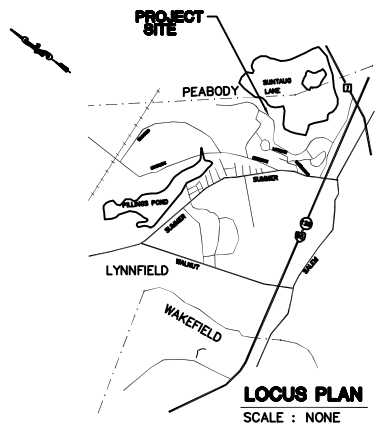
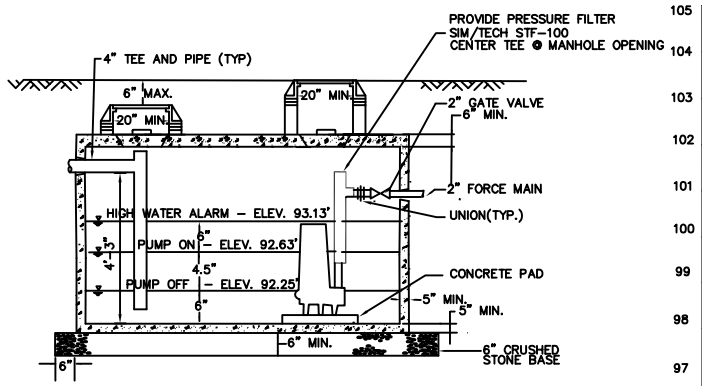


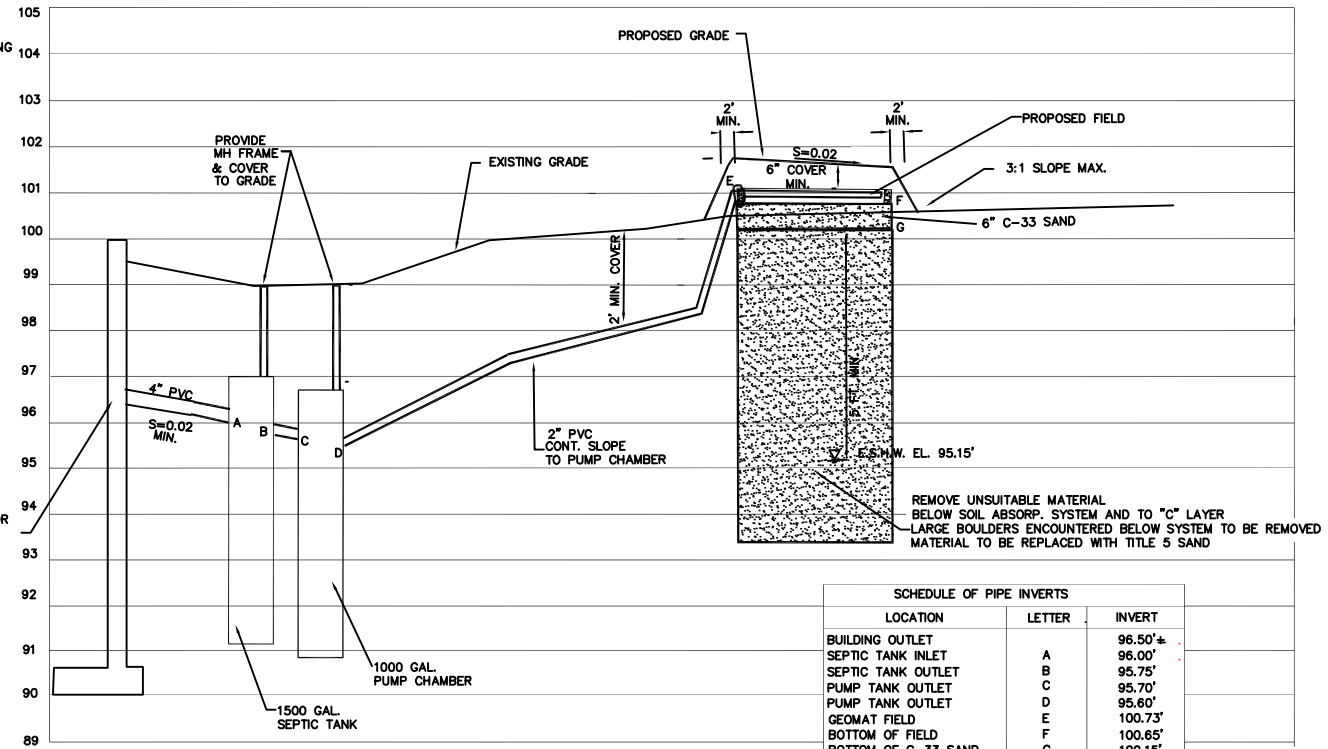
LOCUS PLAN
SCALE : NONE



PRECAST CONCRETE TANK DESIGNED FOR H-20 LOADING MONOLITHIC TANK TO BE WATERTIGHT PER MANUFACTURER SPECIFICATIONS

1000 Gal. Pump Chamber Design

(NOT TO SCALE)



CONNECT ALL INTERIOR PLUMBING TO SYSTEM

SCHEDULE OF PIPE INVERTS		
LOCATION	LETTER	INVERT
BUILDING OUTLET		96.50'±
SEPTIC TANK INLET	A	96.00'
SEPTIC TANK OUTLET	B	95.75'
PUMP TANK OUTLET	C	95.70'
PUMP TANK OUTLET	D	95.60'
GEOMAT FIELD	E	100.73'
BOTTOM OF FIELD	F	100.65'
BOTTOM OF C-33 SAND	G	100.15'

PUMP SPECIFICATIONS

Liberty Pump Model LE51(OR SIMILAR)

- 1/2 H.P., 115V, Single Phase
- 2" Solids Handling
- Mechanical Float Switches
- Install high water alarm inside dwelling on seperate circuit other than pump, include red light, buzzer

HIGH WATER ALARM
* LOCATED INSIDE RESIDENCE

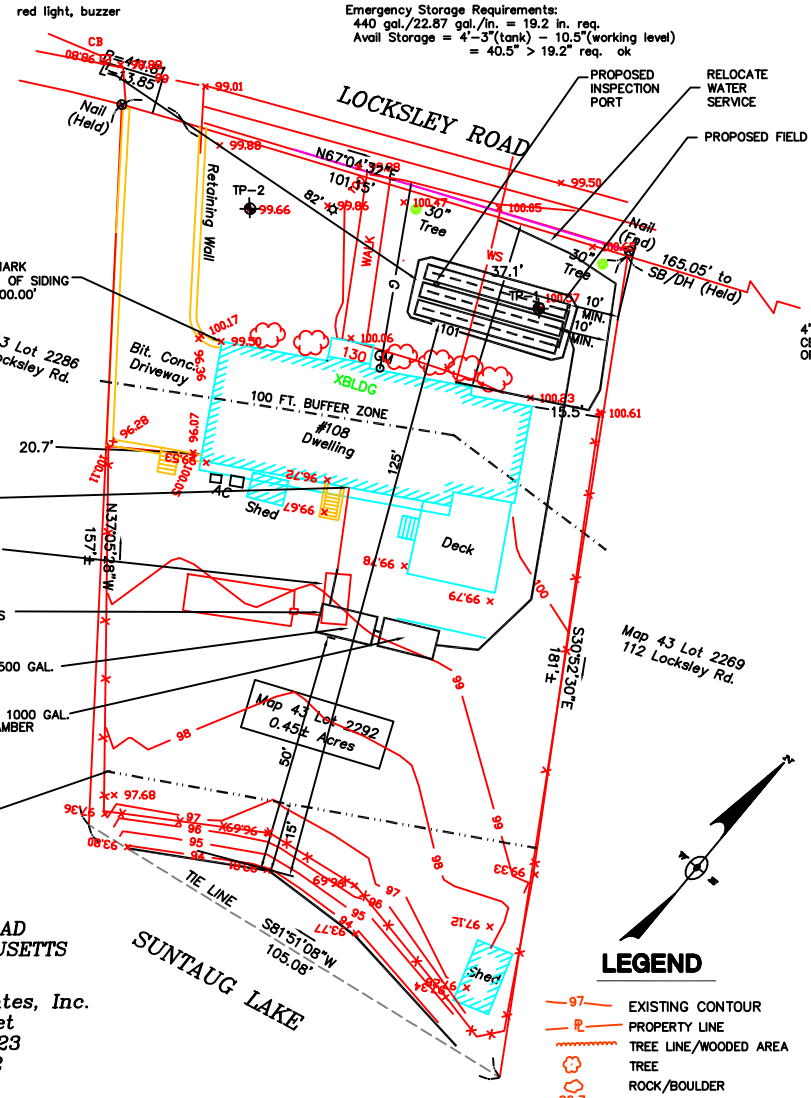
PUMP DESIGN

Dosing Frequency :
1.012 gal./ft.x90 ft.=91 gal.+15 gal flowback=106 gal.(MAX.)

Pump Chamber Capacity :
Chamber Capacity : 8'-10"X4'-2"x1"X7.48 gal./cu.ft.
= 22.87 g/inch depth(Approx.)

Pump Controls :
Pump On/Off : 106 gal./22.87 gal./inch. = 4.6" SAY 4.5"

Emergency Storage Requirements:
440 gal./22.87 gal./in. = 19.2 in. req.
Avail Storage = 4'-3"(tank) - 10.5"(working level)
= 40.5" > 19.2" req. ok



PLOT PLAN
108 LOCKSLEY ROAD
LYNNFIELD, MASSACHUSETTS

Prepared By
LeBlanc Survey Associates, Inc.
161 Holten Street
Danvers, MA 01923
(978) 774-6012

May 11, 2022 *Scale: 1"=20'*

ZONING DISTRICT - RA

PLAN VIEW
SCALE : 1"=20'

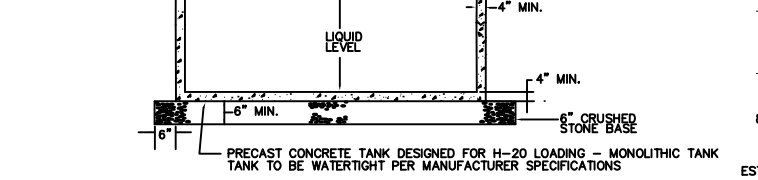
REFERENCES:
1) Land Court Doc. #480545
2) Land Court Plan #19113-0

LEGEND

- 97 — EXISTING CONTOUR
- PL — PROPERTY LINE
- TREE LINE/WOODED AREA
- TREE
- 96.7 x — ROCK/BOULDER
- SPOT GRADE
- 96 — PROPOSED CONTOUR
- TP-1 — TEST PIT LOC.
- P-1 — PERC. TEST LOC.
- B.V.W. DELINEATION LINE
- W-9 — PROPOSED HAY WATTLES
- 100' BUFFER ZONE LINE
- RETAINING WALL
- SHRUBS/PLANTS
- STONE WALL
- FENCE

PROFILE

SCALE : HOR. 1"=20'
VERT. 1"=2'



1500 - Septic Tank Design
(NOT TO SCALE)

TP-1

FROM SURF.	SOIL TYPE	GRND. ELEV.
		100.57'
0-65"	FILL	95.15'
65"-80"	Apb - FSL 10YR2/1	93.90'
80"-86"	Bw - FSL 10YR6/8	93.40'
86"-136"	C - S 2.5YR6/4	89.24'

GROUNDWATER OBSERVED @ 65"
EST. SEAS. HIGH WATER @ 65"(95.15')

TP-2

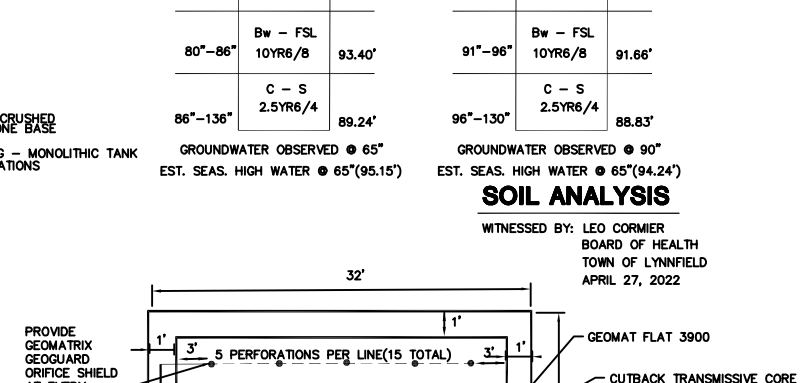
FROM SURF.	SOIL TYPE	GRND. ELEV.
		99.66'
0-63"	FILL	94.41'
63"-91"	Apb - FSL 10YR2/1	92.08'
91"-96"	Bw - FSL 10YR6/8	91.66'
96"-130"	C - S 2.5YR6/4	88.83'

GROUNDWATER OBSERVED @ 90"
EST. SEAS. HIGH WATER @ 65"(94.24')

SOIL ANALYSIS

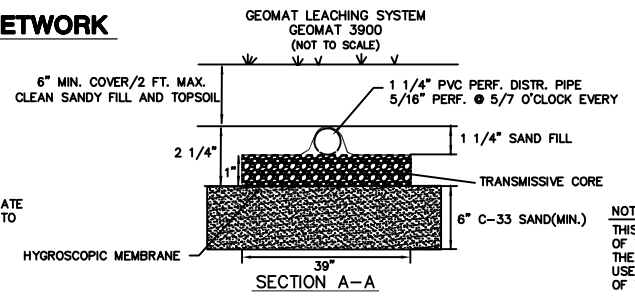
WITNESSED BY: LEO CORMIER
BOARD OF HEALTH
TOWN OF LYNNFIELD
APRIL 27, 2022

SECTION - DISTR. NETWORK
(NOT TO SCALE)



SOIL ABSORPTION SYSTEM PLAN

GEOMAT LEACHING SYSTEM
GEOMAT 3900
(NOT TO SCALE)



SECTION A-A

NOTES:

- GRADE SURFACE DRAINAGE AWAY FROM HOUSE AND SEPTIC SYSTEM
- CONTRACTOR SHALL VERIFY AND INCORPORATE ALL INTERIOR PLUMBING WORK NECESSARY TO CONNECT TO PROPOSED SYSTEM
- NO PLANTINGS WITHIN 5 FT. OF SYSTEM

NOTE:
THIS PLAN WAS PREPARED FOR THE SOLE PURPOSE OF THE ABOVE WORK AND FOR THE NOTED PERSON/FIRM. THE INFORMATION CONTAINED WITHIN THIS PLAN MY NOT BE USED FOR OTHER PURPOSES WITHOUT THE WRITTEN CONSENT OF THE DESIGN ENGINEER.

Notes

1. ALL UNSUITABLE MATERIAL MUST BE REMOVED FROM THE PROPOSED CONSTRUCTION AREA BELOW THE SOIL ABSORPTION SYSTEM AND A MINIMUM OF FIVE FEET LATERALLY IN ALL DIRECTIONS BEYOND THE OUTER PERIMETER OF THE SYSTEM. BACKFILL MATERIAL SHALL CONSIST OF CLEAN SAND OR GRAVEL FREE OF FINES AND HAVING A PERCOLATION RATE OF 2 MIN. PER INCH OR LESS AFTER BEING PLACED AND COMPACTED.
2. ALL STONE MUST BE DOUBLE WASHED AND FREE FROM FINES AND MUST HAVE LESS THAN 0.5% FINER MATERIAL PASSING THE NO. 200 SIEVE.
3. HEAVY MACHINERY SHALL NOT BE PERMITTED TO PASS OVER ANY PART OF THE PROPOSED SUBSURFACE DISPOSAL SYSTEM.
4. SYSTEM PIPING SHALL CONSIST OF POLYVINYL CHLORIDE PIPE(PVC) SCHEDULE 40 NSF, UNLESS OTHERWISE NOTED.
5. GARBAGE GRINDER/DISPOSAL SYSTEM IS NOT TO BE CONNECTED TO THE SUBSURFACE DISPOSAL SYSTEM.
6. SITE SURVEY WAS SOLELY PERFORMED TO OBTAIN SITE TOPOGRAPHY FOR THE INSTALLATION OF A SUBSURFACE DISPOSAL SYSTEM. THE DESIGNER IS NOT RESPONSIBLE FOR THE ACCURACY OF THE REPRESENTATION OF ANY PROPERTY LINES OR BUILDING LOCATIONS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR ALL HORIZONTAL AND VERTICAL CONTROLS.
7. ALL DISTURBED AREAS SHALL BE LOAMED, SEEDED AND MAINTAINED TO PREVENT EROSION. ANY DISTURBED PAVING MUST BE REPLACED IN-KIND.
8. THE DESIGNER HAS NOT BEEN RETAINED BY THE CLIENT TO CONSTRUCT OR SUPERVISE THE CONSTRUCTION OF THE SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ARRANGEMENTS FOR INSPECTION OF THE INSTALLATION OF THE SYSTEM WITH THE LOCAL BOARD OF HEALTH.
9. ALL SURFACE AND SUBSURFACE DRAINAGE SHALL BE DIRECTED AWAY FROM THE SUBSURFACE DISPOSAL SYSTEM AND FOUNDATIONS.
10. ALL SYSTEM TANKS AND PIPING CONNECTIONS SHALL BE MADE WATERTIGHT THROUGH MANUFACTURERS SPECIFICATIONS AND WARRANTY.
11. PROPER MAINTENANCE AND PERFORMANCE OF THE SUBSURFACE DISPOSAL SYSTEM SHOULD CONSIST OF INSPECTING THE SEPTIC TANK AT LEAST ONCE A YEAR AND WHEN THE TOTAL DEPTH OF SCUM AND SOLIDS EXCEEDS 1/3 THE LIQUID DEPTH OF THE TANK, THE TANK SHOULD BE PUMPED.
12. SEPTIC TANK MANUFACTURER TO SUPPLY BOUYANCY VERIFICATION AND/OR BOUYANCY PAD FOR PROPOSED CHAMBERS.
13. SEWER LINES WHICH HAVE LESS THAN 1/4 BENDS INSTALLED SHALL ALSO HAVE CLEANOUTS INSTALLED IN AN ACCESSIBLE LOCATION.

MASSDEP REMEDIAL USE APPROVAL - GEOMAT LEACHING SYSTEM(7/14/17)

LOCAL UPGRADE REQUEST:
UNDER SECTION 15.405(1) OF MDEP REGULATION 310 CMR 15.00

- A REQUEST IS ASKED FOR A VARIANCE TO CONDUCT SOIL ANALYSIS
- A REQUEST IS ASKED FOR A VARIANCE FOR A REDUCTION OF THE SAS FROM A SURFACE WATER SUPPLY FROM 400 FT. TO 125 FT.
- A REQUEST IS ASKED FOR A VARIANCE FOR A REDUCTION OF THE SEPTIC TANK FROM A SURFACE WATER SUPPLY FROM 400 FT. TO 50 FT.
- A REQUEST IS ASKED FOR A VARIANCE FOR A REDUCTION OF THE SAS FROM THE DRAINLINE A SURFACE WATER SUPPLY FROM 100 FT. TO 82 FT.

Design

Design Flow : 4 Bedrooms
Design Flow : 4 Bedrooms @ 110 gpd = 440 gpd
LTAR = 1.50 gpd/sq.ft.

Design of Soil Absorption System : GeoMat
Sqft of GeoMat required = 4 BDRM @ 110 gpd = 440 gpd/1.50 gpd/sqft = 293 sqft
Length of GeoMAt Flat 3900 = 293 sqft/3.42sqft/linft = 86 linft
Minimun sand bed size(table 3) = 400 sqft
Sample GeoMat layout = Qty 3-30" Rows
Minimum Bed Width 400 sqft/(30ft+1ft+1ft) = 12.5ft
12.5ft = (3 rows GeoMat 3900 3.25' wide)-1ft-1ft = 2.75ft/2 spaces = 4.5" in-between
Use Bed size 32 ft. long by 12.5 ft. wide

Septic Tank Design
200% for Design factor : 2 X440 gpd = 880 gpd
Use (Min. Req'd.) 1500 Gal. Septic Tank

SOIL EVALUATOR STATEMENT :
I(JAMES M. KAVANAUGH) CERTIFY THAT ON JULY 26,1995 I HAVE PASSED THE EXAMINATION APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT THE ABOVE ANALYSIS HAS BEEN PERFORMED BY ME CONSISTENT WITH THE REQUIRED TRAINING, EXPERTISE AND EXPERIENCE DESCRIBED IN 310 CMR 15.018(2).

James M. Kavanaugh, P.E.
Environmental Consultant
14 Shady Hill Drive
N. Reading Mass. 01864 **Tel.(978)664-2925**

DESIGN OF SUBSURFACE DISPOSAL SYSTEM
PREPARED FOR

Suk Han Lam
108 Locksley Road
Lynnfield Ma. 01940

Map No. 43
Parcel No. 2292

Proj. No. 22014	Desn. By: JMK
Date : May 26, 2022	Drn. By: DMC
Scale : As Noted	Sheet 1 of 1