TEST HOLE DATA

DEEP TEST HOLES WERE PERFORMED BY NEXUS ENGINEERING ASSOCIATES AND WITNESSED BY THE TOWN, ON JUNE 16, 1987

TH 1
0–9" TOPSOIL
9–30" LIGHT TO SANDY LOAM
30–88" COMPACT MOTTLED TILL
LEDGE AT 88"
ROOTS TO 30"

TH 2
0–6" TOPSOIL
6–24" LIGHT TAN SANDY LOAM
24–36" BROWN SANDY LOAM
36–90" COMPACT MOTTLED TILL WITH SOME STONE
LEDGE AT 90"
ROOTS TO 24"

TH 3
0–6" TOPSOIL
6–24" LIGHT TAN SANDY LOAM
24–48" COMPACT TILL
LEDGE AT 48"

TH 4
0–12" TOPSOIL
12–36" BROWN SANDY LOAM
36–66" BROWN PACKED MOTTLED TILL
66–76" DECOMPOSED LEDGE
LEDGE AT 66"
ROOTS TO 24"
NO WATER

TH 5
0–6" TOPSOIL
6–24" LIGHT TAN SANDY LOAM
24–94" BROWN COMPACT MOTTLED TILL
LEDGE AT 94"
ROOTS TO 24"

DEEP TEST HOLES WERE PERFORMED BY PEAK ENGINEERS, LLC AND WITNESSED BY THE TOWN, ON JUNE 30, 2021

TH 6
0–14" MISC FILL, TS–DISTURBED
14–39" RED/BROWN FINE SANDY LOAM
39–42" TAN FINE SANDY LOAM
42–50" GREY/TAN FINE SAND
RESTRICTIVE LAYER 28" (42–14)

TH 7
0–6" TOPSOIL
6–17" RED/BROWN FINE SANDY LOAM
17–31" TAN VERY FINE SANDY LOAM
31–72" MODERATELY COMPACT SANDY HARDPAN
MOTTLES & HARDPAN 31"
ROOTS 31"
RESTRICTIVE LAYER 31"

TH 8
0–5" MISC FILL
5–14" ORIGINAL TOPSOIL
14–31" RED/BROWN SILTY FINE SANDY LOAM
31–41" TAN SLIGHTLY COMPACT SILT AND SAND
41–72" TAN SANDY HARDPAN
HARDPAN/MOTTLES 31"
RESTRICTIVE LAYER 26" (31–5)

PERCOLATION DATA

PERCOLATION TEST PERFORMED BY NEXUS ENGINEER

PH 1 10" DIAMETER, 26" DEEP, DATE JANUARY 13, 1988
PRESOAK 12:45

TIME	MEASURE	DROP	MIN ELAPSED	RATE
1:40	11 3/4"			
1:50	15 1/4"	3 1/2"	10	1"/2.9 MIN.
2:00	16 1/4"	1"	10	1"/10.0 MIN.
2:10	17 1/4"	1"	10	1"/10.0 MIN.
2:20	18 1/4"	1"	10	1"/10.0 MIN.
2:30	19 1/4"	1"	10	1"/10.0 MIN.

PH 2 10" DIAMETER, 31" DEEP, DATE JANUARY 13, 1988
PRESOAK AT 1:08

TIME	MEASURE	DROP	MIN ELAPSED	RATE
2:05	10 1/2"			
2:15	13 1/2"	3"	10	1"/3.3 MIN.
2:25	15 1/2"	2"	10	1"/5 MIN.
2:35	17 1/2"	2"	10	1"/5 MIN.
2:45	18"	1/2"	10	1"/20 MIN.

PERCOLATION DATA

PERCOLATION TEST PERFORMED BY PEAK ENGINEERS, LLC

PH A 10" DIAMETER, 22" DEEP, DATE JULY 7, 2021
PRESOAK 11:49 7", DRY 12:24

TIME	MEASURE	DROP	MIN ELAPSED	RATE
12:25	8"			
12:35	12 1/4"	4 1/4"	10	1"/2.4 MIN.
12:45	15 1/4"	3"	10	1"/3.33 MIN.
12:55	16 3/4"	1 1/2"	10	1"/6.6 MIN.
1:05	18 1/4"	1 1/2"	10	1"/6.6 MIN.
1:15	19 7/8"	1 5/8"	10	1"/6.15 MIN.

INSTALLATION NOTES, SEPTIC SYSTEM

1. *INSTALL 58 LF OF GEOMATRIX GST 6212 PER THE MANUFACTURERS SPECIFICATIONS*
   THE TRENCH EXCAVATION SHALL BE NOT LESS THAN 66" WIDE AND THE BOTTOM SHALL BE LEVEL THROUGHOUT. THE EXCAVATOR SHALL SCARIFY THE BOTTOM OF THE TRENCH WITH THE TEETH OF THE BUCKET.
2. *INSTALL 1500 GALLON SEPTIC TANK. THE TANK SHALL MEET ASTM C1227–95 AND BE EQUIPPED WITH AN APPROVED OUTLET FILTER. MAXIMUM COVER, ASSUMING 100 PCF LOADING, IS TWO FEET.*
   MANHOLES OF THE TANK SHALL BE WITHIN 6" OF FINISHED GRADE.
   TANKS BURIED MORE THAN 24"" MUST HAVE RISERS WITH MINIMUM INSIDE DIAMETER OF 24". ALL RISERS SHALL BE GROUTED WATERTIGHT.

∗∗∗ *THE INSTALLER IS RESPONSIBLE FOR ORDERING A TANK THAT CAN MEET SITE LOADING CONDITIONS (SOIL COVER).*

3. *DISTRIBUTION BOXES SHALL BE PRECAST CONCRETE WITH REMOVABLE COVER, BOXES SHALL BE SET LEVEL ON A MINIMUM OF 24" OF DOT NO. 4 OR NO 6 STONE. THE BOXES SHALL BE SOLIDLY BACKFILLED ON ALL SIDES.*
4. *STONE AGGREGATE MEANS BROKEN OR CRUSHED STONES, OR SCREENED GRAVEL MEETING DEPARTMENT OF TRANSPORTATION FORM 816 SPEC. M.01.01 FOR NO. 4 STONE.*
5. *DISTRIBUTION PIPE, BEYOND THE SEPTIC TANK, SHALL BE SOLID PIPE SATISFYING ASTM D3034 SDR35. WITH RUBBER COMPRESSION GASKET COUPLINGS (OR EQUAL). SEE TABLE 2–C OF TECH STNDS.*
6. *BUILDING SEWER PIPE FROM THE BUILDING SERVED TO THE SEPTIC TANK, (TABLE NO. 2–A, TECH. STNDS), SHALL BE 4" PVC ASTM D 1785 OR ASTM D 2665, SCHEDULE 40 WITH SOLVENT WELD COUPLINGS/FITTINGS USING PROPER TWO STEP PVC SOLVENT SOLUTION PROCEDURE OR RUBBER COMPRESSION GASKET COUPLINGS, HARCO MFG., ASTM D 3139 OR EQUAL. THE PIPE SHALL BE LAID AT PITCH NOT LESS THAN 1/4" PER LINEAL FOOT.*
   THE FINAL LOCATIONS OF THE SERVICE LINE AND TANKS MAY BE ALTERED FROM PLAN DEPENDING ON SITE CONDITIONS. LINES OVER 75' IN LENGTH AND LINES WITH CUMULATIVE BENDS EXCEEDING 45 DEGREES REQUIRE CLEANOUTS TO GRADE.
7. *SELECT FILL SHALL BE CLEAN BANK RUN SAND, CLEAN BANK RUN SAND AND GRAVEL, OR APPROVED MANUFACTURED FILL MEETING THE SPECS. IN SECTION VIII OF THE TECH. STNDS.*

SIEVE SIZE PERCENT PASSING

WET SIEVE		DRY SIEVE		
#4	100	#4	100	NATURAL SAND IS STRONGLY RECOMMENDED.
#10	70–100	#10	70–100	
#40	10–50*	#40	10–75	
#100	0–20	#100	0–5	
#200	0–5	#200	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%.*

8. *THE SELECT FILL SHALL BE PLACED WITHOUT THE NEED FOR HEAVY EQUIPMENT PASSING OVER THE SYSTEM AREA. THE SELECT FILL SHALL NOT BE TAMPED OR ROLLED. THE IN PLACE PERCOLATION RATE SHALL BE BETTER THAN 1" IN 10 MINUTES.*
9. *BERM MATERIAL SHALL BE NATIVE SOIL OR CLEAN COMMON FILL FREE OF ORGANIC MATTER, TOPSOIL, STUMPS AND BOULDERS 6" OR GREATER IN SIZE.*

INSTALL 1,000 GALLON PRECAST CONCRETE PUMP CHAMBER.
- *THE PUMP CHAMBER SHALL BE WATERPROOFED ON THE OUTSIDE. DELIVERY SLIP IS REQUIRED AT TIME OF ASBUILT WITH THE TOWN AND ENGINEER*
- *THE TANK SHALL MEET ASTM SPEC C–1227–95. MANHOLES OF THE PUMP CHAMBER SHALL BE SET AT OR ABOVE GRADE.*

10. *ALL RISERS AND LIDS SHALL BE GROUTED WATERTIGHT. THE INSTALLER IS RESPONSIBLE FOR ORDERING A TANK THAT CAN MEET SITE LOADING CONDITIONS (SOIL COVER).*

∗∗∗ 11. *THE PUMP LINE SHALL BE PVC PLASTIC RIGID PRESSURE PIPE ASTM D1785/ASTM D2665, SCH. 40. JOINTS SHALL BE SOLVENT WELDED, THREADED JOINTS OR GASKETED COUPLINGS. THE PIPE SHALL BE BURIED A MINIMUM OF 42" (FROST PROTECTION) AND BE SURROUNDED BY A MINIMUM OF 6" OF SAND.*
   IF 42" OF COVER CAN NOT BE PROVIDED THE DEPTH OF COVER MAY BE REDUCED TO 18" IF THE PUMP LINE IS INSTALLED TO DRAIN COMPLETELY EMPTY . THE PUMP MANUFACTURER MUST APPROVE INSTALLATION OF PUMP WITHOUT A CHECK VALVE.

12. *"TIGHT" STORM DRAIN PIPE SHALL MEET OR EXCEED THE SPECIFICATIONS LISTED IN TABLE 2–C, OF THE CONNECTICUT PUBLIC HEALTH CODE, ON–SITE SEWAGE DISPOSAL REGULATIONS AND TECHNICAL STANDARDS FOR SUBSURFACE SEWAGE DISPOSAL SYSTEMS, LATEST REVISION JANUARY 2015. USE ASTM D 3034, SDR 35 WITH TWO STEP PVC SOLVENT SOLUTION PROCEDURE (OR BETTER PIPE AND JOINT).*
13. *PROVIDE 50' MINIMUM FROM A SEWAGE DISPOSAL SYSTEM TO ANY DOWN GRADIENT DRAINAGE SYSTEM INSTALLED TO COLLECT AND/OR REDIRECT GROUNDWATER, INCLUDING LOOSE, OPEN JOINTED, OR PERFORATED, PIPING AND PIPING BACKFILLED WITH FREE DRAINING MATERIAL.*
    PROVIDE 25' MINIMUM FROM A SEWAGE DISPOSAL SYSTEM TO ANY UPGRADIENT OR LATERAL DRAINAGE SYSTEM INSTALLED TO COLLECT AND/OR REDIRECT GROUNDWATER OR ROOF WATER. INCLUDING LOOSE, OPEN JOINTED, OR PERFORATED, PIPING AND PIPING BACKFILLED WITH FREE DRAINING MATERIAL.
14. *PROVIDE 50' MINIMUM FROM THE LEACHING AREA TO ANY DOWN GRADIENT CUT IN HISTORIC GRADE.*

SEPTIC DESIGN DATA

REFERENCE: CT PUBLIC HEALTH CODE, ON–SITE SEWAGE DISPOSAL REGULATIONS AND TECHNICAL STANDARDS FOR SUBSURFACE SEWAGE DISPOSAL SYSTEMS, 2018 EDITION.

1. *PROPOSED 4 BEDROOM RESIDENCE.*
2. *DESIGN PERCOLATION RATE 1"/10.1–1"/20.0 MINUTES.*
3. *REQUIRED LEACHING AREA IS 577.5 SQUARE FEET.*
4. *MLSS CALCULATIONS*

HYDRAULIC GRADIENT (% SLOPE) =6.1–8.0%
DEPTH TO RESTRICTIVE LAYER (IN INCHES)

AVERAGE RL OF TEST HOLES WITHIN THE SYSTEM AREA (TH 2,7,8) IS $RL = \frac{36 + 31 + 26}{3} = 31"$

AVERAGE RL OF DOWNGRADE TEST HOLES (TH 3,6) $RL = \frac{24 + 28}{2} = 26"$

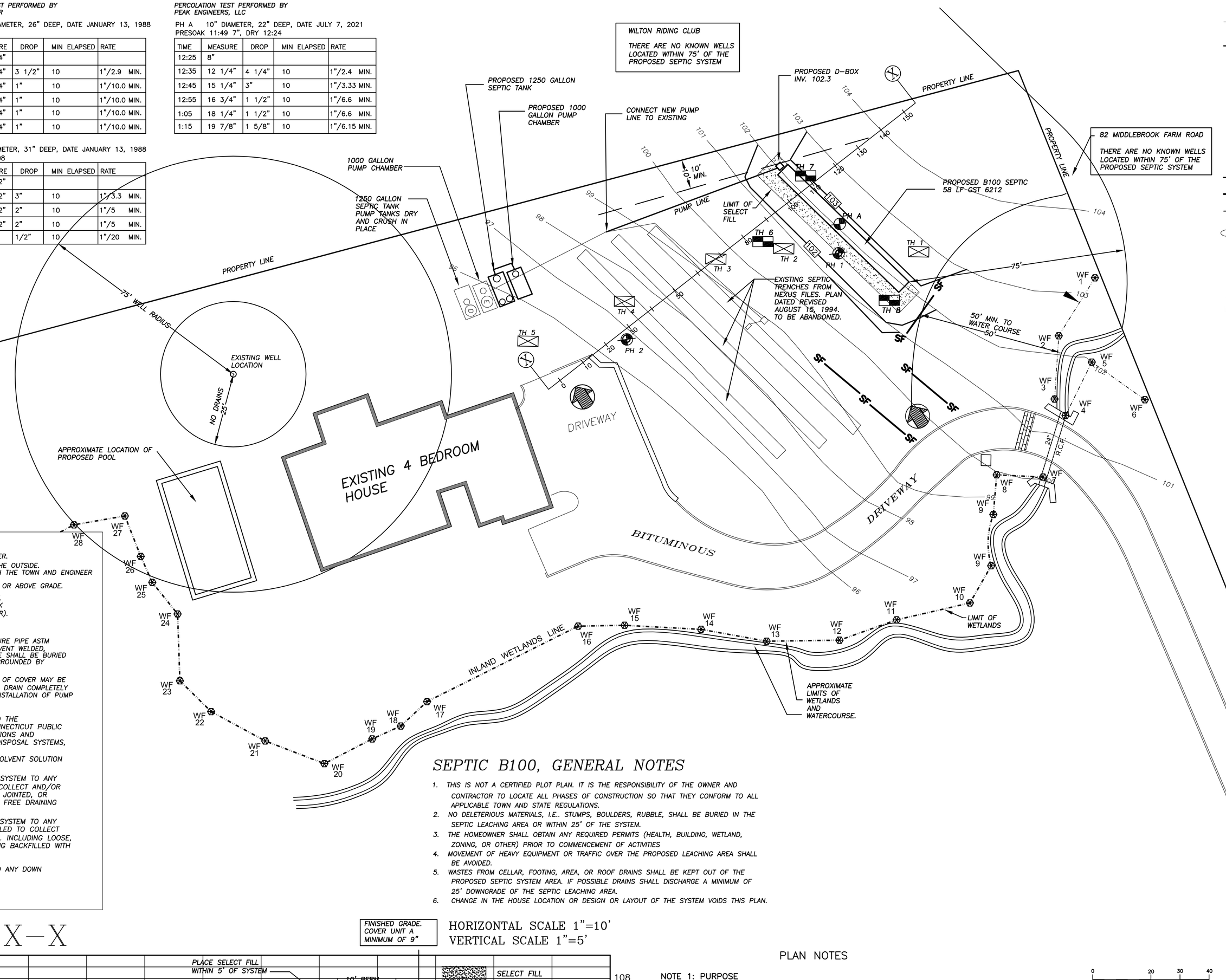
$MLSS\ DESIGN\ RL = \frac{31" + 26"}{2} = 28.5"$

HYDRAULIC FACTOR (HF) =28
FLOW FACTOR (FF) = 4 BEDROOMS =1.75
PERCOLATION FACTOR (PF) 1"/10.1–1"/20.0 =1.00

MLSS (IN FEET) = HF x FF x PF =49'

58 LINEAL FEET OF LEACHING SPREAD PROVIDED BY THE DESIGN

5. *PROPOSED SYSTEM–58 LINEAL FEET OF GEOMATRIX GST 6212. EFFECTIVE LEACHING RATE IS 10.0 SF PER LF. LEACHING AREA PROVIDED IS 580 SQUARE FEET.*
6. *THIS SYSTEM IS NOT DESIGNED TO ACCEPT WASTES FROM GARBAGE DISPOSAL UNITS (GARBAGE GRINDERS) OR BACKWASH EFFLUENT FROM WATER SOFTENERS OR FILTERS AND/OR WHIRLPOOL TYPE BATHS IN EXCESS OF 100 GALLONS, OR BACKWASH FROM CENTRAL VACUUM SYSTEMS. BATHTUBS EXCEEDING 100 GALLONS AND LESS THAN 200 GALLONS REQUIRES THE SEPTIC TANK CAPACITY TO BE INCREASED BY 250 GALLONS.*

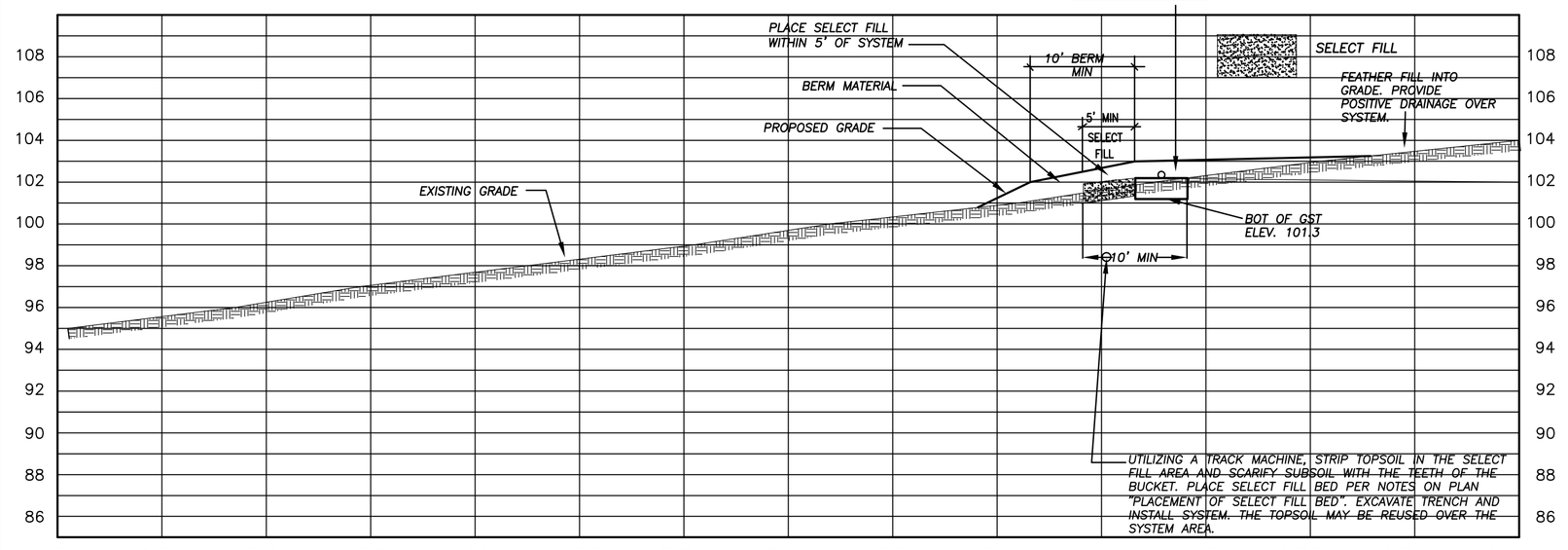


LEGEND

- 102 — EXISTING CONTOUR
- 102 — PROPOSED CONTOUR
- +100.2 — EXISTING SPOT ELEVATION
- 100.9 — PROPOSED SPOT ELEVATION
- PH A — PERCOLATION HOLE
- TH 1 — DEEP TEST HOLE
- TH 1 — DEEP TEST HOLE PERFORMED BY OTHERS
- WATER
- WETLANDS
- WETLANDS UPLAND REVIEW AREA
- STONE WALL EXISTING
- GTD — GRADE TO DRAIN
- FD — FOOTING DRAIN
- RD — ROOF DRAIN
- PRIMARY SEPTIC FIELD
- EXISTING SEPTIC FIELD
- CONSTRUCTION ACCESS ROUTE
- CONSTRUCTION ENTRANCE
- SF — SF — SILT FENCE
- STOCKPILE AREA
- STAKED HAYBALE
- SF — SF — SILT FENCE WITH STAKED STRAWBALE
- LOD — LOD — LIMIT OF DISTURBANCE

SECTION AT X–X

HORIZONTAL SCALE 1"=10'
VERTICAL SCALE 1"=5'



SEPTIC B100, GENERAL NOTES

1. *THIS IS NOT A CERTIFIED PLOT PLAN. IT IS THE RESPONSIBILITY OF THE OWNER AND CONTRACTOR TO LOCATE ALL PHASES OF CONSTRUCTION SO THAT THEY CONFORM TO ALL APPLICABLE TOWN AND STATE REGULATIONS.*
2. *NO DELETERIOUS MATERIALS, I.E.. STUMPS, BOULDERS, RUBBLE, SHALL BE BURIED IN THE SEPTIC LEACHING AREA OR WITHIN 25' OF THE SYSTEM.*
3. *THE HOMEOWNER SHALL OBTAIN ANY REQUIRED PERMITS (HEALTH, BUILDING, WETLAND, ZONING, OR OTHER) PRIOR TO COMMENCEMENT OF ACTIVITIES*
4. *MOVEMENT OF HEAVY EQUIPMENT OR TRAFFIC OVER THE PROPOSED LEACHING AREA SHALL BE AVOIDED.*
5. *WASTES FROM CELLAR, FOOTING, AREA, OR ROOF DRAINS SHALL BE KEPT OUT OF THE PROPOSED SEPTIC SYSTEM AREA. IF POSSIBLE DRAINS SHALL DISCHARGE A MINIMUM OF 25' DOWNGRADE OF THE SEPTIC LEACHING AREA.*
6. *CHANGE IN THE HOUSE LOCATION OR DESIGN OR LAYOUT OF THE SYSTEM VOIDS THIS PLAN.*

PLAN NOTES

NOTE 1: PURPOSE
THE PURPOSE OF THIS PLAN IS TO OBTAIN APPROVAL TO DESIGNATE A CODE–COMPLYING SEPTIC SYSTEM REPLACEMENT AREA. THIS PLAN IS NOT TO BE USED FOR INSTALLATION PERMIT. PRIOR TO IMPLEMENTATION OF THIS PLAN THE ENGINEER SHALL PREPARE A "SEPTIC INSTALLATION PLAN" FOR HEALTH DEPT. PERMIT TO INSTALL.

SUBMITTAL TO AND APPROVAL BY OTHER AGENCIES OF THE TOWN MAY BE REQUIRED PRIOR TO OBTAINING A BUILDING PERMIT.

NOTE 2: SURVEY
SURVEY AND TOPOGRAPHIC INFORMATION TAKEN FROM NEXUS PLAN DATED REVISED AUGUST 15, 1994.

WETLANDS AND WATERCOURSE LIMITS: TAKEN FROM A DIGITAL FILE PREPARED BY AND PROVIDED BY RYAN AND FAULDS LAND SURVEYING, PLAN DATED JULY 7, 2021.

THIS IS NOT A CERTIFIED PLOT PLAN. THE PURPOSE OF THIS PLAN IS TO INDICATE THE PROPOSED LOCATION OF THE SEPTIC REPLACEMENT SYSTEM IN RELATION TO THE EXISTING HOUSE. NO OTHER USE IS EXPRESSED OR IMPLIED.

NOTE 3: SEPTIC INFORMATION
EXISTING LEACHING FIELD LOCATION TAKEN FROM ASBUILT PLAN BY NEXUS ENGINEERING ASSOCIATES

NOTE 4: USE OF PLAN.
THIS PLAN IS THE PROPERTY OF PEAK ENGINEERS, LLC. AND IS TO BE TO BE USED BY THE PERSON, COMPANY OR ENTITY IN THE TITLE BOX. THIS USE IS NON–TRANSFERABLE. USE OF THIS PLAN BY OTHERS VOIDS SEAL AND CERTIFICATION HEREON.

THIS PLAN MAY NOT INCLUDE THE LOCATION OF ALL UTILITIES OR STRUCTURES ABOVE OR BELOW GROUND. IT IS THE CONTRACTORS RESPONSIBILITY TO ACCURATELY LOCATE ALL UTILITIES AND STRUCTURES PRIOR TO ANY CONSTRUCTION.

NOTE 5: TREE REMOVAL
THIS PLAN DOES NOT DEPICT ALL TREES. THE CONTRACTOR IS REQUIRED TO REMOVE TREES NECESSARY TO MEET APPLICABLE STATE AND LOCAL HEALTH REGULATIONS. ALL TREES LOCATED WITHIN THE SEPTIC FIELD, SELECT FILL, AND BERM SHALL BE REMOVED.

0 20 30 40
Scale : 1"=20'

TOWN SIGNATURE BLOCK

FB
FB
FILE:
DRAWING #210706
DWN BY: TS, CBO
DATE: July 6, 2021
REV: AUGUST 3, 2021 AMEND CONTOURS, INSERT LATEST WETLAND AND WATERCOURSE LIMITS
REV:

Thomas S. Quinn, P.E. 17051
THIS PRINT IS INVALID WITHOUT LIVE RED SEAL AND EMBOSSED SEAL

Peak Engineers, LLC
PROVIDING CIVIL ENGINEERING SERVICES
Site, Septic, and Drainage, Feasibility and Design
16 Old Mill Road, Redding, CT 06896
Tel 203–834–0588 Email: TQuinn@PeakEngineersLLC.com

PREPARED FOR
Gregory & Gina Jansen
70 Middlebrook Farm Road
Wilton, Connecticut 06987

PROJECT LOCATION
70 Middlebrook Farm Road
Wilton, Connecticut 06897
Assessor's Map 90, Lot 25

TITLE
Code Complying Septic Replacement Plan For Proposed Pool

CCS–1