TOWN OF EXETER, NEW HAMPSHIRE

10 FRONT STREET • EXETER, NH • 03833-3792 • (603) 778-0591 •FAX 772-4709
www.exeternh.gov

PUBLIC NOTICE
EXETER CONSERVATION COMMISSION

Site Walk

The Exeter Conservation Commission will attend a site walk to review an agricultural use request at 62 Beech Hill Road, Exeter on **Tuesday September 12th**, 2017 at 5:00 P.M.

Monthly Meeting

The Exeter Conservation Commission will meet in the Nowak Room, Exeter Town Offices at 10 Front Street, Exeter on **Tuesday, September 12th, 2017 at 7:00 P.M.**

Call to Order:

1. Introduction of Members Present
2. Public Comment

Action Items

1. Minimum Impact Expedited Permit Request for Exeter River Mobile Home Park Cooperative to fill 1,637 SF of wetlands resulting from excavation activity for a grandfathered gravel pit. Tax Map 95/Lot 64 *(Chris Albert, Jones and Beach).*
2. Review Amended Agricultural Plan for the Bunker/Barker Conservation Easement on Beech Hill Road *(Laura Barker)*
3. Raynes Farm Replacement Sign (*Kathy Norton*)
4. Dredge and Fill application for 3,210 SF of wetland impact at 3-5 Continental Drive for the construction of a 30k SF commercial building and associated infrastructure. Tax Map 47/Lot 1-3 and 1-4. (*Brendan Quigley, GES Inc.*)
5. Committee Reports
    a. Property Management
    b. Trails
        i. Oaklands Trail Project
    c. Outreach
        i. Raynes Pumpkin Toss planning
        ii. NHACC Partnership Project
6. Approval of Minutes: August 8th Meeting
7. Other Business:
8. Next Meeting: Date Scheduled (10/10/17), Submission Deadline (8/31/17)

Bill Campbell, Chair
Exeter Conservation Commission
September 8th, 2017 Exeter Town Office, Exeter Public Library, and Town Departments.

JONES & BEACH ENGINEERS INC.
85 Portsmouth Avenue, PO Box 219, Stratham, NH 03885
603.772.4746 - JonesandBeach.com

July 28, 2017

NHDES Wetlands Bureau
Attn: Eben Lewis
PO Box 95
Concord, NH 03302-0095

RE: Wetlands Permit - Gravel Pit Restoration
Exeter River MHP Cooperative
Hemlock Street, Exeter, NH
Tax Map 95, Lot 64
JBE Project No. 09044

Dear Mr. Lewis:

On behalf of our client and property owner, Exeter River MHP Cooperative, we are submitting a Minimum Expedited Wetlands Permit Application to fill 2 small wetland pockets which resulted from excavation activity for a grandfathered gravel pit. The gravel pit area has been used during recent water and sewer construction work taking place in the park to store surplus fill from excavation. The proposal is to use the excess fill to level out the gravel pit area and restore the site. The proposed wetland impact totals 1,637 square feet. The work is anticipated to start this fall.

If you have any questions or need any additional information, please feel free to contact our office. Thank you very much for your time.

Very truly yours,
JONES & BEACH ENGINEERS, INC.

Paige Libbey
Project Engineer

Cc: Roger Ellis (Exeter River MHP Cooperative Operations Manager)

NHDES MINIMUM EXPEDITED WETLANDS APPLICATION

FOR

Exeter River MHP Cooperative
Attn: Roger Ellis
10 Vincent Street
Exeter, NH

PREPARED BY:

JONES & BEACH ENGINEERS, INC.
85 PORTSMOUTH AVENUE
PO BOX 219
STRATHAM, NH 03885
(603) 772-4746
JULY, 2017
JBE PROJECT NO. 09044

TABLE OF CONTENTS

NHDES Minimum Expedited Wetlands Permit Application

Letter of Authorization

Copy of the Check

USGS Quad Sheet

Historical USGS Maps

Historical Aerial Photography

New Hampshire Natural Heritage Inventory

Tax Maps

Abutter Notice, List, and Certified Receipts

Project Photographs

Impacts Checklist with the following attachments:

- GIS Impaired Waters Map
- Highest Ranked Wildlife Habitat By Ecological Condition Maps

11x17 Aerial Plan

Full Size Plan

NHDES-W-06-012

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

WETLANDS PERMIT APPLICATION

Land Resources Management
Wetlands Bureau

Check the status of your application: www.des.nh.gov/onestop

RSA/Rule: RSA 482-A/ Env-Wt 100-900

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No.:
			Check No.:
			Amount:
			Initials:

1. REVIEW TIME:

Indicate your Review Time below. Refer to Guidance Document A for instructions.

☐ Standard Review (Minimum, Minor or Major Impact) ☒ Expedited Review (Minimum Impact only)

2. PROJECT LOCATION:

Separate applications must be filed with each municipality that jurisdictional impacts will occur in.

ADDRESS: **Lindenshire Ave**		TOWN/CITY: **Exeter**	
TAX MAP: **95**	BLOCK:	LOT: **64**	UNIT:
USGS TOPO MAP WATERBODY NAME: ☒ NA		STREAM WATERSHED SIZE: ☒ NA	
LOCATION COORDINATES (If known): **42°58'12"N, 70°57'52"W**		☐ Latitude/Longitude ☐ UTM ☒ State Plane	

3. PROJECT DESCRIPTION:

Provide a brief description of the project outlining the scope of work. Attach additional sheets as needed to provide a detailed explanation of your project. DO NOT reply "See Attached" in the space provided below.

Filling of man made wetlands to reclamate old gravel pit

4. SHORELINE FRONTAGE

☒ NA This lot has no shoreline frontage. SHORELINE FRONTAGE:

Shoreline frontage is calculated by determining the average of the distances of the actual natural navigable shoreline frontage and a straight line drawn between the property lines, both of which are measured at the normal high water line.

5. RELATED PERMITS, ENFORCEMENT, EMERGENCY AUTHORIZATION, SHORELAND, ALTERATION OF TERRAIN, ETC.

6. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS:

See the Instructions & Required Attachments document for instructions to complete a & b below.

a. Natural Heritage Bureau File ID: NHB **16** - **3163** .

b. ☐ Designated River the project is in ¼ miles of: _____ ; and
date a copy of the application was sent to the Local River Management Advisory Committee: Month: __ Day: __ Year: ____
☒ NA

7. APPLICANT INFORMATION (Desired permit holder)

LAST NAME, FIRST NAME, M.I.: **Ellis, Roger (Operations Manager)**			
TRUST / COMPANY NAME: **Exeter River MHP Cooperative**	MAILING ADDRESS: **201 Loudon Road**		
TOWN/CITY: **Concord**		STATE: **NH**	ZIP CODE: **03301**
EMAIL or FAX: **exeterriveroffice@yahoo.com**	PHONE: **(603) 778-0865**		
ELECTRONIC COMMUNICATION: By initialing here: **CSA**, I hereby authorize NHDES to communicate all matters relative to this application electronically			

8. PROPERTY OWNER INFORMATION (If different than applicant)

LAST NAME, FIRST NAME, M.I.:			
TRUST / COMPANY NAME:	MAILING ADDRESS:		
TOWN/CITY:		STATE:	ZIP CODE:
EMAIL or FAX:	PHONE:		
ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize NHDES to communicate all matters relative to this application electronically			

9. AUTHORIZED AGENT INFORMATION

LAST NAME, FIRST NAME, M.I.: **Albert, Christopher S.**	COMPANY NAME: **Jones & Beach Engineers, Inc.**		
MAILING ADDRESS: **PO Box 219**			
TOWN/CITY: **Stratham**		STATE: **NH**	ZIP CODE: **03885**
EMAIL or FAX: **calbert@jonesandbeach.com**	PHONE: **(603)772-4746**		
ELECTRONIC COMMUNICATION: By initialing here **CSA**, I hereby authorize NHDES to communicate all matters relative to this application electronically			

10. PROPERTY OWNER SIGNATURE:

See the Instructions & Required Attachments document for clarification of the below statements

By signing the application, I am certifying that:

1. I authorize the applicant and/or agent indicated on this form to act in my behalf in the processing of this application, and to furnish upon request, supplemental information in support of this permit application.
2. I have reviewed and submitted information & attachments outlined in the Instructions and Required Attachment document.
3. All abutters have been identified in accordance with RSA 482-A:3, I and Env-Wt 100-900.
4. I have read and provided the required information outlined in Env-Wt 302.04 for the applicable project type.
5. I have read and understand Env-Wt 302.03 and have chosen the least impacting alternative.
6. Any structure that I am proposing to repair/replace was either previously permitted by the Wetlands Bureau or would be considered grandfathered per Env-Wt 101.47.
7. I have submitted a Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) to the NH State Historic Preservation Officer (SHPO) at the NH Division of Historical Resources to identify the presence of historical/ archeological resources while coordinating with the lead federal agency for NHPA 106 compliance.
8. I authorize NHDES and the municipal conservation commission to inspect the site of the proposed project.
9. I have reviewed the information being submitted and that to the best of my knowledge the information is true and accurate.
10. I understand that the willful submission of falsified or misrepresented information to the New Hampshire Department of Environmental Services is a criminal act, which may result in legal action.
11. I am aware that the work I am proposing may require additional state, local or federal permits which I am responsible for obtaining.

 Property Owner Signature	**Paige Libbey, ref. LOA** Print name legibly	7/27/17 Date

MUNICIPAL SIGNATURES

11. CONSERVATION COMMISSION SIGNATURE

The signature below certifies that the municipal conservation commission has reviewed this application, and:

1. Waives its right to intervene per RSA 482-A:11;
2. Believes that the application and submitted plans accurately represent the proposed project; and
3. Has no objection to permitting the proposed work.

⇨	Print name legibly	Date

DIRECTIONS FOR CONSERVATION COMMISSION

1. Expedited review ONLY requires that the conservation commission's signature is obtained in the space above.
2. Expedited review requires the Conservation Commission signature be obtained **prior** to the submittal of the original application to the Town/City Clerk for signature.
3. The Conservation Commission may refuse to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for expedited review and the application will reviewed in the standard review time frame.

12. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 2014), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.

⇨ Town/City Clerk Signature	Print name legibly	Town/City	Date

DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3,I

1. For applications where "Expedited Review" is checked on page 1, if the Conservation Commission signature is not present, NHDES will accept the permit application, but it will NOT receive the expedited review time.
2. IMMEDIATELY sign the original application form and four copies in the signature space provided above;
3. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
4. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board; and
5. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:

1. Submit the single, original permit application form bearing the signature of the Town/ City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery.

13. IMPACT AREA:

For each jurisdictional area that will be/has been impacted, provide square feet and, if applicable, linear feet of impact

Permanent: impacts that will remain after the project is complete.

Temporary: impacts not intended to remain (and will be restored to pre-construction conditions) after the project is complete.

JURISDICTIONAL AREA	PERMANENT Sq. Ft. / Lin. Ft.	TEMPORARY Sq. Ft. / Lin. Ft.
Forested wetland	☐ ATF	☐ ATF
Scrub-shrub wetland	1,637 ☐ ATF	☐ ATF
Emergent wetland	☐ ATF	☐ ATF
Wet meadow	☐ ATF	☐ ATF
Intermittent stream	☐ ATF	☐ ATF
Perennial Stream / River	/ ☐ ATF	/ ☐ ATF
Lake / Pond	/ ☐ ATF	/ ☐ ATF
Bank - Intermittent stream	/ ☐ ATF	/ ☐ ATF
Bank - Perennial stream / River	/ ☐ ATF	/ ☐ ATF
Bank - Lake / Pond	/ ☐ ATF	/ ☐ ATF
Tidal water	/ ☐ ATF	/ ☐ ATF
Salt marsh	☐ ATF	☐ ATF
Sand dune	☐ ATF	☐ ATF
Prime wetland	☐ ATF	☐ ATF
Prime wetland buffer	☐ ATF	☐ ATF
Undeveloped Tidal Buffer Zone (TBZ)	☐ ATF	☐ ATF
Previously-developed upland in TBZ	☐ ATF	☐ ATF
Docking - Lake / Pond	☐ ATF	☐ ATF
Docking - River	☐ ATF	☐ ATF
Docking - Tidal Water	☐ ATF	☐ ATF
TOTAL	1,637 /	/

14. APPLICATION FEE: See the Instructions & Required Attachments document for further instruction

☒ Minimum Impact Fee: Flat fee of $ 200

☐ Minor or Major Impact Fee: Calculate using the below table below

Permanent and Temporary (non-docking) _____ sq. ft. X $0.20 = $ _____

Temporary (seasonal) docking structure: _____ sq. ft. X $1.00 = $ _____

Permanent docking structure: _____ sq. ft. X $2.00 = $ _____

Projects proposing shoreline structures (including docks) add $200 = $ _____

Total = $ _____

The Application Fee is the above calculated Total or $200, whichever is greater = **$ 200.00**

Letter of Authorization

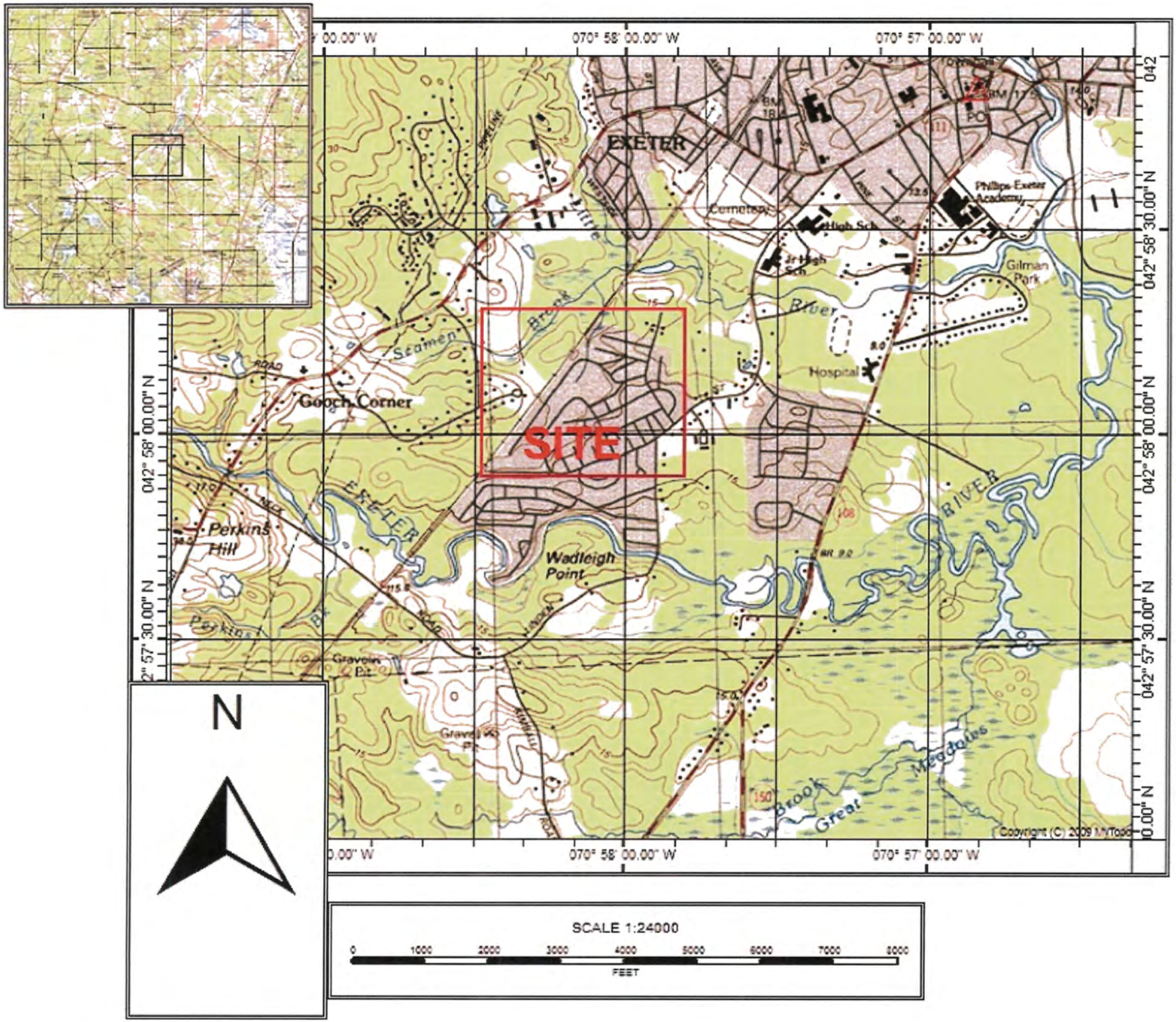
I, Mark Raynes, Exeter River Mobile Home Park Cooperative, Inc., 10 Vincent Street, Exeter, NH 03833, owner of property located in Exeter, NH, known as Tax Map 95, Lot 64-87, do hereby authorize Jones & Beach Engineers, Inc., PO Box 219, Stratham, NH, to act on my behalf concerning the previously mentioned property. The parcel is located on Alder Street in Exeter, NH.

I hereby appoint Jones & Beach Engineers, Inc., as my agent to act on my behalf in the review process, to include any required signatures.

Witness

Mark Raynes
Exeter River Mobile Home Park Cooperative, Inc.
Pamela M. Webster, Secretary

3/11/14
Date


070° 58' 00.00" W
070° 57' 00.00" W
042° 58' 30.00" N
042° 58' 00.00" N
042° 57' 30.00" N
EXETER
Cemetery
Phillips Exeter Academy
Gilman Park
River
Hospital
Seamen
Brook
ROAD
Gooch Corner
SITE
EXETER
RIVER
Perkins Hill
Wadleigh Point
Gravel Pit
Great Meadows
Brook
N
SCALE 1:24000
0 1000 2000 3000 4000 5000 6000 7000 8000
FEET
Copyright (C) 2009 MyTopo

Google Earth

feet 1000
meters 500

1993

Google Earth

feet 1000
meters 500

2003

Google Earth

feet 1000

meters 500

2009

Google Earth

feet 1000
meters 500

2017

New Hampshire Natural Heritage Bureau

To: Paige Libbey
85 Portsmouth Avenue
Stratham, NH 03885

Date: 10/14/2016

From: NH Natural Heritage Bureau

Re: Review by NH Natural Heritage Bureau of request dated 10/14/2016

NHB File ID: NHB16-3163

Applicant: Paige Libbey

Location: Tax Map(s)/Lot(s): Tax Map 95 Lot 64
Exeter

Project Description: Water and Sewer lines to be installed crossing the wetland - temp impacts

The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

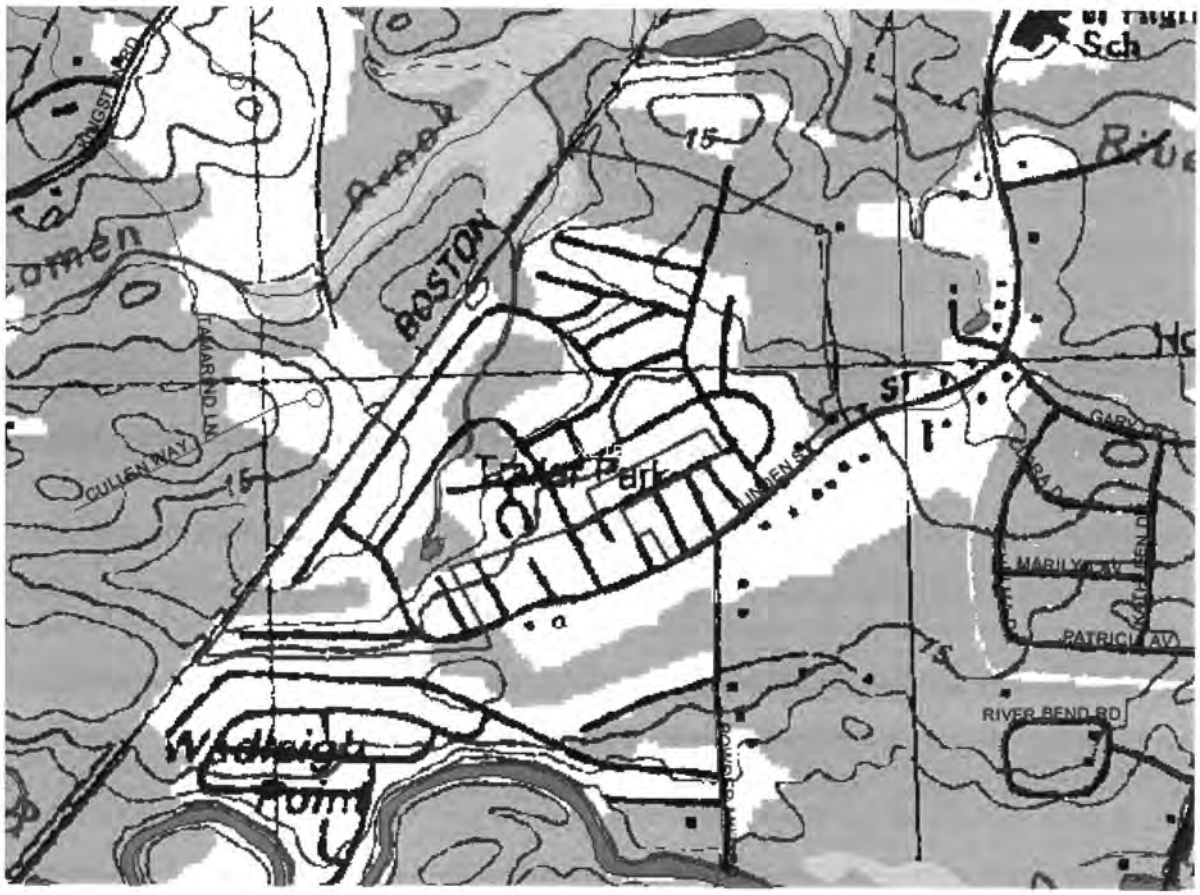
A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

This report is valid through 10/13/2017.

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DRED/NHB
172 Pembroke Road
Concord NH 03301

MAP OF PROJECT BOUNDARIES FOR NHB FILE ID: NHB16-3163



Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DRED/NHB
172 Pembroke Road
Concord NH 03301

ABUTTERS LIST
FOR
HEMLOCK STREET, EXTEER RIVER MHP COOPERATIVE
EXETER, NH
JBE PROJECT No. 09044
OCTOBER 17, 2016
REVISED JULY 24, 2017

OWNER OF RECORD/APPLICANT:

TAX MAP 95/ LOT 64 (8 WAYLAND CIRCLE) – SUBJECT PROPERTY
96/5 (10 VINCENT ST) – ABUTTING PROPERTY
EXETER RIVER MHP COOPERATIVE INC C/O HODGES
201 LOUDON RD
CONCORD, NH 03301
BK 4786 /PG 1005 (04/10/07) – LOT 64
BK 4807/ PG 2520 (05/17/070 – LOT 5

ABUTTERS:

73/47 (ARBOR ST)
BOSTON & MAIN RAILROAD CORPORATION
1700 IRON HORSE PARK
NORTH BILLERICA, MA 01862

95/65 (89 LINDEN ST)
89 LINDEN ST REALTY TRUST
ROBERT A & BARBARA A JOHNSON, TRUSTEES
1 TOPPAN LANE
HAMPTON FALLS, NH 03844
BK 5189/PG 2563 (01/24/11)

95/66
DENISE L SWEENEY
87 LINDEN ST
EXETER, NH 03833
BK 4633/PG 0888 (03/24/06)

95/67 (WINSLOW DRIVE)
LINDEN COMMONS HOMEOWNERS ASSOCIATION
3 PENSTOCK WAY
NEWMARKET, NH 03870
BK 5635/PG 0248 (07/07/15)

96/3 (16 VINCENT ST)
ARTHUR J. JEAN JR
GENEVIEVE JEAN
75 DEEP MEADOW
EXETER, NH 03833
BK 3214/PG 0044 (05/12/97)

96/4 (12 VINCENT ST)
CHARLES L DEON
PO BOX 1034
EXETER, NH 03833
BK 5146/PG 0202 (09/20/10)

96/6
ADAM D SHEEHAN
8 VINCENT STREET
EXETER, NH 03833
BK 4554/PG 1456 909/25/05)

96/7 (4 VINCENT STREET)
DONNA G JANZEGERS
PO BOX 277
EXETER, NH 03833
BK 4590/PG 1702 (12/02/05)

ENGINEERS/SURVEYORS:

JONES & BEACH ENGINEERS, INC.
ATTN: CHRISTOPHER ALBERT
PO BOX 219
STRATHAM, NH 03885

JONES & BEACH
ENGINEERS INC.
85 Portsmouth Avenue, PO Box 219, Stratham, NH 03885
603.772.4746 - JonesandBeach.com

July 27, 2017

RE: Wetlands Permit - Gravel Pit Restoration
Exeter River Mobile Home Park Cooperative
Hemlock Street, Exeter, NH
Tax Map 95, Lot 64
JBE Project No. 09044

Dear Abutter:

Under RSA 482-A, we are required to notify you that we are applying for a Minimum Expedited Wetlands Permit from the N.H. Department of Environmental Services (DES) Wetlands Bureau. This letter is to inform you, as an abutter to the above-referenced property, that an application will be filed with the DES Wetlands Bureau. The project proposes to fill 2 small wetland pockets which resulted from excavation activity for a grandfathered gravel pit. The proposed wetland impact totals 1,637 square feet. The application with plans that show the proposed project and temporary impacts will be available for viewing during normal business hours at the office of the Exeter Town Clerk.

Please feel free to contact myself with any questions. Thank you for your time.

Very truly yours,
JONES & BEACH ENGINEERS, INC.

Christopher S. Albert
Senior Project Manager

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JONES & BEACH ENGINEERS, INC.
ATTN: CHRISTOPHER ALBERT
PO BOX 219
STRATHAM, NH 03885

09044

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 0600 0000 5129 6425

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DONNA G JANZEGERS
PO BOX 277
EXETER, NH 03833

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ADAM D SHEEHAN
8 VINCENT STREET
EXETER, NH 03833

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CHARLES L DEON
PO BOX 1034
EXETER, NH 03833

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GENEVIEVE JEAN
75 DEEP MEADOW
EXETER, NH 03833

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☐ Certified Mail Restricted Delivery $
☐ Adult Signature Required $
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Street and Apt. No.
City, State, ZIP+4

LINDEN COMMONS HOMEOWNERS
ASSOCIATION
3 PENSTOCK WAY
NEWMARKET, NH 03870

09044

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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☐ Adult Signature Required $
☐ Adult Signature Restricted Delivery $

Postage
$ .46

Total Postage and
$ 6.56

Sent To
DENISE L SWEENEY
87 LINDEN ST
EXETER, NH 03833

Street and Apt. No.,

City, State, ZIP+4®
09044

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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TRUSTEES
1 TOPPAN LANE
HAMPTON FALLS, NH 03844

Street and Apt. No.,

City, State, ZIP+4®
09044

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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☐ Return Receipt (electronic) $
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☐ Adult Signature Required $
☐ Adult Signature Restricted Delivery $

Postage
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Total Postage and
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CORPORATION
1700 IRON HORSE PARK
NORTH BILLERICA, MA 01862

Street and Apt. No.,

City, State, ZIP+4®
09044

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

STRATHAM NH JUL 27 2017 Postmark Here USPS 03885

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☒ Return Receipt (hardcopy) $ 2.75
☐ Return Receipt (electronic) $
☐ Certified Mail Restricted Delivery $
☐ Adult Signature Required $
☐ Adult Signature Restricted Delivery $

Postage
$ .46

Total Postage and
$ 6.56

Sent To
EXETER RIVER MHP COOPERATIVE INC
C/O HODGES
201 LOUDON RD
CONCORD, NH 03301

Street and Apt. No.,

City, State, ZIP+4®
09044

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

STRATHAM NH JUL 27 2017 Postmark Here USPS 03885

7016 0600 0000 5129 6449

Wetland Permit Photos

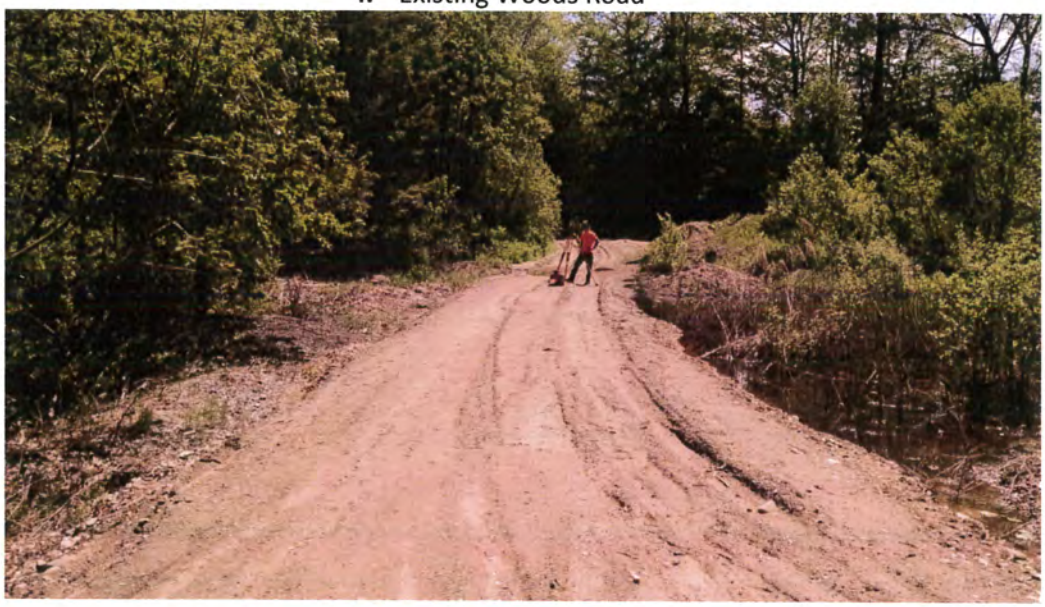
Exeter River MHP Cooperative
Hemlock Street, Exeter, NH
July 2017
JBE No. 09044

1. Wetland to be filled

2. Wetland to be filled

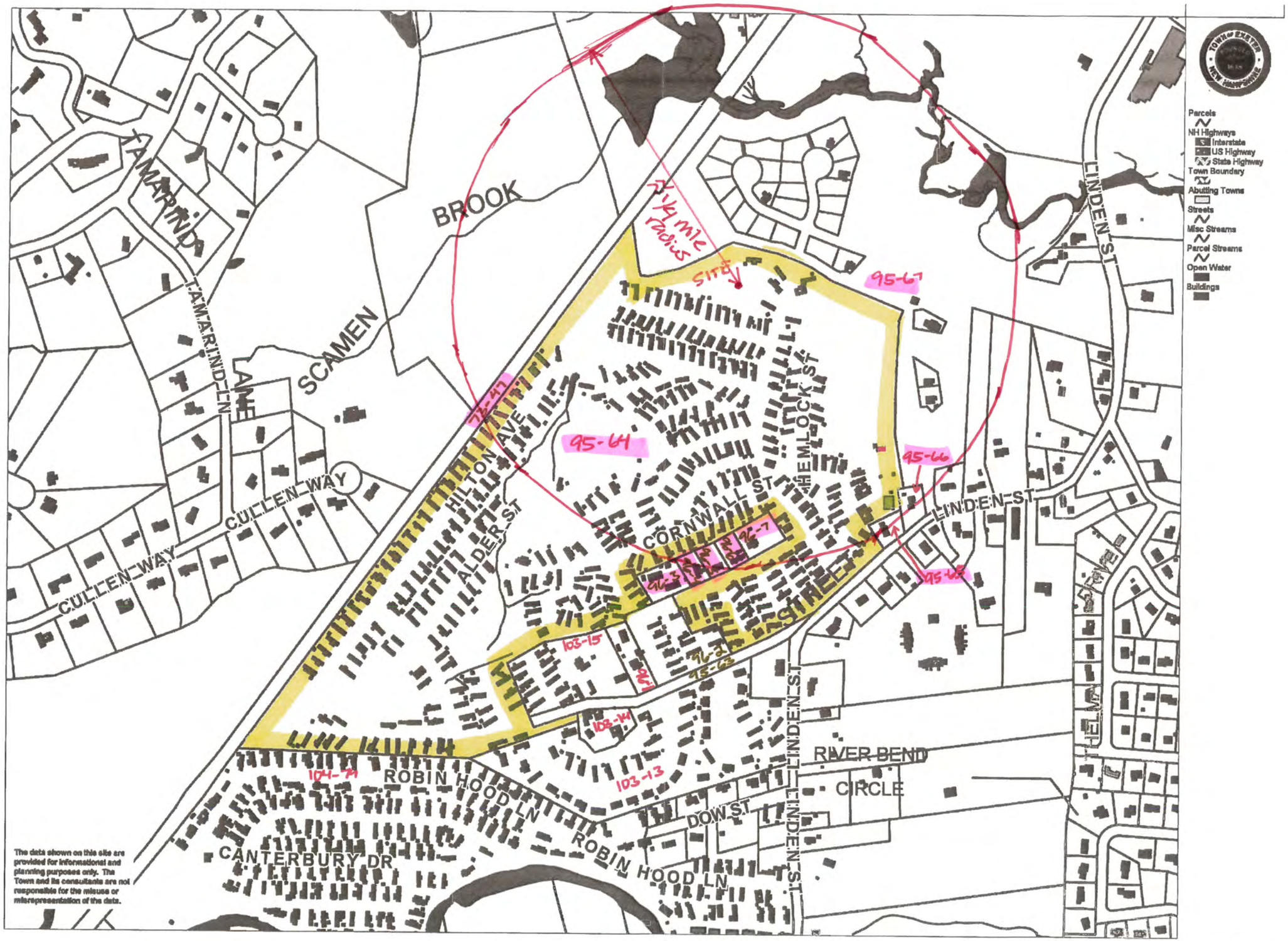
3. Existing Woods Road

4. Existing Woods Road



5. Surplus fill pile

6. Surplus fill pile


BROOK
TAMARIND
TAMARIND LN
SCAMEN
AVE
CULLEN WAY
CULLEN WAY
HILTON AVE
ALDER ST
CORNWALL ST
LINDEN ST
LINDEN ST
LINDEN ST
RIVER BEND
CIRCLE
DOW ST
ROBIN HOOD LN
ROBIN HOOD LN
CANTERBURY DR
THELMA
½ mile radius
site
95-67
95-64
95-66
95-7
95-3
95-63
103-15
103-14
103-13
104-71
72-47
Parcels
NH Highways
Interstate
US Highway
State Highway
Town Boundary
Abutting Towns
Streets
Misc Streams
Parcel Streams
Open Water
Buildings
The data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for the misuse or misrepresentation of the data.
0
800
1600 ft
Printed on 10/17/2016 at 10:59 AM
Exeter MapsOnline

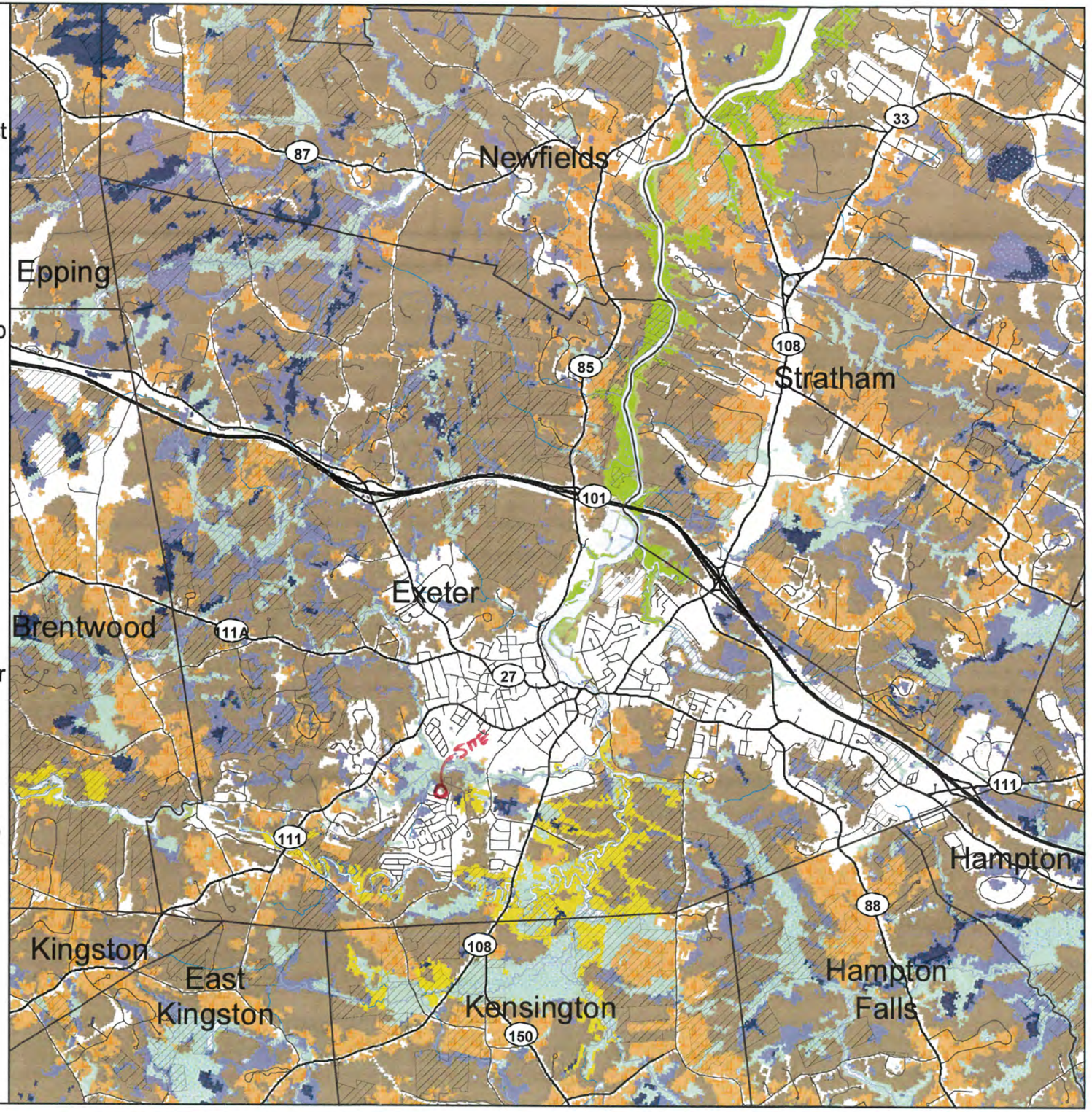
NEW HAMPSHIRE WILDLIFE HABITAT LAND COVER 2015

- Coastal Island/Rocky coast
- Dune
- Salt marsh
- Peatland
- Marsh and Shrub wetland
- Northern or Temperate Swamp
- Floodplain Forest
- Grassland
- Pine barren
- Cliff or Talus slope
- Rocky ridge
- Alpine
- High-elevation Spruce-fir
- Low-elevation Spruce-fir
- Northern hardwood-conifer
- Appalachian oak-pine
- Hemlock-hardwood-pine
- Open Water
- Developed or Barren (NLCD)
- Conservation or public land

Base map data provided by NH GRANIT (2015)
Intended for planning use only.

NEW HAMPSHIRE
Wildlife Action Plan
September 2015

0 1 2 Kilometers
0 1 2 Miles



2015 HIGHEST RANKED WILDLIFE HABITAT BY ECOLOGICAL CONDITION

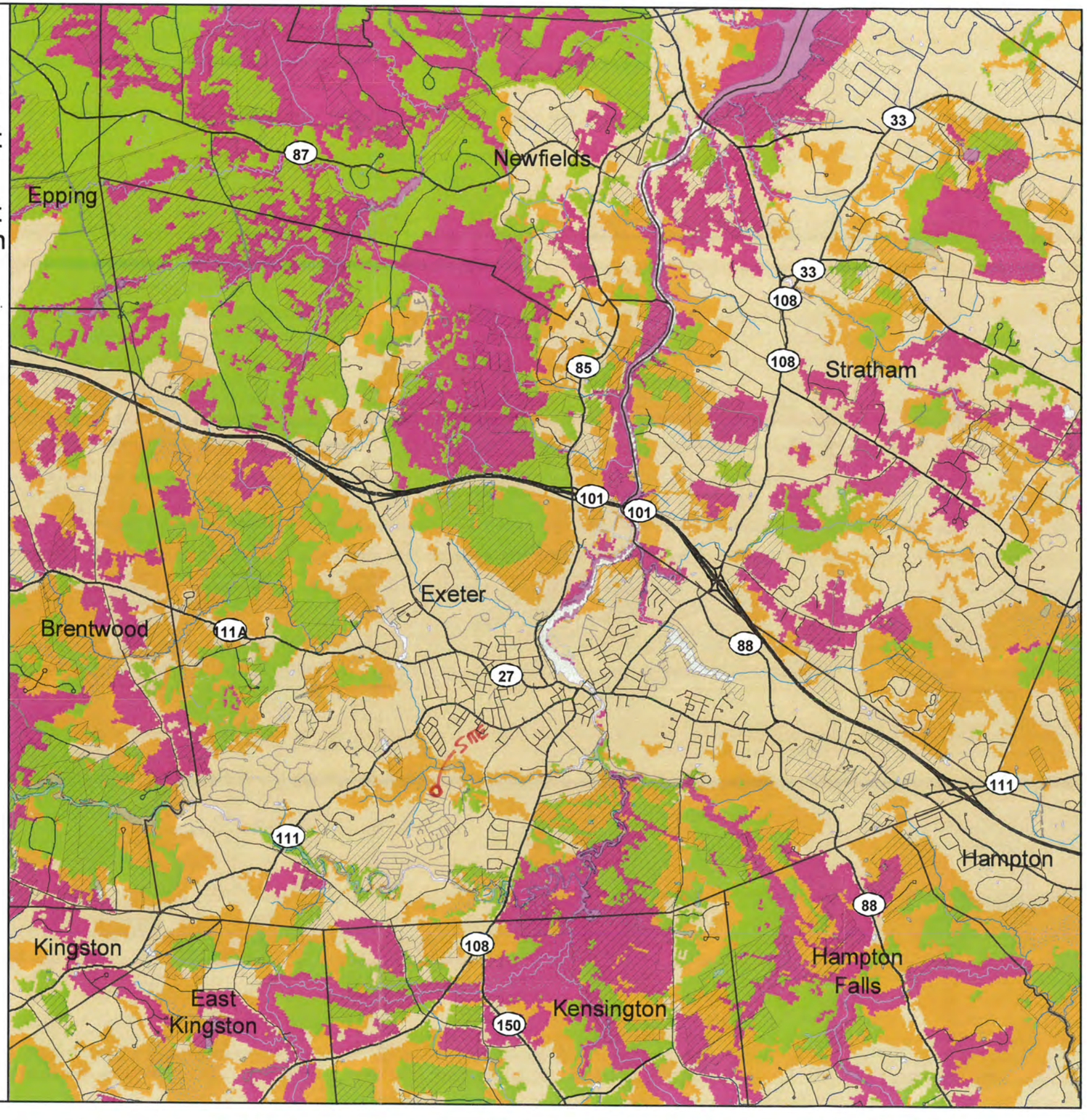
Highest Ranked Habitat in New Hampshire

Highest Ranked Habitat in the Biological Region

Biological region = TNC ecoregional subsection for terrestrial habitats or Aquatic Resource Mitigation region for wetlands and floodplain forest.

Supporting Landscapes

Conservation or public



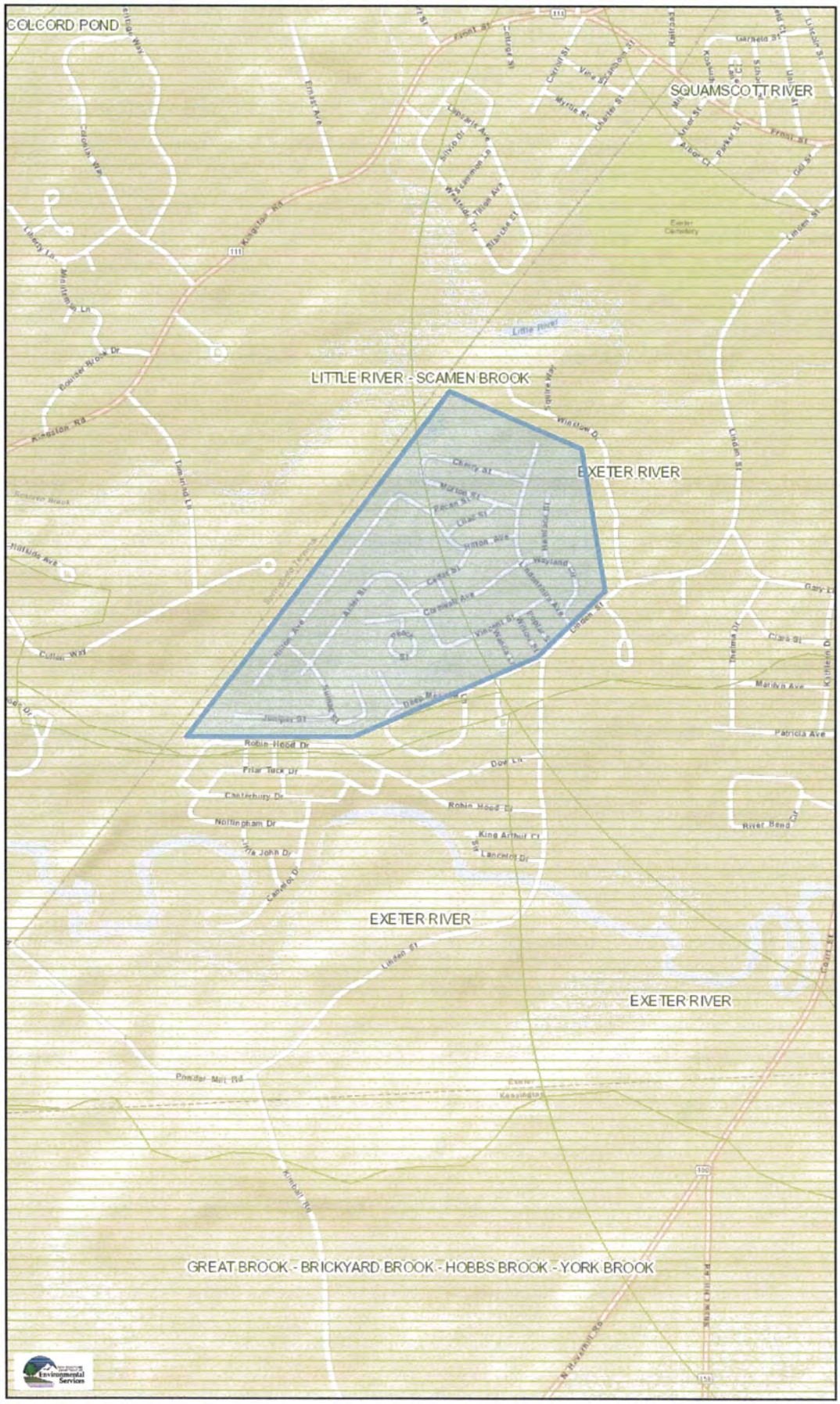
Base map data provided by NH GRANIT (2015)
Not intended for legal use.

NEW HAMPSHIRE
Wildlife Action Plan
September 2015

0 1 2 Kilometers

0 1 2 Miles

Map By



Legend

- Surface Water Impairments with 1 Mile Buffer

Map Scale

1: 12,988

Map Generated: 10/17/2016

Notes

SITE NOTES:

1. THIS PLAN SET HAS BEEN PREPARED BY JONES & BEACH ENGINEERS, INC., FOR MUNICIPAL AND STATE APPROVALS AND FOR CONSTRUCTION BASED ON DATA OBTAINED FROM ON-SITE FIELD SURVEY AND EXISTING MUNICIPAL RECORDS. THROUGHOUT THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY FIELD DISCREPANCY FROM DATA AS SHOWN ON THE DESIGN PLANS, INCLUDING ANY UNFORESEEN CONDITIONS, SUBSURFACE OR OTHERWISE, FOR EVALUATION AND RECOMMENDATIONS. ANY CONTRADICTION BETWEEN ITEMS ON THIS PLAN/PLAN SET, OR BETWEEN THE PLANS AND ON-SITE CONDITIONS, MUST BE RESOLVED BEFORE RELATED CONSTRUCTION HAS BEEN INITIATED. CONTRACTOR TO ALWAYS CONTACT DIG SAFE PRIOR TO DIGGING ONSITE OR OFFSITE TO ENSURE SAFETY AND OBEY THE LAW.
2. ALL CONSTRUCTION SHALL CONFORM TO TOWN STANDARDS AND REGULATIONS, AND NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, WHICHEVER IS MORE STRINGENT.
3. LANDOWNERS ARE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL WETLAND REGULATIONS, INCLUDING PERMITTING REQUIRED UNDER THESE REGULATIONS.
4. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, ARCHITECT AND/OR OWNER, IN ORDER TO OBTAIN AND/OR PAY ALL THE NECESSARY LOCAL PERMITS, FEES AND BONDS.
5. ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.

EXISTING CONDITIONS NOTES:

1. THE LIMITS OF JURISDICTIONAL WETLANDS WERE DELINEATED BY CHRISTOPHER ALBERT, JONES & BEACH ENGINEERS, INC. DURING SUMMER, 2016, IN ACCORDANCE WITH THE FOLLOWING GUIDANCE DOCUMENTS:
   a. THE CORPS OF ENGINEERS FEDERAL MANUAL FOR IDENTIFYING AND DELINEATING JURISDICTIONAL WETLANDS.
   b. THE NORTH CENTRAL & NORTHEAST REGIONAL SUPPLEMENT TO THE FEDERAL MANUAL.
   c. THE CURRENT VERSION OF THE FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, AS PUBLISHED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION AND/OR THE CURRENT VERSION OF THE FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, AS PUBLISHED BY THE USDA, NRCS, AS APPROPRIATE.
   d. THE CURRENT NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS, AS PUBLISHED BY THE US FISH AND WILDLIFE SERVICE.
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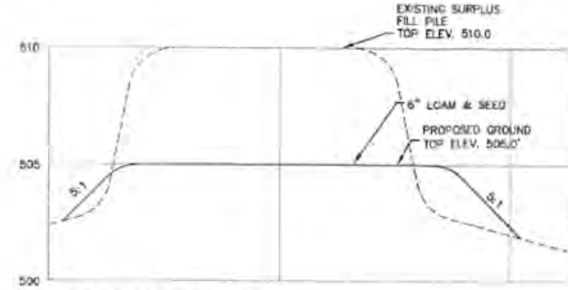
3. WETLAND BOUNDARIES AND CONSTRUCTION LIMITS ARE TO BE CLEARLY MARKED PRIOR TO THE START OF CONSTRUCTION.

GENERAL LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINES
		FRESHWATER WETLANDS LINE
		TREELINE
	X100.00	SPOT GRADE
100	100	MAJOR CONTOUR
98	98	MINOR CONTOUR
	X	SILT FENCE
1		PHOTO LOCATION

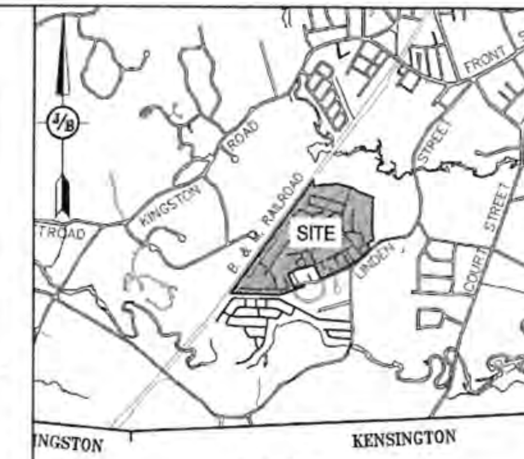
GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

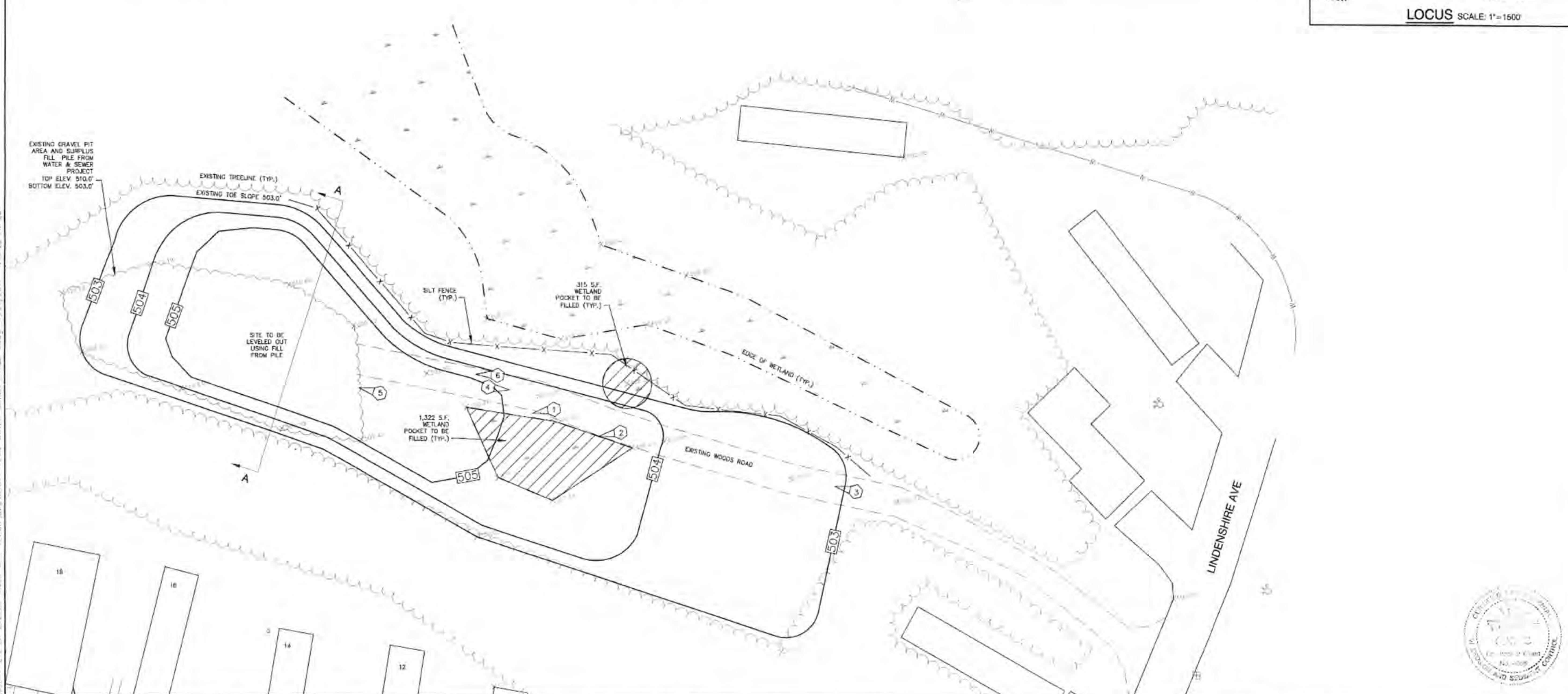


CROSS SECTION AA

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'



LOCUS SCALE: 1"=1500'



Design: CSA	Draft: LAZ	Date: 8/3/16
Checked: JSR	Scale: 1" = 30'	Project No.: 09044
Drawing Name: 09044-PLAN-WATER-SEWER.dwg		

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.

REV.	DATE	REVISION	BY
7	7/27/17	ISSUE WETLAND PERMIT FOR NHDES REVIEW	PSL
6	1/13/17	REVISED LINDENSHIRE SEWER	LAZ
5	12/27/16	REVISED HEMLOCK STREET SEWER AND DRAINAGE	CSA
4	12/16/16	REVISED PER DES WASTEWATER COMMENTS	CSA
3	10/18/16	ISSUE FOR BID	PSL

Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave. PO Box 219 Stratham, NH 03885
603-772-4746 FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	GRAVEL PIT RESTORATION PLAN
Project:	EXETER RIVER MHP COOPERATIVE EXETER, NH
Client:	EXETER RIVER MHP - COOPERATIVE EXETER, NH 03833

DRAWING No.

EX2

SHEET 1 OF 1
JBE PROJECT NO. 09044

SITE NOTES:

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GENERAL LEGEND

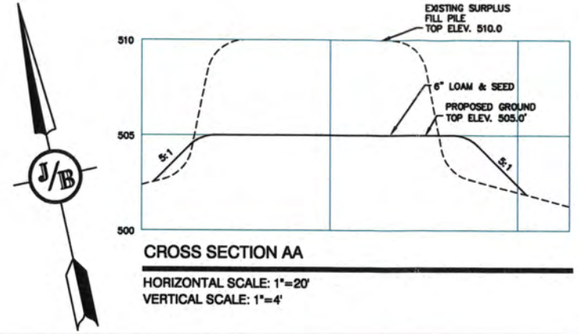
EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINES
		FRESHWATER WETLANDS LINE
		TREELINE
X100.00	X100.00	SPOT GRADE
100	100	MAJOR CONTOUR
98	98	MINOR CONTOUR
	X	SILT FENCE
1		PHOTO LOCATION

GRAPHIC SCALE

20 0 10 20 40 80

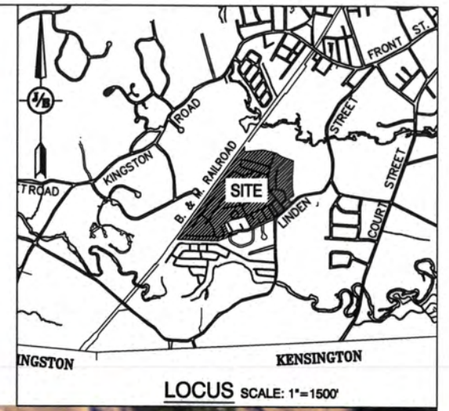
(IN FEET)
1 inch = 20 ft.

J/B

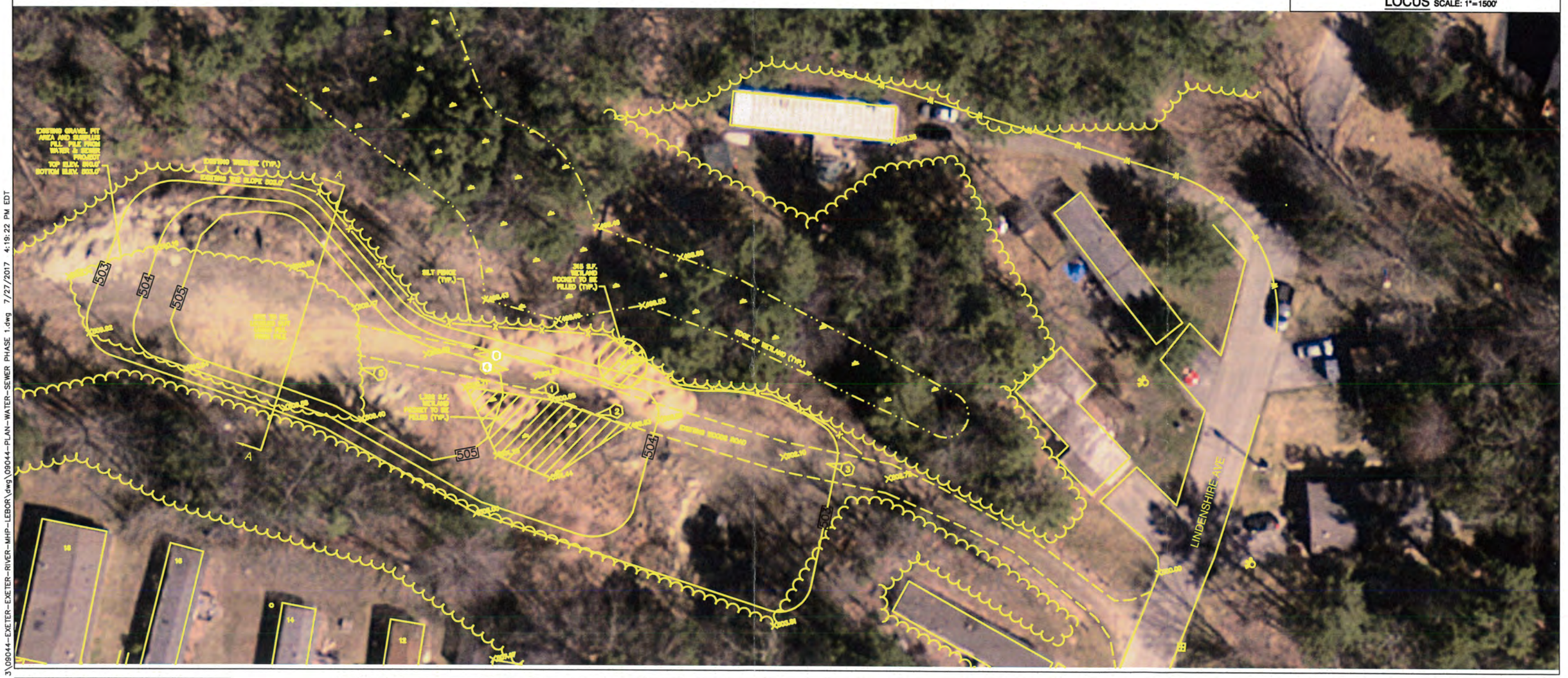


CROSS SECTION AA

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'



LOCUS SCALE: 1"=1500'



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Design: CSA	Draft: LAZ	Date: 8/3/16
Checked: JSR	Scale: 1" = 30'	Project No.: 09044
Drawing Name: 09044-PLAN-WATER-SEWER.dwg		

REV.	DATE	REVISION	BY
7	7/27/17	ISSUE WETLAND PERMIT FOR NHDES REVIEW	PSL
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J/B Jones & Beach Engineers, Inc.
85 Portsmouth Ave. Civil Engineering Services 603-772-4746
PO Box 219 FAX: 603-772-0227
Stratham, NH 03885 E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	GRAVEL PIT RESTORATION PLAN
Project:	EXETER RIVER MHP COOPERATIVE EXETER, NH
Client:	EXETER RIVER MHP - COOPERATIVE EXETER, NH 03833

DRAWING No.

EX2

SHEET 1 OF 1
JBE PROJECT NO. 09044

Agricultural Plan
Bunker\Barker Easement
July 2017

The following is a summary of agriculturally related activities and structures:

Compost facility: Designed and placed by NRCS and team. Designed to follow BMPs and be friendly to all. We pick up manure everyday for the horses, and sheep and goats areas are done about once per week or more frequent in summer. When the compost is "ready" we give some away, sell some, and use some to improve the soils and horticulture.

Heavy Use Area (HUA): Designed and placed by NRCS and team. It was constructed per attached plan. There is also a buffer with blocks at the end and is fenced to keep animals out of the vegetation buffer as prescribed in plan. The HUA also has a sled style shelter that can be removed with approx 6 screws- but it is the feeding area for the animals and follows BMPs.

Summer paddock: Designed by NRCS and team to use rotational grazing as a way to improve the soils, keep the animals happy, minimize the need for the power company to do the chip mowing and allow the animals to naturally improve the land without chemicals or manufactured fertilizers. A grazing plan was also implemented at the time with the help of UNH Co-op Extension. We built the paddock to be used in the summer and fall during the growing season. Two 16 foot gates were installed at either end to allow snowmobilers to pass during the winter months when the summer paddock in not in use. Should gates be kept shut, snowmobiles are still able to cross on the sides.

All of the shelters are movable and not permanent. They are designed to let the animals have a dry place to rest, follow BMPs for their care, and not require permanent structures. They are easy to pick up and/or drag on their built in skids. Two are placed on the HUA area for the feeding area.

Hay Barn: In April 2017, we obtained an equitable waiver from Exeter's Zoning Board of Adjustment to permit a structure that crosses property boundary lines. The building permit was issued

Storage Area 1: This 200' x 30' area contains various items used throughout the property. In general it includes replacement fencing materials, fence posts, wood, kennels, pots, disassembled sheds (which will be placed into the summer paddock), bricks and cement blocks (for weighing down mobile shelters), and flexible drain pipes with filter socks (used as barriers to flooding during times of high water). See photos on next page.

Storage Area 2: This 50' x 20' area contains materials and supplies for the greenhouse (located outside of the easement area).

Wood Stove, Wood Storage Area: As indicated on the map, a Johnson wood burning stove and structure for storing wood is located within the easement area for heating the home and barns.

Signatures:

_____ _____
Laura Barker Date

_____ _____
Chair, Exeter Conservation Commission Date

Initials: _____ _____

STORAGE AREA 1:

Photo 1.

Photo 2.

Photo 3.

Photo 4.

Initials: _____ _____

STORAGE AREA 1 cont'd:

Photo 5.

Photo 6.

Photo 7.

Photo 8.

Initials: _____ _____

STORAGE AREA 1 cont'd:

Photo 9.

Photo 10.

Photo 11.

Photo 12.

Initials: _____ _____

STORAGE AREA 2:

Photo 1. Bags of Much, Soil, Shed for Greenhouse Use

WOOD STOVE:

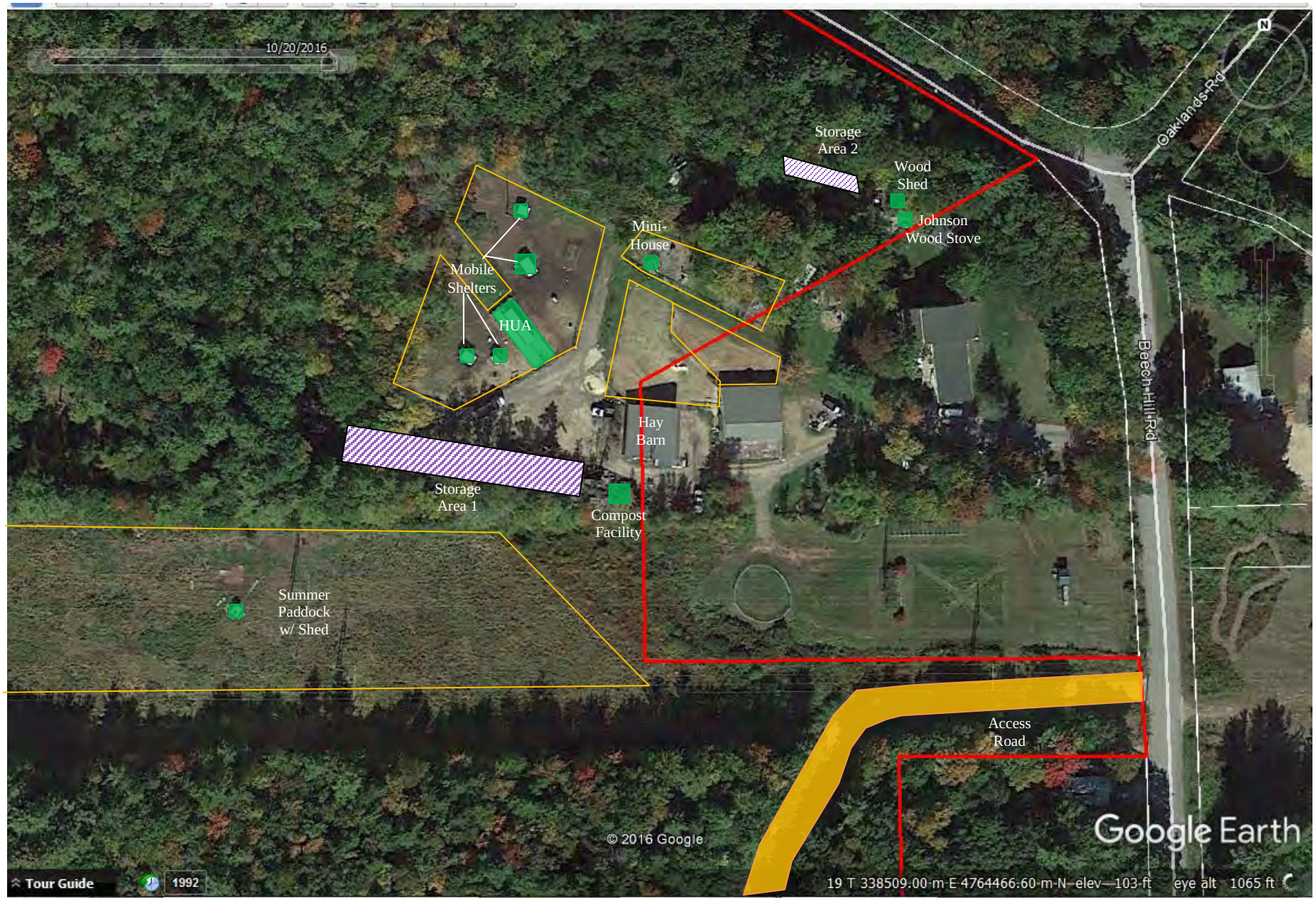
Photo 1. Johnson Wood Stove, Wood Storage Structure

Initials: _____ _____

Aerial Overview of Conservation Easement

Initials: _____ _____

Northern Conservation Easement Area Detail



NRCS Natural Resources Conservation Service
EPPING SERVICE CENTER
TELLY'S PLAZA, 243 CALEF HIGHWAY
EPPING, NH 03042-2326
6036791587 ext. 101

Richard Ellsmore
District Conservationist
Kimberly McCabe
Soil Conservation Tech.

Conservation Plan

LAURA BARKER
62 BEECH HILL RD
EXETER, NH 03833

Forest

Tract: 1072

Access Road

Build a designated route or constructed travelway to be used by vehicles necessary for management of the operation.

Field	Planned Amount	Month	Year	Applied Amount	Date
3	1 ft	10	2005		
Total:	1 ft				

Forest Stand Improvement

Manipulate species composition, stand structure, and stocking by cutting or killing selected trees and understory vegetation according to the Forest Management Plan.

Field	Planned Amount	Month	Year	Applied Amount	Date
3	13.1 ac	10	2005		
Total:	13.1 ac				

Headquarters

Tract: 1072

Composting Facility

Construct a facility for biological stabilization of organic waste material. Facility will store and compost animal waste, into usable soils for greenhouse use.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	1 no	10	2005		
Total:	1 no				

Comprehensive Nutrient Management Plan

A Comprehensive Nutrient Management Plan that addresses the handling, storage, and application of animal waste in an environmentally safe manner will be developed and implemented. The implementation of the CNMP is required to remain in compliance of this contract.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	1 no	10	2005		

Total:	1 no				

Heavy Use Area Protection

Protect heavily used areas by providing soil protection with vegetation, surfacing material or mechanical structures.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	3.1 ac	10	2005		
Total:	3.1 ac				

Water Well

Install a well.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	1 no	10	2005		
Total:	1 no				

Watering Facility

Install a water drinking facility for livestock.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	1 no	10	2005		
Total:	1 no				

Pasture

Tract: 1072

Fence

Construct a fence for use as a barrier to livestock. This will create pastures for prescribed grazing.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	1 ft	10	2005		
Total:	1 ft				

Nutrient Management

Manage the amount, form, placement and timing of plant nutrient application.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	3.7 ac	10	2005		
Total:	3.7 ac				

Pasture and Hay Planting

Establish forage species for grazing .

Field	Planned Amount	Month	Year	Applied Amount	Date
2	3.7 ac	10	2005		
Total:	3.7 ac				

Pest Management

Manage infestations of weeds, insects and disease to reduce adverse effects on plant growth, crop production and material resources.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	3.7 ac	10	2005		
Total:	3.7 ac				

Prescribed Grazing

Grazing will be managed according to a schedule that meets the needs of the soil, water, air, plant and animal resources and the objectives of the resource manager.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	3.7 ac	10	2005		
Total:	3.7 ac				

CERTIFICATION OF PARTICIPANTS

LAURA BARKER Date

CERTIFICATION OF:

District Conservationist

Richard Ellsmore Date

Conservation District

RCCD Date

NONDISCRIMINATION STATEMENT

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

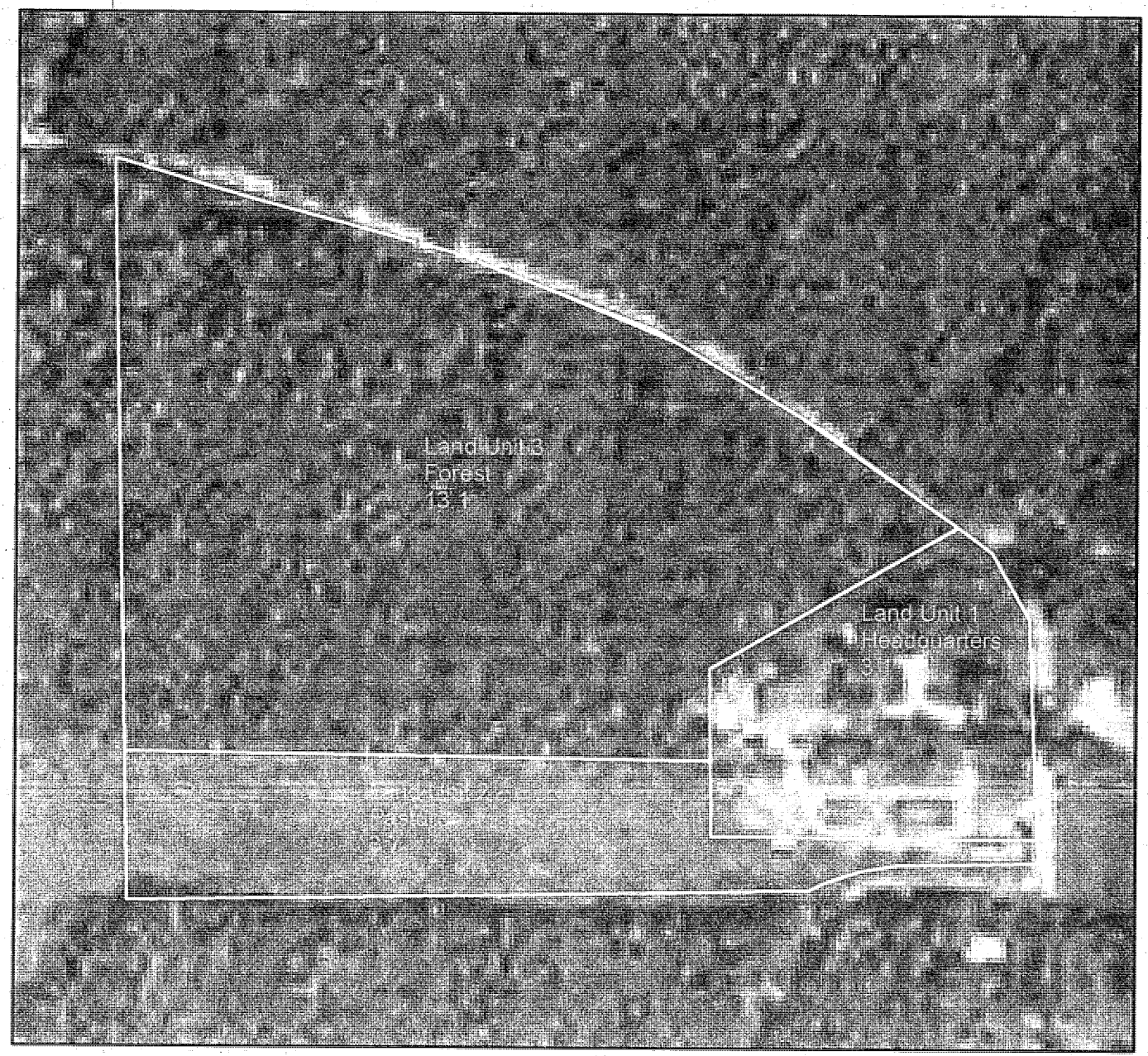
To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

Conservation Plan

Date: 9/26/2005

Customer(s): LAURA BARKER
District: Rockingham
Approximate Acres: 19.9

Field Office: EPPING SERVICE CENTER
Agency: NRCS
Assisted By: Kimberly McCabe
State and County: NH, ROCKINGHAM



Legend

Consplan2

110 0 110 220 330 440
Feet

N

1. To be completed by NRCS; check appropriate box: ✓ This transaction is for CCC. ☐ This transaction is for NRCS. OMB No. 0578-0013

U.S. DEPARTMENT OF AGRICULTURE

CONSERVATION PLAN
SCHEDULE OF OPERATIONS

3. NAME	4. COUNTY	5. STATE	6. CONTRACT OR AGREEMENT NO.	7. TOTAL ACRES UNDER CONTRACT
LAURA BARKER	ROCKINGHAM	New Hampshire	7414286A102	19.9

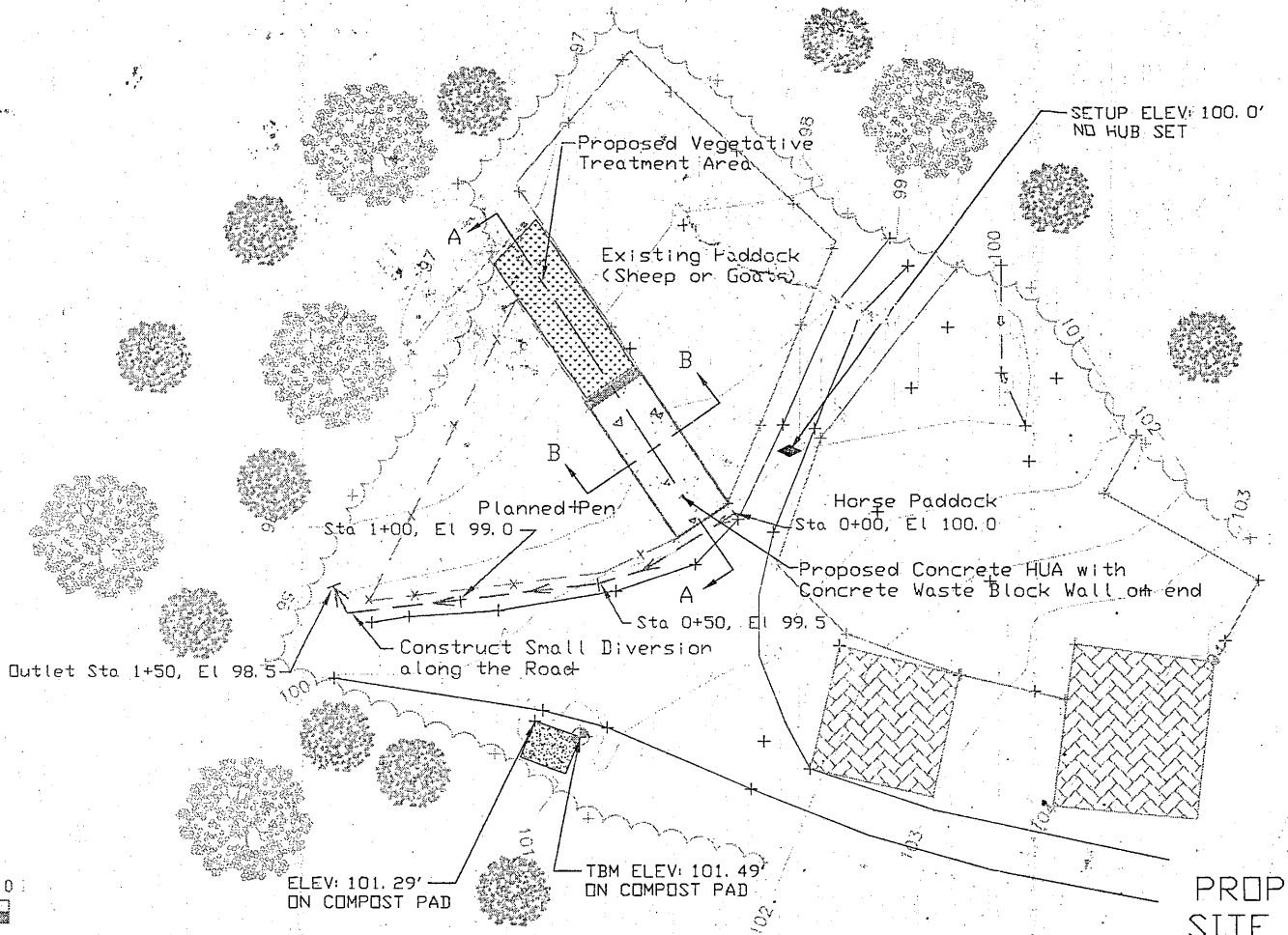
ITEM NO.	FIELD	PLANNED CONSERVATION TREATMENT (Record of Decisions)	ESTIMATED AMOUNT (UNITS)	COST BASIS $	COST SHARE OR PAYMENT RATE %	COMPLETION SCHEDULE AND ESTIMATED COST-SHARE OR PAYMENT BY YEAR (For Non-Cost Share Items Show Units)										REF. NO.
						14	15	16	17	18	19	20	21	22	23	
						2006	2007	2008	2009	2010						
8	9	10	11	12	13	24	25	26	27	28	29	30	31	32	33	34
Construct a facility for biological stabilization of organic waste material. Facility will store and compost animal waste, into usable soils for greenhouse use. Resource Concerns:Water Quality: Excessive Nutrients and Organics in Surface Water , Water Quality: Excessive Suspended Sediment and Turbidity in Surface Water , Soil Condition: Contaminants-Animal Waste and Other Organics - N Livestock: Beef																
1	Tract: 1072 Fields: 1;	COMPOSTING FACILITY(317)	1 no		$8,304											
1a		COMPOST FACILITY	1 no	$9,226.4000	90%AM	$8,304										
Protect heavily used areas by providing soil protection with vegetation, surfacing material or mechanical structures. Resource Concerns:Water Quality: Excessive Nutrients and Organics in Surface Water , Water Quality: Excessive Suspended Sediment and Turbidity in Surface Water , Soil Condition: Contaminants-Animal Waste and Other Organics - N Livestock: Beef																
2	Tract: 1072 Fields: 1;	HEAVY USE AREA PROTECTION(561)	0.1 ac		$2,520											
2a		HEAVY USE AREA PROTECTION	0.1 ac	$28,000.000 0	90%AM	$2,520										
Install a well. Resource Concerns:Water Quality: Excessive Nutrients and Organics in Surface Water , Water Quality: Excessive Suspended Sediment and Turbidity in Surface Water , Soil Condition: Contaminants-Animal Waste and Other Organics - N Livestock: Beef																
3	Tract: 1072 Fields: 1;	WATER WELL(642)	1 no		$5,400											
3a		WATER WELL	1 no	$6,000.0000	90%AM		$5,400									
Construct a fence for use as a barrier to livestock. This will create pastures for prescribed grazing. Resource Concerns:Water Quality: Excessive Nutrients and Organics in Surface Water , Water Quality: Excessive Suspended Sediment and Turbidity in Surface Water , Soil Condition: Contaminants-Animal Waste and Other Organics - N Livestock: Beef																
4	Tract: 1072 Fields: 2;	FENCE(382)	2715 ft		$5,625											
4a		FENCE	1500 ft	$5.0000	75%AM				$5,625							
Establish forage species for grazing . Resource Concerns:Water Quality: Excessive Nutrients and Organics in Surface Water , Water Quality: Excessive Suspended Sediment and Turbidity in Surface Water , Soil Condition: Contaminants-Animal Waste and Other Organics - N Livestock: Beef																
5	Tract: 1072 Fields: 2;	PASTURE AND HAY PLANTING(512)	3.7 ac		$1,665											
5a		PASTURE AND HAYLAND PLANTING	3.7 ac	$600.0000	75%AM			$1,665								
Grazing will be managed according to a schedule that meets the needs of the soil, water, air, plant and animal resources and the objectives of the resource manager. Resource Concerns:Water Quality: Excessive Nutrients and Organics in Surface Water , Water Quality: Excessive Suspended Sediment and Turbidity in Surface Water , Soil Condition: Contaminants-Animal Waste and Other Organics - N Livestock: Beef																
6	Tract: 1072 Fields: 2;	PRESCRIBED GRAZING(528)	3.7 ac		$93											
6a		PRESCRIBED GRAZING	3.7 ac	$25.0000	FR [1]					$93						

[1]Flat rates are the incentive payment amounts determined necessary to encourage adoption of conservation practices and are not based on cost share rates.

LEGEND

These standard symbols are in the drawing.

- SETUP
- TBM
- EDGE ROAD
- CL DITCH
- FENCE
- EDGE WOODS
- BUILDING
- COMPOST



PROPOSED SITE PLAN VIEW

Designed G. Lang 9/11
Drawn C HAMER 1/12/10
Checked
Approved

Practice: HUA
Owner: LAURA BARKER
Town: EXETER NH

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

File No.
Drawing No.
Sheet 2 of 4

REVISIONS		
DATE	APPROVED	TITLE

CONSTRUCTION NOTES

1. Contractor shall call DIGSAFE before any construction begins.
2. Install Temporary Sediment and Erosion control Devices prior to commencing any earthwork.
3. The construction site shall be cleared of all vegetation, rocks, and other debris. All materials not suitable for subgrade shall be removed and replaced with compacted earth fill to planned grades.
4. Gravel base material and crushed stone under blocks to be compacted to grade before placing concrete blocks or concrete slab.
5. Concrete blocks should be placed against the concrete slab with gaps as noted in the details.
6. Concrete for the floor shall be 4000 psi with 8.0 lbs/yd STRUX fiber added.
7. Concrete shall be placed on compacted or dense foundation of 6" gravel.
8. Concrete floor shall be bull floated after screeding and then surface can be brushed lightly to provide a roughen surface for travel and animals. Contraction/Expansion joints shall be cut before concrete is set completely as shown in the details.
9. The surface of the concrete shall be kept moist for the first 48 hours to allow proper curing or sealed with an approved sealer.
10. Care shall be taken when backfilling around the slab and blocks to not damage or move them.
11. Seed and mulch all disturbed areas immediately after shaping is completed.
12. Construct and shape the diversion to the grades shown on the design layout sheet.
13. Maintain the vegetation below the HUA for treating the runoff off the HUA before it enters the woods
14. Please note that this concrete slab is not designed for placement of a building upon it. It is only for use for feeding and resting of the animals on the farm.

TABLE OF QUANTITIES		
ITEM	UNIT	QTY
Stripping, excavation	Cu Yds	27
Earth Fill	Cu Yds	160
Gravel Base (Pit Run)	Cu Yds	19
Concrete, 4000 psi, fiber reinforced	Cu Yds	16
STRUX 40/90 Fiber - 8 lbs/cu yd	Lbs	128
Crushed Stone under blocks (¾" Minus)	Cu Yds	1
Concrete Blocks 2'x2'x6' long	Ea	3
Earthwork, Diversion shaping	Ln Ft	150
Seeding and Mulching	Sq Ft	4,000

The HUA size is calculated for 30 sheep at 200 lbs each and 30 goats at 100 lbs each. This provides approximately 110 sf per Animal Unit or 17 sf per animal for feeding and resting.

QUANTITIES & NOTES

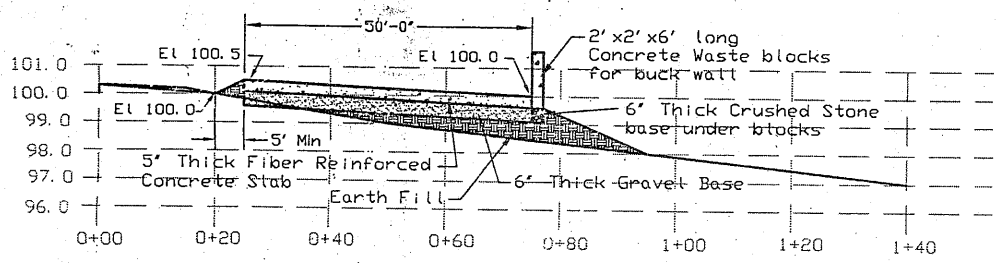
REVISIONS		
DATE	APPROVED	TITLE

Designed G. Lang Date 9/11
Drawn C HAMER 1/12/10
Checked
Approved

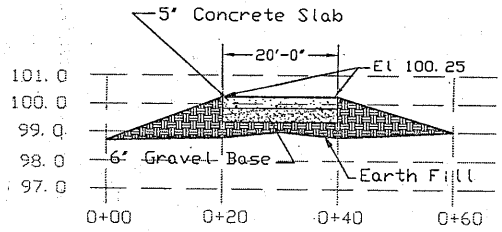
Practice: HUA
Owner: LAURA BARKER
Town: EXETER, NH

NRCS Natural Resources Conservation Service, United States Department of Agriculture

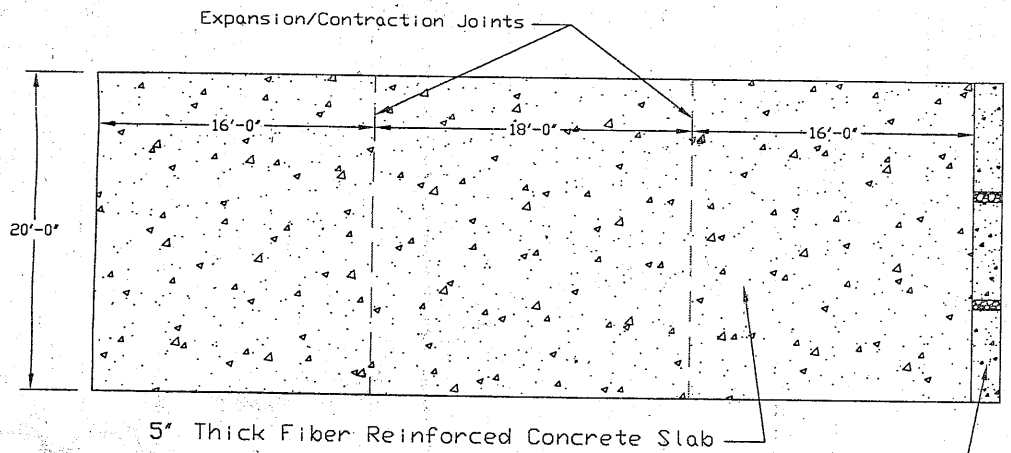
File No.
Drawing No.
Sheet 4 of 4



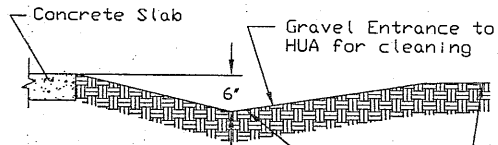
SECTION A-A
Not to Scale



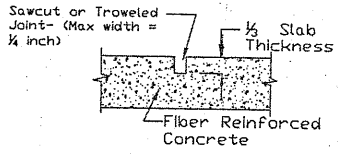
SECTION B-B
Located at Sta 0+50 of Section A-A
Not to Scale



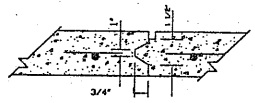
CONCRETE SLAB DETAIL
Not to Scale



ACCESS TO HUA DETAIL
Not to Scale

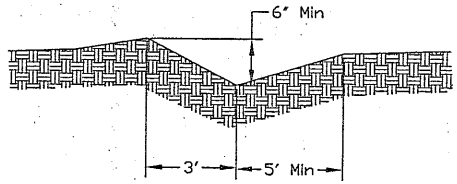


Joint Detail



CONSTRUCTION JOINT

1. USE WHEN PLACEMENT OF CONCRETE IS STOPPED FOR MORE THAN 30 MINUTES.



DIVERSION CROSS SECTION
DETAIL
Not to Scale

DETAILS

REVISIONS		
DATE	APPROVED	TITLE

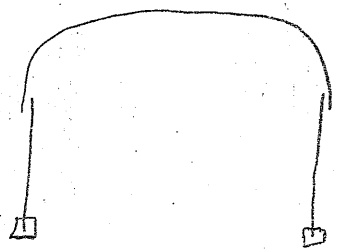
Designed G. Lang 9/11
Drawn C HAMER 1/12/10
Checked
Approved

Practice: HUA
Owner: LAURA BARKER
Town: EXETER NH

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

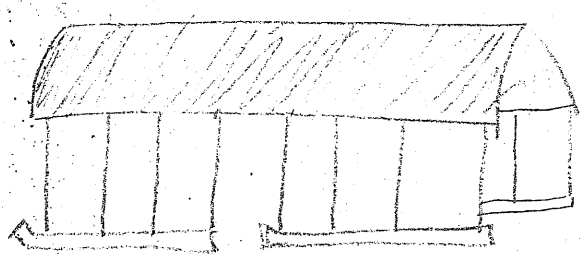
File No.
Drawing No.
Sheet 3 of 4

A & B



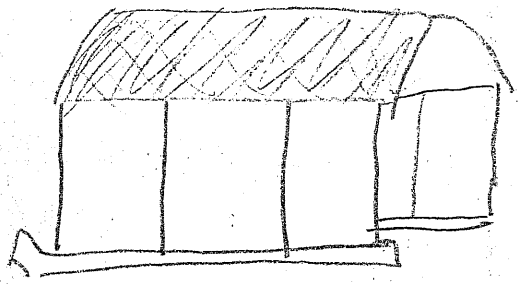
Front view

"A"

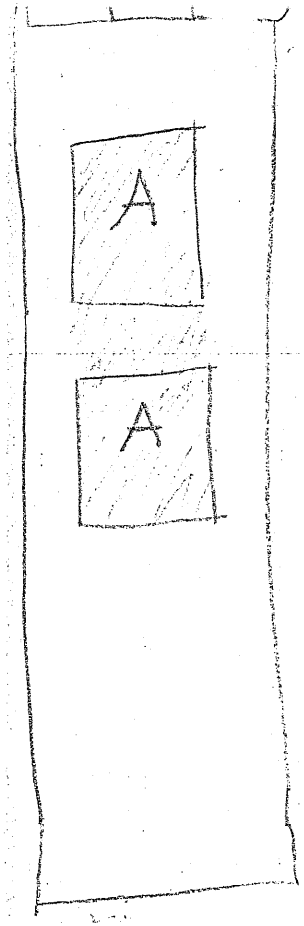


side view of HUA shelter is 2 "B" units put together

"B" unit



★ No Floor on any units

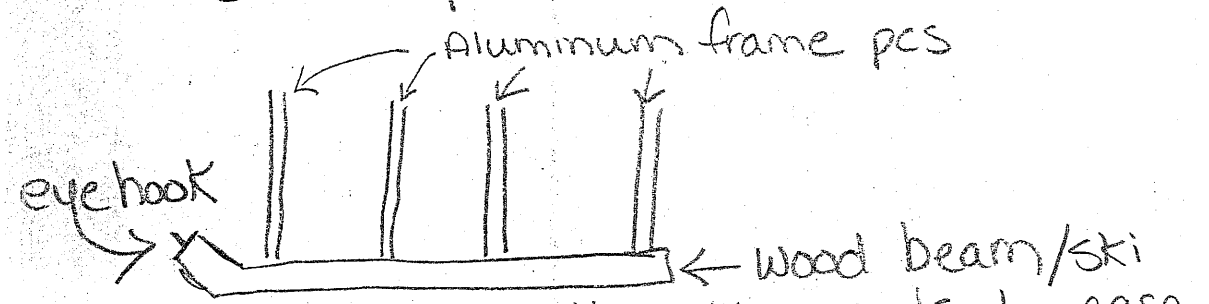


< Blend to end HUA that turns to veg. buffer per NRCS plans

HUA

2 "B" units put together for feeding/shelter

Close up of Skid



with hook on ends to ease pulling them around as needed

3 sided shelter

"C"

4x8 sheets with shingles applied

This unit is approx 3 feet tall at walls 8 feet wide & deep

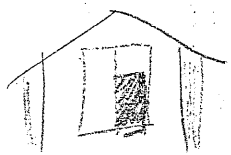
Old wood gates

NO FLOOR

Maternity pen

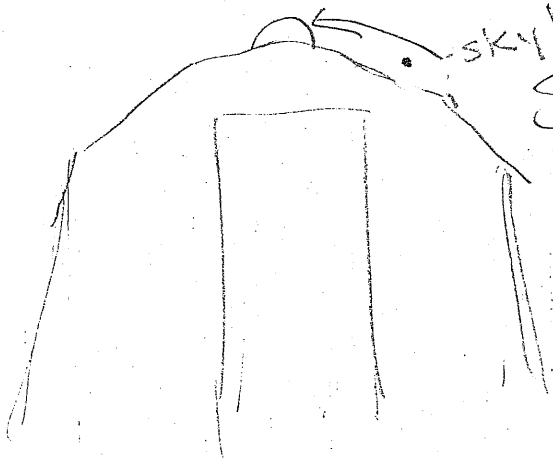
There is also a plastic Rubber maid structure that is approx 8x8'-ft snaps together (came in a box for easy moving or 2 men could carry.

"D"



"mini" house

"E"



skylight

Summer paddock

Gambrel Styled abandoned shed that was already in the powerlines

☆ Extremely Rough condition ☆

We believe it was used as a hunting blind years ago or

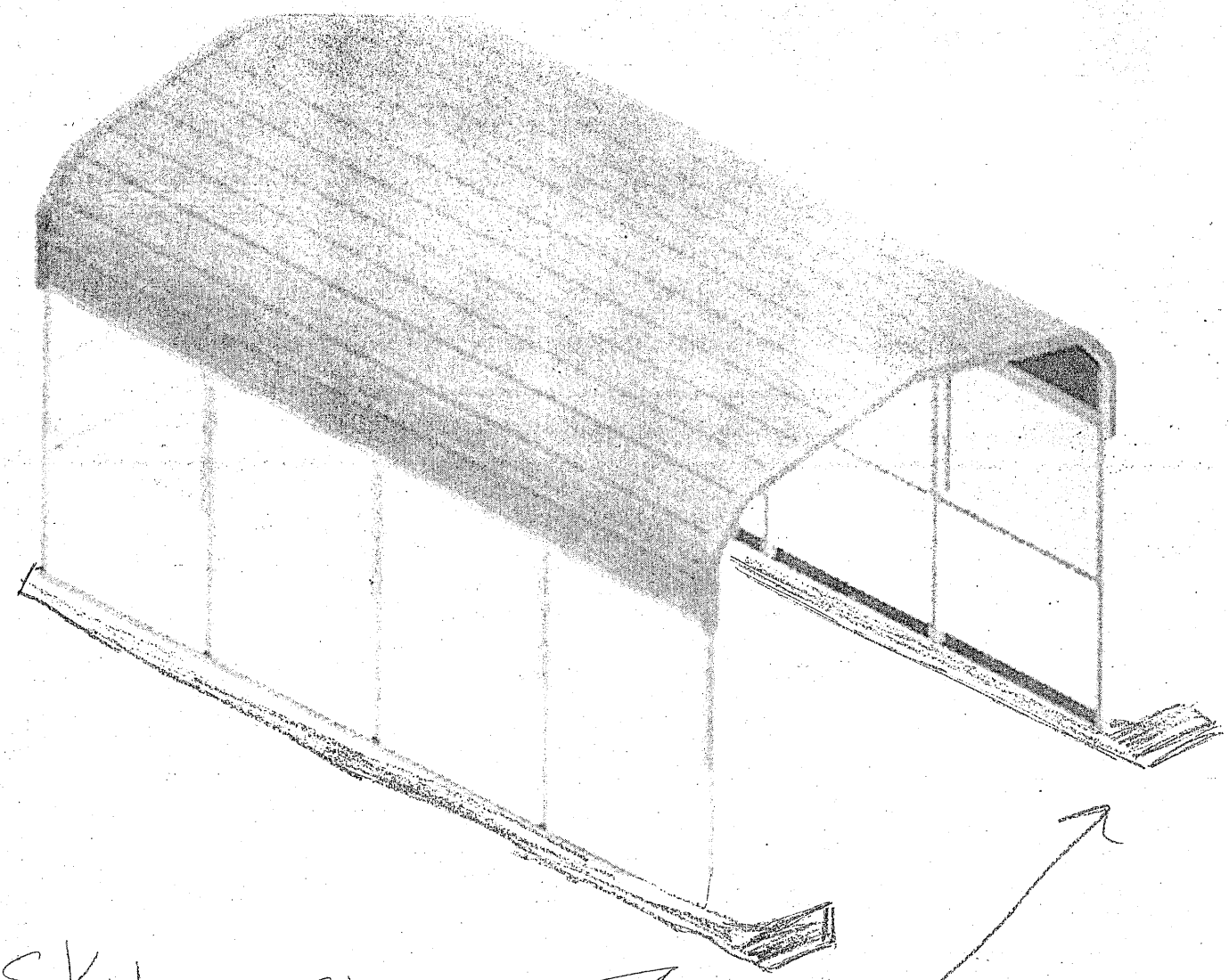
-we would find trash & beer cans & fire pit out there before the animals were put in

See enlargement on Pg 2.

N

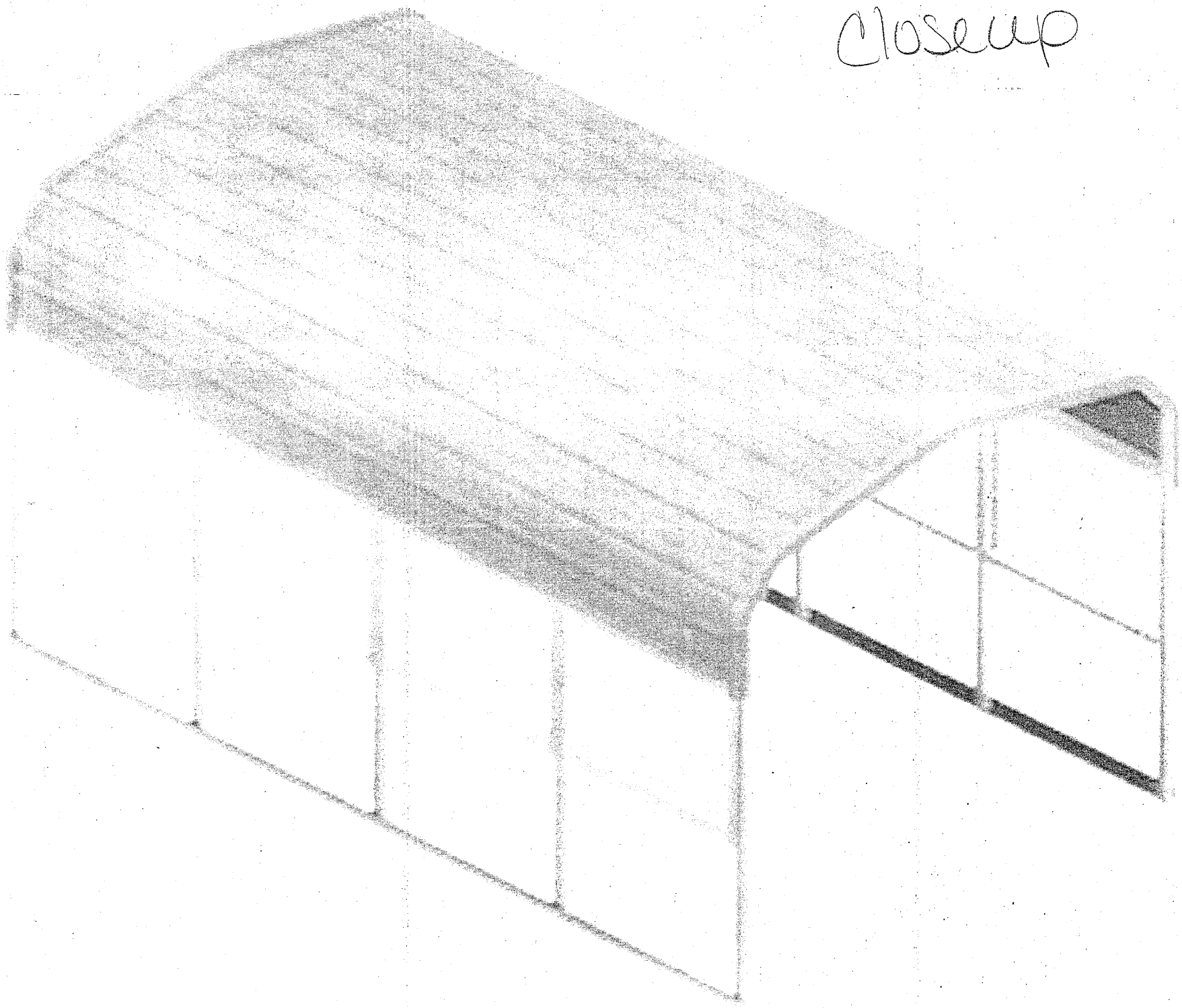
Aerial Overview of Conservation Easement


Structures
Fence line
HUA
Compost facility
Pg 2



Skids or skiis attached to ease moving the shelters around.

Closeup



University of New Hampshire
Cooperative Extension

Family, Home & Garden Education Center
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Toll free Info Line 1-877-398-4769 M-F • 9 AM - 2 PM

Housing and Space Guidelines for Livestock

As New Hampshire becomes more urban, the potential for conflict between the farming and non-farming communities increases. By using best management practices*, farmers can greatly reduce or eliminate problems of odor and fly control, pesticide drift, contamination of surface and ground waters, and damage to neighboring crops. With best management practices in place, farming activities are compatible with other land uses in urban environments.

Farming activities may involve full-time, part-time or backyard farmers. Existing commercial farms are protected by the Right to Farm Law. This allows for properly managed agricultural enterprises to continue operating in residential areas.

Housing

Most farm animals need some shelter in the winter time, but their natural coats allow them to endure much colder temperatures than people can tolerate. When animal housing is designed for human comfort, it can actually be too warm and unhealthy for animals. Buildings with plugged air cracks and windows covered with double plastic are often poorly ventilated. This situation can result in a buildup of moisture and animal odors, creating an unhealthy environment.

A simple, three-sided shelter with an open front will meet the needs of many farm animals and is often the building of choice to raise healthy livestock. When designing a three-sided animal shelter, make sure the open side faces the south away from prevailing wind. Locate the structure on an elevated, well-drained site and make it accessible for feeding and materials handling.

There are several factors to consider when planning adequate livestock shelter in cold weather:

- **Air quality:** An animal shelter should either be open, with provisions for natural ventilation, or enclosed, using fans and proper air inlets around the ceiling perimeter to provide ventilation. Tight buildings result in a buildup of respiration gases and animal odors, which can irritate the animals' lungs and cause pneumonia.
- **Drafts:** Animals can stand cold temperatures, but you should protect them from drafts. Constructing panels in front of an open building can reduce drafts. When animals are allowed to run loose in a pen, instead of being hitched, they will search for the most comfortable spots.
- **Dry bedding area:** Animals will be comfortable in the cold if they have clean, dry bedding. A thick, dry bed provides insulation from the cold ground and decreases the amount of energy the animal has to expend to keep warm. Shelter from the snow and rain allows an animal's coat to remain dry, to provide maximum insulating value.

- **Fresh water:** All animals need water to survive. Under cold conditions, provide fresh water often or use freeze-proof watering devices.
- **Adequate food:** Animals can endure severe cold temperatures if they eat enough food to maintain their energy reserves. Animals need food for growth and maintenance. They require additional amounts of good quality feed during cold weather to allow for the extra energy expended in keeping warm. Hay racks or feed bunks will properly dispense forages to reduce waste.

Space

Refer to the table on the next page for estimates on the space needs of various animals for exercise yards and pasture. You will not need a pasture as long as you provide adequate purchased feed, have an exercise yard and develop a sound plan for manure management.

If you do provide pasture, the number of animals it will support per acre depends on soil fertility and environmental considerations. *Rotational grazing* — the practice of sectioning off one section of a pasture with electric fencing and confining animals in that section, then repositioning the fence and moving animals to another section — prevents pastures from being overgrazed and will support more animals than one large unimproved pasture of equal size.

The following table lists the minimum space requirements, housing types and fencing needs of various farm species, along with the number of animals that will meet the food, fiber, recreation and other needs of an average family farmstead. Use it only as a rough guide.

(***Note to municipal planners:*** *The minimum space and housing guidelines in the chart apply to both commercial farms and backyard operations. However, you should* ***not*** *apply the numbers of animals suggested in the "Family Needs" category to commercial farms when drafting ordinances regulating agriculture in your community.)*

*Refer to the "Manual of Best Management Practices (BMPs) for Agriculture in New Hampshire" for specific guidelines on proper animal waste handling and barnyard management. To request a copy, call the New Hampshire Bureau of Markets at (603) 271-3685.

Fact sheet and table developed by David C. Seavey, Extension Agricultural Resources Educator and John C. Porter, Extension Dairy Specialist. Updated 6/2009, by John C. Porter, Extension Professor and Dairy Specialist, Emeritus.

United States Department of Agriculture
Natural Resources Conservation Service
New Hampshire

Operation and Maintenance Worksheet For Your Composting Facility

For: Landowner/Operator Laura and Ken Barker, Wild Spirit Farm

Job Location Exeter, NH 03833

County Rockingham Prepared By Kimberly McCabe Date 10/05

Operation and Maintenance Items

A properly operated and maintained composting facility is an asset to your farm. This composting facility was designed and installed for temporary storage and treatment of animal wastes. The estimated life span of this installation is at least 10 years. The life of this installation can be assured and usually increased by developing and carrying out a good operation and maintenance program.

This practice will require you to perform periodic operation and maintenance to maintain satisfactory performance. A good operation and maintenance plan includes:

Operation

Temperature. For best results, operating temperature of the composting material should be 131^{0}F to 170^{0}F once the process has begun. It should reach operating temperature within about 7 days and remain elevated for up to 14 days to facilitate efficient composting. The material should remain at or above 110^{0}F for the remainder of the designated composting period.

If temperature falls significantly during the composting period and odors develop, or if material does not reach operating temperature, investigate piles for moisture content, porosity, and thoroughness of mixing. Compost managed at the required temperatures will favor destruction of any pathogens, plant diseases and weed seeds.

Aeration. Heat generated by the process causes piles to dehydrate. As the process proceeds, material consolidates, and the volume of voids through which air flows decreases. Materials selected for the composting mix should carefully selected to insure adequate air movement throughout the composting process. Periodically turning the pile and maintaining proper moisture levels for windrows and static piles will normally provide adequate aeration.

Pathogens. Composting of dead animal carcasses and animal parts should include strict temperature monitoring to insure pathogens are destroyed.

When using the in-vessel or static aerated pile type of composting, temperature of the active pile must be maintained at 131^{0}F or higher for 3 consecutive days to achieve pathogen reduction.
To achieve pathogen destruction when composting with aerated windrows, the temperature of the active compost pile must be maintained at 131^{0}F or higher for at least 15 consecutive days and the windrow must be turned at least 5 times during the high temperature period.

Vectors. Flies, rats and birds may be attracted to the raw compost feedstocks. Mosquitoes may reproduce where standing water is present. To minimize vector problems:

⇒ Reduce the amount of raw feedstocks stored.

⇒ Turn piles frequently to promote rapid decomposition.
⇒ Eliminate standing water.
⇒ Employ good housekeeping to keep the area clean.

Nutrients. Keep compost well aerated to minimize nitrogen loss by denitrification. Keep pH at neutral or slightly lower to avoid nitrogen loss by ammonification. High amounts of available carbon will aid nitrogen immobilization. Phosphorus losses will be minimized when the composting process is managed according to the requirements of this standard. Include compost nutrients in nutrient management plans, determine the effects of use and management of nutrients on the quality of surface water and ground water as related to human and livestock consumption.

Testing Needs. Test compost material for carbon, nitrogen, moisture, and pH if compost fails to reach desired temperature or if odor problems develop. The finished compost material should be periodically tested for constituents that could cause plant phytotoxicity as the result of application to crops. Compost made from dead animals or animal parts should be tested for indicator pathogens such as e coli and salmonella. Composted materials that are prepared for the retail market will require testing for labeling purposes.

MAINTENANCE

⇒ Do not allow the operation of any equipment that exceeds the design limit on or within twenty feet of the structure.
⇒ Do not allow human entry into any enclosed structure without safety equipment, that includes ladders and breathing apparatus.
⇒ Maintain all electrical and mechanical equipment in good operating condition by following the manufacturers recommendations.
⇒ Maintain grounding rods and wiring for all electrical equipment in good condition.
⇒ All fences, railings, and/or warning signs shall be maintained to provide warning and/or prevent unauthorized human or livestock entry.
⇒ Immediately repair any vandalism, vehicular or livestock damage to the structure, earthen areas surrounding the structure, or any appurtenances.

Special Operation and Maintenance Requirements:_____

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

COMPOSTING FACILITY

(No.)

CODE 317

DEFINITION

A facility for the biological stabilization of waste organic material.

PURPOSE

To treat waste organic material biologically by producing a humus-like material that can be recycled as a soil amendment and fertilizer substitute or otherwise utilized in compliance with all laws, rules, and regulations.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies where: (1) waste organic material is generated by agricultural production or processing; (2) composting is needed to manage the waste organic material properly; (3) an overall waste management system has been planned that accounts for the end use of the composted material. Municipal sludge, solid waste and other non-farm type wastes other than leaves and grass clippings are not included in this standard.

CRITERIA

Soils. Locate composting facilities on soils having slow to moderate permeability to minimize seepage of dissolved substances into the soil profile and movement toward groundwater. Evaluate site paving needs in terms of effects of equipment operation on trafficability, soil compaction, and potential for contamination from compost and petrol products. The property limits and distances to resource concerns shall be as shown in Table 1 and 2. A soils investigation shall be made of the proposed facility site. As a minimum the underlying soil shall be investigated to an adequate depth to determine if the site meets the requirements set forth in Table 1. If conditions of Table 1 and 2 are not met, the site shall be amended or modified to meet these conditions or adequate justification provided for a variance to be allowed.

Table 1 - Property Limits For Compost Facilities

Property	Limits	Units
Maximum Slope	8.0	Percent
Maximum Permeability (Least Permeable Horizon > 12" thick)	2.0	Inches/Hr
Minimum Depth to Bedrock	30.0	Inches
Minimum Depth to High Water Table	18.0	Inches
Minimum Flooding Event	1 Time	Per 25 Yrs.
Maximum Fraction 3" Rock (Percent by Weight)	35.0	Percent

Table 2 - Minimum Distance from Potential Composting Facility to Resource Concerns

Resource Concern 1/ Sensitivity of outlet shall be considered.	Minimum Downslope Dist. to CF	Minimum Upslope Dist. to CF
Residence or Well (Neighbor)	500 Ft.	500 Ft.
Adjoining Property Line	200 Ft.	100 Ft.
On farm well/spring	300 Ft.	100 Ft.
Lake/Pond/River/Wetland	300 Ft.	100 Ft.
Diversion/Waterway 1/	100 Ft.	25 Ft.
Gully/Swale/Ravine 1/	100 Ft.	25 Ft.

NRCS, NHFOTG
April, 2000

Runoff. Divert surface runoff from outside drainage areas around the compost facility. Collect runoff from the compost facility and utilize or dispose and/or treat it properly. Evaluate the effects of changed infiltration conditions on groundwater recharge, and evaluate changes in volumes and rates of runoff caused by the location of the operation. Properly manage movement of organic material, soluble substances, and substances attached to solids carried by runoff.

Carbon-Nitrogen Ratio. Calculate the amounts of the various ingredients to establish the desired carbon-nitrogen ratio (C:N) of the mix to be composed. The C:N should be between 25:1 and 40:1. Use the higher range of C:N for organic materials that decompose at a high rate (or are highly unstable) with associated high odor production.

Where more than two ingredients are to be blended, the two main ingredients are to be used in the analysis for the desired C:N and mixed accordingly. Adding up to 50 percent by weight of other ingredients to improve workability and air movement is permissible as long as the C:N of the added ingredient does not exceed the target C:N of the compost.

Odor. Select carbonaceous material that, when blended with the nitrogenous material, will result in the desired pH of between 6 and 8. The blended material should have a pH at or slightly below neutral for best odor control. Where odors do not present a problem, pH of 8 to 9 is acceptable, but strong ammonia and amine related odors will be present for up to the first 2 weeks. Adding extra carbon sources may control high pH. Adding lime may increase low pH. At the end of the composting process, pH should be near neutral or 7.0.

Locate composting operations where movement of any odors toward neighbors will be minimized. Buffer areas, vegetative screens, and natural landscape features can help minimize the effects of odors.

Facility Size. Where dead poultry and other small farm animals are composted, establish the size of the composter units on the basis of locally determined animal loss rates. Composting facilities for the purpose of processing animal carcasses are to include a primary composting unit into which alternate layers of low moisture content manure (unusual poultry manure), carbon source material (straw is common), and dead animal carcasses are placed. A secondary composting unit is often necessary to complete the composing process.

The facility size may also be influenced by pile configuration and row spacing for turning and windowing machinery. A separate area for final compost processing and storage may also be needed.

Moisture. The moisture content of the blended material at start-up of the composting process should be approximately 60 percent (wet weight basis) and maintained between 40 and 60 percent during the composting process. The composting process may become inhibited when moisture falls below approximately 40 percent. Water used for moisture control must be free of deleterious substances. A good source of moisture is the recycled runoff and leachate from the compost pad or milkhouse waste water and contaminated runoff water.

Pile Configuration. Compost piles for wind-rowed and static piles should be triangular to parabolic in cross-sectional form with a base width to height ratio of about 2 to 1. Increased surface area favorably affects evaporation and natural aeration and increases the area exposed to infiltration from precipitation in uncovered stacks. Aligning piles north to south and maintaining moderate side slopes maximizes solar warming. Windrows should be aligned to avoid accumulation of precipitation. Use of geotextiles specifically designed for covering compost piles shall be encouraged.

Composting Period. The time needed for completion of the process varies with the material and must continue until the material reaches a stability level at which it can be safely stored without creating undesirable odors and poor handling features. Acceptable stability occurs when microbial activity diminishes to a low level. Stability can be obtained in about 21-28 days but can require up to 60 days to produce the desired quality. Visual inspection and temperature measurements will provide needed evaluation of compost status. If compost is to be sold commercially as a plant nutrient, certain testing procedures to determine compost maturity,

soluble salts and ammonium nitrogen may be required to comply with local regulations.

Storage. Provide properly designed pads or other storage facilities sized for the appropriate storage period for both raw materials and finished product. If possible, protect composted material from the weather by roofs or other suitable covers. Structures must meet the requirements of conservation practice standard, "Waste Storage Structure," Code 313.

Location. Planning for the location of the facility shall consider distances from resource concerns to minimize surface and subsurface water pollution and odor problems (minimum distances are shown in Table 2). Greater distances may be required by local, state and federal regulations. Deviation from these distance guidelines requires documented planning rational that locating facilities closer to the resource concerns will not cause surface and subsurface water pollution or odor problems.

Facilities shall not be located in flood plains from a 25-year, 24-hour storm event, unless flood proofing or elevating the facility will satisfy this requirement.

CONSIDERATIONS

Types. Three types of composting operations are covered in this standard—aerated windrows, static piles, and in-vessel. Aerated windrows are more suited to large volumes of organic material that are managed by power equipment used to turn the composting material periodically. Periodic turning re-aerates the windrows, promoting the composting process.

Organic material in static piles is initially mixed to a homogeneous condition and not turned again throughout the composting process. Static pile material must have the proper moisture content and bulk density to facilitate air movement throughout the pile. Forced air might be necessary to facilitate the composting process.

In-vessel composting in a totally enclosed structure is carried out on a blended organic material under conditions where temperature and air flow are strictly controlled. In-vessel composting also includes naturally aerated processes where organic materials are layered in the vessel in a specified sequence. Layered, in-vessel materials are usually turned once to facilitate the process. Vessel dimensions must be consistent with equipment to be used for management of compost.

Process. Composting is accomplished by mixing an energy source (carbonaceous material) with a nutrient source (nitrogenous material) in a prescribed manner to meet aerobic microbial metabolic requirements. The process is carried out under specific moisture and temperature conditions for a specified period of time. The active composting phase typically is accomplished within a period of three to eight weeks. Curing should continue for at least one month after the active phase. Correct proportions of the various compost ingredients are essential to minimize odors and to avoid attracting flies, rodents, and other small animals.

Carbon Source. A dependable source of carbonaceous material must be available. The material should have a high carbon content and high carbon to nitrogen ratio (C:N). Wood chips, sawdust, peanut hulls, straw, corn cobs, bark peat moss, and well bedded horse manure are good sources of carbon. When selecting a carbon source, consider its availability to microbes (i.e., sawdust is more available than bark).

Moisture Control. Large amounts of water evaporate during the composting process because operating temperatures drive off water. A source of water must be available for compost pile moisture control from start-up through completion. Proper moisture facilitates the composting process and helps control odors.

Equipment Needs. Appropriate equipment must be available for initial mixing, turning, and hauling composted material and carbonaceous material. Appropriate long stem thermometers should be available for managing the composting material. A pH kit may be needed on some sites.

Bulking Materials. Bulking materials may be added to enhance air flow within the composting material. Piles that are too compact will inhibit the composting process.

The carbonaceous material can be considered as a bulking agent. Where it is desirable to salvage carbonaceous material, provisions for removing the material, such as screening, must be made. High moisture organic wastes may be blended with absorbent bulking materials such as straw or leaves to attain an overall desirable moisture level. (Rule of Thumb: Materials are too wet if water can be squeezed out by hand and too dry if material does not fee moist to the touch).

Management. Composting operations require close management. Management capabilities of the operator and availability of labor should be assessed as part of the planning and implementing process.

Economics. Benefits associated with the ultimate use of the composed material should be compared to the capital expenditure and operating costs of the composting operations. In addition to cost return, benefits can include environmental protection, improved handling, disposal of dead poultry and other farm animal carcass, odor control, and reduced need for storage volume.

Safety. If the facility poses a health of safety hazard, fencing, meeting Code 382 - Fence, shall be installed. Signs and other safety devices shall also be installed. Considerations also should include respiratory ailments aggravated by the composting process.

Location. Composting site locations shall be selected considering proximity to urban, suburban and rural populations, transportation availability and other infrastructure. Site selections shall also consider groundwater, surface water, soils and geology, topography, landscape screening, wind direction, and other physical conditions.

PLANS AND SPECIFICATIONS

Plans and specifications for organic composting facility shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose. A written operation and maintenance plan shall be developed with full knowledge and input of the owner-operator and included with the documents provided to the owner-operator. A Nutrient Management Plan shall be developed to show the location, timing, application rates, and incorporation of composted material in an environmentally sound manner, if the material cannot be sold commercially.

OPERATION AND MAINTENANCE

An operation and maintenance (O&M) plan shall be prepared for the Composting Facility and any other associated conservation practices. The plan should include the periodic mowing of vegetation and the removal of trees, brush and other woody vegetation around the composing facility. The plan should also include the inspection and repair of the facility as needed, including re-vegetating barren and damaged areas.

Temperature. For best results, operating temperature of the composting material should be 130 °F to 170 °F once the process has begun. It should reach operating temperature within about 7 days and remain elevated for up to 14 days to facilitate efficient composting. The material should remain at or above 110 °F for the remainder of the designated composting period.

If temperature falls significantly during the composting period and odors develop, or if material does not reach operating temperature, investigate piles for moisture content, porosity, and thoroughness of mixing. Compost managed at the required temperatures will favor destruction of any pathogens and weed seeds.

Aeration. Heat generated by the process causes piles to dehydrate. As the process proceeds, material consolidates, and the volume of voids through which air flows decreases. Materials selected for the composting mix should provide for adequate air movement throughout the composting process. Periodically turning the pile and maintaining proper moisture levels for windrows and static piles will normally provide adequate aeration.

Nutrients. Keep compost well aerated to minimize nitrogen loss by denitrification. Keep pH at neutral or slightly lower to avoid nitrogen loss by ammonification. High amounts of available carbon will aid nitrogen

immobilization. Phosphorus losses will be minimized when the composting process is managed according to the requirements of this standard. Include compost nutrients in nutrient management plans and determine the effects of use and management of nutrients on the quality of surface water and ground water as related to human and livestock consumption.

Testing Needs. Test compost material for carbon, nitrogen, moisture, and pH if compost fails to reach desired temperature or if odor problems develop. The finished compost material should be periodically tested for constituents that could cause plant phytotoxicity as the result of application to crops. Composted materials that are prepared for the retail market as a plant nutrient will require testing for labeling purposes.

Site. Maintain surface drainage of adjacent areas away from pad surfaces. Re-grade and vegetate as needed.

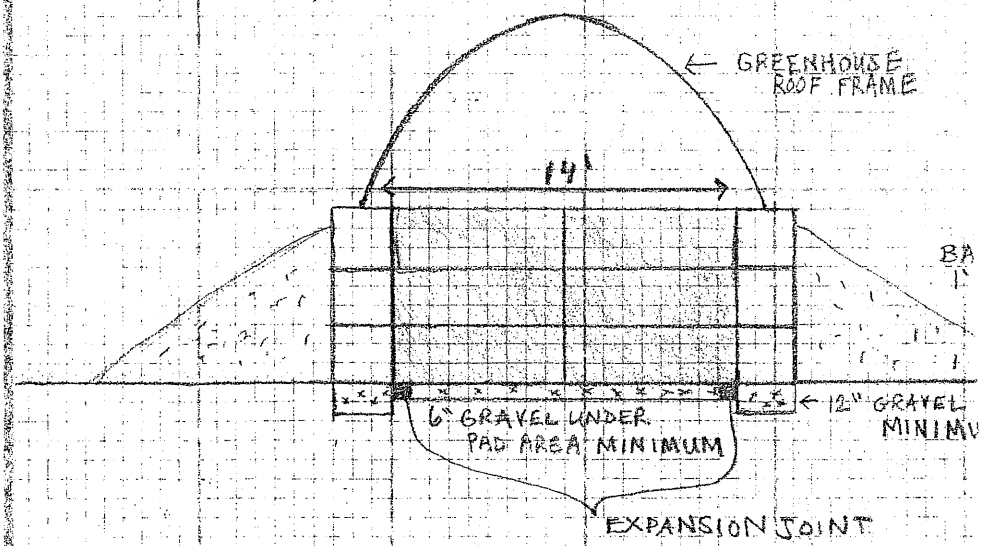
REFERENCES

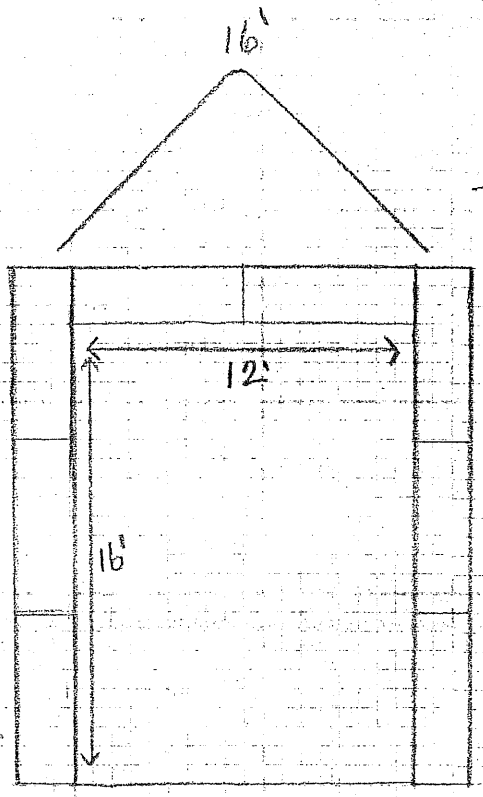
1. On Farm Composting Handbook, NRAES-54, Northeast Regional Agricultural Engineering Service, Ithaca, NY, by Rynk, Robert et al, June 1992
2. Agricultural Waste Management Field Handbook, Rev. 1997, USDA, Natural Resources, Conservation Service

MATERIALS:
40 WASTE BLOCKS (2' x 2' x 6')
9.4 CUBIC YARDS CONCRETE
10.7 CUBIC YARDS GRAVEL (CLASS I COMPACTED CLEAN SAND/GRAVEL)

18'

PROFILE VIEW:





TOP VIEW

PITCH BACK OF FACILITY SLIGHTLY DOWNWARD TO AVOID RUNOFF

TO WITHIN OF BLOCKS

BLOCKS

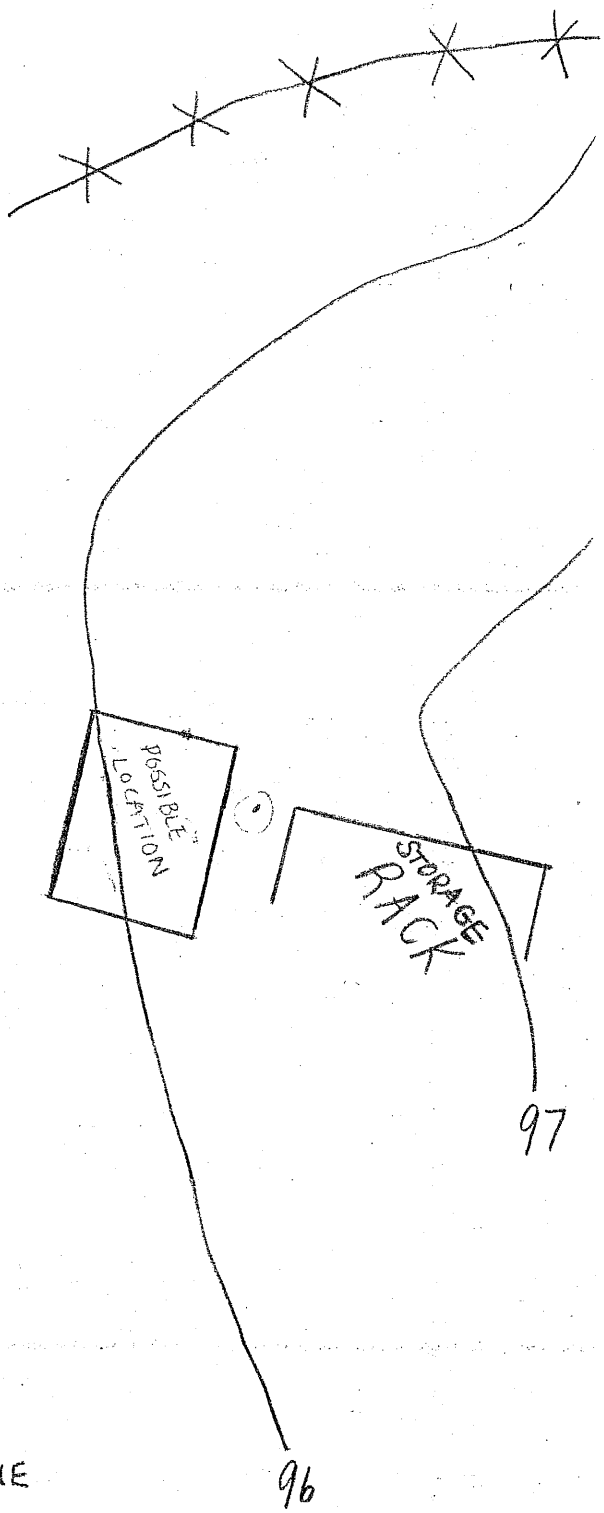
SCALE: 1" = 6.7 ft

WILD SPIRIT FARM
KEN AND LAURA BARKER
COMPOST FACILITY

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

K. McCabe 10/26
K. McCabe 10/25

KM 11 2005

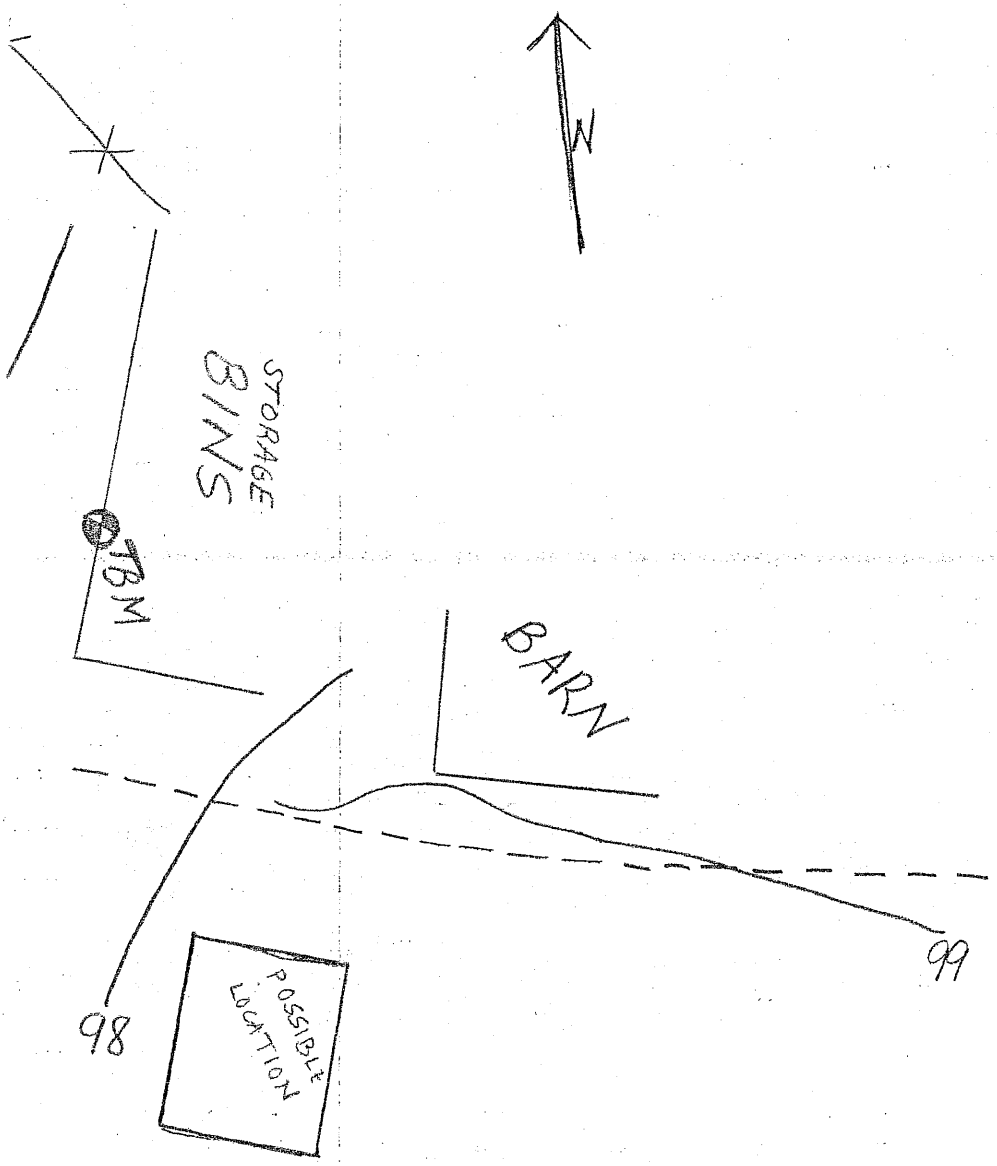


LEGEND

FENCE LINE

CENTERLINE ROAD

REFERENCE KEN AND LAURA BARKER COMPOSTING FACILITY



SCALE : 1" = 20'

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
ASSISTING
SOIL CONSERVATION DISTRICT

DRAWING NUMBER

SHEET ... OF ... SHEETS

DATE 10/05

Construction Specifications

Wild Spirit Farm (Ken and Laura Barker) Exeter, NH

COMPOSTING FACILITY

1) Remove existing organic material to a stable base. See excavation specifications pages 3 and 4 attached.

2) Add a minimum of 6 inches of bank run gravel over entire excavated area. Material should be placed in layers and compacted thoroughly following the earth fill specifications attached to avoid settling and cracking of concrete. See earth fill specifications pages 5-10 attached.

3) Add a minimum of 12 inches of bank run gravel under the concrete blocks. Set the concrete blocks on the perimeter of the gravel base according to the attached designs.

4) Place water strip gasket along the inside perimeter of the concrete blocks to a height of 6 inches above the gravel surface. See pages 19-21.

5) Set form to cover the opening of the composting facility and with approximately a 4 inch pitch to the rear of the pit, add 2.4 cubic yards of concrete reinforced with Fibrillated Polypropylene (4 inches thick). See concrete specifications on pages 11-17 attached.

6) Form must remain in place for a minimum of 7 days. The area should be watered regularly so the concrete does not dry too quickly (mulch hay, straw, or sawdust can be added to retain moisture). See concrete specifications on pages 11-17 attached.

7) Structure should be back filled to within 1 foot of the top block, with no greater that a 2:1 slope.

CONSTRUCTION SPECIFICATION

21. EXCAVATION

1. SCOPE

The work shall consist of the excavation required by the drawings and specifications and the disposal of the excavated materials.

2. CLASSIFICATION

Unless otherwise specified on the drawings, all excavation shall be unclassified and shall include all materials encountered regardless of their nature or the manner in which they are removed.

3. BLASTING

The transportation, handling, storage, and use of dynamite and other explosives shall be directed and supervised by a person of proven experience and ability in blasting operations.

Blasting shall be done in such a way as to prevent damage to the work or unnecessary fracturing of the foundation and so that the resulting surfaces are reasonably to line and grade.

No blasting shall take place within 100 feet of any concrete structure that has been in place for less than 7 days.

No blasting of bedrock shall be carried out in cutoff and drain trenches associated with earth embankments constructed to impound water. Blasting of boulders in cutoff and drain trenches shall be allowed after the surrounding soil is excavated.

4. USE OF EXCAVATED MATERIALS

To the extent they are needed, all suitable materials from the specified excavations shall be used in the construction of required permanent earthfill or rockfill. The suitability of materials for specific purposes will be determined by the engineer.

5. DISPOSAL OF WASTE MATERIALS

All surplus or unsuitable material will be designated as waste and shall be disposed of at locations shown on the drawings.

Rock waste shall be covered with a minimum of one foot of soil material.

Waste areas adjacent to embankments shall be neatly graded and finished against them so as to form berms which will continuously direct surface runoff away from the embankment. All waste areas shall be left in a neat and sightly condition and graded to provide positive drainage. Graded surfaces shall have a slope of three horizontal to one vertical or flatter.

6. BRACING AND SHORING

Excavated surfaces too steep to be safe and stable if unsupported shall be supported as necessary to safeguard the work and workman, to prevent sliding or settling of the adjacent ground, and to avoid damaging existing improvements. The width of the excavation shall be increased, if necessary, to provide space for sheeting, bracing, shoring, and other supporting installations. Supporting structural material shall be removed prior to completion of the backfilling operation. All work shall be accomplished in such a manner as to meet OSHA standards.

7. BORROW EXCAVATION

When the quantities of suitable materials obtained from specified excavations are insufficient to construct the specified fills, additional materials shall be obtained from the designated borrow areas. The extent and depth of borrow excavation within the limits of the designated borrow areas shall be as directed by the engineer. All excavated or otherwise disturbed portions within the limits of the designated borrow areas shall be left in a neat and sightly condition and graded to provide positive drainage. Graded surfaces shall have a slope of three horizontal to one vertical or flatter.

8. Excavation in rock beyond the specified lines and grades shall be corrected by filling the resulting voids with portland cement concrete. Concrete that will be exposed to the atmosphere when construction is complete shall contain not less than 6 sacks of cement per cubic yard of concrete. Concrete that will be permanently covered shall contain not less than $4^{1/2}$ sacks of cement per cubic yard.

Excavation in earth beyond the specified lines and grades shall be corrected by filling the resulting voids with approved compacted earthfill, except that if the earth is to become the subgrade for riprap, rockfill, sand or gravel bedding, drainfill or drainage fabric, the voids ma be filled with material conforming to the specifications for the riprap, rockfill, bedding, drainfill or drainage fabric.

CONSTUCTION SPECIFICATION

23. EARTH FILL

1. SCOPE

The work shall consist of the construction of earth embankments and other earth fills required by the drawings and specifications.

2. CLASSIFICATION

Earth fill will be classified according to the compaction required. Class I earth fill shall be compacted fill placed in layers and compacted by rolling with a mechanical roller. (See Table 1).

Class II earth fill shall be compacted fill placed in layers and compacted by the action of the hauling and spreading equipment. (See Table 2).

Class III Earthfill shall be uncompacted fill.

3. TYPES OF EARTH FILL

Earth fill shall be of two types: embankment and back fill.

4. MATERIALS

All fill materials shall be obtained from required excavations and designated borrow areas. The selection, blending, routing, and disposition of materials in the various fills shall be as specified or directed by the engineer.

Fill materials shall contain no sod, brush, roots, or other perishable materials.

Unless otherwise specified, fill for embankments shall contain no rock particles greater than shown in Tables 1 and 2. Back fill shall contain no stones greater than $1^{1/2}$ inches in size.

5. FOUNDATION PREPARATION

Foundations for earth fill shall be cleared and grubbed in accordance with Construction Specification 2, Clearing and Grubbing. Topsoil shall be stripped and other unsuitable material shall be excavated as specified.

Unless otherwise specified, earth foundation surfaces shall be graded to remove surface irregularities and scarified, disked or otherwise acceptably scored and loosened parallel to the axis of the fill to a minimum depth of 3 inches prior to the placement of earth fill. The moisture content of the loosened material shall be within the limits specified in Tables 1 and 2 for

earth fill. The surface materials shall be compacted and bonded with the first layer of fill as specified for subsequent layers of earth fill.

Earth abutment surfaces shall be free of loose uncompacted earth in excess of 3 inches in depth normal to the slope. The moisture content shall be within the limits specified in Tables 1 and 2 so that earth fill can be compacted against them to effect a good bond between the fill and the abutments.

Rock foundation and abutment surfaces shall be cleared of all loose materials by hand of other effective means and shall be free of standing water when fill is placed upon them. Unless otherwise specified, occasional small rock outcrops shall not require special treatment if they do not interfere with compaction of the foundation and initial layers of the fill or the bond between the foundation and the fill.

Foundation and abutment surfaces and sides of previously excavated test pits or other cavities shall be no steeper than 1 horizontal to 1 vertical. Test pits or other cavities shall be filled with compacted earth fill conforming to the specified earth fill to be placed upon the foundation.

Rock surfaces having a slope steeper than 1 horizontal to 1 vertical and a height of more than 1 foot and all rock overhangs shall be treated as specified or as directed by the engineer.

6. REPLACEMENT

Fill shall not be placed until the required excavations and foundation preparation have been completed and the foundation has been inspected and approved b the engineer. Fill shall not be placed upon a frozen surface, nor shall snow, ice, or frozen material be incorporated into the fill.

a. Embankment

Class I and II fill shall be placed in approximately horizontal layers except that a crown or cross-slope of approximately 2 percent shall be maintained to insure effective surface drainage. The thickness of the uncompacted layer shall be as indicated on the drawings or as shown in Tables 1 or 2. Type of compaction equipment, layer thickness, number of passes by the compaction equipment, and the moisture content range shown in Tables 1 and 2 for the various earth fill materials shall not be interchanged during construction.

Each lift or layer shall extend over the entire area of the fill except where openings to facilitate construction or to allow the passage of stream flow during construction are permitted by the engineer. When such openings are allowed, the slope of the bonding surface between fill in place and fill to be placed shall not be steeper than 3 horizontal to 1 vertical. Prior to

placing new fill, the bonding surface of the in-place fill shall be stripped of all loose material, scarified, moistened, and recompacted when new fill is placed against it as needed to insure a good bon and to obtain uniform moisture content and density at the junction of the in-place and the new fill.

Fill shall be essentially uniform and free from lenses, pockets, streaks or layers of material differing substantially in texture, moisture content, or gradation from the surrounding material.

There are no restrictions on the method of placing Class III fill. The finished fill shall be shaped and graded to the lines and grades shown on the drawings.

b. Backfill

Class I and II shall be placed in horizontal layers having a maximum uncompacted thickness of 4 inches and shall be brought up uniformly around the structure.

1. CONTROL OF MOISTURE CONTENT

During placement and compaction of Class I and II fill, the moisture content of the materials being placed shall be within the ranges specified in tables 1 and 2 for the corresponding materials. Generally, Class I and II fill should contain sufficient moisture to allow it to be formed into a ball between the hands without crumbling. If water or mud oozes from the material being squeezed, it is too wet to compact properly.

Material that is too wet for use as earth fill shall be removed or dried to the specified moisture content before compaction.

When the required moisture content is specified on the drawings, a properly calibrated Carbide Moisture Meter shall be used to determine Class I and II fill moisture content during placement and compaction.

2. COMPACTION

The contractor shall furnish and operate the equipment required to compact the class of fill specified.

a. Embankment

Unless otherwise specified, the type of compaction equipment, the maximum uncompacted layer thickness, and the maximum rock size during the placement and compaction of Class I and II fill shall be as specified in Tables 1 and 2 for the appropriate type of materials. Class III fill shall have no compaction requirements.

b. Backfill

Class I and II fill shall be compacted to the same density as the surrounding fill by hand tamping or manually directed power tampers or plate vibrators. Heavy equipment shall not be operated within 5 feet horizontally of any pipe or structure. Heavy equipment shall not operate over a structure or pipe unless there is a minimum of 2 feet of fill over the pipe or structure.

TABLE 1

CLASS I EARTH FILL

Earth Material (Unified Soil Classification System)	Type of Compaction Equipment	Max. Layer Thickness Before Compaction	Maximum Rock Size	No. of Passes by Compaction Equipment	Moisture Content
		(in.)	(in.)		(%)
GW & GP	Vibratory	18	12	3	10-15
	Rubber Tire	6	4	4	
GM & GC	Sheeps Foot	9	6	4	12-17
	Rubber-tired	6	4	4	
	Vibratory	12	8	3	
SW & SP	Vibratory	18	12	3	12-17
	Rubber-tired	6	4	4	
SM & SC	Sheeps foot	9	6	4	12-17
	Vibratory	12	8	3	
	Rubber-tired	6	4	4	
ML & CL	Sheeps foot	9	6	4	15-20
	Vibratory	12	8	3	
	Rubber-tired	6	4	4	
MH	Sheeps foot	9	6	4	30-35
	Rubber-tired	6	4	4	
CH	Sheeps foot	9	6	4	25-30
	Rubber-tired	6	4	4	

TABLE 2

CLASS II EARTH FILL

Earth Material (Unified Soil Classification System)	*Type of Compaction Equipment	Max. Layer Thickness Before Compaction	Maximum Rock Size	No. of Passes by Compaction Equipment	Moisture Content
		(in.)	(in.)		(%)
GW & GP	Crawler tractor	6	4	2	10-15
	Scraper	9	6	1	
GM & GC	Crawler tractor	6	4	2	12-17
	Scraper	9	6	1	
	Farm tractor or truck	6	4	2	
SW & SP	Crawler tractor	6	4	2	12-17
SM & SC	Crawler tractor	6	4	2	12-17
	Scraper	9	6	1	
	Farm tractor or truck	6	4	2	
ML & CL	Crawler tractor	6	4	2	15-20
	Scraper	9	6	1	
	Farm tractor or truck	6	4	2	
MH	Crawler tractor	6	4	2	30-35
	Scraper	9	6	1	
	Farm tractor or truck	6	4	2	
CH	Crawler tractor	6	4	2	25-30
	Scraper	9	6	1	
	Farm tractor or truck	6	4	2	

*Crawler Tractors to be operated at a minimum speed of 4 MPH.

CONSTRUCTION SPECIFICATION

32. CONCRETE

1. SCOPE

The work shall consist of furnishing, forming, placing, finishing, and curing portland cement concrete as required to build the structures shown on the drawings.

2. MATERIALS

a. Portland cement shall conform to ASTM Specification C-150, Type I, IA, II, or IIA, except that portland blast furnace slag cement conforming to ASTM Specification C-595 may be used in lieu of Type I portland cement.

b. Coarse aggregate shall be composed of clean hard durable particles free from clay or dirt particles or organic matter. Gradation shall conform to ASTM Specification C-33, Table 2, Size No.s 467, 67, of 57.

c. Fine aggregate shall be composed of clean hard durable particles free from clay or dirt particles organic matter. It shall be well graded with 100 percent passing a three-eight inch sieve.

d. Water shall be clean and free from injurious amounts of oil, salt, acid, alkali, organic matter including sewage, or other deterious substances.

e. Preformed expansion joint filler shall conform to the requirements of ASTM Specification D-1752, Type I, II or III unless bituminous type is specified. Bituminous type reformed joint filler shall conform to the requirements of ASTM Specification D-994.

f. Waterstops, if required, shall conform to the material, class and Type shown on the drawing or designated in the specifications.

g. Air-entraining admixtures shall conform to ASTM Specification C-260. If air-entraining cement is used, any additional admixture shall be of the same type as that used in the cement.

h. Water-reducing, set-retarding admixtures shall conform to ASTM Specification C-494, Type D.

i. Curing compound shall conform to ASTM Specification C-309. Type 2, white pigmented.

1. CLASSES OF CONCRETE

The classes of concrete shall be as specified on the drawings and shall be defined according to the required 28-day compressive strength.

Class of Concrete	Minimum 28-day Compressive Strength (psi)
5000	5000
5001	4000
5002	3000
5003	2500

When specified, concrete may be classified as follows:

Class of Concrete	Maximum Net Water Content (gallons/bag)*	Minimum Cement Content (bags/cubic yard)*
5000X	5	7
4000X	6	6
3000X	7	5
2500X	8	$4^1/_2$

*1 bag of cement = 94 pounds

1. AIR CONTENT SLUMP AND CONSISTENCY

The air content of the mixed concrete shall be between 5 and 8 percent of the volume of the concrete. Unless otherwise specified, the slump of the concrete shall be 2 to 4 inches. The consistency of the mix shall be such as to allow it to be worked into place and consolidated without segregation or excessive laitance.

2. DESIGN OF THE CONCRETE MIX

The contractor shall be responsible for the design of the concrete mixtures. At least 5 days prior to any placement of the concrete he shall furnish the engineer a statement of the materials and mix proportion (including admixtures, if any) he intends to use for each specified class of concrete. The statement shall include evidence satisfactory to the engineer that the materials and proportions selected will produce concrete of the quality, consistency, and strength specified.

The use of calcium chloride or other accelerators or antifreeze compounds will not be allowed.

3. FORMS

Forms shall be of wood, plywood, steel or other approved material and shall be mortar tight. The forms and associated false work shall be substantial and

unyielding and shall be constructed so that the finished concrete will conform to the specified dimensions and contours. Form surfaces shall be smooth and free from holes, dents, sags or other irregularities. Forms shall be coated with a nonstaining form oil before being set into place.

Metal ties or anchorages within the forms shall be equipped with cones, she-bolts or other devices that permit their removal to a depth of at least 1 inch without injury to the concrete. Ties designed to break off below the surface of the concrete may be used without cones.

4. PREPARATION OF FORMS AND SUBGRADE

Prior to placement of concrete the forms and subgrade shall be free of chips, sawdust, debris, water, ice, snow, extraneous oil, mortar, or other harmful substances or coatings. Any oil on the reinforcing steel or other surfaces required to be bonded to the concrete shall be removed. Rock surfaces shall be cleaned by wire brush scrubbing and shall be wetted immediately prior to placement of concrete. Earth surfaces shall be firm and damp. Placement of concrete on mud, dried earth or uncompacted fill or frozen subgrade will not be permitted.

Unless otherwise specified, when concrete is to be placed over drain fill, the contact surface of the drain fill shall be covered with a layer of asphalt-impregnated building paper or polyvinyl sheeting prior to placement of the concrete. Forms for weepholes shall extend through this layer into the drain fill.

Items to be embedded in the concrete shall be positioned accurately and anchored firmly.

Weepholes in walls or slabs shall be formed with nonferrous material.

5. CONVEYING

Concrete shall be delivered to the site and discharged into the forms within 1-1/2 hours after the introduction of the cement to the aggregates. In hot weather or under conditions contributing to quick stiffening of the concrete, or when the temperature of the concrete is 85°F or above, the time between the introduction of the cement to the aggregates and discharge shall not exceed 45 minutes.

The engineer may allow a longer time, provided the setting time of the concrete is increased a corresponding amount by the addition of an approved set-retarding admixture. In any case, concrete shall be conveyed from the mixer to the forms as rapidly as practicable, by methods that will prevent segregation of the aggregates or loss of mortar.

6. PLACING

Concrete shall not be placed until the subgrade, forms and steel reinforcement have been inspected and approved by the engineer. Reasonable notice shall be

given to the engineer prior to the time of concrete placement. Such notice shall be far enough in advance to give the engineer adequate time to inspect the subgrade, forms, steel reinforcement and other preparations for compliance with the specifications before concrete is delivered for placing.

The concrete shall be deposited as closely as possible to its final position in the forms and shall be worked into the corners and angles of the forms and around all reinforcement and embedded items in a manner to prevent segregation of aggregates or excessive laitance.

Unless otherwise specified, slab concrete shall be placed to design thickness in one continuous layer. Formed concrete shall be placed in horizontal layers not more than 20 inches thick. Hopper chutes, pipes or "elephant trunks" shall be used when vertical drop is in excess of five feet to prevent splashing of mortar on the forms and reinforcing steel above the layer being placed.

Immediately after the concrete is placed in the forms, it shall be consolidated by spading, hand tamping or vibration as necessary to insure smooth surfaces and dens concrete. Each layer shall be consolidated to insure monolithic bond with the preceding layer. If the surface of a layer of concrete in place sets to the degree that it will not flow and merge with the succeeding layer when spaded or vibrated, the placement of concrete will be discontinued and a construction joint will be made.

If placing is discontinued when an incomplete horizontal layer is in place, the unfinished end of the layer shall be formed by a vertical bulkhead.

7. CONSTRUCTION JOINTS

Construction joints shall be made at the locations shown on the drawings. If construction joints are needed which are not shown on the drawings, they shall be placed in locations and in a manner approved by the engineer.

Where a feather edge would be produced at a construction joint, as in the top surface of a sloping wall, an insert form shall be used so that the resulting edge thickness on either side of the joint is not less than 6 inches.

In walls and columns, as each lift is completed, the top surface shall be immediately and carefully protected from any condition that might adversely affect the hardening of the concrete.

Steel tying and form construction adjacent to concrete in place shall not be started until the concrete has cured at least 12 hours. Before new concrete is deposited on or against concrete that has hardened, the forms shall be retightened. New concrete shall not be placed until the hardened concrete has cured at least 12 hours.

Surfaces of construction joints shall be cleaned of all unsatisfactory concrete, laitance, coatings or debris by washing and scrubbing with a wire brush or wire broom or by other means approved by the engineer. The surfaces shall be kept moist for at least 1 hour prior to placement of the new concrete.

8. EXPANSION AND CONTRACTION JOINTS

Expansion and contraction joints shall be made only at locations shown on the drawings.

Exposed concrete edges at expansion and contraction joints shall be carefully tooled or chamfered, and the joints shall be free of mortar and concrete. Joint filler shall be left exposed for its full length with clean true edges.

Preformed expansion joint filler shall be held firmly in the correct position as the concrete is placed.

When open joints are specified, they shall be constructed by the insertion and subsequent removal of a wooden strip, metal plate or other suitable template in such a manner that the corners of the concrete will not be chipped or broken. The edges of open joints shall be finished with an edging tool prior to removal of the joint strips.

9. WATERSTOPS

Waterstops shall be held firmly in the correct position as the concrete is placed. Joints in metal waterstops shall be soldered, brazed or welded. Joints in rubber or plastic waterstops shall be cemented, welded or vulcanized as recommended by the manufacturer.

10. REMOVAL OF FORMS

Forms shall not be removed before the expiration of the following minimum time intervals after placement of concrete, exclusive of days when the minimum temperature of the air adjacent to the concrete is below 50 degrees F.

Item	Time
Beam bottom forms, temporary supports	14 days
Roof or deck slabs	14 days
Columns	7 days
Bearing walls	7 days
Nonbearing walls	24 hours
Sides of beams	24 hours

Forms shall be removed in such a way as to prevent damage to the concrete. Supports shall be removed in a manner that will permit the concrete to take the stresses due to its own weight uniformly and gradually.

11. FINISHING FORMED SURFACES

Immediately after the removal of the forms:

a. All fins and irregular projections shall be removed from exposed surfaces.

b. On all surfaces, the holes produced by the removal of form ties, cone-bolts, and she-bolts shall be cleaned, wetted and filled with dry-pack mortar consisting of one part portland cement, three parts sand that will pass a No. 16 sieve, and water just sufficient to produce a consistency such that the filling is at the point of becoming rubbery when the material is solidly packed.

1. FINISHED UNFORMED SURFACES

All exposed surfaces of the concrete shall be accurately screeded to grade and then wood float finished.

Excessive floating or trowling of surface while the concrete is soft will not be permitted.

The addition of dry cement or water to the surface of the screeded concrete to expedite finishing will not be allowed.

Joints and edges on unformed surfaces that will be exposed to view shall be chamferred or finished with molding tools.

2. CURING

Concrete shall be prevented from drying for a curing period of at least 7 days after it is placed. Exposed surfaces shall be kept continuously moist for the entire period, or until curing compound is applied as specified below. Moisture shall be maintained by sprinkling, flooding or fog spraying or by covering with continuously moistened canvas, cloth mats, straw, sand or other approved material. Wood forms (except plywood) left in place during the curing period shall be kept wet. Formed surfaces shall be thoroughly wetted immediately after forms are removed and shall be kept wet until patching and repairs are completed. Water or covering shall be applied in such a way that the concrete surface is not eroded or otherwise damaged.

Concrete, except at construction joints, may be coated with an approved curing compound in lieu of continued application of moisture. The compound shall be sprayed on the moist concrete surfaces as soon as free water has disappeared, but shall not be applied to any surface until patching, repairs and finishing of that surface are completed. The compound shall be applied at a uniform rate of not less than one gallon per 150 square feet of surface and shall form a continuous

adherent membrane over the entire surface. Curing compound shall not be applied to surfaces requiring bond to subsequently placed concrete, such as construction joints, shear plates, reinforcing steel and other embedded items. If the membrane is damaged during the curing period, the damaged area shall be resprayed at the rate of application specified above.

3. REMOVAL OR REPAIR

Concrete that is honeycombed, damaged or otherwise defective shall be removed and the structure or structural member replaced, or where feasible, the defective parts repaired. SCS engineer will determine the required extent of removal, replacement or repair. The plan for effecting the repair must be approved by the technician prior to beginning of repair work.

4. CONCRETING IN COLD WEATHER

Concrete shall not be mixed nor placed when the daily minimum atmospheric temperature is less than 50 degrees F unless facilities are provided to prevent the concrete from freezing. The use accelerators or antifreeze compounds will not be allowed. The temperature of the concrete at the time of placing shall not be less than 50 degrees F and shall be maintained at temperatures not less than 50 degrees F for the duration of the curing period.

5. CONCRETING IN HOT WEATHER

The supplier shall apply effective means to maintain the temperature of the concrete below 90 degrees F during mixing and conveying.

MATERIAL SPECIFICATION

536. SEALING COMPOUND FOR JOINTS IN CONCRETE AND CONCRETE PIPE

1. SCOPE

This specification covers the quality of sealing compound for filling joints in concrete pipe and concrete structures.

2. TYPE

The compound shall be a cold-application mastic, single component or multiple component type.

The single component type shall be a ready-mixed nondrying compound furnished in troweling consistency or in preformed rope or strip form.

The multiple component type shall be composed of two or more substances that are to be mixed prior to application.

3. QUALITY

Sealing compound shall conform to the requirements of one of the following specifications:

ASTM Specification D 1850; Concrete Joint Sealer, Cold-Application Type. Penetration, determined as specified in ASTM D 1850, shall be not greater than 120.

Federal Specification SS-S-210A; Sealing Compound, Preformed Plastic, for Expansion Joints and Pipe Joints.

ASTM Specification D-1190 concrete joint sealer, hot poured elastic type.

Federal Specification TT-S-227; Sealing Compound; Rubber Base, Two Component (for caulking, Sealing and Glazing in Building Construction), type II.

The compound shall be capable of being applied at a temperature of 70°F and shall be of such nature that it will adhere to dry, dust free concrete when applied either directly or over a suitable primer. After curing it shall be a resilient, adhesive material that is capable of filling joints and firm enough to prevent the entry of subsequently placed concrete or of earth during the bedding, cradling, or backfilling operations.

4. COMPOSITION AND PROPERTIES

The compound, if used for pipe having rubber gaskets, shall have a composition such that it will not cause deterioration of the rubber gaskets.

MATERIAL SPECIFICATION

535. PREFORMED EXPANSION JOINT FILLER

1. SCOPE

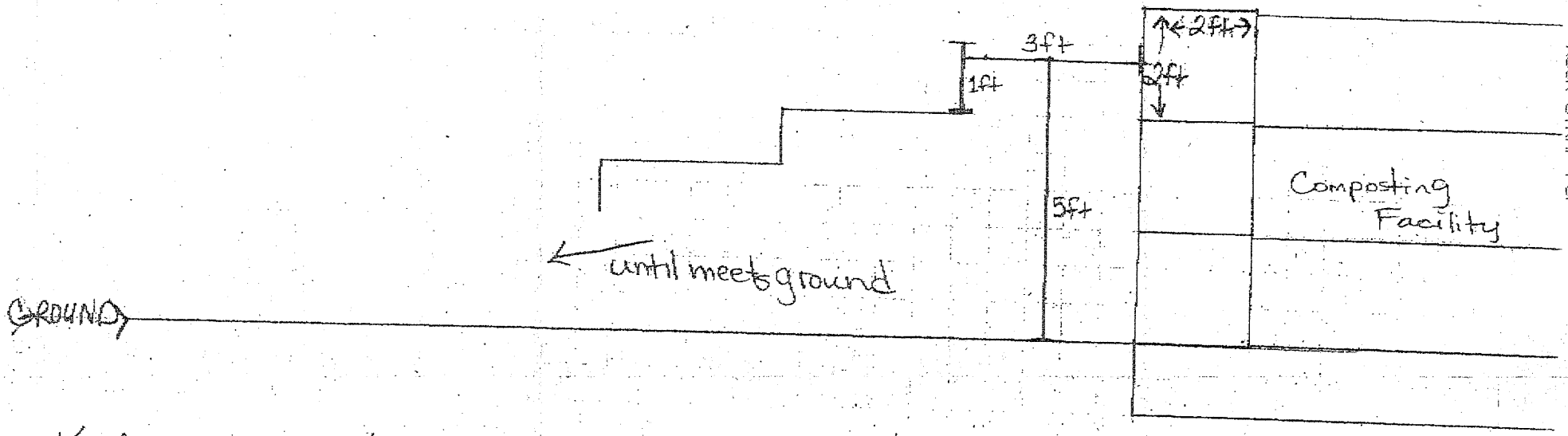
This specification covers the quality of preformed expansion joint fillers for concrete.

2. QUALITY

Preformed expansion joint filler shall conform to the requirements of ASTM Specification D 1752, Type I, Type II or Type III, unless bituminous type is specified. Bituminous type preformed expansion joint filler shall conform to the requirements of ASTM Specification D 994, or D 1751.

Terraced Backfill for Wild Spirit Farm (Lauraard Kerk Barker)

- 1st terrace against Block face must be 5ft or within one foot of top blocks
- 1st terrace must run a minimum of 3ft out from block wall
- terrace may be 1 foot or greater steps, and shall meet 2 to 1 slope requirement
- terraces should be seeded to vegetative cover as soon as feasible
- If terraces are faced with logs they shall be securely achored



K. McCabe 10/19/06
As per phone conversation with Jeffrey Tenley 10/19/06

United States Department of Agriculture
NRCS Natural Resources Conservation Service
243 Calef Highway, Telly's Plaza, Epping, NH 03042-2326 (603) 679-1587 Fax: (603) 679-4658 www.nh.nrcs.usda.gov

FAX COVER SHEET

Date: 10-19-06

Time: 10:45 am

To: Wild Spirit Farm
Laura and Ken Barker

Phone: 778-9988

Fax: 778-2380

From: Natural Resources Conservation Service
Kim McCabe

Phone: (603) 679-1587 x109

Fax: (603) 679-4658

Re: Terraced Backfill

Cc:

Number of pages including cover sheet: 2

Message

Hello,

So here is an illustration of what the minimum requirements are for the terraced Backfill on the composting facility. If you have any Question please give me a call.

Have a Great Day!

— Kim

Billing Group: 005 Wetland Permitting

Contract Maximum	$1,500.00
Previous Billings Against Maximum:	$0.00
Current Billings Against Maximum:	$1,500.00
Balance After This Invoice:	$0.00

Professional Services	Hours	Bill Rate	Charge
Certified Wetland Scientist	1.50	90.00	135.00
Permitting Specialist	6.25	65.00	406.25
Wetland Scientist II	16.25	78.00	1,267.50
		Professional Services Total	$1,808.75

Reimbursables	Charge
Application/Permits	12.00
Application/Permits	120.00
Mileage	29.37
Postage/Delivery	2.40
Postage/Delivery	48.06
Prints	2.00
Reimbursables Total	$213.83

Billing Group Subtotal:	2,022.58
Billing Adj.--Cost Plus to Max:	-308.75
Billing Group 005 Total	$1,713.83
Project Subtotal:	2,868.44
Fees:	-668.75
Billing Total:	2,199.69
Total Invoice Amount:	**$2,199.69**

Aged Receivables:

Current	31-60 Days	61-90 Days	91-120 Days	> 120 Days
$2,199.69	$0.00	$0.00	$0.00	$0.00

Payment is due within 10 days from the date of this invoice. Past due amounts will be subject to a finance charge of 18% per annum or 1.5% per month.

pd web 8989 on 10-28-05

NH Soil Consultants, Inc.
The Commons At Kent Place
202 Kent Place, Newmarket, NH 03857
603-659-3559 Fax: 603-659-7750

Invoice No. 6884
Invoice Date: October 14, 2005

Project: 05-0451 Beech Hill Road
Exeter, NH

Manager: James Long

Professional Services for the Period: 8/26/2005 to 9/25/2005

Billing Group: 001 Site Assessment

Professional Services	Hours	Bill Rate	Charge
Certified Wetland Scientist	0.25	90.00	22.50
Professional Services Total			$22.50

Billing Group 001 Total $22.50

Billing Group: 002 Wetland Delineation

Contract Maximum	$450.00
Previous Billings Against Maximum:	$0.00
Current Billings Against Maximum:	$450.00
Balance After This Invoice:	$0.00

Professional Services	Hours	Bill Rate	Charge
Certified Wetland Scientist	7.50	90.00	675.00
Principal Wetlands	1.50	90.00	135.00
Professional Services Total			$810.00

Reimbursables	Charge
Mileage	13.36
Reimbursables Total	$13.36

Billing Group Subtotal: 823.36
Billing Adj.--Cost Plus to Max: -360.00
Billing Group 002 Total $463.36

Rockingham Economic Development Corporation - REDC
Two Center Street, Exeter, NH ~ Tel. 603 772-2655 ~ Fax 772-0213
Mailing Address: Post Office Box 465, Exeter, NH 03833
A regional non-profit economic development corporation
serving the communities of Rockingham County

Warren Henderson
President

Marie Cappello
Executive Director

March 26, 2001

Mr. Ken Barker
62 Beach Hill Road
Exeter, NH 03833

Dear Mr. Barker:

Thanks for your interest in REDC programs and services. As promised I am sending you some information on REDC and Business Plan Development.

If you have any questions once you review the materials, please do not hesitate to contact me.

Sincerely,

Marie Cappello

Marie Cappello
Executive Director

Sent packet of SBA, Project loans etc.

JONES & BEACH ENGINEERS, INC.

85 Portsmouth Avenue
PO Box 219
Stratham, NH 03885
Email: jbe@jonesandbeach.com

Tel. 603-772-4746 Fax 603-772-0227

Invoice

Invoice Number: 12508
October 13, 2005

Professional Services for the Period Ending: 10/2/2005

Project: 05169 Exeter, Beech Hill Road Wetland Permit

Professional Services	Bill Hours	Charge
ENGINEERING REVIEW		
Correspondence	0.25	7.50
Design & Plan Review	2.00	130.00
Drainage Design Analysis	4.50	327.50
Site Walk	2.00	200.00
Professional Services Total:		**$665.00**

Total Invoice Amount: **$665.00**

PLEASE INCLUDE OUR INVOICE NUMBER AND PROJECT NUMBER ON YOUR CHECK STUB
A service charge will be applied to all invoices past 30 days. The rate is 1.5% per month based upon an annual percentage rate of 18%.

pd 10-28-05
WEB 8989

State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES
6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
(603) 271-2147 FAX (603) 271-6588

September 19, 2005

NOTICE OF ADMINISTRATIVE COMPLETENESS
MINIMUM IMPACT EXPEDITED APPLICATION

Copy for meeting

)05-02154
ech Hill Rd, Exeter

This letter is to acknowledge that on 09/15/2005 the NH DES Wetlands Bureau received your Minimum Impact Expedited application and materials to request a permit for impacts related to a proposed project on the lot(s) mentioned above. Your name, mailing address and site location are shown above as they have been entered into our database. Please check this information and notify us of any errors.

The application has been accepted as administratively complete. This means that the application has been found to contain the basic items necessary and has been assigned to Eben Lewis, (603) 559-1515. **Please note, that while the basic items have been received, we may request additional filing fees or information as necessary to meet the requirements of RSA chapter 482-A and the Wetlands Program Code of Administrative Rules, Wt 100 - 800.** Please check your materials to ensure that your submittal accurately and completely reflects your project, and refer to your wetlands file number 2005-02154 if you need to contact the Bureau or submit additional information.

Within 30 days of this administrative completeness letter, we will conduct a technical review and either:

1. Make a decision on your application,
2. Request any outstanding fees or additional information necessary to clarify the application, or
3. Notify you, with an explanation, if your project does not qualify for the expedited review process in which case your application will be reviewed as a Standard Dredge and Fill Application. Please note, if the local conservation commission did not sign the application or if your town does not have a conservation commission, your project will not qualify for the expedited process and will be reviewed under the Standard Dredge and Fill Application process.

You may use the Internet to check the status of the permit application review by using the "Wetland Permits Query" on the front page of Wetlands Bureau's website: www.des.nh.gov/wetlands.

We appreciate your commitment to comply with state wetlands laws and rules, and the time you have dedicated to this process. Your continued cooperation will assist us in providing timely attention to your application. Thank you.

Sincerely,

DES Wetlands Bureau

cc: NH Soil Consultants, Inc.
Exeter Conservation Commission
Exeter Municipal Clerk

Approved 10-18-05 EXPIRES 10-18-2010

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
629 Calef Highway
Knightly Plaza
Epping, NH 03042-2326 (603) 679-1587 Fax: (603) 679-4658 www.nh.nrcs.usda.gov

June 24, 2008

Laura Barker
62 Beech Hill Road
Exeter, NH 03833

Dear Ms. Barker,

I have enclosed a release form, for your signature, that allows NRCS to provide the listed information to Bruce Clement, Technical Service Provider. Mr. Clement will use the information to develop a grazing plan as scheduled in your 2006 EQIP contract. Please fill in the contact information that you would like Mr. Clement to have as he will need to speak with you regarding the development of your grazing plan. Please return the signed release form to this office and we will forward the information to Mr. Clement. If you have any questions, please call me, at 603-679-1587 x 109.

Sincerely,

Vincent Snyder

Vincent Snyder
Natural Resource Specialist

Release of NRCS
Case File Information

I Laura Barker authorize the Natural Resources Conservation Service (NRCS) to release the following information to Bruce Clement for use in developing a prescribed grazing plan for my farm.

☑ Conservation Plan, Including Tract and Field Maps, and Soils Information

☑ Soil Map, Aerial Map with Farm and Tract boundaries and Topographic Map

☑ My Contact Information
Home- 778-9988
KEN-HUSBAND Cell 603-944-2113

Signature of Producer [signature] Date 2/9/08

Amy- Copy-File copy in NRCS-Then Mail or fax.

FORAGE SEEDING MIXTURES FOR NEW HAMPSHIRE

James R. Mitchell
Extension Agronomist
University of New Hampshire
March, 1976

A forage crop may be established as a pure stand of a grass or a legume or as a combination of one or more grasses and legumes. If a single crop such as alfalfa is highly adapted to a given seeding condition it is not likely that the addition of one or more grasses or legumes will increase the yield of the stand. Usually, however, a mixture of forage species is desirable as it provides a hedge against heaving and winter-killing of legumes, a greater adaptation to the variable soil types in a field, a guarantee of season long production and usually a higher yield than any single forage grass or legume.

At the present time there is considerable interest in growing pure stands of alfalfa. This interest may be traced to the following factors:

(1) alfalfa is a very vigorous seedling. No other grass or legume displays as much seedling vigor and only red clover challenges alfalfa in this regard.
(2) weed control materials that are designed to control difficult perennial grass weeds such as quackgrass or nutsedge do not permit the inclusion of a grass in an alfalfa seeding.
(3) a heavy stand of alfalfa will produce more than 80% of the total production of an alfalfa-grass seeding.

Forage seedings are much more likely to be a success when started in the months of April, May or August. Spring seedings may be made as soon as the soil conditions will allow, usually mid or late April. Birdsfoot trefoil, orchardgrass and reed canarygrass are forage species that will become established best when seeded in the spring. Timothy and bromegrass are two forage crops that are usually more easily established when the seedings are made in August. Legumes such as alfalfa, red or ladino clover will grow equally well when the seedings are made in April, May or August. Although certain forage species will usually develop best when seeded during a specific period, there are several factors that are more important when determining the components of a forage seeding mixture. These factors are the soil on which the crop is to be grown, the manner in which the crop will be harvested, the compatibility of the forage species and any potential weed problem. Harvesting plans should be made in advance to utilize the yield and quality of forages such as alfalfa, orchardgrass and reed canarygrass that grow rapidly in the spring. These forages also have potential for the greatest total yield due to their rapid recovery throughout the growing season.

Forage seedings are often a failure due to the following:

(1) forage seedings are made on land that has not received adequate lime and/or fertilizer. The first step in establishing a successful seeding is to determine the lack of fertility of the soil. Obtaining soil samples for laboratory analysis will help ensure the application of proper amounts of lime and fertilizer. Lime is slow to react in the soil and is more beneficial when applied six months in advance of a seeding.
(2) legume seeds are often planted without receiving inoculation. Inoculation should always be practiced when the legume to be planted has not been grown previously on the land or the previous legume crop grew poorly and/or the roots were poorly nodulated.
(3) the seed is placed too deep in the soil or the seed is planted into a loose seedbed. The grasses and legumes mentioned in this paper will germinate and emerge in greatest numbers when the seed is placed in a firm seedbed to a depth of no more than 1/2 of an inch. A depth of 1/4 inch is ideal unless the soil surface is extremely dry.

PERENNIAL FORAGE MIXTURES FOR HAY CROPS AND ROTATIONAL PASTURES

Soil Drainage (with typical soils) 1/	Uses	Seed Mixtures (With lbs. per Acre) 2/
Somewhat Excessively Drained (Shallow to bedrock) Brimfield, Canaan, Clover, Hollis, Lyman	Hay or hay crop silage	14 lbs. Iroquois or Saranac alfalfa 10 lbs. Iroquois or Saranac alfalfa and 5 lbs. Pennlate orchardgrass
Droughty (sands and/or gravel) Adams, Colton, Hinckley, Jaffrey, Merrimack, Stetson, Suncook, Warwick, Windsor		
Well drained Agawam, Becket, Berkshire, Bernardston, Brookfield, Calais, Canton, Charlton, Groveton, Hadley, Hartland, Hermon, Marlow, Melrose, Millis, Ondawa, Paxton, Salmon, Suffield	Hay or hay crop silage	14 lbs. Iroquois or Saranac alfalfa 10 lbs. Iroquois or Saranac alfalfa 8 lbs. Saratoga bromegrass or 5 lbs. Pennlate orchardgrass
	Rotational pasture	6 lbs. Iroquois alfalfa 2 lbs. Ladino clover 5 lbs. Pennlate orchardgrass
Moderately well drained Acton, Belgrade, Buckland, Buxton, Croghan, Deerfield, Duane, Elmwood, Madawaska, Nicholville, Ninigret, Peru, Pittstown, Podunk, Scituate, Skerry, Sudbury, Sutton, Waumbek, Winooski, Woodbridge	Hay or hay crop silage	6 lbs. Iroquois alfalfa 3 lbs. Pennscott red clover 6 lbs. Saratoga bromegrass or 5 lbs. Climax timothy 8 lbs. Viking trefoil 6 lbs. Saratoga bromegrass or 5 lbs. Climax timothy
	Rotational pasture	2 lbs. Ladino clover 6 lbs. Pennlate orchardgrass 6 lbs. Empire trefoil 1 lb. Ladino clover 6 lbs. Climax timothy
Poorly drained Au Gres, Cabot, Leicester, Limerick, Raynham, Ridgebury, Rumney, Saugatuck, Scantic, Stissing, Swanton, Walpole, Wareham	Hay or hay crop silage	6 lbs. Pennscott red clover 2 lbs. Alsike clover 5 lbs. Climax timothy 8 lbs. Viking trefoil 6 lbs. Climax timothy 8 lbs Climax timothy
	Rotational pasture	2 lbs. Ladino clover 6 lbs. Climax timothy 8 lbs. Empire trefoil 5 lbs. Climax timothy

1/ Artificially drained soils will have drainage equivalent to the next higher drainage class.

2/ Use named varieties listed above whenever seed is available.

SUGGESTED SEEDING MIXTURES FOR HORSE & SHEEP PASTURES

Soil Drainage (with typical soils) 1/		Seed Mixtures (lbs. per Acre) 2/
Somewhat Excessively Drained (Shallow to bedrock)		10 lbs. Pennlate orchardgrass 8 lbs. Empire birdsfoot trefoil 1 lb. Ladino clover
Brimfield	Hollis	
Canaan	Lyman	
Glover		
Droughty (sands and/or gravel)		
Adams	Merrimack	
Colton	Stetson	
Hinckley	Suncook	
Jaffrey	Warwick	
	Windsor	
Well drained		10 lbs. Kentucky bluegrass 8 lbs. Empire birdsfoot trefoil 1 lb. Ladino clover
Agawam	Hadley	
Becket	Hartland	
Berkshire	Hermon	
Bernardston	Marlow	
Brookfield	Melrose	
Calais	Millis	
Canton	Ondawa	
Charlton	Paxton	
Groveton	Salmon	
	Suffield	
		6 lbs. Climax timothy 8 lbs. Empire bridsfoot trefoil 1 lb. Ladino clover
Moderately well drained		15 lbs. Kentucky bluegrass 1 lb. Ladino clover
Acton	Peru	
Belgrade	Pittstown	
Buckland	Podunk	
Buxton	Scituate	
Croghan	Skerry	
Deerfield	Sudbury	
Duane	Sutton	
Elmwood	Waumbek	
Madawaska	Winooski	
Nicholville	Woodbridge	
Ninigret		
		10 lbs. Kentucky bluegrass 8 lbs. Empire birdsfoot trefoil 1 lb. Ladino clover
		10 lbs. Kentucky bluegrass 6 lbs. Climax timothy 1-2 lbs. Ladino clover
Poorly drained		8 lbs. Climax timothy 1-2 lbs. Ladino clover
Au Gres	Saugatuck	
Cabot	Scantic	
Leicester	Stissing	
Limerick	Swanton	
Raynham	Walpole	
Ridgebury	Wareham	
Rumney		
		5 lbs. Climax timothy 8 lbs. Empire trefoil

1/ Artificially drained soils will have drainage equivalent to the next higher drainage class.

2/ Use named varieties listed above whenever seed is available.

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

CRITICAL AREA PLANTING

(Ac.)

CODE 342

DEFINITION

Establishing permanent vegetation on sites that have or are expected to have high erosion rates, and on sites that have physical, chemical or biological conditions that prevent the establishment of vegetation with normal practices.

PURPOSE

- Stabilize areas with existing or expected high rates of soil erosion by water.
- Stabilize areas with existing or expected high rates of soil erosion by wind.
- Restore degraded sites that cannot be stabilized through normal methods.

CONDITIONS WHERE PRACTICE APPLIES

On areas with existing or expected high rates of erosion or degraded sites that usually cannot be stabilized by ordinary conservation treatment and/or management, and if left untreated, could be severely damaged by erosion or sedimentation or could cause significant off-site damage.

CRITERIA

General Criteria Applicable To All Purposes

Species selected for seeding or planting shall be suited to current site conditions and intended uses. Selected species will have the capacity to achieve adequate density and vigor within an appropriate time frame to stabilize the site sufficiently to permit suited uses with ordinary management activities.

Species, rates of seeding or planting, minimum quality of planting stock, such as PLS or stem caliper, and method of establishment shall be specified before application. Only viable, high quality seed or planting stock will be used.

Site preparation and seeding or planting shall be done at a time and in a manner that best ensures survival and growth of the selected species. What constitutes successful establishment, e.g. minimum percent ground/canopy cover, percent survival, stand density, etc. shall be specified before application.

Fertilization, mulching, or other facilitating practices for plant growth shall be timed and applied to accelerate establishment of selected species. If the recommended fertilizer rate exceeds the criteria in Conservation Practice Standard (590) Nutrient Management, appropriate mitigating practices will be installed to reduce the risk of nutrient losses from the site.

Comply with all applicable federal, state, and local laws, rules, and regulations.

Additional Criteria To Restore Degraded Sites

If gullies or deep rills are present, they will be treated, if feasible, to allow equipment operation and ensure proper site and seedbed preparation.

Soil amendments will be added as necessary to ameliorate or eliminate physical or chemical conditions that inhibit plant establishment and growth. Required amendments, such as compost or manure to add organic matter and improve soil structure and water holding capacity; agricultural limestone to increase the pH of acid soils; or elemental sulfur to lower the

pH of calcareous soils shall be included in the site specification with amounts, timing, and method of application.

Additional Criteria for Temporary Seeding

Temporary seeding of critical areas subject to erosion shall be made if the area will be exposed up to 12 months.

Site preparation shall include the installation of needed surface water control measures prior to planting and grading to permit the use of conventional equipment where possible.

As practical, perform all cultural operations at right angles to the slope and apply soil amendments per soil test recommendations.

In lieu of soil tests:

- Apply agricultural limestone at a rate of 1 ton per acre (50 lbs/1000 sq.ft.) where experience shows it necessary for satisfactory plant growth.
- Apply 10-10-10 analysis fertilizer at a minimum rate of 1000 lbs per acre (23 lbs/1000 sq.ft.) where practical and feasible.
- Incorporate lime and fertilizer into the soil before planting where possible.
- Use Table 1 for plant selection and seeding rates.

Table 1

Seeding for Temporary Cover

Seed	Seeding Rates		Recommended Seeding Dates	Remarks
	Lbs/Ac	Lbs/1000 sq.ft.		
Winter Rye	112	2.6	8/15 - 9/5 for fall cover	Good for fall seeding. Select a hardy variety
Oats	80	2	4/1 - 7/1 8/15 - 9/15	Best for spring seeding. Early fall seedings will die when winter weather comes, but the dead material will provide protection.
Annual Ryegrass	40	1	4/1 - 6/1	Grows quickly but is of short duration. Use where appearance is important.
Sudangrass	40	0.9	5/15 - 8/15	Good growth during hot summer periods.
Perennial Ryegrass	30	0.7	4/1 - 6/1 8/15 - 9/15	Good cover, longer lasting than Annual Ryegrass. Mulching will allow seeding throughout growing season.

Permanent Seeding of Grass and Legume on Sediment Producing Areas

Site preparation shall include the installation of needed surface water control measures prior to planting and grading to permit the use of conventional equipment where possible.

As practical, perform all cultural operations at right angles to the slope and apply soil amendments per soil test recommendations.

In lieu of soil tests:

- Apply agricultural limestone at a rate of 2 ton per acre (100 lbs/1000 sq.ft.) for satisfactory plant growth.

- Apply 10-20-20 analysis fertilizer at a minimum rate of 500 lbs per acre (11.5 lbs/1000 sq.ft.).
- Incorporate lime and fertilizer into the soil before planting where possible.
- Use Table 2 for selecting vegetative mixture and Table 3 for seeding rates.
- Mulching is important in establishing vegetation on critical areas. Mulch will help hold moisture, protect soil from erosion, hold seed in place, and keep soil temperatures relatively constant. See Mulching Standard - 484 for specific mulching recommendations.
- Relative amounts of individual species shown in Table 3 may vary within mixtures somewhat, especially where species are available in commercial mixtures.

Table 2

Seeding for Permanent Cover

Type of Area and Conditions	Seeding Mixture from Table 3	
	Mowing Planned	No Mowing Planned
Borrow Areas, Roadsides, Dikes, Levees, Pond Banks, and other slopes and banks		
A. Well to excessively drained	1, 2, 3, 4, 5, or 8	3, 4, 5, 6 ,8 ,9, 10, 11, 12, or 13
B. Somewhat poorly drained	2	5 or 6
C. Variable drainage	2	5 or 6
Drainage Ditch and Channel Banks		
A. Well to excessively drained	1, 2, 3, or 4	9, 10, or 11
B. Somewhat poorly drained	2	
C. Variable drainage	2	
Diversions		
A. Well to excessively drained	2, 3, or 4	9, 10, or 11
B. Somewhat poorly drained	2	
C. Variable drainage	2	
Effluent Disposal		5 or 6
Gullied and Eroded Areas		3, 4, 5, 8, 10, or 11
Shorelines (fluctuating water levels)		5 or 6
Sod Waterways and Spillways	1, 2, 3, 4, 6, or 7	1, 2, 3, 4, 6, or 7
General Recreation Seedings, Picnic and Playgrounds, or Driving and Archery Ranges	1, 2, 15, 16, or 18	
Woodland Access Roads, Trails, and Landings		
A. Well to excessively drained		9, 10, or 11
B. Somewhat poorly drained		2, 5 or 6
C. Variable drainage		2, 4, 9, or 10

Table 3

Seed Mixtures for Permanent Seedings

No.	Mixture	Lbs/acre	Lbs/1000 sq.ft.
1.	Kentucky Bluegrass	20	.45
	Creeping Red Fescue	20	.45
	Perennial Ryegrass	5	.10
2.	Creeping Red Fescue	20	.45
	Redtop	2	.05
	Tall Fescue	20	.45
3.	Creeping Red Fescue	20	.45
	Birdsfoot Trefoil 1/	8	.20
	Tall Fescue or Smooth Bromegrass	20	.45
4.	Tall Fescue	20	.45
	Redtop	2	.05
	Birdsfoot Trefoil 1/	8	.20
5.	Reed Canarygrass	20	.45
	Redtop	5	.10
6.	Reed Canarygrass	15	.35
	Redtop	5	.10
	Birdsfoot Trefoil 1/	10	.25
7.	Smooth Bromegrass	15	.35
	Perennial Ryegrass	5	.10
	Birdsfoot Trefoil 1/	10	.25
8.	Switchgrass (Broadcast)	10 (PLS) 2/	.25
9.	Creeping Red Fescue	10	.25
	Crownvetch or Flatpea 1/	15 (30)	.35 (.70)
	Tall Fescue or Smooth Bromegrass	15	.35
	Redtop	2	.05
10.	Creeping Red Fescue	20	.45
	Redtop	2	.05
	Crownvetch or Flatpea	15 (30)	.35 (.70)
11.	Birdsfoot Trefoil 1/	8	.20
	Crownvetch 1/	15	.35
	Creeping Red Fescue or Tall Fescue	20	.45
12.	Crownvetch or Flatpea 1/	10 (30)	.25 (.70)
	Perennial Ryegrass	10	.25
13.	Switchgrass	5 (PLS) 2/	.10
	Bluestem (Big or Little)	5 (PLS) 2/	.10
	Perennial Ryegrass	5	.10
	Birdsfoot Trefoil 1/	5	.10
14.	Tall Fescue	20	.45
	Flatpea	30	.70
15.	Creeping Red Fescue	50	1.15
	Canada Bluegrass or Kentucky Bluegrass	50	1.15
16.	Creeping Red Fescue	50	1.15
	Tall Fescue	30	.70
17.	Creeping Red Fescue	20	.45
	Flatpea 1/	30	.70
18.	Tall Fescue	150	3.5

1/ Inoculate legume seeds. Use four times recommended rate of inoculant when hydroseeding.

2/ (PLS) Pure Live Seed = (% Germination x % Purity) / 100

NRCS, NHFOTG

October, 2002

Sod Installation on Sediment Producing Areas

Site preparation shall include the installation of needed surface water control measures prior to laying sod.

Grade slopes to 2:1 or flatter and provide adequate subsurface drainage where needed, especially at the toe of slopes.

Provide good soil conditions for placing sod with the surface free of large clods, stones, or other debris. Incorporate lime and fertilizer based on soil test information uniformly into the surface soil before placing sod.

Apply lime and fertilizer according to the following recommendations in lieu of a soil test:

- Apply 2 tons of ground limestone per acre (100 lbs/1000 sq.ft.).
- Apply 500 lbs of 5-20-20 or equivalent fertilizer per acre (11.5 lbs/1000 sq.ft.).
- Incorporate the lime and fertilizer before placing the sod.

Sod Materials

- Sod should be good quality, free of weeds, disease and insects, and should be of good color and density.
- Sod should be machine cut at a uniform soil thickness necessary for plant viability during the Harvest-Transport-Installation cycle.
- Individual pieces of sod should be cut to the supplier's standard width and length and be strong enough to support their own weight and retain their size and shape during normal installation.

Installation

- After all grading is completed, the soil should be irrigated within 12-24 hours prior to placement of sod. Sod should not be laid on dry or powdery soil.
- The first row of sod should be laid in a straight line with subsequent rows placed parallel to and tightly against each other. Lateral joints should be staggered to promote more uniform growth and strength.
- On sloping surfaces where erosion may be a problem, sod should be laid with staggered joints and secured by pegging.
- The sod should be immediately watered during and after installation to prevent drying. It should then be thoroughly irrigated to a depth sufficient that the underside of the new sod pad and soil below the sod are thoroughly wet.
- During the first week, water daily or as needed to maintain moist soil to a depth of 4 inches. After that, water as needed to maintain adequate moisture in the upper 4 inches of soil.

Gravel Pit Renovation

Follow recommendations in NH Technical Note PM-NH-24 for seed and installation information.

CONSIDERATIONS

Native species or mixes that are adapted to the site and have multiple values should be considered.

Avoid species that may harbor pests. Species diversity should be considered to avoid loss of function due to species-specific pests.

PLANS AND SPECIFICATIONS

Specifications for applying this practice shall be prepared for each site and recorded and filed using the approved specification sheets or narrative statements in the conservation plan.

OPERATION AND MAINTENANCE

Use of the area shall be managed as long as necessary to stabilize the site and achieve the intended purpose.

Control or exclude pests that will interfere with the timely establishment of vegetation.

Inspections, reseeding or replanting, fertilization, and pest control may be needed to insure that this practice functions as intended throughout its expected life.

GOVE ENVIRONMENTAL SERVICES, INC.

NH DES WETLANDS BUREAU
DREDGE & FILL APPLICATION
For
3-5 CONTINENTAL DRIVE, LLC

3&5 Continental Drive

Exeter, NH

August 25, 2017

Prepared By

Gove Environmental Services, Inc.
8 Continental Dr Bldg 2 Unit H, Exeter, NH 03833-7526
Ph (603) 778 0644 / *Fax* (603) 778 0654
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NH DES Dredge & Fill Application Form

NHDES-W-06-012

WETLANDS PERMIT APPLICATION

Water Division/ Wetlands Bureau
Land Resources Management

Check the status of your application: www.des.nh.gov/onestop

RSA/Rule: RSA 482-A/ Env-Wt 100-900

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No.:
			Check No.:
			Amount:
			Initials:

1. REVIEW TIME: Indicate your Review Time below. To determine review time, refer to Guidance Document A for instructions.

☒ Standard Review (Minimum, Minor or Major Impact) ☐ Expedited Review (Minimum Impact only)

2. MITIGATION REQUIREMENT:

If mitigation is required a Mitigation-Pre Application meeting must occur prior to submitting this Wetlands Permit Application. To determine if Mitigation is Required, please refer to the Determine if Mitigation is Required Frequently Asked Question.

Mitigation Pre-Application Meeting Date: Month: __ Day: __ Year: ____

☒ N/A - Mitigation is not required

3. PROJECT LOCATION:

Separate wetland permit applications must be submitted for each municipality that wetland impacts occur within.

ADDRESS: **3 Continental Drive**		TOWN/CITY: **Exeter**	
TAX MAP: **47**	BLOCK:	LOT: **1-3 &1-4**	UNIT:
USGS TOPO MAP WATERBODY NAME:	☒ NA	STREAM WATERSHED SIZE:	☒ NA
LOCATION COORDINATES (If known): **1169279E 180799N**		☐ Latitude/Longitude ☐ UTM	

4. PROJECT DESCRIPTION:

Provide a brief description of the project outlining the scope of work. Attach additional sheets as needed to provide a detailed explanation of your project. DO NOT reply "See Attached" in the space provided below.

The proposed project will take place on approximately 7 acres of the 22 acre property and consists of a 30k SF comercial building housing two tennents, associated parking, access, and stormwater management. A total of 3,210 SF of direct wetold impact is proposed in three locstaion for access and site development.

5. SHORELINE FRONTAGE:

☒ NA This does not have shoreline frontage. SHORELINE FRONTAGE:

Shoreline frontage is calculated by determining the average of the distances of the actual natural navigable shoreline frontage and a straight line drawn between the property lines, both of which are measured at the normal high water line.

6. RELATED NHDES LAND RESOURCES MANAGEMENT PERMIT APPLICATIONS ASSOCIATED WITH THIS PROJECT:

Please indicate if any of the following permit applications are required and, if required, the status of the application.

To determine if other Land Resources Management Permits are required, refer to the Land Resources Management Web Page.

Permit Type	Permit Required	File Number	Permit Application Status
Alteration of Terrain Permit Per RSA 485-A:17	☒ YES ☐ NO	_____	☐ APPROVED ☐ PENDING ☐ DENIED
Individual Sewerage Disposal per RSA 485-A:2	☐ YES ☐ NO	_____	☐ APPROVED ☐ PENDING ☐ DENIED
Subdivision Approval Per RSA 485-A	☐ YES ☐ NO	_____	☐ APPROVED ☐ PENDING ☐ DENIED
Shoreland Permit Per RSA 483-B	☐ YES ☐ NO	_____	☐ APPROVED ☐ PENDING ☐ DENIED

7. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS:

See the Instructions & Required Attachments document for instructions to complete a & b below.

a. Natural Heritage Bureau File ID: NHB **17** - **1271** .

b. ☐ Designated River the project is in ¼ miles of: _____ ; and
date a copy of the application was sent to the Local River Management Advisory Committee: Month: __ Day: __ Year: ____
☐ N/A

8. APPLICANT INFORMATION (Desired permit holder)

LAST NAME, FIRST NAME, M.I.: **Lambert, Micheal**

TRUST / COMPANY NAME: **3-5 Continental Drive, LLC** | MAILING ADDRESS: **156 Epping Road**

TOWN/CITY: **Exeter** | STATE: **NH** | ZIP CODE: **03833**

EMAIL or FAX: **mike@aprrinc.com** | PHONE:

ELECTRONIC COMMUNICATION: By initialing here: _____, I hereby authorize NHDES to communicate all matters relative to this application electronically

9. PROPERTY OWNER INFORMATION (If different than applicant)

LAST NAME, FIRST NAME, M.I.: **SAME AS APPLICANT**

TRUST / COMPANY NAME: | MAILING ADDRESS:

TOWN/CITY: | STATE: | ZIP CODE:

EMAIL or FAX: | PHONE:

ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize NHDES to communicate all matters relative to this application electronically

10. AUTHORIZED AGENT INFORMATION

LAST NAME, FIRST NAME, M.I.: **Quigley, Brendan** | COMPANY NAME: **Gove Environmental Services, Inc**

MAILING ADDRESS: **8 Continental Drive Bldg 2 Unit H**

TOWN/CITY: **Exeter** | STATE: **NH** | ZIP CODE: **03833**

EMAIL or FAX: **bquigley@gesinc.biz** | PHONE: **603-778-0644**

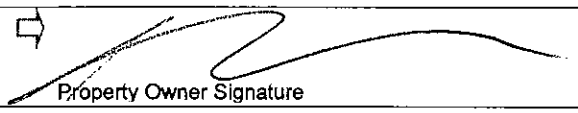
ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize NHDES to communicate all matters relative to this application electronically

11. PROPERTY OWNER SIGNATURE:

See the Instructions & Required Attachments document for clarification of the below statements

By signing the application, I am certifying that:

1. I authorize the applicant and/or agent indicated on this form to act in my behalf in the processing of this application, and to furnish upon request, supplemental information in support of this permit application.
2. I have reviewed and submitted information & attachments outlined in the Instructions and Required Attachment document.
3. All abutters have been identified in accordance with RSA 482-A:3, I and Env-Wt 100-900.
4. I have read and provided the required information outlined in Env-Wt 302.04 for the applicable project type.
5. I have read and understand Env-Wt 302.03 and have chosen the least impacting alternative.
6. Any structure that I am proposing to repair/replace was either previously permitted by the Wetlands Bureau or would be considered grandfathered per Env-Wt 101.47.
7. I have submitted a Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) to the NH State Historic Preservation Officer (SHPO) at the NH Division of Historical Resources to identify the presence of historical/ archeological resources while coordinating with the lead federal agency for NHPA 106 compliance.
8. I authorize NHDES and the municipal conservation commission to inspect the site of the proposed project.
9. I have reviewed the information being submitted and that to the best of my knowledge the information is true and accurate.
10. I understand that the willful submission of falsified or misrepresented information to the New Hampshire Department of Environmental Services is a criminal act, which may result in legal action.
11. I am aware that the work I am proposing may require additional state, local or federal permits which I am responsible for obtaining.
12. The mailing addresses I have provided are up to date and appropriate for receipt of NHDES correspondence. NHDES will not forward returned mail.

Property Owner Signature	Print name legibly	Date
	Michael Lambert	8/10/2017

MUNICIPAL SIGNATURES

12. CONSERVATION COMMISSION SIGNATURE

The signature below certifies that the municipal conservation commission has reviewed this application, and:

1. Waives its right to intervene per RSA 482-A:11;
2. Believes that the application and submitted plans accurately represent the proposed project; and
3. Has no objection to permitting the proposed work.

⇨	Print name legibly	Date

DIRECTIONS FOR CONSERVATION COMMISSION

1. Expedited review ONLY requires that the conservation commission's signature is obtained in the space above.
2. Expedited review requires the Conservation Commission signature be obtained **prior** to the submittal of the original application to the Town/City Clerk for signature.
3. The Conservation Commission may refuse to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for expedited review and the application will reviewed in the standard review time frame.

13. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 2014), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.

⇨ Town/City Clerk Signature	Print name legibly	Town/City	Date

DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3,I

1. For applications where "Expedited Review" is checked on page 1, if the Conservation Commission signature is not present, NHDES will accept the permit application, but it will NOT receive the expedited review time.
2. IMMEDIATELY sign the original application form and four copies in the signature space provided above;
3. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
4. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board; and
5. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:

1. Submit the single, original permit application form bearing the signature of the Town/ City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery.

14. IMPACT AREA:

For each jurisdictional area that will be/has been impacted, provide square feet and, if applicable, linear feet of impact

Permanent: impacts that will remain after the project is complete.

Temporary: impacts not intended to remain (and will be restored to pre-construction conditions) after the project is complete.

JURISDICTIONAL AREA	PERMANENT Sq. Ft. / Lin. Ft.		TEMPORARY Sq. Ft. / Lin. Ft.	
Forested wetland	3,210	☐ ATF		☐ ATF
Scrub-shrub wetland		☐ ATF		☐ ATF
Emergent wetland		☐ ATF		☐ ATF
Wet meadow		☐ ATF		☐ ATF
Intermittent stream		☐ ATF		☐ ATF
Perennial Stream / River	/	☐ ATF	/	☐ ATF
Lake / Pond	/	☐ ATF	/	☐ ATF
Bank - Intermittent stream	/	☐ ATF	/	☐ ATF
Bank - Perennial stream / River	/	☐ ATF	/	☐ ATF
Bank - Lake / Pond	/	☐ ATF	/	☐ ATF
Tidal water	/	☐ ATF	/	☐ ATF
Salt marsh		☐ ATF		☐ ATF
Sand dune		☐ ATF		☐ ATF
Prime wetland		☐ ATF		☐ ATF
Prime wetland buffer		☐ ATF		☐ ATF
Undeveloped Tidal Buffer Zone (TBZ)		☐ ATF		☐ ATF
Previously-developed upland in TBZ		☐ ATF		☐ ATF
Docking - Lake / Pond		☐ ATF		☐ ATF
Docking - River		☐ ATF		☐ ATF
Docking - Tidal Water		☐ ATF		☐ ATF
TOTAL	3,210 /		/	

15. APPLICATION FEE: See the Instructions & Required Attachments document for further instruction

☐ Minimum Impact Fee: Flat fee of $ 200

☐ Minor or Major Impact Fee: Calculate using the below table below

Permanent and Temporary (non-docking)	**3,210** sq. ft.	X	$0.20 =	$ **642.00**
Temporary (seasonal) docking structure:	sq. ft.	X	$1.00 =	$
Permanent docking structure:	sq. ft.	X	$2.00 =	$
Projects proposing shoreline structures (including docks) add $200 =				$
Total =				$ **642.00**
The Application Fee is the above calculated Total or $200, whichever is greater =				$ **642.00**

WETLANDS PERMIT APPLICATION – ATTACHMENT A
MINOR AND MAJOR - 20 QUESTIONS

Land Resources Management
Wetlands Bureau

Check the Status of your application: www.des.nh.gov/onestop

RSA/ Rule: RSA 482-A, Env-Wt 100-900

Env-Wt 302.04 Requirements for Application Evaluation - For any major or minor project, the applicant shall demonstrate by plan and example that the following factors have been considered in the project's design in assessing the impact of the proposed project to areas and environments under the department's jurisdiction. Respond with statements demonstrating:
1. The need for the proposed impact.
The purpose of the proposed project is to construct a 30,000 SF, two tenant commercial building along with associated access, parking. Loading areas, and stormwater management. The project site is an existing lot in the commercial and industrial area of Exeter and also lies within the Exeter Tax Increment Financing (TIF) district in which the Town is supporting development.
2. That the alternative proposed by the applicant is the one with the least impact to wetlands or surface waters on site.
The facility has been located in the middle of the large contiguous upland area on the site in close proximity to Continental Drive. Impacts have been limited to a single crossing for access and two small areas of isolated wetland. Wetland impacts within the southern part of the site were avoided since these areas drain more directly to the river. The orientation of the site was also rotated to fit within the central upland area with the least wetland impact. Impacts have been minimized by the use of steep grading. **The impacts from the access driveway cannot be relocated due to sight distance on Continental Drive for safety and due to grade concerns. Relocating the access would result in the need to shift the entire building south to achieve acceptable driveway grade therefore impacting higher value wetlands closer to Little River. The proposed alternative is therefore the least impacting alternative.**

3. The type and classification of the wetlands involved.

All the wetland areas are seasonally saturated forested wetlands (PFO1E) dominated by Red Maple

4. The relationship of the proposed wetlands to be impacted relative to nearby wetlands and surface waters.

The wetland represents the uppermost reaches of the wetland complex associated with the Little River which is well outside the project area approximately 1,500 feet to the south. The wetland associated with the project is only loosely associated with this waterway and is distinctly different than the very poorly drained swamps and marshes bordering around these waterways.

5. The rarity of the wetland, surface water, sand dunes, or tidal buffer zone area.

The wetland on this site is marginal red maple forested wetland which is common in New Hampshire.

6. The surface area of the wetlands that will be impacted.

A total direct wetland impact of 3,210 square feet is proposed

7. The impact on plants, fish and wildlife including, but not limited to:
   a. Rare, special concern species;
   b. State and federally listed threatened and endangered species;
   c. Species at the extremities of their ranges;
   d. Migratory fish and wildlife;
   e. Exemplary natural communities identified by the DRED-NHB; and
   f. Vernal pools.

The New Hampshire Natural Heritage Bureau has indicated there are no species of concern on or in the vicinity of the project site.

A vernal pool investigation was conducted in the spring of 2017 and although areas of ponding were present on the property none contained evidence of breeding by obligate vernal pool species

8. The impact of the proposed project on public commerce, navigation and recreation.

The project will have net positive impact on public commerce though job creation, tax base, and the sales of the goods that facility will create. The property is entirely private and offers no public recreation benefits, nor does it have any connectivity for waterway navigation.

9. The extent to which a project interferes with the aesthetic interests of the general public. For example, where an applicant proposes the construction of a retaining wall on the bank of a lake, the applicant shall be required to indicate the type of material to be used and the effect of the construction of the wall on the view of other users of the lake.

The site of the proposed project is an existing development lot within an industrial park. The proposed development is entirely consistent with the existing uses and zoning and should have no impact on the aesthetic interests of the public.

10. The extent to which a project interferes with or obstructs public rights of passage or access. For example, where the applicant proposes to construct a dock in a narrow channel, the applicant shall be required to document the extent to which the dock would block or interfere with the passage through this area.

This site is private property with no current right of public passage.

11. The impact upon abutting owners pursuant to RSA 482-A:11, II. For example, if an applicant is proposing to rip-rap a stream, the applicant shall be required to document the effect of such work on upstream and downstream abutting properties.

Proposed impacts are completely contained on the site and will not affect abutters in any way. Drainage from the proposed development will be handled on-site in accordance with AOT requirements, therefore ensuring there will be no impact to abutting properties upstream or downstream from the site.

12. The benefit of a project to the health, safety, and well being of the general public.

The project involves the construction of a facility intended to house commercial and warehouse uses. These are consistent with the surrounding land use and will not affect public health in any way.

13. The impact of a proposed project on quantity or quality of surface and groundwater. For example, where an applicant proposes to fill wetlands the applicant shall be required to document the impact of the proposed fill on the amount of drainage entering the site versus the amount of drainage exiting the site and the difference in the quality of water entering and exiting the site.

The comprehensive stormwater management proposed for the development will fully comply with AOT requirements, therefore ensuring no changes to the quantity or quality of stormwater post development.

14. The potential of a proposed project to cause or increase flooding, erosion, or sedimentation.

These interests will be protected during the construction term through best management practices as specified in the plans and the AOT permit. Post development, the stormwater management system will ensure that flooding, erosion, and sedimentation do not occur.

15. The extent to which a project that is located in surface waters reflects or redirects current or wave energy which might cause damage or hazards.

The project is not directly associated with a waterbody or waterway and does not involve elements of wave action or current.

16. The cumulative impact that would result if all parties owning or abutting a portion of the affected wetland or wetland complex were also permitted alterations to the wetland proportional to the extent of their property rights. For example, an applicant who owns only a portion of a wetland shall document the applicant's percentage of ownership of that wetland and the percentage of that ownership that would be impacted.

The size of the wetland on site is very small in relation to the overall size of the wetland complex which lies primarily off site in association with the Little River. The proposed impacts are an even smaller portion of the wetland. If similar impacts were allowed to other owners net effects would be commensurately small.

17. The impact of the proposed project on the values and functions of the total wetland or wetland complex.

The function of the wetlands on the site is limited to modest wildlife habitat and maintenance of water quality in the watershed, essentially acting as a buffer to the more sensitive wetlands near the Little River. The wildlife habitat value is diminished by its proximity to existing development and by the fact that it is not wetland specific, differing little from the surrounding uplands. The true wetland related habitat value lies within the Little River and its floodplain which lie well outside the project area. Since impacts are located far up-gradient of these areas and stormwater management systems will be design to protect water quality, proposed impacts will have negligible, if any effect on the overall functions and values of the wetland areas which will remain intact and largely offsite.

18. The impact upon the value of the sites included in the latest published edition of the National Register of Natural Landmarks, or sites eligible for such publication.

No such areas have been identified

19. The impact upon the value of areas named in acts of Congress or presidential proclamations as national rivers, national wilderness areas, national lakeshores, and such areas as may be established under federal, state, or municipal laws for similar and related purposes such as estuarine and marine sanctuaries.

No such areas have been identified

20. The degree to which a project redirects water from one watershed to another.

The project will not redirect water to another watershed

Additional comments
see text and attachments

1.0 Introduction

This Minor Impact Dredge and Fill Application is being submitted by 3-5 Continental Drive, LLC for a commercial development located at 3 & 5 Continental Drive in in Exeter, NH. The project site consists of two lots identified on assessor Map 47 as Lots 1-4 and 1-4, totaling 22 acres. The proposed project involves the construction of a 30,000 square foot *spec-built* commercial building to house two tenants, associated access, parking, and stormwater management. The proposed project will utilize approximately 7 acres of the property. The following sections and appendices provide details on the proposed project, the proposed impacts, and the requirements outlined in Env-Wt 300.

2.0 Wetland Resources

The wetlands on the site were delineated by Gove Environmental Services in the spring of 2017 utilizing the standards of the Corps of Engineers *Wetlands Delineation Manual*[1] and the NH DES Wetlands Bureau *Code of Administrative Rules*[2]. Dominant hydric soil conditions within the wetlands were identified using the criteria in *Field Indicators for Identifying Hydric Soils in New England*[3]. Wetland flags were located by Doucet Survey, Inc. Wetlands were classified by GES utilizing the *Classification of Wetlands and Deepwater Habitats of the United States*[4].

The resource areas consist of marginal forested red maple dominated wetlands representing the uppermost reaches of the wetland complex associated with the Little River which lies outside the project area approximately 1,500 feet to the south. The wetland associated with the project is only loosely associated with this waterway and is distinctly different than the very poorly drained swamps and marshes bordering around these waterways. Several of the wetlands in the project area are small isolated pockets and the others originate at drainage pipes under Continental Drive.

2.1 Wetland Function and Value

A functional assessment of the wetlands on and associated with the project site was conducted by GES during wetland delineation and subsequent field visits using the US Army Corps of Engineers' Highway Methodology Workbook Supplement (NAEEP-360-1-30a, September 1999). Functions and values are identified as "principal" if they are

[1] Environmental Laboratory. 1987. "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1. Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station: NTIS No. AD A176 912.
[2] NH Code Admin. R. [Wt] Ch. 100-800.
[3] New England Hydric Soils Technical Committee. 2004. 3rd ed., Field Indicators for Identifying Hydric Soils in New England. Lowell, MA: New England Interstate Water Pollution Control Commission.
[4] Cowardin, L. M., 1979. Classification of Wetlands and Deepwater Habitats in the United States. Washington, D.C.: U.S. Department of the Interior, Fish and Wildlife Service.

determined to be a significant physical feature of the wetland system, as compared to other functions and values. According to the USACE, the function/value qualifier as "principal" does not mean that the function or value identified is exceptional, but that the particular function/value is demonstrated more than any other function or value in the Highway Methodology Workbook. Forms used in this evaluation are attached to this application

The function of the wetlands on the site is limited to modest wildlife habitat and maintenance of water quality in the watershed, essentially acting as a buffer to the more sensitive wetlands near the Little River. The wildlife habitat value is diminished by its proximity to existing development and by the fact that it is not wetland specific, differing little from the surrounding uplands. The true wetland related habitat value lies within the Little River and its floodplain which lie well outside the project area. Water quality function is associated only with the wetland being crossed for the access drive as the other two impact areas are isolated.

3.0 Project Description and Impacts

The project involves the construction of a 30,000 square foot, two tenant commercial building on approximately 7 acres of a 22 acre site. Access will be via a driveway located on Continental Drive. Stormwater will be managed through a system of catch basins and pipes which will flow to a gravel wetland before being discharged. The system will fully comply with AOT standards. The project proposes a total of 3,210 square feet of direct wetland impact necessary for the driveways crossing and a portion of two isolated wetlands.

3.1 Impacts on Functions and Values

Development of this site will be consistent with the adjacent properties on Epping road and Continental Drive. The proposed small impacts to isolated wetlands with very modest habitat vale and other forested wetland far up-gradient of little River. The proposed stormwater management system will be designed to protect water quality and will compensate for any small loss of water quality function in the watershed. The proposed impacts will have negligible, if any, effect on the overall functions and values of the wetland complex which will remain intact and outside the project area.

3.2 Wt 302.01 Statement of Purpose

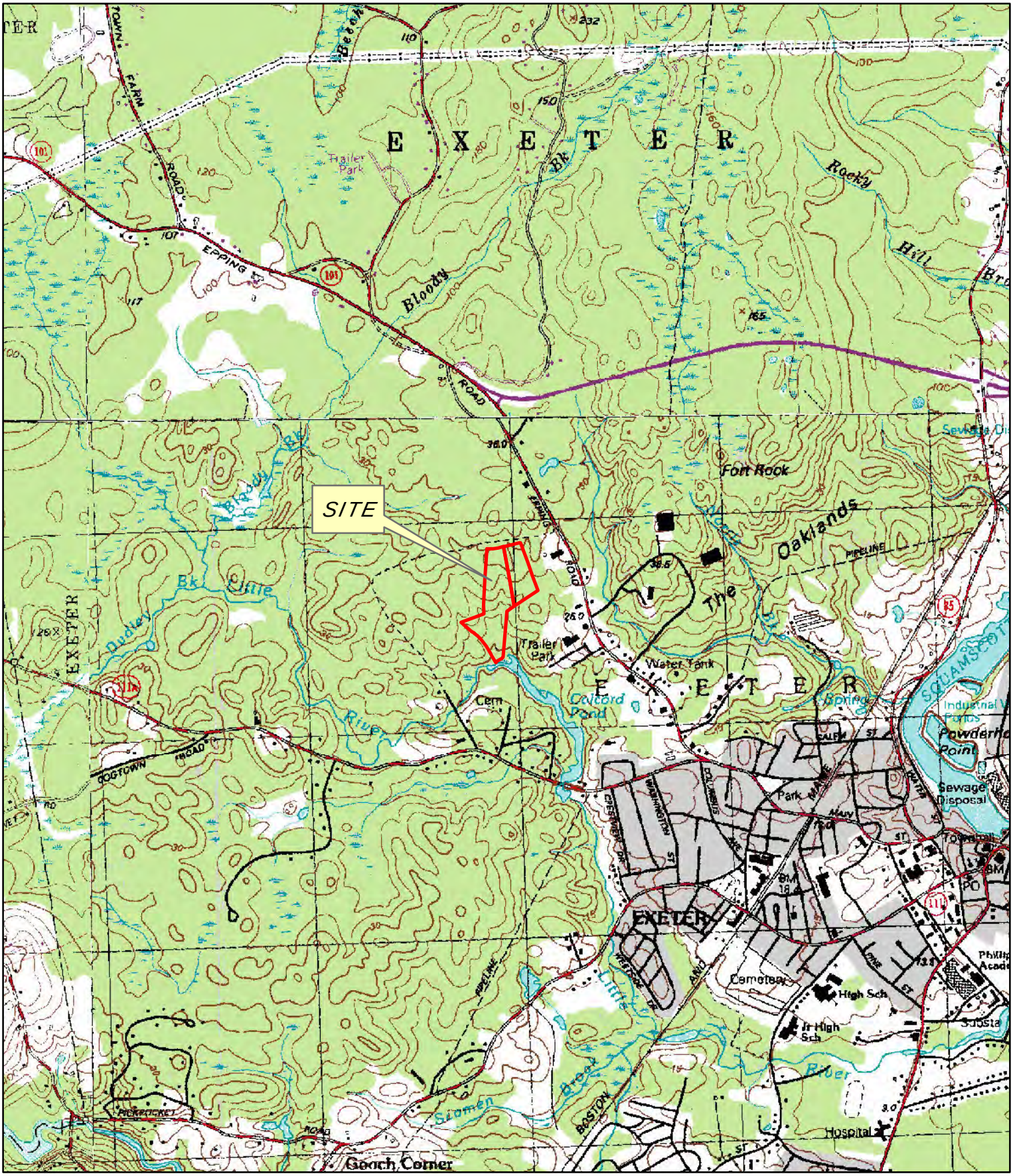
The purpose of the proposed project is to construct a two tenant commercial building along with associated access, parking. Loading areas, and stormwater management. The project site is an existing lot in the commercial and industrial area of Exeter and also lies within the Exeter Tax Increment Financing (TIF) district in which the Town is supporting development.

3.3 Wt 302.03 Avoidance & Minimization

The facility has been located in the middle of the large contiguous upland area on the site in close proximity to Continental Drive. Impacts have been limited to a single crossing for access and two small areas of isolated wetland. Wetland impacts within the southern part of the site were avoided since these areas drain more directly to the river. The orientation of the site was also rotated to fit within the central upland area with the least wetland impact. Impacts have also been minimized by the use of steep grading.

The impacts from the access driveway cannot be relocated due to sight distance on Continental Drive and due to grade concerns. Relocating the access would result in the need to shift the entire building south to achieve acceptable driveway grade therefore impacting higher value wetlands closer to Little River. The proposed alternative is therefore the least impacting alternative.

Figures



1 inch = 2,000 feet

Locus Map

Map 47 Lots 1.3 &1.4
Continental Drive
Exeter, NH

Gove Environmental Services, Inc.
8 Continental Drive, Bldg 2 Unit H, Exeter NH 03833 603.778.0644

N

LEGEND

- PROPOSED MAJOR CONTOUR LINE
- PROPOSED MINOR CONTOUR LINE
- PROPOSED DRAIN LINE (TYP)
- PROPOSED SILT SOCK
- INLET PROTECTION SILT SACK
- PROPOSED CATCHBASIN
- PROPOSED DRAIN MANHOLE
- PROPOSED 5' DIA DRAIN MANHOLE
- BLDG — BUILDING
- TYP — TYPICAL
- COORD — COORDINATE

Wetland	Wetland Impact
1	0
2	0
3	1535
4	1255
5	420
Total	3210

Appendix A

Impact Area Photos

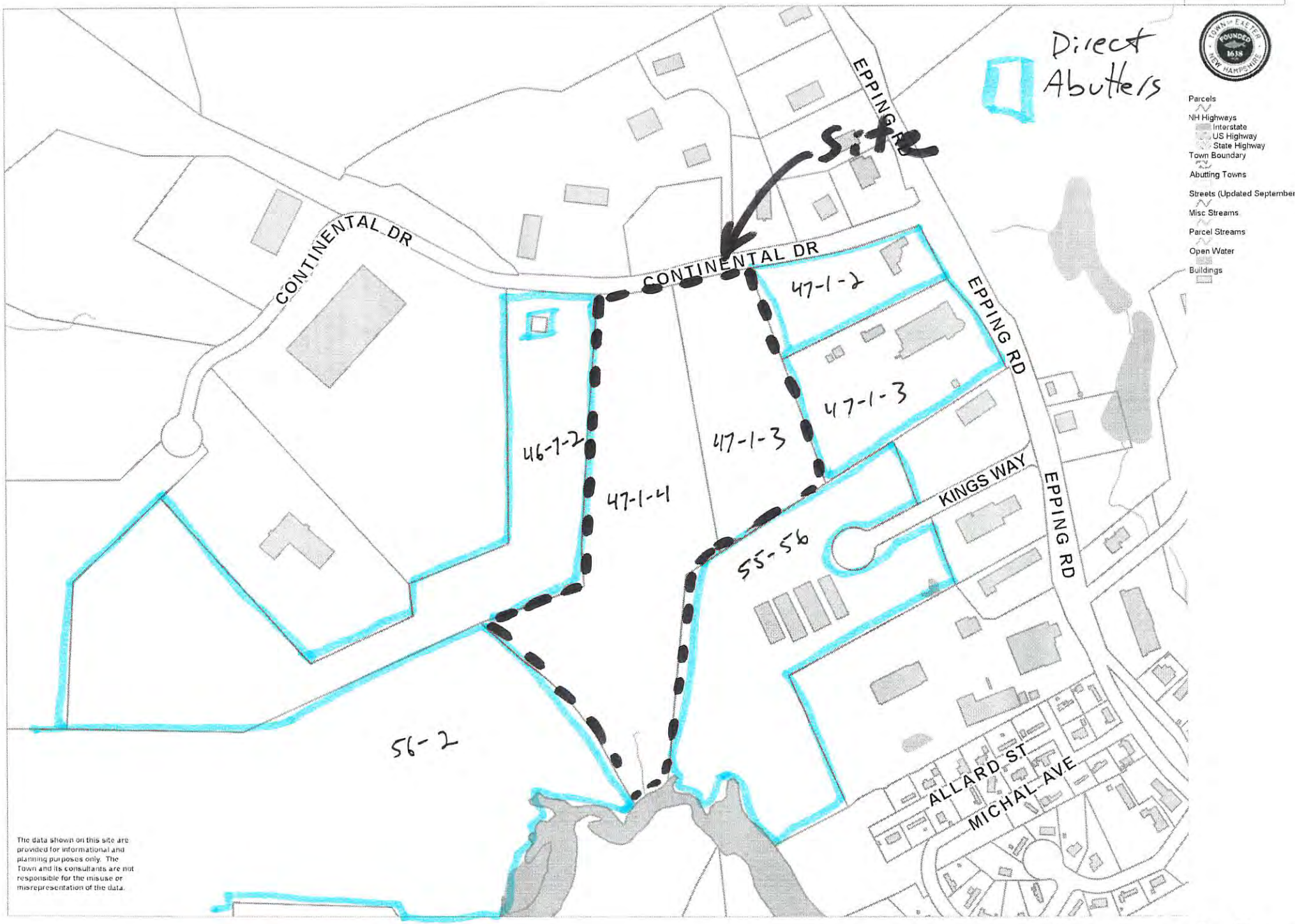
Photo 1: Impact Area for crossing (wetland 3)

Photo 2: Impact Area Within Wetland 4

Photo 3: Impact Area Within Wetland 5

Appendix B

Abutter Information


Direct Abutters
Site
CONTINENTAL DR
CONTINENTAL DR
EPPING RD
EPPING RD
EPPING RD
KINGS WAY
ALLARD ST
MICHAL AVE
47-1-2
47-1-3
47-1-3
46-1-2
47-1-4
55-56
56-2
Parcels
NH Highways
Interstate
US Highway
State Highway
Town Boundary
Abutting Towns
Streets (Updated September
Misc Streams
Parcel Streams
Open Water
Buildings
The data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for the misuse or misrepresentation of the data.
0
600
1200 ft
Printed on 08/22/2017 at 11:29 AM
Exeter MapsOnline

DIRECT ABUTTERS.

SUBJECT PARCELS

47-1-3 & 47-1-4
3-5 CONTINENTAL DRIVE LLC
156 EPPING ROAD
EXETER, NH 03833

ABUTTERS:

46-7-2
HOLDING COURT, LLC
C/O MARK PANETH LLP
685 THIRD AVE 4TH FLOOR
NEW YORK NY 10017

47-1-1
156 EPPING ROAD LLC
156 EPPING RD UNIT 1
EXETER, NH 03833

47-1-2
158 EPPING ROAD LLC
156 EPPING ROAD
EXETER, NH 03833

55-56
A STORAGE KING LLC
6 KINGSWAY AVE
EXETER, NH 03833

56-2
EXETER TOWN OF
10 FRONT STREET
EXETER, NH 03833

August 24, 2017

«Name»
«Street»
«TownStateZip»

Re: 3 Continental Drive
Map 47 Lot 1-3 & 1-4
Exeter, NH

Dear Abutter:

The purpose of this letter is to inform you 3-5 Continental Drive, LLC, has submitted a Dredge and Fill Application to the NH Department of Environmental Services for a development project located at 3 Continental Drive in Exeter, NH, Tax Map 47 Lota 1-3 and 1-4. DES requires this notice for work within a wetland area. After filing, a copy of the final Application, including plans, will be made available for your review at the Exeter Town Hall and at the NH Department of Environmental Services Wetlands Bureau, 29 Hazen Drive, in Concord.

If you have any questions that we might be able to answer, please feel free to contact our office.

Sincerely,

Brendan Quigley, CWS
Gove Environmental Services, Inc.

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Restricted Delivery Fee (Endorsement Required)
Total Postage & Fees $

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AUG 24 2017
USPS

46-7-2
HOLDING COURT, LLC
C/O MARK PANETH LLP
685 THIRD AVE 4TH FLOOR
NEW YORK NY 10017

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

---

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- ☐ Return Receipt (electronic) $
- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

Postage
$
Total Postage & Fees $

Postmark Here
AUG 24 2017
EXETER NH 03833
USPS

7016 0750 0001 1374 7159

55-56
A STORAGE KING LLC
6 KINGSWAY AVE
EXETER, NH 03833

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

---

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Restricted Delivery Fee (Endorsement Required)
Total Postage & Fees $

Postmark Here
AUG 24 2017
EXETER NH 03833
USPS

47-1-1
156 EPPING ROAD LLC
156 EPPING RD UNIT 1
EXETER, NH 03833

PS Form 3800, July 2014 See Reverse for Instructions

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- ☐ Return Receipt (hardcopy) $
- ☐ Return Receipt (electronic) $
- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

Postage
$
Total Postage & Fees $

Postmark Here
AUG 24 2017
EXETER NH 03833
USPS

7016 0750 0001 1374 7142

56-2
EXETER TOWN OF
10 FRONT STREET
EXETER, NH 03833

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

---

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Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $
- ☐ Return Receipt (electronic) $
- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

Postage
$
Total Postage & Fees $

Postmark Here
AUG 24 2017
EXETER NH 03833
USPS

47-1-2
158 EPPING ROAD LLC
156 EPPING ROAD
EXETER, NH 03833

Appendix C

New Hampshire Natural Heritage Inquiry

New Hampshire Natural Heritage Bureau

To: Luke Hurley
8 continental Drive
Exeter, NH 03833

Date: 4/26/2017

From: NH Natural Heritage Bureau

Re: Review by NH Natural Heritage Bureau of request dated 4/26/2017

NHB File ID: NHB17-1271 Applicant: Michael Lampert

Location: Tax Map(s)/Lot(s): 47-1
Exeter

Project Description: Industrial development.

The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

This report is valid through 4/25/2018.

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DRED/NHB
172 Pembroke Road
Concord NH 03301

MAP OF PROJECT BOUNDARIES FOR NHB FILE ID: NHB17-1271

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DRED/NHB
172 Pembroke Road
Concord NH 03301

Appendix D

State Historic Preservation Office Inquiry

Please mail the completed form and required material to:

New Hampshire Division of Historical Resources
State Historic Preservation Office
Attention: Review & Compliance
19 Pillsbury Street, Concord, NH 03301-3570

PENDING FINAL RESPONSE

DHR Use Only

R&C # _____

Log In Date ____ / ____ / ____

Response Date ____ / ____ / ____

Sent Date ____ / ____ / ____

Request for Project Review by the New Hampshire Division of Historical Resources

☒ This is a new submittal
☐ This is additional information relating to DHR Review & Compliance (R&C) #:

GENERAL PROJECT INFORMATION

Project Title Continental Drive- Exeter

Project Location Continental Drive

City/Town Exeter Tax Map 47 Lot # 1.3 & 1.4

NH State Plane - Feet Geographic Coordinates: Easting 1169279 Northing 180799
(See RPR Instructions and R&C FAQs for guidance.)

Lead Federal Agency and Contact *(if applicable)* ACOE
(Agency providing funds, licenses, or permits)
Permit Type and Permit or Job Reference #

State Agency and Contact *(if applicable)* NHDES

Permit Type and Permit or Job Reference # wetland

APPLICANT INFORMATION

Applicant Name Michael Lampert, APR&R

Mailing Address 156 Epping Road Phone Number 6037788158

City Exeter State NH Zip 03833 Email Mike@aprrinc.com

CONTACT PERSON TO RECEIVE RESPONSE

Name/Company Brenden Quigley, Gove Environmental Services, Inc.

Mailing Address 8 Continental Drive, Bldg 2, Unit H Phone Number 6035804122

City Exeter State NH Zip 03833 Email bquigley@gesinc.biz

This form is updated periodically. Please download the current form at www.nh.gov/nhdhr/review. *Please refer to the Request for Project Review Instructions for direction on completing this form.* Submit one copy of this project review form for each project for which review is requested. Include a self-addressed stamped envelope to expedite review response. Project submissions will not be accepted via facsimile or e-mail. This form is required. Review request form must be complete for review to begin. Incomplete forms will be sent back to the applicant without comment. Please be aware that this form may only initiate consultation. For some projects, additional information will be needed to complete the Section 106 review. All items and supporting documentation submitted with a review request, including photographs and publications, will be retained by the DHR as part of its review records. Items to be kept confidential should be clearly identified. For questions regarding the DHR review process and the DHR's role in it, please visit our website at: www.nh.gov/nhdhr/review or contact the R&C Specialist at christina.st.louis@dcr.nh.gov or 603.271.3558.

Project Boundaries and Description

☒ Attach the relevant portion of a 7.5' USGS Map (photocopied or computer-generated) ***indicating the defined projec***
☒ Attach a detailed narrative description of the proposed project.
☒ Attach a site plan. The site plan should include the project boundaries and areas of proposed excavation.
☒ Attach photos of the project area (overview of project location and area adjacent to project location, and specific ar
☒ A DHR file review must be conducted to identify properties within or adjacent to the project area.
Provide file review results in **Table 1**. *(Blank table forms are available on the DHR website.)*
File review conducted on 4/26/2017.

Architecture

Are there any buildings, structures (bridges, walls, culverts, etc.) objects, districts or landscapes within the project area
If no, skip to Archaeology section. If yes, submit all of the following information:

Approximate age(s): n/a

☐ Photographs of ***each*** resource or streetscape located within the project area, with captions, along with a mapped pl
☐ If the project involves rehabilitation, demolition, additions, or alterations to existing buildings or structures, provi

Archaeology

Does the proposed undertaking involve ground-disturbing activity? ☒ Yes ☐ No
If yes, submit all of the following information:

☒ Description of current and previous land use and disturbances.
☒ Available information concerning known or suspected archaeological resources within the project area (such as cel

Please note that for many project

DHR Comment/Finding Recommendation *This Space for Division of Historical Resources Use Only*

☐ Insufficient information to initiate review. ☐ Additional information is needed in order to complete review.

☐ No Potential to cause Effects ☐ No Historic Properties Affected ☐ No Adverse Effect ☐ Adverse Effect

Comments:_____
_____
_____
_____
_____

If plans change or resources are discovered in the course of this project, you must contact the Division of Historical Resou

Authorized Signature: _____ Date: _____

Appendix E

ACOE Supplemental Information Form

US Army Corps of Engineers®
New England District

New Hampshire Programmatic General Permit (PGP)
Appendix B - Corps Secondary Impacts Checklist
(for inland wetland/waterway fill projects in New Hampshire)

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination.
2. All references to "work" include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See PGP, GC 5, regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm to determine if there is an impaired water in the vicinity of your work area.*	X	
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?		X
2.2 Are there proposed impacts to SAS, shellfish beds, special wetlands and vernal pools (see PGP, GC 26 and Appendix A)? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) website, www.nhnaturalheritage.org, specifically the book Natural Community Systems of New Hampshire.		X
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	X	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)		X
2.5 The overall project site is more than 40 acres.		X
2.6 What is the size of the existing impervious surface area?	0	
2.7 What is the size of the proposed impervious surface area?	115,000	
2.8 What is the % of the impervious area (new and existing) to the overall project site?	12%	
3. Wildlife	Yes	No
3.1 Has the NHB determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require a NHB determination.)		X
3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at: • PDF: www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html.		X

3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?	X	
3.5 Are stream crossings designed in accordance with the PGP, GC 21? NA		
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?		X
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?	NA	
5. Historic/Archaeological Resources		
For a minor or major impact project - a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) shall be sent to the NH Division of Historical Resources as required on Page 5 of the PGP**	X	

*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement.

** If project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law..

Appendix F

Function and Value Assessment Forms

Wetland Function-Value Evaluation Form

Crossing

Total area of wetland: >5ac. Human made? NO Is wetland part of a wildlife corridor? NO or a 'habitat island'? NO

Wetland ID: Wetland 3

Adjacent land use Woodlot / Road / commercial Distance to nearest roadway or other development NO - 100'

Latitude Longitude

Prepared by: BQR Date 8-24-17

Dominant wetland systems present PFO1B Contiguous undeveloped buffer zone present NO

Wetland Impact:

Type Fill Area 1535 SF

Is the wetland a separate hydraulic system? NO If not, where does the wetland lie in the drainage basin? high

Evaluation based on:

Office X Field X

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Corps manual wetland delineation completed? (Y) N

Function/Value	Occurrence Y/N	Rationale (Reference #)*	Principal Function/Value(s)	Comments
Groundwater Recharge/Discharge	N			dense till soil
Floodflow Alteration	N			little storage, NO significant input
Fish and Shellfish Habitat	N			NO suitable water body or stream
Sediment/Toxicant Retention	Y	7,5,4,3,1	X	Moderate function for Little River
Nutrient Removal	Y	3,4,5,7,8,9	X	↓same
Production Export	Y	1,3,4		Mast, berries, seeds, flowers, limited by lack of habitat
Sediment/Shoreline Stabilization	N			NO waterbody
Wildlife Habitat	Y	7,8		current logged state and proximity to Rd.
Recreation	N			Private, common woodland
Educational/Scientific Value	N			common forest type
Uniqueness/Heritage	N			common forest type
Visual Quality/Aesthetics	N			common forest type, not diverse
Endangered Species Habitat	N			none identified
Other				

Notes:

*Refer to backup list of numbered considerations.

Isolated Impacts

Wetland Function-Value Evaluation Form

Total area of wetland ~4000 SF Human made? N Is wetland part of a wildlife corridor? NO or a "habitat island"? NO

Adjacent land use Woodlot/Road/commercial Distance to nearest roadway or other development 150'-350'

Dominant wetland systems present PFO1B Contiguous undeveloped buffer zone present yes

Is the wetland a separate hydraulic system? yes If not, where does the wetland lie in the drainage basin? High

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Wetland 4+5

Latitude _____ Longitude _____

Prepared by: BCQ Date 8-24-17

Wetland Impact: Type Fill Area 1675

Evaluation based on: Office ✓ Field ✓

Corps manual wetland delineation completed? Y ✓ N _____

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	N			Dense Till
Floodflow Alteration	N			Isolated Wetlands, no watercourse
Fish and Shellfish Habitat	N			NO water course
Sediment/Toxicant Retention	N			Isolated
Nutrient Removal	N			Isolated
Production Export	Y	1		Mast, berries, seed. Limited since isolated
Sediment/Shoreline Stabilization	N			No water course or waterbody
Wildlife Habitat	Y	1, 8,	*	Very modest, not wetland specific
Recreation	N			Private, common woodlot
Educational/Scientific Value	N			common forest type
Uniqueness/Heritage	N			common forest type
Visual Quality/Aesthetics	N			common forest in industrial area
ES Endangered Species Habitat	N			none identified
Other				

Notes:

* Refer to backup list of numbered considerations.

Appendix G

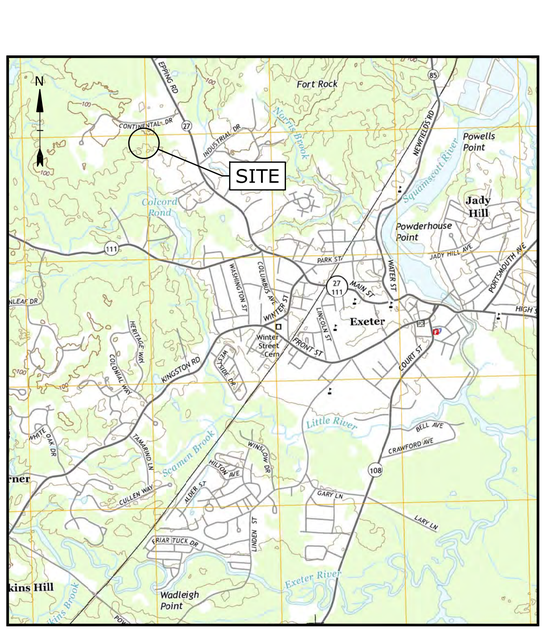
Site Plans

(under separate cover)

PROPOSED BUILDING

CONTINENTAL DRIVE
EXETER, NEW HAMPSHIRE
PROJECT NO: A-1139-1
AUGUST 23, 2017

LIST OF DRAWINGS		
SHEET NO.	SHEET TITLE	LAST REVISED
	COVER SHEET	8/23/2017
1 OF 1	EXISTING CONDITIONS PLAN	4/24/2017
C-102	SITE PLAN	8/23/2017
C-103	GRADING, DRAINAGE AND EROSIONS CONTROL PLAN	8/23/2017
C-103.1	WETLAND IMPACT PLAN	8/23/2017
C-501	EROSION CONTROL NOTES & DETAILS	8/23/2017
C-505	DETAILS SHEET	8/23/2017



LOCATION MAP
SCALE: 1" = 2,000'

OWNER: TAX MAP 47, LOTS 1-3 & 1-4
3-5 CONTINENTAL DRIVE, LLC
156 EPPING ROAD
EXETER, NEW HAMPSHIRE 03833

APPLICANT: 3-5 CONTINENTAL DRIVE, LLC
c/o MICHAEL LAMPERT
156 EPPING ROAD
EXETER, NEW HAMPSHIRE 03833

PREPARED BY: Tighe&Bond
177 CORPORATE DRIVE
PORTSMOUTH, NEW HAMPSHIRE 03801

COMPLETE SET 7 SHEETS
WETLANDS PERMIT SUBMISSION

Last Saved: 8/23/2017
Printed: Aug 23, 2017-4:15pm By: NAhansen
Tighe & Bond:J:\A\A1139 APR&R\Drawings_Figures\AutoCAD\Sheet\A-1139-COVER.dwg

PER REF. PLAN 2

TAX MAP 47, LOT 1-1

6" X 6" GRAN. BND. FND. (NO D.H.) UP 9" W/HOLDEN DISK 10682

TBM 4953C
PK NAIL FOUND UP 12" IN POLE 3/3FP
ELEV.=107.02'

TAX MAP 47, LOT 1-2

JERSEY BARRIER (TYP.)

TOWN OF EXETER WETLAND BOUNDARY SIGN POST (TYP.)

SMH 1470
RIM=106.7'
(1465) 12" PVC INV.=93.0'
(A) 12" PVC INV.=92.8'

3/3FP

5/8" REBAR FLUSH DAMAGED CAP

JERSEY BARRIER PILE

~GRAVEL~

BRUSH PILE

~GRAVEL AREA~

~WATER~

CONTINENTAL DRIVE

TBM 4953B
PK NAIL FOUND UP 9" IN POLE
ELEV.=105.83'

BRIDGE

EDGE OF STANDING WATER 04/13/17

TRAIL

15" RCP INV.=101.0'

15" RCP INV.=100.9'

TAX MAP 47, LOT 1-3

TAX MAP 47, LOT 4.1

SMH 1465
RIM=107.8'
(1498) 12" PVC INV.=94.0'
(1470) 12" PVC INV.=93.6'

6" X 6" GRAN. BND. FND. (NO D.H.) UP 4" W/HOLDEN DISK 10683

SPORADIC GAS LINE MARKINGS EXIST ON THIS SIDE OF THE ROAD (SEE NOTE #X)

5/8" REBAR UP 1" W/CAP LLS 824

TBM 4953A
PK NAUL FOUND UP 6" IN POLE 1131/5
ELEV.=105.61'

6" X 6" GRAN. BND. FND. (NO D.H.) UP 4" W/HOLDEN DISK 10835

R.O.W. PER REFERENCE PLAN 1

R.O.W. PER REFERENCE PLAN 2

SMH 1498
RIM=105.3'
UNABLE TO OPEN

15" RCP INV.=101.2'

15" RCP INV.=100.3'

TAX MAP 47, LOT 1-4

D.H.F.

TAX MAP 55, LOT 56

1" REBAR FND. W/DIVOT UP 19"

TAX MAP 46, LOT 7

SMH 1508

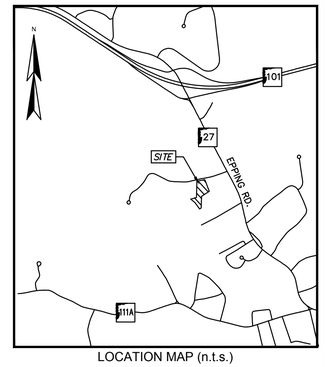
7/25AMP/7FP

NOTES:

1. REFERENCE: TOPOGRAPHIC SURVEY
   TAX MAP 47 LOTS 1-3 & 1-4
   CONTINENTAL DRIVE
   EXETER, NEW HAMPSHIRE
2. FIELD SURVEY PERFORMED BY P.J.M. & L.P.S. DURING APRIL 2017 USING A TRIMBLE S7 TOTAL STATION WITH A TRIMBLE TSC3 DATA COLLECTOR AND A TRIMBLE DINI DIGITAL AUTO LEVEL. TRAVERSE ADJUSTMENT BASED ON LEAST SQUARE ANALYSIS.
3. JURISDICTIONAL WETLANDS DELINEATED BY GOVE ENVIRONMENTAL SERVICES, INC.)DURING APRIL 2017 IN ACCORDANCE WITH 1987 CORPS OF ENGINEERS WETLANDS DELINEATIONS MANUAL, TECHNICAL REPORT Y-87-1.
4. HORIZONTAL DATUM BASED ON REFERENCE PLAN 2.
5. VERTICAL DATUM IS BASED ON NGVD29 PER REFERENCE PLAN 2.
6. PROPER FIELD PROCEDURES WERE FOLLOWED IN ORDER TO GENERATE CONTOURS AT 2' INTERVALS. ANY MODIFICATION OF THIS INTERVAL WILL DIMINISH THE INTEGRITY OF THE DATA, AND DOUCET SURVEY, INC. WILL NOT BE RESPONSIBLE FOR ANY SUCH ALTERATION PERFORMED BY THE USER.
7. ALL LOT LINES SHOW HEREON ARE APPROXIMATED. THIS MAP WAS PREPARED FROM RECORD RESEARCH, OTHER MAPS, LIMITED FIELD MEASUREMENTS AND OTHER SOURCES. IT IS NOT TO BE CONSTRUED AS A PROPERTY / BOUNDARY SURVEY AND IS SUBJECT TO SUCH FACTS AS SAID SURVEYS MAY DISCLOSE.
8. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON OBSERVABLE PHYSICAL EVIDENCE AND PAINT MARKS FOUND ON-SITE. THE SITE WAS NOT MARKED FOR UNDERGROUND UTILITIES PRIOR TO THE FIELD SURVEY.
9. THE ACCURACY OF MEASURED UTILITY INVERTS AND PIPE SIZES/TYPES IS SUBJECT TO NUMEROUS FIELD CONDITIONS, INCLUDING; THE ABILITY TO MAKE VISUAL OBSERVATIONS, DIRECT ACCESS TO THE VARIOUS ELEMENTS, MANHOLE CONFIGURATION, ETC.
10. ALL ELECTRIC, GAS, TEL. WATER, SEWER AND DRAIN SERVICES ARE SHOWN IN SCHEMATIC FASHION, THEIR LOCATIONS ARE NOT PRECISE OR NECESSARILY ACCURATE. NO WORK WHATSOEVER SHALL BE UNDERTAKEN ON THIS SITE USING THIS PLAN TO LOCATE THE ABOVE SERVICES. CONSULT WITH THE PROPER AUTHORITIES CONCERNED WITH THE SUBJECT SERVICE LOCATIONS FOR INFORMATION REGARDING SUCH. CALL DIG-SAFE AT 1-888-DIG-SAFE.

REFERENCE PLANS:

1. "TOWN OF EXETER RIGHT OF WAY PLAN, GARRISON LANE, EXETER, NEW HAMPSHIRE", DATED MAY 1996, BY WALTER J. ZWEARCAN, L.L.S., R.C.R.D. PLAN D-25392.
2. "SUBDIVISION PLAN OF LAND FOR PAUL J. & ANNA GRACE HOLLOWAY, EPPING ROAD, EXETER, NEW HAMPSHIRE, COUNTY OF ROCKINGHAM", DATED 9/22/1999 AND REVISED 3/29/2000, BY CIVILWORKS R.C.R.D. PLAN 28075.



LOCATION MAP (n.t.s.)

LEGEND

	APPROXIMATE LOT LINE (PER REFERENCE PLAN #2)
	APPROXIMATE R.O.W. LINE (PER REFERENCE PLAN #1)
	APPROXIMATE ABUTTERS LOT LINE
	STONE WALL
OHW	OVERHEAD WIRE
SS	SEWER LINE
SD	DRAIN LINE
W	WATER LINE PER REF. PLAN 2
100	MAJOR CONTOUR LINE
98	MINOR CONTOUR LINE
	TREE LINE
	EDGE OF WETLAND
	RIP RAP
	UTILITY POLE
	BOUND FOUND
	DRILL HOLE FOUND
	IRON PIPE/ROD FOUND
	POST (WETLAND MARKER)
	FIRE HYDRANT
	WATER GATE VALVE
	UTILITY POLE & GUY WIRE
S	SEWER MANHOLE
	WETLAND AREA
	LEDGE OUTCROP
	BOULDER
F100	WETLAND FLAG LOCATION
TYP.	TYPICAL
GRAN.	GRANITE
BND. FND.	BOUND FOUND
D.H.F.	DRILL HOLE FOUND
EP	EDGE OF PAVEMENT

50 0 50 100

SCALE: 1 INCH = 50 FT.

TOPOGRAPHIC PLAN

FOR

TIGHE & BOND

OF

TAX MAP 47 LOT 1-3
AND A PORTION OF
TAX MAP 47, LOT 1-4

CONTINENTAL DRIVE
EXETER, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY

DRAWN BY:	M.T.L.	DATE:	APRIL 2017
CHECKED BY:	J.A.G.	DRAWING NO.:	4953A
JOB NO.:	4953	SHEET	1 OF 1

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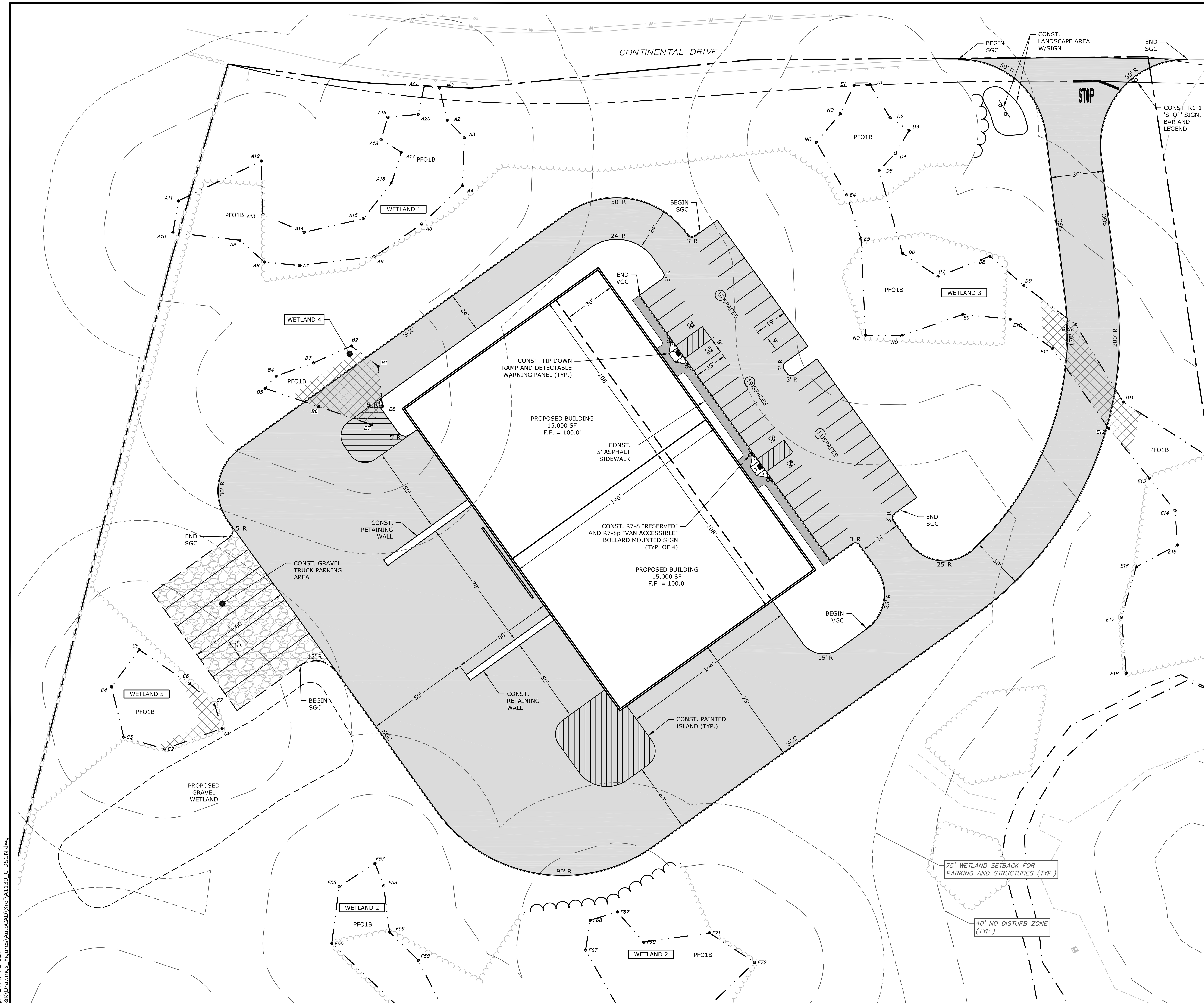
FILE NAME: T:\PROJECTS\4953 CDS\DWG\4953A.dwg LAYOUT NAME: TOPO PLAN (1) PLOTTED: Monday, April 24, 2017 - 2:23pm



SITE DATA:
LOCATION:
TAX MAP 47, LOTS 1-3 & 1-4
CONTINENTAL DRIVE
EXETER, NEW HAMPSHIRE

ZONING DISTRICT: C-3 EPPING ROAD HIGHWAY COMMERCIAL

DIMENSIONAL REQUIREMENTS:	REQUIRED	PROPOSED
MINIMUM LOT AREA:	40,000 SF	992,330 SF
MINIMUM LOT WIDTH:	175 FT	360 FT
MINIMUM LOT DEPTH:	225 FT	802 FT
MINIMUM SETBACKS:		
• FRONT:	50 FT	95 FT
• SIDE:	30 FT	151 FT
• REAR:	25 FT	561 FT
MAXIMUM BUILDING HEIGHT:	50 FT	<50 FT
MAXIMUM BUILDING COVERAGE:	40%	3.0%
MINIMUM OPEN SPACE:	20%	85.9%

PARKING REQUIREMENTS:	REQUIRED	PROPOSED
PARKING STALL LAYOUT:		
• STANDARD 90°	9' X 19'	9' X 19'
PARKING SPACE REQUIREMENTS:		
WAREHOUSE:		
1 / EMPLOYEE ON MAXIMUM SHIFT		
= 14 EMPLOYEES	14 SPACES	
OFFICE:		
1 / 250 SF		
= 6,480 SF / 250 SF/SPACE =	26 SPACES	
TOTAL REQUIRED PARKING:	40 SPACES	40 SPACES*

* - FOUR (4) ADA SPACES PROVIDED

SITE NOTES:

1. STRIPE PARKING AREAS AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, CROSS WALKS, ARROWS, LEGENDS AND CENTERLINES SHALL BE THERMOPLASTIC MATERIAL. THERMOPLASTIC MATERIAL SHALL MEET THE REQUIREMENTS OF AASHTO AASHTO M249. (ALL MARKINGS EXCEPT CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING WHITE TRAFFIC PAINT. CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING YELLOW TRAFFIC PAINT. ALL TRAFFIC PAINT SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F").
2. ALL PAVEMENT MARKINGS AND SIGNS TO CONFORM TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS, LATEST EDITIONS.
3. SEE DETAILS FOR PARKING STALL MARKINGS, ADA SYMBOLS, SIGNS AND SIGN POSTS.
4. CENTERLINES SHALL BE FOUR (4) INCH WIDE YELLOW LINES. STOP BARS SHALL BE EIGHTEEN (18) INCHES WIDE.
5. PAINTED ISLANDS SHALL BE FOUR (4) INCH WIDE DIAGONAL LINES AT 3'-0" O.C. BORDERED BY FOUR (4) INCH WIDE LINES.
6. THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED LAND SURVEYOR TO DETERMINE ALL LINES AND GRADES.
7. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAW CUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
8. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, TOWN OF EXETER CODES & SPECIFICATIONS.
9. COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAYS WITH THE TOWN OF EXETER.
10. CONTRACTOR TO SUBMIT AS-BUILT PLANS ON REPRODUCIBLE MYLARS AND IN DIGITAL FORMAT (.DWG FILE) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
11. SEE ARCHITECTURAL/BUILDING DRAWINGS FOR ALL CONCRETE PADS & SIDEWALKS ADJACENT TO BUILDING.
12. ALL WORK SHALL CONFORM TO THE TOWN OF EXETER DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS.
13. CONTRACTOR TO PROVIDE BACKFILL AND COMPACTION AT CURB LINE AFTER CONCRETE FORMS FOR SIDEWALKS AND PADS HAVE BEEN STRIPPED. COORDINATE WITH BUILDING CONTRACTOR.
14. ALL LIGHT POLE BASES NOT PROTECTED BY A RAISED CURB SHALL BE PAINTED YELLOW.
15. COORDINATE ALL WORK ADJACENT TO BUILDING WITH BUILDING CONTRACTOR.
16. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

LEGEND

PROPERTY LINE
PROPOSED R.O.W.
PROPOSED EDGE OF PAVEMENT
PROPOSED CURB
PROPOSED GRAVEL DRIVE
APPROXIMATE LIMIT OF PROPOSED WETLAND IMPACT AREA
PROPOSED BUILDING
PROPOSED PAVEMENT SECTION
PROPOSED GRAVEL PARKING AREA
PROPOSED ASPHALT SIDEWALK
PROPOSED BOLLARD
BLDG — BUILDING
TYP — TYPICAL
COORD — COORDINATE
30'R — PROPOSED CURB RADIUS
VGC — PROPOSED VERTICAL GRANITE CURB
SGC — PROPOSED SLOPED GRANITE CURB

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SCALE IN FEET
0 30' 60'
GRAPHIC SCALE

Proposed Building

3-5 Continental LLC

Exeter, New Hampshire

MARK	DATE	DESCRIPTION
A	8/23/2017	NHDES Wetlands Permit

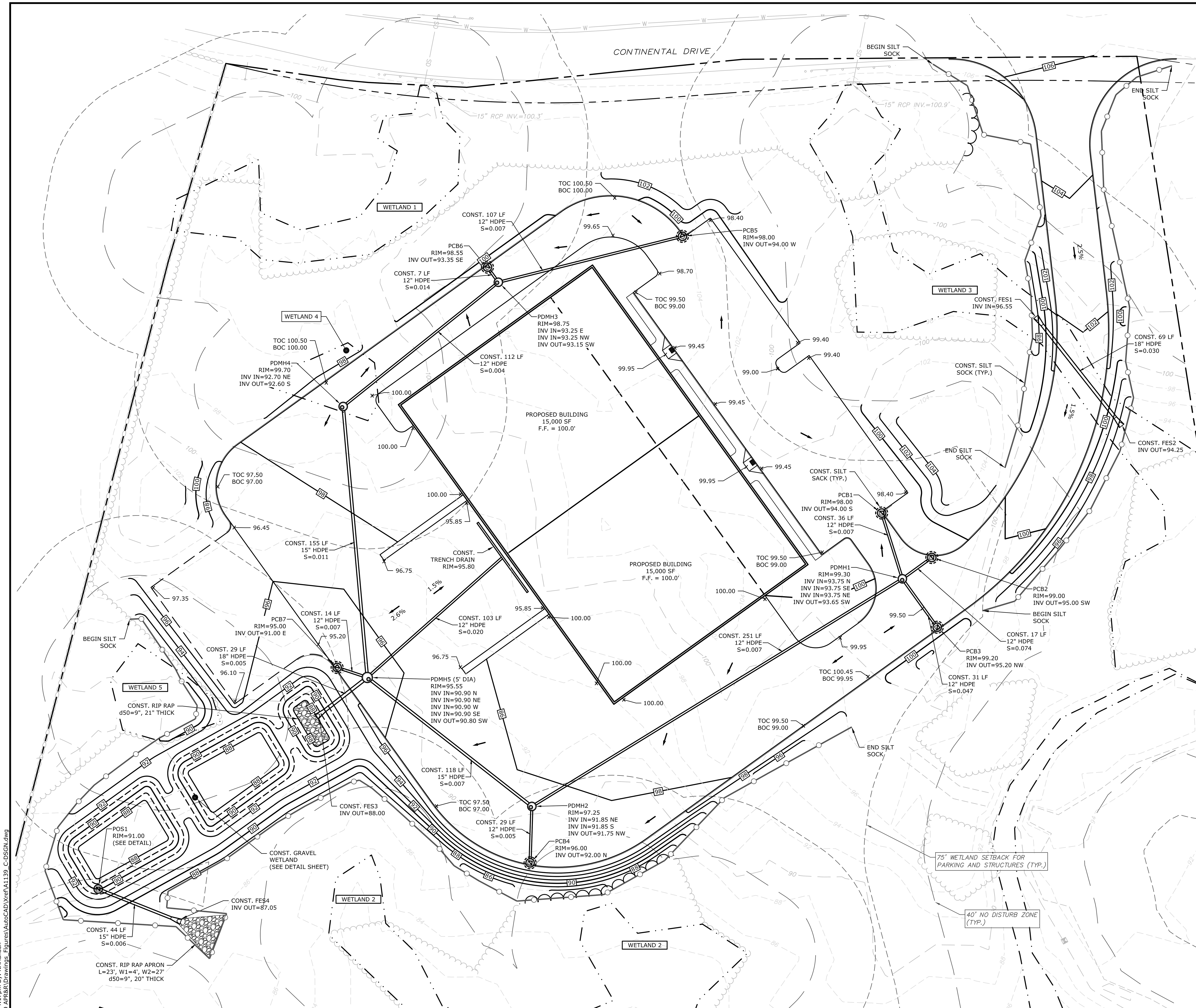
PROJECT NO:	A-1139
DATE:	August 23, 2017
FILE:	A1139_C-DSGN.dwg
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

SITE PLAN

SCALE: AS SHOWN

C-102

Last Saved: 8/23/2017
Plotted On:Aug 23, 2017-4:16pm By: NAHansen
Tighe & Bond:J:\A\A1139 APR&R\Drawings_Figures\AutoCAD\Xref\A1139_C-DSGN.dwg



GRADING AND DRAINAGE NOTES:

1. 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. ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR EQUAL), UNLESS OTHERWISE SPECIFIED.
3. SEE UTILITY PLAN FOR ALL SITE UTILITY INFORMATION.
4. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
5. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS AND LOADING DOCK AREAS ADJACENT TO THE BUILDING.
6. 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 STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NHDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.
10. ALL PROPOSED CATCH BASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4' SUMPS.
11. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND TOWN OF EXETER DEPARTMENT OF PUBLIC WORKS AND CONSTRUCTION SPECIFICATIONS, LATEST REVISIONS.
12. CONTRACTOR TO SUBMIT AS-BUILT PLANS ON REPRODUCIBLE MYLARS AND IN DIGITAL FORMAT (.DWG FILE) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
13. SEE EXISTING CONDITIONS PLAN FOR BENCH MARK INFORMATION.

EROSION CONTROL NOTES:

1. INSTALL EROSION CONTROL BARRIERS AS SHOWN AS FIRST ORDER OF WORK.
2. SEE GENERAL EROSION CONTROL NOTES ON "EROSION CONTROL NOTES & DETAILS SHEET".
3. PROVIDE INLET PROTECTION AROUND ALL EXISTING AND PROPOSED CATCH BASIN INLETS WITHIN THE WORK LIMITS. MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
5. INSPECT INLET PROTECTION AND PERIMETER EROSION CONTROL MEASURES DAILY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
6. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED, FERTILIZER AND MULCH.
7. CONSTRUCT EROSION CONTROL BLANKET ON ALL SLOPES STEEPER THAN 3:1.
8. PRIOR TO ANY WORK OR SOIL DISTURBANCE COMMENCING ON THE SUBJECT PROPERTY, INCLUDING MOVING OF EARTH, THE APPLICANT SHALL INSTALL ALL EROSION AND SILTATION MITIGATION AND CONTROL MEASURES AS REQUIRED BY STATE AND LOCAL PERMITS AND APPROVALS.
9. CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, SPRINKLING WATER ON UNSTABLE SOILS SUBJECT TO ARID CONDITIONS.
10. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
11. ALL CATCH BASIN SUMPS AND PIPING SHALL BE THOROUGHLY CLEANED TO REMOVE ALL SEDIMENT AND DEBRIS AFTER THE PROJECT HAS BEEN FULLY PAVED.
12. TEMPORARY SOIL STOCKPILE SHALL BE SURROUNDED BY SILT FENCE AND SHALL BE STABILIZED BY TEMPORARY EROSION CONTROL SEEDING. STOCKPILE AREAS TO BE LOCATED AS FAR AS POSSIBLE FROM THE DELINEATED EDGE OF WETLANDS.
13. SAFETY FENCING SHALL BE PROVIDED AROUND STOCKPILES OVER 10 FT.
14. CONCRETE TRUCKS WILL BE REQUIRED TO WASH OUT (IF NECESSARY) SHOOTS ONLY WITHIN AREAS WHERE CONCRETE HAS BEEN PLACED. NO OTHER WASH OUT WILL BE ALLOWED.

LEGEND

80	PROPOSED MAJOR CONTOUR LINE
82	PROPOSED MINOR CONTOUR LINE
	PROPOSED DRAIN LINE (TYP)
	PROPOSED SILT SOCK
	INLET PROTECTION SILT SACK
	PROPOSED CATCHBASIN
	PROPOSED DRAIN MANHOLE
	PROPOSED 5' DIA DRAIN MANHOLE
BLDG	BUILDING
TYP	TYPICAL
COORD	COORDINATE

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SCALE IN FEET
0 30' 60'
GRAPHIC SCALE

Proposed Building

3-5 Continental LLC

Exeter, New Hampshire

MARK	DATE	DESCRIPTION
A	8/23/2017	NHDES Wetlands Permit

PROJECT NO:	A-1139
DATE:	August 23, 2017
FILE: A1139_C-DSGN.dwg	
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

GRADING, DRAINAGE & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103

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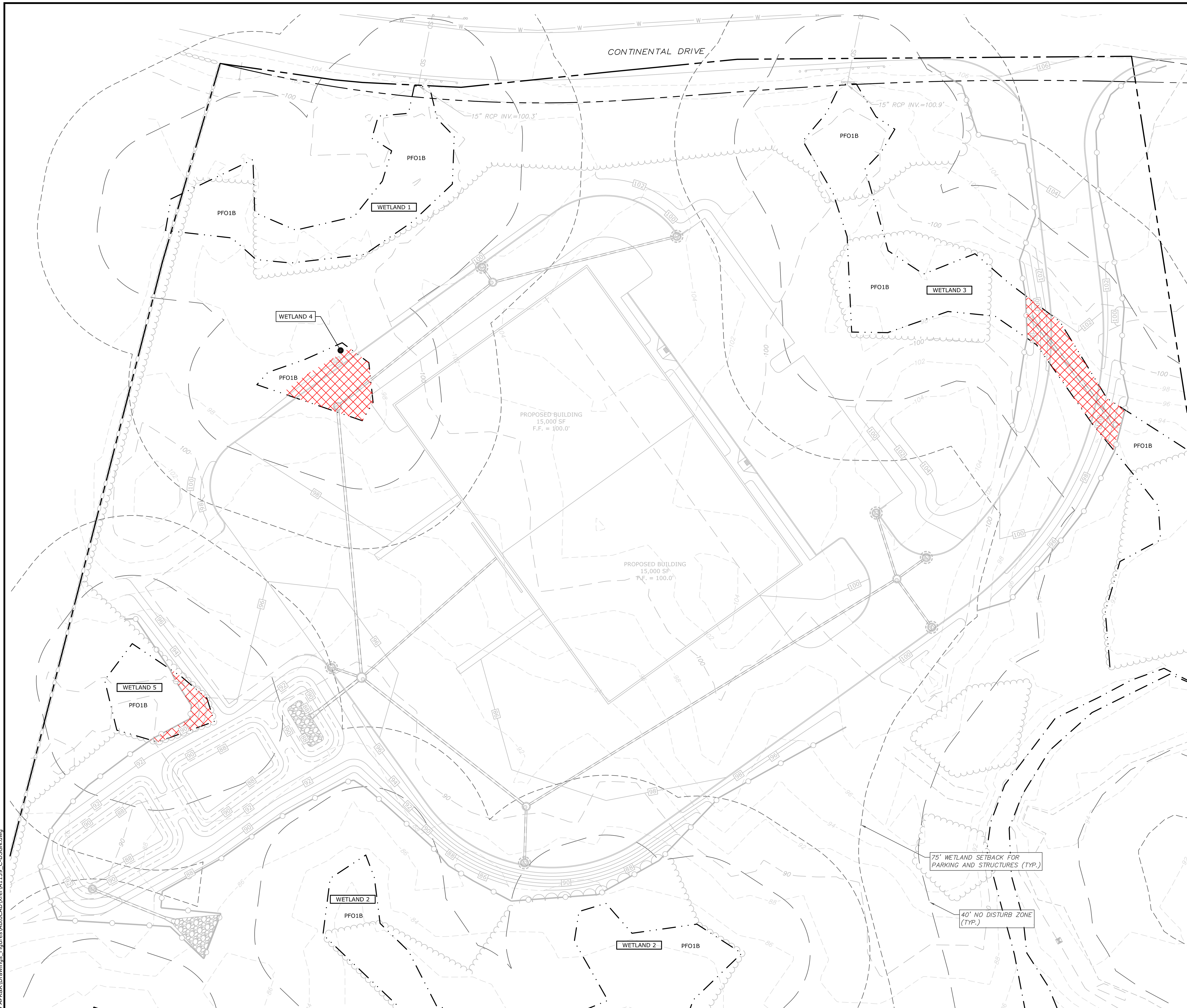

LEGEND

80	PROPOSED MAJOR CONTOUR LINE
82	PROPOSED MINOR CONTOUR LINE
	PROPOSED DRAIN LINE (TYP)
	PROPOSED SILT SOCK
	INLET PROTECTION SILT SACK
	PROPOSED CATCHBASIN
	PROPOSED DRAIN MANHOLE
	PROPOSED 5' DIA DRAIN MANHOLE
BLDG	BUILDING
TYP	TYPICAL
COORD	COORDINATE

Wetland	Wetland Impact
1	0
2	0
3	1535
4	1255
5	420
Total	3210

SCALE IN FEET
0 30' 60'
GRAPHIC SCALE

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Proposed Building

3-5 Continental LLC

Exeter, New Hampshire

MARK	DATE	DESCRIPTION
A	8/23/2017	NHDES Wetlands Permit

PROJECT NO: A-1139
DATE: August 23, 2017
FILE: A1139_C-DSGN.dwg
DRAWN BY: NAH
CHECKED: PMC
APPROVED: BLM

WETLAND IMPACT PLAN

SCALE: AS SHOWN

C-103.1

Last Saved: 8/23/2017
Plotted On:Aug 23, 2017-4:18pm By: NAHansen
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GENERAL PROJECT INFORMATION

PROJECT OWNER: MICHAEL LAMPERT
156 EPPING ROAD
EXETER, NH 03833

PROJECT NAME: PROPOSED BUILDING

PROJECT ADDRESS: 3-5 CONTINENTAL DRIVE 42°-59'-36"N
EXETER, NH, 03833 70°-58'-31"W

PROJECT MAP / LOT: MAP 47 / LOTS 1-3 & 1-4

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF A 30,000 SF BUILDING WITH ASSOCIATED PARKING, DRAINAGE AND UTILITIES. THE WORK IS ANTICIPATED TO START IN SPRING 2018, AND BE COMPLETED BY WINTER 2018.

DISTURBED AREA

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 4.3 ACRES.

SOIL CHARACTERISTICS

BASED ON THE USCS SITE SPECIFIC SOIL SURVEY CONDUCTED BY GOVE ENVIRONMENTAL SERVICES, ON AUGUST 1, 2017 THE SOILS ON SITE CONSIST OF POORLY DRAIN DRAINED SOILS WITH HYDROLOGIC SOIL GROUP RATINGS OF C AND D.

NAME OF RECEIVING WATERS

THE STORMWATER RUNOFF FROM THE SITE WILL BE DISCHARGED VIA OVERLAND FLOW TO AN UNNAMED WETLAND AND ULTIMATELY FLOWS TO THE LITTLE RIVER.

CONSTRUCTION SEQUENCE OF MAJOR ACTIVITIES:

1. CUT AND CLEAR TREES.
2. CONSTRUCT TEMPORARY AND PERMANENT SEDIMENT, EROSION AND DETENTION CONTROL FACILITIES. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS THAT WILL INFLUENCE STORMWATER RUNOFF SUCH AS:
   - NEW CONSTRUCTION
   - NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS
   - CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
3. ALL PERMANENT DITCHES, SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS TO BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPS PRIOR TO DIRECTING RUNOFF TO THEM.
4. CLEAR AND DISPOSE OF DEBRIS.
5. CONSTRUCT TEMPORARY CULVERTS AND DIVERSION CHANNELS AS REQUIRED.
6. GRADE AND GRAVEL ROADWAYS AND PARKING AREAS - ALL ROADS AND PARKING AREA SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
7. BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
8. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, PERIMETER EROSION CONTROL MEASURES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
9. FINISH PAVING ALL ROADWAYS AND PARKING LOTS.
10. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
11. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
12. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

SPECIAL CONSTRUCTION NOTES:

1. THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE.
2. THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

EROSION CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL VOLUME 3: EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" PREPARED BY THE NHDES.
2. PRIOR TO ANY WORK OR SOIL DISTURBANCE, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR EROSION CONTROL MEASURES AS REQUIRED IN THE PROJECT MANUAL.
3. CONTRACTOR SHALL INSTALL TEMPORARY EROSION CONTROL BARRIERS, INCLUDING HAY BALE, SILT FENCES, MULCH BERMS, SILT SACKS AND SILT SOCKS AS SHOWN IN THESE DRAWINGS AS THE FIRST ORDER OF WORK.
4. SILT SACK INLET PROTECTION SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASIN INLETS WITHIN THE WORK LIMITS AND BE 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 NON-PAVED AREAS HAVE BEEN STABILIZED.
6. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
7. ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED AND FERTILIZER.
8. INSPECT ALL INLET PROTECTION AND PERIMETER CONTROLS WEEKLY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
9. CONSTRUCT EROSION CONTROL BLANKETS ON ALL SLOPES STEEPER THAN 3:1.

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;
   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. WINTER STABILIZATION PRACTICES:
   A. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS;
   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 NOVEMBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT;
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. 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.
5. 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 NOVEMBER 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 INCLUDING BUT NOT LIMITED TO CONTINENTAL DRIVE.

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 ENTRANCE(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. VEGETATIVE PRACTICE:
   A. FOR 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 FOLLOWING ARE THE ONLY NON-STORMWATER DISCHARGES ALLOWED. ALL OTHER NON-STORMWATER DISCHARGES ARE PROHIBITED ON SITE:
   A. THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FACILITY;
   B. IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER;
   C. CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS;
   D. INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED.

ALLOWABLE NON-STORMWATER DISCHARGES:

1. FIRE-FIGHTING ACTIVITIES;
2. FIRE HYDRANT FLUSHING;
3. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED;
4. WATER USED TO CONTROL DUST;
5. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING;
6. ROUTINE EXTERNAL BUILDING WASH DOWN WHERE DETERGENTS ARE NOT USED;
7. PAVEMENT WASH WATERS WHERE DETERGENTS ARE NOT USED;
8. UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION;
9. UNCONTAMINATED GROUND WATER OR SPRING WATER;
10. FOUNDATION OR FOOTING DRAINS WHICH ARE UNCONTAMINATED;
11. UNCONTAMINATED EXCAVATION DEWATERING;
12. 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:

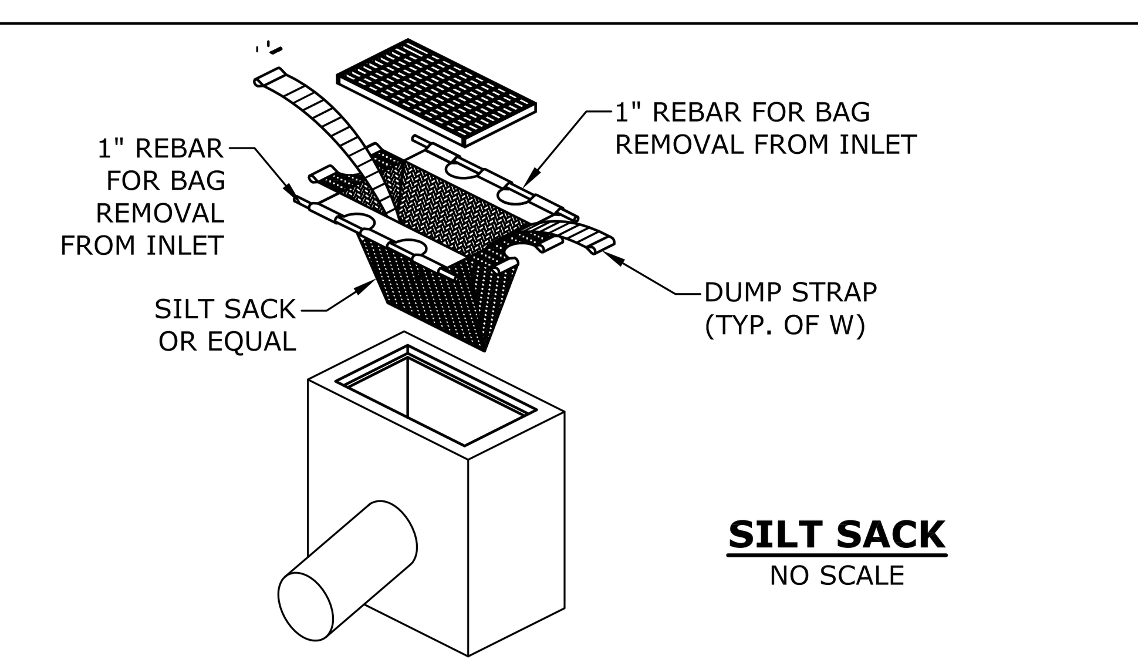
1. CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY LOCAL, STATE AND FEDERAL AGENCIES. AT A MINIMUM, CONTRACTOR SHALL FOLLOW THE BEST MANAGEMENT SPILL PREVENTION PRACTICES OUTLINED BELOW.
2. THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO REDUCE THE RISK 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 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;
      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.
   B. HAZARDOUS PRODUCTS - THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
      g. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE;
      h. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION;
      i. 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.
      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.
      c. 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 EQUIPTMENT/VEHICAL 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.

EROSION CONTROL OBSERVATIONS AND MAINTENANCE PRACTICES

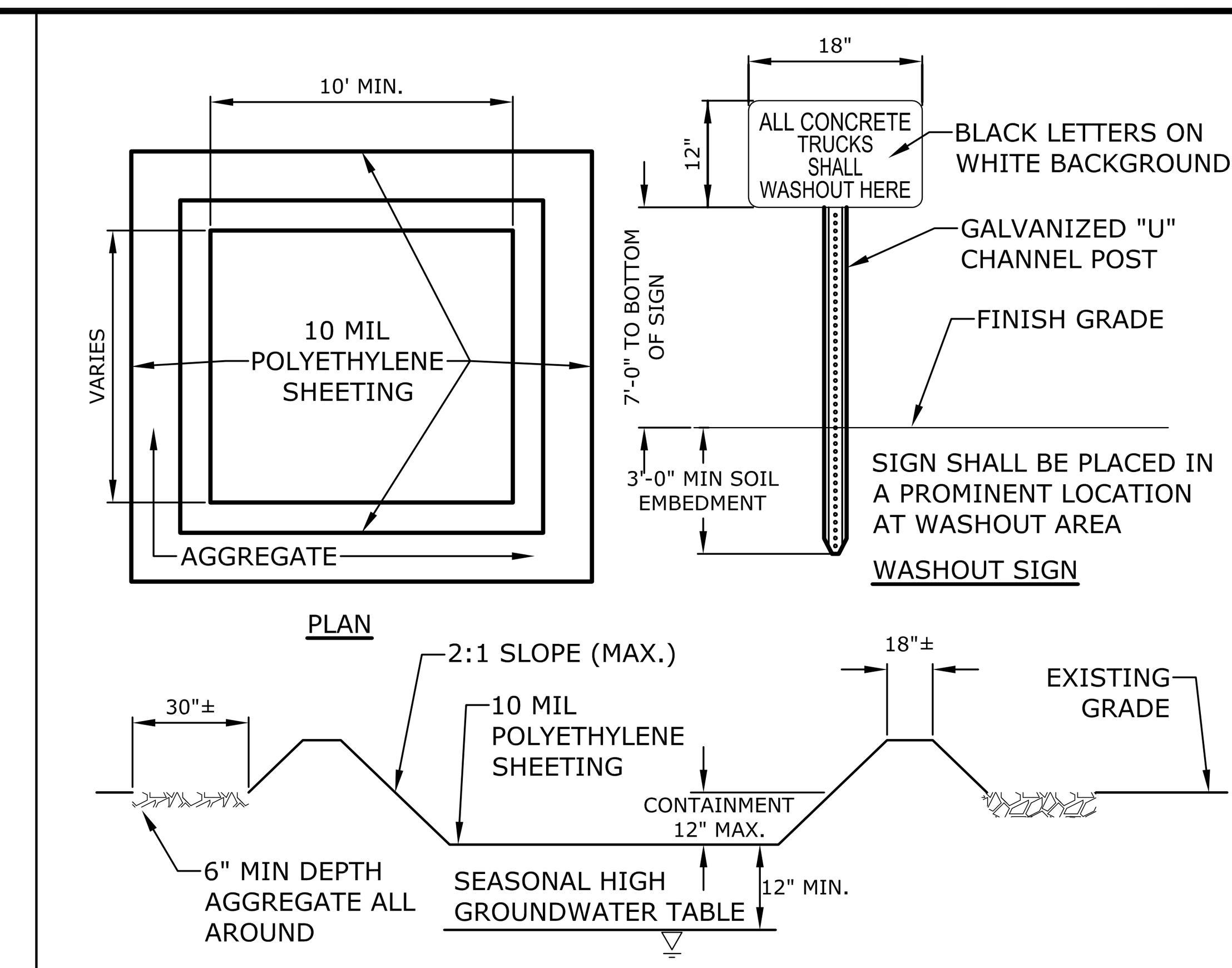
THIS PROJECT EXCEED(S) ONE (1) ACRE OF DISTURBANCE AND THUS REQUIRE(S) A SWPPP. THE SWPPP SHALL BE PREPARED BY THE (CONTRACTOR). THE CONTRACTOR SHALL BE FAMILIAR WITH THE SWPPP AND KEEP AN UPDATED COPY OF THE SWPPP ONSITE AT ALL TIMES.

THE FOLLOWING REPRESENTS THE GENERAL OBSERVATION AND REPORTING PRACTICES THAT SHALL BE FOLLOWED AS PART OF THIS PROJECT:

1. OBSERVATIONS OF THE PROJECT FOR COMPLIANCE WITH THE SWPPP SHALL BE MADE BY THE (CONTRACTOR) AT LEAST ONCE A WEEK OR WITHIN 24 HOURS OF A STORM 0.25 INCHES OR GREATER;
2. AN OBSERVATION REPORT SHALL BE MADE AFTER EACH OBSERVATION AND DISTRIBUTED TO THE ENGINEER, THE OWNER, AND THE CONTRACTOR;
3. A REPRESENTATIVE OF THE SITE CONTRACTOR, SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR ACTIVITIES;
4. IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.



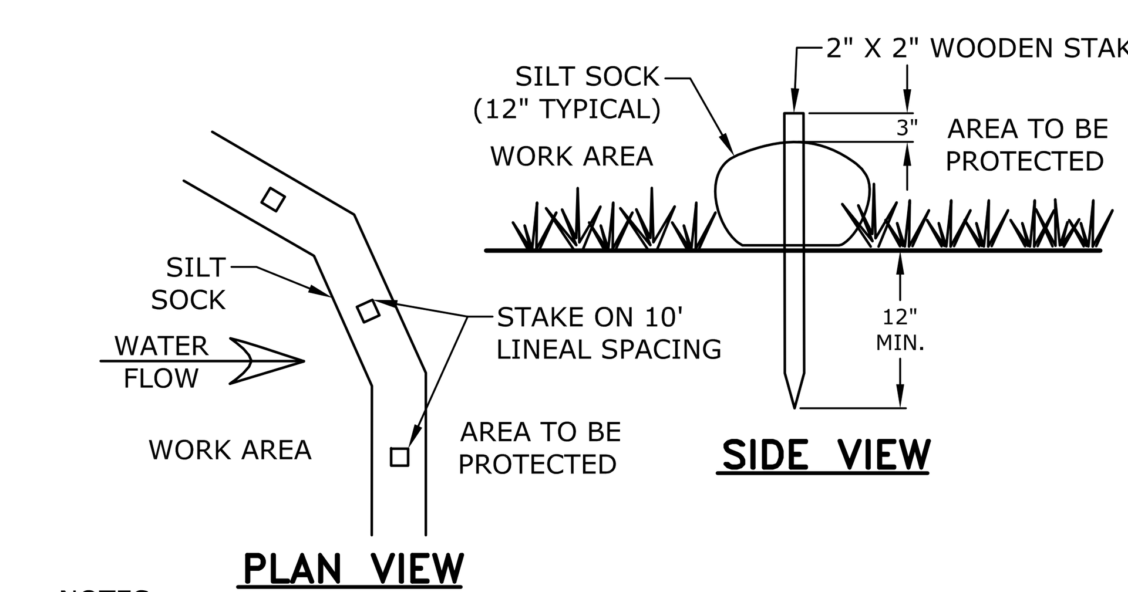
SILT SACK
NO SCALE



NOTES:

1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

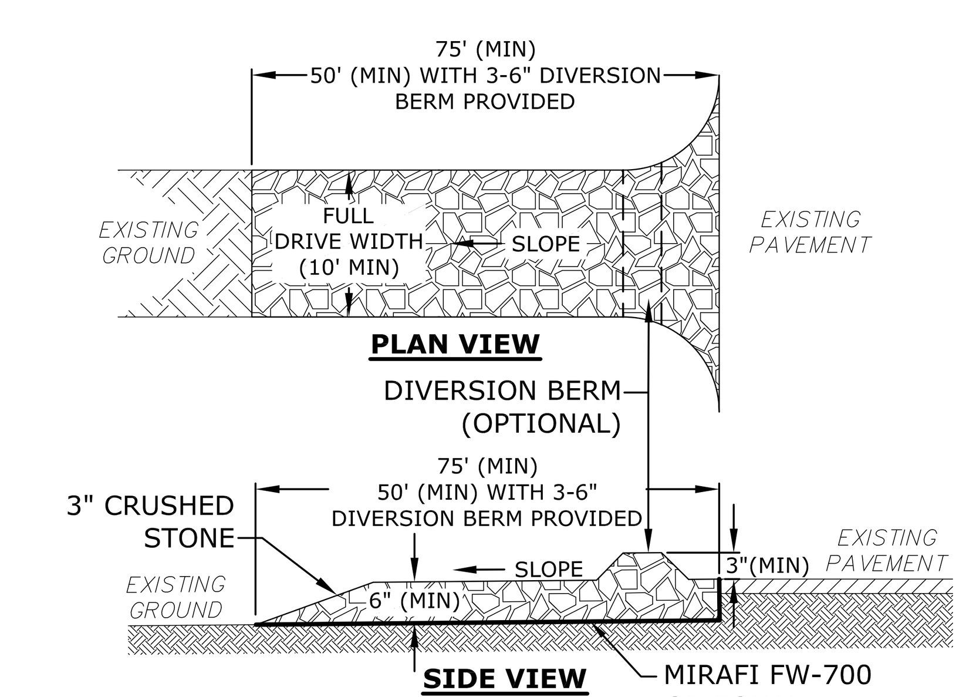
CONCRETE WASHOUT AREA
NO SCALE



NOTES:

1. SILT SOCK SHALL BE SILT SOXX BY FILTREXX OR APPROVED EQUAL

SILT SOCK
NO SCALE



NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT FROM THE SITE. WHEN WASHING IS REQUIRED, IT SHALL BE DONE SO RUNOFF DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS

STABILIZED CONSTRUCTION ENTRANCE
NO SCALE

Tighe&Bond
www.tighebond.com

Proposed Building

3-5 Continental LLC

Exeter, New Hampshire

MARK	DATE	DESCRIPTION
A	8/23/2017	NHDES Wetlands Permit

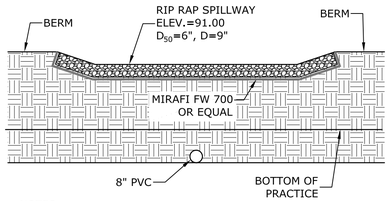
PROJECT NO:	A-1139
DATE:	August 23, 2017
FILE: A1139_C-DTLS.dwg	
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

EROSION CONTROL NOTES AND DETAILS SHEET

SCALE: AS SHOWN

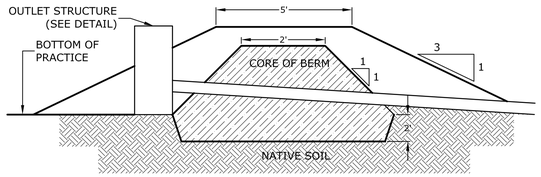
C-501

Last Saved: 8/23/2017
Plotted On:Aug 23, 2017-4:07pm By: NAHansen
Tighe & Bond:J:\A\A1139 APRAR\Drawings_Figures\AutoCAD\Xref\A1139_C-DTLS.dwg



NOTES:
1. SEE GRADING & DRAINAGE PLAN FOR LOCATION AND DIMENSIONS.

RIP RAP SPILLWAY
NO SCALE

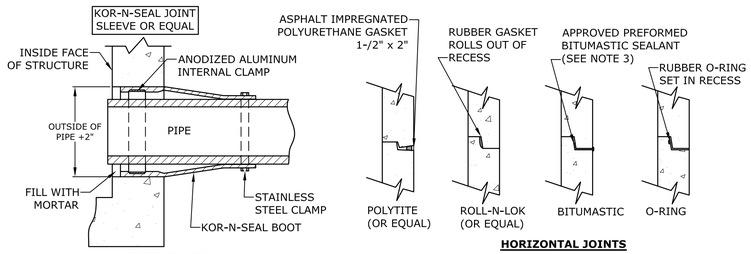


NOTES:
1. CORE MATERIAL SHALL MEET USGS CLASSIFICATION SC, SM, CL OR ML AND HAVE A MAXIMUM PARTICLE SIZE OF 3" AND A PERMEABILITY LESS THAN 0.000005 CM/S, AND MEET THE FOLLOWING GRADATION:

SIEVE SIZE	PERCENT FINER BY WEIGHT
3 INCH	100
# 200	50 -100.

2. PIPE SHALL BE FULLY EMBEDDED IN CORE TO ELIMINATE SEEPAGE

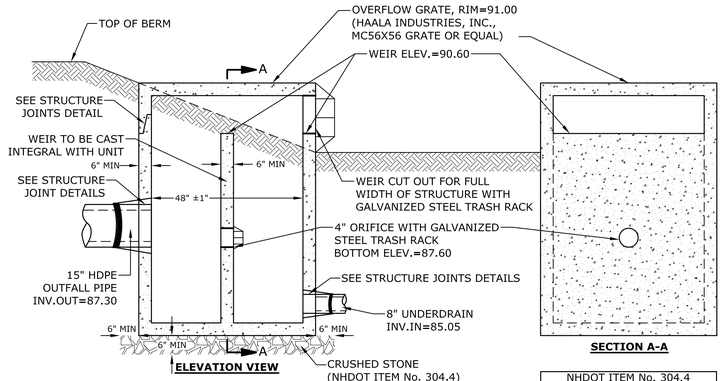
CLAY CORE BERM
NO SCALE



PIPE JOINTS | **HORIZONTAL JOINTS**

NOTES:
1. HORIZONTAL JOINTS BETWEEN THE SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE PER CITY/TOWN OF ??? DPW STANDARD AND SHALL BE SEALED FOR WATERTIGHTNESS USING A DOUBLE ROW ELASTOMERIC OR MASTIC-LIKE GASKET.
2. PIPE TO MANHOLE JOINTS SHALL BE PER CITY/TOWN OF ???? 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

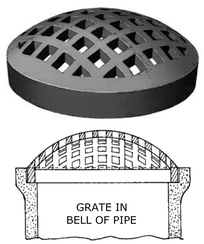


ELEVATION VIEW | **SECTION A-A**

NOTES:
1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE (TYPE II CEMENT).
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER OF THE THIRDE WALL.
3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
5. ALL JOINTS ON THE STRUCTURE AND PIPING SHALL BE WATERTIGHT.

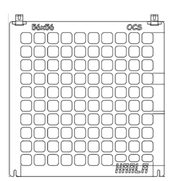
NHDOT ITEM No. 304.4 (CRUSHED STONE - FINE)	
SIEVE SIZE	% PASSING
2"	100
1-1/2"	85-100
3/4"	45-75
#4	10-45
#200	0-5

OUTLET STRUCTURE
NO SCALE



NOTES:
1. 8" GRAVEL WETLAND GRATES SHALL NEENAH R-4350-1 GRATE OR EQUAL.
2. 24" GRAVEL WETLAND GRATES SHALL NEENAH R-4350-E GRATE OR EQUAL.

NEENAH R-4350 SERIES GRATE
NO SCALE



NOTES:
1. OUTLET STRUCTURE GRATE SHALL BE HAALA INDUSTRIES, INC. MC56X56 TOP MOUNT GRATE OR EQUAL.
2. GRATE TO BE SECURED TO CONCRETE STRUCTURE.

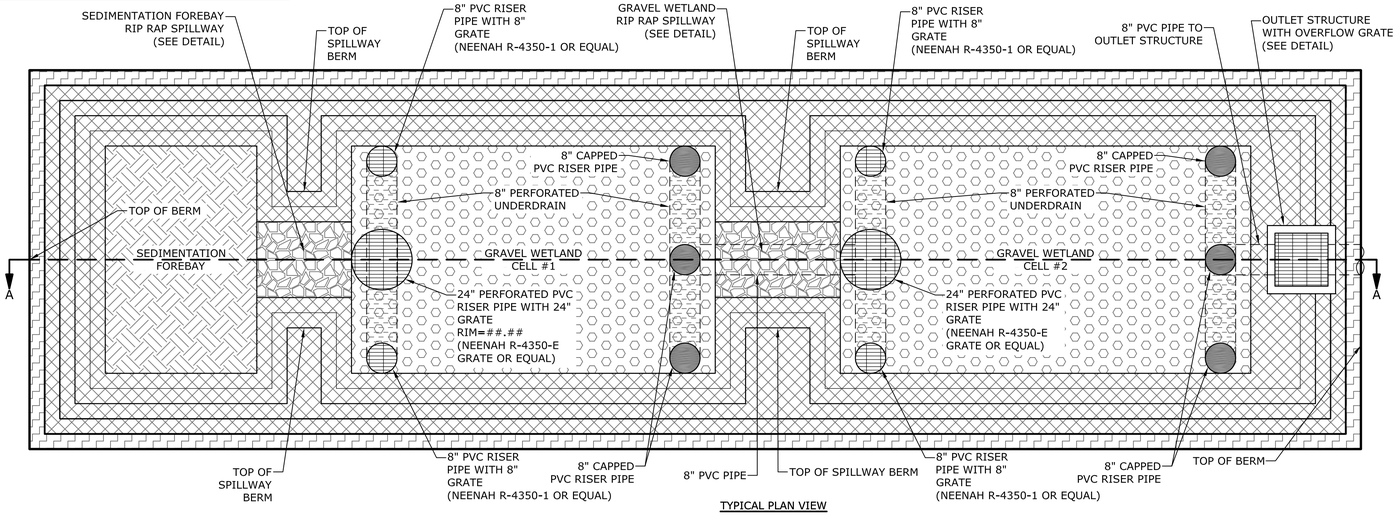
HAALA MC56X56 GRATE
NO SCALE

GRAVEL WETLAND INSPECTION / MAINTENANCE REQUIREMENTS

INSPECTION / MAINTENANCE	FREQUENCY	ACTION
MONITOR TO ENSURE THAT GRAVEL WETLAND FUNCTIONS EFFECTIVELY AFTER STORMS	FOUR (4) TIMES ANNUALLY (QUARTERLY) AND AFTER ANY RAINFALL EVENT EXCEEDING 2.5" IN A 24-HR PERIOD	- TRASH AND DEBRIS TO BE REMOVED - ANY REQUIRED MAINTENANCE SHALL BE ADDRESSED - INSPECT SOIL AND REPAIR ERODED AREAS, ESPECIALLY ON SLOPES. - CHECK INLETS, OUTLETS, AND OVERFLOW SPILLWAY FOR BLOCKAGE, STRUCTURAL INTEGRITY AND EVIDENCE OF EROSION.
INSPECT VEGETATION	ANNUALLY	- INSPECT THE CONDITION OF ALL GRAVEL WETLAND VEGETATION - PRUNE BACK OVERGROWTH - REPLACE DEAD VEGETATION - REMOVE ANY INVASIVE SPECIES - COORDINATE WITH UNH STORMWATER CENTER FOR FURTHER VEGETATION MANAGEMENT GUIDELINES
INSPECT DRAWDOWN TIME - THE SYSTEM SHALL DRAWDOWN WITHIN 48-HOURS FOLLOWING A RAINFALL EVENT.	ANNUALLY	- HIRE QUALIFIED PROFESSIONAL TO ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE THE FILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER.

GRAVEL WETLAND PLANTING PLAN

SPECIES	PLANT SIZE	QUANTITY/SPACING
NEW ENGLAND EROSION CONTROL/RESTORATION MIX OR EQUIVALENT		35LB/ACRE
"RED OSIER DOGWOOD" CORNUS SERICEA	2'-3'	8'-10' ON CENTER
"SILKY DOGWOOD" CORNUS AMMOMUM AND "HIGHBUSH BLUEBERRY" VACCINUM CORYBOSSUSUM	2'-3'	8'-10' ON CENTER



TYPICAL PLAN VIEW

SEE GRADING & DRAINAGE PLAN(S) FOR GRAVEL WETLAND LAYOUT

TYPICAL SECTION A-A VIEW

NOTES:
1. WETLAND SOIL SHALL BE A SANDY CLAY LOAM WITH A HYDRAULIC CONDUCTIVITY OF 0.1-0.01 FT/DAY. ORGANIC CONTENT SHALL BE GREATER THAN 15% BY VOLUME. CLAY CONTENT SHALL BE LESS THAN 15% BY VOLUME.
2. INFILTRATION TESTING OF THE NATIVE SOILS AT THE SUBGRADE OF THE PROPOSED GRAVEL WETLAND SHALL OCCUR PRIOR TO THE INSTALLATION OF THE GRAVEL WETLAND AND SHALL BE COORDINATED WITH THE ENGINEER. IF THE NATIVE SOILS EXCEED A PERMEABILITY RATE OF 0.03 FT/DAY THE SOILS SHOULD AMENDED OR LINER ADDED AS DETERMINED BY THE ENGINEER.
3. PERFORATED PVC RISERS SHALL HAVE VERTICAL SLOTS CUT INTO PVC RISERS ABOVE GRADE MEASURING 3"x1/8".

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

AASHTO #8 STONE (#8 to 3/8")	
SIEVE SIZE	% PASSING
1/2"	100
3/8"	85-100
#4	10-30
#8	0-10
#16	0-5

GRAVEL WETLAND
NO SCALE

Tighe&Bond
www.tighebond.com

Proposed Building

3-5 Continental LLC

Exeter, New Hampshire

MARK	DATE	DESCRIPTION
A	8/23/2017	NHDES Wetlands Permit

PROJECT NO:	A-1139
DATE:	August 23, 2017
FILE:	A1139_C-DTLS.dwg
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

DETAILS SHEET

SCALE: AS SHOWN

C-505

Last Saved: 8/23/2017
Printed: 8/23/2017 4:08pm By: NAHansen
Tighe & Bond:J:\AA\1139 APR&R\Drawings_Figures\AutoCAD\Xref\A1139_C-DTLS.dwg

Draft Minutes

Conservation Commission

8/8/17

Call to Order

1. Introduction of Members Present

Present are David O'Hearn, Andrew Koff, Bill Campbell, Dave Short, Kristen Murphy, Virginia Raub, and Alison Eberhardt. The meeting was called to order at 7:02 by Bill Campbell.

2. Public Comment

There were no public comments.

Acton Items

1. Minimum Impact Expedited Permit Request for Exeter River Mobile Home Park Cooperative to fill 1,637 SF of wetlands resulting from excavation activity for a grandfathered gravel pit. Tax Map 95/Lot 64 (Paige Libby, Jones and Beach).

This was not covered during this meeting.

2. Committee Reports

a. Property Management

i. Raynes Barn Assessment, 2018 CIP and Budget Planning

Ms. Murphy passed out copies of the town budget, and described the differences between this year and last year on the report. This year, building maintenance was moved to Kevin Smart's budget because it is a town building. And, the electricity for the Raynes barn was moved outside of the conservation commission's budget. Mr. Campbell proposed a line item in the regular budget for the maintenance of the Raynes barn for minor repairs, as well as that electricity should be moved to the electricity for other buildings category in the town budget. The board discussed what the amount for maintenance should be, and they had asked for it to be 1,000 dollars instead of 500 dollars.

Ms. Murphy pointed out that the item contract services was in place last year to cover invasive plant treatment, and has since been tabled. She was not sure about the additional contracts. She also pointed out that the intern budget has been kept the same, and that they are ¾ of the way spent through the recording secretary's budget. This is because the length of the meetings are hard to predict.

Mr. Campbell asked about the prices of the camper. Mr. O'Hearn said the price was 400 dollars. It was asked if the commission should add a separate line item for that and reduce community services. Mr. O'Hearn said he would like to approach organizations in town and ask for donations. Mr. Koff asked if money could be added to the budget, but Ms. Murphy said it needed to be level. Mr. Campbell pointed out that the commission was about 760 dollars under, and that the budget review committee likely would not want to raise it.

Mr. Short asked about the Raynes field mowing. The commission discussed potentially not mowing for a year or mowing halfway to cut the cost of that down. They may want to invest more money for Raynes landscaping next year. Ms. Raub asked if the final budget would be 9,558 dollars instead of what the commission was given this year. Ms. Murphy said that they are submitting a level funded budget, plus an additional 500 dollars for maintenance at the Raynes barn.

MOTION: Ms. Raub moved to approve the preliminary budget as presented. Mr. O'Hearn seconded the motion. The motion passed unanimously.

The commission then moved onto the 2018 CIP. They are hoping for an LCHIP grant, and want to put in a warrant article to match that from the town. They will apply for this in 2019. Ballpark numbers from engineering reports and other estimates come in at around 185,000 dollars, where an earlier estimate was between 170,000-200,000 dollars. Mr. Campbell asked if the commission would like the propose a warrant article instead of doing things one at a time. Ms. Eberhardt asked what the cap of the LCHIP funds were. Ms. Murphy said last time they received 205,000 dollars, and there is a 1:1 match requirement. The board discussed that it would go on the warrant in 2019, and would be on the CIP in 2018 because it would be too quick to get an LCHIP grant this year.

Mr. Koff asked if there was a downside to the warrant article. Ms. Eberhardt said she would like to launch an outreach campaign so that people understand the value of the Raynes property. Mr. Short proposed getting hard numbers so that they would have more support. Ms. Murphy said that by next year they should have the validated numbers. It was discussed that they would have to pay for some number estimating, and that for this year a sum could be used.

Mr. O'Hearn said that it would have to go to bid, Mr. Short pointed out that they would have to provide bid documents. Mr. Short also wanted to qualify some firms and accept proposals from them by getting recommendations from other towns and farmers of companies. Mr. Campbell said that Emmanuel Engineering provided an estimate for engineering support in the amount of 6,000 dollars, and an allowance of 4,000 was recommended. He agreed it would have to go to bid if they were awarded money, and said that in the meantime they could get firmer numbers but for now could go with 180,000-190,000 dollars.

ii. Elliott Property Management Plan

The board was presented with a report from Megan Henderson on the Elliot property. Ms. Murphy said that she had a contract through NRCS to fund her efforts, and that Ms. Henderson developed a timber management plan about timber stands and identified potential harvest operations. She submitted a proposal for a cost estimate on timber stand improvements, which was 16,385 dollars. There was a map showing two different stands, with 19 acres in one and 10 acres in the other. The commission this year cannot do any management financially. It is an option to do this in the future, but is not required.

Ms. Raub asked if it should be on the list of invasive areas to treat. Ms. Murphy replied that they had been doing so with spot treatments. Mr. Campbell said that in the report, the value of the wood is provided and asked if that is what they could get from logging. He said if they spent 18,000 they would need to recover costs. Mr. O'Hearn said it would just be before labor costs and is just what the wood is worth. If they went with the proposal, it would be 14,500 dollars for the 29 acres. Mr. Campbell agreed

that it wouldn't cover the costs, and said that it was a great report that at least identified the trees there.

iii. Update from Ad-hoc Invasive Plant Committee

Mr. Campbell said that during the last meeting they had appointed an ad-hoc committee dedicated to controlling invasive species. Mr. Carlos Guindon is the chair of the committee, but has been out of town recently. The committee is currently spraying for invasive species at the Elliot property.

iv. Update on Scout Kiosk Projects

The consensus of the members of the commission was that the scout kiosk projects look good. Mr. Koff said that there are 2 different kiosks with distinctive styles, and that the signs and maps turned out well with easy to read text. Mr. Campbell commented on the poison ivy near the signs, to which Ms. Raub replied that they had been cutting it away. The commission talked about a possible sign about overnight, and that the goal was to clean up the area. Ms. Raub said that they were looking for someone with a chainsaw to make slices on the logs on the paths.

b. Trails

This was not covered during this meeting.

c. Outreach

i. 2017 Raynes Farm Pumpkin Toss Planning

The commission discussed the planning of the 107 Raynes Farm Pumpkin Toss. Mr. Campbell said that they need to be careful about the farm's usage, because there is a land use policy about Exeter land use, a project agreement with John Raynes and the town, and an LCHIP from 2002. He brought up that it would be a good idea to have a separate committee commit to the pumpkin toss.

Ms. Raub had prepared a list of additional costs including a police detail, vans for shuttle transportation, pumpkins, and porta-pottys. She asked how the commission wanted to fund this event. Mr. Campbell said that in December's vote, they had decided to do the pumpkin toss and need to see if an event like it is permitted to be done. He echoed Ms. Raub's concerns over funding sources. Ms. Raub brought up charging vendor fees and soliciting sponsors, as well as a suggested entrance donation.

Mr. O'Hearn brought up that last year, 350 dollars was raised. He said the event could show the historical side of the property. This year, he said, we need a way to get the elderly and handicapped up to the barn. He listed off various costs from handicapped parking to porta-pottys, and asked the commission what their plan was to fundraise. Entrance donations were suggested, but a problem with making vendors pay entrance fees is that there may be no incentive for profit. It was brought up that maybe the commission should charge for parking. Another cost not mentioned is the costs of t shirt printing, but Ms. Raub said those had already been purchased. Mr. O'Hearn volunteered to head the parking committee and to collect donations to recoup the costs of the barn restoration.

Mr. Campbell agreed with this, and said that there needs to be a separate committee for the pumpkin toss. He said that some people feel like this event is not what is considered "allowed", and that social events are not permitted if they are not beneficial to the farm and barn. Is the pumpkin toss one of these events? Mr. O'Hearn and Ms. Raub said it fits under the historical and agricultural nature of the

barn, and Mr. Short pointed out that it would benefit the barn. Ms. Eberhardt said that is true as long as goals are clearly defined to raise awareness of the property and to support it. Mr. O'Hearn volunteered to help Ms. Raub run a committee. It was suggested that perhaps the people who helped last year could this year. Mr. Koff said he would like to keep the event as simple as possible to stick with its agricultural theme.

Ms. Raub said that Peter Smith of the historical society made a list of suggestions for this year's event they could check out, maybe the historical society could help. Mr. Koff also suggested getting the arts committee and other committees involved. Ms. Kathy Norton spoke and said that she would not be able to put as much time into it as she did last year, but was happy with the event. It was decided that for further ideas, Mr. O'Hearn and Ms. Raub should be contacted.

3. Approval of Minutes: May 9th, June 6th Site Walk, June 13th Site Walk, June 13th, July 11th

a. May 9th

- On page 1, Mr. Koff's name is spelled wrong.
- On page 4, in the 2nd paragraph, it should say that the "technical review has not happened yet".
- Ms. Raub had a few other corrections of names in the document.
- Mr. Campbell said that page 7, "responsibility of managing the spring" should be added where it says "Mr. Campbell would be hesitant.
- Ms. Murphy corrected "Mr. McDonnell" instead of "Mr. McDonald"
- Ms. Raub said that were it says, "Mr. Campbell says Mr. Kelly was here recently", add the words "future" to "projects" and some additional spelling errors.
- Ms. Raub, on page 10, wanted to change it to "erosion issues at timber landing site". Next paragraph, get rid of "active vernal pool would be well-protected".

MOTION: Mr. Koff motioned to approve the minutes as corrected, Mr. O'Hearn seconded. All voted aye except for Ms. Eberhardt, who abstained.

b. June 6th site walk

MOTION: There was a motion to approve the minutes, all voted aye but Ms. Raub, who abstained.

c. June 13th site walk

MOTION: There was a motion to approve the minutes, all voted aye except Mr. Campbell and Ms. Raub, who abstained.

d. June 13th meeting

- On page 2, correct the spelling of Kimmin's Brook
- On page 2, change to administrator order instead of administrative consent order
- On page 2, explain that the RPC did a C-RISE project
- On page 5, should be American trailrunner's association instead of the trailriding championship
- There were a few more spelling errors to correct

- On page 6, 3rd paragraph, say “Mr. Donahue discussed moving the impacts out of the buffers through the proposal of stone retaining walls.”
- At the bottom of page 1, say “Ms. Murphy can comment on those and at the technical review committee”
- On page 8, 5th paragraph, RPC should be RCCD

MOTION: Mr. O’Hearn moved to approve the minutes as corrected, Ms. Raub seconded the motion, all voted aye unanimously.

e. July 11th meeting

MOTION: Mr. O’Hearn moved to approve the minutes as amended, Ms. Eberhardt seconded, the motion passed unanimously.

The commission discussed how the wanted the minutes to be for next time. The general consensus was that they could be synthesized more and condensed down the main points. The minutes are used by the commission and by the town offices as well as the public. They should not be verbatim, and should cover the main points and anything needing follow-up.

4. Other Business

There was nothing else to report.

5. Next Meeting: Date Scheduled (9/12/17), Submission Deadline (9/1/17)

The meeting was adjourned at 8:45pm. The motion to adjourn was made by Ms. Eberhardt and seconded by Ms. Raub. All voted aye unanimously.