OXBOW ASSOCIATES, INC.

Wetlands Delineation and Permitting Wildlife Studies Herpetology Vernal Pool Ecology

Request for Determination of Applicability

Pursuant to the
Acton Wetlands Protection Bylaw

Septic System Upgrade

21 Henley Road
Acton, Massachusetts

Submitted by:
Linda Campelia
21 Henley Road
Acton, MA 01720

Prepared by:
Oxbow Associates, Inc.
P.O. Box 971
Acton, MA 01720-0971
www.oxbowassociates.com

December 21, 2009

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Acton
City/Town

WPA Form 1- Request for Determination of Applicability

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

A. General Information

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

1. Applicant:

Linda Campelia
Name

E-Mail Address

21 Henley Road
Mailing Address

Acton
City/Town

MA
State

01720
Zip Code

978-263-1203
Phone Number

Fax Number (if applicable)

2. Representative (if any):

Oxbow Associates, Inc.
Firm

Brian Butler
Contact Name

butler@oxbowassociates.com
E-Mail Address

P.O. Box 971
Mailing Address

Acton
City/Town

MA
State

01720
Zip Code

978-929-9058
Phone Number

978-635-1892
Fax Number (if applicable)

B. Determinations

1. I request the Acton (Conservation Commission) make the following determination(s). Check any that apply:

☐ a. whether the **area** depicted on plan(s) and/or map(s) referenced below is an area subject to jurisdiction of the Wetlands Protection Act.

☐ b. whether the **boundaries** of resource area(s) depicted on plan(s) and/or map(s) referenced below are accurately delineated.

☐ c. whether the **work** depicted on plan(s) referenced below is subject to the Wetlands Protection Act.

☒ d. whether the area and/or work depicted on plan(s) referenced below is subject to the jurisdiction of any **municipal wetlands ordinance** or **bylaw** of:

Acton
Name of Municipality

☐ e. whether the following **scope of alternatives** is adequate for work in the Riverfront Area as depicted on referenced plan(s).

C. Project Description

1. a. Project Location (use maps and plans to identify the location of the area subject to this request):

21 Henley Road	Acton
Street Address	City/Town
B4	25 &14-2 / 51
Assessors Map/Plat Number	Parcel/Lot Number

b. Area Description (use additional paper, if necessary):

See RDA project narrative.

c. Plan and/or Map Reference(s):

USGS Locus Map, 21 Henley Road, Acton, MA	December 4, 2009
Title	Date
Proposed Septic System 21 Henley Road, Acton, MA	December 3, 2009
Title	Date
Title	Date

2. a. Work Description (use additional paper and/or provide plan(s) of work, if necessary):

Septic System upgrade within 100 foot buffer zone to Isolated Vegetated wetland (Acton Weland Protection Bylaw only). See RDA Project Narrative for details.

C. Project Description (cont.)

b. Identify provisions of the Wetlands Protection Act or regulations which may exempt the applicant from having to file a Notice of Intent for all or part of the described work (use additional paper, if necessary).

See RDA Project Narrative.

3. a. If this application is a Request for Determination of Scope of Alternatives for work in the Riverfront Area, indicate the one classification below that best describes the project.

☐ Single family house on a lot recorded on or before 8/1/96

☐ Single family house on a lot recorded after 8/1/96

☐ Expansion of an existing structure on a lot recorded after 8/1/96

☐ Project, other than a single family house or public project, where the applicant owned the lot before 8/7/96

☐ New agriculture or aquaculture project

☐ Public project where funds were appropriated prior to 8/7/96

☐ Project on a lot shown on an approved, definitive subdivision plan where there is a recorded deed restriction limiting total alteration of the Riverfront Area for the entire subdivision

☐ Residential subdivision; institutional, industrial, or commercial project

☐ Municipal project

☐ District, county, state, or federal government project

☐ Project required to evaluate off-site alternatives in more than one municipality in an Environmental Impact Report under MEPA or in an alternatives analysis pursuant to an application for a 404 permit from the U.S. Army Corps of Engineers or 401 Water Quality Certification from the Department of Environmental Protection.

b. Provide evidence (e.g., record of date subdivision lot was recorded) supporting the classification above (use additional paper and/or attach appropriate documents, if necessary.)

D. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Request for Determination of Applicability and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

I further certify that the property owner, if different from the applicant, and the appropriate DEP Regional Office were sent a complete copy of this Request (including all appropriate documentation) simultaneously with the submittal of this Request to the Conservation Commission. ↖ N/A - filing under local bylaw ONLY

Failure by the applicant to send copies in a timely manner may result in dismissal of the Request for Determination of Applicability.

Name and address of the property owner:

Linda Campelia
Name

21 Henley Road
Mailing Address

Acton
City/Town

MA
State

01720
Zip Code

Signatures:

I also understand that notification of this Request will be placed in a local newspaper at my expense in accordance with Section 10.05(3)(b)(1) of the Wetlands Protection Act regulations.

Linda V. Campelia
Signature of Applicant

12/18/09
Date

Signature of Representative (if any)

12/18/09
Date

Request for Determination of Applicability Project Narrative
21 Henley Road, On Site Sewage Disposal System Repair
December 18, 2009

Site and Wetland Resource Area Description

Oxbow Associates, Inc. (OA, specifically B. Butler) investigated the wetlands in the vicinity of the proposed project on November 25, 2009. The site includes an existing single family home and on site sewage disposal system. The system was in failure at the time of observation, with effluent breaking out of the ground in the yard area behind (east of) the house.

An area of forested wetland lies partially on the site to the east of the existing house, yard and fence. This wetland is an area of pit and mound topography, apparently altered during the construction of the Henley Rd. and Nonset Path residential subdivisions in the historic past. Upon examination, it was determined that the forested wetland does not "border" on a surface water type identified in the Massachusetts Wetlands Protection Act (MGL Ch. 131A, the "Act"). The topography in and adjacent to the wetland area can obviously not contain a volume of water sufficient to qualify as Isolated Land Subject to Flooding (310 CMR 10.57). Therefore, this isolated vegetated wetland is not a jurisdictional resource under the Act. It is, however regulated under the Acton Wetlands Protection Bylaw and it may be jurisdictional under Section 404 of the Federal Clean Waters Act under the adjacency criteria. There is no vernal pool habitat within the isolated vegetated wetland.

The attached Perley Engineering, LLC design plan (Dec. 3, 2009) shows the configuration of the recently approved (by Acton BoH) design to abate the existing public health hazard and provide a compliant (with several variances) Title V system.

Acton Conservation Staff (T. Tidman) conducted an inspection of the site and vicinity and concurred that the system should be replaced as expeditiously as possible and that filing an RDA under the local Bylaw concurrent with the emergency system repair was acceptable given the time of year, site conditions and ongoing public health hazard.

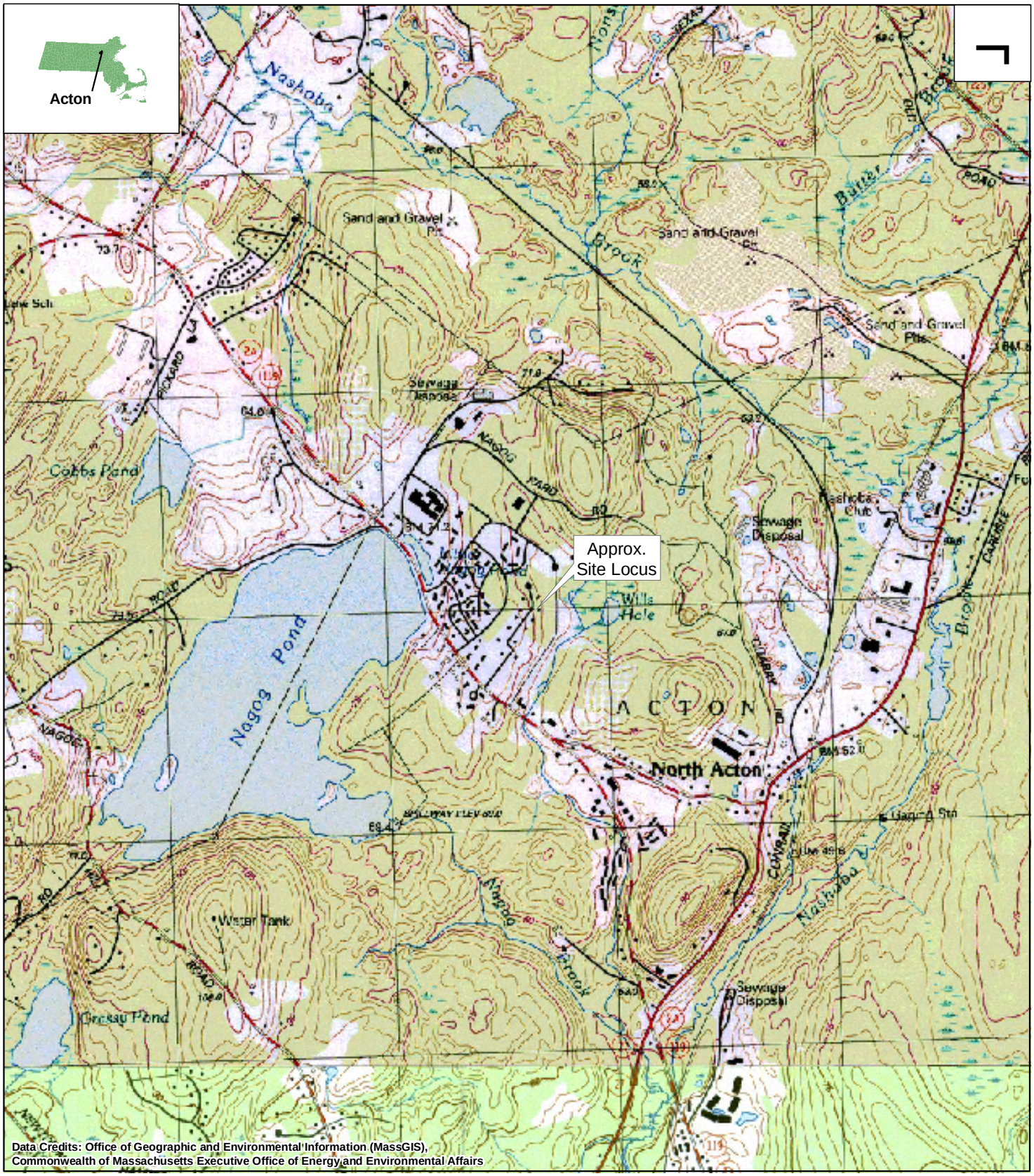
The limit of grading is approximately 22 feet west of the wetland boundary at its closest point, in an area of existing lawn, separated from the wetland by a stockade fence. The proposed leaching chambers are located 38 horizontal feet from the resource area.

This RDA is filed pursuant to the Acton Wetlands Protection Bylaw (Ch. F) and under the exemption provided at Section F4.1 of the Bylaw.

According to the current MassGIS Natural Heritage and Endangered Species Program (NHESP) data layers there are no vernal pools located in the vicinity of the proposed work, nor is the project within Estimated or Priority Habitat.

Project Description

The proposed activities are the removal and replacement (repair) of the on site sewage disposal system as shown on the enclosed plan materials. Erosion control is provided, and stabilization of the slope will be accomplished with biodegradable erosion control netting until grass can be established in the spring of 2010.



OXBOW ASSOCIATES, Inc.
Wetlands Delineation and Permitting
Wildlife Studies * Herpetology
Vernal Pool Ecology
P.O. BOX 971, ACTON
MASSACHUSETTS 01720-0971
PHONE: (978)929-9058
FAX: (978)635-1892
WEB: WWW.OXBOWASSOCIATES.COM

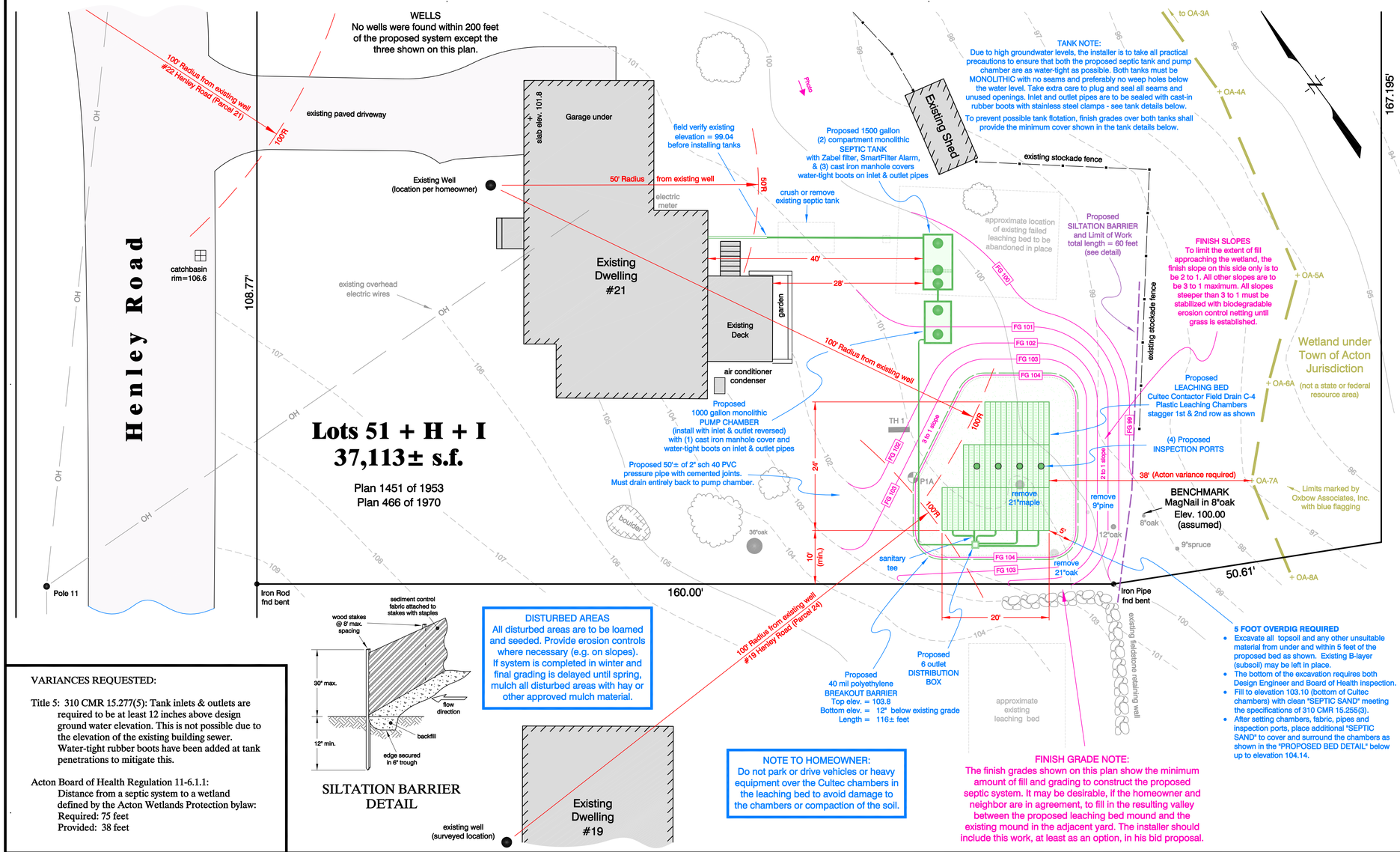
1:24,000

1 inch equals 2,000 feet

0 1,000 2,000
Feet

USGS Locus Map
21 Henley Road
Acton, MA

December 4, 2009



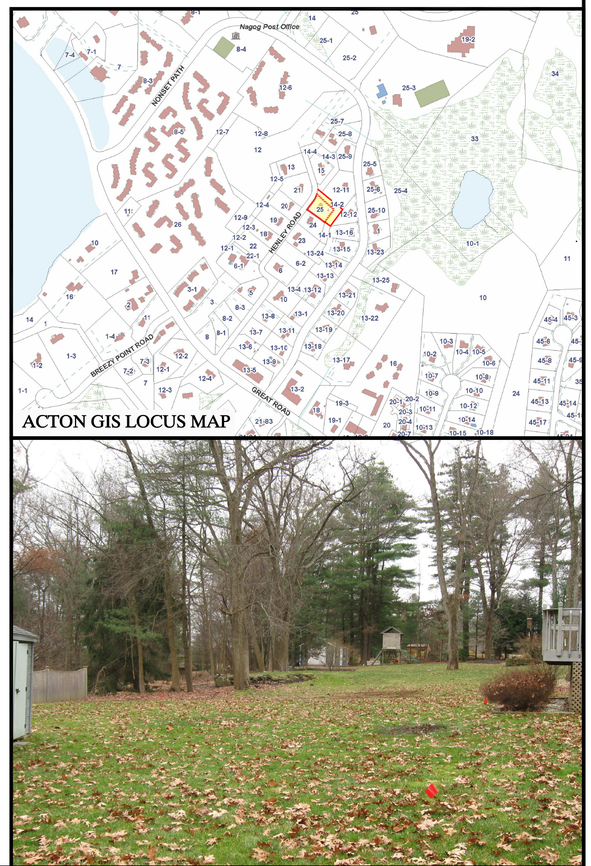
This plan has been prepared only to obtain a Disposal System Construction Permit to allow a properly licensed Installer to construct the septic system shown hereon. All other uses are expressly prohibited, including use as a certified as-built or proposed plot plan for building construction, or for the determination of property lines.

The lot lines and street lines shown on this plan may be approximate only and are not the result of a boundary survey.

Underground utilities shown on this plan may be from record information or from Dig Safe markings or may be shown in an estimated location. They were not field verified by Perley Engineering LLC and are not guaranteed to be complete or correct. Other utilities may exist. The installer must contact Dig Safe at 1-888-344-7233 at least 3 days before starting work.

The Installer must be trained and certified by Cultec, Inc. before installing this system, as required by DEP's Certification for General Use of Cultec chambers.

The Installer must comply with all applicable codes and regulations, including 520 CMR 14.00, "Excavation and Trench Safety."



VARIANCES REQUESTED:

Title 5: 310 CMR 15.277(5): Tank inlets & outlets are required to be at least 12 inches above design ground water elevation. This is not possible due to the elevation of the existing building sewer. Water-tight rubber boots have been added at tank penetrations to mitigate this.

Acton Board of Health Regulation 11-6.1.1: Distance from a septic system to a wetland defined by the Acton Wetlands Protection bylaw:
Required: 75 feet
Provided: 38 feet

SILTATION BARRIER DETAIL

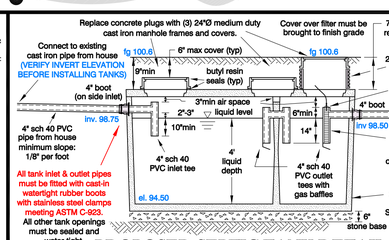
HOLE # 1

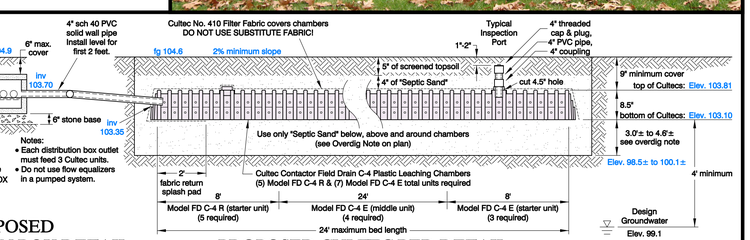
Depth (feet)	Soil Horizon/ Layer	Soil Texture (USDA)	Soil Matrix Color (Munsell)	Redoximorphic Features (mottles) Depth	Color	Percent	Coarse Fragments % by volume Gravel	Cobbles/stones	Soil Structure	Soil Consistence
101.1										
0.0'-0.8'	A	sandy LOAM	10YR2/2							
100.3										
0.8'-1.9'	B	sandy LOAM	10YR4/6	None			0%	10%	massive	friable
99.2										
1.9'-7.0'	C	sandy LOAM	5Y5/4 @ 2.0'	7.5YR5/8 5Y7/2		>5%	10%	10%	massive	firm
94.1										

Groundwater encountered: weeping @ 3.0'
Estimated seasonal high: 2.0' (Elev. 99.1) by mottling

DEEP OBSERVATION HOLE LOG

soil evaluator: Jefferson G. Perley
date of testing: November 17, 2009
witnessed by: Justin Snair
location on plan indicated by ■





PERCOLATION TEST DATA

Test #	Rate	Depth	Elevation	Date of testing
1A	13 min/in	3.0'	98.4	Nov. 17, 2009

performed by: Jefferson Perley
location on plan indicated by ◔

DESIGN CRITERIA

type: Upgrade
number of bedrooms: 3
design flow: 330 gallons per day
garbage grinder permitted: NO
septic tank capacity: 1500 (1000+500) gallons
type of leaching system: Cultec Contactor C4 leaching bed
number of chambers: 12
effective leaching area: 6.7 sf/lf
soil class: Class II
design percolation rate: 15 min/inch
effluent loading rate: 0.56 gpd/sf
system area: 12 units x 8.0' x 6.7 sf/ft = 643 square feet
system capacity: 0.56 x 643 sf = 360 gpd

DESIGN ELEVATIONS

top of existing foundation: 108.7
cellar floor:
invert of existing building sewer at foundation: inaccesible
invert of septic tank inlet: 98.75
outlet: 98.50
invert of pump chamber inlet: 98.48
outlet: 98.73
invert of distribution box inlet: 103.87
outlet: 103.70
invert at start of Cultec chambers: 103.35
bottom of Cultec chambers: 103.10
bottom of bed excavation: 98.5± to 100.1±
design groundwater elevation: 99.1
finish grade over leaching system: 104.6

AS-BUILT ELEVATIONS

top of existing foundation:
cellar floor:
invert of existing building sewer at foundation:
invert of septic tank inlet:
outlet:
invert of pump chamber inlet:
outlet:
invert of distribution box inlet:
outlet:
invert at start of Cultec chambers:
bottom of Cultec chambers:
bottom of bed excavation:
DATE OF AS-BUILT:

NOTES FOR INSTALLER

The Installer must contact the Design Engineer AT LEAST 3 business days before starting construction to schedule the following site visits by the Engineer:

- Staking of the leaching area for construction.
- Viewing the bottom of the leaching area excavation.
- Viewing and taking measurements of the as-built system. All components must be installed and remain exposed.
- Any other site visits or testing that may be required on the plan or by the construction permit.

This system must be installed exactly as shown on this plan. Any variations must be approved by the Design Engineer BEFORE construction or as-built certification may be denied.

REVISIONS

0 5 10 20 30
SCALE IN FEET

PERLEY ENGINEERING LLC
Engineering - Land Surveying - Septic System Design
90 Picnic Street (978) 369-2689
Boxborough, MA 01719-1105 (978) 263-6499

Electronic media copy - not a certified document.

FB: 09-3
Pg: 81-87;97-98

In the event of any discrepancy, the signed and sealed hardcopy shall control.

PROPOSED SEPTIC SYSTEM

FOR: Linda V. Campelia
LOT 51 PARCEL: 25 & 14-2 ASSESSORS MAP: B-4
21 Henley Road
Acton, Massachusetts

SCALE: 1"=10'
DATE: December 3, 2009

FILE NO: 537
DWG:09-142A1
SHEET 1 OF 1