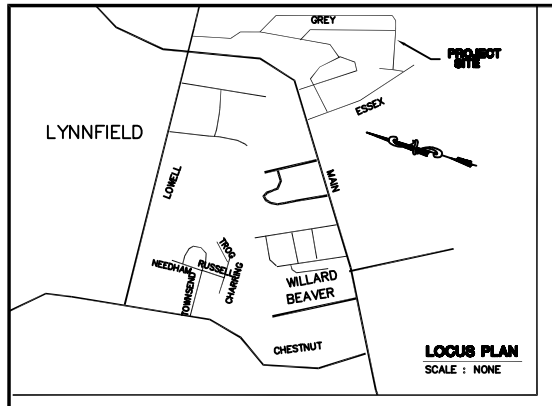
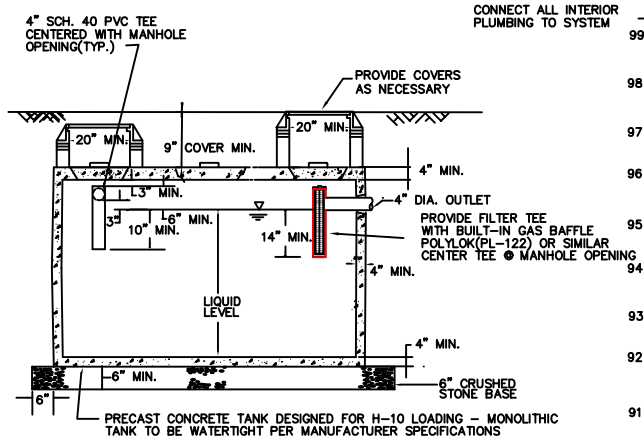
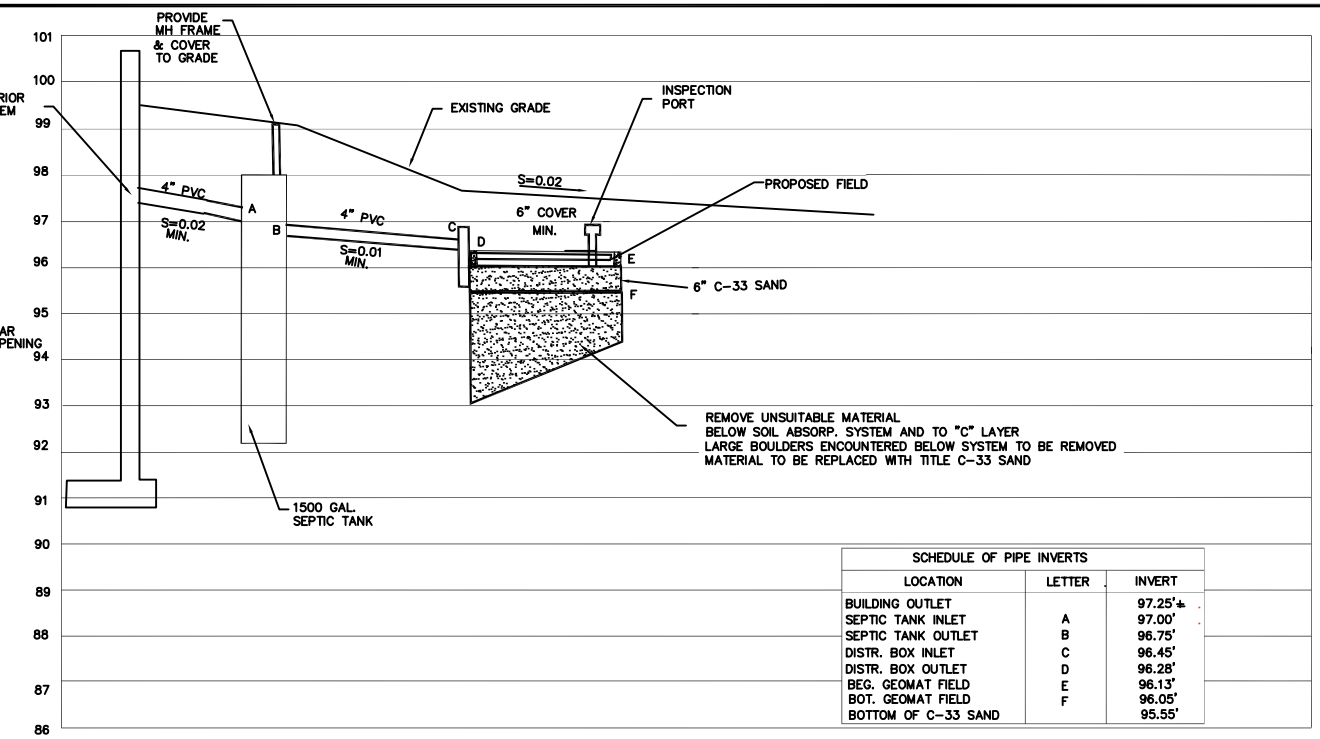




1500 - Septic Tank Design

(NOT TO SCALE)



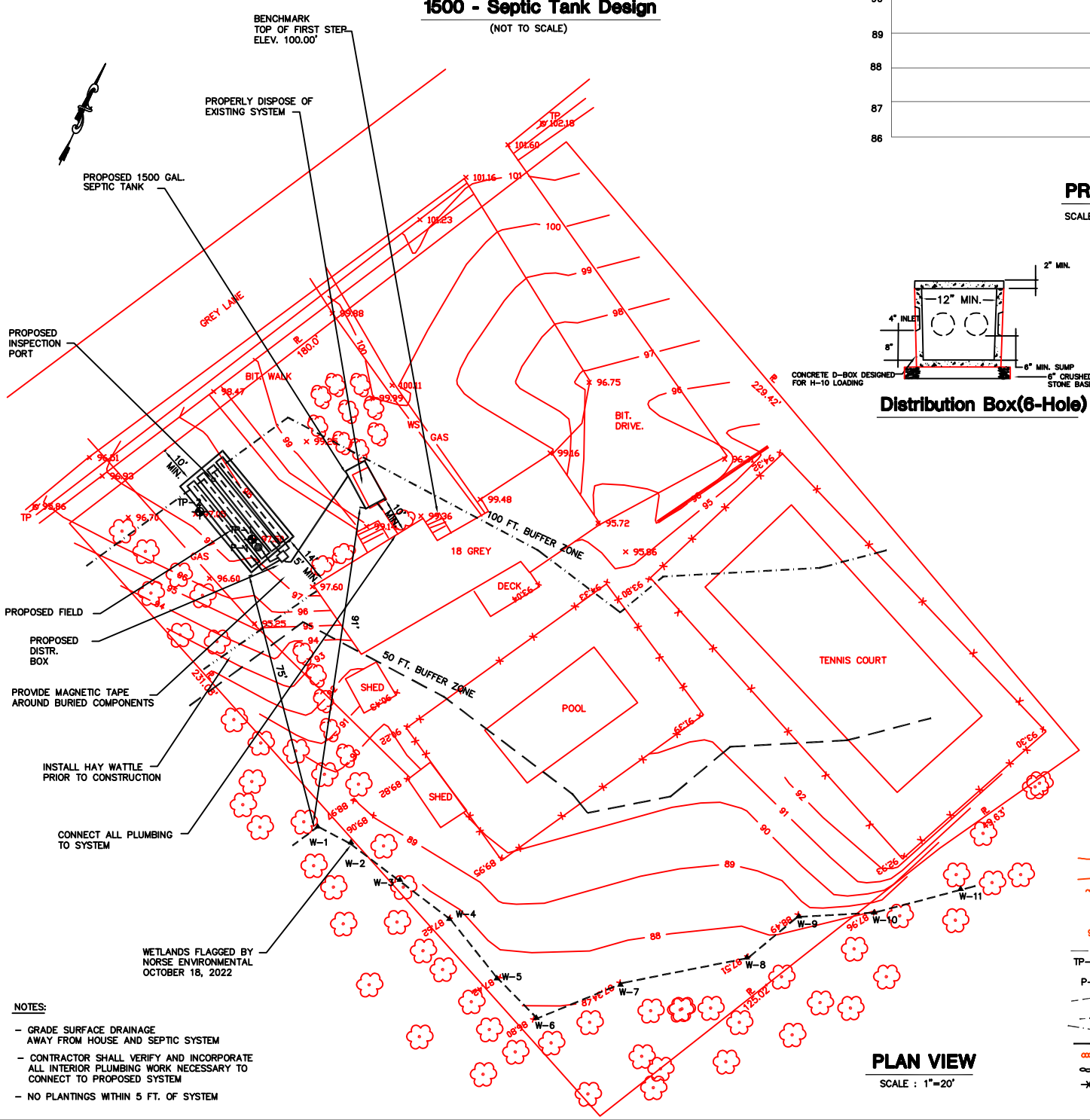
SCHEDULE OF PIPE INVERTS

LOCATION	LETTER	INVERT
BUILDING OUTLET		97.25'
SEPTIC TANK INLET	A	97.00'
SEPTIC TANK OUTLET	B	96.75'
DISTR. BOX INLET	C	96.45'
DISTR. BOX OUTLET	D	96.28'
BEG. GEOMAT FIELD	E	96.13'
BOT. GEOMAT FIELD	F	96.05'
BOTTOM OF C-33 SAND		95.55'

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 REMEDEIAL USE APPROVAL - GEOMAT LEACHING SYSTEM(7/14/17)
- APPROVED REDUCTION FROM E.S.H.W. FROM 4 FT. TO 2 FT.(2 FT. REQ.)
- APPROVED REDUCTION FROM FOUNDATION FROM 20 FT. TO 5 FT.(14 FT. REQ.)



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

PLAN VIEW

SCALE : 1"=20'

Distribution Box(6-Hole)

PROFILE

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

TP-1

GRND. ELEV.	SOIL TYPE	FROM SURF.
		97.50'
0-32"	FILL	94.83'
32"-42"	Ap - FSL 10YR2/2	94.00'
42"-54"	Bw - FSL 10YR5/8	93.00'
54"-75"	C1 - SL 2.5Y5/6	91.25'
75"-120"	C2 - SL 5Y7/3	86.50'

NO GROUNDWATER OBSERVED
EST. SEAS. HIGH WATER 48"(93.50')

TP-2

FROM SURF.	SOIL TYPE	GRND. ELEV.
		97.05'
0-24"	FILL	95.05'
24"-32"	Ab - FSL 10YR2/2	94.38'
32"-65"	C1 - SL 2.5Y5/6	91.63'
65"-120"	C2 - SL 5Y7/3	87.05'

GROUNDWATER OBSERVED @ 96"
EST. SEAS. HIGH WATER 42"(93.55')

P-1

GRND. ELEV.	FROM SURF.
	96.25'
72"	90.75'

23 MIN./IN.

SOIL ANALYSIS

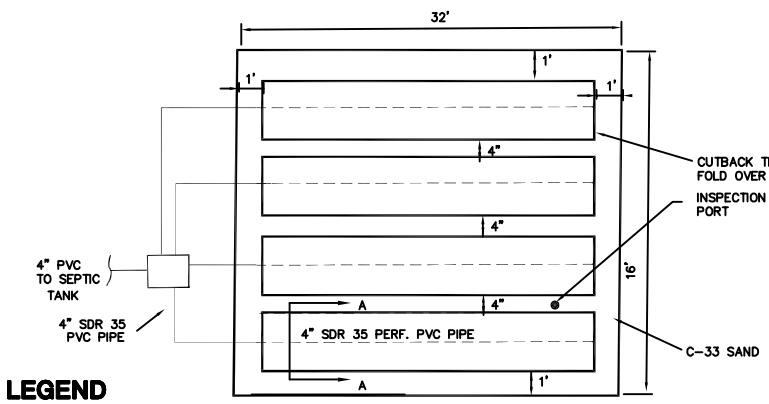
WITNESSED BY: LEO CORMIER
BOARD OF HEALTH
TOWN OF LYNNFIELD
SEPTEMBER 29, 2022

Design

Design Flow : 3 Bedrooms
Design Flow : 3 Bedrooms @ 110 gpd = 330 gpd
LTAR = 0.81 gpd/sq.ft.

Design of Soil Absorption System : GeoMat
Sqft of GeoMat required - 3 BDRM @ 110 gpd = 330 gpd/0.81 gpd/sqft = 407 sqft
Length of GeoMAt Flat 3900 - 407 sqft/3.42sqft/linft = 119 linft
Minimun sand bed size(table 3) = 495 sqft
Sample GeoMat layout - Qty 4-30' Rows
Minimum Bed Width 495 sqft/(30ft+1ft+1ft) = 15.5ft SAY 16 FT.
16ft - (3 rows GeoMat 3900 3.25' wide)-1ft-1ft = 1 ft/3 spaces = 4" in-between
Use Bed size 32 ft. long by 16 ft. wide

Septic Tank Design
200% for Design factor : 2 X330 gpd = 660 gpd
Use (Min. Req'd.) 1500 Gal. Septic Tank

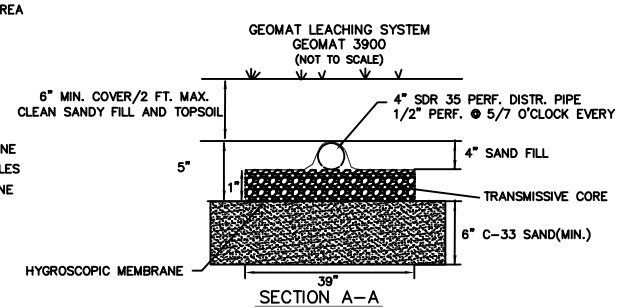


SOIL ABSORPTION SYSTEM PLAN

(NOT TO SCALE)

LEGEND

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



SECTION A-A

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).

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.

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

Barbara Sullivan
18 Grey Lane
Lynnfield Ma. 01940

Map No. 21
Parcel No. 2652

Proj. No. 22036	Desn. By: JMK
Date : September 29, 2022	Drn. By: DMC
Scale : As Noted	Sheet 1 of 1