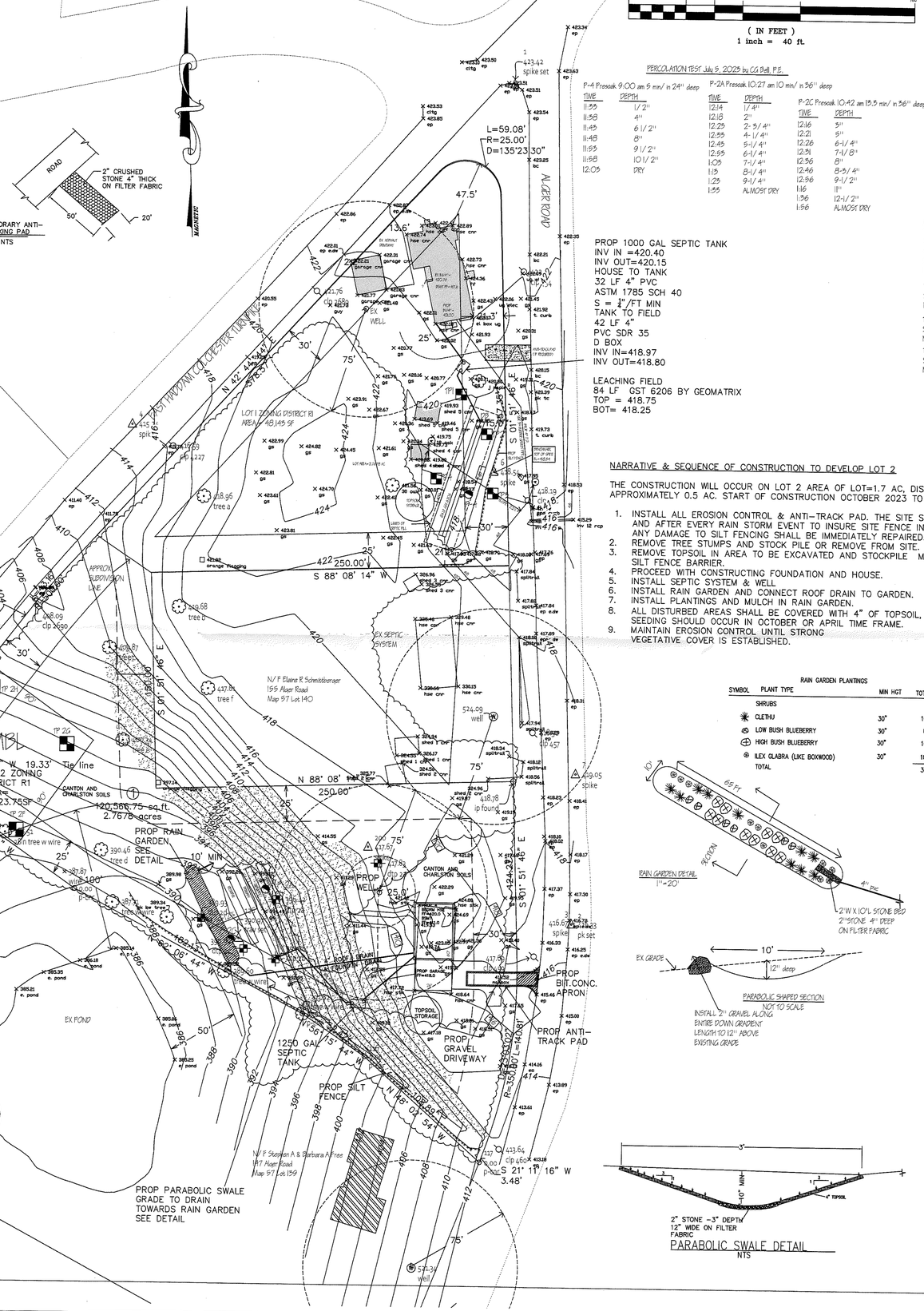


KEY MAP
1"=1000'

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.



PERCOLATION TEST July 5, 2023 by CG Bell, P.E.

P-1 Presoak 9:00 am 9 min/ in 24" deep

TIME	DEPTH
11:33	1/ 2"
11:38	4"
11:43	6 1/ 2"
11:48	8"
11:53	9 1/ 2"
11:58	10 1/ 2"
12:03	DRY

P-2A Presoak 10:27 am 10 min/ in 36" deep

TIME	DEPTH
12:14	1/ 4"
12:18	2"
12:25	2- 3/ 4"
12:33	4- 1/ 4"
12:43	5-1/ 4"
12:55	6-1/ 4"
1:03	7-1/ 4"
1:13	8-1/ 4"
1:23	9-1/ 4"
1:33	ALMOST DRY

P-2C Presoak 10:42 am 13.3 min/ in 36" deep

TIME	DEPTH
12:16	5"
12:21	5"
12:26	6-1/ 4"
12:31	7-1/ 8"
12:36	8"
12:46	8-3/ 4"
12:56	9-1/ 2"
1:16	11"
1:36	12-1/ 2"
1:56	ALMOST DRY

MBL TEST PITS 7-12-23 BY CG BELL, PE

TP 2E
0-6 TOPSOIL
6-50 PSL
50-96 FINE TO MED SAND W/ GRAVEL
NO LEDGE MOTT @ 48" GW @ 90"

TP 2F
SIMILAR TO TP2E
NO LEDGE MOTT @ 45" GW @ 90"

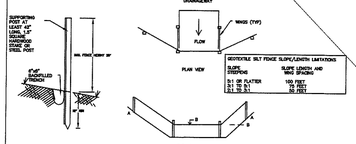
TP 2G
SIMILAR TO TP2E
NO LEDGE MOTT @ 50" GW @ 90"

TP 2H
SIMILAR TO TP2E
NO LEDGE MOTT @ 55" GW @ 90"

NARRATIVE & SEQUENCE OF CONSTRUCTION TO DEVELOP LOT 2

THE CONSTRUCTION WILL OCCUR ON LOT 2 AREA OF LOT=1.7 AC, DISTURBED AREA IS APPROXIMATELY 0.5 AC. START OF CONSTRUCTION OCTOBER 2023 TO COMPLETE BY OCTOBER 2024.

1. INSTALL ALL EROSION CONTROL & ANTI-TRACK PAD. THE SITE SHALL BE MONITORED BEFORE AND AFTER EVERY RAIN STORM EVENT TO INSURE SITE FENCE INTEGRITY. ANY DAMAGE TO SILT FENCING SHALL BE IMMEDIATELY REPAIRED.
2. REMOVE TREE STUMPS AND STOCK PILE OR REMOVE FROM SITE.
3. REMOVE TOPSOIL IN AREA TO BE EXCAVATED AND STOCKPILE MATERIAL WITH SILT FENCE BARRIER.
4. PROCEED WITH CONSTRUCTING FOUNDATION AND HOUSE.
5. INSTALL SEPTIC SYSTEM & WELL
6. INSTALL RAIN GARDEN AND CONNECT ROOF DRAIN TO GARDEN.
7. INSTALL PLANTINGS AND MULCH IN RAIN GARDEN.
8. ALL DISTURBED AREAS SHALL BE COVERED WITH 4" OF TOPSOIL, SEEDED AND MULCHED. SEEDING SHOULD OCCUR IN OCTOBER OR APRIL TIME FRAME.
9. MAINTAIN EROSION CONTROL UNTIL STRONG VEGETATIVE COVER IS ESTABLISHED.



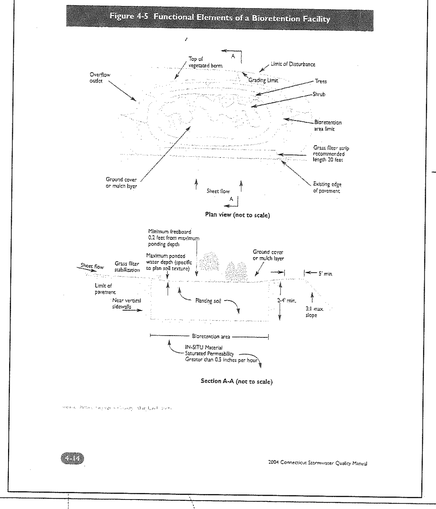
RAIN GARDEN PLANTINGS

SYMBOL	PLANT TYPE	MIN HGT	TOTAL
	SHRUBS		
✳	CLETHU	30"	10
⊗	LOW BUSH BLUEBERRY	30"	6
⊕	HIGH BUSH BLUEBERRY	30"	10
⊛	ILEX GLABRA (LIKE BOXWOOD)	30"	10
	TOTAL		36

RAIN GARDEN DETAIL
1"=20'

PARABOLIC SHAPED SECTION
NOT TO SCALE

PARABOLIC SWALE DETAIL
NTS



GENERAL NOTES:
1. A. REFERENCE MAPS: A-2 SURVEY ENTITLED" Property Survey As-built prepared for Richard M. Lagace, Jr. 161 Alger Avenue East Haddam, Ct. Assessor map 57 Lot 141, scale 1"=40' dated 6-27-23 " by Thomas A. Stevens and Associates, Inc. Engineers Land Surveyors. Topography based on 1-2 survey from said map.
2. ADDITIONAL SOIL TESTING FOR SEPTIC DESIGN MAY BE REQUIRED PRIOR TO CONSTRUCTION.
3. The proposed lot has been designed to best have access to passive solar exposure.

EROSION AND SEDIMENTATION CONTROL NOTES

1. All sedimentation and erosion control measures shall conform to the requirements set forth in the Connecticut Department of Environmental Protection publication " Connecticut Guidelines for Soil Erosion and Sedimentation Control " dated April, 2002.
2. Areas disturbed for site improvements shall be kept to an absolute minimum.
3. The primary measures used to control erosion and sedimentation shall be silt fences, staked hay bales, hay mulch, jute mesh netting and turf establishment.
   a. Silt fences shall be employed on the downhill end of all exposed slopes.
   b. Hay mulch shall be applied to all exposed areas as soon as possible after exposure (1 week maximum). Mulch on slopes exceeding 5% shall be held in place with jute mesh netting.
   c. All exposed areas shall be final graded, covered with top-soil (4" minimum) and seeded as soon as possible after exposure (1 month maximum) to stabilize slopes. Turf establishment shall be accomplished as follows:
4. Seed for permanent turf establishment shall be applied to a prepared bed of topsoil (4" in depth). Fertilizer shall be 10-10-10 or equal and shall be spread at a rate of 7.5 lbs. per 1000 sf. Ground limestone shall be applied at the rate of 90 lbs. per 1000 sf. Seed shall be uniformly spread and shall be a mixture of 45% Kentucky blue grass, 45% Creeping red fescue, and 10% Perenial ryegrass applied at a rate of 5 lbs. per 1000 sf. Permanent turf establishment shall be done between the dates of April 1 and June 1 or August 15 and Sept 15.
5. If permanent turf establishment cannot be done within the time constraints listed above, the exposed areas shall be protected with a temporary vegetative cover. This shall consist of Annual ryegrass seed applied at a rate of 5 lbs. per 1000 sf to a surface prepared by the application of a 10-10-10 fertilizer (7.5 lbs. per 1000 sf) and ground limestone (90 lbs. per 1000sf). This measure shall be applicable between the dates of March 1 and June 1 or August 15 and October 15. Outside of those dates exposed areas shall be protected with hay mulch (90 lbs. per 1000 sf) anchored with jute mesh netting.
6. It shall be the responsibility of the Owner to install, inspect and maintain all soil erosion and sedimentation control devices. Inspection of all control measures shall be at least once a week during periods of dry weather, after each runoff producing storm and once a day during periods of prolonged rainfall. Repair or replacement of damaged control measures shall be done immediatly.

THE PERSON RESPONSIBLE FOR THE IMPLENTATION OF THIS PLAN IS:
RICHARD LAGACE JR.
7 BANNING ROAD
EAST HADDAM, CT 06423
TEL: 860-790-5009

FORM #2
Chatham Health District
State of Connecticut Department of Public Health
1/1/11

Application/Permit No.:

SITE INVESTIGATION FOR A SEWAGE DISPOSAL SYSTEM

Property Owner: Location: 161 Alger Rd East Haddam

DATE: 7-5-2023

DEEP TEST PIT DATA/SOIL DESCRIPTIONS

Groundwater Table: (Near max. below max., etc.):
Soil Moisture (High, medium, low, etc.):

TEST PIT-1 2a	TEST PIT- 2b	TEST PIT- 2c	TEST PIT-2d
0-6" Topsoil 6"-30" Medium Br Fine Silty Loam 30"- 42" Light Br Very Fine Silty Sand 48"-101" Hardpan, Fine Silty Sand and Stones	0-6" Topsoil 6"-25" Medium Br Fine Silty Loam 25"-48" Light Br Very Fine Silty Sand 48"-108" Hardpan, Fine Silty Sand and Stones	0-9" Topsoil 9"-48" Light Br Very Fine Silty Sand 48"-96" Hardpan, Fine Silty Sand and Stones	0-10" Topsoil 10"-30" Light Br Fine Silty Loam 30"-34" Light Br Fine Silty Sand 34"-108" Hardpan Grey Fine Silty Sand
Mottles: 46" GW: None Ledge: None Roots: 48" Restrictive: 46" - Mottled	Mottles: 67" GW: None Ledge: None Roots: 48" Restrictive:67" Mottled	Mottles: 32" GW: None Ledge: None Roots: 34" Restrictive:32" Mottled	Mottles: 30" GW: None Ledge: None Roots: 31" Restrictive:30" Mottled

COMMENTS: TP 2a-2d dug for b100a lot line revision suitability.

FORM #2
Chatham Health District
State of Connecticut Department of Public Health
1/1/11

Application/Permit No.:

SITE INVESTIGATION FOR A SEWAGE DISPOSAL SYSTEM

Property Owner: Location: 161 Alger Rd East Haddam

DATE: 7-5-2023

DEEP TEST PIT DATA/SOIL DESCRIPTIONS

(Record all Test Pits)

TEST PIT-1	TEST PIT- 2	TEST PIT- 3	TEST PIT-4
0-6" Topsoil 6"-12" Buried Fill 12"-17" Original Topsoil 17"-28" Medium Br Fine Silty Loam 28"-60" Grey/Orange Fine Silty Sand	0-10" Topsoil 10"-25" Medium Br Fine Silty Loam 25"-80" Grey/Orange Fine Silty Sand	0-11" Topsoil 11"-23" Medium Br Fine Silty Loam 23"-58" Grey/Orange Fine Silty Sand	0-12" Topsoil 12"-32" Medium Br Fine Silty Loam 32"-66" Light Br Fine Silty Sand 54"-108" Hardpan Grey Fine Silty Sand
Mottles: 34" GW: 50" Ledge: None Roots: 40" Restrictive: 34" - 12" (fill) - 22"	Mottles: 25" GW: 37" Ledge: None Roots: 38" Restrictive:25" Mottled	Mottles: 23" GW: 52" Ledge: None Roots: 30" Restrictive:23" Mottled	Mottles: 29" GW: 50" Ledge: None Roots: 35" Restrictive:29" Mottled

COMMENTS: TP1-4 dug near existing house for repair/replacement of septic system. Fill encountered in TP1, area not recommended for construction.

Septic system Repair design LOT 1

1. Septic system design based on 1.0 to 5.0 min./in percolation rate, 3 bedroom house, 495 sf leaching area, 1000 gal. septic tank required.

2. Proposed primary – 1 row – 84' long 6"D x 62"W GST 6206 by GeoMatrix
Effective Area = 84' x 5.9 sf/lf = 495.6 sf. > 495 SF OK

3. Reserve: Not required

4. MLSS
HF = 48 based on restrictive layer @ 22–26", S = 2.2%
FF = 1.5 based on 3 bedrooms
PF = 1.0 based on 1.0–5 min./in percolation rate
MLSS = 48 x 1.5 x 1.0 = 72' < 84' OK

Septic system design LOT 2

1. Septic system design based on 1.0 to 5.0 min./in percolation rate, 4 bedroom house, 577.5 sf leaching area, 1250 gal. septic tank required.

2. Proposed primary – 3 rows – 65' long 12"D x 48"W Stone Trenches
Effective Area = 65'x3x3 sf/lf = 585 sf. > 577.5 SF OK

3. Reserve based on 10.1 to 20 min/in percolation rate: 787.5 sf required
Proposed system: 57 LF GST 6212 by GeoMatrix.
Effective area: 57' x 14 sf/LF= 798 sf OK

4. MLSS primary
HF = 14 based on restrictive layer @ 46–67", S = 12%
FF = 1.75 based on 3 bedrooms
PF = 1.25 based on 1.0–5 min./in percolation rate
MLSS = 14 x 1.75 x 1.25 = 31' < 65' OK

CERTIFICATION BY THE TOWN SANITARIAN
I HEREBY CERTIFY THAT ALL LOTS ON THIS MAP MAY HAVE SEPTIC SYSTEMS AND WELLS AT LOCATIONS SHOWN. THE FOLLOWING LOTS , IF ANY SHALL HAVE ENGINEERED DESIGNED SYSTEMS _____
TOWN SANITARIAN _____ DATE _____

APPROVED BY THE EAST HADDAM PLANNING AND ZONING COMMISSION

FINAL APPROVAL _____
CHAIRMAN/SECRETARY

DATE _____

EXPIRATION DATE: _____

"THE SUBDIVISION REGULATIONS OF THE EAST HADDAM PLANNING AND ZONING COMMISSION ARE A PART OF THIS PLAN, AND APPROVAL OF THIS PLAN IS CONTINGENT ON COMPLETION OF ALL THE REQUIREMENTS OF SAID SUBDIVISION REGULATIONS, EXCEPTING ONLY ANY VARIANCES OR MODIFICATIONS MADE IN WRITING MADE BY THE EAST HADDAM PLANNING AND ZONING COMMISSION AND ATTACHED HERETO.

APPLICANT AND OWNER
RICHARD LAGACE JR
7 BANNING ROAD
EAST HADDAM, CT 06423

LEGEND

EX TREELINE
PROP LIMIT OF CLEARING
PROPERTY LINE
EDGE OF PAVEMENT
MONUMENT
IRON PIN — I.PIN
IRON PIPE — I.P.
UTILITY POLE
SILT FENCE
EX CONTOUR — 100
PROP CONTOUR — 100
TEST PIT
PERCOLATION TEST
AREAS OVER 20% SLOPE

SP-1

PRELIMINARY PLAN LAGACE SUBDIVISION
161 ALGER ROAD
EAST HADDAM, CT
PROPERTY OF
RICHARD M. LAGACE, JR.

DRAWN BY: C.G. BELL
DESIGNED BY: C.G. BELL
DATE: AUGUST 15, 2023
JOB NO. 2302

CHRISTOPHER G. BELL P.E. - CONSULTING ENGINEERS
1 Doane Road
Higganum, Ct. 06441
860-345-7337

NOT VALID UNLESS EMBOSSED SEAL

PE NO. 11670