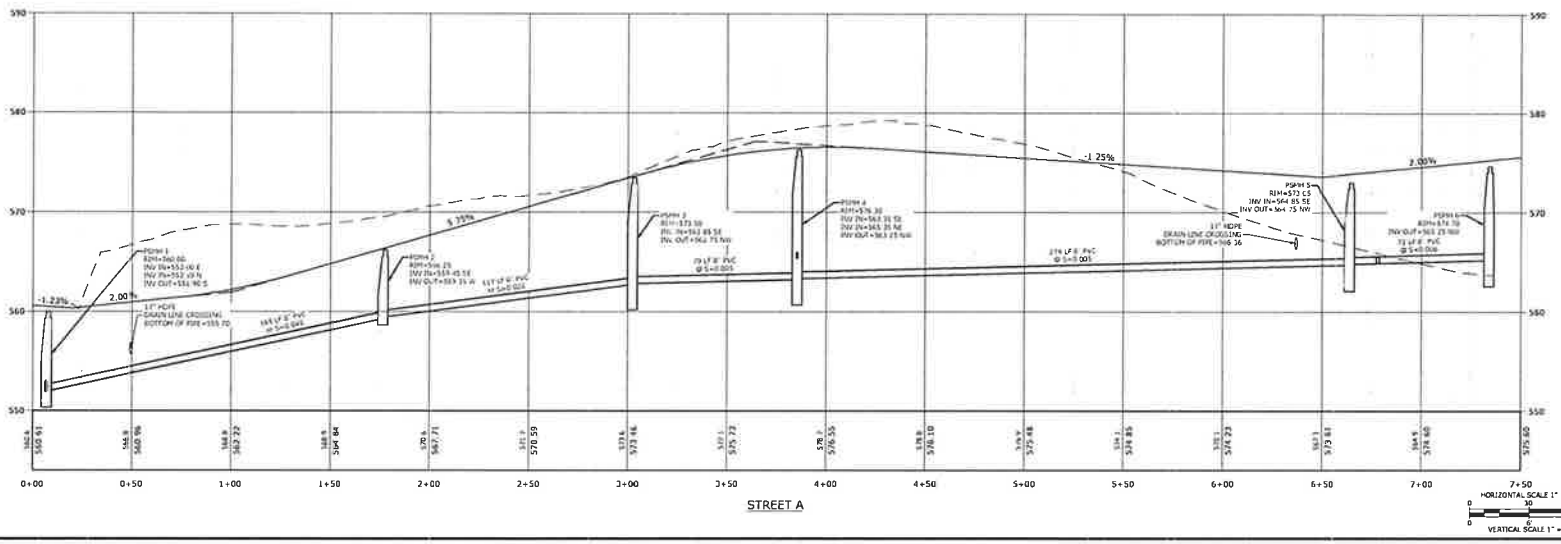
UTILITIES PLAN

SCALE: AS SHOWN

C-401







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33 WHITE OAKS SUBDIVISION

33 White Oaks Road

Laconia, New Hampshire

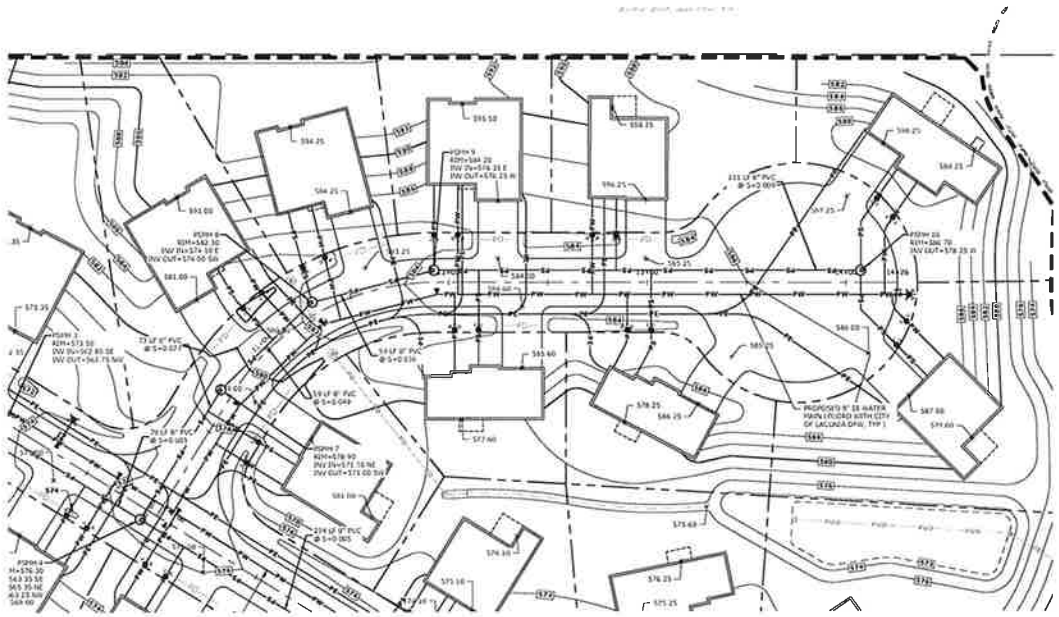
MARK	DATE	DESCRIPTION
1	1/30/2026	TRC Submission

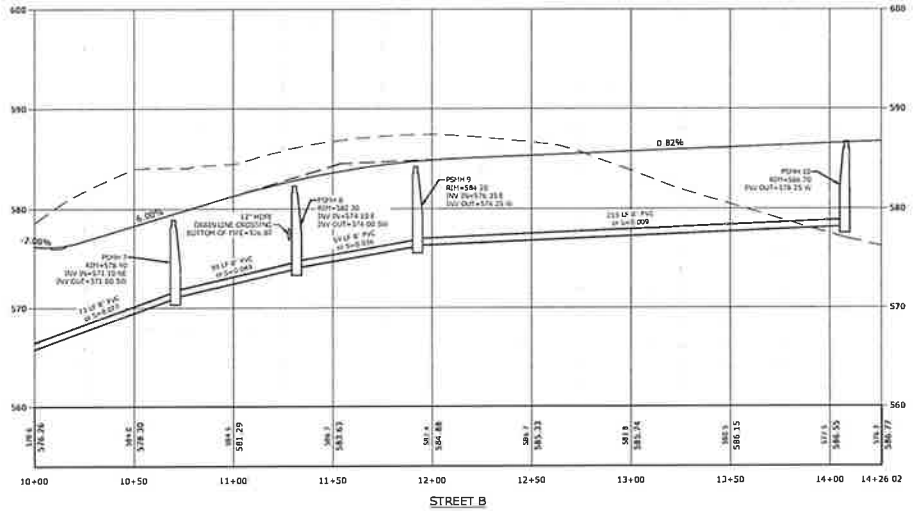
PROJECT NO	83089.0278
DATE	01/30/2026
FILE	83089.0278 C DSGN.dwg
DRAWN BY	M.QUALEY/C.KRZOUL
DESIGNED BY	C.KRZOUL
CHECKED BY	N.HANSEN
APPROVED BY	P.CUMMINGS

ROADWAY PLAN AND PROFILE

SCALE: AS SHOWN

C-501





STREET B

HORIZONTAL SCALE 1" = 30'
VERTICAL SCALE 1" = 6'

Tighe & Bond

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33 WHITE OAKS SUBDIVISION

33 White Oaks Road

Laconia, New Hampshire

MARK	DATE	DESCRIPTION
1	1/30/2026	TAC Submittal

PROJECT NO	65089.0278
DATE	01/30/2026
FILE	65089 0278-C DSGN.dwg
DRAWN BY	M CURLE/C KRZCUIK
DESIGNED BY	C KRZCUIK
CHECKED BY	N HANSEN
APPROVED BY	P CRIMMINS

ROADWAY PLAN AND PROFILE

SCALE: AS SHOWN

C-502

GENERAL PROJECT INFORMATION

PROJECT OWNER	DANIEL A. GREENHALGH 18 TENNEY ROAD PELHAM, NH 03076
PROJECT NAME	33 WHITE OAKS SUBDIVISION
PROJECT ADDRESS	33 WHITE OAKS ROAD LACONIA, NH 03246
PROJECT MAP / LOT	MAP 278 BLOCK 241 LOT 29
PROJECT LATITUDE	43° 34' 8.5"N
PROJECT LONGITUDE	71° 26' 49.4"W

PROJECT DESCRIPTION
THE PROJECT CONSISTS OF THE SUB DIVISION OF A PARCEL INTO 25 TOTAL LOTS, AND THE CONSTRUCTION OF 24 RESIDENTIAL UNITS. THE WORK IS ANTICIPATED TO START IN SUMMER 2026, AND BE COMPLETED BY FALL 2027.

DISTURBED AREA
THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 7.48 ACRES

SOIL CHARACTERISTICS
BASED ON THE WEB SOIL SURVEY ON DECEMBER, 8 2025 THE SOILS ON SITE CONSIST OF CANTERBURY, GILMANTON, HENNIKER, AND CHAMPLAIN SOILS WHICH ARE SOMEWHAT EXCESSIVELY DRAINED SOILS WITH HYDROLOGIC SOIL GROUP RATING(S) OF A, C, AND D

NAME OF RECEIVING WATERS
THE STORMWATER RUNOFF FROM THE SITE WILL BE DISCHARGED VIA CLOSED DRAINAGE SYSTEM TO AN UNNAMED WETLAND AND ULTIMATELY FLOWS TO THE PAUGUS BAY
(STATE WATERBODY ID: NHLAK700020110-02-01)

CONSTRUCTION SEQUENCE PLAN OF MAJOR ACTIVITIES:
1 CONSTRUCT TEMPORARY AND PERMANENT PERIMETER EROSION CONTROLS, SEDIMENT CONTROLS AND DETENTION MEASURES, PRIOR TO ANY EARTH MOVING OPERATIONS THAT MAY AFFECT STORMWATER RUNOFF SUCH AS
- DISPOSAL OF SEDIMENT SPOIL, STUMPS, DEMOLITION DEBRIS, AND OTHER SOLID WASTE
- CONTROL OF DUST
- CONSTRUCTION OF DRIVES, PARKING AREAS, AND OTHER IMPERVIOUS SURFACES
- INSTALLATION OF UTILITIES AND BUILDINGS & BLEACHERS CONSTRUCTION
- CONSTRUCTION DURING LATE WINTER AND EARLY SPRING

1 DEMOLISH ALL SITE FEATURES AS DIRECTED ON THE DRAWINGS. CLEAR AND DISPOSE OF DEBRIS IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS.
2 CUT AND CLEAR TREES ACROSS SITE. (GRUBBING SHALL NOT OCCUR UNTIL AFTER THE INSTALLATION OF PERIMETER CONTROLS.)
3 INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT THE ENTIRETY OF CONSTRUCTION. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS NEEDED IN ACCORDANCE WITH THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND DIRECTION OF THE ENVIRONMENTAL MONITOR
4 NOTE THAT ALL PERMANENT DITCHES, SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS SHALL BE STABILIZED USING THE VEGETATIVE AND NON STRUCTURAL BMPS PRIOR TO DIRECTING RUNOFF TO THEM
5 CONSTRUCT TEMPORARY CULVERTS, DIVERSION CHANNELS, AND/OR BASINS AS REQUIRED. SEDIMENT TRAPS AND/OR BASINS SHALL BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED
6 COMPLETE MASS GRADING AND EARTHWORK IN ORDER TO ESTABLISH SITE SUBGRADE ELEVATIONS, AS WELL AS EXCAVATION NECESSARY TO CONSTRUCT FOUNDATIONS FOR PROPOSED STRUCTURES
7 CONSTRUCT UNDERGROUND DRAINAGE, UTILITY AND LIGHTING INFRASTRUCTURE NECESSARY TO SUPPORT TEMPORARY AND PERMANENT CONDITIONS. ALL TRENCHES TO BE BACKFILLED IN ACCORDANCE WITH PROJECT DRAWINGS AND SPECIFICATIONS
8 ALL AREAS OF UNSTABILIZED SOIL SHALL BE TEMPORARILY STABILIZED AS SOON AS PRACTICABLE, BUT IN ALL CASES WITHIN 45 DAYS OF INITIAL DISTURBANCE, UNLESS A SHORTER TIME IS SPECIFIED BY LOCAL AUTHORITIES, THE CONSTRUCTION SEQUENCE APPROVED AS PART OF THE ISSUED PERMIT, OR AN INDEPENDENT MONITOR. ALL AREAS OF TEMPORARILY STABILIZED SOIL SHALL PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT IN ALL CASES WITHIN 3 DAYS OF FINAL GRADING
9 CONSTRUCT BASE COURSE GRAVELS FOR ALL DRIVES AND PARKING AREAS. ALL DRIVES AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE
10 BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES THAT HAVE NOT BEEN OTHERWISE STABILIZED BY GRAVELS SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE
11 DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, PERIMETER EROSION CONTROL MEASURES, SEDIMENT TRAPS, ETC. MULCH AND SEED AS REQUIRED
12 FINISH PAVING ALL DRIVES, AND PARKING AREAS. CONSTRUCT ALL HARDSCAPE, FIELD SURFACES AND SITE AMENITIES/FEATURES
13 COMPLETE PERMANENT SEEDING AND LANDSCAPING
14 REMOVE TRAPPED SEDIMENTS FROM ALL EROSION CONTROL MEASURES AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES

SPECIAL CONSTRUCTION NOTES:
1 THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE. THE AREA OF DISTURBANCE SHALL ONLY EXCEED FIVE (5) ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED IF AN ENVIRONMENTAL MONITOR IS EMPLOYED DURING CONSTRUCTION IN ACCORDANCE WITH Env-Wq 1505.03 AND AS DESCRIBED UNDER THE "ENVIRONMENTAL MONITORING NOTES" SECTION ON THIS SHEET
2 THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:51-57 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES. ANY INVASIVE OR NOXIOUS PLANT SPECIES ENCOUNTERED DURING CONSTRUCTION SHALL BE CONTROLLED IN ACCORDANCE WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "ENV 1, MANUAL 1 - BEST MANAGEMENT PRACTICES FOR CONTROL OF INVASIVE AND NOXIOUS PLANT SPECIES", CURRENT EDITION
3 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

ENVIRONMENTAL MONITORING NOTES:
1 THIS PROJECT EXCEEDS FIVE (5) ACRES OF DISTURBANCE AND THUS REQUIRES ENVIRONMENTAL MONITORING DURING CONSTRUCTION IN ACCORDANCE WITH ENV-WQ 1505.03 (d). THE ENVIRONMENTAL MONITOR SHALL:
  A INSPECT THE PROJECT SITE AT LEAST ONCE EACH WEEK FROM THE START OF TERRAIN ALTERATION ACTIVITIES UNTIL ALL TERRAIN ALTERATION ACTIVITIES ARE COMPLETED AND THE SITE IS STABILIZED
  B IN ADDITION TO REGULAR WEEKLY INSPECTIONS, INSPECT THE PROJECT SITE DURING ANY RAIN EVENT IN WHICH 0.25 INCH OF PRECIPITATION AND MORE FALLS WITHIN A 24 HOUR PERIOD, PROVIDED THAT IF THE ENVIRONMENTAL MONITOR IS UNABLE TO BE PRESENT DURING SUCH A STORM, THE MONITOR SHALL INSPECT THE SITE WITHIN 24 HOURS OF THE RAIN EVENT
  C SUBMIT A WRITTEN REPORT, STAMPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST, TO THE DEPARTMENT WITHIN 24 HOURS OF EACH INSPECTION THAT
    a DESCRIBES THE PROGRESS OF THE PROJECT, INCLUDING WHETHER ALL CONDITIONS OF THE PERMIT ARE BEING MET AND, IF NOT, WHICH REQUIREMENTS ARE NOT BEING MET,
    b IF ANY REQUIREMENTS ARE NOT BEING MET, AN EXPLANATION OF THE CORRECTIVE ACTION(S) THAT WILL BE OR ARE BEING TAKEN TO BRING THE PROJECT INTO COMPLIANCE WITH APPLICABLE REQUIREMENTS AND THE DEADLINE BY WHICH SUCH ACTIONS WILL BE COMPLETED, AND
    c INCLUDES PHOTOGRAPHS OF THE SITE THAT ARE REPRESENTATIVE OF THE PROJECT AND,
  D RETAIN A COPY OF THE REPORT PREPARED PURSUANT TO (C), ABOVE, ON SITE FOR REVIEW DURING SITE INSPECTIONS BY FEDERAL, STATE, AND LOCAL OFFICIALS

EROSION CONTROL NOTES:
1 ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL", LATEST EDITION
2 CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL EROSION AND SEDIMENT CONTROL MEASURES FOR APPROVAL
3 AS THE FIRST ORDER OF WORK, PRIOR TO ANY EARTH DISTURBANCE, THE CONTRACTOR SHALL INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BUT NOT LIMITED TO, INLET PROTECTION BARRIERS, SILT SOCKS, SILT FENCES, MULCH BERMS, AND STABILIZED CONSTRUCTION EXITS AS SHOWN ON THE DRAWINGS, AND AS REQUIRED BY ALL STATE AND LOCAL PERMITS AND APPROVALS
4 INLET PROTECTION BARRIERS SHALL BE INSTALLED AT ALL EXISTING AND PROPOSED CATCH BASINS/CURB INLETS AND YARD DRAINS WITHIN THE LIMITS OF WORK AS WELL AS ANY CATCH BASINS/CURB INLETS AND YARD DRAINS THAT RECEIVE RUNOFF FROM ANY CONSTRUCTION ACTIVITIES. THESE MEASURES SHALL BE FULLY MAINTAINED FOR THE DURATION OF THE PROJECT
5 PERIMETER CONTROLS INCLUDING SILT FENCES, MULCH BERM, SILT SOCK, AND/OR HAY BALE BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL ALL NON PAVED AREAS HAVE BEEN STABILIZED
6 CONTRACTOR SHALL INSTALL EROSION CONTROL BLANKETS ON ALL STEEP SLOPE AREA (3:1 OR GREATER)
7 DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL MEASURES INCLUDE, BUT NOT LIMITED TO, MOISTEN EXPOSED SOIL SURFACES PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST, MECHANICAL SWEEPERS ON PAVED SURFACES, AND COVERING SURFACES WITH CRUSHED STONE OR COARSE GRAVEL
8 THE CONTRACTOR SHALL HAVE ALL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, INLET PROTECTION BARRIERS, PERIMETER SEDIMENT CONTROLS, AND STEEP SLOPE EROSION CONTROL BLANKETS INSPECTED BY A QUALIFIED PERSON AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.25 INCHES OR GREATER. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ADJUSTED, REPAIRED, MODIFIED, OR ADDITIONAL MEASURES INSTALLED AS NECESSARY TO ADDRESS EVOLVING CONDITIONS DURING CONSTRUCTION
9 SEDIMENT CONTROL FILTER MEASURES SHALL BE REPLACED WHEN SEDIMENT REACHES 1/3 THE HEIGHT OF THE FILTER
10 THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION
11 ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED AND FERTILIZER

EROSION CONTROL OBSERVATIONS AND MAINTENANCE PRACTICES
1 THIS PROJECT EXCEEDS ONE (1) ACRE OF DISTURBANCE AND THUS REQUIRES A STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP SHALL BE PREPARED BY A QUALIFIED PERSON. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SWPPP AND KEEP AN UPDATED COPY OF THE SWPPP ONSITE AT ALL TIMES
2 THE FOLLOWING REPRESENTS THE GENERAL OBSERVATION AND REPORTING PRACTICES THAT SHALL BE FOLLOWED AS PART OF A SWPPP
  A OBSERVATIONS OF THE PROJECT FOR COMPLIANCE WITH THE SWPPP SHALL BE MADE BY A QUALIFIED PERSON AT LEAST ONCE A WEEK OR WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.25 INCHES OR GREATER,
  B AN OBSERVATION REPORT SHALL BE MADE AFTER EACH OBSERVATION AND DISTRIBUTED TO THE ENGINEER, THE OWNER, AND THE CONTRACTOR;
  C A REPRESENTATIVE OF THE SITE CONTRACTOR, SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR ACTIVITIES
  D IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT

STABILIZATION:
1 AN AREA SHALL BE CONSIDERED STABLE WHEN ONE OF THE FOLLOWING HAS OCCURRED
  A BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED,
    a IN AREAS TO BE PAVED. "STABLE" MEANS THAT BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF NHDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, ITEM 304.2 HAVE BEEN INSTALLED
  B A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED,
  C A MINIMUM OF 3" OF NON EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED,
  D EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED
2 ALL CUT AND FILL SLOPES SHALL BE SEEDED AND LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE
3 ALL ROADS, DRIVES AND PARKING AREA SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE
4 WINTER STABILIZATION PRACTICES
  A ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85% 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,
  B 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,
  C AFTER OCTOBER 15, INCOMPLETE ROAD, DRIVES, 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, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT,
  D FOR OVER WINTER PROTECTION, A DOUBLE ROW OF SEDIMENT BARRIERS (SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX, ETC.) SHALL BE PLACED WITHIN 75 FEET OF A PROTECTED NATURAL RESOURCE AREA
3 STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. STABILIZATION MEASURES TO BE USED INCLUDE
  A TEMPORARY SEEDING,
  B MULCHING
4 ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE
5 WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN THESE AREAS, SILT FENCES, MULCH BERMS, HAY BALE BARRIERS AND ANY EARTH/DIKES SHALL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED
6 DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT FENCES, MULCH BERMS, HAY BALE BARRIERS, OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY OCTOBER 15

DUST CONTROL:
1 THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE CONSTRUCTION PERIOD
2 DUST CONTROL METHODS SHALL INCLUDE, BUT BE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING
3 DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ABUTTING AREAS

STOCKPILES:
1 LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CATCH BASINS, SWALES, AND CULVERTS
2 ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE ONSET OF PRECIPITATION
3 PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY
4 PROTECT ALL STOCKPILES FROM STORMWATER RUN OFF USING TEMPORARY EROSION CONTROL MEASURES SUCH AS BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES

OFF SITE VEHICLE TRACKING:
1 THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION EXIT(S) PRIOR TO ANY EXCAVATION ACTIVITIES

VEGETATION:
1 TEMPORARY GRASS COVER
  A SEEDBED PREPARATION
    a APPLY FERTILIZER AT THE RATE OF 600 POUNDS PER ACRE OF 10-10-10. APPLY LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF THREE (3) TONS PER ACRE,
  B SEEDING
    a UTILIZE ANNUAL RYE GRASS AT A RATE OF 40 LBS/ACRE,
    b WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF TWO (2) INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED,
    c APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). HYDROSEEDINGS, WHICH INCLUDE MULCH, MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING.
  C MAINTENANCE
    a TEMPORARY SEEDING SHALL BE PERIODICALLY INSPECTED. AT A MINIMUM, 95% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES USED IN THE INTERIM (MULCH, FILTER BARRIERS, CHECK DAMS, ETC.)
2 PERMANENT MEASURES AND PLANTINGS
  A LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF THREE (3) TONS PER ACRE IN ORDER TO PROVIDE A PH VALUE OF 5.5 TO 6.5,
  B FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 800 POUNDS PER ACRE OF 10-20-20 FERTILIZER,
  C SOIL CONDITIONERS AND FERTILIZER SHALL BE APPLIED AT THE RECOMMENDED RATES AND SHALL BE THOROUGHLY WORKED INTO THE LOAM. LOAM SHALL BE RAKED UNTIL THE SURFACE IS FINELY PULVERIZED, SMOOTH AND EVEN, AND THEN COMPACTED TO AN EVEN SURFACE CONFORMING TO THE REQUIRED LINES AND GRADES WITH APPROVED ROLLERS WEIGHING BETWEEN 4 1/2 POUNDS AND 5 1/2 POUNDS PER INCH OF WIDTH,
  D SEED SHALL BE SOWN AT THE RATE SHOWN BELOW. SOWING SHALL BE DONE ON A CALM, DRY DAY, PREFERABLY BY MACHINE, BUT IF BY HAND, ONLY BY EXPERIENCED WORKMEN IMMEDIATELY BEFORE SEEDING. THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH,
  E HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AS INDICATED ABOVE;
  F THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED WITH GRASS SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED,
  G THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED,
  H A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE APPLIED AT THE INDICATED RATE

SEED MIX	APPLICATION RATE
CREEPING RED FESCUE	20 LBS/ACRE
TALL FESCUE	20 LBS/ACRE
REDTOP	2 LBS/ACRE

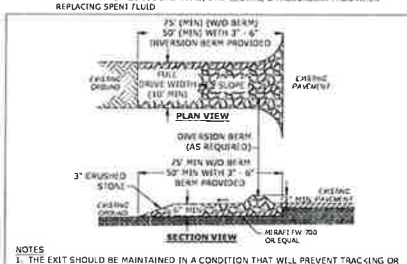
IN NO CASE SHALL THE WEED CONTENT EXCEED ONE (1) PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH STATE AND FEDERAL SEED LAWS. SEEDING SHALL BE DONE NO LATER THAN SEPTEMBER 15. IN NO CASE SHALL SEEDING TAKE PLACE OVER SNOW
3 DORMANT SEEDING (SEPTEMBER 15 TO FIRST SNOWFALL)
  A FOLLOW PERMANENT MEASURES SLOPE, LIME, FERTILIZER AND GRADING REQUIREMENTS. APPLY SEED MIXTURE AT TWICE THE INDICATED RATE. APPLY MULCH AS INDICATED FOR PERMANENT MEASURES

CONCRETE WASHOUT AREA:
1 THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FACILITY,
2 IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER,
3 CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS,
4 INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED

ALLOWABLE NON-STORMWATER DISCHARGES:
1 THE FOLLOWING ARE THE ONLY STORMWATER DISCHARGES ALLOWED. ALL OTHER NON STORMWATER DISCHARGES ARE PROHIBITED ON SITE
  A FIRE FIGHTING ACTIVITIES,
  B FIRE HYDRANT FLUSHING,
  C WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED,
  D WATER USED TO CONTROL DUST,
  E POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING,
  F ROUTINE EXTERNAL BUILDING WASH DOWN WHERE DETERGENTS ARE NOT USED,
  G PAVEMENT WASH WATERS WHERE DETERGENTS ARE NOT USED,
  H UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION,
  I UNCONTAMINATED GROUND WATER OR SPRING WATER,
  J FOUNDATION OR FOOTING DRAINS WHICH ARE UNCONTAMINATED,
  K UNCONTAMINATED EXCAVATION DEWATERING,
  L LANDSCAPE IRRIGATION

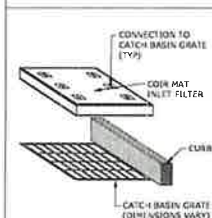
WASTE DISPOSAL:
1 WASTE MATERIAL
  A ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER,
  B NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE,
  C ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT
2 HAZARDOUS WASTE
  A ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER,
  B SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT
3 SANITARY WASTE
  A ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR

SPILL PREVENTION:
1 CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY ALL LOCAL, STATE AND FEDERAL REGULATIONS. AT A MINIMUM, CONTRACTOR SHALL FOLLOW THE BEST MANAGEMENT SPILL PREVENTION PRACTICES OUTLINED BELOW
2 THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF
  A GOOD HOUSEKEEPING - THE FOLLOWING GOOD HOUSEKEEPING PRACTICE SHALL BE FOLLOWED ON SITE DURING CONSTRUCTION
    a ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB SHALL BE STORED ON SITE,
    b ALL REGULATED MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE, ON AN IMPERVIOUS SURFACE,
    c MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED,
    d THE SITE SUPERINTENDENT SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS,
    e SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER;
    f WHENEVER POSSIBLE ALL OF A PRODUCT SHALL BE USED UP BEFORE DISPOSING OF THE CONTAINER
    g THE TRAINING OF ON SITE EMPLOYEES AND THE ON-SITE POSTING OF RELEASE RESPONSE INFORMATION DESCRIBING WHAT TO DO IN THE EVENT OF A SPILL OF REGULATED SUBSTANCES
  B HAZARDOUS PRODUCTS - THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS
    a PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE,
    b ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION,
    c SURPLUS PRODUCT THAT MUST BE DISPOSED OF SHALL BE DISCARDED ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL
  C PRODUCT SPECIFIC PRACTICES - THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ON SITE:
    a PETROLEUM PRODUCTS
      - ALL ON SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE LEAKAGE;
      - PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS
      - SECURE FUEL STORAGE AREAS AGAINST UNAUTHORIZED ENTRY,
      - INSPECT FUEL STORAGE AREAS WEEKLY,
      - WHENEVER POSSIBLE, KEEP REGULATED CONTAINERS THAT ARE STORED OUTSIDE MORE THAN 50 FEET FROM SURFACE WATER AND STORM DRAINS, 75 FEET FROM PRIVATE WELLS, AND 400 FEET FROM PUBLIC WELLS,
      - COVER REGULATED CONTAINERS IN OUTSIDE STORAGE AREAS,
      - SECONDARY CONTAINMENT IS REQUIRED FOR CONTAINERS CONTAINING REGULATED SUBSTANCES STORED OUTSIDE, EXCEPT FOR ON PREMISE USE HEATING FUEL TANKS, OR ABOVEGROUND OR UNDERGROUND STORAGE TANKS OTHERWISE REGULATED
      - THE FUEL HANDLING REQUIREMENTS SHALL INCLUDE:
        (1) EXCEPT WHEN IN USE, KEEP CONTAINERS CONTAINING REGULATED SUBSTANCES CLOSED AND SEALED,
        (2) PLACE DRIP PANS UNDER SPIGOTS, VALVES, AND PUMPS,
        (3) HAVE SPILL CONTROL AND CONTAINMENT EQUIPMENT READILY AVAILABLE IN ALL WORK AREAS,
        (4) USE FUNNELS AND DRIP PANS WHEN TRANSFERRING REGULATED SUBSTANCES,
        (5) PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS SURFACE
      - FUELING AND MAINTENANCE OF EXCAVATION, EARTHMOVING AND OTHER CONSTRUCTION RELATED EQUIPMENT SHALL COMPLY WITH THE REGULATIONS OF THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES. THESE REQUIREMENTS ARE SUMMARIZED IN WD-DWGB 22-6 BEST MANAGEMENT PRACTICES FOR FUELING AND MAINTENANCE OF EXCAVATION AND EARTHMOVING EQUIPMENT, OR ITS SUCCESSOR DOCUMENT
    b FERTILIZERS
      - FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS,
      - ONCE APPLIED FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER,
      - STORAGE SHALL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS
      - PAINTS
      - ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE
      - EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM;
      - EXCESS PAINT SHALL BE DISPOSED OF PROPERLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS
  D SPILL CONTROL PRACTICES - IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTION, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP
    a MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES,
    b MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS SHALL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST AND PLASTIC OR METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE,
    c ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY,
    d THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE,
    e SPILLS OF TOXIC OR HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE LOCAL, STATE OR FEDERAL AGENCIES AS REQUIRED,
    f THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY TO DAY SITE OPERATIONS SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR
  E VEHICLE FUELING AND MAINTENANCE PRACTICE
    a CONTRACTOR SHALL MAKE AN EFFORT TO PERFORM EQUIPMENT/VEHICLE FUELING AND MAINTENANCE AT AN OFF SITE FACILITY,
    b CONTRACTOR SHALL PROVIDE AN ON SITE FUELING AND MAINTENANCE AREA THAT IS CLEAN AND DRY,
    c IF POSSIBLE THE CONTRACTOR SHALL KEEP AREA COVERED,
    d CONTRACTOR SHALL KEEP A SPILL KIT AT THE FUELING AND MAINTENANCE AREA,
    e CONTRACTOR SHALL REGULARLY INSPECT VEHICLES FOR LEAKS AND DAMAGE,
    f CONTRACTOR SHALL USE DRIP PANS, DRIP CLOTHS, OR ABSORBENT PADS WHEN REPLACING SPENT FLUID



NOTES
1 THE EXIT SHOULD BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY
2 WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHOULD BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL, RE GRADED ON SITE, AND STABILIZED PRIOR TO RECONSTRUCTING THE EXIT.
3 THE CONTRACTOR SHOULD SWEEP THE PAVEMENT AT EXITS WHENEVER SOIL MATERIALS ARE TRACKED ONTO THE ADJACENT PAVEMENT OR TRAVELED WAY.
4 WHEN WHEEL WASHING IS REQUIRED, IT SHOULD BE CONDUCTED ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT-TRAPPING DEVICE
5 ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS TO THE GREATEST EXTENT PRACTICAL
6 NATURAL DRAINAGE THAT CROSSES THE LOCATION OF THE STONE PAD SHOULD BE INTERCEPTED AND PIPED BENEATH THE PAD, AS NECESSARY, WITH SUITABLE OUTLET PROTECTION

STABILIZED CONSTRUCTION EXIT
NO SCALE



NOTES
1 INLET PROTECTION BARRIER COIR MAT INLET FILTER SHALL BE STORM WATER INLET FILTER BY BLOCKSOM & CO. OR EQUAL
2 INSTALL AND MAINTAIN INLET PROTECTION IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS

INLET PROTECTION BARRIER
NO SCALE

Tighe&Bond

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33 WHITE OAKS SUBDIVISION

33 White Oaks Road

Laconia, New Hampshire

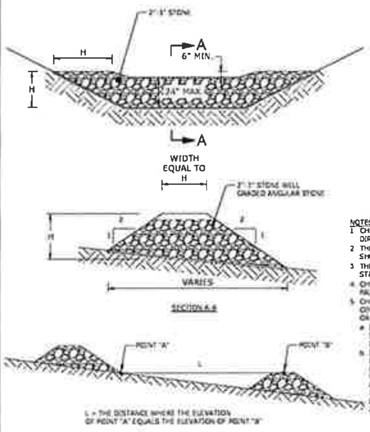
MARK	DATE	DESCRIPTION
1	[illegible]	[illegible]

PROJECT NO	[illegible]
DATE	[illegible]
FILE	[illegible]
DRAWN BY	[illegible]
DESIGNED BY	[illegible]
CHECKED BY	[illegible]
APPROVED BY	[illegible]

EROSION CONTROL NOTES AND LEGEND

SCALE: AS SHOWN

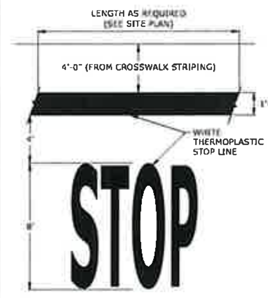
C-601



BEAM STONE SIZE	
SIEVE DESIGNATION (US CUSTOMARY)	PERCENT BY WEIGHT PASSING SQUARE MESH SIEVES
12 IN	100
6 IN	84-100
3 IN	68-83
1 IN	42-55
NO. 4	8-12

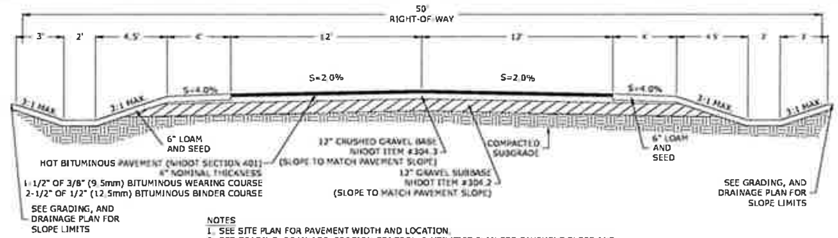
NOTES
1. CHECK DAMS SHOULD BE INSTALLED BEFORE RUNOFF IS DIRECTED TO THE SWALE OR DRAINAGE DITCH
2. THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE DAM SHOULD BE LESS THAN ONE ACRE
3. THE CHECK DAM SHOULD NOT BE USED IN A FLOWING STREAM
4. CHECK DAMS SHOWN ON THE DRAWINGS SHALL BE LEFT IN PLACE PERMANENTLY
5. CHECK DAMS INSTALLED AS PART OF TEMPORARY EROSION CONTROL MEASURE SHALL BE REMOVED ONCE THE SWALE OR DITCH HAS BEEN STABILIZED
   a. IN TEMPORARY DITCHES AND SWALES, CHECK DAMS SHOULD BE REMOVED AND THE DITCH FILLED IN WHEN IT IS NO LONGER NEEDED
   b. IN PERMANENT STRUCTURES, CHECK DAMS SHOULD BE REMOVED WHEN PERMANENT LINING HAS BEEN ESTABLISHED. IF THE PERMANENT LINING IS VEGETATION, THEN THE CHECK DAM SHOULD BE RETAINED UNTIL THE GRASS HAS MATURED TO PROTECT THE DITCH OR SWALE. THE AREA BENEATH THE CHECK DAM MUST BE SEEDED AND MULCHED IMMEDIATELY AFTER REMOVAL.

STONE CHECK DAM
NO SCALE



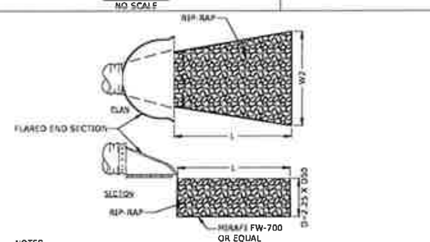
NOTES
1. PAVEMENT MARKINGS TO BE INSTALLED IN LOCATIONS AS SHOWN ON SITE PLAN.
2. STRIPING SHALL BE CONSTRUCTED USING WHITE THERMO PLASTIC, REFLECTERIZED PAVEMENT MARKING MATERIAL MEETING THE REQUIREMENTS OF ASTM D 4505

STOP BAR
NO SCALE



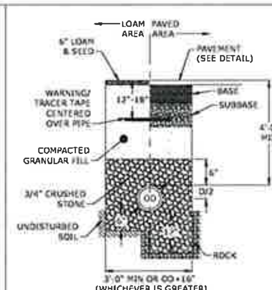
NOTES
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE, EROSION CONTROL, & UTILITIES PLAN FOR PAVEMENT SLOPE AND CROSS SLOPE.
3. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.
4. FINAL PAVEMENT SECTION DESIGN SHALL BE APPROVED BY THE PROJECTS GEOTECHNICAL ENGINEER.
5. THE PAVEMENT SECTION SHOULD BE THICKENED AT THE ENTRANCE AND EXIT WAY AREAS OVER A 5' SECTION TO MATCH THE EXISTING ROADWAY PAVEMENT DEPTHS.
6. THE PAVEMENT DEPTH, BOTH WEARING AND BINDER COURSE, FOR AREAS TO BE RECLAIMED AND RE-PAVED SHALL MATCH EXISTING DEPTH.
7. IF THE GEOTECHNICAL ENGINEERS RECOMMENDATIONS ALLOW THE CONTRACTOR SHALL HAVE THE OPTION OF RECLAIMING THE EXISTING PAVEMENT, REMOVING MATERIAL, THEN REUSING THE RECLAIMED MATERIAL AS A PAVEMENT BASE/SUBBASE.

TYPICAL STANDARD DUTY PAVEMENT AND SWALE SECTION
NO SCALE



NOTES
1. STONE SIZE AND MAT DIMENSIONS DETAILED ON PLANS
2. STONE SHALL CONSIST OF SUB ANGULAR FIELD STONE OR ROUGH UNHEWN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. FLAT OR ROUND ROCKS ARE NOT ACCEPTABLE. THE STONE SHALL BE HARD AND OF SUCH QUALITY THAT IT WILL NOT DISINTEGRATE ON EXPOSURE TO WATER OR WEATHERING, BE CHEMICALLY STABLE AND IT SHALL BE SUITABLE IN ALL OTHER RESPECTS FOR THE PURPOSE INTENDED. THE BULK SPECIFIC GRAVITY (SATURATED SURFACE-DRY BASIS) OF THE INDIVIDUAL STONES SHALL BE AT LEAST 2.5.
3. THE STONE SHALL BE COMPOSED OF A WELL-GRADED MIXTURE DOWN TO THE ONE-INCH SIZE PARTICLE SUCH THAT 50 PERCENT OF THE MIXTURE BY WEIGHT SHALL BE LARGER THAN THE D50 SIZE SPECIFIED. A WELL-GRADED MIXTURE IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF THE LARGER STONE SIZE BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE PROGRESSIVELY SMALLER VOIDS BETWEEN THE STONES. THE DIAMETER OF THE LARGEST STONE SIZE IN SUCH A MIXTURE SHALL BE 1.5 TIMES THE D50 SIZE.

RIP-RAP APRON DETAIL
NO SCALE

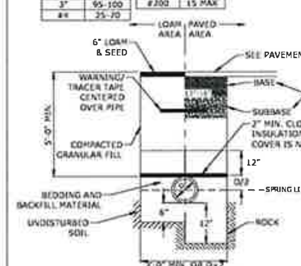


NOTES
1. 3/4" CRUSHED STONE BEDDING AND BACKFILL MATERIAL FOR FULL WIDTH OF THE TRENCH FROM MINIMUM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO MINIMUM OF 6" OVER THE TOP OF THE PIPE.
2. STORM DRAINS SHALL BE INSTALLED PER THE CITY OF LACONIA DEPARTMENT OF PUBLIC WORKS STANDARDS. COORDINATE ALL INSTALLATIONS WITH THE CITY OF LACONIA

STORM DRAIN TRENCH
NO SCALE

GRANULAR FILL (GRAVEL)	
SIEVE SIZE	% PASSING
3"	95-100
#4	25-70

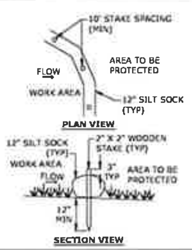
SAND BLANKET	
SIEVE SIZE	% PASSING
1/2"	100
#200	15 MAX



AASHTO #67 STONE (#4 to 3/4")	
SIEVE SIZE	% PASSING
1"	100
3/4"	90-100
3/8"	20-55
#4	0-10
#8	0-5

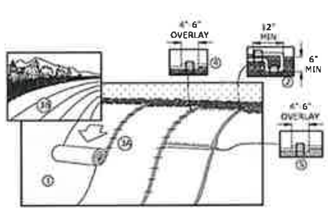
NOTES
1. SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE.
2. ALL UTILITIES SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS. COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES AND THE CITY OF LACONIA.

WATER TRENCH
NO SCALE



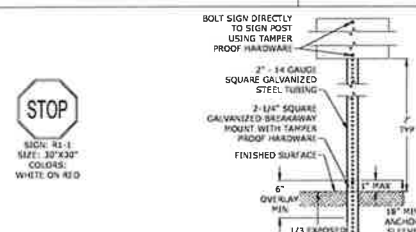
NOTES
1. SILT SOCK SHALL BE SILT SOXX BY FILTREXX OR EQUAL.
2. SILT SOCK SHALL BE FILLED WITH A CERTIFIED COMPOST FILTERMEDIA BY FILTREXX OR EQUAL.
3. WHERE TWO SILT SOCKS ARE JOINED, A MINIMUM OF 2 FEET OF OVERLAP SHALL BE MAINTAINED.
4. CONTRACTOR SHALL INSTALL SILT SOCK IN "J-HOOK" OR "SMILE" CONFIGURATION TO LIMIT CONCENTRATION OF STORMWATER RUNOFF AT A SINGLE DISCHARGE POINT AS PER RECOMMENDATIONS IN THE "NEW HAMPSHIRE STORMWATER MANUAL VOLUME 3: EROSION AND SEDIMENT CONTROLS DURING CONSTRUCT".
5. SILT SOCKS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

SILT SOCK
NO SCALE



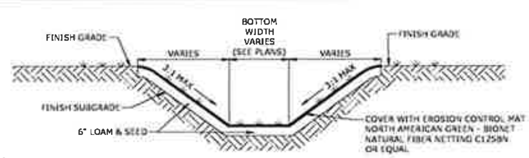
NOTES
1. EROSION CONTROL BLANKETS SHALL BE INSTALLED ON ALL STEEP SLOPE AREA (3:1 OR GREATER)
2. PRIOR TO INSTALLATION SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS. BLANKETS SHALL HAVE GOOD SOIL CONTACT.
3. PERMANENT SEEDING SHALL BE PLACED PRIOR TO INSTALLING BLANKETS.
4. BLANKETS SHALL BE LOOSELY LAID AND STAKED/STAPLED TO MAINTAIN DIRECT CONTACT WITH THE SOIL. BLANKETS SHALL NOT BE STRETCHED.
5. EROSION CONTROL BLANKET SHALL BE 'EAST COAST EROSION CONTROL ECC-2B'™ OR EQUAL AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS.

EROSION CONTROL BLANKET
NO SCALE



NOTES
1. SIGNS SHALL MEET THE FOLLOWING REQUIREMENT:
   LENGTH: AS REQUIRED
   WEIGHT PER LINEAR FOOT: 2.16 LBS (MIN) (FOR 2" SQUARE POST)
   HOLES: 7/16" DIA, PRE PUNCHED, 1" OC FULL LENGTH
   STEEL: GRADE 50 (ASTM A1011) GALVANIZED (ASTM A 653)
   FINISH: SITE SIGNS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M111
   SIGNS WITHIN ROW SHALL BE PAINTED WITH TWO COATS OF AN APPROVED MEDIUM GREEN BAKED ON OR DRIED, PAINT OF WEATHER RESISTANT QUALITY, IN ACCORDANCE WITH ALL LOCAL AND FENDER REQUIREMENTS. ALL FABRICATION SHALL BE COMPLETE BEFORE PAINTING.
2. IF SIGN BASE WITHIN LEDGE, LEDGE SHALL BE DRILLED TO ACCEPT POST TO A MINIMUM DEPTH OF 2' AND GROUTED IN PLACE.
3. ALL SIGNS TO BE CONSTRUCTED PER THE FHWA STANDARD HIGHWAY SIGNS MANUAL, CURRENT EDITION AND INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.
4. ALL SIGNS SHALL MEET THE REQUIREMENTS OF SECTION 615-SIGNS OF THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.

TYPICAL SIGN POST & LEGEND
NO SCALE



NOTES
1. THE FOUNDATION AREA OF THE WATERWAY SHALL BE CLEARED AND GRUBBED OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL. MATERIALS REMOVED SHALL BE DISPOSED OF SO THEY WILL NOT INTERFERE WITH THE CONSTRUCTION OR PROPER FUNCTIONING OF THE WATERWAY.
2. THE WATERWAY SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS-SECTION AS REQUIRED TO MEET THE DESIGN INTENT. THE WATERWAY SHALL BE FREE OF IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
3. EARTH FILLS REQUIRED TO MEET SUBGRADE REQUIREMENTS BECAUSE OF OVER EXCAVATION OR TOPOGRAPHY SHALL BE COMPACTED TO THE SAME DENSITY AS THE SURROUNDING SOIL TO PREVENT UNEQUAL SETTLEMENT THAT COULD CAUSE DAMAGE TO THE COMPLETED WATERWAY. EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE WATERWAY.
4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER AS TO MINIMIZE EROSION AND AIR AND WATER POLLUTION. ALL APPROPRIATE STATE AND LOCAL LAWS AND REGULATIONS SHALL BE COMPLIED WITH FOR INSTALLATION.
5. VEGETATION SHALL BE ESTABLISHED IN THE SWALE PRIOR TO ALLOWING STORMWATER RUNOFF TO FLOW THROUGH THE SWALE.
6. MAINTENANCE OF THE VEGETATION IN THE GRASSED WATERWAY IS EXTREMELY IMPORTANT IN ORDER TO PREVENT RILLING, EROSION, AND FAILURE OF THE WATERWAY. MOWING SHOULD BE DONE FREQUENTLY ENOUGH TO CONTROL ENCROACHMENT OF WEEDS AND WOODY VEGETATION AND TO KEEP THE GRASSES IN A VIGOROUS CONDITION. THE VEGETATION SHOULD NOT BE MOWED TOO CLOSELY SO AS TO REDUCE THE EROSION RESISTANCE IN THE WATERWAY.
7. THE WATERWAY SHOULD BE INSPECTED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE THE CONDITION OF THE WATERWAY. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND REVEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.
8. PERIODIC APPLICATIONS OF LIME AND FERTILIZER MAY BE NEEDED TO MAINTAIN VIGOROUS GROWTH.

GRASS LINED SWALE
NO SCALE

Tighe & Bond
177 Corporate Drive
Portsmouth, NH 03801
1-603-433-8818

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33 WHITE OAKS SUBDIVISION

33 White Oaks Road

Laconia, New Hampshire

MARK	DATE	DESCRIPTION
1	1/30/2026	TRC Submission

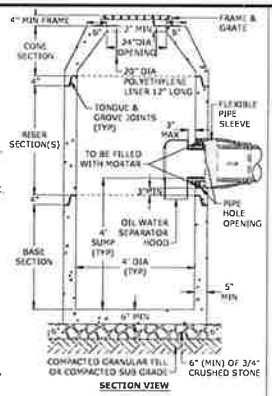
PROJECT NO:	R5089-0278
DATE:	01/30/2026
FILE:	R5089-0278-C-DTLS.dwg
DRAWN BY:	M CURLEY/C KRZCIUK
DESIGNED BY:	C KRZCIUK
CHECKED BY:	N HANSEN
APPROVED BY:	P CRIMMINS

DETAILS SHEET

SCALE: AS SHOWN

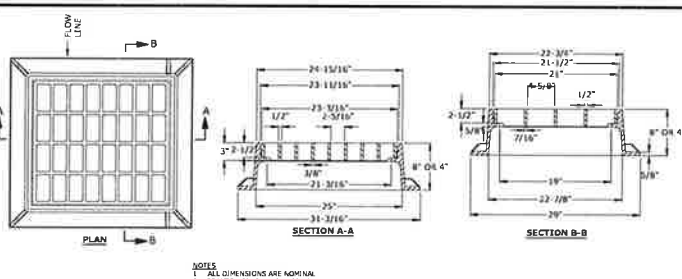
C-602

NOTES
1. ALL PRECAST SECTIONS SHALL BE 4,000 PSI (MIN) CONCRETE DESIGNED FOR AASHTO H-20 LOADING CONFORMING TO ASTM C-478 AND AASHTO M-199.
2. STEEL REINFORCEMENT SHALL BE 0.12 IN²/LF AND 0.12 IN² (BOTH WAYS) BASE BOTTOM CONFORMING TO ASTM A-615 AND ASTM A-185.
3. FRAME AND GRATES SHALL BE AS FOLLOWS:
   • PER THE CITY OF LACONIA, DEPARTMENT OF PUBLIC WORKS STANDARDS, FOR ALL CATCH BASINS WITHIN PUBLIC RIGHT OF WAYS OR EASEMENTS.
   • NHDOT TYPE "B" FRAME AND GRATE (NHDOT ITEM No. 604.72) (OR EQUAL), FOR ALL CATCH BASINS WITHIN THE PROJECT SITE.
4. ADJUSTING FRAMES AND GRATES TO FINISHED GRADE SHALL BE DONE USING PRECAST REINFORCED CONCRETE GRADE RINGS OR CLAY BRICKS
5. CONE SECTIONS MAY BE EITHER CONCENTRIC (TYP) OR ECCENTRIC. FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CONE SECTION OF THE STRUCTURE.
6. HORIZONTAL SECTION JOINTS SHALL BE TONGUE AND GROOVE JOINTS SEALED WITH ONE (1) STRIP OF FLEXIBLE BUTYL RUBBER JOINT SEALANT CONFORMING TO ASTM C-990.
   • JOINT SEALANT SHALL BE CONSEAL CS-102 (OR EQUAL).
7. PIPE TO CATCH BASIN CONNECTION JOINTS SHALL BE FLEXIBLE SLEEVE CONFORMING TO ASTM C-923.
   • FLEXIBLE SLEEVES SHALL BE KOR-N-SEAL (OR EQUAL).
8. PIPE HOLE OPENING(S) WITHIN PRECAST SECTIONS VARIES DEPENDING ON PIPE SIZE (MAX 24" DIA PIPE FOR 4' DIA STRUCTURE). PIPE OPENING SIZES SHALL BE COORDINATED WITH PRECASTER AND FLEXIBLE PIPE SLEEVE MANUFACTURERS.
9. CATCH BASINS WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF HORIZONTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES WITHIN 3" OF HORIZONTAL SECTION JOINTS.
10. OIL WATER SEPARATOR HOODS SHALL BE GROUND WATER RESCUE, INC. "THE ELIMINATOR" (OR EQUAL).



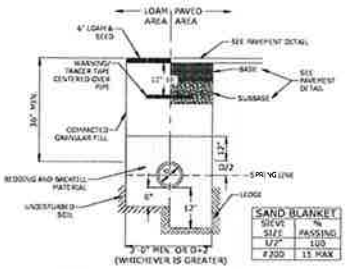
SECTION VIEW

TYPICAL DEEP SUMP CATCH BASIN
NO SCALE



NOTES
1. ALL DIMENSIONS ARE NOMINAL
2. FRAMES USING NARROWER DIMENSIONS FOR THICKNESS ARE ALLOWED PROVIDED
   2.a. THE FRAMES MEET OR EXCEED THE SPECIFIED LOAD RATING
   2.b. THE INTERIOR PERIMETER (SEAT AREA) DIMENSIONS OF THE FRAMES REMAIN THE SAME TO ALLOW CONTINUED USE OF EXISTING GRATES/COVERS AS THE EXISTING FRAMES ALLOW, WITHOUT SHIMS OR OTHER MODIFICATIONS OR ACCOMMODATIONS
   2.c. ALL OTHER PERTINENT REQUIREMENTS OF THE SPECIFICATIONS ARE MET
3. FRAME AVAILABLE IN 4" OR 8" HEIGHTS
4. FREE OPEN AREA = 2.35 SQ. FT.
5. USE 3 FLANGE FRAME IF INSTALLED ADJACENT TO GRANITE CURB

CATCH BASIN FRAME AND GRATE (NHDOT - TYPE "B" GRATE
NO SCALE



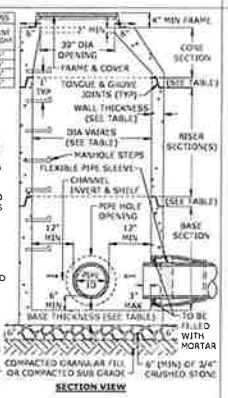
SAND BLANKET	
SIEVE SIZE	% PASSING
1/2"	100
#200	15 MAX

NOTES
1. SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK, UP TO 12" ABOVE TOP OF PIPE
2. GAS LINE SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS. COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES AND THE CITY OF LACONIA

GAS TRENCH
NO SCALE

NOTES
1. ALL PRECAST SECTIONS SHALL BE 4,000 PSI (MIN) CONCRETE DESIGNED FOR AASHTO H-20 LOADING CONFORMING TO ASTM C-478 AND AMS 410 M-199.
2. STEEL REINFORCEMENT SHALL BE 0.12 IN²/LF AND 0.12 IN² (BOTH WAYS) BASE BOTTOM CONFORMING TO ASTM A 615 AND ASTM A-185.
3. FRAMES AND COVERS SHALL BE AS FOLLOWS:
   • PER THE CITY OF LACONIA, DEPARTMENT OF PUBLIC WORKS STANDARDS, FOR ALL MANHOLES WITHIN PUBLIC RIGHT OF WAYS OR EASEMENTS.
   • CAST IRON, DESIGNED FOR AASHTO H-20 LOADING, HAVING A 30" CLEAR OPENING, WITH THE WORD "DRAIN" IN A 3" LETTERING CAST INTO THE CENTER OF EACH COVER, FOR ALL MANHOLES WITHIN THE PROJECT SITE.
4. ADJUSTING FRAMES AND COVERS TO FINISHED GRADE SHALL BE DONE USING PRECAST REINFORCED CONCRETE GRADE RINGS OR CLAY BRICKS.
5. CONE SECTIONS MAY BE EITHER CONCENTRIC OR ECCENTRIC (TYP). FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CONE SECTION OF THE STRUCTURE.
6. HORIZONTAL SECTION JOINTS SHALL BE TONGUE AND GROOVE JOINTS SEALED WITH ONE (1) STRIP OF FLEXIBLE BUTYL RUBBER JOINT SEALANT CONFORMING TO ASTM C-990.
   • JOINT SEALANT SHALL BE CONSEAL CS-102 (OR EQUAL).
7. PIPE TO MANHOLE CONNECTION JOINTS SHALL BE FLEXIBLE SLEEVE CONFORMING TO ASTM C-923.
   • FLEXIBLE SLEEVES SHALL BE KOR-N-SEAL (OR EQUAL).
8. PIPE HOLE OPENING(S) WITHIN PRECAST SECTIONS VARIES DEPENDING ON PIPE SIZE. PIPE OPENING SIZES SHALL BE COORDINATED WITH PRECASTER AND FLEXIBLE PIPE SLEEVE MANUFACTURERS.
9. MANHOLES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF HORIZONTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES WITHIN 3" OF HORIZONTAL SECTION JOINTS.
10. CHANNEL INVERT SHALL BE A SMOOTH CONTINUATION OF THE DRAIN LINE INVERT(S). ALL CHANNEL INVERTS AND SHELVES SHALL BE CONSTRUCTED PER THE CITY OF LACONIA, DEPARTMENT OF PUBLIC WORKS STANDARDS.
11. MANHOLE STEPS SHALL BE 14" WIDE WITH AN ABRASIVE STEP SURFACE, STEEL REINFORCED, COPOLYMER, POLYPROPYLENE, PLASTIC STEPS CONFORMING TO OSHA REQUIREMENTS.

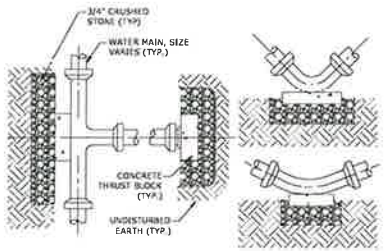
MANHOLE DIMENSIONS			
DIA	WALL & SLAB THICKNESS	JOINT HEIGHT
	WALL	BASE	
4	5"	6"	6"
5	5"	6"	6"
6	5"	6"	6"
8	5"	10"	6"



SECTION VIEW

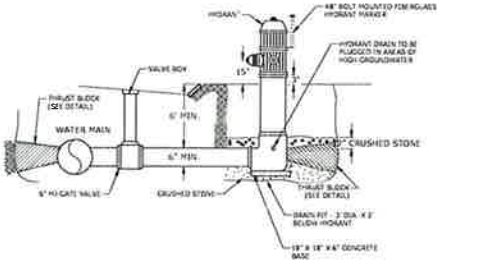
TYPICAL DRAIN MANHOLE
NO SCALE

SQUARE FEET OF MINIMUM BEARING AREA						
NOMINAL DIA. (IN)	PIPE SIZE					
	4"	6"	8"	10"	12"	16"
PIPE FITTINGS	*	*	5.18	7.96	11.43	20.29
A 90°	*	4.11	7.33	11.26	16.17	28.69
C 45°	*	*	*	6.10	8.75	15.53
D 22-1/2°	*	*	*	*	4.46	7.92
E 11-1/4°	*	*	*	*	*	*
*SEE NOTE 2	SYSTEM PRESSURE: 125 psi SAFETY FACTOR: 1.5 SOIL BEARING CAPACITY: 2,000 psf					



NOTES
1. ALL THRUST BLOCKS SHALL BE PRE-CAST CONCRETE UNLESS APPROVED BY THE CITY ENGINEER.
2. 2'X2'X2' MINIMUM THRUST BLOCK REQUIRED, ANY BEARING AREA OVER 4 SF REQUIRES THRUST BLOCKS, RESTRAINED JOINTS AND CALCULATIONS ASSOCIATED WITH THE JOINT.
4. FOR MINIMUM BEARING AREAS OVER 4 SF, THE LENGTH (L) OF THE BLOCK IS APPROXIMATELY TWICE AS LONG AS THE HEIGHT (H).
5. THE MINIMUM BEARING AREAS SHOWN IN THE THRUST BLOCK SCHEDULE ARE BASED ON A SYSTEM PRESSURE OF 125 PSI. IF THE SYSTEM PRESSURE IS ABOVE 125 PSI, INCREASE THE NOTED AREAS PROPORTIONALLY TO THE ACTUAL SYSTEM PRESSURE.
6. PLACE CRUSHED STONE BEHIND THRUST BLOCK AGAINST UNDISTURBED SOIL.
7. PLACE THRUST BLOCK ALONG MAXIMUM LENGTH OF THE FITTING TO MAXIMIZE BEARING AREA
8. CONCRETE COMPRESSIVE STRENGTH: 2,000 PSI MINIMUM.
9. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS.
10. INSTALLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE WITH CITY OF LACONIA WATER DEPARTMENT STANDARDS.

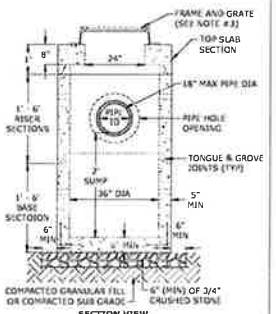
THRUST BLOCKING DETAIL
NO SCALE



NOTES
1. HYDRANT INSTALLATION AND OPERATION, MANUFACTURE AND MODEL, AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE CITY OF LACONIA WATER DEPARTMENT AND THE CITY OF LACONIA FIRE DEPARTMENT

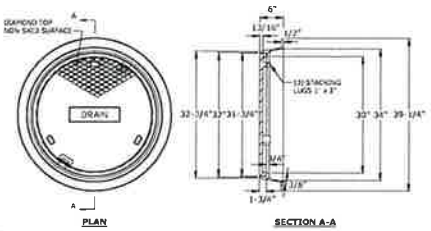
FIRE HYDRANT
NO SCALE

NOTES
1. ALL PRECAST SECTIONS SHALL BE 4,000 PSI (MIN) CONCRETE DESIGNED FOR AASHTO H-20 LOADING CONFORMING TO ASTM C-478 AND AASHTO M-199.
2. STEEL REINFORCEMENT SHALL BE 0.12 IN²/LF AND 0.12 IN² (BOTH WAYS) BASE BOTTOM CONFORMING TO ASTM A-615 AND ASTM A-185.
3. YARD / AREA DRAIN FRAME AND GRATES SHALL BE AS FOLLOWS:
   • NEENAH FOUNDRY R-2569 FRAME & GRATE TYPE Q, (±0.6 SF OPEN AREA OR EQUAL), FOR DRAINS LOCATED IN AREAS THAT REQUIRE ADA ACCESSIBILITY.
4. ADJUSTING FRAMES AND COVERS TO FINISHED GRADE SHALL BE DONE USING PRECAST REINFORCED CONCRETE GRADE RINGS OR CLAY BRICKS.
5. HORIZONTAL SECTION JOINTS SHALL BE TONGUE AND GROOVE JOINTS SEALED WITH ONE (1) STRIP OF FLEXIBLE BUTYL RUBBER JOINT SEALANT CONFORMING TO ASTM C-990
   • JOINT SEALANT SHALL BE CONSEAL CS-102 (OR EQUAL)
6. PIPE TO MANHOLE CONNECTION JOINTS SHALL BE FLEXIBLE SLEEVE CONFORMING TO ASTM C-923.
   • FLEXIBLE SLEEVES SHALL BE KOR-N-SEAL (OR EQUAL).
7. PIPE HOLE OPENING(S) WITHIN PRECAST SECTIONS VARIES DEPENDING ON PIPE SIZE. PIPE OPENING SIZES SHALL BE COORDINATED WITH PRECASTER AND FLEXIBLE PIPE SLEEVE MANUFACTURERS
8. PRECAST CONCRETE YARD / AREA DRAINS SHALL BE PHOENIX PRECAST PRODUCTS - 3' DIA CATCH BASIN (OR EQUAL).



SECTION VIEW

TYPICAL PRECAST CONCRETE YARD / AREA DRAIN
NO SCALE



NOTES
1. ALL DIMENSIONS ARE NOMINAL
2. FRAMES USING NARROWER DIMENSIONS FOR THICKNESS ARE ALLOWED PROVIDED
   A. THE FRAMES MEET OR EXCEED THE SPECIFIED LOAD RATING
   B. THE INTERIOR PERIMETER (SEAT AREA) DIMENSIONS OF THE FRAMES REMAIN THE SAME TO ALLOW CONTINUED USE OF EXISTING GRATES/COVERS AS THE EXISTING FRAMES ALLOW, WITHOUT SHIMS OR OTHER MODIFICATIONS OR ACCOMMODATIONS
   C. ALL OTHER PERTINENT REQUIREMENTS OF THE SPECIFICATIONS ARE MET
3. LABEL TYPE OF MANHOLE WITH 3" HIGH LETTERS IN THE CENTER OF THE COVER

DRAIN MANHOLE FRAME & COVER
NO SCALE

Tighe&Bond
177 Corporate Dr
Portsmouth, NH 03801
T 603 433 8818

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33 WHITE OAKS SUBDIVISION

33 White Oaks Road

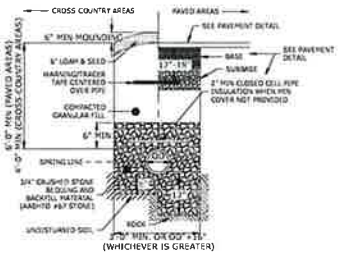
Laconia, New Hampshire

MARK	DATE	DESCRIPTION
1	1/30/2026	TAC SUBMITTAL
PROJECT NO		R5089.0278
DATE		01/30/2026
FILE		R5089 0278 C DTLS.dwg
DRAWN BY		M. CURLEY/C. KRZCUIK
DESIGNED BY		C. KRZCUIK
CHECKED BY		N. HANSEN
APPROVED BY		P. CRIMMINS

DETAILS SHEET

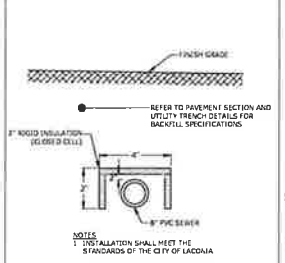
SCALE: AS SHOWN

C-603



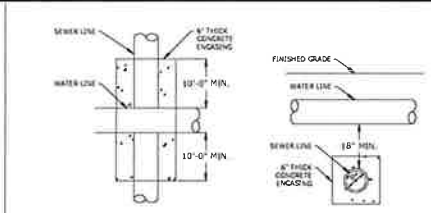
NOTES
1 3/4" CRUSHED STONE BEDDING AND BACKFILL MATERIAL FOR FULL WIDTH OF THE TRENCH FROM MINIMUM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO MINIMUM OF 6" OVER THE TOP OF THE PIPE
2 SANITARY SEWER SHALL BE INSTALLED PER THE CITY DEPARTMENT OF PUBLIC WORKS STANDARDS COORDINATE ALL INSTALLATIONS WITH THE CITY OF LACONIA

TYPICAL SEWER TRENCH
NO SCALE



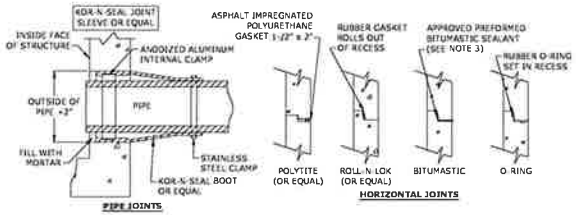
NOTES
1 INSTALLATION SHALL MEET THE STANDARDS OF THE CITY OF LACONIA

SEWER INSULATION DETAIL
NO SCALE



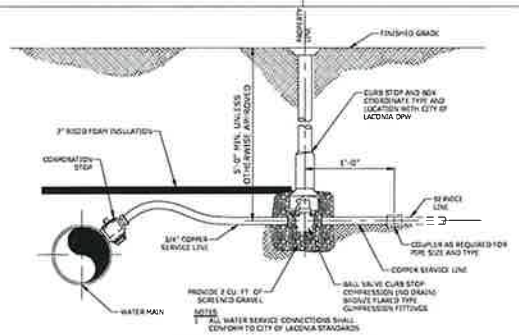
NOTES
1 A 10 FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED FROM ANY EXISTING OR PROPOSED WATER LINE
2 AN 18" MINIMUM EDGE TO EDGE VERTICAL SEPARATION SHALL BE PROVIDED, WITH WATER ABOVE SEWER, AT ALL CROSSINGS
3 SEWER PIPE JOINTS SHALL BE LOCATED AT LEAST 6 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN JOINT
4 WHERE AN 18" VERTICAL SEPARATION CANNOT BE PROVIDED, SEWER PIPE SHALL BE CONSTRUCTED USING A SDR 26 PVC PIPE OR ENCASED CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET ON BOTH SIDES OF THE LINE BEING CROSSED, AS SHOWN ABOVE
5 CROSSINGS SHALL CONFORM TO THE CITY OF LACONIA STANDARDS AND SPECIFICATIONS

WATER & SEWER CROSSING
NO SCALE



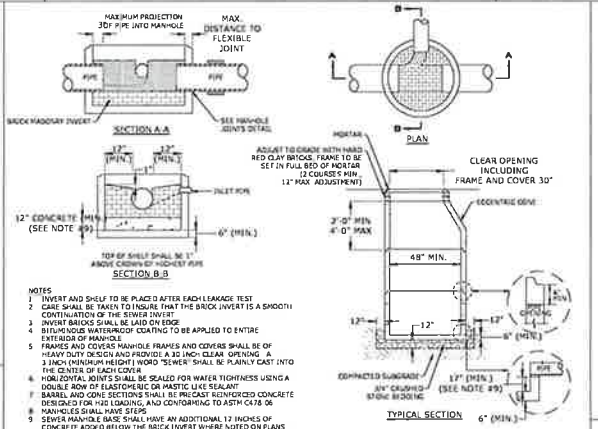
NOTES
1. HORIZONTAL JOINTS BETWEEN THE SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE PER CITY OF LACONIA DPW STANDARD AND SHALL BE SEALED FOR WATER TIGHTNESS USING A DOUBLE ROW ELASTOMERIC OR MASTIC-LIKE GASKET.
2. PIPE TO MANHOLE JOINTS SHALL BE PER CITY OF LACONIA STANDARD.
3. FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY.
4. ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS

STRUCTURE JOINTS
NO SCALE



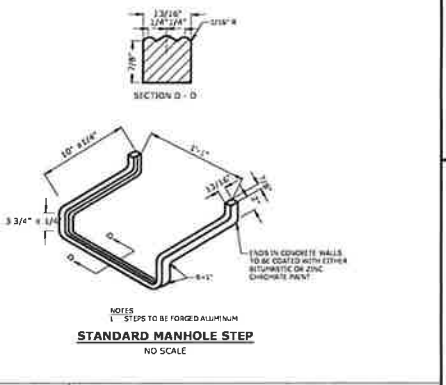
NOTES
1 ALL WATER SERVICE CONNECTIONS SHALL CONFORM TO CITY OF LACONIA STANDARDS

WATER SERVICE CONNECTION
NO SCALE



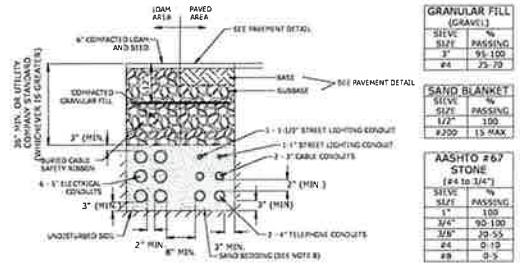
NOTES
1 INVERT AND SHELF TO BE PLACED AFTER EACH LEAKAGE TEST
2 CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT
3 INVERT BRICKS SHALL BE LAID ON EDGE
4 BITUMINOUS WATERPROOF COATING TO BE APPLIED TO ENTIRE EXTERIOR OF MANHOLE
5 FRAMES AND COVERS MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30 INCH CLEAR OPENING A 3 INCH (MINIMUM HEIGHT) WORD "SEWER" SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER
6 HORIZONTAL JOINTS SHALL BE SEALED FOR WATER TIGHTNESS USING A DOUBLE ROW OF ELASTOMERIC OR MASTIC LIKE SEALANT
7 BARREL AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE DESIGNED FOR H20 LOADING, AND CONFORMING TO ASTM C478 06
8 MANHOLES SHALL HAVE STEPS
9 SEWER MANHOLE BASE SHALL HAVE AN ADDITIONAL 12 INCHES OF CONCRETE ADDED BELOW THE BRICK INVERT WHERE NOTED ON PLANS

SEWER MANHOLE
NO SCALE



NOTES
1 STEPS TO BE FORGED ALUMINUM

STANDARD MANHOLE STEP
NO SCALE



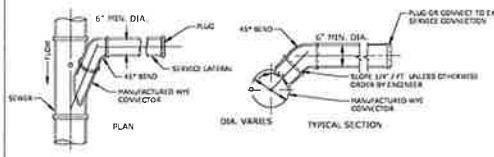
GRANULAR FILL (GRAVEL)	
SIEVE SIZE	% PASSING
3"	95-100
#4	25-70

SAND BLANKET	
SIEVE SIZE	% PASSING
1/2"	100
#200	15 MAX.

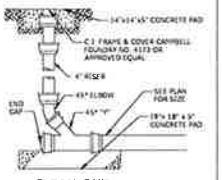
AASHTO #67 STONE (#4 to 3/4")	
SIEVE SIZE	% PASSING
1"	100
3/4"	90-100
3/8"	20-55
#4	0-10
#8	0-5

NOTES
1 NUMBER, MATERIAL, AND SIZE OF UTILITY CONDUITS TO BE DETERMINED BY LOCAL UTILITY OR AS SHOWN ON ELECTRICAL DRAWINGS CONTRACTOR TO PROVIDE ONE SPARE CONDUIT FOR EACH UTILITY TO BUILDING
2 DIMENSIONS SHOWN REPRESENT OWNERS MINIMUM REQUIREMENTS ACTUAL DIMENSIONS MAY BE GREATER BASED ON UTILITY COMPANY STANDARDS, BUT SHALL NOT BE LESS THAN THOSE SHOWN
3 NO CONDUIT RUN SHALL EXCEED 360 DEGREES IN TOTAL BENDS
4 A SUITABLE PULLING STRING, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE UTILITY COMPANY IS NOTIFIED TO INSTALL CABLE THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT
5 UTILITY COMPANY MUST BE GIVEN THE OPPORTUNITY TO INSPECT THE CONDUIT PRIOR TO BACKFILL THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD THE UTILITY COMPANY BE UNABLE TO INSTALL ITS CABLE IN A SUITABLE MANNER
6 ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND, WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE
7 ALL 90° SWEEPS WILL BE MADE USING RIGID GALVANIZED STEEL SWEEPS WITH A 36 TO 48 INCH RADIUS
8 SAND BEDDING TO BE REPLACED WITH CONCRETE ENCASEMENT WHERE COVER IS LESS THAN 3 FEET, WHEN LOCATED BELOW PAVEMENT, OR WHERE SHOWN ON THE UTILITIES PLAN

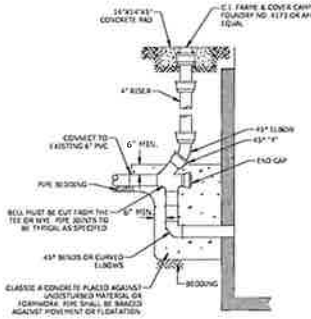
ELECTRICAL AND COMMUNICATION CONDUIT
NO SCALE



STANDARD SERVICE LATERAL CONNECTION
NO SCALE



CLEAN-OUT
NO SCALE



EXTERNAL DROP
NO SCALE

Tighe & Bond

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33 WHITE OAKS SUBDIVISION

33 White Oaks Road

Laconia, New Hampshire

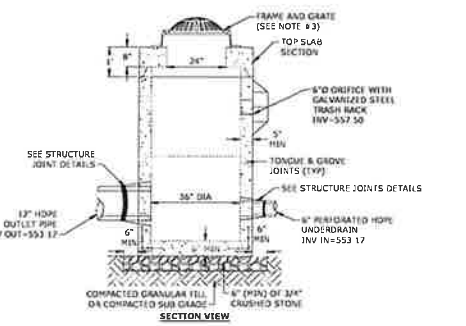
NO.	DATE	DESCRIPTION
1	1/30/2026	TRC Submission

PROJECT NO.	#3089.0278
DATE	01/15/2026
FILE	#3089.0278-C DTLS.dwg
DRAWN BY	M CURLEY/C KRZCIUK
DESIGNED BY	C KRZCIUK
CHECKED BY	N HANSEN
APPROVED BY	P CRIMMINS

DETAILS SHEET

SCALE: AS SHOWN

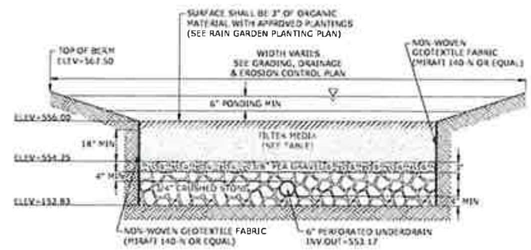
C-604



SECTION VIEW

NOTES
1. ALL PRECAST SECTIONS SHALL BE 4,000 PSI (MIN) CONCRETE DESIGNED FOR AASHTO H-20 LOADING CONFORMING TO ASTM C-478 AND AASHTO M-199
2. STEEL REINFORCEMENT SHALL BE 0.12-IN²/LF AND 0.12-IN² (BOTH WAYS) BASE BOTTOM CONFORMING TO ASTM A-615 AND ASTM A-185.
3. YARD / AREA DRAIN FRAME AND GRATES SHALL BE AS FOLLOWS:
   • NEENAH FOUNDRY R-2561 FRAME, WITH BEEHIVE GRATE (±1.2 SF OPEN AREA OR EQUAL), FOR DRAINS LOCATED IN GRASSED AREAS;
6. ADJUSTING FRAMES AND COVERS TO FINISHED GRADE SHALL BE DONE USING PRECAST REINFORCED CONCRETE GRADE RINGS OR CLAY BRICKS.
7. HORIZONTAL SECTION JOINTS SHALL BE TONGUE AND GROOVE JOINTS SEALED WITH ONE (1) STRIP OF FLEXIBLE BUTYL RUBBER JOINT SEALANT CONFORMING TO ASTM C-990.
   • JOINT SEALANT SHALL BE CONSEAL CS-102 (OR EQUAL)
8. PIPE TO MANHOLE CONNECTION JOINTS SHALL BE FLEXIBLE SLEEVE CONFORMING TO ASTM C-923
   • FLEXIBLE SLEEVES SHALL BE KOR-N-SEAL (OR EQUAL)
9. PIPE HOLE OPENING(S) WITHIN PRECAST SECTIONS VARIES DEPENDING ON PIPE SIZE. PIPE OPENING SIZES SHALL BE COORDINATED WITH PRECASTER AND FLEXIBLE PIPE SLEEVE MANUFACTURERS
10. PRECAST CONCRETE YARD / AREA DRAINS SHALL BE PHOENIX PRECAST PRODUCTS - 3' DIA CATCH BASIN (OR EQUAL).

OUTLET CONTROL STRUCTURE 1
NO SCALE



SECTION VIEW

FILTER MEDIA COMPOSITION			
COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL SIEVE #	PERCENT PASSING
ASTM C-33 CONCRETE SAND	50-55	SEE NOTE #5	
LOAMY SAND TOPSOIL	20-30	200	15-25
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH	20-30	200	5 MAX

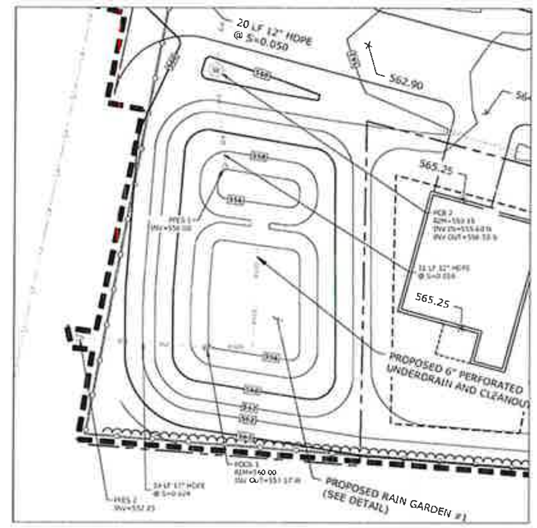
NOTES
1. BARK MULCH SHALL BE AGED A MINIMUM OF 12 MONTHS AND SHALL NOT FLOAT.
2. RAIN GARDENS SHALL NOT BE PLACED INTO SERVICE UNTIL THE PRACTICE HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
3. DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. CONTRACTOR SHALL KEEP ALL EXCAVATION EQUIPMENT OUTSIDE OF THE LIMIT OF THE RAIN GARDEN.
4. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR LOCATIONS, LAYOUTS, AND ELEVATIONS.
5. CONTRACTOR SHALL PROVIDE A FIXED VERTICAL SEDIMENT MARKER TO MEASURE SEDIMENT DEPTH.
6. WET SEED MIX SHALL CONSIST OF THE FOLLOW:
   • 50% NEW ENGLAND WETLAND PLANTS: NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DETENTION BASINS & MOIST SITES (OR EQUAL)
   • 50% NEW ENGLAND WETLAND PLANTS: NEW ENGLAND CONSERVATION WILDLIFE MIX (OR EQUAL)
7. THE SAND PORTION OF THE FILTER MEDIA SHALL MEET THE FOLLOWING GRADATION (ASTM C-33)

SIEVE SIZE	PERCENT PASSING
3/8"	100
#4	95-100
#8	80-100
#16	50-85
#30	25-60
#50	5-30
#100	0-10

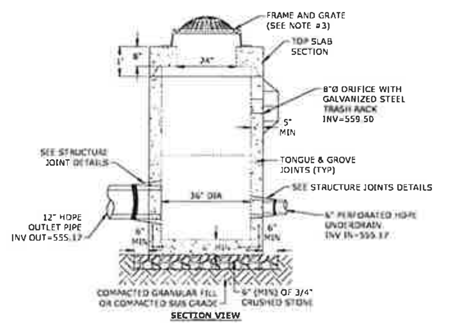
8. SEDIMENT FOREBAY STONE BERM MATERIAL SHALL MEET THE FOLLOWING GRADATION AS PER Env-Wq 1508.19(g)

SIEVE SIZE	PERCENT PASSING
12"	100
6"	84-100
3"	68-83
1"	42-55
#4	8-12

RAIN GARDEN 1 SECTION
NO SCALE



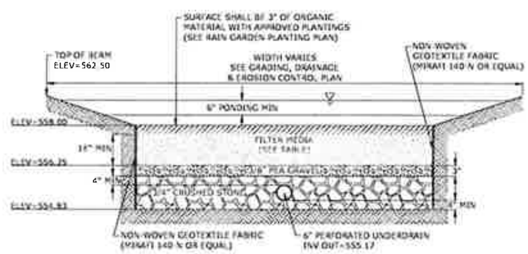
PLAN VIEW
SCALE: 1"=20'



SECTION VIEW

NOTES
1. ALL PRECAST SECTIONS SHALL BE 4,000 PSI (MIN) CONCRETE DESIGNED FOR AASHTO H-20 LOADING CONFORMING TO ASTM C-478 AND AASHTO M-199.
2. STEEL REINFORCEMENT SHALL BE 0.12-IN²/LF AND 0.12-IN² (BOTH WAYS) BASE BOTTOM CONFORMING TO ASTM A-615 AND ASTM A-185.
3. YARD / AREA DRAIN FRAME AND GRATES SHALL BE AS FOLLOWS:
   • NEENAH FOUNDRY R-2561 FRAME, WITH BEEHIVE GRATE (±1.2 SF OPEN AREA OR EQUAL), FOR DRAINS LOCATED IN GRASSED AREAS;
6. ADJUSTING FRAMES AND COVERS TO FINISHED GRADE SHALL BE DONE USING PRECAST REINFORCED CONCRETE GRADE RINGS OR CLAY BRICKS.
7. HORIZONTAL SECTION JOINTS SHALL BE TONGUE AND GROOVE JOINTS SEALED WITH ONE (1) STRIP OF FLEXIBLE BUTYL RUBBER JOINT SEALANT CONFORMING TO ASTM C-990.
   • JOINT SEALANT SHALL BE CONSEAL CS-102 (OR EQUAL)
8. PIPE TO MANHOLE CONNECTION JOINTS SHALL BE FLEXIBLE SLEEVE CONFORMING TO ASTM C-923
   • FLEXIBLE SLEEVES SHALL BE KOR-N-SEAL (OR EQUAL).
9. PIPE HOLE OPENING(S) WITHIN PRECAST SECTIONS VARIES DEPENDING ON PIPE SIZE. PIPE OPENING SIZES SHALL BE COORDINATED WITH PRECASTER AND FLEXIBLE PIPE SLEEVE MANUFACTURERS
10. PRECAST CONCRETE YARD / AREA DRAINS SHALL BE PHOENIX PRECAST PRODUCTS - 3' DIA CATCH BASIN (OR EQUAL).

OUTLET CONTROL STRUCTURE 2
NO SCALE



SECTION VIEW

FILTER MEDIA COMPOSITION			
COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL SIEVE #	PERCENT PASSING
ASTM C-33 CONCRETE SAND	50-55	SEE NOTE #5	
LOAMY SAND TOPSOIL	20-30	200	15-25
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH	20-30	200	5 MAX

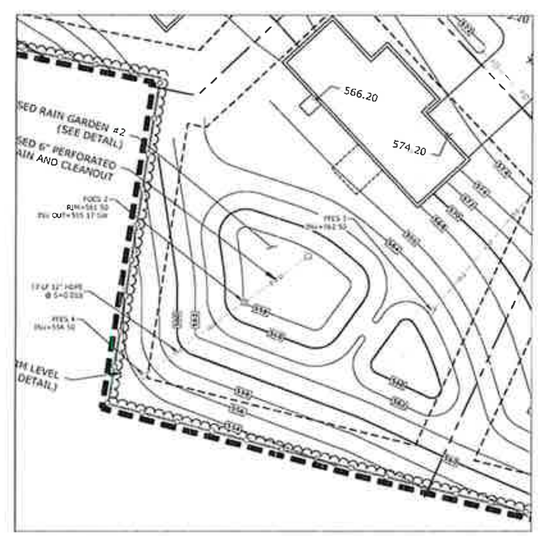
NOTES
1. BARK MULCH SHALL BE AGED A MINIMUM OF 12 MONTHS AND SHALL NOT FLOAT.
2. RAIN GARDENS SHALL NOT BE PLACED INTO SERVICE UNTIL THE PRACTICE HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
3. DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. CONTRACTOR SHALL KEEP ALL EXCAVATION EQUIPMENT OUTSIDE OF THE LIMIT OF THE RAIN GARDEN.
4. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR LOCATIONS, LAYOUTS, AND ELEVATIONS.
5. CONTRACTOR SHALL PROVIDE A FIXED VERTICAL SEDIMENT MARKER TO MEASURE SEDIMENT DEPTH.
6. WET SEED MIX SHALL CONSIST OF THE FOLLOW:
   • 50% NEW ENGLAND WETLAND PLANTS: NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DETENTION BASINS & MOIST SITES (OR EQUAL)
   • 50% NEW ENGLAND WETLAND PLANTS: NEW ENGLAND CONSERVATION WILDLIFE MIX (OR EQUAL)
7. THE SAND PORTION OF THE FILTER MEDIA SHALL MEET THE FOLLOWING GRADATION (ASTM C-33)

SIEVE SIZE	PERCENT PASSING
3/8"	100
#4	95-100
#8	80-100
#16	50-85
#30	25-60
#50	5-30
#100	0-10

8. SEDIMENT FOREBAY STONE BERM MATERIAL SHALL MEET THE FOLLOWING GRADATION AS PER Env-Wq 1508.19(g)

SIEVE SIZE	PERCENT PASSING
12"	100
6"	84-100
3"	68-83
1"	42-55
#4	8-12

RAIN GARDEN 2 SECTION
NO SCALE



PLAN VIEW
SCALE: 1"=20'

Tighe&Bond

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33 WHITE OAKS SUBDIVISION

33 White Oaks Road

Laconia, New Hampshire

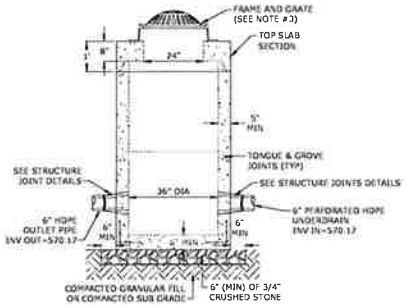
MARK	DATE	DESCRIPTION
1	1/30/2026	TRC Submission

PROJECT NO	R5089 0278
DATE	01/30/2026
FILE	R5089 0278 C DTLS dwg
DRAWN BY	M CURLEY/C KRZCUIK
DESIGNED BY	C KRZCUIK
CHECKED BY	N HANSEN
APPROVED BY	P CRIMMINS

DETAILS SHEET

SCALE: AS SHOWN

C-605



SECTION VIEW

NOTES
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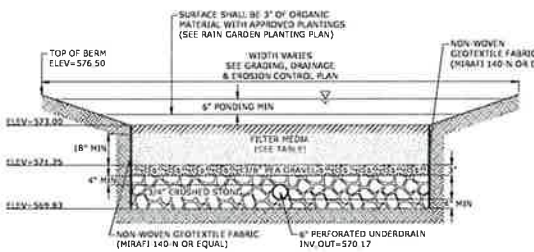
OUTLET CONTROL STRUCTURE 3
NO SCALE



SECTION VIEW

FILTER MEDIA COMPOSITION:

COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL SIEVE #	PERCENT PASSING
ASTM C-33 CONCRETE SAND	50-55	SEE NOTE #5	
LOAMY SAND TOPSOIL	20-30	200	15-25
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH	20-30	200	5 MAX

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3. DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. CONTRACTOR SHALL KEEP ALL EXCAVATION EQUIPMENT OUTSIDE OF THE LIMIT OF THE RAIN GARDEN.
4. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR LOCATIONS, LAYOUTS, AND ELEVATIONS.
5. CONTRACTOR SHALL PROVIDE A FIXED VERTICAL SEDIMENT MARKER TO MEASURE SEDIMENT DEPTH.
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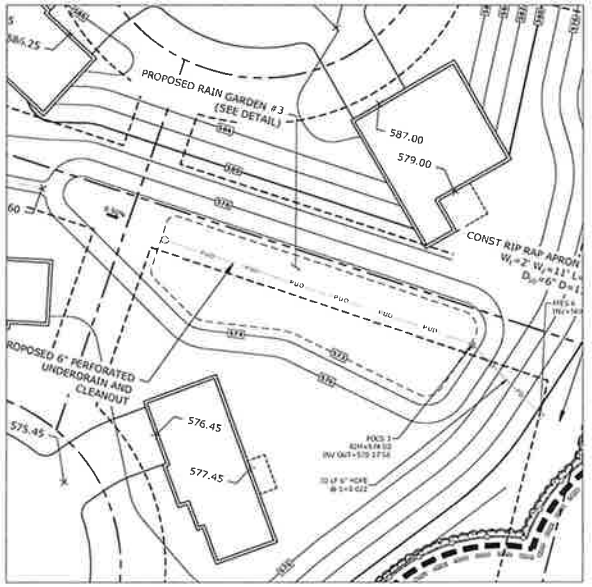
#30	25-60
#50	5-30
#100	0-10

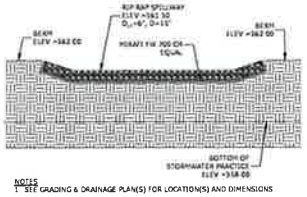
8. SEDIMENT FOREBAY STONE BERM MATERIAL SHALL MEET THE FOLLOWING GRADATION AS PER Env-Wq 1508.19(g):

SIEVE SIZE	PERCENT PASSING
12"	100
6"	84-100
3"	48-83
1"	42-55
#4	8-12

RAIN GARDEN 3 SECTION
NO SCALE

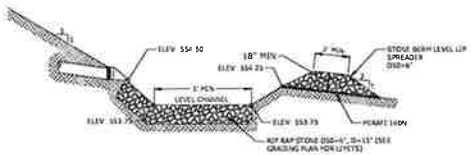


PLAN VIEW
SCALE: 1"=20'



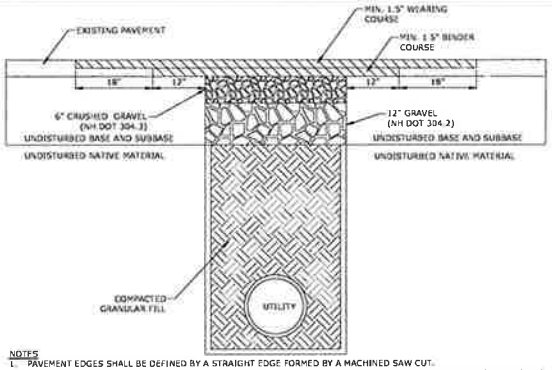
NOTES
1. SEE GRADING & DRAINAGE PLAN(S) FOR LOCATION(S) AND DIMENSIONS

RIP-RAP SPILLWAY
NO SCALE



NOTE
1. CHANNEL BEFORE STONE BERM SHALL BE LEVEL THROUGHOUT THE ENTIRE LENGTH

STONE BERM LEVEL SPREADER
NO SCALE



NOTES
1. PAVEMENT EDGES SHALL BE DEFINED BY A STRAIGHT EDGE FORMED BY A MACHINED SAW CUT.
2. TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH GRANULAR FILL AND COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY.
3. TOP 18" OF BACKFILL SHALL BE 6" IF COMPACTED 3/4" CRUSHED GRAVEL (NHDOT 304.3) SUPPORTED BY 12" OF COMPACTED GRAVEL (NHDOT 304.2).
4. ALL VERTICAL AND HORIZONTAL JOINTS BETWEEN PAVEMENTS SHALL BE TACK COATED.
5. PAVEMENT THICKNESS SHALL MATCH EXISTING BUT IN NO CASE SHALL BE LESS THAN 3" THICK TOTAL.
6. PAVEMENT SHALL BE PLACED IN TWO PHASES:
   a. THE FIRST PHASE SHALL CONSIST OF CUTTING BACK THE FULL DEPTH OF PAVEMENT 12" BEYOND THE EDGES OF THE DISTURBED TRENCH AND PAVING A BINDER COURSE THE FULL DEPTH OF THE PAVEMENT AS TO BRING THE PATCH FLUSH WITH THE EXISTING ROAD SURFACE.
   b. HE SECOND PHASE SHALL BE CONDUCTED THE FOLLOWING YEAR AND SHALL CONSIST OF MILLING OVER THE EDGES OF THE PREVIOUS PATCH BY A MINIMUM OF 18" IN ALL DIRECTIONS TO A DEPTH OF 1.5", WEARING COURSE PAVEMENT SHALL BE USED TO CREATE A SMOOTH SURFACE WITH THE ROADWAY OVER THE EXTENTS OF THE MILLED AREA.
7. ANY TRENCH PATCH REQUIRES PRE-APPROVAL BY DPW AND IS SUBJECTED TO INSPECTION TO ENSURE COMPLIANCE WITH CITY STANDARDS.

UTILITY TRENCH PATCH
NO SCALE

Tighe&Bond

177 Corporate Drive
Portsmouth, NH 03801
(603) 433-8818

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33 WHITE OAKS SUBDIVISION

33 White Oaks Road

Laconia, New Hampshire

MARK	DATE	DESCRIPTION
1	1/30/2026	TRC Submission

PROJECT NO.	83689.02.T8
DATE	01/16/2026
FILE	83689.02.T8 C-0113.dwg
DRAWN BY	M CURLEY/C KRZCUIK
DESIGNED BY	C KRZCUIK
CHECKED BY	N HANSEN
APPROVED BY	P CUMMINS

DETAILS SHEET

SCALE: AS SHOWN

C-606

BENCHMARK, LLC
50 NASHUA ROAD, SUITE 305
LONDONDERRY, NH 03053

January 30, 2026

Mr. Rob Mora
Planner Director
City of Laconia
45 Beacon Street E
Laconia, New Hampshire 03246

RE: TRC Submittal
Pickerel Pond Cluster Development
Pickerel Pond Road
TAX MAP 13 LOT 183-16

Dear Mr. Mora:

At this time we would like to submit the above reference project for discussion at the TRC meeting on February 17th. The project is for the construction of 26 single family detached condominiums serviced by two proposed public roadways. We have included the following items:

(6) SETS OF SITE PLANS (FULL SIZE)

PLANNING BOARD APPLICATION

SITE PLAN & SUBDIVISION CHECKLIST

ABUTTER LIST

CHECK FOR APPLICATION FEES

DIGITAL SUBMISSION (via email)

If you have any questions or if you require any additional information please feel free to contact me by phone or email.

Thank you

Nicholas B. Loring

Nicholas Loring
Benchmark, LLC
603-437-5000
nick@benchmark-engineering.com

City of Laconia Planning Board
Application Instructions

Please read these instructions carefully. Contact the Planning Department at 527-1264 if you have any questions. We recommend completing the application and checklist(s) well in advance of the submittal deadline and suggest that if you have any questions concerning specific items that you request a pre-app meeting for review.

APPLICATION SUBMITTAL REQUIREMENTS:
If you have any questions pertaining to particular documents please contact the Planning Department for assistance.

- ☑ One original signed application, appropriate fees, abutters list, abutters envelopes with correct postage or appropriate fee, one complete set of folded plans and one copy of any reports, cost estimates, studies, or other documents required for review of the proposal shall be submitted to the Planning Department, basement of City Hall by the published deadline. **No exceptions.**

One copy of the application and a complete plan set shall be submitted to the following city Departments at the following locations:

- ☑ Along with one copy of the cost estimate, drainage and watershed analysis submitted to the Assistant Director at DPW, 27 Bisson Ave.
- ☑ Along with one copy of the folded set of architectural plans submitted to the Deputy Chief of Fire Prevention, at the Central Station.
- ☑ Along with the abutter list submitted to the Assessing Department, Main Floor, City Hall
- ☑ Water Works Superintendent, 988 Union Ave
- ☑ Conservation Technician, Planning Office, Basement, City Hall
- ☑ Police Dept, New Salem Street (Minor Site Plan application only)

PLEASE PROVIDE A COVER LETTER FOR EACH DEPARTMENT'S SUBMITTAL WITH EXPECTED PLANNING BOARD MEETING DATE INCLUDED.

DEADLINE: In order to be considered for a Planning Board agenda this application and the required fees, plans and other associated documents must be filed with the appropriate City Departments as required by the official Planning Board Schedule, published by the Planning Department. Failure to do so will result in the application being postponed until a future meeting.

PLANS: Submitted Plans shall consist of a complete plan set, with original stamps and signatures of all appropriate professionals.

FEES: Refer to the fee schedule as adopted by the City Council and administered by the City Manager. The Planning Department will approve the calculation of fees. Failure to submit required fees will result in postponement of the application. Fees are calculated separately for each submittal request.

SIGNATURES: The property owner provides the official signature for an application. An agent or power of attorney may sign provided appropriate documentation of authorization is provided. In the case of a corporation, association, or other non-person ownership, the president or chief executive officer may sign provided a certification by the clerk or secretary is provided. Only one original copy of agent certification is

required with application submittal. Applications should be signed to be considered complete.

WAIVER REQUESTS: Waiver requests for submittal data must be indicated on the checklists provided by the Department. Waiver requests for standards within the regulations must reference the name and section of the regulation. All waiver requests must be accompanied by supporting documentation and be attached or enclosed with this application.

ABUTTER NOTIFICATION: Submitted abutters lists are required by state statute to be current according to the assessor's records within five days of the submittal date. We encourage you to double check for changes if you complete the application or plan prior to the five-day period. Be sure to include updates that the assessor does not yet have on record if you are aware of them.

It shall be the responsibility of the applicant to address all envelopes to abutters. The envelopes shall be business style (4" x 9 1/2") and include completed certified mail receipts with return address to the Planning Department, 45 Beacon Street E, Laconia, NH 03246.

CHECKLISTS: Checklists are required to be submitted with the application. If you are applying for both subdivision and site plan, both need to be filled out and returned. In the case of multiple page plan sets please indicate the sheet number in the 'Plan Sheet#' column.

Thank you for your co-operation.

The Planning Staff

Laconia
CITY ON THE LAKES

Application(s) #: _____

Fees Paid: _____
Check #: _____
Receipt #: _____

PLANNING BOARD APPLICATION

Project Name: HERON POINT PRESERVE

Project Address: PICKEREL POND ROAD

Tax Map/ Lot # (s): 13-183-16 Zoning District (s): R1 Parcel Size Acres: 150.47

Number of Lots: 26 Total Developed Land Area: 11.5 Building(s) and/or additions Total Sq. Ft. 52,000

Submittal Request (Check all that apply):

❑ Alternative Parking CUP	❑ Amendment	❑ Boundary Line Adjustment
❑ Boundary Line Agreement	❑ Change of Use	☒ Cluster Development CUP
☒ Cluster Subdivision	☒ Condominium Subdivision	❑ Conventional Subdivision
❑ Discretionary Easement	❑ Marinas and Yacht Club CUP	❑ Minor Site Plan
❑ Performance Zoning CUP	❑ Site Plan (Commercial)	❑ Site Plan (Multi-family)
❑ Steep Slope CUP	☒ Wetland/Wetland Buffer CUP	❑ Other _____

Proposal Description: Proposal is for the construction of 26 detached single family homes and associated improvements including two public roads, driveways, drainage improvements, utilities, etc. The homes will be in a condominium form of ownership. The project will be serviced by on-site septic systems and wells.

I hereby make application to the City of Laconia for the above-referenced property(ies) and the development as described. To the best of my knowledge the information provided herein is accurate and is in accordance with the Zoning Ordinance and land use regulations of the City, except where waivers are requested. The City of Laconia Planning Board, Minor Site Plan Committee, Technical Review Committee and/or city employees are authorized to enter the property(ies) for purposes of reviewing this proposal and for inspecting improvements as a result of an approval of this proposal. I understand that I am responsible for appearing, or having someone appear on my behalf, at any and all meetings before the Planning Board, Minor Site Plan Committee or Technical Review Committee.

Sign as appropriate (If agent or non-person please attach certification)
NOTE: Please attach an Applicant Contact Worksheet

	PROPERTY OWNER 1	PROPERTY OWNER 2	AGENT / APPLICANT
Printed Name:	PETER GRENIER		Nicholas Loring
Signature:			Nicholas B. Loring
Date:	1/28/2026		1/30/26

Laconia
CITY ON THE LAKES

DEPARTMENT OF PLANNING, ZONING & CODE
45 BEACON STREET, EAST
☎603-527-1264
🖷603-524-2164

APPLICANT CONTACT SHEET

Application Type: SITE PLAN Application #:_____

Name of Applicant: PARADE REI, LLC

Mailing Address: PO BOX 1926 CONCORD, NH 03302

Phone: 603-714-0515 E-mail: grenierpeter@gmail.com

Name of Agent: NICHOLAS LORING - BENCHMARK, LLC

Mailing Address: 50 NASHUA RD, SUITE 305 LONDONDERRY, NH 03053

Phone: 603-437-5000 E-mail: nick@benchmark-engineering.com

Property Owner 1: SAME AS OWNER

Mailing Address: _____

Phone: _____ E-mail: _____

Property Owner 2: _____

Mailing Address: _____

Phone: _____ E-mail: _____

Emergency Contact Person: Pete Grenier Phone: 603-714-0515

Parade REI LLC
PO Box 1926
Concord, NH 03302

January 28, 2026

RE: Heron Point Preserve
TAX MAP 13 LOT 183-16
PLANNING BOARD APPLICATION

LETTER OF AUTHORIZATION

To whom it may concern;

I hereby authorize Benchmark LLC. to represent my application relating to a Planning Board application for the above referenced property.

Thank you

Pete Grenier

Parade REI LLC

ZONING & PLANNING BOARD APPLICATION FEES

Adopted by City Council 2/10/2020

www.cityoflaconianh.org

Application Type †	Basic Fee*	Additional Fees*	
Administrative Review	$125.00	None apply	
Administrative Review Short Term Lodging Permit	$250	Permit must be renewed every 2 years, fee authorized at that time.	
Minor Site Plan Committee (MSPC), Minor Site Plan or Change of Use between 5,000 and 10,000 SF#	$100.00	None apply	
Planning Board Basic Site Plan, Site Plan Amendment or Change of Use over 10,000 SF#	$200.00	Construction of new commercial structures, and additions	+ $50 per each 1,000 SF# of new structure footprint
		Construction of new industrial structures and additions	+ $30 per each 1,000 SF# of new structure footprint
		Construction of new residential units	+ $50 per unit
		Principal Outdoor Uses	+ $100 per acre (or portion over .5 acre) of developed area
		Parking or paving	+ $20 per 1,000 SF#
Basic Subdivision (of Lots or Sites)	$200.00	For 1-3 lots/sites (includes the original lot)	$50 per lot/site
NEW RESIDENTIAL UNITS: $200 + 26 X $75 = 2,150 2,150 X 25% REDUC.= $1,612.50		For over 3 lots/sites (including original lot)	$75 per lot/site
		Lot Line Adjustments	$50 for each adjustment between every two lots
		Boundary Line Agreements	$50 for each adjustment between every two lots
Basic Site Plan for establishment or expansion of parking lots over 25 spaces	$500.00	None apply	
Design Review	$100.00	None apply	
Conceptual Review	No Fee	None apply	
As-built Site Plan	$100.00	None apply	

Miscellaneous Items/Fees	
Request for a continued hearing	$25.00 for the first request, $50. for each request after
Request for extension of approval	$25.00 for the first request, $50. for each request after
Request for Street Acceptance	$100.00 Flat fee
Conditional Use Permits X 2 = $200	$100.00 Per requirement
Zoning Petitions	$100.00
Zoning Applications, Zoning Re-Hearings	$125.00
Lot Merger Applications	$25.00
Sign Permits	$30.00 per sign
Banner Sign Permits	$50.00 per banner per week
After-the-fact Applications	$500 or double the regular application fee, whichever is greater, plus the normal application fee
Abutter Notification 21 X $10 = $210 $1,612.50 + $210 + $200 = **$2,022.50**	$10 per abutter, includes postal fees. Applicants wishing to pay the postal fees will be credited that amount. Applicant must prepare the mailing envelopes including affixing certified slip (return receipt not required).
Recording Fees	Make payable to Belknap Country Registry of Deeds – amounts will vary depending on what is being recorded

***Application fees do not include recording fees.**

†Submission of an application fee must accompany a complete application in order for that application to be placed on an agenda for review and/or public hearing.

SITE PLAN

Office Use Only

Tax Map ____ Block ____ Lot ____

Date Reviewed _____

Applicant Name Parade REI, LLC

Heron Pnt. Preserve

For Staff Use Only

PLAT REQUIREMENTS FOR SITE PLAN

	Enclosed	Plan Site #	Waiver Req.	None Found	N/A		Submitted	Rec. Waiver	Not Submitted	Acceptable	Required
Application Properly Executed	/										
Filing Fee	/										
Abutter Information	/										
Authorization from Property Owner	/										
Plans (properly distributed)	/										
Existing Conditions	/										
Proposed Site Plan	/										
Architectural Plan TRC #2											
Landscape Plan											
Reduced Plan Set (After PRC II for PB distribution)					/						
PLAN FORMAT											
Size (11" x 17" to 24" x 36")	/										
Scale: (No greater than 1" = 150')	/										
Bound if More than One Page	/										
Locus (No Greater than 1" = 1000')	/										
Legend	/										
Title Box	/										
(Lower Right Hand Corner)	/										
Owner Name and Address	/										
Project Name	/										
Project Location and Address	/										
Tax Map Number(s)	/										
Deed Book and Page Numbers	/										
Zone Designation/Boundaries	/										
Draft Date & Revision Dates	/										
Preparer Name & Address	/										
Original P.E./LLS Stamp & Signature	/										
North Arrow	/										

PLAT REQUIREMENTS FOR SITE PLAN

	Enclosed	Plan Sht #	Waiver Req.	None found	N/A		Submitted	Rec. Waiver	Not Submitted	Acceptable	Required
Measurements	/	3,4									
Bearings	/	3,4									
Error of Closure Statement	/	3,4									
Signature Block (lower right hand corner)	/	1,2									

NATURAL FEATURES

5-9

8-9

Topographic Contours (2 ft. intervals)	/	3,4									
Wetland Delineation/CSS Stamp & Signature	/	3,4									
Water Bodies & Water Courses	/	3,4									
Ledge Outcroppings					/						
Significant Tree Stands	/	3,4									
FEMA Floodplain Boundary	/	3,4									
Steep Slope Areas > 25%					/						

Existing Condition Plan

Lot Sizes in Square Feet	/										
Lot Lines/Monumentation - Location	/										
Green Space Calculation	/	2									
Easements or Rights-of-way/Location & Width	/										
Structures - Location, Footprint & Use	/										
Curb Cuts & Driveways - location, layout & dimen.	/										
Access Street - location, pavement, & Row widths	/										
Sewer/Septic Disposal Facilities-location, line size					/						
Water Supply - location, line size					/						
Non-municipal utilities, elect., cable, alarm etc.	/										
Signage - location & size					/						
Outdoor Lighting - location & type					/						
Dock or Mooring Sites					/						

PROPOSED LAYOUT

5/6

Lot Lines	/										
Easements & Rights of Way	/										
Structures & Additions - location, footprint & use	/										
Building Dimensions/Height	/										
Parking & Loading areas -location, layout & dimen.					/						
Curb Cuts & Driveways - location, layout & dimen.	/										

PLAT REQUIREMENTS FOR SITE PLAN

	Enclosed	Plan Sht #	Waiver Req.	None found	N/A		Submitted	Rec. Waiver	Not Submitted	Acceptable	Required
Handicapped spaces - location, layout & dimensions					/						
Parking Requirement Calculation based on Use (s)	/	2									
Signs - Location & Size					/						
Finished First Floor Elevations	/										
Solid Waste Disposal - location & type TRC-2											
Outdoor Lighting - location & type											
Fire Lanes & Other Emergency Access	/										
Walkways - location & width					/						
Fences, walls - location, type & height					/						
Phasing Delineation					/						
Street Improvements - plans, profiles & cross-section	/										
911 Street Name Designation (DPW)	/										
Non-municipal Utility Connection Locations:	/										
I.e. electric, fire alarm											
Well Location	/										
Septic Disposal Facilities TRC-2											
Drainage Improvements - location & Layout TRC-2	/										
Grading Plan - contours @ 2 ft. intervals with	/										
finished grade elevations	/										
Municipal Utility Extensions - plan & profiles					/						
Sewer - locations, size & invert elevations of manhole					/						
Water Mains - location/size & invert of hydrants,					/						
gates, valves & blowoffs					/						
Pump Station Locations					/						
Erosion & Sediment Control Plan View & Detail	/										
Dock or Mooring Sites					/						
LANDSCAPE PLAN TRC#2											
Plan View & Planting Schedule											
Location, site & type of new, retained & relocated plantings											
Street Tree Layout											
Greenspace/Landscape Calculations											
ARCHITECTURAL PLAN TRC#2											
Preparer of plan											
All Elevations Shown											
Scale (minimum 1/8" = 1')											

PLAT REQUIREMENTS FOR SITE PLAN

	Enclosed	Plan Sht #	Waiver Req.	None found	N/A		Submitted	Rec. Waiver	Not Submitted	Acceptable	Required
Building Colors											
Roof Type & Pitch											
Location of Windows & Doors											
Towers, Antennaes - size, type & location											
Bulk/Height Relationship to Abutting Structures											
Building Height											
ABUTTING PROPERTIES											
Owner Name & Address	/										
Tax Map Number	/										
Location & Use of Buildings/Property	/										
OFF-SITE PROPROSED IMPROVEMENTS											
Streets					/						
Utilities					/						
Parks					/						
Others					/						
DOCUMENTS											
Articles of Agreement	/				/						
Association By-Laws	/										
Restrictive Covenants	/										
Construction Estimates	/										
Easements	/										
Consultant Review Agreement											
Declaration of Condominium	/										
Traffic Impact Study	/										
Wetlands/Watercourse Impact Analysis					/						
Drainage Analysis for 10-Year Flow	/										
Groundwater Analysis					/						
TOWN, STATE & FEDERAL APPROVALS											
Dredge and Fill (482-A)					/						
Army Corp. of Engineers					/						
Significant Alteration of Terrain (485-A:17) Pending	/										
Energy Facility (162h)					/						
State Public Works and Highways (236:13) - Driveway					/						
Condominium Development (356-B) Pending	/										
Land Disclosure (356-A) if over 16 Lots	/										
HUD Land Disclosure (15 USC 1701), if over 50 Lots					/						
Conditional Use Permit for Wetlands Crossing					/						
Shoreline Protection (483-B)					/						

TRC #2

SUBDIVISION PLAN

Office Use Only

Tax Map ____ Block ____ Lot ____

Date Reviewed _____

Applicant Name Parade REI, LLC

PLAT REQUIREMENTS FOR SUBDIVISION PLAN

	Enclosed	Plan Sht #	Waiver Req.	None Found	N/A		Submitted	Rec. Waiver	Not Submitted	Acceptable	Required
Application Properly Executed	/										
Filing Fee	/										
Abutter Information	/										
Authorization from Property Owner	/										
Plans (distributed properly)	/										
Reduced Plan Set (After PRC II for PB distribution)											
PLAN FORMAT											
Size (11" x 17" to 24" x 36")	/										
Scale: (No greater than 1" = 100')	/										
Bound if More than One Page	/										
Locus (No Greater than 1" = 1000')	/										
Legend	/										
Title Box - Subdivision/Lot Line Adjustment	/										
(Lower Right Hand Corner)	/										
Owner Name and Address	/										
Project Name	/										
Project Location	/										
Tax Map Number(s)	/										
Deed book and page	/										
Zone Designation/Boundaries	/										
Draft Date & Revision Dates	/										
Preparer Name & Address	/										
Original Surveyor Stamp & Signature	/										
North Arrow	/										
Measurements	/										
Bearings	/										
Error of Closure	/										
Planning Board Signature Block	/										
(Lower Right Hand Corner)	/										

PLAT REQUIREMENTS FOR SUBDIVISION PLAN	Enclosed	Plan Sht #	Waiver Req.	None found	N/A		Submitted	Rec. Waiver	Not Submitted	Acceptable	Required
NATURAL FEATURES											
Topographic Contours (2 ft. intervals)	/										
Wetland Delineation/CSS Stamp & Signature	/										
Water Bodies & Water Courses	/										
Ledge Outcroppings					/						
Significant Tree Stands	/										
FEMA Foodplain Boundary	/										
Steep Slope Areas > 25%					/						
EXISTING CONDITIONS PLAN											
Lot Sizes in Square Feet	/										
Lot Lines					/						
Easements or Rights-of-way/Location & width	/										
Septic Disposal Facilities	/										
Water Supply	/										
Buildings	/										
Roads	/										
Driveways	/										
Drainage Improvements	/										
PROPOSED LAYOUT											
Lot Lines					/						
Setback Lines	/										
Easements or Rights-of-way/Location & Width	/										
Septic Disposal Facilities/Sewer Design/Plan-Profile					/						
Water Supply/Water System Design/Plan & Profile					/						
Buildings	/										
Driveways	/										
Drainage Improvements/Plan & Profile TRC 2											
Road Engineering/Road Cross Section/Plan & Profile	/										
911 Street Name Designation (DPW)	/										
Street Design	/										
Sidewalks Waiver			/								
Curbing	/										
Street Lighting TRC 2											

PLAT REQUIREMENTS FOR SUBDIVISION PLAN	Enclosed	Plan Sht #	Waiver Req.	None found	N/A		Submitted	Rec. Waiver	Not Submitted	Acceptable	Required
Street Trees TRC-2											
Street Grades	/										
Erosion & Sediment Control Plan/View & Detail	/										
Dock Site/Mooring Locations					/						
Topography/Grading Plan	/										
Monumentation	/										
Common/Limited Common Areas	/										
Open Space/Public Sites	/										
Conservation Easements					/						
ABUTTING PROPERTIES											
Owner Name & Address	/										
Tax Map Number	/										
Wells within 75 feet	/										
Subdivision Names	/										
Roads/Road Names	/										
Building Lines within 200 Feet	/										
OFF-SITE PROPOSED IMPROVEMENTS											
Streets					/						
Utilities					/						
Parks					/						
Other					/						
DOCUMENTS SEE SITE CHECKLIST											
Articles of Agreement											
Association By-Laws											
Restrictive Covenants											
Construction Estimates											
Easements											
Consultant Review Agreement											
Declaration of Condominium											

PLAT REQUIREMENTS FOR SUBDIVISION PLAN	Enclosed	Plan Sht #	Waiver Req.	None found	N/A		Submitted	Rec. Waiver	Not Submitted	Acceptable	Required
STUDIES SEE SITE CHECKLIST											
Traffic Impact Study > 10 Lots											
Wetlands/Watercourse Impact Analysis											
Master Plan Compatability Statement											
Drainage Analysis for 50 Year Flow											
Groundwater Analysis											
TOWN, STATE & FEDERAL APPROVALS SEE SITE CHCKLIST											
Dredge and Fill (482-A)											
Army Corp. of Engineers											
Significant Alteration of Terrain (485-A:17)											
Subdivision Approval (485-A:29)											
Energy Facility (162h)											
State Public Works and Highways (236:13) - Driveway											
Condominium Development (356-B)											
Land Disclosure (356-A) if over 16 Lots											
HUD Land Disclosure (15 USC 1701), if over 50 Lots											
Conditional Use Permit for Wetland Crossings											
Shoreland Protection (483-B)											

CITY OF LACONIA
DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
45 Beacon Street East
Laconia, NH 03246
Phone: (603) 527-1264
Fax: (603) 524-2167
Email: Planning@Laconianh.gov

Laconia
CITY ON THE LAKES

NOTICE OF ACTION
MEETING September 15th, 2025
CITY OF LACONIA
ZONING BOARD OF ADJUSTMENT

Parade REI LLC
160 Bouchard St
Manchester, NH 03103

RE: Variance Road Length (Cul De Sac) (13/183/16)

This is to certify that at the meeting held on **September 15, 2025**, the City of Laconia Zoning Board of Adjustment voted to **Approved** Application **ZB2025-010,** request for **Variance** from **Article VII §235-40 B (6)(n)[1][c]** to allow for a Cul De Sac that will be longer than the prescribed 1000 Feet at this property. The criteria below were used as a finding of fact.

1.Granting the variance would not be contrary to the public interest because: The standard for prongs one and two of the variance criteria is whether the requested relief, if granted, will alter the essential character of the neighborhood or negatively impact the health, welfare, and safety of the surrounding area and mere conflict with the terms of the ordinance is insufficient as all variance requests are somewhat averse to an ordinance, hence why the relief is sought in the first instance. Harborside associates, L.P. v. Parade Residence Hotel, LLC. 162 N.H. 508 (2011). Furthermore, it is important to note that prong 1 is in the negative. That is to say that it does not require the Applicant to prove that the proposed use is in the public interest. But only to prove that it is not contrary to the public's interest. Here, the immediate question is to allow for a road length of 1300 feet where 1000 feet is required. The public interest in limiting the length of dead-end streets is based on safety. In years gone by, fire apparatus had a pump and hose limit of 1000 feet. In modern times fire equipment has improved with pump and hose limits being far greater than 1000 feet. The maximum length of a Cul De Sac lengths up to 3000 feet. In many cases, Cisterns are provided to enhance safety and facilitate fire safety. Safety is not a concern in this development. The applicant met with Fire Department Officials to discuss the road length and cisterns. It is expected a letter from the fire chief will be on record prior to the hearing stating the Department is satisfied with the road length and cistern locations. The relief requested does not alter the essential character of the neighborhood because the road only services the lots within the cluster subdivision and will have no different impact on abutting properties than a loop road or connector roads.

2.If the variance were granted, the spirit of the ordinance would be observed because: As a matter of law, the analysis for both Prongs one and two of the variance criteria are the same. As such, the applicant incorporates and repeats the narrative of prong 1 and reiterates the same for prong 2. Harborside Associates. L.P. v. Parade residence hotel, LLC 162 N.H. 508(2011)

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Laconia
CITY ON THE LAKES

3. Granting the variance would do substantial justice because: Perhaps the only guiding rule [on this standard] is that any loss to the individual that is not outweighed by a gain to the public is an injustice. Malachy Glen Assocs. V Town of Chichester, 155 N.H. 102. 109 (2007). Here the loss to the Applicant in not approving this variance would far outweigh any benefit to the public. By granting the variance the Applicant can make the most of their investment and improve the property in cluster development which maintains the bulk of the land as open space. The concentration of lots in a cluster development reduces impervious cover, facilitates storm water management, reduces wetland impacts and benefits the environment. If denied, the public gains nothing as the property can be developed as a conventional subdivision where there will be more impacts, greater impervious cover, longer roads and greater wetland impacts. Idle properties are deemed to be against the best interest of the public. Reasonable development of property and generation of tax revenue is a benefit to the public. This use is being market rate single family housing, is a benefit to the public who need housing in this community. Approval of the variance requested will benefit the Applicant, owner, Abutters, and the public.

4.If the variance were granted, the values of the surrounding properties would not be diminished because: The project will not alter the essential character of the neighborhood and will take an idle property and increase its value to the tax rolls. For that reason, the variance will not diminish the value of surrounding properties but rather enhance said values. The road length does not have an impact on abutting property owners. Very plainly, there is no evidence to suggest that granting this relief would negatively impact surrounding property values.

5.Unnecessary Hardship: "Hardship" under NH RSA 674:33, I (b) (1) (A) and (B) is a straightforward three step analyses: a. What are the special conditions of the property, if any; b.' no fair and substantial relationship exists between the public purposes of the ordinance provisions and the specific application of that provision to the property. Which can be said another way that if the variance is granted would it unreasonably frustrate the purpose ordinance and is the proposed use reasonable? The property has special features including its size topography and wetland locations. The purpose of the cul-de-sac length limitation is for safety. Here it has been determined that the 1,300-foot length with the addition of cisterns will not impair public safety or access to emergency vehicles. Lastly the proposed use for the site is residential and there is a high public demand in the community and the state in general for housing. As such the project will benefit the public in fulfilling this role. The site otherwise meets the cluster subdivision regulations and is therefore reasonable.

a. Owing to special conditions of the property that distinguish it from other properties in the area, denial of the variance would result in unnecessary hardship because:
i. No fair and substantial relationship exists between the general public purposes of the ordinance provision and the specific application of that provision to the property because:
ii. The proposed use is a reasonable one because:
b. If the criteria in subparagraph (a) are not established, an unnecessary hardship will be deemed to exist if, and only if, owing to special conditions of the property that distinguish it

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Laconia
CITY ON THE LAKES

from other properties in the area, the property cannot be reasonably used in strict conformance with the ordinance, and a variance is therefore necessary to enable a reasonable use of it.

CERTIFICATION

I hereby attest that the foregoing is a true and accurate record of the action of the Zoning Board.

ROBERT A. MORA
Director, Planning and Community Development

9/24/25
DATE

100 feet Abutters List Report

Laconia, NH
January 28, 2026

Subject Property:

Parcel Number:	13-183-16	Mailing Address:	PARADE REI LLC
CAMA Number:	13-183-16		PO BOX 1926
Property Address:	PICKEREL POND RD		CONCORD, NH 03302

Abutters:

Parcel Number:	12-183-13	Mailing Address:	OUELLETTE DAVE
CAMA Number:	12-183-13		298 PICKEREL POND ROAD
Property Address:	PICKEREL POND RD		LACONIA, NH 03246
Parcel Number:	13-183-15	Mailing Address:	LABRANCHE FAMILY REV TRUST
CAMA Number:	13-183-15		LABRANCHE BRUCE & SOFIA TRUSTEES
Property Address:	140 PICKEREL POND RD		38 S CATHERINE ST
			LACONIA, NH 03246
Parcel Number:	13-183-17	Mailing Address:	OUELLETTE DAVE J & TAMMY L
CAMA Number:	13-183-17		298 PICKEREL POND RD
Property Address:	298 PICKEREL POND RD		LACONIA, NH 03246
Parcel Number:	13-183-2	Mailing Address:	MACIE RENE & RYAN SHEILA
CAMA Number:	13-183-2		285 PICKEREL POND RD
Property Address:	285 PICKEREL POND RD		LACONIA, NH 03246
Parcel Number:	13-183-5	Mailing Address:	COOK ARTHUR J & NANCY E
CAMA Number:	13-183-5		273 PICKEREL POND RD
Property Address:	273 PICKEREL POND RD		LACONIA, NH 03246
Parcel Number:	13-183-6	Mailing Address:	TISBIN LLC
CAMA Number:	13-183-6		396 LAKESIDE AV
Property Address:	255 PICKEREL POND RD		LACONIA, NH 03246
Parcel Number:	13-183-7	Mailing Address:	GAUDET FAMILY CAMP LLC C/O DAVID BUCKLEY
CAMA Number:	13-183-7		1193 BUNGY RD
Property Address:	219 PICKEREL POND RD		COLUMBIA, NH 03576
Parcel Number:	13-183-8	Mailing Address:	PATERSON BRIAN J
CAMA Number:	13-183-8		203 PICKEREL POND RD
Property Address:	203 PICKEREL POND RD		LACONIA, NH 03246
Parcel Number:	14-154-2	Mailing Address:	MARCHIONE FREDERICK & DELLA M
CAMA Number:	14-154-2		53 PARSONAGE DR
Property Address:	53 PARSONAGE DR		LACONIA, NH 03246
Parcel Number:	14-154-3	Mailing Address:	COOPER BRYON C
CAMA Number:	14-154-3		43 PARSONAGE DR
Property Address:	43 PARSONAGE DR		LACONIA, NH 03246

100 feet Abutters List Report

Laconia, NH
January 28, 2026

Parcel Number:	14-154-4	Mailing Address:	LACONIA CITY OF VAC/ LAND LOCKED
CAMA Number:	14-154-4		45 BEACON ST EAST
Property Address:	PARSONAGE DR		LACONIA, NH 03246
Parcel Number:	18-154-5	Mailing Address:	OTTESEN BRYAN A & KAREN A 2022
CAMA Number:	18-154-5		REV TRUST/TRUSTEES
Property Address:	96 PARSONAGE DR		96 PARSONAGE DR
			LACONIA, NH 03246
Parcel Number:	18-154-6	Mailing Address:	FARIS SETH EDWIN & RACHEL L
CAMA Number:	18-154-6		85 PARSONAGE DR
Property Address:	85 PARSONAGE DR		LACONIA, NH 03246
Parcel Number:	18-154-7	Mailing Address:	HENDRICKS A & R 2004 TRUST
CAMA Number:	18-154-7		HENDRICKS GERALD & STACE DICKER
Property Address:	71 PARSONAGE DR		TRUSTEES
			71 PARSONAGE DR
			LACONIA, NH 03246
Parcel Number:	18-155-1	Mailing Address:	RICE JANE P REV TRUST OF 2008 RICE
CAMA Number:	18-155-1		JANE P TRUSTEE
Property Address:	PARADE RD		PO BOX 5
			MOULTONBORO, NH 03254
Parcel Number:	18-155-2	Mailing Address:	BEHAN JOHN W
CAMA Number:	18-155-2		2676 PARADE RD
Property Address:	2676 PARADE RD		LACONIA, NH 03246
Parcel Number:	24-153-6	Mailing Address:	WALLACE LINDA L & WALLACE
CAMA Number:	24-153-6		BRADLEY L SR ESTATE OF
Property Address:	MERE CENTER RD		158 SARAH CR
			LACONIA, NH 03246
Parcel Number:	26-155-1	Mailing Address:	N H STATE OF DNCR
CAMA Number:	26-155-1		172 PEMBROKE RD
Property Address:	PARADE RD		CONCORD, NH 03301

ATTORNEY:
JOHN G. CRONIN, ESQ.
722 CHESTNUT STREET
MANCHESTER, NH 03104

ENGINEER:
BENCHMARK , LLC
50 NASHUA ROAD, SUITE 305
LONDONDERRY, NH

NOTES:

1. SEE SHEET 2 FOR ADDITIONAL NOTES AND INFORMATION.
2. WETLANDS MAPPED ON-SITE BY BLUEMOON ENVIRONMENTAL
   CONCORD, NEW HAMPSHIRE 03301
   NANCY B RENDALL CWS, CSS
3. BOUNDARY SURVEY COMPLETED BY: RANGEWAY LAND SURVEY & DESIGN
   252 DANIEL PLUMMER ROAD
   GOFFSTOWN, NEW HAMPSHIRE 03045

PLAN REFERENCES

1. BCRD PLAN L36 PAGE 47
2. SEE PLAN TITLED "SITE PLAN, LAND OF BARRY LUKATCH WATSON ROAD AND US ROUTE 3, LACONIA NH" DATED SEPTEMBER 14, 1991 BY BRYAN BAILEY LLC #576
3. SEE PLAN TITLE "SUBDIVISION OF LAND FOR BARRY LUKATCH 1048 WATSON ROAD ENDICOTT STREET NORTH/US ROUTE 3 AND HAYES ROAD LACONIA, BELKNAP COUNTY, NEW HAMPSHIRE" DATED JANUARY 03, 2000, SCALE 1"=40' AS PREPARED BY STEVEN J SMITH
4. BCRD PLAN L36 PAGE 99
5. BCRD PLAN L34 PAGE 48
6. BCRD BOOK 3700 PAGE 131 – LOT MERGER

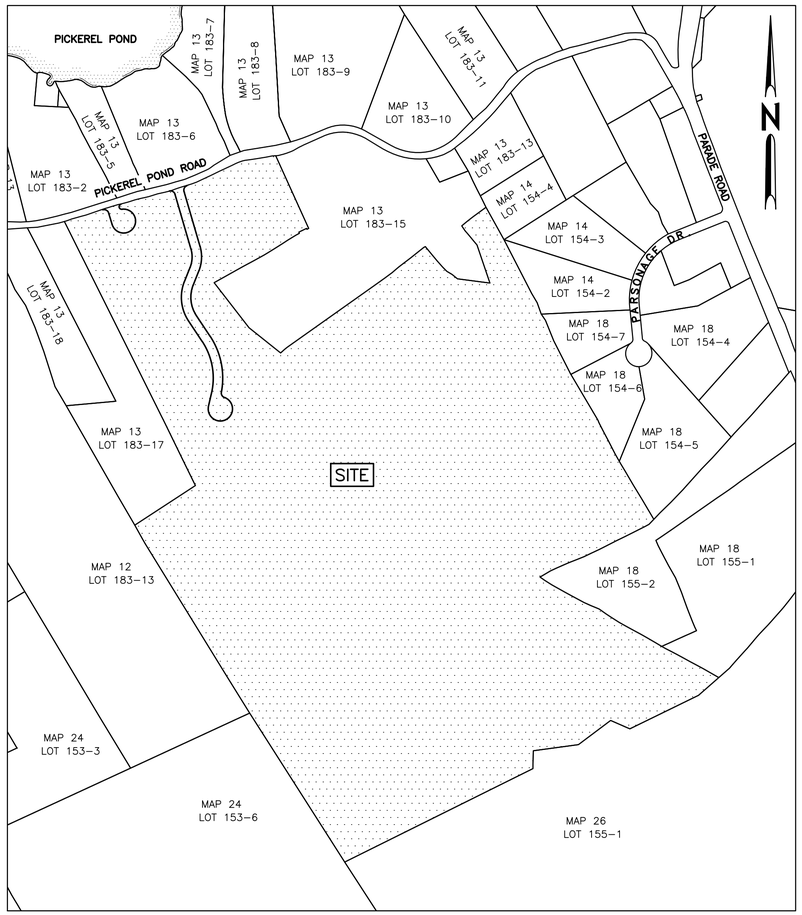
LEGEND:

- IRON PIPE / REBAR / DRILL HOLE FOUND
- DRILL HOLE/ REBAR TO BE SET
- STONE BOUND FOUND/ CONC BOUND FOUND
- BOUND TO BE SET
- TBM TEMPORARY BENCHMARK
- W WELL
- SIGNS/SINGLE & DOUBLE POST
- TEST PIT
- LIGHT POLE
- LIMITS OF DRAINAGE SWALE BY BLUE MOON ENV.
- TREELINE
- STONE WALL
- VGC SGE CCB VERTICAL GRANITE CURB/ SLOPED GRANITE EDGE/ CAPE COD BERM
- EOG EDGE OF GRAVEL
- EOP EOC EDGE OF PAVEMENT/ EDGE OF CONCRETE
- DYL DOUBLE YELLOW LINE
- RETAINING WALL
- CLF PVC CHAIN LINK/PVC FENCE

I HEREBY CERTIFY THAT THE WORK PERFORMED IN THE PREPARATION OF THIS PLAN HAS AN ERROR OF CLOSURE OF 1 IN 10,000 OR BETTER.

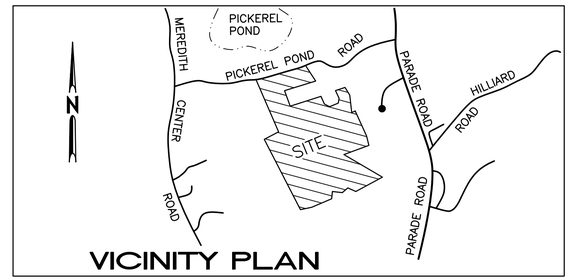
STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 0709 PAUL W. ZARNOWSKI SIGNATURE

RANGEWAY LAND SURVEY & DESIGN LLC
PAUL W ZARNOWSKI



TAX MAP PLAN
1 inch = 400 ft. (APPROX.)

GRAPHIC SCALE
0 400 800
(IN FEET)
1 inch =400 ft.



VICINITY PLAN

SHEET INDEX:

HERON POINT PRESERVE

RESIDENTIAL CLUSTER DEVELOPMENT

PICKEREL POND ROAD
LACONIA, NEW HAMPSHIRE 03246

OWNER OF RECORD/PREPARED FOR
PARADE REI, LLC
160 BOUCHARD STREET
MANCHESTER, NH 03103
BCRD BOOK 3694/PAGE 459

APPROVED BY THE LACONIA PLANNING BOARD

ON: _____ CERTIFIED BY

CHAIRMAN: _____ AND

SECRETARY _____

COVER SHEET

HERON POINT PRESERVE
TAX MAP 13 LOT 183-16
PICKEREL POND ROAD
LACONIA, NEW HAMPSHIRE 03246

OWNER OF RECORD/PREPARED FOR
PARADE REI, LLC
PO BOX 1926
CONCORD, NH 03302
BCRD BOOK 3694/PAGE 459

SCALE: AS NOTED SHEET 1 of 21 DECEMBER 10, 2025

#	DATE	DESCRIPTION

BENCHMARK LLC
Consulting Engineers Land Planners
50 Nashua Road, Suite 305
Londonderry, New Hampshire 03053
Phone: (603) 437-5000

2413 – Subdivision.dwg/1 COVER

GENERAL NOTES:

1. THE PURPOSE OF PLAN IS:
   A.) TO SHOW THE PROPOSED IMPROVEMENTS TO TAX MAP 13 LOT 186-16 NECESSARY TO PERMIT AND CONSTRUCT (26) SINGLES FAMILY HOMES AS A CLUSTER DEVELOPMENT
   B.) TO CONSTRUCT TWO (2) PUBLIC ROADS WITHIN THE HERON POINT PRESERVE PROJECT
2. OWNER OF RECORD: PARADE REI, LLC
   PO BOX 1926
   CONCORD, NH 03302
   BCRD BOOK 3694/PAGE 459
3. PARCEL ZONE: RR1 (RURAL RESIDENTIAL 1)
4. ZONING REQUIREMENTS

LOT SIZE	–	2 ACRES
MIN FRONTAGE	–	250 FEET
MIN FRONT SETBACK	–	40 FEET
MIN SIDE SETBACK	–	25 FEET
MIN REAR SETBACK	–	40 FEET
MAX BUILDING HEIGHT	–	35 FEET
MIN. GREEN AREA	–	65%

5. PARCEL ID: TAX MAP 13 LOT 186-16
6. TOTAL PARCEL AREA: 6,554,500 SQUARE FEET = 150.47 ACRES
7. EXISTING USE: UNDEVELOPED
8. PROPOSED USE: 26 SINGLE FAMILY DETACHED HOMES
9. EXISTING CONDITIONS AND TOPOGRAPHY SHOWN BASED ON AN ON-SITE SURVEY CONDUCTED BETWEEN JANUARY TO APRIL 2025 AND JULY/AUGUST 2025. HORIZONTAL DATUM IS NH STATE PLANE GRID NAD83. ELEVATION DATUM IS NAVD88.
10. BOUNDARY SHOWN FROM BCRD PLAN REFERENCE L 91 PAGE 37 & 38
11. BOUNDARY & FIELD LOCATION OF WETLAND FLAGS IN CONJUNCTION WITH:
    RANGEWAY LAND SURVEY AND DESIGN
    252 DANIEL PLUMMER ROAD
    GOFFSTOWN NH 03045
12. WETLAND AND SOIL MAPPING PROVIDED BY:
    BLUE MOON ENVIRONMENTAL, INC.,
    CONCORD, NH
    NANCY RENDALL CWS, CSS
13. A PORTION OF THIS PROPERTY IS LOCATED WITHIN THE 100-YEAR FLOOD HAZARD ZONE-A AS SHOWN ON THE FEDERAL FLOOD INSURANCE MAPS (F.I.R.M) FOR LACONIA, NEW HAMPSHIRE,
    COMMUNITY PANEL #3300050003B (EFFECTIVE AUGUST 15, 1980)
    COMMUNITY PANEL #3300050004B (EFFECTIVE AUGUST 15, 1980)
14. PICKEREL POND ROAD IS A PUBLIC – CLASS V CITY OWNED AND MAINTAINED ROAD
15. ALL SHEETS TO BE ON FILE AT THE TOWN OF LACONIA PLANNING DEPARTMENT.
16. DENSITY CALCULATIONS:
    MAXIMUM RESIDENTIAL DENSITY = 1 HOME PER 2 ACRES
    150 ACRES X 1 HOME/ 2-ACRES = 75 HOMES
    PROPOSED UNIT COUNT = 26 HOMES
17. GREEN SPACE CALCULATION:
    REQUIRED: 60% OF 150 AC. = 90 ACRES
    PROVIDED: 97% = 146 ACRES
18. PARKING REQUIREMENTS:
    1.5 PARKING SPACES/UNIT X 26 UNITS = 39 SPACES REQUIRED
    26 UNITS W/ GARAGE & EXTERIOR SPACE EACH = 52 SPACES PROVIDED
19. PROPOSED DWELLINGS WILL BE SERVICED BY ON-SITE SEPTIC SYSTEMS AND ON-SITE WELLS
20. PERMITS:
    NH DES ALTERATION OF TERRAIN PERMIT #: PENDING
    NHDES SUBDIVISION APPROVAL #: PENDING
    SEPTIC SYSTEM DESIGNS SHALL BE COMPLETED PRIOR TO ISSUANCE OF A BUILDING PERMIT
    EPA CONSTRUCTION GENERAL PERMIT WILL ALSO BE REQUIRED PRIOR TO THE START OF CONSTRUCTION
21. PLANNING BOARD WAIVERS: SIDEWALKS
    PERIMETER BUFFER REDUCTION ALONG PICKEREL POND ROAD
22. CONDITIONAL USE PERMIT REQUESTS:
    A) TO ALLOW A CLUSTER DEVELOPMENT PER ZONING ORDINANCE ARTICLE VII SECTION 235-40 (B)
    B) WETLAND CONSERVATION & WATER QUALITY (WC) OVERLAY DISTRICT IMPACTS
23. VARIANCES: CASE# ZB2025-010 GRANTED ON SEPTEMBER 15, 2025
    VARIANCE FROM ARTICLE VI SECTION 235-40 B (6)(n)[1][c] TO ALLOW FOR A CUL-DE-SAC THAT WILL BE LONGER THAN THE PRESCRIBED 1,000 FEET AT THIS PROPERTY.
24. ALL SIGNAGE SHALL CONFORM TO THE CITY OF LACONIA ZONING ORDINANCE.
25. TRASH COLLECTION TO BE CURB SIDE PICK UP
26. UTILITY INFORMATION SHOWN IS BASED ON BOTH EXISTING PLANS OF RECORD AND A FIELD SURVEY THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS ARE APPROXIMATE ONLY. BEFORE PLANNING ANY FUTURE CONNECTIONS THE PROPER UTILITY ENGINEERING DEPARTMENTS SHOULD BE CONSULTED AND THE ACTUAL LOCATIONS OF SUBSURFACE STRUCTURES SHOULD BE DETERMINED IN THE FIELD. CALL DIG-SAFE CALL CENTER 1-800-DIG-SAFE, A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
27. LOCATION OF UNDERGROUND UTILITIES SUBJECT TO CHANGE UPON FINAL REVIEW BY GOVERNING UTILITY PROVIDERS.
28. ALL GRADING AROUND UNITS SHALL NOT EXCEED 3:1 (H:V) SLOPES. IN STEEPER AREAS EROSION CONTROL MATS ARE STRONGLY RECOMMENDED.
29. ALL BLASTING SHALL COMPLY WITH NHDOT REQUIREMENTS AND SHALL MEET THE APPROVAL OF THE CITY OF LACONIA FIRE DEPARTMENT.
30. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION. EROSION CONTROL SHALL BE MONITORED AND REPAIRED AS NECESSARY UNTIL DISTURBED AREAS BECOME FULLY ESTABLISHED WITH VEGETATION.
31. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF LACONIA AND THE STATE OF NEW HAMPSHIRE STANDARDS AND SPECIFICATIONS FOR ROADS AND BRIDGE CONSTRUCTION, 2016 EDITION, AND ALL SUBSEQUENT AMENDMENTS.
32. ALL PROPOSED STORM DRAINS TO BE ADS-N-12 OR REINFORCED CONCRETE (RCP) PIPE OR APPROVED EQUAL

ALTERATION OF TERRAIN NOTES:

Env-Wq 1504.06(j) FUGITIVE DUST GENERATED ON SITE SHALL BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000.

Env-Wq 1504.06(k) THIS PROJECT SHALL MEET THE REQUIREMENTS AND INTENT OF RSA 430:51-57 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.

Env-Wq 1504.06(l) CONSTRUCTION PHASING: ALL WORK SHALL BE COMPLETED IN THREE PHASES.

Env-Wq 1505.03 MAXIMUM OPEN AREA ALLOWED: **5 ACRES**

(A) ALL AREAS OF UNSTABILIZED SOIL SHALL BE:
1. TEMPORARILY STABILIZED AS SOON AS PRACTICAL BUT IN ALL CASES WITHIN 45 DAYS OF INITIAL DISTURBANCE, UNLESS A SHORTER TIME IS SPECIFIED BY LOCAL AUTHORITIES, THE CONSTRUCTION SEQUENCE APPROVED AS PART OF THE ISSUED PERMIT, OR AN INDEPENDENT MONITOR; AND
2. PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT IN ALL CASES WITHIN 3 DAYS OF FINAL GRADING.

(B) THE AREA OF UNSTABILIZED SOIL SHALL NOT EXCEED 5 ACRES. SEE THE CONSTRUCTION SEQUENCE NOTES.

Env-Wq 1505.06 COLD WEATHER SITE STABILIZATION:

(A) TO ADEQUATELY PROTECT WATER QUALITY DURING COLD WEATHER AND DURING SPRING RUNOFF, THE ADDITIONAL STABILIZATION TECHNIQUES SPECIFIED BELOW SHALL BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15 THROUGH MAY 1.

(B) SUBJECT TO (C), BELOW, THE AREA OF EXPOSED, UNSTABILIZED SOILS SHALL BE:
(1) LIMITED TO ONE ACRE; AND
(2) PROTECTED AGAINST EROSION BY THE METHODS DESCRIBED IN THIS SECTION PRIOR TO ANY THAW OR SPRING MELT EVENT.

(C) THE ALLOWED AREA OF EXPOSED SOIL MAY BE INCREASED IF A WINTER CONSTRUCTION PLAN IS DEVELOPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST AND SUBMITTED TO THE DEPARTMENT FOR OCTOBER 15 THROUGH MAY 1. THE ONE-ACRE LIMIT.

(D) SUBJECT TO (F) AND (G), BELOW, ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR THAT ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDED AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE AND SECURED WITH ANCHORED NETTING OR TACKIFIER, OR 2 INCHES OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(b). (SEE BELOW)

(E) SUBJECT TO (F) AND (G), BELOW, ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF 15% OR GREATER THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR THAT ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDED AND COVERED WITH A PROPERLY INSTALLED AND ANCHORED EROSION CONTROL BLANKET OR WITH A LEAST 4 INCHES OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(b). (SEE BELOW)

(F) ANCHORED HAY MULCH OR EROSION CONTROL MIX THAT MEETS THE CRITERIA OF ENV-WQ 1506.05(b) SHALL NOT BE INSTALLED OVER SNOW OF GREATER THAN ONE (1) INCH IN DEPTH.

(G) EROSION CONTROL BLANKETS SHALL NOT BE INSTALLED OVER SNOW GREATER THAN ONE (1) INCH IN DEPTH OR ON FROZEN GROUND.

(H) ALL PROPOSED STABILIZATION IN ACCORDANCE WITH (D) OR (E), ABOVE, SHALL BE COMPLETED WITHIN A DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS.

(I) ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% 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, AS DETERMINED BY THE OWNER'S ENGINEERING CONSULTANT.

(J) AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING AREAS WHERE ACTIVE CONSTRUCTION OF THE ROAD OR PARKING AREA HAS STOPPED FOR THE WINTER SEASON SHALL BE PROTECTED WITH A MINIMUM 3 INCH LAYER OF BASE COURSE GRAVELS MEETING THE GRADATION REQUIREMENTS OF NHDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2016, TABLE 304-1, ITEM NO. 304.1, 304.2, OR 304.3.

Env-Wq 1506.05 (b): EROSION CONTROL MIX SHALL:
1. HAVE AN ORGANIC PORTION BETWEEN 25% AND 65%, DRY WEIGHT BASIS THAT IS:
   a. FIBROUS AND ELONGATED SUCH AS FROM SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR EQUIVALENT MANUFACTURED PRODUCTS; AND
   b. NOT COMPRISED OF WOOD CHIPS, BARK CHIPS, GROUND CONTROL DEBRIS, OR REPROCESSED WOOD PRODUCTS;
2. NOT CONTAIN SILTS, CLAYS, OR FINE SANDS;
3. HAVE A PARTICLE SIZE BY WEIGHT OF 100% PASSING A 3-INCH SCREEN, 90% TO 100% PASSING A 1-INCH SCREEN, 70% TO 100% PASSING A 0.75-INCH SCREEN, AND 30% TO 75% PASSING A 0.25-INCH SCREEN; AND
4. HAVE A pH BETWEEN 5.0 AND 8.0.

TURF ESTABLISHMENT NOTES:
1. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
   A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
   B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
   C. A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP AS BEEN INSTALLED.
   D. OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED IN ACCORDANCE WITH ENV-WQ 1506.03.
2. STABILIZATION SHALL BE ACCOMPLISHED BY LOAMING, FERTILIZING, SEEDING AND MULCHING ALL DISTURBED AREAS OTHER THAN UNDER THE PAVEMENT AS FOLLOWS:
   A. LOAM – SCREENED LOAM WITH A MINIMUM DEPTH OF 6"
   B. LIME AND FERTILIZER SHALL BE APPLIED PRIOR TO, OR AT THE TIME OF PERMANENT SEEDING AND INCORPORATED INTO THE SOIL AT THE FOLLOWING RATES:
      LIMESTONE (AGRICULTURAL) 3,000 LBS/ACRE
      COMMERCIAL TURF STARTER FERTILIZER (10-18-10) FOR ESTABLISHMENT ONLY AT 150LBS/ACRE (SUCH AS "GREEN GOLD RENEW")
   C. SEED SELECTION (OR EQUIVALENT) & SEEDING RATES:
      TEMPORARY: ANNUAL RYE GRASS @ 50 LBS/ACRE
      PERMANENT: "ROCKINGHAM COUNTY CONSERVATION MIX" @ 150LBS/ACRE
      CONSISTING OF:
      CREEPING RED FESCUE 35%
      TALL FESCUE 25%
      ANNUAL RYE GRASS 15%
      PERENNIAL RYE GRASS 12%
      KENTUCKY BLUE GRASS 10%
      WHITE CLOVER(LEGUME) 3%
   D. MULCHING SHALL BE APPLIED (FROM MAY TO SEPTEMBER ONLY) AT THE RATE OF 1-1/2-2 TONS/ACRE.
   E. THE RECOMMENDED GRASS MIXTURES AND FERTILIZERS SPECIFIED HEREIN ARE AVAILABLE AT BLUE SEAL FEEDS, NASHUA, NH (603-883-9531)

ENV-WQ 1510 BEST MANAGEMENT PRACTICES FOR BLASTING

ENV-WQ 1510.01 PURPOSE. THE PURPOSE OF THIS PART IS TO ESTABLISH BEST MANAGEMENT PRACTICES FOR BLASTING TO MINIMIZE THE POTENTIAL FOR GROUNDWATER CONTAMINATION, TO ENSURE THAT THE GROUNDWATER CAN BE USED FOR EXISTING AND FUTURE DRINKING WATER SUPPLY SOURCES.

ENV-WQ 1510.02 APPLICABILITY. THIS PART SHALL APPLY TO ALL PROJECTS FOR WHICH AN AOT PERMIT IS REQUIRED THAT WILL INVOLVE BLASTING OF BEDROCK.

ENV-WQ 1510.03 LOADING PRACTICES.
THE FOLLOWING BLAST HOLE LOADING PRACTICES SHALL BE IMPLEMENTED:
(a) THE DRILLER SHALL MAINTAIN DRILLING LOGS TO DOCUMENT:
   (1) THE DEPTHS AND LENGTHS OF VOIDS, CAVITIES, AND FAULT ZONES OR OTHER WEAK ZONES ENCOUNTERED; AND
   (2) GROUNDWATER CONDITIONS;
(b) THE DRILLER SHALL COMMUNICATE THE CONTENTS OF THE DRILLING LOGS DIRECTLY TO THE BLASTER;
(c) EXPLOSIVE PRODUCTS SHALL BE MANAGED ON SITE SUCH THAT THEY ARE:
   (1) USED IN THE BOREHOLE;
   (2) RETURNED TO THE DELIVERY VEHICLE; OR
   (3) PLACED IN SECURE CONTAINERS FOR OFF-SITE DISPOSAL;
(d) SPILLAGE AROUND THE BOREHOLE SHALL BE:
   (1) PLACED IN THE BOREHOLE; OR
   (2) CLEANED UP AND RETURNED TO AN APPROPRIATE VEHICLE FOR HANDLING OR PLACEMENT IN SECURED CONTAINERS FOR OFF-SITE DISPOSAL;
(e) LOADED EXPLOSIVES SHALL BE DETONATED AS SOON AS POSSIBLE AND NOT LEFT IN THE BLAST HOLES OVERNIGHT, UNLESS WEATHER OR OTHER SAFETY CONCERNS REASONABLY DICTATE THAT DETONATION SHOULD BE POSTPONED;
(f) LOADING EQUIPMENT SHALL BE CLEANED IN AN AREA WHERE WASTEWATER CAN BE PROPERLY CONTAINED AND HANDLED IN A MANNER THAT PREVENTS RELEASE OF CONTAMINANTS TO THE ENVIRONMENT; AND
(g) EXPLOSIVES SHALL BE LOADED IN ACCORDANCE WITH INDUSTRY STANDARD PRACTICES FOR PRIMING, STEMMING, DECKING AND COLUMN RISE TO MAINTAIN GOOD CONTINUITY IN THE COLUMN LOAD TO PROMOTE COMPLETE DETONATION.

ENV-WQ 1510.04 EXPLOSIVE SELECTION. EXPLOSIVE PRODUCTS SHALL BE SELECTED THAT ARE:
(a) APPROPRIATE FOR SITE CONDITIONS AND SAFE BLAST EXECUTION; AND
(b) HAVE THE APPROPRIATE WATER RESISTANCE FOR THE SITE CONDITIONS PRESENT.

ENV-WQ 1510.05 PREVENTION OF MISFIRES. INDUSTRY-STANDARD PRACTICES SHALL BE IMPLEMENTED TO PREVENT MISFIRES.

ENV-WQ 1510.06 MUCK AND ROCK MANAGEMENT.
(a) FOR PURPOSES OF THIS PART, THE FOLLOWING DEFINITIONS APPLY:
   (1) "BLASTED MATERIAL" MEANS ALL OF THE EARTH MATERIAL LOOSENED AS A RESULT OF THE BLASTING;
   (2) "MUCK" MEANS THE BLASTED MATERIAL REMAINING AFTER THE ROCKS HAVE BEEN REMOVED; AND
   (3) "ROCKS" MEANS THE LARGER PIECES OF BLASTED MATERIAL THAT ARE SEPARATED FROM THE MUCK FOR USE ELSEWHERE, INCLUDING FOR FEEDSTOCK OF A ROCK CRUSHING OPERATION.
(b) MUCK SHALL BE REMOVED FROM THE BLAST AREA AS SOON AS REASONABLY POSSIBLE.
(c) ROCKS SHALL BE MANAGED SO AS TO PREVENT WATER SUPPLY WELLS OR SURFACE WATERS FROM BEING CONTAMINATED BY RUNOFF.

ENV-WQ 1510.07 SPILL PREVENTION MEASURES AND SPILL MITIGATION.
(a) FUEL AND OTHER REGULATED SUBSTANCES SHALL BE MANAGED AS REQUIRED BY ENV-WQ 401.04.
(b) PERSONNEL WORKING AT THE BLAST SITE SHALL BE TRAINED IN HOW TO RESPOND TO A SPILL OF THE REGULATED SUBSTANCES BEING USED AT THE SITE.

ENV-WQ 1510.08 FUELING AND MAINTENANCE OF CONSTRUCTION EQUIPMENT.
(a) IF ANY CONSTRUCTION EQUIPMENT, INCLUDING BUT NOT LIMITED TO EARTHMOVING, EXCAVATION, AND BORING EQUIPMENT, WILL BE FUELED FROM A TANK TRUCK OR OTHER CONTAINER THAT IS MOVED AROUND THE SITE, THE FOLLOWING SHALL APPLY:
   (1) PORTABLE CONTAINMENT EQUIPMENT THAT IS SIZED TO CONTAIN THE MOST LIKELY VOLUME OF FUEL TO BE SPILLED DURING A FUEL TRANSFER SHALL BE USED, WHERE THE MOST LIKELY VOLUME TO BE SPILLED IS DETERMINED BASED ON THE FUEL TRANSFER RATE, THE AMOUNT OF FUEL BEING TRANSFERRED, THE DISTANCE BETWEEN THE HOSE NOZZLE AND PUMP SHUT OFF SWITCH, AND THE RESPONSE TIME OF PERSONNEL AND EQUIPMENT AVAILABLE AT THE FACILITY;
   (2) THE CONTAINMENT EQUIPMENT SHALL BE POSITIONED TO CATCH ANY FUEL SPILLS DUE TO OVERFILLING THE EQUIPMENT AND ANY OTHER SPILLS THAT MIGHT OCCUR AT OR NEAR THE FUEL FILLER PORT TO THAT EQUIPMENT;
   (3) THE TYPE OF CONTAINMENT EQUIPMENT USED AND ITS POSITIONING AND USE SHALL ACCOUNT FOR ALL OF THE DRIP POINTS ASSOCIATED WITH THE FUEL FILLING PORT AND THE HOSE FROM THE FUEL DELIVERY TRUCK; AND
   (4) PERSONNEL SHALL NOT LEAVE THE IMMEDIATE AREA WHILE FUEL IS BEING TRANSFERRED, TO ENSURE THAT ANY SPILLS WILL BE OF LIMITED VOLUME.
(b) IF THE SITE WILL HAVE A FIXED LOCATION FOR FUELING CONSTRUCTION EQUIPMENT, THE FOLLOWING SHALL APPLY:
   1. ALL FUEL CONTAINERS, INCLUDING BUT NOT LIMITED TO SKID-MOUNTED TANKS, DRUMS, AND FIVE GALLON CANS, SHALL HAVE SECONDARY CONTAINMENT THAT:
      a. IS CAPABLE OF CONTAINING 110% OF THE VOLUME OF THE LARGEST FUEL STORAGE CONTAINER; AND
      b. HAS AN IMPERVIOUS FLOOR;
   2. SECONDARY CONTAINMENT FOR TANKS MAY COMPRISE A METAL, PLASTIC, POLYMER OR PRECAST CONCRETE VAULT PROVIDING 110 PERCENT OF THE VOLUME OF THE LARGEST FUEL STORAGE CONTAINER;
   3. FOR FUEL CONTAINERS, SECONDARY CONTAINMENT MAY COMPRISE CONTAINMENT PALLETS;
   4. THE AREA WHERE FUEL IS TRANSFERRED SHALL BE A FLAT, IMPERVIOUS AREA THAT:
      a. IS ADJACENT TO THE FUEL CONTAINER(S); AND
      b. EXTENDS BEYOND THE FULL REACH, OR LENGTH, OF THE FUEL HOSE; AND
   5. SECONDARY CONTAINMENT AREAS MAY BE IN THE FORM OF A BASIN THAT IS:
      a. SLOPED DOWN TO A CENTRAL LOW POINT OR BERMED ALONG THE PERIMETER;
      b. LINED WITH A CONTINUOUS SHEET OF 20 MIL OR THICKER POLYMER MATERIAL OR APPROPRIATE GEOMEMBRANE LINER; AND
      c. BACKFILLED WITH AT LEAST 6 INCHES OF SAND.

ENV-WQ 1504.17 WILDLIFE PROTECTION NOTES

1. ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES ON THE PROJECT SITE SHALL BE REPORTED IMMEDIATELY TO THE NHF&G NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV, WITH THE EMAIL SUBJECT LINE CONTAINING THE NHB DATACHECK TOOL RESULTS LETTER ASSIGNED NUMBER (NHB24-1226), THE PROJECT NAME, AND THE TERM WILDLIFE SPECIES OBSERVATION;
2. PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHF&G IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION, AS FEASIBLE;
3. 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; AND
4. THE NHF&G, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.

APPROVED BY THE LACONIA PLANNING BOARD

ON: _____ CERTIFIED BY

CHAIRMAN: _____ AND

SECRETARY _____

NOTES

HERON POINT PRESERVE

TAX MAP 13 LOT 183-16

PICKEREL POND ROAD

LACONIA, NEW HAMPSHIRE 03246

OWNER OF RECORD/PREPARED FOR
PARADE REI, LLC
PO BOX 1926
CONCORD, NH 03302
BCRD BOOK 3694/PAGE 459

SCALE: 1"=30' SHEET 2 of 21 DECEMBER 10, 2025

#	DATE	DESCRIPTION

BENCHMARK LLC
Consulting Engineers Land Planners
50 Nashua Road, Suite 305
Londonderry, New Hampshire 03053
Phone: (603) 437-5000

TAX MAP 13 LOT 183-002
N/F RENE MACIE & SHEILA RYAN
285 PICKEREL POND ROAD
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 1777/PAGE 553
PARCEL ZONE: RR-1

TAX MAP 13 LOT 183-005
N/F ARTHUR & NANCY COOK
273 PICKEREL POND ROAD
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 2033/PAGE 209
PARCEL ZONE: RR-1

TAX MAP 13 LOT 183-006
N/F TISBIN LLC
396 LAKESIDE AVENUE
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 3261/PAGE 603
PARCEL ZONE: RR-1

TAX MAP 13 LOT 183-007
N/F GAUDET DAMILY CAMP LLC
1193 QUINCY ROAD
COLUMBIA NEW HAMPSHIRE 03576
BCRD PLAN 2706/PAGE 362
PARCEL ZONE: RR-1

TAX MAP 13 LOT 183-018
N/F JENNIFER & CASEY KREITZER
316 PICKEREL POND ROAD
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 1919/PAGE 59
PARCEL ZONE: RR-1

TAX MAP 13 LOT 183-017
N/F DAVID & TAMMY OUELLETTE
236 PICKEREL POND ROAD
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 1881/PAGE 350
PARCEL ZONE: RR-1

TAX MAP 13 LOT 183-15
N/F LABRANCHE FAMILY REV TRUST
38 SOUTH CATHERINE STREET
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 3533/PAGE 737
PARCEL ZONE: RR-1

TAX MAP 14 LOT 154-002
N/F FREDERICK & DELLA MARCHIONE
53 PARSONAGE DRIVE
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 1344/PAGE 268
PARCEL ZONE: RR-1

PICKEREL POND ROAD

IRON PIPE FOUND UP 0.6'

SHED ENCROACHMENT

COVER-IT ENCROACHMENT

EDGE OF WETLANDS BY BLUE MOON ENV.

REBAR SET PER BOUNDARY LINE AGREEMENT

IRON PIPE FOUND UP 5.2'

IRON PIPE FOUND UP 3.4'

IRON PIPE FOUND

IRON PIPE FOUND UP 3.2'

IRON PIPE FOUND

BARB WIRE W/ BLUE FLAGGING

REBAR SET @ CENTERLINE OF WALL PER BOUNDARY LINE AGREEMENT

DH SET @ CORNER

DH SET BEGIN SW

DH SET END SW

DH SET

BARB WIRE

MAGSPIKE FOUND IN DRILL HOLE @ SW-T

IRON PIPE FOUND UP 0.8'

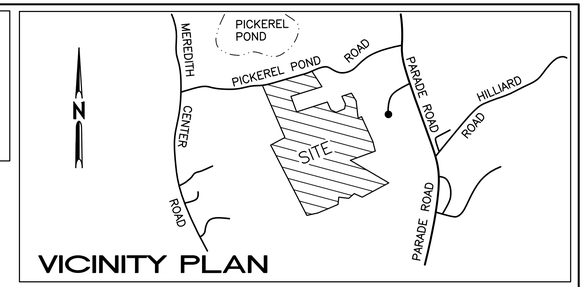
IRON PIPE FOUND UP 1.2'

DRILL HOLE SET @ SW CORNER

DH SET @SW CORNER

LEGEND:

- IRON ROD/REBAR DRILL HOLE SET/FOUND
- IRON ROD/REBAR DRILL HOLE TO BE SET
- PROPERTY LINE
- STONEWALL
- WIRE FENCE



VICINITY PLAN

WETLAND NOTES:

1. Wetland boundaries as flagged were delineated by Nancy B. Rendall, Certified Wetland Scientist, #073 in April-July, 2025 and represent site conditions at that time.
2. Wetland delineation was performed to the standards in the "Regional Supplement to the Corps of Engineers Wetland Delineation Manual Northcentral and Northeast Region (Version 2.0), USACE, January, 2012."
3. Hydric soils were determined in accordance with the protocol in "Field Indicators of Hydric Soils in the United States - A Guide for Identifying and Delineating Hydric soils, NRCS, Version 8.2, 2018/2021" and "Version 4 of the Field Indicators for Identifying Hydric Soils in New England."
4. Determination of wetland vegetation was assessed using the National Wetland Plant List, Version 3.3. U.S. Army Corps of Engineers 2019.
5. Wetlands were classified using the USFWS Methodology, "Classification of Wetlands and Deepwater Habitats, Cowardin, et al, 1979."

STATE OF NEW HAMPSHIRE
NANCY B. RENDALL
No. 073
CERTIFIED WETLAND SCIENTIST

I HEREBY CERTIFY THAT THE WORK PERFORMED IN THE PREPARATION OF THIS PLAN HAS AN ERROR OF CLOSURE OF 1 IN 10,000 OR BETTER.

STATE OF NEW HAMPSHIRE
No. 0709
PAUL W. ZARNOWSKI
LAND SURVEYOR
SIGNATURE

RANGEWAY LAND SURVEY & DESIGN LLC
PAUL W ZARNOWSKI

NOTES:

1. SEE SHEET 2 FOR ADDITIONAL NOTES AND INFORMATION.
2. WETLANDS MAPPED ON-SITE BY BLUEMOON ENVIRONMENTAL CONCORD, NEW HAMPSHIRE 03301 NANCY B RENDALL CWS, CSS
3. BOUNDARY SURVEY COMPLETED BY: RANGEWAY LAND SURVEY & DESIGN 252 DANIEL PLUMMER ROAD GOFFSTOWN, NEW HAMPSHIRE 03045
4. HORIZONTAL DATUM IS NH STATE PLANE GRID NAD83. ELEVATION DATUM IS NAVD88.

GRAPHIC SCALE
100 0 100 200
(IN FEET)
1 inch = 100 ft.

TAX MAP 13
LOT 183-016
6,554,500 SQ. FT.
150.47 ACRES

MATCHLINE SHEET 4

EXISTING CONDITIONS PLAN

HERON POINT PRESERVE

TAX MAP 13 LOT 183-16
PICKEREL POND ROAD
LACONIA, NEW HAMPSHIRE 03246

OWNER OF RECORD/PREPARED FOR
PARADE REI, LLC
PO BOX 1926
CONCORD, NH 03302
BCRD BOOK 3694/PAGE 459

SCALE: 1"=100' SHEET 3 of 15 DECEMBER 10, 2025

#	DATE	DESCRIPTION

BENCHMARK LLC
Consulting Engineers Land Planners
50 Nashua Road, Suite 305
Londonderry, New Hampshire 03053
Phone: (603) 437-5000

2413 - Existing.dwg/3 EXISTING-1

MATCHLINE SHEET 3

N

TAX MAP 13
LOT 183-016
6,554,500 SQ. FT.
150.47 ACRES

PLAN REFERENCES

PLAN BOOK 63/PAGE 43
PLAN BOOK 75/PAGE 46
PLAN BOOK 76/PAGE 10
PLAN BOOK 76/PAGE 37
PLAN BOOK 80/PAGE 69
PLAN BOOK 98 PAGE 71
PLAN BOOK 99/PAGE 71

ALSO SEE PLAN BY STATE OF NEW HAMPSHIRE DEPARTMENT OF NATURAL AND CULTURAL RESOURCES – DIVISION OF FOREST & LANDS
TAX MAP 26 BLOCK 155, LOTS 1 & 2 BOUNDARY PLAN OF PRESCOTT STATE FOREST ROUTE 106 LACONIA, BELKNAP COUNTY, NEW HAMPSHIRE
DATED FEBRUARY 28, 2019, SCALE 1"=150'
PLAN IS NOT RECORDED

DEED REFERENCES

BCRD BOOK 2577/PAGE 403
BCRD BOOK 828/PAGE 525
BSRD BOOK 2711/PAGE 01
BCRD BOOK 3095/PAGE 764
BCRD BOOK 3541/PAGE 734
BCRD BOOK 3533/PAGE 737
BCRD BOOK 1350/PAGE 696
BCRD BOOK 1881/PAGE 350
BCRD BOOK 809/PAGE 384

TAX MAP 18 LOT 154-005
N/F BRYAN & KAREN OTTESEN 2022 REV TRUST
96 PARSONAGE DRIVE
LACONIA, NEW HAMPSHIRE 03246
BCRD PLAN 2541/PAGE 734
PARCEL ZONE: RR-1

TAX MAP 18 LOT 154-006
N/F SETH EDWIN & RACHEL FARIS
85 PARSONAGE DRIVE
LACONIA, NEW HAMPSHIRE 03246
BCRD PLAN 3280/PAGE 517
PARCEL ZONE: RR-1

I HEREBY CERTIFY THAT THE WORK PERFORMED IN THE PREPARATION OF THIS PLAN HAS AN ERROR OF CLOSURE OF 1 IN 10,000 OR BETTER.

STATE OF NEW HAMPSHIRE — No. 0709 — PAUL W. ZARNOWSKI — LICENSED LAND SURVEYOR

SIGNATURE

RANGEWAY LAND SURVEY & DESIGN LLC
PAUL W ZARNOWSKI

NOTES:

1. SEE SHEET 2 FOR ADDITIONAL NOTES AND INFORMATION.
2. WETLANDS MAPPED ON-SITE BY BLUEMOON ENVIRONMENTAL CONCORD, NEW HAMPSHIRE 03301 NANCY B RENDALL CWS, CSS
3. BOUNDARY SURVEY COMPLETED BY: RANGEWAY LAND SURVEY & DESIGN 252 DANIEL PLUMMER ROAD COFFSTOWN, NEW HAMPSHIRE 03045
4. HORIZONTAL DATUM IS NH STATE PLANE GRID NAD83. ELEVATION DATUM IS NAVD88.

STATE OF NEW HAMPSHIRE — NANCY B. RENDALL — No. 073 — CERTIFIED WETLAND SCIENTIST

IRON PIPE FOUND UP 3'
N30°48'23"W 287.01'
N21°42'48"W 46.59'
N28°05'15"W 163.50'
N28°17'00"W 34.33'
N30°43'55"W 352.87'
N42°39'27"E 34.47'
FIELD STONE BOUND FND
IRON PIPE FOUND UP 3'
N63°34'44"E 322.33'
N65°39'46"E 183.74'
N63°37'07"E 133.58'
IRON PIPE FOUND UP 3' @ SW "T"
N58°24'16"W 159.06'
N62°12'15"W 24.61'
N63°33'10"W 135.21'
N65°53'09"W 32.58'
N56°58'41"W 105.12'
N60°38'31"W 91.52'
N60°48'22"W 190.38'
IRON PIPE FOUND UP 3' @ SW "T"
S61°08'04"E 344.57'
TAX MAP 18 LOT 155-001
N/F JANE RICE REV TRUST 2009
PO BOX 5
MOULTONBORO NEW HAMPSHIRE 03254
BCRD PLAN 3099/PAGE 764
PARCEL ZONE: RR-1

TAX MAP 18 LOT 155-002
N/F JOHN BEHAN
2676 PARADE ROAD
LACONIA, NEW HAMPSHIRE 03246
BCRD PLAN 2711/PAGE 001
PARCEL ZONE: RR-1

PLAN BOOK 80/PAGE 69

IRON PIPE FOUND DOWN 0.3'
S30°23'41"E 1202.80'
S38°27'48"E 898.34'
MAGNETIC LOCATION FOUND DOWN 2' W/ PVC WITNESS
N64°09'28"E 1027.25'
BLAZED TREELINE W/ WIRE FENCE
DRILL HOLE SET
DRILL HOLE SET
N04°31'46"W 92.19'
N82°51'58"E 246.84'
IRON PIPE FND UP 1.5' SW
N52°19'53"E 202.21'
IRON PIPE FND UP 0.8'
DRILL HOLE SET IN SW
S80°08'00"E 114.59'
DRILL HOLE SET IN SW
DRILL HOLE END SW
N66°06'33"E 306.80'
BLAZED TREELINE WIRE FENCE
N67°55'27"E 95.07'
DRILL HOLE SW CORNER
N48°23'53"E 130.83'

TAX MAP 24 LOT 153-006
N/F ESTATE OF BRADLEY L WALLACE ST
158 SARA CIRCLE
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 809/PAGE 384
PARCEL ZONE: RR-1

TAX MAP 26 LOT 155-001
N/F STATE OF NH DNCR
172 PEMBROKE ROAD
CONCORD NEW HAMPSHIRE 03301
BCRD PLAN 219/PAGE 007
PARCEL ZONE: RR-1

GRAPHIC SCALE
100 0 100 200
(IN FEET)
1 inch = 100 ft.

EXISTING CONDITIONS PLAN

HERON POINT PRESERVE

TAX MAP 13 LOT 183-16
PICKEREL POND ROAD
LACONIA, NEW HAMPSHIRE 03246

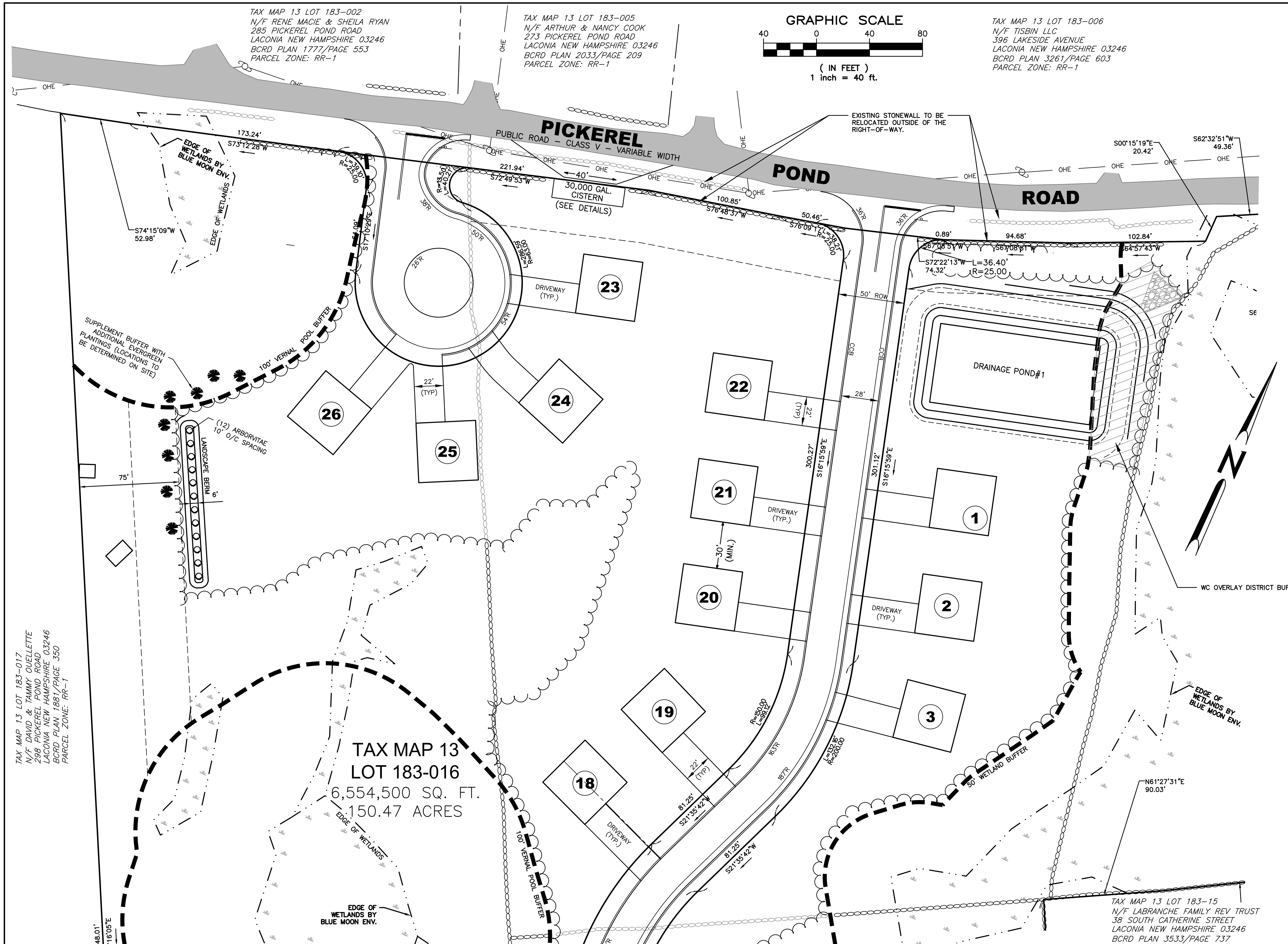
OWNER OF RECORD/PREPARED FOR
PARADE REI, LLC
PO BOX 1926
CONCORD, NH 03302
BCRD BOOK 3694/PAGE 459

SCALE: 1"=100' SHEET 4 of 15 DECEMBER 10, 2025

#	DATE	DESCRIPTION

BENCHMARK LLC
Consulting Engineers Land Planners
50 Nashua Road, Suite 305
Londonderry, New Hampshire 03053
Phone: (603) 437-5000

2413 – Existing.dwg/4 EXISTING-2


GRAPHIC SCALE
40 0 40 80
(IN FEET)
1 inch = 40 ft.
TAX MAP 13 LOT 183-002
N/F RENE MACIE & SHEILA RYAN
285 PICKEREL POND ROAD
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 1777/PAGE 553
PARCEL ZONE: RR-1
TAX MAP 13 LOT 183-005
N/F ARTHUR & NANCY COOK
273 PICKEREL POND ROAD
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 2033/PAGE 209
PARCEL ZONE: RR-1
TAX MAP 13 LOT 183-006
N/F TISBIN LLC
396 LAKESIDE AVENUE
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 3261/PAGE 603
PARCEL ZONE: RR-1
PICKEREL POND ROAD
PUBLIC ROAD - CLASS V - VARIABLE WIDTH
EXISTING STONEWALL TO BE RELOCATED OUTSIDE OF THE RIGHT-OF-WAY.
30,000 GAL. CISTERN
(SEE DETAILS)
EDGE OF WETLANDS BY BLUE MOON ENV.
EDGE OF WETLANDS
SUPPLEMENT BUFFER WITH ADDITIONAL EVERGREEN PLANTINGS (LOCATIONS TO BE DETERMINED ON SITE)
100' VERNAL POOL BUFFER
(12) ARBORVITAE 10' O/C SPACING
LANDSCAPE BERM
DRIVEWAY (TYP.)
DRAINAGE POND#1
50' ROW
30' (MIN.)
50' WETLAND BUFFER
WC OVERLAY DISTRICT BUFFER IMPACT AREA-A
TAX MAP 13 LOT 183-017
N/F DAVID & TAMMY OUELLETTE
298 PICKEREL POND ROAD
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 1881/PAGE 350
PARCEL ZONE: RR-1
TAX MAP 13
LOT 183-016
6,554,500 SQ. FT.
150.47 ACRES
TAX MAP 13 LOT 183-15
N/F LABRANCHE FAMILY REV TRUST
38 SOUTH CATHERINE STREET
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 3533/PAGE 737
PARCEL ZONE: RR-1
1
2
3
18
19
20
21
22
23
24
25
26

NOTES:

1. SEE SHEET 2 FOR ADDITIONAL NOTES AND INFORMATION.
2. WETLANDS MAPPED ON-SITE BY BLUEMOON ENVIRONMENTAL, CONCORD, NEW HAMPSHIRE 03301, NANCY B RENDALL CWS, CSS
3. BOUNDARY SURVEY COMPLETED BY: RANGEWAY LAND SURVEY & DESIGN, 252 DANIEL PLUMMER ROAD, GOFFSTOWN, NEW HAMPSHIRE 03045

I HEREBY CERTIFY THAT THE WORK PERFORMED IN THE PREPARATION OF THIS PLAN HAS AN ERROR OF CLOSURE OF 1 IN 10,000 OR BETTER.

RANGEWAY LAND SURVEY & DESIGN LLC
PAUL W ZARNOWSKI

STATE OF NEW HAMPSHIRE — PAUL W. ZARNOWSKI — No. 0709 — LICENSED LAND SURVEYOR — SIGNATURE

LEGEND:

- IRON PIPE / REBAR DRILL HOLE FOUND
- DRILL HOLE/ REBAR TO BE SET
- STONE BOUND FOUND/ CONC BOUND FOUND
- BOUND TO BE SET
- TBM TEMPORARY BENCHMARK
- WELL
- SIGNS/SINGLE & DOUBLE POST
- TEST PIT
- LIGHT POLE
- EDGE OF WETLAND BY BLUE MOON ENV.
- TREELINE
- STONE WALL
- VGC SGE CCB VERTICAL GRANITE CURB/ SLOPED GRANITE EDGE/ CAPE COD BERM
- EOG EDGE OF GRAVEL
- EOP EOC EDGE OF PAVEMENT/ EDGE OF CONCRETE
- DYL DOUBLE YELLOW LINE
- RETAINING WALL
- CLF PVC CHAIN LINK/PVC FENCE

STATE OF NEW HAMPSHIRE — NANCY B. RENDALL — No. 073 — CERTIFIED WETLAND SCIENTIST

SITE PLAN

HERON POINT PRESERVE

TAX MAP 13 LOT 183-16
PICKEREL POND ROAD
LACONIA, NEW HAMPSHIRE 03246

OWNER OF RECORD/PREPARED FOR
PARADE REI, LLC
PO BOX 1926
CONCORD, NH 03302
BCRD BOOK 3694/PAGE 459

SCALE: 1"=40' SHEET 5 of 21 DECEMBER 10, 2025

APPROVED BY THE LACONIA PLANNING BOARD

ON: ______________________ CERTIFIED BY

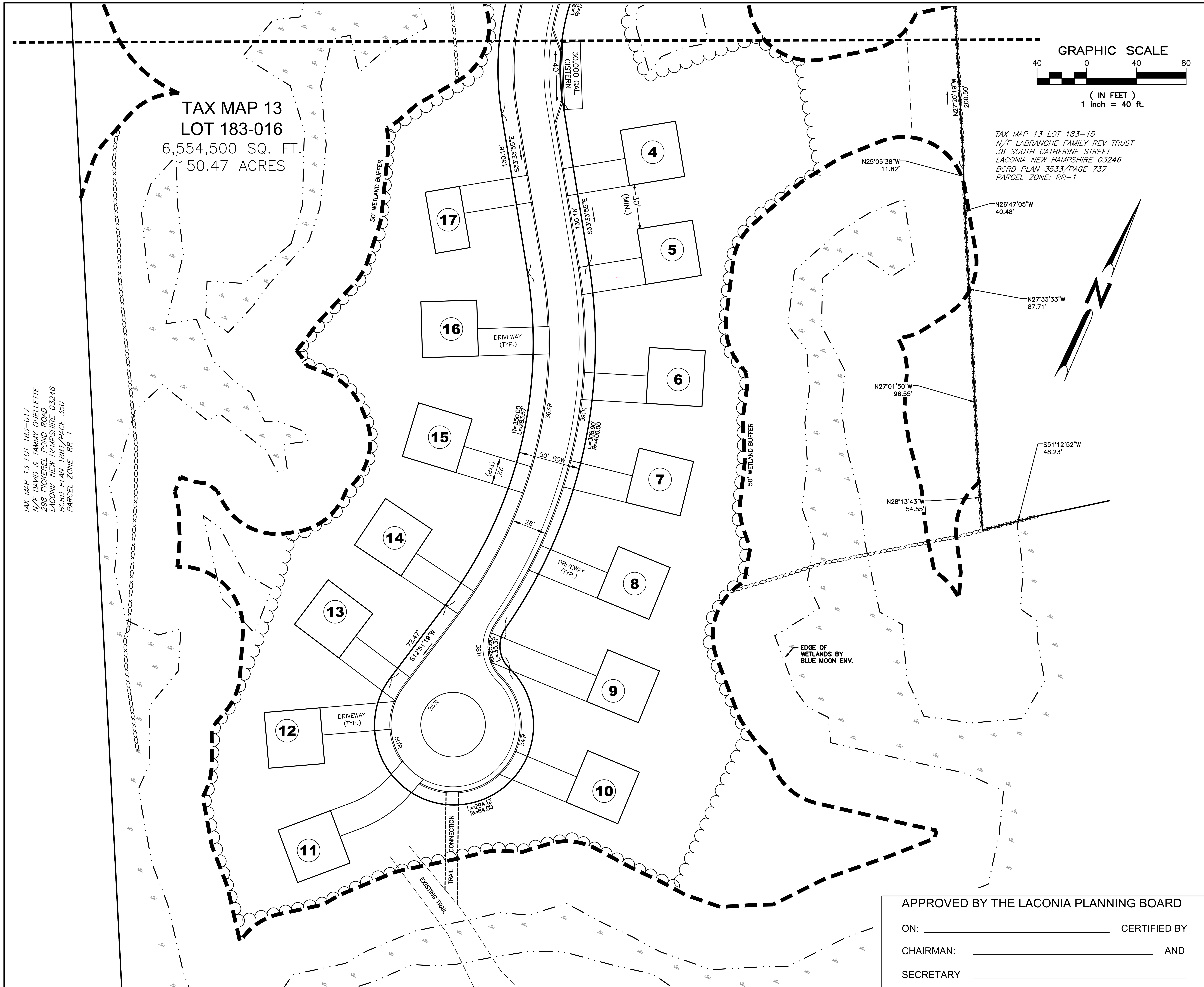
CHAIRMAN: ______________________ AND

SECRETARY ______________________

#	DATE	DESCRIPTION

BENCHMARK LLC
Consulting Engineers Land Planners
50 Nashua Road, Suite 305
Londonderry, New Hampshire 03053
Phone: (603) 437-5000

2413 - Subdivision.dwg/5 SITE



NOTES:

1. SEE SHEET 2 FOR ADDITIONAL NOTES AND INFORMATION.
2. WETLANDS MAPPED ON-SITE BY BLUEMOON ENVIRONMENTAL, CONCORD, NEW HAMPSHIRE 03301, NANCY B RENDALL CWS, CSS
3. BOUNDARY SURVEY COMPLETED BY: RANGEWAY LAND SURVEY & DESIGN, 252 DANIEL PLUMMER ROAD, GOFFSTOWN, NEW HAMPSHIRE 03045

I HEREBY CERTIFY THAT THE WORK PERFORMED IN THE PREPARATION OF THIS PLAN HAS AN ERROR OF CLOSURE OF 1 IN 10,000 OR BETTER.

RANGEWAY LAND SURVEY & DESIGN LLC
PAUL W ZARNOWSKI

STATE OF NEW HAMPSHIRE — PAUL W. ZARNOWSKI — No. 0709 — LICENSED LAND SURVEYOR — SIGNATURE

LEGEND:

- IRON PIPE / REBAR DRILL HOLE FOUND
- DRILL HOLE/ REBAR TO BE SET
- STONE BOUND FOUND/ CONC BOUND FOUND
- BOUND TO BE SET
- TBM TEMPORARY BENCHMARK
- WELL
- SIGNS/SINGLE & DOUBLE POST
- TEST PIT
- LIGHT POLE
- LIMITS OF DRAINAGE SWALE BY BLUE MOON ENV.
- TREELINE
- STONE WALL
- VGC SGE CCB — VERTICAL GRANITE CURB/ SLOPED GRANITE EDGE/ CAPE COD BERM
- EOG — EDGE OF GRAVEL
- EOP EOC — EDGE OF PAVEMENT/ EDGE OF CONCRETE
- DYL — DOUBLE YELLOW LINE
- RETAINING WALL
- CLF PVC — CHAIN LINK/PVC FENCE

STATE OF NEW HAMPSHIRE — NANCY B. RENDALL — No. 073 — CERTIFIED WETLAND SCIENTIST

SITE PLAN

HERON POINT PRESERVE

TAX MAP 13 LOT 183-16
PICKEREL POND ROAD
LACONIA, NEW HAMPSHIRE 03246

OWNER OF RECORD/PREPARED FOR
PARADE REI, LLC
PO BOX 1926
CONCORD, NH 03302
BCRD BOOK 3694/PAGE 459

SCALE: 1"=40' SHEET 6 of 21 DECEMBER 10, 2025

APPROVED BY THE LACONIA PLANNING BOARD

ON: ______________________ CERTIFIED BY

CHAIRMAN: ______________________ AND

SECRETARY ______________________

#	DATE	DESCRIPTION

BENCHMARK LLC
Consulting Engineers Land Planners
50 Nashua Road, Suite 305
Londonderry, New Hampshire 03053
Phone: (603) 437-5000

2413 – Subdivision.dwg/6 SITE(2)

LEGEND:

- CONDOMINIUM UNITS (NOT YET BEGUN)
- CONDOMINIUM UNITS (NOT YET COMPLETED)
- CONDOMINIUM UNITS (COMPLETED)
- LIMITS OF LIMITED CONDOMINIUM AREA (LCA)
- 36'R RADIAL DIMENSION

GRAPHIC SCALE

60 0 60 120

(IN FEET)
1 inch = 60 ft.

LAND SURVEYORS CERTIFICATION

THIS PLAN IS A CONDOMINIUM INSTRUMENT UNDER R.S.A. CHAPTER 356-B AND IS NOT A SUBDIVISION OF LAND.

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN (R.S.A. 676:18).

I CERTIFY THAT THIS SURVEY PLAN IS ACCURATE AND IN COMPLIANCE UNDER R.S.A. 356-B.20.I AND THAT UNITS AS SHOWN ARE COMPLETED TO THE EXTENT DEPICTED THEREON

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR
No. 0709
PAUL W. ZARNOWSKI
SIGNATURE

RANGEWAY LAND SURVEYING & DESIGN, INC. DATE
BY: PAUL W. ZARNOWSKI LLS.

TAX MAP 13 LOT 183-017
N/F DAVID & TAMMY OUELLETTE
298 PICKEREL POND ROAD
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 1881/PAGE 350
PARCEL ZONE: RR-1

OPEN SPACE
1548.01'
S27°16'05"E
OPEN SPACE
75' PERIMETER BUFFER
PROP. WELL (TYP)
S74°15'09"W 52.98'
S72°12'28"W 173.24'
50' WETLAND BUFFER
LIMITS OF WETLANDS
TRAIL ACCESS
DUCK POND LANE
DETENTION POND
40' PERIMETER BUFFER
S72°49'51"W 221.94'
S72°22'13"W 74.32'
S62°08'51"W 84.68'
S84°57'43"W 102.84'
S00°15'11" 20.42'
N28°13'43"W 54.55'
N27°01'50"W 96.55'
N25°05'38"W 11.82'
N27°20'19"W 200.50'
N26°47'05"W 40.48'
N27°33'33"W 87.71'
S51°12'52"W 48.23'
N61°27'31"E 90.03'
OPEN SPACE
OPEN SPACE
OPEN SPACE
DETENTION POND
DETENTION POND

ROAD
POND
PICKEREL

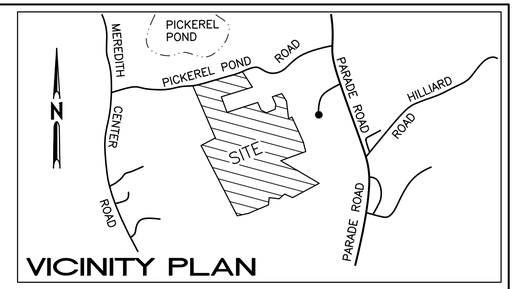
TAX MAP 13 LOT 183-002
N/F RENE MACIE & SHEILA RYAN
285 PICKEREL POND ROAD
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 1777/PAGE 553
PARCEL ZONE: RR-1

TAX MAP 13 LOT 183-005
N/F NANCY COOK
PICKEREL POND ROAD
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 2033/PAGE 209
PARCEL ZONE: RR-1

TAX MAP 13 LOT 183-004
N/F ARTHUR & NANCY COOK
173 PICKEREL POND ROAD
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 2033/PAGE 209
PARCEL ZONE: RR-1

TAX MAP 13 LOT 183-006
N/F TISBIN LLC
396 LAKESIDE AVENUE
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 3261/PAGE 603
PARCEL ZONE: RR-1

TAX MAP 13 LOT 183-15
N/F LABRANCHE FAMILY REV TRUST
38 SOUTH CATHERINE STREET
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 3533/PAGE 737
PARCEL ZONE: RR-1



VICINITY PLAN

NOTES:

1. PURPOSE OF PLAN:
   A. TO SHOW THE LOCATION OF THE 26 SINGLE FAMILY DETACHED HOMES.
2. THIS PLAN IS NOT A SUBDIVISION OF LAND.
3. LIMITED COMMON AREAS ARE PROPOSED.
4. UNITS 1-26 DEPICTED HEREON ARE NOT YET BEGUN.
5. POND #1 AND #2 WITHIN THE COMMON AREAS ARE NOT YET COMPLETE.
6. PROJECT ACCESS DRIVES ARE NOT YET COMPLETE.
7. PARCEL ID: TAX MAP 13 LOT 183-16
8. TOTAL PARCEL AREA: 161,290 SQUARE FEET OR 3.70 ACRES
9. PARCEL ZONE: CR (COMMERCIAL/RESORT)
10. ALL PROPOSED BUILDINGS WILL BE SERVICED BY ON SITE WELLS AND ON SITE SEPTIC SYSTEMS.
11. PRIMARY ACCESS TO HERON POINT PRESERVE WILL BE FROM PICKEREL POND ROAD.
12. PERMITS:
    NH DES ALTERATION OF TERRAIN PERMIT #: PENDING
    NHDES SUBDIVISION APPROVAL #: PENDING

CONDOMINIUM SITE PLAN

HERON POINT PRESERVE

TAX MAP 13 LOT 183-16
PICKEREL POND ROAD
LACONIA, NEW HAMPSHIRE 03246

OWNER OF RECORD/PREPARED FOR
PARADE REI, LLC
PO BOX 1926
CONCORD, NH 03302
BCRD BOOK 3694/PAGE 459

SCALE: 1"=60' SHEET 7 of 15 DECEMBER 10, 2025

APPROVED BY THE LACONIA PLANNING BOARD

ON: _____ CERTIFIED BY

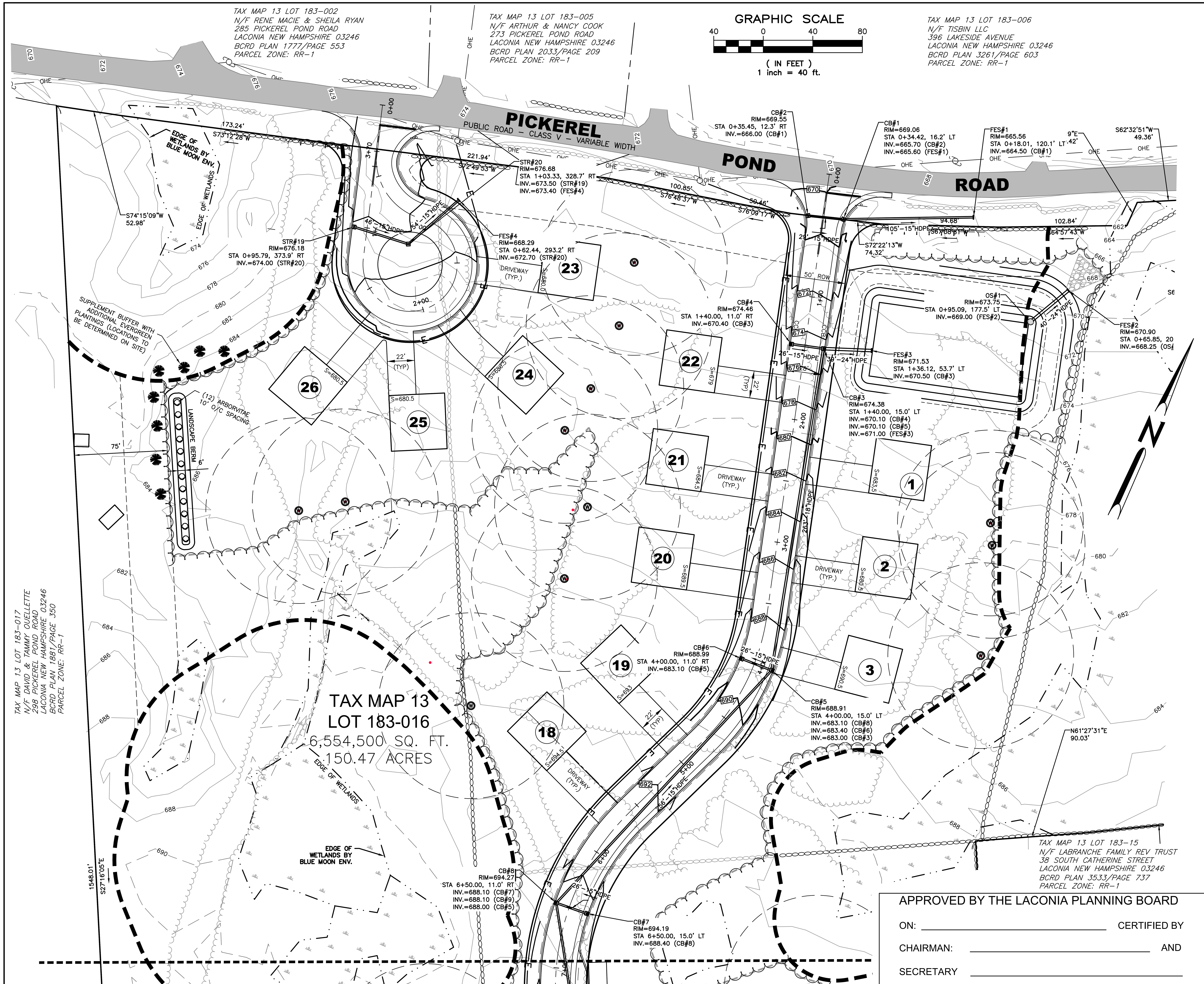
CHAIRMAN: _____ AND

SECRETARY _____

#	DATE	DESCRIPTION

BENCHMARK LLC
Consulting Engineers Land Planners
50 Nashua Road, Suite 305
Londonderry, New Hampshire 03053
Phone: (603) 437-5000

2413 - Condo Site Plan.dwg/7 CONDO



GRAPHIC SCALE
40 0 40 80
(IN FEET)
1 inch = 40 ft.
TAX MAP 13 LOT 183-002
N/F RENE MACIE & SHEILA RYAN
285 PICKEREL POND ROAD
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 1777/PAGE 553
PARCEL ZONE: RR-1
TAX MAP 13 LOT 183-005
N/F ARTHUR & NANCY COOK
273 PICKEREL POND ROAD
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 2033/PAGE 209
PARCEL ZONE: RR-1
TAX MAP 13 LOT 183-006
N/F TISBIN LLC
396 LAKESIDE AVENUE
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 3261/PAGE 603
PARCEL ZONE: RR-1
PICKEREL POND ROAD
PUBLIC ROAD - CLASS V - VARIABLE WIDTH
CB#2
RIM=669.55
STA 0+35.45, 12.3' RT
INV.=666.00 (CB#1)
CB#1
RIM=669.06
STA 0+34.42, 16.2' LT
INV.=665.70 (CB#2)
INV.=665.60 (FES#1)
FES#1
RIM=665.56
STA 0+18.01, 120.1' LT
INV.=664.50 (CB#1)
STR#20
RIM=676.68
STA 1+03.33, 328.7' RT
INV.=673.50 (STR#19)
INV.=673.40 (FES#4)
STR#19
RIM=676.18
STA 0+95.79, 373.9' RT
INV.=674.00 (STR#20)
FES#4
RIM=668.29
STA 0+62.44, 293.2' RT
INV.=672.70 (STR#20)
CB#4
RIM=674.46
STA 1+40.00, 11.0' RT
INV.=670.40 (CB#3)
OS#1
RIM=673.75
STA 0+95.09, 177.5' LT
INV.=669.00 (FES#2)
FES#2
RIM=670.90
STA 0+65.85, 20
INV.=668.25 (OS
FES#3
RIM=671.53
STA 1+36.12, 53.7' LT
INV.=670.50 (CB#3)
CB#3
RIM=674.38
STA 1+40.00, 15.0' LT
INV.=670.10 (CB#4)
INV.=670.10 (CB#5)
INV.=671.00 (FES#3)
CB#6
RIM=688.99
STA 4+00.00, 11.0' RT
INV.=683.10 (CB#5)
CB#5
RIM=688.91
STA 4+00.00, 15.0' LT
INV.=683.10 (CB#8)
INV.=683.40 (CB#6)
INV.=683.00 (CB#3)
CB#8
RIM=694.27
STA 6+50.00, 11.0' RT
INV.=688.10 (CB#7)
INV.=688.10 (CB#9)
INV.=688.00 (CB#5)
CB#7
RIM=694.19
STA 6+50.00, 15.0' LT
INV.=688.40 (CB#8)
EDGE OF WETLANDS BY BLUE MOON ENV.
EDGE OF WETLANDS
SUPPLEMENT BUFFER WITH ADDITIONAL EVERGREEN PLANTINGS (LOCATIONS TO BE DETERMINED ON SITE)
(12) ARBORVITAE 10' O/C SPACING
LANDSCAPE BERM
DRIVEWAY (TYP.)
50' ROW
TAX MAP 13
LOT 183-016
6,554,500 SQ. FT.
150.47 ACRES
TAX MAP 13 LOT 183-017
N/F DAVID & TAMMY OUELLETTE
298 PICKEREL POND ROAD
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 1881/PAGE 350
PARCEL ZONE: RR-1
TAX MAP 13 LOT 183-15
N/F LABRANCHE FAMILY REV TRUST
38 SOUTH CATHERINE STREET
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 3533/PAGE 737
PARCEL ZONE: RR-1
N61°27'31"E
90.03'
S73°12'28"W
173.24'
S72°49'53"W
221.94'
S76°48'37"W
100.85'
S76°09'17"W
50.46'
S74°15'09"W
52.98'
S72°22'13"W
74.32'
S62°32'51"W
49.36'
S27°16'05"E
1548.01'
1
2
3
18
19
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21
22
23
24
25
26

NOTES:

1. SEE SHEET 2 FOR ADDITIONAL NOTES AND INFORMATION.
2. WETLANDS MAPPED ON-SITE BY BLUEMOON ENVIRONMENTAL
   CONCORD, NEW HAMPSHIRE 03301
   NANCY B RENDALL CWS, CSS
3. BOUNDARY SURVEY COMPLETED BY: RANGEWAY LAND SURVEY & DESIGN
   252 DANIEL PLUMMER ROAD
   GOFFSTOWN, NEW HAMPSHIRE 03045

STATE OF NEW HAMPSHIRE — PAUL W. ZARNOWSKI — No. 0709 — LICENSED LAND SURVEYOR — SIGNATURE

STATE OF NEW HAMPSHIRE — NANCY B. RENDALL — No. 073 — CERTIFIED WETLAND SCIENTIST

GRADING & UTILITIES PLAN

HERON POINT PRESERVE

TAX MAP 13 LOT 183-16
PICKEREL POND ROAD
LACONIA, NEW HAMPSHIRE 03246

OWNER OF RECORD/PREPARED FOR
PARADE REI, LLC
PO BOX 1926
CONCORD, NH 03302
BCRD BOOK 3694/PAGE 459

SCALE: 1"=40' SHEET 8 of 15 DECEMBER 10, 2025

APPROVED BY THE LACONIA PLANNING BOARD

ON: ______________ CERTIFIED BY

CHAIRMAN: ______________ AND

SECRETARY ______________

#	DATE	DESCRIPTION

BENCHMARK LLC
Consulting Engineers Land Planners
50 Nashua Road, Suite 305
Londonderry, New Hampshire 03053
Phone: (603) 437-5000

2413 - Grading.dwg/8 GRADING-1

NOTES:
1. SEE SHEET 2 FOR ADDITIONAL NOTES AND INFORMATION.
2. WETLANDS MAPPED ON-SITE BY BLUEMOON ENVIRONMENTAL CONCORD, NEW HAMPSHIRE 03301 NANCY B RENDALL CWS, CSS
3. BOUNDARY SURVEY COMPLETED BY: RANGEWAY LAND SURVEY & DESIGN 252 DANIEL PLUMMER ROAD GOFFSTOWN, NEW HAMPSHIRE 03045

GRAPHIC SCALE
40 0 40 80
(IN FEET)
1 inch = 40 ft.

TAX MAP 13 LOT 183-017
N/F DAVID & TAMMY OUELLETTE
298 PICKEREL POND ROAD
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 1881/PAGE 350
PARCEL ZONE: RR-1

TAX MAP 13 LOT 183-15
N/F LABRANCHE FAMILY REV TRUST
38 SOUTH CATHERINE STREET
LACONIA NEW HAMPSHIRE 03246
BCRD PLAN 3533/PAGE 737
PARCEL ZONE: RR-1

TAX MAP 13
LOT 183-016
6,554,500 SQ. FT.
150.47 ACRES

RIM=694.19
STA 6+50.00, 15.0' LT
INV.=688.40 (CB#8)

CB#10
RIM=700.08
STA 9+25.00, 11.0' RT
INV.=694.40 (CB#9)

CB#9
RIM=699.99
STA 9+25.00, 15.0' LT
INV.=694.10 (CB#11)
INV.=694.10 (CB#10)
INV.=694.00 (CB#8)

CB#12
RIM=705.63
STA 11+88.00, 11.0' RT
INV.=700.40 (CB#13)
INV.=700.50 (CB#11)

CB#11
RIM=705.16
STA 11+69.70, 15.0' LT
INV.=700.10 (CB#12)
INV.=700.00 (CB#9)

CB#13
RIM=705.50
STA 12+41.15, 26.3' LT
INV.=701.10 (CB#12)

N25°05'38"W 11.82'
N26°47'05"W 40.48'
N27°33'33"W 87.71'
N27°01'50"W 96.55'
S51°12'52"W 48.23'
N28°13'43"W 54.55'
N27°10'54"W 200.50'

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ON: _____ CERTIFIED BY

CHAIRMAN: _____ AND

SECRETARY _____

GRADING & UTILITIES PLAN

HERON POINT PRESERVE

TAX MAP 13 LOT 183-16
PICKEREL POND ROAD
LACONIA, NEW HAMPSHIRE 03246

OWNER OF RECORD/PREPARED FOR
PARADE REI, LLC
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BCRD BOOK 3694/PAGE 459

SCALE: 1"=40' SHEET 9 of 15 DECEMBER 10, 2025

#	DATE	DESCRIPTION

STATE OF NEW HAMPSHIRE LAND SURVEYOR No. 0709 PAUL W. ZARNOWSKI SIGNATURE

STATE OF NEW HAMPSHIRE NANCY B. RENDALL CERTIFIED WETLAND SCIENTIST No. 073

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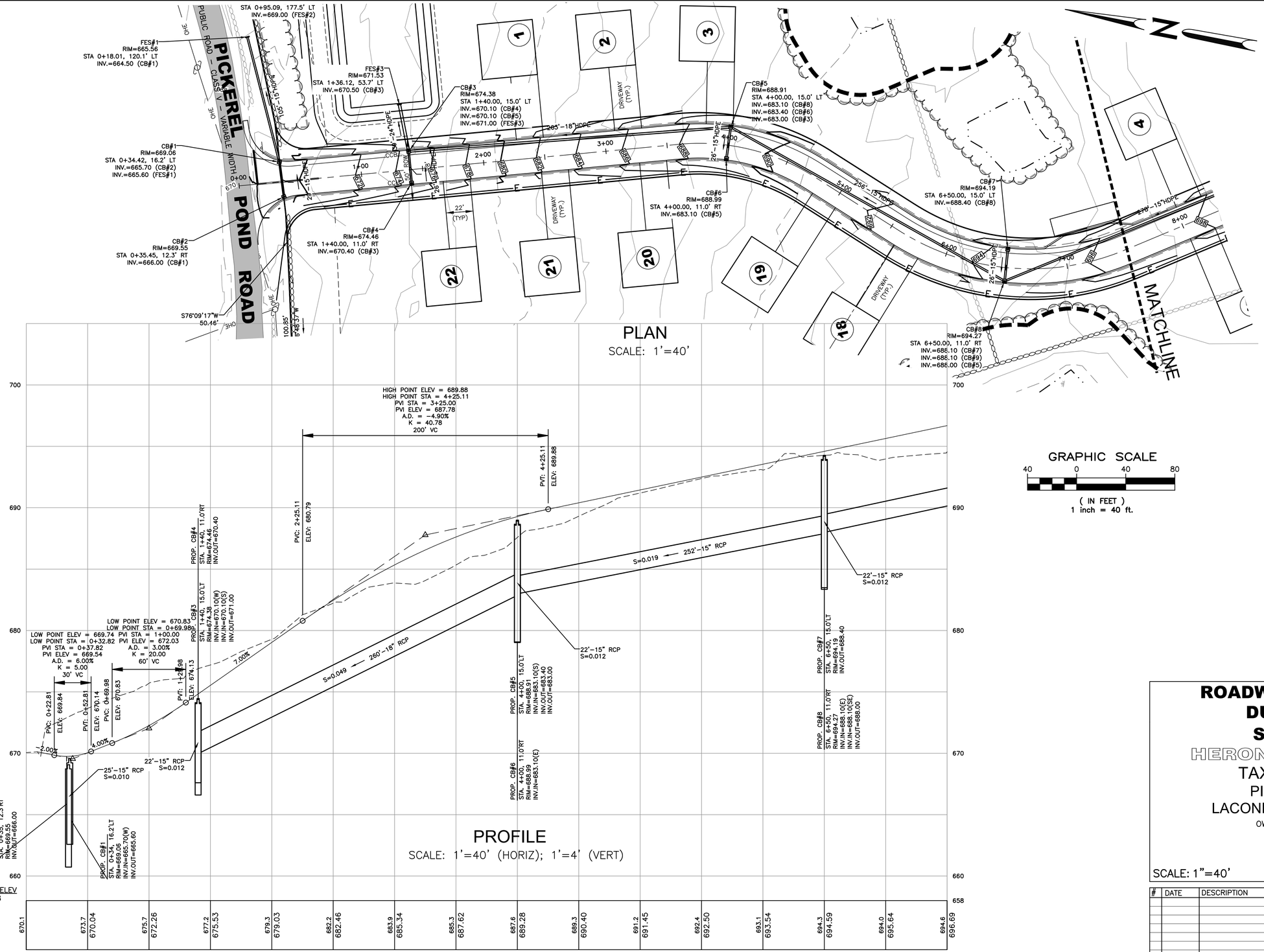
2413 - Grading.dwg/9 GRADING-2



LEGEND:

- PROPERTY LINE
- EASEMENT LINE
- EDGE OF WETLANDS BY BLUE MOON ENV.
- UGU — UNDERGROUND UTILITIES
- UP OHW — OVERHEAD WIRES w/ UTILITY POLE/GUY WIRE
- DMH CB — DRAIN LINE/MANHOLE/ CATCH BASIN w/FLOW DIRECTION
- UD — UNDERDRAIN
- TREELINE
- STONE WALL
- EOG — EDGE OF GRAVEL
- EOP EOC — EDGE OF PAVEMENT/ EDGE OF CONCRETE
- DYL — DOUBLE YELLOW LINE
- RETAINING WALL
- CLF PVC — CHAIN LINK/PVC FENCE
- SILT FENCE
- BUILDING SETBACK LINE
- 288 — 2 FT CONTOUR (EXISTING)
- 290 — 10 FT CONTOUR (EXISTING)
- 527.3 — SPOT ELEVATION (EXISTING)
- 290 — CONTOUR (PROPOSED)
- 274X0 — SPOT ELEVATION (PROPOSED)

ROADWAY PLAN & PROFILE
DUCK POND LANE
STA. 0+00 - 7+50
HERON POINT PRESERVE

TAX MAP 13 LOT 183-16
PICKEREL POND ROAD
LACONIA, NEW HAMPSHIRE 03246

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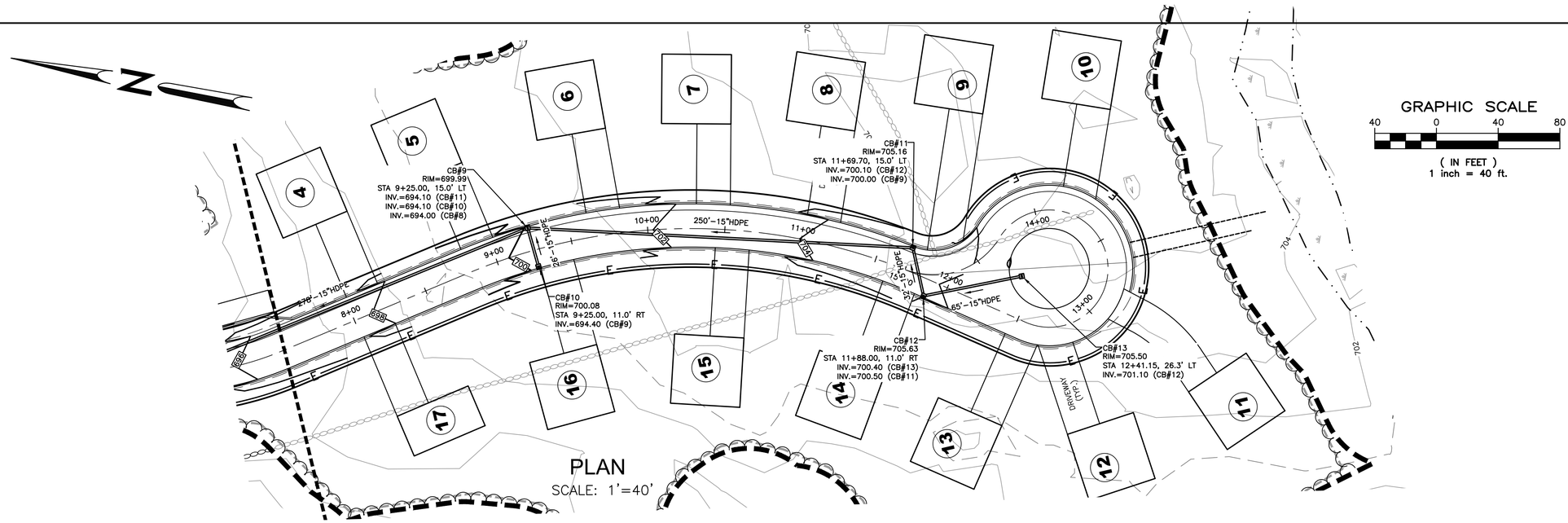
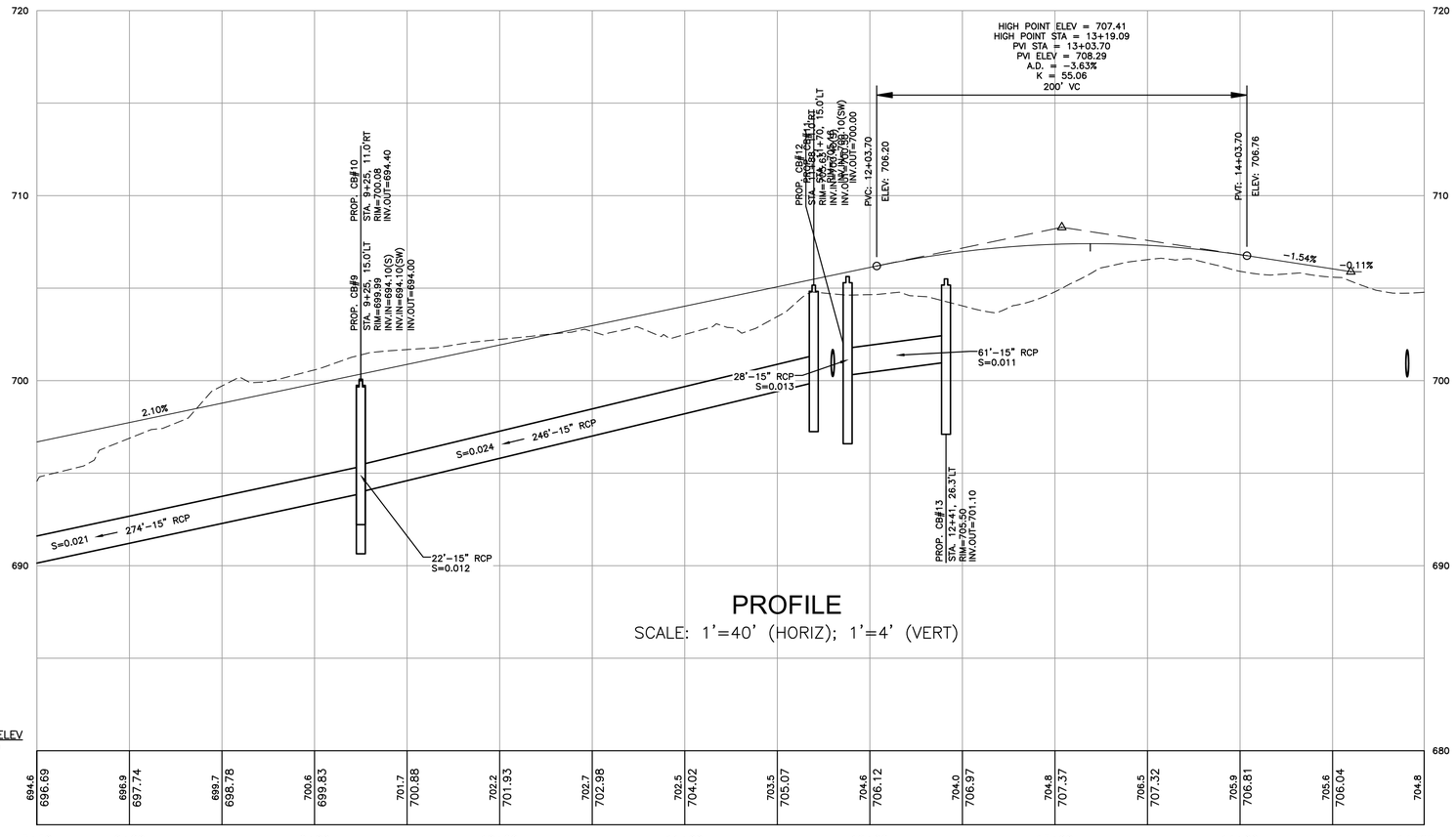
2413 – Plan & Profiles.dwg/10 Road-1 Profile





PROFILE
SCALE: 1'=40' (HORIZ); 1'=4' (VERT)

ROADWAY PLAN & PROFILE
DUCK POND LANE
STA. 7+50 - 15+00
HERON POINT PRESERVE

TAX MAP 13 LOT 183-16
PICKEREL POND ROAD
LACONIA, NEW HAMPSHIRE 03246

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SCALE: 1"=40' SHEET 11 of 15 DECEMBER 10, 2025

#	DATE	DESCRIPTION

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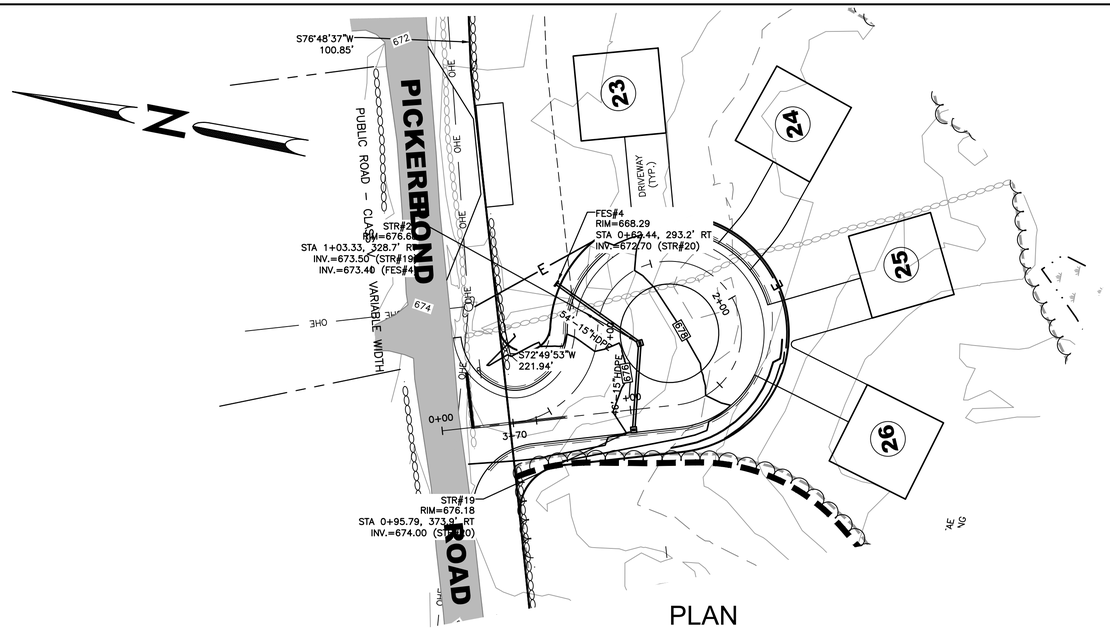
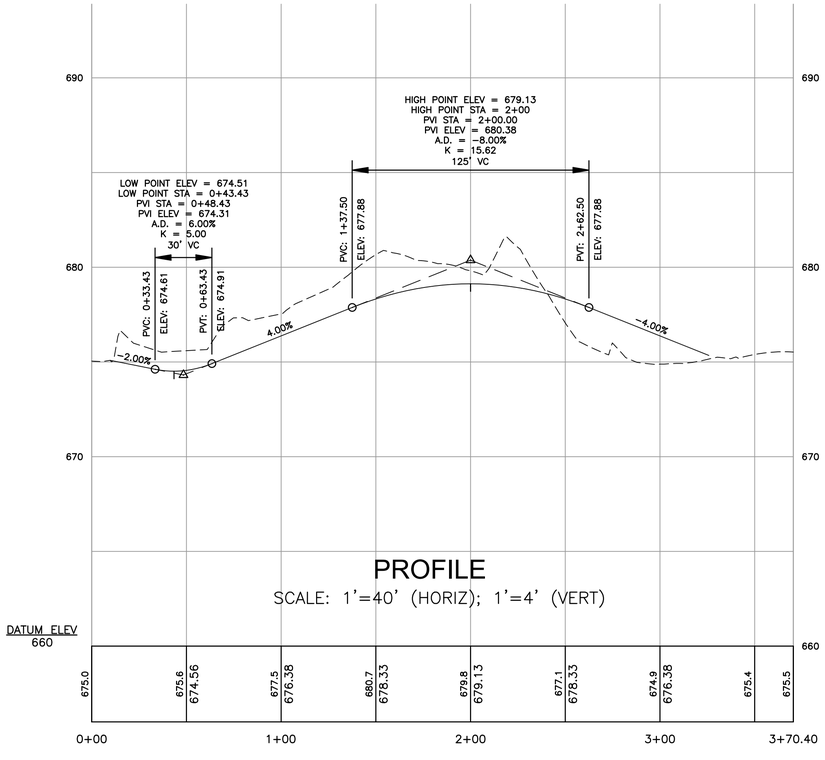
2413 - Plan & Profiles.dwg/11 Road-1 Profile (2)



PLAN

SCALE: 1'=40'



PROFILE

SCALE: 1'=40' (HORIZ); 1'=4' (VERT)

GRAPHIC SCALE

40 0 40 80

(IN FEET)

1 inch = 40 ft.

ROADWAY PLAN & PROFILE
OAK KNOLL CIRCLE
STA. 0+00 - 3+70

HERON POINT PRESERVE

TAX MAP 13 LOT 183-16

PICKEREL POND ROAD

LACONIA, NEW HAMPSHIRE 03246

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SCALE: 1"=40' SHEET 12 of 15 DECEMBER 10, 2025

APPROVED BY THE LACONIA PLANNING BOARD

ON: _____ CERTIFIED BY

CHAIRMAN: _____ AND

SECRETARY _____

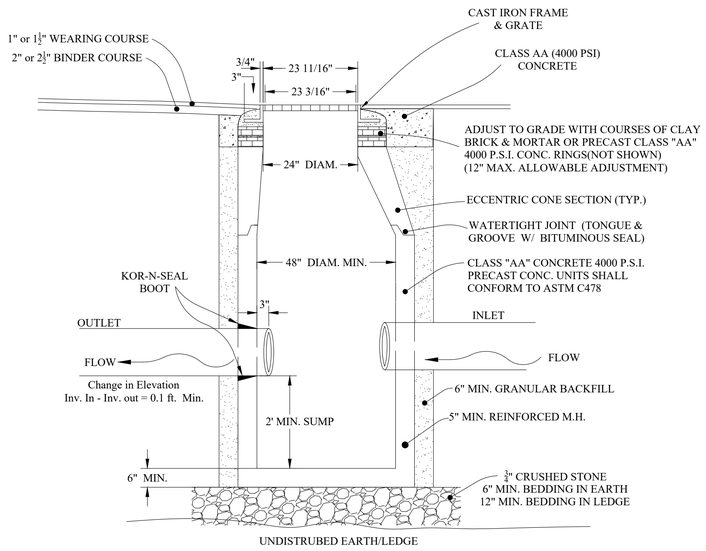
#	DATE	DESCRIPTION

BENCHMARK LLC
Consulting Engineers Land Planners
50 Nashua Road, Suite 305
Londonderry, New Hampshire 03053
Phone: (603) 437-5000

2413 - Plan & Profiles.dwg/12 Road-2 Profile (3)

D15-Typical Catch Basin/Drop Inlet

(not to scale)

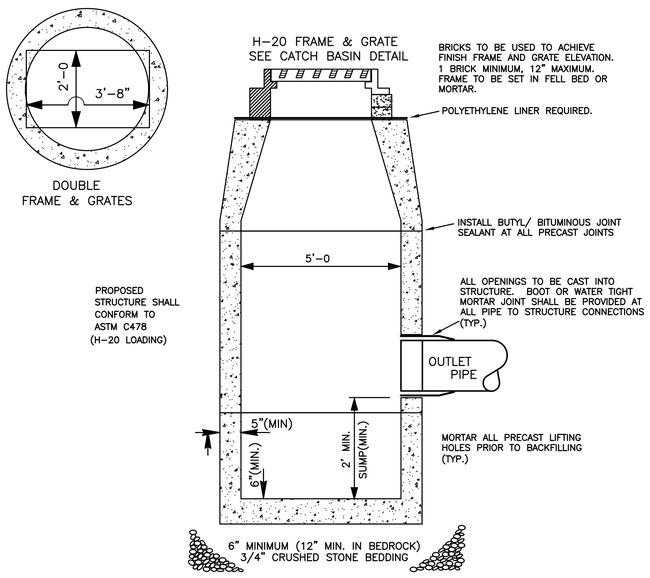


NOTE:
ALL CATCH BASINS SHALL BE IN ACCORDANCE WITH THE CITY OF LACONIA DPW STANDARDS

POLYETHYLENE LINER NOTES:

ALL CATCH BASINS TO BE OUTFITTED WITH A POLYETHYLENE LINER DOWNSPOUT. POLYETHYLENE LINER (NHDOT ITEM 604.0007) SHALL BE FABRICATED AT THE SHOP. DOWNSPOUT SHALL BE EXTRUSION FILLET WELDED TO THE POLYETHYLENE SHEET. PLACE A CONTINUOUS BEAD OF AN APPROVED SILICONE SEALANT BETWEEN THE FRAME AND POLYETHYLENE SHEET.

PLACE CLASS AA CONCRETE TO 2" BELOW THE TOP OF GRATE ELEVATION (SUBSIDIARY TO DRAINAGE STRUCTURE) TRIM POLYETHYLENE SHEET A MAXIMUM OF 4" OUTSIDE THE FLANGE ON THE FRAME FOR THE CATCH BASIN BEFORE PLACING CONCRETE. (EXCEPT AS SHOWN WHEN USED WITH CURB). CENTER OF THE GRATE AND FRAME MAY BE SHIFTED A MAXIMUM OF 3" FROM THE CENTER OF THE DOWNSPOUT IN ANY DIRECTION.



DOUBLE GRATE CATCH BASIN DETAIL
(NOT TO SCALE)

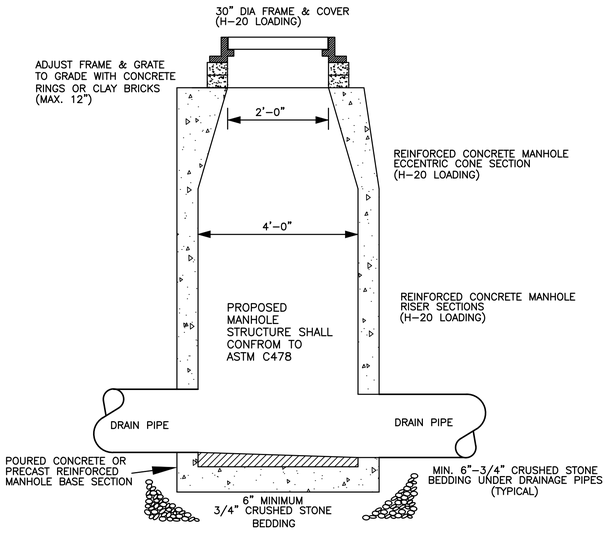
FIRE CISTERN NOTES:

DESIGN & INSTALLATION REQUIREMENTS:

1. THE DESIGN OF THE CISTERN SHALL BE SUBMITTED TO THE FIRE DEPARTMENT FOR APPROVAL PRIOR TO CONSTRUCTION. ALL PLANS SUBMITTED MUST BE SIGNED AND STAMPED BY A NEW HAMPSHIRE LICENSED/REGISTERED PROFESSIONAL ENGINEER.
2. THE ENTIRE CISTERN SHALL BE RATED H–20 HIGHWAY LOADING.
3. BEDDING FOR THE CISTERN SHALL CONSIST OF A MINIMUM OF 12 INCHES OF 3/4 INCH CRUSHED, WASHED STONE, COMPACTED IN A WORKMAN LIKE MANNER. NO FILL SHALL BE UNDER THE STONE.
4. THE BASE OF THE CISTERN SHALL BE DESIGNED IN A MANNER THAT THE CISTERN WILL NOT FLOAT WHEN EMPTY.
5. CISTERNS SHALL BE CONSTRUCTED OUT OF CONCRETE, GUNITE, FIBERGLASS, OR OTHER MATERIAL WITH PRIOR APPROVAL OF THE FIRE DEPARTMENT.
6. NO CISTERN SHALL HAVE A GASKET OR SEAM BELOW THE WATER LEVEL, BASED ON CALCULATED CAPACITY.
7. THE CONCRETE OR GUNITE IS TO BE MIXED, PLACED, AND CURED WITHOUT THE USE OF CALCIUM CHLORIDE (CAC12). WINTER PLACEMENT AND CURING MUST FOLLOW ACI CODES AS AMENDED.
8. ALL SUCTION PIPING SHALL BE ASTM SCHEDULE 40 STEEL, 6 OR 8 INCHES IN DIAMETER.
9. ALL STEEL PIPING JOINTS ARE TO BE WELDED. ALL PVC PIPE JOINTS ARE TO BE GLUED.
10. THE SUCTION PIPE SHALL BE CONNECTED TO THE BOTTOM OF THE CISTERN WITH A 6–INCH SPACE ABOVE THE FLOOR OF THE TANK.
11. THE MAXIMUM LENGTH OF THE SUCTION PIPE FROM THE BOTTOM OF THE CISTERN TO THE FIRE DEPARTMENT CONNECTION (FDC) IS 18 FEET.
12. THE SUCTION PIPE SHALL BE NO MORE THAN 8 FEET FROM THE EDGE OF THE FINISHED PAVEMENT AND SHALL BE SUPPORTED TO PREVENT THE PIPE FROM BREAKING WHEN FILLED WITH WATER.
13. THERE SHALL BE NO LANDSCAPING INSTALLED THAT MAY INTERFERE WITH THE USE OF THE CISTERN.
14. THE SUCTION PIPING SYSTEM SHALL BE CAPABLE OF DELIVERING A MINIMUM OF 1,000 GALLONS PER MINUTE FOR THREE QUARTERS OF THE CAPACITY OF THE CISTERN.
15. THE BOTTOM THREADS OF THE SUCTION PIPING CONNECTION SHALL BE INSTALLED AT A LEVEL OF 20 TO 24 INCHES ABOVE FINAL GRADE.
16. THE FINISHED SUCTION CONNECTION SHALL HAVE A 6–INCH MALE CONNECTION NH THREADS COMPLETE WITH HYDRANT CAP AND CHAIN.
17. THE SUCTION PIPE SHALL BE SUPPORTED EITHER AT THE TOP OF THE TANK OR AT THE LEVEL BELOW FROST.
18. THE SUCTION PIPE SHALL BE PITCHED SLIGHTLY BACK TOWARD THE TANK FOR PROPER DRAINAGE.
19. THE FILL PIPE SHALL BE ASTM SCHEDULE 40 STEEL AND HAVE A 4–INCH STORZ CONNECTOR WITH CAP AND 90–DEGREE ELBOW. A DOWNWARD ELBOW FOR THE STORZ CONNECTOR OF NO MORE THAN 45 DEGREES IS ACCEPTABLE.
20. ALL THE CISTERN APPURTENANCES, INCLUDING THE PIPE BOLLARDS, SHALL BE PAINTED RED.
21. THE CISTERN SHALL HAVE A VISUAL FLOAT INDICATOR FOR THE WATER LEVEL.
22. A PERMANENT, WEATHERPROOF SIGN SHALL BE INSTALLED INDICATING THE CAPACITY OF THE CISTERN IN GALLONS.
23. TO PREVENT DAMAGE FROM VEHICLES, CEMENT FILLED PIPE BOLLARDS ARE TO BE INSTALLED 2 FEET FROM EACH SIDE AND 12 INCHES IN FRONT OF THE SUCTION PIPE. THESE COLUMNS SHALL BE SET IN CONCRETE 4 FEET BELOW GRADE AND SHALL EXTEND 12 INCHES ABOVE THE SUCTION PIPE. ADDITIONAL PROTECTION MAY BE REQUIRED FOR OTHER CISTERN APPURTENANCES AS NEEDED.

TESTING & ACCEPTANCE

1. THE ENTIRE CISTERN IS TO BE INSPECTED BY THE FIRE DEPARTMENT PRIOR TO BACKFILLING.
2. THE DEVELOPER IS RESPONSIBLE FOR FILLING THE CISTERN.
3. A WRITTEN AGREEMENT MUST BE ON FILE WITH THE FIRE DEPARTMENT AS TO WHO WILL BE RESPONSIBLE FOR MAINTENANCE AND ENSURING THE WATER LEVEL OF THE CISTERN.
4. FLOW TEST OF THE CISTERN MUST BE ON FILE WITH THE FIRE DEPARTMENT PRIOR TO ACCEPTANCE.
5. NO OCCUPANCY PERMITS WILL BE ISSUED UNTIL THE CISTERN IS INSPECTED, TESTED, AND APPROVED BY THE FIRE DEPARTMENT.

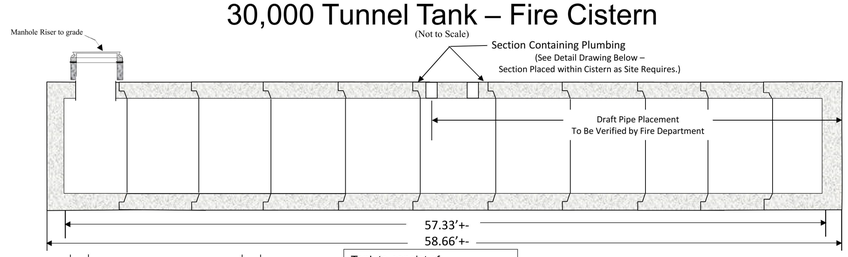


DRAINAGE MANHOLE DETAIL
(NO SCALE)

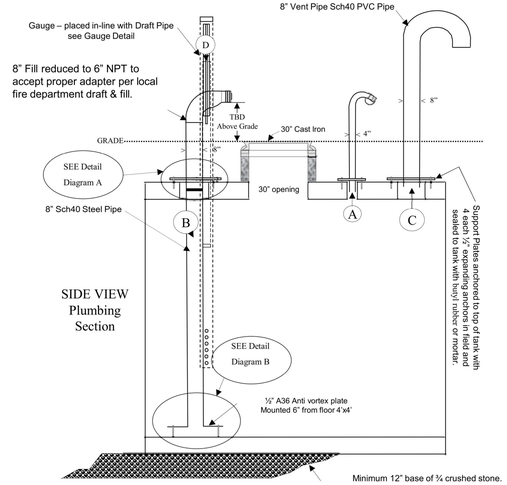
As Proposed 30,000 Tunnel Tank Fire Cistern

SAMPLE PIPE PLACEMENT
30,000 Tunnel Tank – Fire Cistern

(Not to Scale)



Tank to consist of:
2-48" ID Ends 28,500# each
1-48" Center 16,250#
8-68" Centers 23,500# each



Notes
- Concrete strength f'c 5000PSI@28 days. Density 150 PCF.
- Cement, Portland Type II or III, ASTM C150-81
- Admixtures, air & plasticizers per ASTM C233-82
- Reinforcement per ASTM A615 for wire fabric and Grade 60 rebar
- Design Loading AASHTO HS20-40
- Constructions joints sealed with butyl rubber & grouted after backfill
- Access & Piping per job specs.
- Fire Cistern meets NFPA22 requirements.

DETAILS

HERON POINT PRESERVE

TAX MAP 13 LOT 183-16
PICKEREL POND ROAD
LACONIA, NEW HAMPSHIRE 03246

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SCALE: NONE SHEET 13 of 15 DECEMBER 10, 2025

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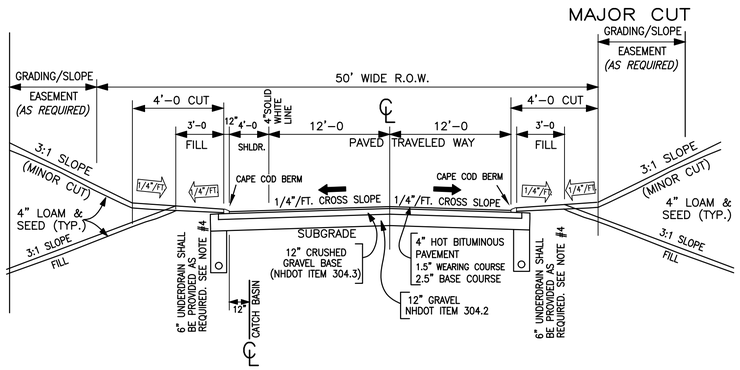
2413 – Details.dwg/13 DETAILS

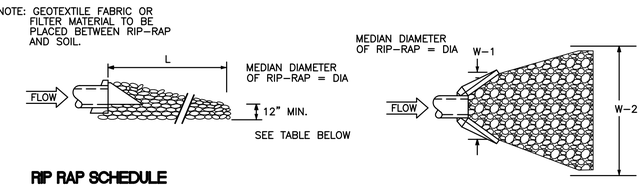


TYPICAL ROADWAY SECTION

(NOT TO SCALE)

TYPICAL ROADWAY SECTION NOTES:

1. REMOVE ALL LOAM, CLAY, MUCK, STUMPS, AND OTHER IMPROPER ROAD FOUNDATION MATERIALS WITHIN 3 FEET OF SUBGRADE. REPLACE WITH COMPACTED GRANULAR FILL MATERIAL ACCEPTABLE TO THE DIRECTOR OF PUBLIC WORKS. COMPACTION TO BE AT LEAST 95% OF THE DRY WEIGHT AS DETERMINED BY MODIFIED PROCTOR TESTING (ASTM 1557).
2. COMPACTION OF AT LEAST 95% SHALL BE MET AT EVERY (100 FOOT) STATION. SIEVE ANALYSIS OF SOURCE GRAVELS SHALL BE SUPPLIED TO DPW BEFORE PLACEMENT.
3. ALL PAVEMENT, BASE MATERIALS, AND WORKMANSHIP TO BE IN COMPLIANCE WITH THE CURRENT AND APPROVED NHDOT 2016 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND AND NH DOT APPROVED MIX DESIGNS.
4. A TWO (2) FOOT SHOULDER EXTENSION IS REQUIRED WHERE GUARDRAIL TO INSTALLED.
5. ALL ROAD DITCH LINES SHALL BE LINED WITH RIP-RAP OF AN APPROPRIATE GRADATION WHERE ROAD GRADE EXCEEDS 5%. WHERE ROAD GRADE IS LESS THAN 5%, EROSION CONTROL FABRIC, OR OTHER SUITABLE MEANS OF DITCH LINE PROTECTION SHALL BE INSTALLED AND EXTENDED 3 FEET OF EACH SIDE OF THE DITCH LINE CENTER LINE.
6. ALL UNDERGROUND FACILITIES AND TRANSFORMER SLABS SHALL BE LOCATED AT THE RIGHT OF WAY LINE, UNLESS OTHERWISE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.
7. ALL LEDGE SHALL BE REMOVED TO 6" BELOW SUBGRADE.

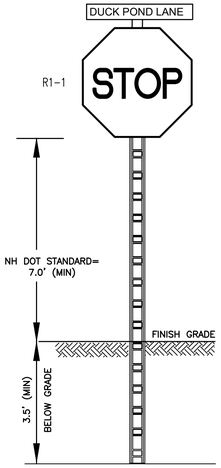


RIP RAP SCHEDULE

DETAIL #	LOCATION	W-1 (FT)	W-2 (FT)	L (FT)	DIA. (IN)
A	FES 1 – CULVERT #1 OUTLET	4	15	11	6
B	FES 2 – POND #1 OUTLET	4	14	10	6
C	FES 3 – POND #1 INLET	16*	16*	16*	6

OUTLET PROTECTION DETAILS

(NO SCALE)



1. HOLES SHALL BE 3/8" DIA. C-C FULL LENGTH
2. STEEL SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-6791 (GRADE 1070-1080)
3. FINISH SHALL BE PAINTED WITH 2 COATS OF APPROVED MEDIUM GREEN, BAKED ON OR AIR DRIED, PAINT OF WEATHER RESISTANT QUALITY. ALL FABRICATION SHALL BE COMPLETE BEFORE PAINTING.

TYPICAL SIGN DETAIL

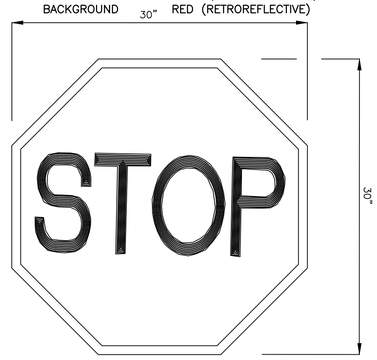
(NO SCALE)

TRAFFIC SIGNS:
ALL TRAFFIC SIGNS & PAVEMENT MARKINGS SHALL BE PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), LATEST EDITION.

STOP SIGN DETAILS

INSTALL MUTCD R1-1 STOP SIGN AND STREET NAME SIGN AT PROPOSED INTERSECTIONS

COLORS:
LEGEND WHITE (RETROREFLECTIVE)
BACKGROUND RED (RETROREFLECTIVE)



R1-1

UNDERDRAIN DETAIL

(NO SCALE)

TYPICAL UNDERDRAIN NOTES:

1. ALL ROADWAY MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THE CITY OF LACONIA DPW REGULATIONS AND THE LATEST NHDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2016 EDITION, INCLUDING SUBSEQUENT AMENDMENTS AND EDITIONS.
2. GRADING FOR UNDERDRAIN PIPE SHALL BE PARALLEL TO GRADE OF THE ROAD.
3. UNDERDRAIN OUTLET SHALL ENTER A CATCH BASIN OR BE PROTECTED BY A MASONRY RUBBLE HEADWALL. WHEN ENTERING A HEADWALL, LAST 10-LF SHALL BE SOLID UNDERDRAIN.

NOTE:
A LAYER OF GEO-TEXTILE FABRIC TO BE INSTALLED BETWEEN THE CRUSHED STONE BEDDING AND THE BACKFILL MATERIALS.

NOTES:

1. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D2321, "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS," LATEST EDITION; AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.
2. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

   UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100-600mm) CORRUGATED POLYETHYLENE PIPE (CPEP); 6" (150mm) FOR 30"-60" (750-1500mm) CPEP.
3. HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
4. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS:

NOMINAL ø in (mm)	MIN. RECOMMENDED TRENCH WIDTH in (mm)
4 (100)	21 (530)
6 (150)	23 (580)
8 (200)	25 (630)
10 (250)	28 (710)
12 (300)	31 (790)
15 (375)	34 (860)
18 (450)	39 (990)
24 (600)	48 (1220)
30 (750)	66 (1680)
36 (900)	78 (1980)
42 (1050)	83 (2110)
48 (1200)	89 (2260)
60 (1500)	102 (2590)

TYPICAL DRAIN TRENCH DETAIL

(NO SCALE)

IN CROSS-COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE STRUCTURES FOR MAINTENANCE AND POSSIBLY RECONSTRUCTION, WHEN NECESSARY WILL BE PRESERVED. SUITABLE MATERIAL SHALL BE PLACED IN 18" LIFTS AND THOROUGHLY COMPACTED TO 92% OR BETTER COMPACTION IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS, SECTION 304.

TYPICAL ELECTRICAL, TELEPHONE, CABLE TRENCH DETAIL

(NO SCALE)

PICKEREL POND ROAD

TYPICAL STOP BAR DETAIL

(NOT TO SCALE)

TYPICAL DRIVEWAY APRON DETAIL (FRONT LOADING GARAGE)

(NOT TO SCALE)

DRIVEWAY CURB DETAIL

(NOT TO SCALE)

TYPICAL FOUNDATION DRAIN TRENCH DETAIL

(NOT TO SCALE)

DRIVEWAY PAVEMENT DETAIL

NO SCALE

NOTE (INSTALLATION OF CAPE COD BERM):
A TACK COAT OF EMULSION SHALL BE INSTALLED ON THE BINDER COURSE IMMEDIATELY PRIOR TO PLACEMENT OF CAPE COD BERM ON THE BINDER BITUMINOUS CONCRETE TO IMPROVE BONDING OF THE TWO SURFACES.

CAPE COD BERM DETAIL

(NO SCALE)

DETAILS

HERON POINT PRESERVE

TAX MAP 13 LOT 183-16
PICKEREL POND ROAD
LACONIA, NEW HAMPSHIRE 03246

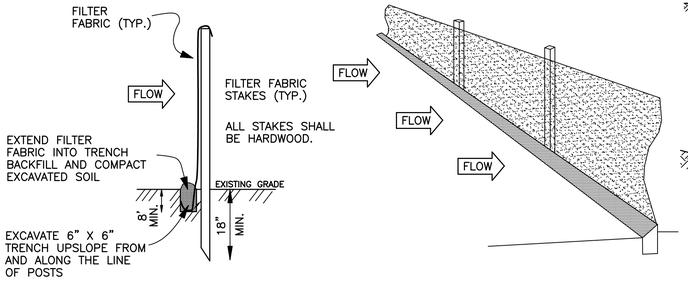
OWNER OF RECORD/PREPARED FOR
PARADE REI, LLC
PO BOX 1926
CONCORD, NH 03302
BCRD BOOK 3694/PAGE 459

SCALE: NONE SHEET 14 of 15 DECEMBER 10, 2025

#	DATE	DESCRIPTION

BENCHMARK LLC
Consulting Engineers Land Planners
50 Nashua Road, Suite 305
Londonderry, New Hampshire 03053
Phone: (603) 437-5000

2413 – Details.dwg/14 DETAILS (2)



ALL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE BMP *(BEST MANAGEMENT PRACTICES)* AS SPECIFIED IN THE "STORMWATER MANAGEMENT AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE" AS PREPARED BY THE ROCKINGHAM COUNTY CONSERVATION DISTRICT.

SILT FENCE MAINTENANCE

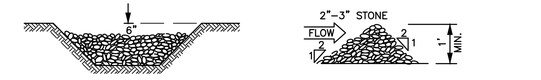
1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
2. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE BARRIER.
4. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

CONSTRUCTION SPECIFICATIONS

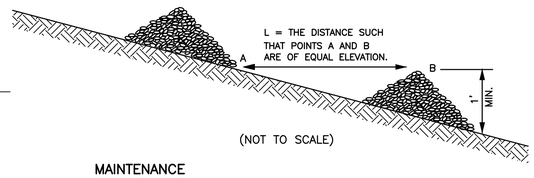
1. THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.
2. THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
3. WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
4. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MID–SECTION AND BOTTOM.
5. WHEN 2 SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED.
6. FENCE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG AND DRIVEN A MINIMUM OF 16 INCHES INTO THE GROUND. WOOD POSTS SHALL BE OF SOUND QUALITY HARDWOOD AND SHALL HAVE A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES.
7. MAINTENANCE SHALL BE PERFORMED AS NEEDED TO PREVENT BULGES IN THE SILT FENCE DUE TO DEPOSITION OF SEDIMENT.

SILT FENCE DETAIL

(NO SCALE)



STONE GRADE STABILIZATION STRUCTURE



(NOT TO SCALE)

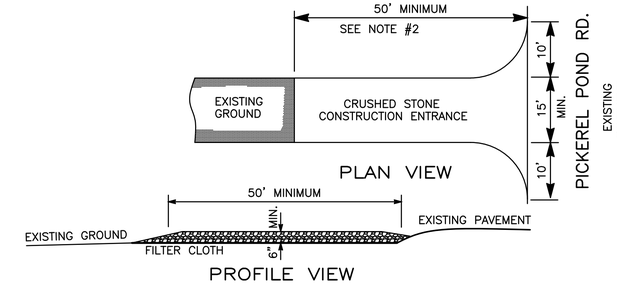
MAINTENANCE

TEMPORARY GRADE STABILIZATION STRUCTURES SHOULD BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED STORMS. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY. PARTICULAR ATTENTION SHOULD BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE. WHEN THE STRUCTURES ARE REMOVED, THE DISTURBED PORTION SHOULD BE BROUGHT TO THE EXISTING CHANNEL GRADE AND THE AREAS PREPARED, SEEDED AND MULCHED. WHILE THIS PRACTICE IS NOT INTENDED TO BE USED PRIMARILY FOR SEDIMENT TRAPPING, SOME SEDIMENT WILL ACCUMULATE BEHIND THE STRUCTURES. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT HAS ACCUMULATED TO ONE HALF OF THE ORIGINAL HEIGHT OF THE STRUCTURE.

CONSTRUCTION SPECIFICATIONS

1. STRUCTURES SHALL BE INSTALLED ACCORDING TO THE DIMENSIONS SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.
2. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER SO THAT EROSION AND AIR AND WATER POLLUTION WILL BE MINIMIZED.
3. WHEN HAYBALES ARE USED, THE BALES SHALL BE EMBEDDED AT LEAST 4 INCHES INTO THE SOIL. WHEN TIMBER STRUCTURES ARE USED, THE TIMBER SHALL EXTEND AT LEAST 18 INCHES INTO THE SOIL.
4. HAY OR STRAW BALES SHALL BE ANCHORED INTO THE SOIL USING 2" X 2" HARDWOOD STAKES DRIVEN THROUGH THE BALES AT LEAST 18 INCHES INTO THE SOIL.
5. SEEDING, FERTILIZING, AND MULCHING SHALL CONFORM TO THE RECOMMENDATIONS IN THE APPROPRIATE VEGETATIVE BMP.
6. STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.

TEMPORARY EROSION CONTROL CHECK DAM WITHIN DRAINAGE CHANNEL



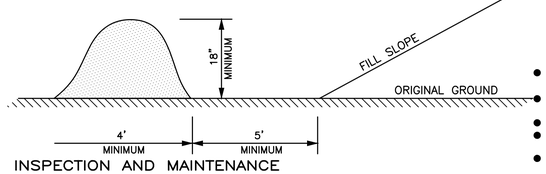
CONSTRUCTION SPECIFICATIONS

1. MINIMUM STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 3 INCH CRUSHED STONE
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 75 FEET, EXCEPT THAT THE MINIMUM MAY BE REDUCED TO 50 FEET IF A 3–INCH TO 6–INCH HIGH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE
3. THE WIDTH OF THE CONSTRUCTION ENTRANCE SHALL EXTEND THE FULL WIDTH OF THE CONSTRUCTION ACCESS ROAD OR 10 FEET, WHICH EVER IS GREATER.
4. THE PAD SHALL SLOPE AWAY FROM THE EXISTING ROAD
5. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
6. GEOTEXTILE FILTER FABRIC SHALL BE PLACED BETWEEN THE STONE PAD AND THE EARTH SURFACE BELOW THE PAD
7. THE PAD SHALL BE MAINTAINED OR REPLACED WHEN MUD AND SOIL PARTICLES CLOG THE VOIDS IN THE STONE SUCH THAT MUD AND SOIL PARTICLES ARE TRACKED OFF SITE
8. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARDS THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
9. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED PROMPTLY.
10. IF NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

STABILIZED CONSTRUCTION ENTRANCE

TO BE CONSTRUCTED AT ALL SITE ENTRANCES AT THEIR INTERSECTION WITH EXISTING ROADS (NO SCALE)

NOTE:
WOOD WASTE COMPOST/BARK MULCH FILTER BERMS MAY BE USED IN COMBINATION WITH SILT FENCE TO IMPROVE SEDIMENT REMOVAL AND PREVENT CLOGGING OF THE WOOD WASTE COMPOST/BARK BERM FILTER BY LARGER SEDIMENT PARTICLES. (SILT FENCE PLACED TO FILTER RUN–OFF BEFORE WOOD WASTE COMPOST/BARK BERM.



INSPECTION AND MAINTENANCE

MAINTENANCE OF A CONTINUOUS BERM REQUIRES MINIMAL EFFORT.
IF EVIDENCE OF PIPING IS DETECTED, COMPACTING LOOSE SOIL IN THE AREA OF FAILURE RESULTS IN MITIGATING THE PROBLEM.
IF VEHICLES RUN OVER THE BERM CAUSING DAMAGE, THE DAMAGED AREA SHALL BE REPAIRED BY RE–STAPLING THE FABRIC.
IN THE EVENT OF MAJOR DAMAGE, A NEW SECTION OF BERM CAN BE EASILY PLACED IN FRONT OF THE DAMAGED SECTION.
WHEN THE BERM IS NO LONGER NECESSARY REMOVAL IS COMPLETED BY SLITTING THE BERM, SLITTING THE FILL MATERIAL AND INCORPORATING IT INTO THE EXISTING SOIL, AND REMOVING THE FABRIC.
FILTER BERM SHALL BE CLEANED WHEN THE DEPTH OF SEDIMENT REACHES HALF THE HEIGHT OF THE BERM (9 INCHES)
RESHAPE THE BERM AS NECESSARY.

MULCH BERM

CONSTRUCTION SPECIFICATIONS:

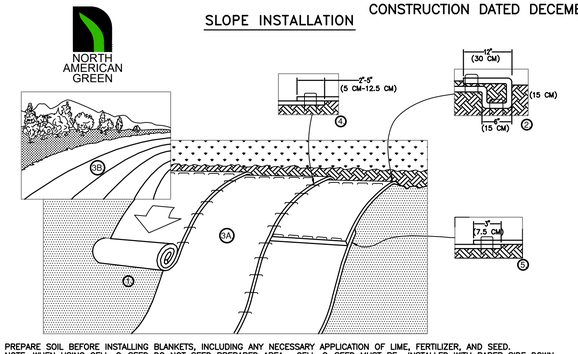
- THE WOOD WASTE COMPOST/BARK FILTER SHALL CONSIST OF A WOOD WASTE COMPOST/ BARK MULCH MIX OR RECYCLED, COMPOSTED BARK FLUME GRIT AND FRAGMENTED WOOD GENERATED FROM WATER FLUME LOG HANDLING SYSTEMS.
  - A) THE MIX SHALL HAVE THE FOLLOWING STANDARDS:
  - B) MOISTURE CONTENT – 30% TO 60%
  - C) pH – 5.0 TO 8.0
  - D) SCREEN SIZE – 100% LESS THAN 75MM, MAXIUMUM 70% LESS THAN 25 MM,
  - E) NO LESS THAN 40% ORGANIC MATERIAL (DRY WEIGHT) BY LOSE OF IGNITION,
  - F) NO STONES GREATER THAN 2 INCHES IN DIAMETER
- BERM MAY BE FORMED WITH A BARK BLOWER OR WITH OTHER EQUIPMENT. BERM SHALL BE 18 INCHES MINIMUM AT THE BASE AND SHALL BE AT LEAST 12" IN HEIGHT.
- FILTER BERM MAY BE PLACED DIRECTLY ON THE GROUND, NO TRENCHING OR STAKING IS REQUIRED. MATERIAL.
- FILL CONTINUOUS BERM WITH SAND, AGGREGATE ROCK, OR SOIL AS SPECIFIED.
- DRAINAGE OF PONDED WATER IS DEPENDENT UPON FABRIC FLOW RATES AND THE INFILL
- WHEN A CONTINUOUS BERM IS TO FUNCTION AS A SEDIMENT TRAP, AT LEAST 3 FEET (0.9M) OF THE STRUCTURE MUST BE FILLED WITH 3/4"– 1 1/2" (20MM TO 38MM) DIAMETER ROCK TO SERVE AS A DRAINAGE CHAMBER. IN ADDITION THE ROCK DRAINAGE CHAMBER MUST BE LOCATED AT A LOW SPOT FOR ADEQUATE DRAINAGE OF PONDED WATERS.
- NONWOVEN FABRIC CAN BE DRAINED BY CUTTING VERTICAL SLITS IN THE UPSTREAM SIDE OF THE FABRIC SURROUNDING THE DRAINAGE CHAMBER TO ALLOW FOR THE PASSAGE OF WATER. OPTIONALLY, INSERT A 2 INCH (51MM) PVC PIPE THROUGH THE DOWNSIDE OF THE BERM, INTO THE ROCK CHAMBER APPROXIMATELY 4–6 INCHES (101–152MM) TO DISCHARGE THE PONDED WATER.
- ONCE A BERM HAS BEEN DEVELOPED, ADDITIONAL SEALING OF THE BOTTOM OCCURS BY HAVING SOMEONE "WALK" ALONG THE TOP.

MULCH BERM DETAIL

(NO SCALE)

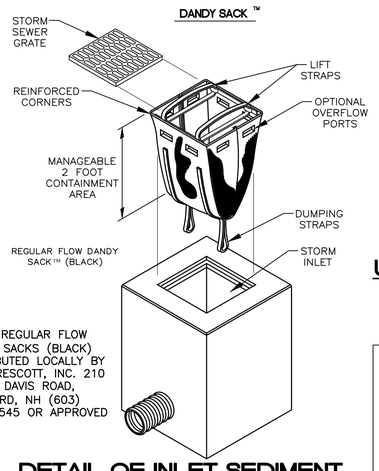
SLOPE INSTALLATION

ALL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE NH STORMWATER MANUAL VOLUME 3 EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION DATED DECEMBER 2008



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL–O–SEED DO NOT SEED PREPARED AREA. CELL–O–SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP–SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™ , STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" – 5" (5 CM – 12.5 CM) OVERLAP DEPENDING ON BLANKET TYPE.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE BLANKET WIDTH.
   NOTE:
   *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
6. USE NORTH AMERICAN GREEN SC150BN EROSION CONTROL BLANKET (OR APPROVED EQUAL) DISTRIBUTED BY EJ PRESCOTT, INC 210 SHEEP DAVIS ROAD CONCORD, NH PHONE: (603) 224–9545

EROSION CONTROL BLANKET (NOT TO SCALE)

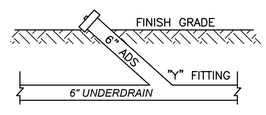


NOTE: REGULAR FLOW DANDY SACKS (BLACK) DISTRIBUTED LOCALLY BY E.J. PRESCOTT, INC. 210 SHEEP DAVIS ROAD, CONCORD, NH (603) 224–9545 OR APPROVED EQUAL.

DETAIL OF INLET SEDIMENT CONTROL DEVICE

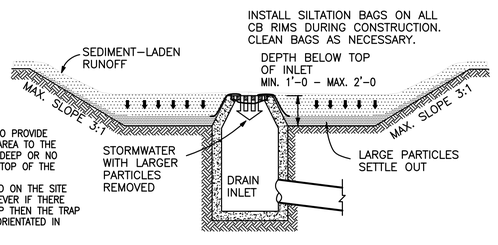
(NOT TO SCALE)

NOTE: INLET SEDIMENT CONTROL DEVICES TO BE REMOVED FROM THE STRUCTURES LOCATED IN PAVED AREAS UPON INSTALLATION OF THE BINDER COURSE.



UNDERDRAIN CLEAN-OUT DETAIL

(NO SCALE)



NOTES:
1. THE TRAP SHOULD BE EXCAVATED AROUND THE INLET TO PROVIDE 67 CUBIC FEET OF STOIRAGE PER ACRE OF DRAINAGE AREA TO THE INLET. THE TRAP SHOULD BE NO LESS THAN 1 FOOT DEEP OR NO MORE THAN 2 FEET DEEP WHEN MEASURED FROM THE TOP OF THE INLET. SIDESLOPES SHOULD BE 3:1 OR FLATTER.
2. THE DIMENSIONS OF THE EXCAVATION SHOULD BE BASED ON THE SITE CONDITIONS. NORMALLY THE TRAPS ARE SQUARE, HOWEVER IF THERE IS CONCENTRATED FLOW BEING DIRECTED INTO THE TRAP THEN THE TRAP SHOULD BE RECTANGULAR WITH THE LONG DIMENSION ORIENTATED IN THE DIRECTION OF THE FLOW

TEMPORARY STORM DRAIN INLET PROTECTION DETAIL (ALTERNATE METHOD) *(NO SCALE)*

APPROVED BY THE LACONIA PLANNING BOARD

ON: _____ CERTIFIED BY

CHAIRMAN: _____ AND

SECRETARY _____

DETAILS

HERON POINT PRESERVE

TAX MAP 13 LOT 183-16
PICKEREL POND ROAD
LACONIA, NEW HAMPSHIRE 03246

OWNER OF RECORD/PREPARED FOR
PARADE REI, LLC
PO BOX 1926
CONCORD, NH 03302
BCRD BOOK 3694/PAGE 459

SCALE: NONE SHEET 15 of 15 DECEMBER 10, 2025

#	DATE	DESCRIPTION

BENCHMARK LLC
Consulting Engineers Land Planners
50 Nashua Road, Suite 305
Londonderry, New Hampshire 03053
Phone: (603) 437–5000

2413 – Details.dwg/15 EROSION (D)

Application(s) #: PB2026-033

Fees Paid: 370.00
Check #: 144
Receipt #:

PLANNING BOARD APPLICATION

Project Name: ANDERSON & SONS AUTO

Project Address: 631 Union Ave # 1

Tax Map/ Lot # (s): 371-220-21 Zoning District (s): UC Parcel Size Acres: _____

Number of Lots: 1 Total Developed Land Area: _____ Building(s) and/or additions Total Sq. Ft. _____

Submittal Request (Check all that apply):

☐ Alternative Parking CUP	☐ Amendment	☐ Boundary Line Adjustment
☐ Boundary Line Agreement	☐ Change of Use	☐ Cluster Development CUP
☐ Cluster Subdivision	☐ Condominium Subdivision	☐ Conventional Subdivision
☐ Discretionary Easement	☐ Marinas and Yacht Club CUP	☐ Minor Site Plan
☐ Performance Zoning CUP	☒ Site Plan (Commercial)	☐ Site Plan (Multi-family)
☐ Steep Slope CUP	☐ Wetland/Wetland Buffer CUP	☐ Other _____

Proposal Description: Car Dealer, Retail Sale's Only No Mechanic

I hereby make application to the City of Laconia for the above-referenced property(ies) and the development as described. To the best of my knowledge the information provided herein is accurate and is in accordance with the Zoning Ordinance and land use regulations of the City, except where waivers are requested. The City of Laconia Planning Board, Minor Site Plan Committee, Technical Review Committee and/or city employees are authorized to enter the property(ies) for purposes of reviewing this proposal and for inspecting improvements as a result of an approval of this proposal. I understand that I am responsible for appearing, or having someone appear on my behalf, at any and all meetings before the Planning Board, Minor Site Plan Committee or Technical Review Committee.

Sign as appropriate (If agent or non-person please attach certification)
NOTE: Please attach an Applicant Contact Worksheet

	PROPERTY OWNER 1	PROPERTY OWNER 2	AGENT / APPLICANT
Printed Name:	~~ETHAN ANDERSON~~		
Signature:			
Date:			

DEPARTMENT OF PLANNING, ZONING & CODE
45 BEACON STREET, EAST
☎603-527-1264
🖷603-524-2164

CERTIFIED LIST OF ABUTTERS

RSA 672:3 "Abutter" means any person whose property is located in New Hampshire and adjoins or is directly across the street or stream from the land under consideration by the local land use board. For purposes of receiving testimony only, and not for purposes of notification, the term "abutter" shall include any person who is able to demonstrate that his land will be directly affected by the proposal under consideration. For purposes of receipt of notification by a municipality of a local land use board hearing, in the case of an abutting property being under a condominium or other collective form of ownership, the term abutter means the officers of the collective or association, as defined in RSA 356-B:3, XXIII. For purposes of receipt of notification by a municipality of a local land use board hearing, in the case of an abutting property being under a manufactured housing park form of ownership as defined in RSA 205-A:1, II, the term "abutter" includes the manufactured housing park owner and the tenants who own manufactured housing which adjoins or is directly across the street or stream from the land under consideration by the local land use board.

The following information must be completed by the applicant in order to begin the application process to the Planning Board or Zoning Board of Adjustment. Below, list the verified names and mailing addresses of the applicant, authorized agent(s), engineer, architect, land surveyor, soil scientist, consultant, abutter, holders of conservation easements or restrictions on adjacent lands, municipal/regional planning commissions (if a regional notice is required), associations, etc., not more than five (5) days prior to submission, per RSA 676:4,I(b). Abutters' names and mailing addresses must be verified against the records kept in the Laconia Assessor's Office. Attach additional copies of this form if necessary. Include an addressed #10 envelope and certified mail receipt for each person/professional listed below.

Map/Block/Lot	Name of Property Owner/Professional	Mailing Address of Owner/Professional
371/220/20	Matthew Spellissy	30 OAK St Franklin NH 03235
371/152/26	Russell Scott S Spears Sara H Gaudette	168 Parade Rd, Meredith
371/220/22	CK IV, LLC	59 Bisson Ave, Laconia NH 03246
388-388/220/6	"	"
371/220/6	Laconia Area Community L	193 Court St Laconia, NH 03246
371/220/7	Belknap Title Co Inc	670 Union Ave, Laconia NH 03246
371/152/58	City of Laconia Hillside Cemetary	45 Beacon St Laconia, NH 03246
	SEE ATTACHED	

Name of Person Preparing List _____ Date Prepared _____

Preparer's Signature _____ Date _____

***Fee per Abutter $10.00**

Laconia
CITY ON THE LAKES

DEPARTMENT OF PLANNING, ZONING & CODE
45 BEACON STREET, EAST
☎603-527-1264
🖷603-524-2164

General Conditional Use Permits Requirements

1. The Use is authorized in the Table of Permitted Uses as a conditional use. yes

2. Any specific conditions or standards are met. All

3. Public safety or health will not be materially endangered. NO

4. The value of adjoining or abutting properties will not be substantially affected. No

5. Compatibility with uses of adjoining or abutting properties and the neighborhood. yes

6. Highway or pedestrian safety will not be substantially adversely impacted. No

7. Natural resources of the city will not be substantially adversely impacted. ~~Yes~~ No they won't be impacted

8. Adequate public facilities and utilities are available or will be provided by the applicant. yes

5 feet Abutters List Report

Laconia, NH
February 05, 2026

Subject Property:

Parcel Number:	371-220-21	Mailing Address:	OPEN DOOR PRESCHOOL & CHILDCARE CENTER LLC 651 UNION AV LACONIA, NH 03246
CAMA Number:	371-220-21		
Property Address:	651 UNION AV		

Abutters:

Parcel Number:	371-152-26	Mailing Address:	SPEARS RUSSELL SCOTT & GAIL JO ABBOTT GAUDETTE SARAH MACKENZIE 168 PARADE RD MEREDITH, NH 03253
CAMA Number:	371-152-26		
Property Address:	76 MECHANIC ST		
Parcel Number:	371-152-58	Mailing Address:	LACONIA CITY OF HILLSIDE CEMETERY 45 BEACON ST EAST LACONIA, NH 03246
CAMA Number:	371-152-58		
Property Address:	MECHANIC ST		
Parcel Number:	371-220-20	Mailing Address:	SPELLISSY MATTHEW S 30 OAK ST FRANKLIN, NH 03235
CAMA Number:	371-220-20		
Property Address:	661 UNION AV		
Parcel Number:	371-220-22	Mailing Address:	CKI IV LLC 59 BISSON AV LACONIA, NH 03246
CAMA Number:	371-220-22		
Property Address:	645 UNION AV		
Parcel Number:	371-220-3	Mailing Address:	ADSC REAL ESTATE LLC 2 IRISH SETTER LN GILFORD, NH 03249
CAMA Number:	371-220-3		
Property Address:	644 UNION AV		
Parcel Number:	371-220-6	Mailing Address:	LACONIA AREA COMMUNITY LAND TRUST INC 193 COURT ST LACONIA, NH 03246
CAMA Number:	371-220-6		
Property Address:	658 UNION AV		
Parcel Number:	388-152-10	Mailing Address:	CKI IV LLC 59 BISSON AV LACONIA, NH 03246
CAMA Number:	388-152-10		
Property Address:	49 MECHANIC ST		
Parcel Number:	388-220-6	Mailing Address:	CKI IV LLC 59 BISSON AV LACONIA, NH 03246
CAMA Number:	388-220-6		
Property Address:	623 UNION AV		

651 UNION AV

Location	651 UNION AV	**Mblu**	371/ 220/ 21/ /
Acct#	5446	**Owner**	OPEN DOOR PRESCHOOL & CHILDCARE CENTER LLC
Assessment	$927,900		1094
Building Count	1		

Current Value

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2025	$744,300	$183,600	$927,900

Owner of Record

Owner	OPEN DOOR PRESCHOOL & CHILDCARE CENTER LLC	**Sale Price**	$0
Co-Owner		**Book & Page**	3480/0482
Address	651 UNION AV	**Sale Date**	01/12/2022
	LACONIA, NH 03246	**Instrument**	40

Ownership History

Ownership History				
Owner	**Sale Price**	**Book & Page**	**Instrument**	**Sale Date**
OPEN DOOR PRESCHOOL & CHILDCARE CENTER LLC	$0	3480/0482	40	01/12/2022
HUGHES AUTOMOTIVE LLC	$0	3453/0028	31	09/29/2021
HUGHES AUTOMOTIVE LLC	$190,500	2657/0624	81	08/23/2010
LAKES REGION TOWING INC	$175,000	0976/0173	00	11/01/1986

Building Information

Building 1 : Section 1

Year Built: 2010
Living Area: 5,264

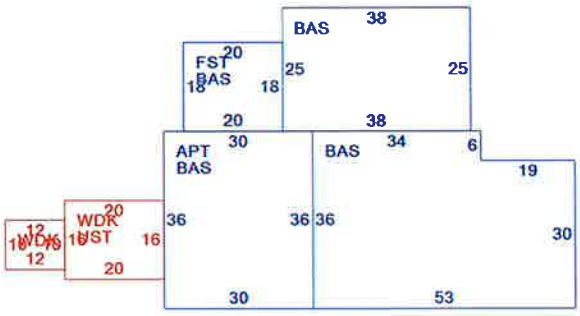
Building Attributes	
Field	**Description**
Style:	Schools-Public

Model	Commercial
Grade	Average
Stories:	1.25
Occupancy	1.00
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	Vinyl Siding
Roof Structure	Shed
Roof Cover	Rolled Compos
Interior Wall 1	Minim/Masonry
Interior Wall 2	Drywall/Sheet
Interior Floor 1	Lino/Vinyl
Interior Floor 2	Concr-Finished
Heating Fuel	Gas
Heating Type	Floor Furnace
AC Type	None
Struct Class	
Bldg Use	DAY CARE MDL-94
Total Rooms	03
Total Bedrms	0
Total Baths	2
1st Floor Use:	0332
Heat/AC	NONE
Frame Type	WOOD FRAME
Baths/Plumbing	AVERAGE
Ceiling/Wall	-DESCRIPTION-
Rooms/Prtns	AVERAGE
Wall Height	18.00
% Comn Wall	0.00

Building Photo

(https://images.vgsi.com/photos/LaconiaNHPhotos/\0030\5446_30502.jpg)

Building Layout



(ParcelSketch.ashx?pid=1094&bid=1136)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	4,184	4,184
APT	Apartment	1,080	1,080
FST	Utility, Finished	360	0
UST	Utility, Storage, Unfinished	320	0
WDK	Deck, Wood	440	0
		6,384	5,264

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 0352

Land Line Valuation

Size (Acres) 0.79

Description	DAY CARE MDL-94	**Frontage**	0
Zone	UC	**Depth**	0
Neighborhood	UNION AVE RT 3	**Assessed Value**	$183,600
Category	No		

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2025	$744,300	$183,600	$927,900
2024	$717,500	$176,600	$894,100
2023	$425,900	$151,200	$577,100

City of Laconia, NH

1 inch = 30 Feet

0 30 60 90

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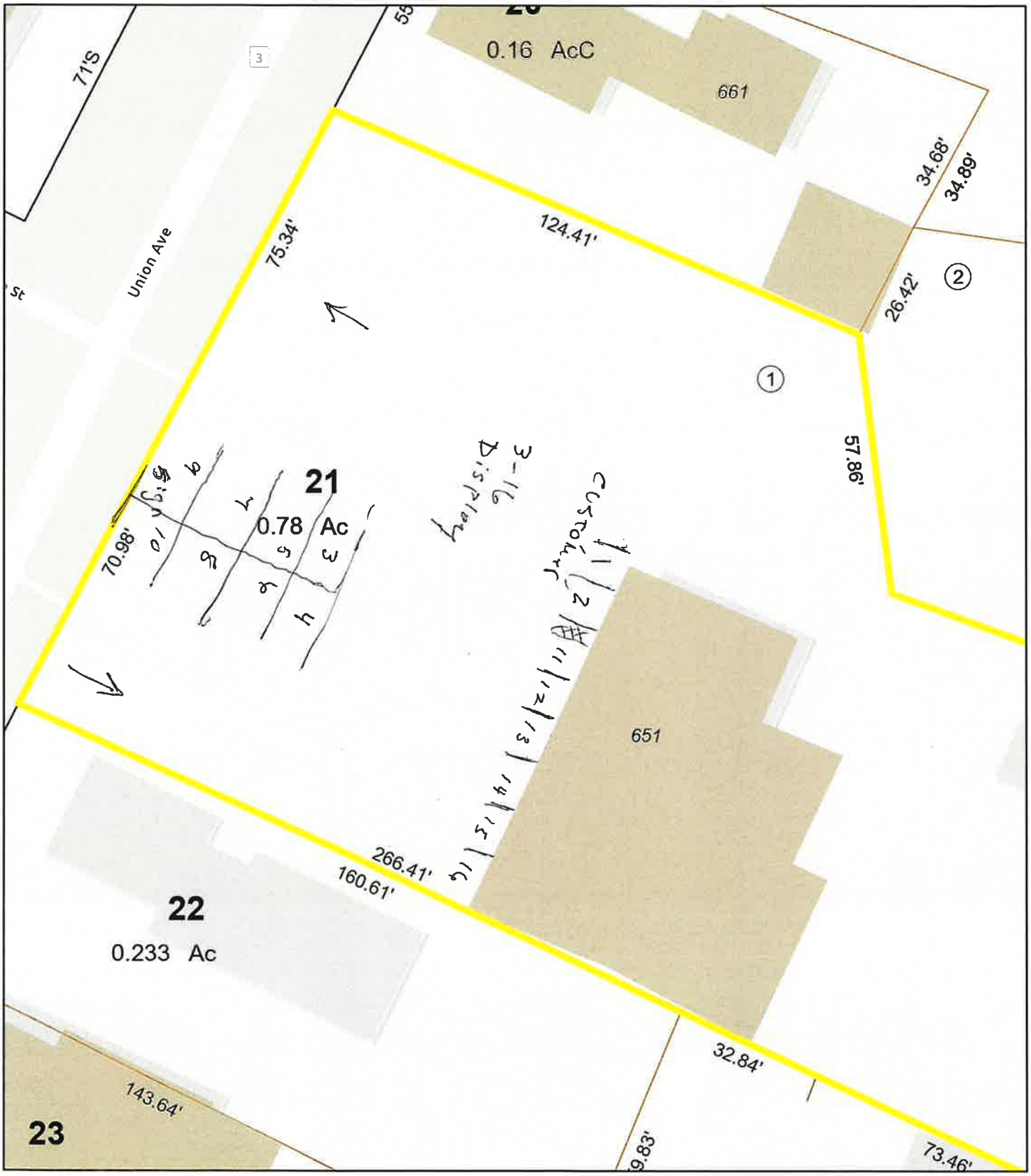
February 4, 2026



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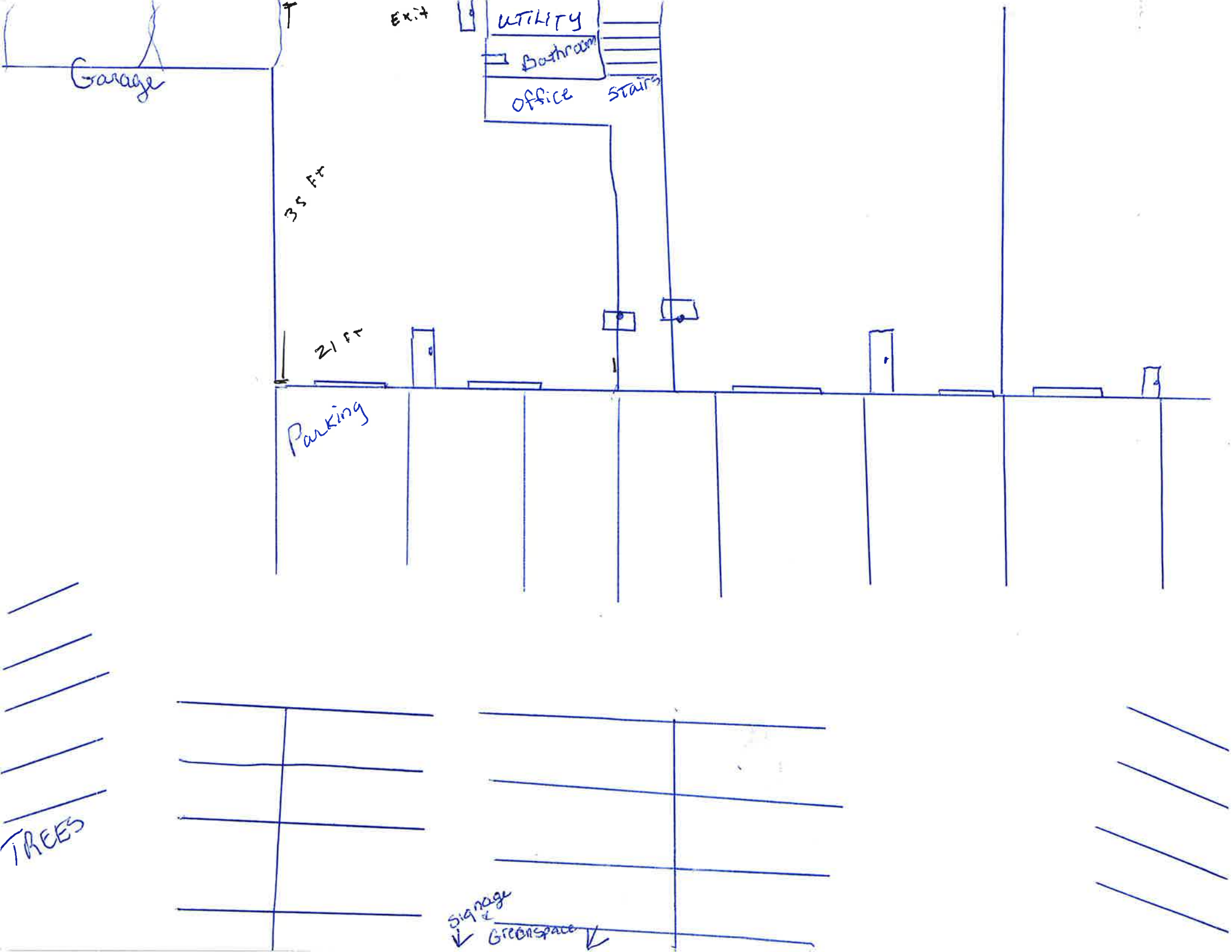
Garage
Exit
UTILITY
Bathroom
office
STAIRS
35 Ft
21 Ft
Parking
TREES
signage
Greenspace

City of Laconia, NH

1 inch = 40 Feet

0 40 80 120

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