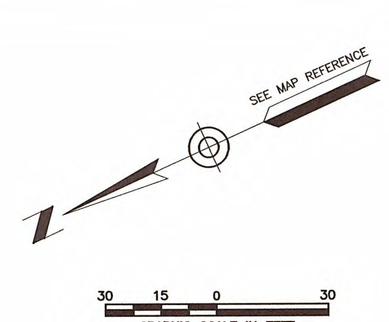
SEE SHEET 2 FOR SOIL TESTING RESULTS & SYSTEM CROSS SECTION

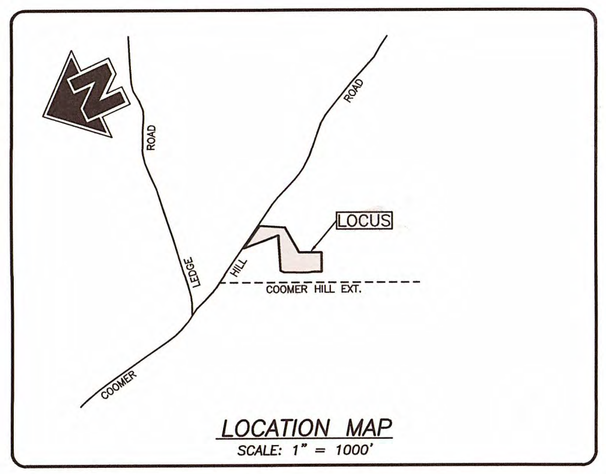
SEPTIC SYSTEM DESIGN DATA

| | | |
|---|---|---|
| Percolation Rate | = | 9.6 min. / in. |
| 2 bedroom house requires | = | 375 s.f. effective leaching area |
| Dog grooming (1 station) | | 250 Gallons per day/0.8 sf per gallon |
| | = | 312.5 s.f. |
| Total | = | 375 + 312.5 = 687.5 s.f. |
| Effective Leaching area | = | 11 s.f. / l.f. of Elgen Mantis 536-8 |
| Length Required | = | 687.5/11 = 62.5 l.f. |
| Length Provided | = | 65 l.f. |
| Min. Leaching System Spread (MLSS) | = | 28 x 1.83 x 1.0 = 51.24' |
| | HF = | 26 |
| | FF = | 1.0 (2 bedroom house) + 250/300 = 1.83 |
| | PF = | 1.0 |
| MLSS Provided | = | 65' |

LEACHING FIELD

One 65' row (13 sections) of Eljin Mantis 536-8
Maximum depth into existing grade = 12"




LOCATION MAP
SCALE: 1" = 1000'

SURVEYOR SHALL SET A BENCH MARK IN THE AREA OF THE SEPTIC SYSTEM AT THE TIME OF CONSTRUCTION STAKE-OUT.

| SEPTIC TANK |
|---|
| 1000 GALLON TWO COMPARTMENT F/L IN = 622.00 F/L OUT = 621.75 |
| DISTRIBUTION BOXES |
| D-1 (STANDARD) F/L IN = 620.47 F/L OUT = 620.30 |

NOTES:

1. This survey has been prepared pursuant to the Regulations of Connecticut State Agencies Sections 20-300b-1 through 20-300b-20 and the "Standards for Surveys and Maps in the State of Connecticut" as adopted by the Connecticut Association of Land Surveyors, Inc. on September 26, 1996;
   - This survey conforms to a Class "C" horizontal accuracy.
   - Topographic features conform to a Class "T-2", "V-2" vertical accuracy.
   - Survey Type: General Location Survey.
2. 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 or Limited Property/ Boundary Survey and is subject to such facts as said surveys may disclose.
3. Zone = RD.
4. Parcel is shown as Lot #19 on Assessors Map #171.
5. Owner of record: Jeanette Beaudry
   183 Coomer Hill Road
   Killingly, CT 06241
   See Volume 1290, Page 432
6. Elevations shown are based on NAVD 88. contours shown are taken from actual field survey. Contour interval = 2'.
7. Wetlands shown were delineated in the field by Joseph Theroux, Certified Soil Scientist, on 3/19/2022.
8. Soil test data taken from NDDH file # = 87000653.
9. Before any construction is to commence contact "CALL BEFORE YOU DIG" at 1-800-922-4455 or 811.

MAP REFERENCE:

1. "Porperty survey showing proposed property adjustment - Prepared for - Thomas & Jeannette Beaudry - Coomer Hill Road - Killingly, Ct. Scale: 1" = 40' - Date: May 2004 - Revised to: 7/2/04 - Prepared by: PC Survey Associates". On file as Map#5312 in the Killingly Land Records.

| DATE | DESCRIPTION |
|---|---|
| | REVISIONS |

SPECIFICATIONS

1. TANK SHALL HAVE A MINIMUM CAPACITY SUFFICIENT TO PRETREAT THE MAXIMUM DAILY FLOW PROPOSED AND NO LESS THAN 500 GALLONS. TANK SHALL BE CONSTRUCTED OF PRECAST CONCRETE.
2. INTERIOR OF THE TANK AND EXTENSION TO GRADE MANHOLES SHALL BE COATED WITH AN EPOXY PETROLEUM RESISTANT SEALANT. EXTERIOR OF THE TANK AND EXTENSION TO GRADE MANHOLES SHALL BE COATED WITH A WATERPROOF FOUNDATION SEALANT. THIS INCLUDES THE TANK EXTERIORS TOP AND BOTTOM.
3. STRUCTURAL SEAM OF THE TANK SHALL BE FILLED IN WITH NON-SHRINKING CEMENT OR WATER PLUG AND COATED WITH A WATERPROOF SEALANT.
4. VOIDS BETWEEN INLET AND OUTLET PIPING OF THE TANK SHALL BE GROUTED WITH NON-SHRINKING CEMENT AND COATED WITH A WATERPROOF SEALANT.
5. THE TANK SHALL HAVE EXTENSIONS TO GRADE ABOVE THE INLET AND OUTLET PIPING. THE EXTENSION SHALL HAVE STEEL FRAMES AND MANHOLE COVERS. THE MANHOLES, EXTENSIONS, AND ACCESSES TO THE TANK SHALL BE AT LEAST 18 INCHES IN DIAMETER.
6. THE OUTLET PIPING SHALL UTILIZE A TEE-PIPE ON THE INTERIOR OF THE TANK. THE TEE-PIPE SHALL BE EQUIPPED WITH A STAND PIPE RISER EXTENDING UP THE COVER. THE TEE-PIPE SHALL EXTEND SIX (6) TO TWELVE (12) INCHES FROM THE BOTTOM OF THE TANK.
7. THE INLET EXTENSION TO GRADE SHALL BE PROVIDED WITH A VENT LINE WHICH EXTENDS EIGHT (8) FEET ABOVE FINISHED GRADE AND PROPERLY SECURED TO THE BUILDING. THE SIZE OF THE VENT SHALL BE HALF THE SIZE OF THE OUTLET DISCHARGE LINE.
8. THE HORIZONTAL STRUCTURE SEAM OF THE TANK SHALL BE LOCATED ABOVE THE STATIC LIQUID LEVEL OF THE TANK.
9. THE INCOMING PIPING SHALL NOT INCLUDE ANY SOURCES OF DOMESTIC WASTEWATER.
10. THE OUTLET PIPE SHALL BE CONNECTED TO THE SANITARY SEWER OR HOLDING TANK.
11. THE OUTLET PIPE SHALL BE AT LEAST THE SIZE OF THE INLET PIPE OR GREATER AND AT A MINIMUM SHOULD BE 4.0 INCHES IN DIAMETER.
12. IF HEAVY PIPING, SUCH AS CAST IRON, IS USED, ALL PIPING MUST BE STRUCTURALLY SECURED.
13. THE CONCRETE COVERS PROVIDED BY THE OIL SEPARATOR MANUFACTURERS MUST BE PERMANENTLY REMOVED.
14. THE ENGINEER MUST BE GIVEN NOTICE OF ONE WEEK NOTICE PRIOR TO BACKFILLING THE TANK TO ALLOW ADEQUATE TIME TO VISUALLY INSPECT THE TANK & FACILITY
15. THE OIL-WATER SEPARATOR AND HOLDING TANK SHALL BE EMPTIED AND MAINTAINED BY A LICENSED PUMPING COMPANY AND EFFLUENT DISPOSED OF IN ACCORDANCE WITH CTDEEP GUIDELINES.

LEGEND

| | |
|---|---|
| F.F. | FINISHED FLOOR |
| ∅ | UTILITY POLE |
| ○ | IRON PINE FOUND |
| 100 | EXISTING CONTOURS |
| 100 | PROPOSED CONTOURS |
| # | INLAND WETLANDS FLAG |
| BL | BUILDING SETBACK LINE |
| PT | PERCOLATION TEST HOLE |
| | TEST HOLE |
| | STONE WALL |
| | SILT FENCE |

ANY CHANGES TO THESE PLANS WITHIN 200' OF WETLANDS OR WATERCOURSES MUST BE RESUBMITTED TO THE KILLINGLY INLAND WETLANDS AND WATERCOURSES COMMISSION FOR ITS APPROVAL.

THE APPLICANT WILL CONTACT THE KILLINGLY INLAND WETLANDS AND WATERCOURSES COMMISSION'S AGENT AFTER ALL EROSION AND SEDIMENT CONTROL MEASURES ARE INSTALLED, PRIOR TO ANY CONSTRUCTION OR EXCAVATION ON THE PROPERTY.

APPROVED BY THE TOWN OF KILLINGLY INLAND WETLANDS COMMISSION

CHAIRMAN DATE

I HAVE REVIEWED THE FLAGGED INLAND WETLANDS LOCATION SHOWN ON THIS PLAN AND THEY APPEAR TO BE SUBSTANTIALLY CORRECT.

Joseph Theroux, Certified Soil Scientist Date

NORMAND THIBEAULT, JR., P.E. No. 22834 3/30/2022 DATE

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON,

GREG A. GLAUDE, L.S. LIC. NO. 70191 3.30.2022 DATE

NO CERTIFICATION IS EXPRESSED OR IMPLIED UNLESS THIS MAP BEARS THE ORIGINAL SEAL AND SIGNATURE OF THE LAND SURVEYOR.

GENERAL LOCATION SURVEY
SEPTIC SYSTEM DESIGN PLAN
PREPARED FOR

ERIC BROWN

189 COOMER HILL ROAD
KILLINGLY, CONNECTICUT


Killingly Engineering Associates
Civil Engineering & Surveying
114 Westcott Road
P.O. Box 421
Killingly, Connecticut 06241
(860) 779-7299
www.killinglyengineering.com


| | |
|---|---|
| DATE: 03/28/2022 | DRAWN: RGS |
| SCALE: 1" = 30' | DESIGN: NET |
| SHEET: 1 OF 2 | CHK BY: GG |
| DWG. No: CLIENT FILE | JOB No: 22013 |

K:\22013\Drawings\22013 sed.dwg Mar 30, 2022 - 12:45 PM

## EROSION AND SEDIMENT CONTROL NARRATIVE:

PRINCIPLES OF EROSION AND SEDIMENT CONTROL

The primary function of erosion and sediment controls is to absorb erosional energies and reduce runoff velocities that force the detachment and transport of soil and/or encourage the deposition of eroded soil particles before they reach any sensitive area.

KEEP LAND DISTURBANCE TO A MINIMUM

The more land that is in vegetative cover, the more surface water will infiltrate into the soil, thus minimizing stormwater runoff and potential erosion. Keeping land disturbance to a minimum not only involves minimizing the extent of exposure at any one time, but also the duration of exposure. Phasing, sequencing and construction scheduling are interrelated. Phasing divides a large project into distinct sections where construction work over a specific area occurs over distinct periods of time and each phase is not dependent upon a subsequent phase in order to be functional. A sequence is the order in which construction activities are to occur during any particular phase. A sequence should be developed on the premise of "first things first" and "last things last" with proper attention given to the inclusion of adequate erosion and sediment control measures. A construction schedule is a sequence with time lines applied to it and should address the potential overlap of actions in a sequence which may be in conflict with each other.

- Limit areas of clearing and grading. Protect natural vegetation from construction equipment with fencing, tree armoring, and retaining walls or tree wells.
- Route traffic patterns within the site to avoid existing or newly planted vegetation.
- Phase construction so that areas which are actively being developed at any one time are minimized and only that area under construction is exposed. Clear only those areas essential for construction.
- Sequence the construction of storm drainage systems so that they are operational as soon as possible during construction. Ensure all outlets are stable before outletting storm drainage flow into them.
- Schedule construction so that final grading and stabilization is completed as soon as possible.

SLOW THE FLOW

Detachment and transport of eroded soil must be kept to a minimum by absorbing and reducing the erosive energy of water. The erosive energy of water increases as the volume and velocity of runoff increases. The volume and velocity of runoff increases during development as a result of reduced infiltration rates caused by the removal of existing vegetation, removal of topsoil, compaction of soil and the construction of impervious surfaces.

- Use diversions, stone dikes, silt fences and similar measures to break flow lines and dissipate storm water energy.
- Avoid diverting one drainage system into another without calculating the potential for downstream flooding or erosion.

KEEP CLEAN RUNOFF SEPARATED

Clean runoff should be kept separated from sediment laden water and should not be directed over disturbed areas without additional controls. Additionally, prevent the mixing of clean off-site generated runoff with sediment laden runoff generated on-site until after adequate filtration of on-site waters has occurred.

- Segregate construction waters from clean water.
- Divert site runoff to keep it isolated from wetlands, watercourses and drainage ways that flow through or near the development until the sediment in that runoff is trapped or detained.

REDUCE ON SITE POTENTIAL INTERNALLY AND INSTALL PERIMETER CONTROLS

While it may seem less complicated to collect all waters to one point of discharge for treatment and just install a perimeter control, it can be more effective to apply internal controls to many small sub-drainage basins within the site. By reducing sediment loading from within the site, the chance of perimeter control failure and the potential off-site damage that it can cause is reduced. It is generally more expensive to correct off-site damage than it is to install proper internal controls.

- Control erosion and sedimentation in the smallest drainage area possible. It is easier to control erosion than to contend with sediment after it has been carried downstream and deposited in unwanted areas.
- Direct runoff from small disturbed areas to adjoining undisturbed vegetated areas to reduce the potential for concentrated flows and increase settlement and filtering of sediments.
- Concentrated runoff from development should be safely conveyed to stable outlets using rip rapped channels, waterways, diversions, storm drains or similar measures.
- Determine the need for sediment basins. Sediment basins are required on larger developments where major grading is planned and where it is impossible or impractical to control erosion at the source. Sediment basins are needed on large and small sites when sensitive areas such as wetlands, watercourses, and streets would be impacted by off-site sediment deposition. Do not locate sediment basins in wetlands or permanent or intermittent watercourses. Sediment basins should be located to intercept runoff prior to its entry into the wetland or watercourse.

## SEPTIC SYSTEM CONSTRUCTION NOTES

1. The building, septic system and well shall be accurately staked in the field by a licensed Land Surveyor in the State of Connecticut, prior to construction.
2. Topsoil shall be removed and in the area of the primary leaching field scarified, prior to placement of septic fill. Septic fill specifications are as follows:

   – Max. percent of gravel (material between No. 4 & 3 inch sieves) = 45%

   GRADATION OF FILL (MINUS GRAVEL)

| SIEVE SIZE | PERCENT PASSING (WET SIEVE) | PERCENT PASSING (DRY SIEVE) |
|---|---|---|
| No. 4 | 100% | 100% |
| No. 10 | 70% – 100% | 70% – 100% |
| No. 40 | 10% – 50% | 10% – 75% |
| No. 100 | 0% – 20% | 0% – 5% |
| No. 200 | 0% – 5% | 0% – 2.5% |

   Fill material shall be approved by the sanitarian prior to placement. It shall be compacted in 6" lifts and shall extend a minimum of five feet (5') around the perimeter of the system. Common fill shall extend an additional five feet (5') down gradient of the system (10' total) before tapering off at a maximum slope of 2H:1V.
3. Septic tank shall be two compartment precast 1,000 gallon tank with gas deflector and outlet filter as manufactured by Jolley Precast, Inc. or equal.
4. Distribution boxes shall be 4 hole precast concrete as manufactured by Jolley Precast, Inc. or equal.
5. All precast structures such as septic tanks, distribution boxes, etc. shall be set level on six inches (6") of compacted gravel base at the elevations specified on the plans.
6. Solid distribution pipe shall be 4" diameter PVC meeting ASTM D–3034 SDR 35 with compression gasket joints. It shall be laid true to the lines and grades shown on the plans and in no case have a slope less than 0.125 inches per foot.
7. Perforated distribution pipe shall be 4" diameter PVC meeting ASTM D–3034 or ASTM F1760 for SDR 35, or ASTM F810 for SDR 38.
8. Sewer pipe from the foundation wall to the septic tank shall be schedule 40 PVC meeting ASTM D 1785. It shall be laid true to the grades shown on the plans and in no case shall have a slope less than 0.25 inches per foot.
9. Solid footing drain outlet pipe shall be 4" Diameter PVC meeting ASTM D 3034, SDR 35 with compression gasketed joints. Footing drain outlet pipe shall not be backfilled with free draining material, such as gravel, broken stone, rock fragments, etc.
10. Septic sand shall meet the requirements of ASTM C–33 with less than 10% passing a 100 sieve and less than 5% passing a 200 sieve

| SIEVE SIZE | % PASSING |
|---|---|
| 0.375 | 100 |
| #4 | 95–100 |
| #8 | 80–100 |
| #16 | 60–85 |
| #30 | 25–60 |
| #50 | 10–30 |
| #100 | <10 |
| #200 | <5 |

PERCOLATION TEST RESULT – March 10, 2022
NORTHEAST DISTRICT DEPARTMENT OF HEALTH

HOLE AA
Depth = 22" Rate = 9.6 min./in.

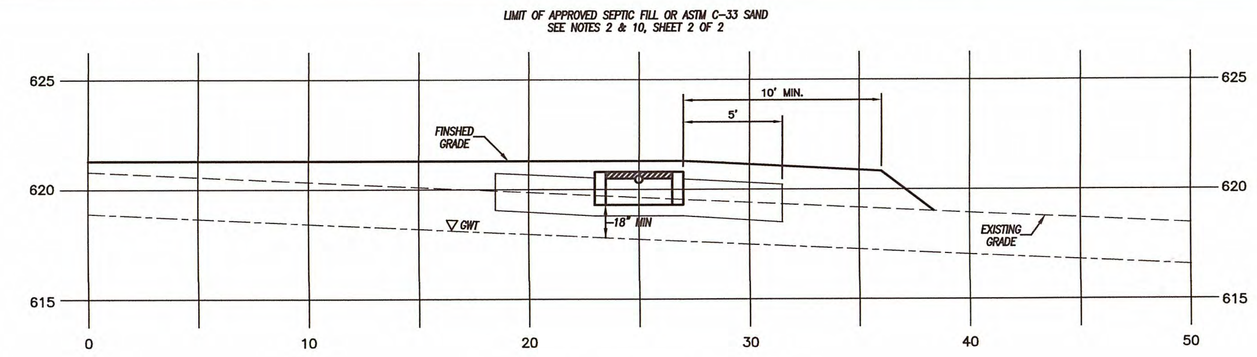
| Time | Reading |
|---|---|
| 12:05 | 1.5" |
| 12:10 | 3.75" |
| 12:17 | 5.625" |
| 12:22 | 7.5" |
| 12:32 | 15" |
| 12:40 | 10.5" |
| 12:46 | 11.25" |
| 12:52 | 11.875" |
| 12:58 | 12.5" |

TEST HOLE DATA – March 10, 2022
Northeast District Department of Health

| | DEPTH | PROFILE |
|---|---|---|
| 101 | 0"– 4" | Topsoil/Organics |
| | 4"– 19" | Brown Sandy Loam, Silty |
| | 19"–31" | Tan Loamy Fine Sand |
| | 31"– 64" | Mottled, Grey Sandy Loam |
| | 64"–68" | Groundwater |
| | Ledge | N/A |
| | GWT | 64" |
| | Mottling | 31" |
| | Restrictive | 31" |
| 102 | 0"–6" | Topsoil/Organics |
| | 6"–17" | Brown Sandy Loam, Silty |
| | 17"–30" | Loamy, Fine Sand |
| | 30"–66" | Moist, Mottled Grey, Sandy Pan |
| | 66"–70" | Groundwater |
| | Ledge | N/A |
| | GWT | 66" Seeps @ 35" |
| | Mottling | 30" |
| | Restrictive | 30" |
| 103 | 0"– 5" | Topsoil/Organics |
| | 5"– 20" | Brown Sandy Loam |
| | 20"–71" | Grey, Mottled Wet Sandy Loam |
| | 71"–75" | Groundwater |
| | Ledge | N/A |
| | GWT | 71" Seeps @ 40" |
| | Mottling | 20" |
| | Restrictive | 20" |

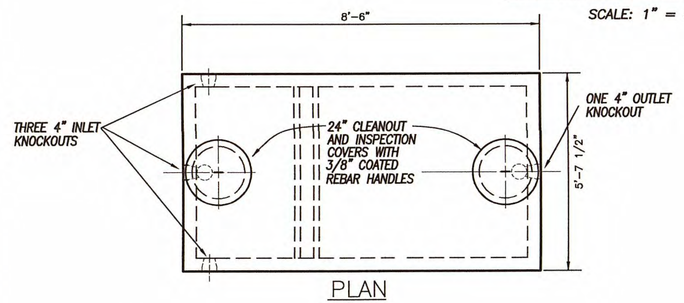
TEST HOLE DATA – Decemeber 28, 1999
Northeast District Department of Health

| | DEPTH | PROFILE |
|---|---|---|
| 1 | 0"– 7" | Topsoil |
| | 7"– 23" | Gravelly Loamy Sand |
| | 23"–45" | Tight Gravelly Loamy Sand |
| | 45"–83" | Mod. Compact Loamy Fine Sand, Water Worked @ 45" |
| | Ledge | N/A |
| | GWT | 79" |
| | Mottling | N/A" |
| 2 | 0"– 8" | Topsoil |
| | 8"– 20" | Gravelly Loamy Sand |
| | 20"–41" | Tight Gravelly Loamy Sand |
| | 41"–96" | Mod. Compact Loamy Coarse Sand To Loamy Fine Sand |
| | Ledge | N/A |
| | GWT | 96" |
| | Mottling | N/A |
| | Water Worked @ 41" | |

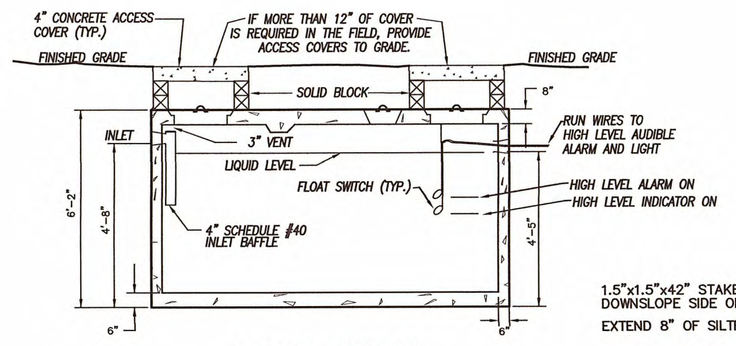



## CROSS SECTION "A–A"

SCALE: 1" = 5'



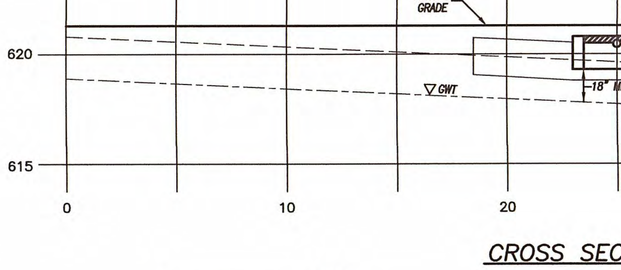

PLAN




CROSS SECTION

## 1000 GALLON HEAVY DUTY 1 COMPARTMENT HOLDING TANK

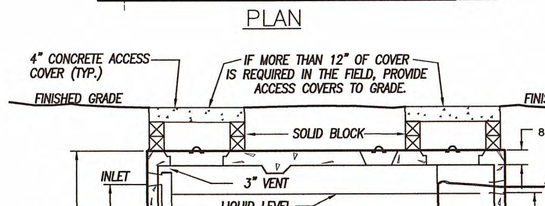
NOT TO SCALE




PLAN VIEW




LAND ABOVE ROAD
(SECTION)

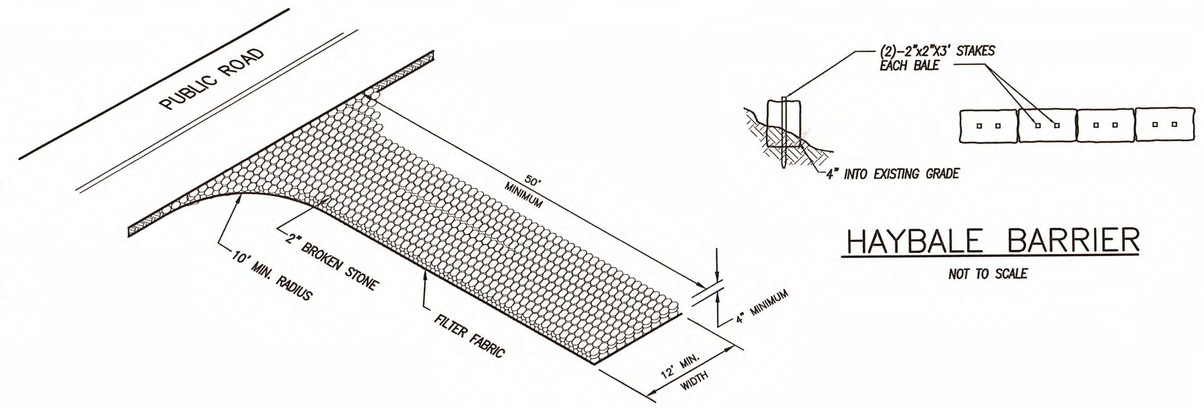



LAND BELOW ROAD
(SECTION)

1. THE ABOVE DETAIL IS ILLUSTRATIVE ONLY AND DOES NOT APPLY TO EVERY SITUATION. REVIEW YOUR DRIVEWAY PERMIT FOR YOUR SPECIFIC REQUIREMENTS.
2. DRIVEWAYS IN EXCESS OF 10% GRADE, AND ALL COMMON (SHARED) DRIVEWAYS SHALL BE PAVED WITH BITUMINOUS CONCRETE.

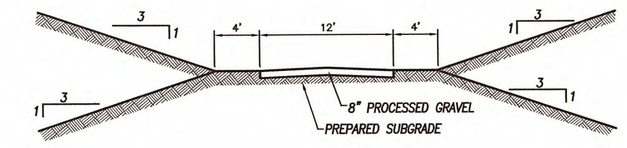
## STANDARD DRIVE DETAIL

NOT TO SCALE




## HAYBALE BARRIER

NOT TO SCALE

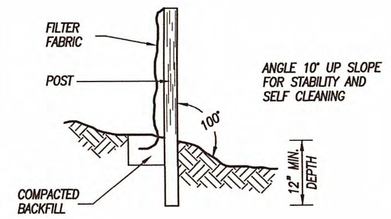


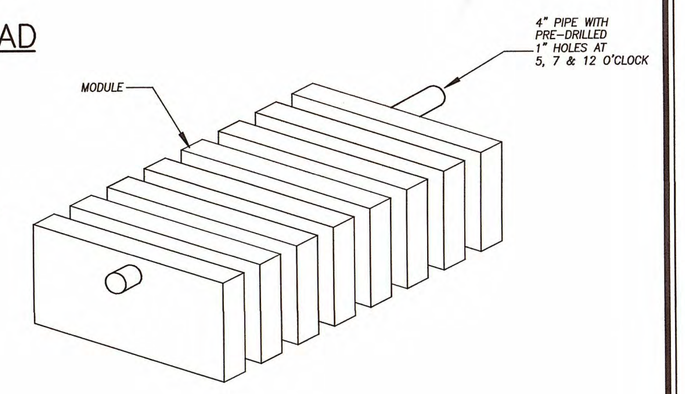

## GRAVEL DRIVE DETAIL

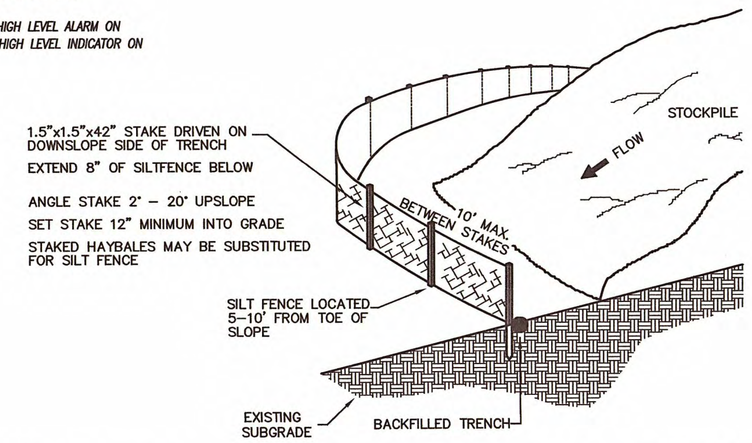
NOT TO SCALE

## ANTI–TRACKING PAD

NOT TO SCALE



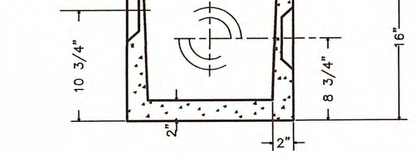




## SILT FENCE @ TOE OF SLOPE APPLICATION

NOT TO SCALE

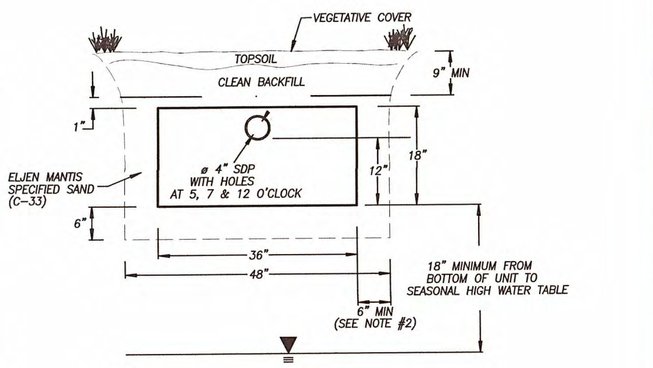
## SILT FENCE

NOT TO SCALE



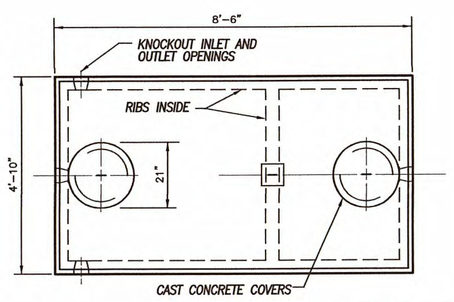

## STANDARD D–BOX

NOT TO SCALE

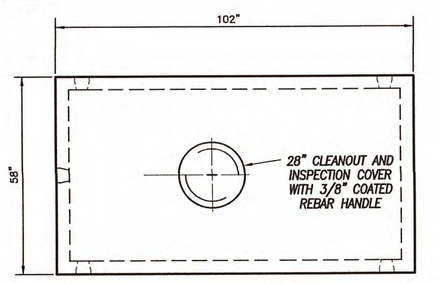



NOTES:
1. VENTING REQUIRED WHEN MORE THAN 18" OF COVER AS MEASURED FROM THE TOP OF THE UNIT TO FINISHED GRADE.
2. FOR SYSTEMS INSTALLED IN FILL, CONTRACTOR SHALL PROVIDE 5' OF SELECT FILL OR ASTM C–33 SAND 5' AROUND PERIMETER OF SYSTEM.

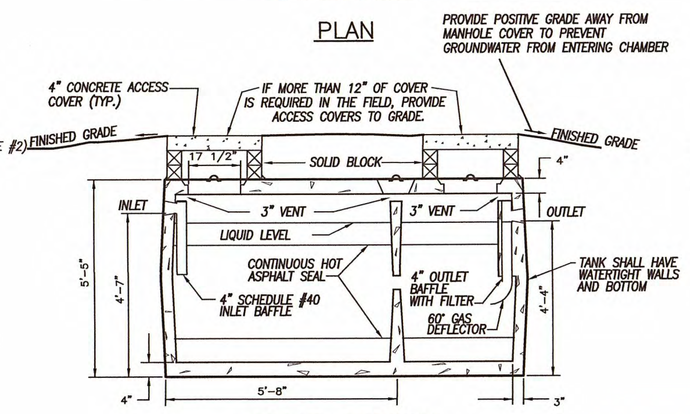
## ELJEN 536–8 WASTEWATER LEACHING SYSTEM




PLAN



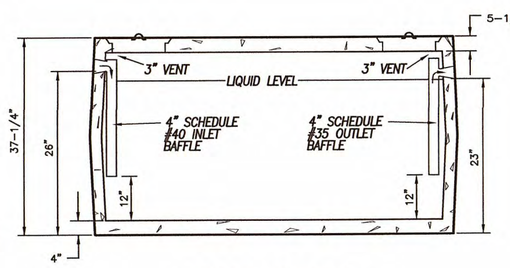

PLAN




CROSS SECTION

## 1000 GALLON 2 COMPARTMENT SEPTIC TANK

NOT TO SCALE




CROSS SECTION

## 500 GALLON GREASE TRAP

NOT TO SCALE

STATE OF CONNECTICUT NORMAND R. THIBEAULT, JR. No. 22834 LICENSED PROFESSIONAL ENGINEER

NORMAND THIBEAULT, JR., P.E. No. 22834 — 3/30/2022 DATE

| DATE | DESCRIPTION |
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REVISIONS

DETAIL SHEET

PREPARED FOR

ERIC BROWN

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| DATE: 03/28/2022 | DRAWN: RGS |
| SCALE: NOT TO SCALE | DESIGN: NET |
| SHEET: 2 OF 2 | CHK BY: GG |
| DWG. No: CLIENT FILE | JOB No: 22013 |

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