SEPTIC NOTES

1. All materials and procedures are to conform to all applicable local and state regulations and to the normal standards of good practice.
2. The Surveyor shall stake out the septic system and provide a benchmark for the contractor prior to installation of the system.
3. The contractor shall verify all on-site and off-site conditions pertinent to the proposed construction. The engineer shall be notified of any field conditions that conflict with this plan.
4. No open jointed perforated or pervious pipe drains are to be located within 50' down gradient of any system area. No perforated drains to be located within 25' up gradient and to the sides of the septic system.
5. The septic pipe from the house to the septic tank shall be a 4" Solvent Welded PVC ASTM D 1785, Schedule 40 pipe or accepted equal. The septic pipe from the septic tank to the septic system shall be a 4"SDR 35 or accepted equal.
6. Call "CALL BEFORE YOU DIG" @ 1-800-922-4455 before the start of any construction.
7. Contractor shall contact the Certifying Engineer and the Health District prior to starting construction or the system will not be certified.
8. The proposed septic area shall be roped off to prevent any heavy equipment from the area. All loam, stumps, and brush shall be removed from the proposed septic area. The topsoil shall be removed and the bottom surface area of the excavation shall be scarified.
9. If select fill is required, the select fill shall be placed on the edge of the site and spread over the prepared area with a bulldozer. The first lift shall be 12 inches and the remaining lifts shall be 8 inches and compacted by normal bulldozing. Fill shall be placed only during dry weather. If water is present at the bottom of the excavation following a period of rain, the excavation shall be dewatered and rescarified. If the soil is moist scarification may be required by a heavy iron rake. The select fill shall extend a minimum of 5 feet laterally in all directions beyond the outer perimeter of the leaching system. The select fill shall have a percolation rate better than 1 inch in 10 minutes. After 50% of the select fill has been installed, the contractor shall have a certified lab pick up and do a sieve analysis on two samples. The contractor shall also hire an engineer to complete two percolation tests in the select fill whenever the entire leaching system (bottom and sides) will be situated within the select fill or when it appears the select fill will not be suitable. The test results shall be given to the Town Sanitarian and Design Engineer.
10. Select fill placed within and adjacent to leaching system areas shall be a clean material comprised of sand, or sand and gravel, free from organic matter and foreign substances. The select fill shall meet the following requirements unless otherwise approved by the design P.E. Select fill exceeding 6 percent passing the #200 sieve based on a wet sieve analysis cannot be approved by the design P.E.
    a. The select fill shall not contain any material larger than the three (3) inch sieve.
    b. Up to 45% of the dry weight of the representative sample may be retained (gravel portion) on the #4 sieve.
    c. The material that passes the #4 sieve is then reweighed and the sieve analysis started.
    d. The remaining sample shall meet the following gradation criteria:

	PERCENT PASSING	
SIEVE SIZE	WET SIEVE	DRY SIEVE
#4	100	100
#10	70 - 100	70 - 100
#40	10 - 50 *	10 - 75
#100	0 - 20	0 - 5
#200	0 - 5	0 - 2.5

* Percent passing the #40 sieve can be increased to no greater than 75 if the percent passing the #100 sieve does not exceed 10 and the #200 sieve does not exceed 5.

Select fill that does not meet the dry sieve gradation criteria but meets the wet sieve gradation criteria is acceptable

11. Stone aggregate shall be of uniform consistency and only contain clean, hard, tough, durable fragments that meet the stone aggregate criteria.

SIEVE SIZE	No. 4 Stone Aggregate (A.K.A., 1 1/4" Stone) % Passing (By Weight)	No. 6 Stone Aggregate (A.K.A., 3/4" Stone) % Passing (By Weight)
2-inch	100	N/A
1.5-inch	90 - 100	N/A
1-inch	20 - 55	100
3/4-inch	0 - 15	90 - 100
1/2-inch	N/A	20 - 55
3/8-inch	0 - 5	0 - 15
#4	N/A	0 - 5

12. Septic tanks shall have a minimum cover of 6." Cleanout manholes shall be a min. inside diameter of 17." Cleanout manholes shall be located at a depth not greater than 12" below final grade. New tanks and existing tanks deeper than 24" below finish grade shall be provided with 24" minimum inside diameter access risers over each cleanout manhole opening. Where Covers are flush or above grade, either the lid shall weigh a min. 59 lbs mor the cover shall be provided with a lock system to prevent unauthorized entrance.
13. No Apparent Wells within 75' of proposed septic system.

SEPTIC DESIGN

Proposal: (5) Bedroom (Main House) & (1) Bedroom Cottage Septic Design

Existing Septic System: 1250 Gal. Septic Tank & 56 LF of 4' x 4' Galleries

Septic Design is based on a percolation rate of **Less Than 10.1 Minutes/Inch**.

Connecticut Public Health Code requires 660 sq. ft. (Main House) & 165 sq. ft. (Cottage) of effective leaching = 825 sq. ft of area for a 5 bedroom residence (Main House) & 1 bedroom (Cottage,).

Primary System shall be **136** L.F of **18" x 48" Galleries** with an application rate of **6.2** sq. ft./ft. to provide an effective area of **843.2** sq. ft. Reserve System shall be **60** L.F of **GST 6218** with an application rate of **14.0** sq. ft./ft. to provide an effective area of **840** sq. ft.

Size of septic tank required is **1500 Gallons**.
Proposed Septic Tank is 1500 Gallons
Proposed Pump Chamber is 1250 Gallons

MLSS
Minimum leaching spread required by the State Health Code based on the Hydraulic Gradient = (294-286/50') = 16% and
Receiving Soil = >60" - MLSS Need Not Be Considered
HF x PF x FF = MLSS Need Not Be Considered
Provided = 64' (Proposed Spread)

APPROXIMATE PROPOSED ELEVATIONS

Main House: First Floor 287.0, Garage 286.75, Cellar 278.5

Cottage: First Floor 287.75, Garage N/A, Cellar 279.4

Effluent Line At Main House 284.6

Effluent Line At Cottage 284.2

Proposed Septic Tank Inlet 282.8, Septic Tank Outlet 282.55

Proposed Splash Box Inlet 291.9, Outlet 291.7

Proposed DB #1 Inlet 291.45, Outlet 291.28, HLO 291.53

Proposed DB #2 Inlet 289.65, Outlet 289.48, HLO 289.73

DEEP TEST HOLES DATA

433 Center Road, Easton

Performed by Ochman Associates Inc., May 18, 2020 (Fb 135 , Pg. 132)

DEEP TEST HOLE #1

0 - 10"	Topsoil
10" - 28"	Red Brown Silty Loam & Roots
28" - 50"	Brown Med. Sand w/ Cobble & Stones Trace of Silt
50"-84"	Olive Brown Fine to Med. w/ Cobble & Stones and a Trace of Silt
No Ledge	None
Mottling	None
Groundwater	None
Roots	To 28"

DEEP TEST HOLE #2

0 - 6"	Topsoil
6" - 36"	Red Brown Silty Loam & Roots
36" - 84"	Olive Brown Fine to Med. w/ Some Gravel & a Few Cobbles Compact
No Ledge	None
Mottling	None
Groundwater	None
Roots	To 36"

DEEP TEST HOLE #3

0 - 8"	Topsoil
8" - 30"	Red Brown Silty Loam & Roots
30" - 84"	Olive Brown Loamy Fine Sand
No Ledge	None
Mottling	None
Groundwater	None
Roots	To 68"

DEEP TEST HOLE #4

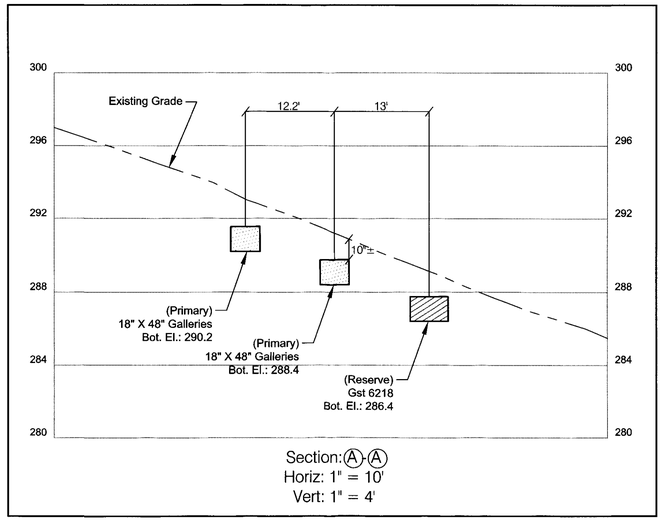
0 - 6"	Topsoil
6" - 18"	Red Brown Silty Loam & Roots
18" - 80"	Olive Brown, Fine to Med. Sand w/ Some Cobble & with a Few Angular Stones
No Ledge	None
Mottling	None
Groundwater	None
Roots	To 18"

PERCOLATION TEST HOLE DATA

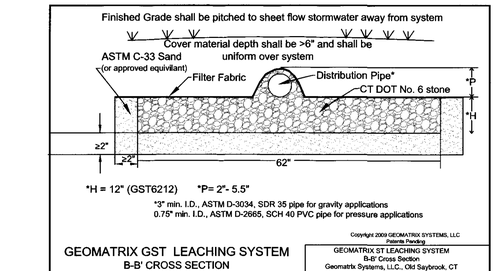
433 Center Road, Easton

Performed by Ochman Associates Inc., May 18, 2020 (Fb 135 , Pg. 132)

PERCOLATION TEST #1		PERCOLATION TEST #1	
Depth - 36"		Depth - 29"	
Presoak For @ 9:30		Presoak For @ 9:50	
Time	Reading	Time	Reading
10:49	10-1/2"	10:50	5"
11:09	21-3/4"	11:10	12-5/8"
11:19	23"	11:20	14-1/4"
11:29	24-1/4"	11:30	16"
11:39	25-1/2"	11:40	17-1/2"
11:49	26-3/4"	11:50	18-5/8"
11:59	28"	12:00	19-5/8"
Design Rate: 1" in 8 Min.		12:10	20-5/8
		Design Rate: 1" in 10 Min.	



Section: Ⓐ-Ⓐ
Horiz: 1" = 10'
Vert: 1" = 4'

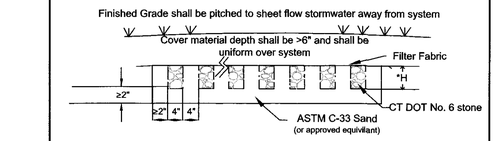


GEOMATRIX GST LEACHING SYSTEM
B-B' CROSS SECTION

Copyright 2009 GEOMATRIX SYSTEMS, LLC
Patents Pending

GEOMATRIX ST LEACHING SYSTEM
B-B' Cross Section
Geomatrix Systems, LLC., Old Saybrook, CT
860-510-0730

SCALE	None	REV.	C-0A/28/09
DATE	6/28/2007	ACAD No. GRC SLS B-B' SWG	
Drawn BY:		SHEET	3 OF 3



GEOMATRIX GST™LEACHING SYSTEM
A-A' CROSS SECTION

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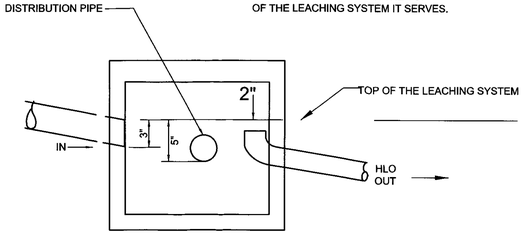
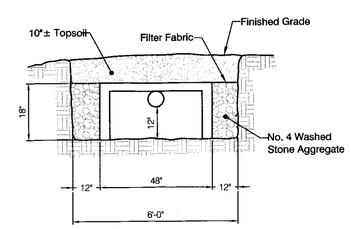
Patents Pending

GEOMATRIX ST LEACHING SYSTEM
A-A' Cross Section
Geomatrix Systems, LLC., Old Saybrook, CT
860-510-0730

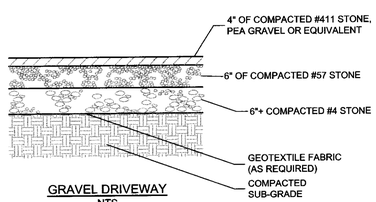
SCALE	None	REV.	C-0A/28/09
DATE	6/28/2007	ACAD No. GRC ST (3 PLAN VIEW).DWG	
Drawn BY:	EW	SHEET	2 OF 3



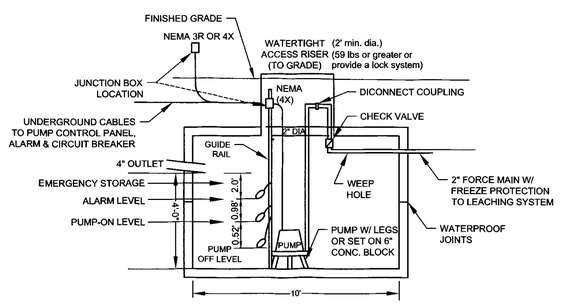
HIGH LEVEL OVERFLOW DISTRIBUTION BOX



18" GALLERY SEPTIC DETAIL
NTS



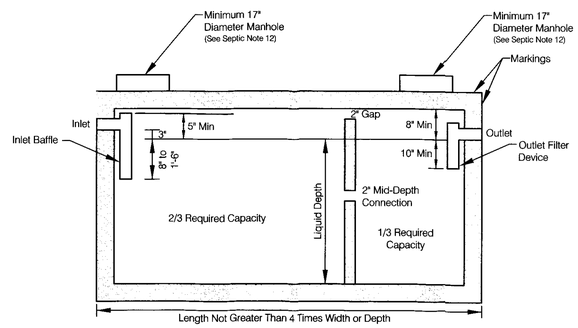
GRAVEL DRIVEWAY
NTS



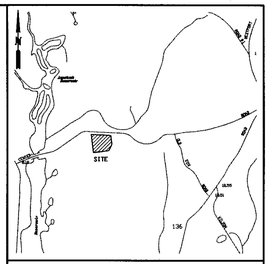
1500 GALLON EFFLUENT PUMP CHAMBER

1500 GALLON CT PRECAST CHAMBER
(INSIDE DIM. 10' L X 5'-2" W X 4'-0" (OUTLET)); 386.5 GAL. PER FOOT

1. INTERNAL LEACHING SYSTEM STORAGE VOLUME = 30 GALLONS/LF X 72 LF (1ST ROW) = 2,160;
2. 20% OF 2,160 GAL. = 432 GALLONS; USE 200 GAL. / DOSE
3. 200 GAL. / 386.5 GAL. PER FOOT OF TANK = 0.52' DOSE DROP
4. 24 HR. EMERGENCY STORAGE FOR 5 BEDROOMS & (1) BEDROOM COTTAGE = 750 GAL. PROVIDED = 2.0' X 386.5 GAL. / FT = 773 GALLONS
5. TOTAL HEAD REQUIRED = 13.5'; THEREFORE USE LIBERTY FL30 (1/3 HP) PUMP OR EQUIVALENT; @ 13.5 OF HEAD LIBERTY FL30 FLOW RATE IS 37 GAL./MIN.



TYPICAL SEPTIC TANK
(NTS)



ORIENTATION SCALE: 1" = 1500'

OCHMAN ASSOCIATES, INC.
CONSULTING ENGINEERS & SURVEYORS
P.O. BOX 76
EASTON, CONNECTICUT 06612
PHONE (203) 268-9194

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NO.	DATE	REVISION
1.	07-13-21	Health Dept. Comments

CONSTRUCTION NOTES & DETAILS:

SUBSURFACE SEWAGE DISPOSAL SYSTEM & GRAVEL DRIVEWAY

- PREPARED FOR -

433 CENTER ROAD LLC

#433 CENTER ROAD
EASTON, CONNECTICUT
ASSESSOR'S MAP 5466 LOT 4B

JUNE 9, 2021

SHEET 3 OF 4

COMMENCE: 03/02/2017	FB: 135 PG: 130
DRAWN BY: MVB	PROJECT NO.:
CHECKED BY: MAO	DWG NO.L: 24 - 1515

SCALE:
0 20 40 60
SCALE: 1" = 20'

STATE OF CONNECTICUT
MARK A. OCHMAN
No. 24913
LICENSED PROFESSIONAL ENGINEER

Mark Ochman

MARK A. OCHMAN, LICENSE # 24913
Not Valid Without A Live Signature & Embossed Seal