

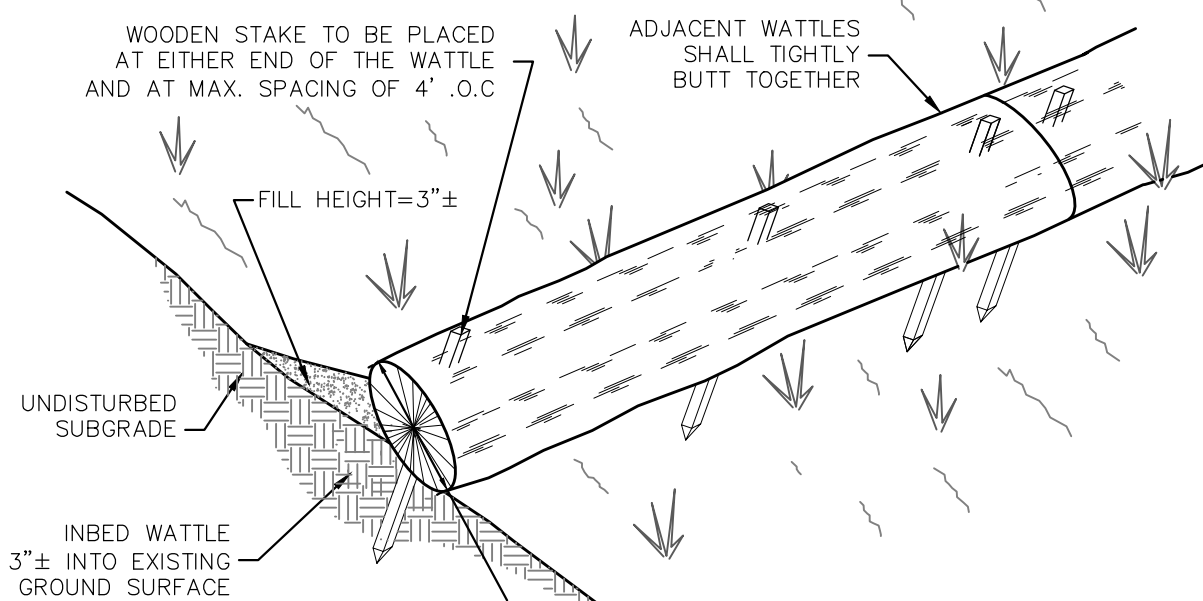
SEPTIC TANK SIZE:  
AVERAGE DAILY FLOW = 330 G.P.D.  
MINIMUM STORAGE REQUIRED:  
COMPARTMENT #1 = 330 G.P.D. X 200% = 660 GAL  
COMPARTMENT #2 = 330 G.P.D X 100% = 330 GAL  
SEPTIC TANK PROVIDED = 1,500 GALLONS

PRIMARY LEACHING AREA:  
 DESIGN PERCOLATION RATE = 5 M.P.I. (SOIL CLASS II)  
 EFFLUENT LOADING RATE = 0.60 GALLONS/S.F.  
 LEACHING AREA REQUIRED =  $330 \text{ GPD} / 0.60 \text{ GPD/S.F.} = 550 \text{ S.F.}$   
 TOTAL LEACHING AREA PROVIDED = 15' WIDE X 37' LONG FIELD (15 X 37) = 555 S.F.  
 TOTAL DESIGN FLOW = 555 S.F. X 0.60 GALLON/S.F. = 333 GALLONS.

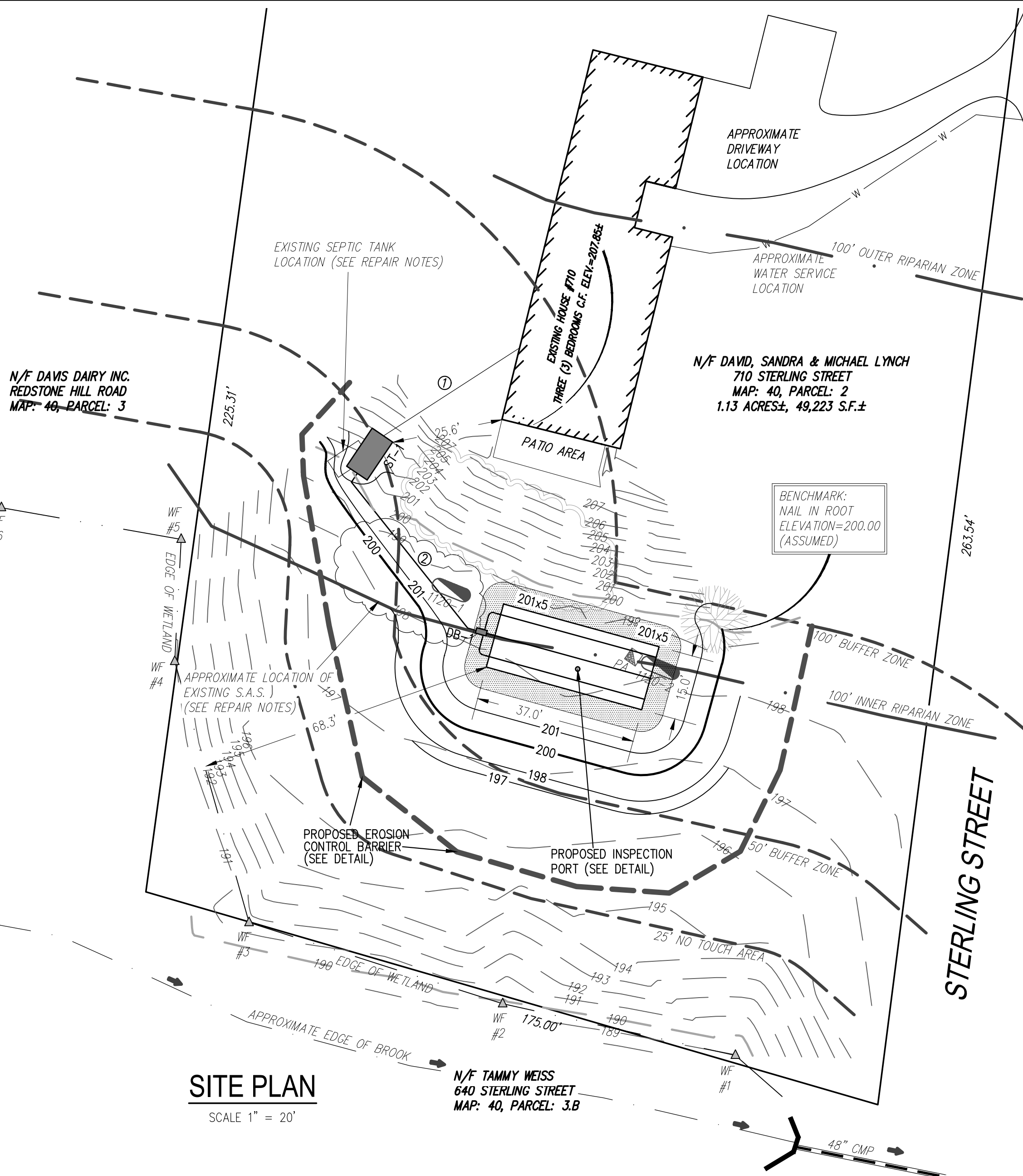
SYSTEM ELEVATIONS:	
CELLAR FLOOR ELEVATION=	207.85
INV. EL. AT FOUNDATION WALL=	204.85
SEPTIC TANK (ST-1) - H-10	
4" INV. (IN)=	200.52
4" INV. (OUT)=	200.27
DISTRIBUTION BOX (DB-1)	
4" INV. (IN)=	199.79
4" INV. (OUT)=	199.72

PRIMARY FIELD ELEVATIONS:				AS-BUILT FIELD ELEVATIONS:		
LINE NO.	EL. INV. BEG. OF FIELD.	EL. INV. END OF FIELD.	EL. OF BOT. OF FIELD.	LINE NO.	EL. INV. BEG. OF FIELD.	EL. INV. END OF FIELD.
P1-3	199.52	199.33	198.83	R1	XXXX.XX	XXXX.XX
				R2	XXXX.XX	XXXX.XX
				R3	XXXX.XX	XXXX.XX

TITLE V VARIANCES:  
NONE REQUIRED. THE SEWAGE DISPOSAL SYSTEM IS DESIGNED IN ACCORDANCE WITH THE STATE OF MASSACHUSETTS TITLE V REGULATIONS; REQUIREMENTS FOR THE SUBSURFACE DISPOSAL OF SANITARY SEWAGE.

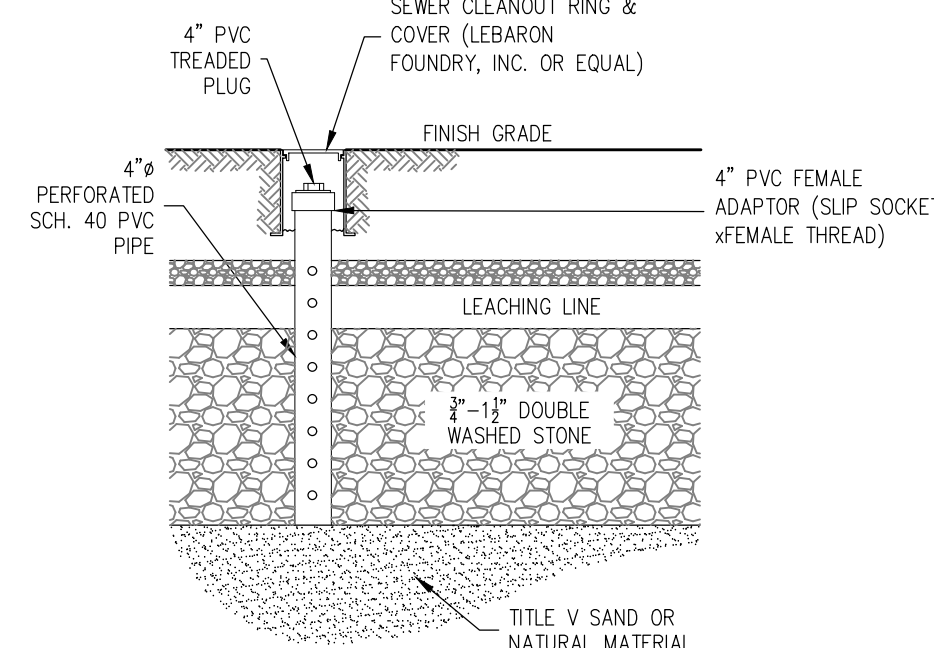
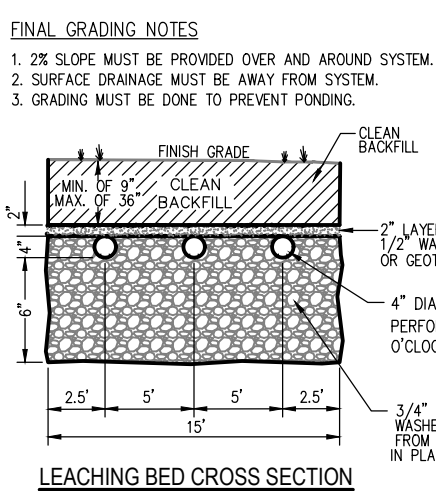


NOT TO SCALE



SCALE 1" = 20'

NOT TO SCALE



NOT TO SCALE

1. TOPOGRAPHIC INFORMATION IS THE RESULT OF AN ON-THE-GROUND SURVEY PERFORMED BY DILLIS & ROY CIVIL DESIGN GROUP, INC. ELEVATIONS REFER TO ASSUMED DATUM (SEE BENCH MARK LOCATED ON PLOT PLAN).
2. PROPERTY LINE INFORMATION IS TAKEN FROM RECORDS PLON ON FILE WITH THE WORCESTER REGISTER OF DEEDS.  
PLAN BOOK: 295 PLAN: 58
3. PERCOLATION TESTS PERFORMED IN ACCORDANCE WITH 310 CMR (TITLE 5) REGULATIONS 15.104 AND 15.105.
4. ANY DEVIATIONS FROM THE DESIGN PLAN MUST BE APPROVED IN WRITING BY DILLIS & ROY CIVIL DESIGN GROUP, INC.
5. NO PERMANENT STRUCTURE SHALL BE CONSTRUCTED ON THE LAND.
6. THE BOARD OF HEALTH requires INSPECTION OF ALL CONSTRUCTION BY THE DESIGN ENGINEER OR BY AN AGENT OF THE BOARD OF HEALTH, AND THAT SUCH A PERSON CERTIFIES IN WRITING THAT ALL WORK HAS BEEN COMPLETED IN ACCORDANCE WITH THE TERMS OF THE PERMIT AND THE DESIGN PLAN.
7. FOR PROPER PERFORMANCE, A SEPTIC TANK SHOULD BE INSPECTED AT LEAST EVERY ONE YEAR AND WHEN THE TOTAL DEPTH OF SOLID AND SOLIDS EXCEEDS ONE THIRD OF LIQUID DEPTH OF THE TANK, THE TANK SHOULD BE PUMPED.
8. THE DESIGNER DOES NOT GUARANTEE OR ACCOMMODATE A GARAGE DISPOSAL.
9. CONSTRUCTION WITHIN 100 FEET OF A WETLAND RESOURCE AREA AS DEFINED IN THE MASSACHUSETTS WETLAND PROTECTION ACT AND REGULATIONS (310 CMR 10.00) SHALL NOT BE PERFORMED UNTIL AN ORDER OF CONDITIONS OR NEGATIVE DETERMINATION OF APPLICABILITY HAS BEEN OBTAINED FROM THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL AFFAIRS.
10. EXISTING UTILITIES SHOWN ON THIS PLAN WERE COMPILED FROM FIELD MEASUREMENT AND RECORD PLANS. THE UTILITIES SHOWN ON THIS PLAN ARE FOR REFERENCE ONLY AND SHOULD NOT BE ASSUMED TO BE CORRECT NOR SHOULD IT BE ASSUMED THAT THE UTILITIES SHOWN ARE THE ONLY UTILITIES PRESENT ON OR NEAR THE SITE. THE CONTRACTOR SHALL DO DIAL SAFE 1-888-DIG-SAFE PRIOR TO CONSTRUCTION IN ACCORDANCE WITH STATE LAWS.

1. FINISH GRADE SHALL BE DONE IN ACCORDANCE WITH THE PLOT PLAN. ALL DISTURBED AREAS SHALL BE COVERED WITH A MINIMUM OF 4" OF LOAM AND SEEDED WITH A NATIVE GRASS MIXTURE.
2. BACKFILL SHALL BE COMPACTED TO 95% OF THE DRY TAMPED DENSITY AND PUMP CHAMBER SHALL BE A MINIMUM OF 9 INCHES EXCLUSIVE TOPSOIL PLACED IN LIFTS AND SUFFICIENTLY COMPACTED TOP PREVENT DEPRESSIONS DUE TO SETTLING. BACKFILL OVER THE SOIL ABSORPTION SYSTEM SHALL BE FREE OF STONES AND BOLDER GREATER THAN 6 INCHES IN SIZE.
3. DRAINAGE SLOPER SHALL BE LAID ON A COMPACTED BED OF SAND.
4. ALL PIPING SHALL BE MINIMUM OF SCHEDULE 40 UNLESS OTHERWISE NOTED.
5. ALL PIPE JOINTS AND CONNECTIONS TO SYSTEM COMPONENTS SHALL BE MECHANICALLY SOUND, WATER TIGHT AND PROTECTED AGAINST DAMAGE BY ROOTS.
6. ALL BUILDING SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STATE PLUMBING CODE 248 CRR 2.00.
7. FINISH GRADE OVER THE SOIL SHALL BE GRADED TO REDUCE INFILTRATION OF SURFACE WATER AND MINIMIZE EROSION. FINISH GRADE SHALL HAVE A MINIMUM SLOPE OF 2%.
8. EFFLUENT DISTRIBUTION LINES SHALL HAVE A SLOPE OF 0.5%.
9. ALL EFFLUENT LINES SHALL BE 12" OR 18" BORE SHALL BE LEVEL FOR A MINIMUM OF TWO FEET OF THEIR LENGTH.
10. FILL MATERIAL FOR SYSTEMS CONSTRUCTED IN FILL SHALL SELECT ON SITE OR IMPORTED SOLTS THAT MEET THE MINIMUM REQUIREMENTS STATED IN 310 CRR 12.50(23).
11. FILL REQUIRED TO BE PLACED OVER IMPERMEABLE SOIL OR IMPERMEABLE SOLTS, THE EXCAVATION OF THE UNSUITABLE MATERIAL SHALL EXCEED A MINIMUM OF 5 FEET LATERALLY IN ALL DIRECTIONS BEFORE THE OUTER PERIMETER OF THE SOIL ABSORPTION SYSTEM TO THE DEPTH OF 3 INCHES INTO THE NATURALLY OCCURRING PERVIOUS MATERIAL.
12. IN THE EVENT OF CONTACT OF THE EXCAVATION AND RELATIVELY DRY, FILL SHALL NOT BE PLACED DURING RAIN OR WIND STORMS. IF THE WATER TABLE ELEVATION IS ABOVE THE ELEVATION OF THE BOTTOM OF THE EXCAVATION, THE EXCAVATION SHALL BE DRAINED.
13. SUBSURFACE COMPONENTS OF A SYSTEM SHALL NOT BE BACKFILLED OR OTHERWISE CONCEALED FROM VIEW UNTIL A FINAL INSPECTION HAS BEEN CONDUCTED BY THE APPROVING AUTHORITY AND PERMISSION HAS BEEN GRANTED BY THE APPROVING AUTHORITY TO BACKFILL.
14. THE DESIGNER SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE EXCAVATION AND THE EXCAVATION SHALL BE PROTECTED BY THE INSTALLER. IN ADDITION, THE FINAL INSPECTION OF THE SYSTEM SHALL BE CONDUCTED BY THE APPROVING AUTHORITY, THE SYSTEM BACKFILLING AND THE DESIGNER PRIOR TO THE ISSUANCE OF A CERTIFICATE OF COMPLIANCE PURSUANT TO 310 CRR 12.50(13). ANY DAMAGE TO THE SYSTEM SHALL BE REPAIRED WITHOUT SHORTEMING THE PERMITS SHALL BE UNDERTAKEN UPON THE REQUEST OF THE APPROVING AUTHORITY OR THE DESIGNER.
15. ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.
16. ALL SOIL ABSORPTION SYSTEMS SHALL HAVE A MINIMUM OF ONE (1) INSPECTION PORT CONSISTING OF A PERFORATED 4" (4 INCH PIPE) WITH A 1/2" (1/2 INCH) DRAINAGE SCREEN. THE SCREEN SHALL BE 18" BELOW THE TOP OF THE PIPE. THE PIPE SHALL BE CAPPED WITH A 3" (3 INCH) DIA. ACCESSIBLE TO WITHIN THREE (3) INCHES OF FINISH GRADE.

1. CONTRACTOR TO VERIFY ELEVATION (\*) PRIOR TO THE START OF CONSTRUCTION AND REPORT TO ENGINEER ANY VARIATIONS IN ELEVATION TO THOSE SHOWN ON THIS PLAN.
2. EXISTING SYSTEM MAY BE ENCOUNTERED DURING THE INSTALLATION OF NEW SOIL ABSORPTION SYSTEM (S.A.S.). REMOVAL, DISPOSAL AND UTILIZATION OF MATERIAL, SHALL BE IN ACCORDANCE WITH THE TOWN OF LANCASTER'S BOARD OF HEALTH RULES AND REGULATIONS.
3. EXISTING SEPTIC TANK TO BE PUMPED, CRUSHED AND BACKFILLED WITH CLEAN GRANULAR MATERIAL AND/OR REMOVED IN ACCORDANCE WITH THE TOWN OF LANCASTER'S BOARD OF HEALTH RULES AND REGULATIONS AND A NEW 1,500 GALLON SEPTIC SHALL BE INSTALLED.

NAME OF APPROVING AUTHORITY: LANCASTER BOARD OF HEALTH BILL BROOKINGS, NABOH AGENT				SOIL TEST DATA				NAME OF SOIL EVALUATOR: DILLIS & ROY CIVIL DESIGN GROUP WILLIAM J. "JACK" MALONEY, JR. (SE-13704)			
IN-SEASON GROUND WATER TESTING - (IF REQ'D)				PERCOLATION TEST DATA							
TEST PIT	DATE	SURFACE ELEVATION	DEPTH TO NEEDED GROUNDWATER	G.WATER ELEVATION	TEST PIT	DATE	BOTTOM OF TEST HOLE		RATE: MINUTES		
							DEPTH FROM SURFACE	SURFACE ELEVATION	PER MIN		
					PA	11/6/2020	66"	198.54	5 M/A		
SOIL CLASSIFICATION: PAXTON FINE SANDY LOAM GEOLOGICAL MATERIAL: ALLUVALE TILL LAND FORM: SLOPE SOIL LIMITATIONS: NONE GENERAL NOTES: 306-C											
DEEP TEST PIT: 1120-1 DATE OF TEST: 11/6/20 REFUSAL AT: NONE OBSERVED (SURFACE ELEV. = 198.54)											
ESTIMATED SEASONAL HIGH GROUND WATER											
AT N/A											
DEEP TEST PIT: 1120-2 DATE OF TEST: 11/6/20 REFUSAL AT: NONE OBSERVED (SURFACE ELEV. = 198.54)											
ESTIMATED SEASONAL HIGH GROUND WATER											
AT 50" (ELEVATION = 194.32)											

I CERTIFY THAT I AM CURRENTLY APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION PURSUANT TO 310 CMR 15.017 TO CONDUCT SOIL EVALUATIONS AND THAT THE ABOVE ANALYSIS HAS BEEN PERFORMED BY ME CONSISTENT WITH THE REQUIRED TRAINING, EXPERTISE, AND EXPERIENCE DESCRIBED IN 310 CMR 15.017. I FURTHER CERTIFY THAT THE RESULTS OF MY SOIL EVALUATION, AS INDICATED ON THE ATTACHED SOIL EVALUATION FORM, ARE ACCURATE IN ACCORDANCE WITH 310 CMR 15.100 THROUGH 15.107

LICENSED SOIL EVALUATOR:  
WILLIAM J. "JACK" MALONEY, JR. (S.E.# 13704)

## DESCRIPTION

DESCRIPTION	DRAWING ENTITY
DENOTES EXISTING CONTOUR (INDEX)	100
DENOTES EXISTING CONTOUR (INTERMEDIATE)	98
DENOTES PROPOSED CONTOUR (INDEX)	100
DENOTES PROPOSED CONTOUR (INTERMEDIATE)	98
DENOTES LIMIT OF EXCAVATION OF UNSUITABLE SOILS	5' EXC.
DENOTES PROPOSED SEWER LINE	S
DENOTES PROPOSED WATER LINE	W
DENOTES PROPOSED UNDERGROUND UTILITIES	ETC
DENOTES PROPOSED BUILDING ENVELOPE	
DENOTES PROPOSED CONCRETE SEPTIC TANK	ST-1
DENOTES PROPOSED CONCRETE PUMP CHAMBER	PC-1
DENOTES PROPOSED CONCRETE DISTRIBUTION BOX	DB-1
DENOTES PROPOSED SEWER CLEANOUT	C.O.

PREPARED BY:



<b>CIVIL ENGINEERS</b>	<b>LAND SURVEYORS</b>	<b>WETLAND CONSULTANTS</b>
1 MAIN STREET, SUITE 1		PHONE: (978) 779-6091
LUNENBURG, MA 01462		<a href="http://www.dillisanndroy.com">www.dillisanndroy.com</a>

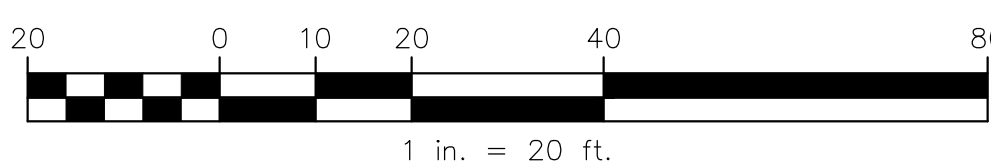
OWNER:

DAVID LYNCH  
710 STERLING STREET  
LANCASTER, MASSACHUSETTS

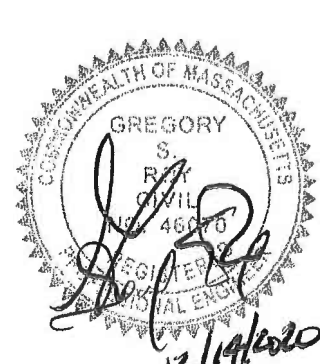
APPLICANT:

DAVID LYNCH  
710 STERLING STREET  
LANCASTER, MASSACHUSETTS

SCALE:



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DATE:	12/14/2020
DESIGN BY:	WJM
DRAWN BY:	WJM
CHECKED BY:	

**SEWAGE DISPOSAL SYSTEM DESIGN**  
710 STERLING STREET (M: 40, PCL: 2)  
LANCASTER, MASSACHUSETTS

NO.	DATE	DESCRIPTION	BY

JOB NO.

6582

DRAWING NO.

6582-SDS

SHEET NO.

1

OF 1