

NOTE:
THE ENTIRE LOT IS LOCATED WITHIN THE 200-FOOT RIVERFRONT AREA

CONSTRUCTION SEQUENCE:
1) INSTALL SITUATION BARRIER
2) CONSTRUCT ACCESS FROM MIDDLETON ROAD TO AREA OF PROPOSED LEACH FIELD TANKS (SEPTIC TANK AND WATERLOO BIOPLETTER TANK) AND DRAINAGE TO THE EXISTING BUILDING SEWER
3) INSTALL FLAG FIELD AND CONNECT TO WATERLOO BIOPLETTER
4) FINISH GRADING AND STABILIZATION/SEEDING DISTURBED AREAS.

DESIGN CRITERIA:
FACILITY TYPE: SINGLE FAMILY DWELLING
SIZE: 3 BEDROOMS
UNIT FLOW RATE: 110 GAL/BED/DAY
DAILY FLOW: 330 GAL/DAY
GARBAGE GRINDER: YES*
(IF YES SYSTEM DESIGN = 150% DAILY FLOW)
SYSTEM DESIGN: 495 GAL/DAY
*GARBAGE BOARD OR HEATH REGULATIONS REQUIRE DESIGN TO BE SIZED FOR A GARBAGE GRINDER

VARIANCES/WAIVERS:
REGULATION: 300CMR(5.10)(2)
CHAPTER 201-9(B)
CHAPTER 201-9(C)
CHAPTER 201-9(E)
300CMR(5.24)(1)(d)

REQUIRED:
A MINIMUM OF TWO DEEP HOLE OBSERVATIONS SHALL BE PERFORMED IN THE PRESENCE OF THE APPROVING AUTHORITY
100 FOOT SETBACK BETWEEN LEACHING FACILITY AND WETLANDS
150 FOOT SETBACK BETWEEN LEACHING FACILITY AND WETLANDS (PERC < 5 MP)
669 SF LEACH AREA (DESIGNED WITH GARBAGE GRINDER)

PROVIDED:
ONE DEEP HOLE IN PRIMARY AREA
50 FOOT SEPARATION
100 FOOT SEPARATION (LOCUS)
130 FOOT SEPARATION (ABUTTER)
50 FOOT SEPARATION
360 SF WITH USE OF WATERLOO BIOPLETTER (WATERLOO BIOPLETTER CERTIFICATION FOR REMEDIAL USE OF WATERLOO GARBAGE GRINDER)

BENCHMARKS:	NGVD 1929	ELEV.
#1	NAIL IN UPOLE	90.52
#2	THRESHOLD	91.55
#3		

SOILS INFORMATION:

SOIL EVALUATOR: JAMES SCANLAN, P.E. (SE#2159 - APRIL 1995)
TOWN WITNESS: KENDALL LONGO
DATE: 6/11/19

I CERTIFY THAT I AM CURRENTLY APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION PURSUANT TO 300CMR(5.017) TO CONDUCT SOIL EVALUATIONS AND THAT THE ABOVE ANALYSIS HAS BEEN PERFORMED BY ME CONSISTENT WITH THE REQUIRED TRAINING AND QUALIFICATION REQUIREMENTS OF MY SOIL EVALUATION AS INDICATED IN THE ATTACHED SOIL EVALUATION FORM ARE ACCURATE AND IN ACCORDANCE WITH 300CMR 15.100 THROUGH 15.107.

SIGNATURE: _____ DATE: _____

SOIL PERCOLATION RATE:
P-1: DEPTH TO 12" = 16" SOIL PERC RATE = 2.67 MIN/IN

SOIL ELEVATIONS:

TEST/PT	T-1	T-2
GRADE	82.0	82.6
E.S.H.G.W.	79.8	79.6
OBS. G.W.	79.3	78.9
BOTTOM PIT	75.8	75.9

SOIL PROFILES:

T-1:
0-12" AP FINE SANDY LOAM 10%R2/2 MASSIVE FRIABLE
12-18" B1 GRAVELLY SANDY LOAM 10%R3/6 MASSIVE FRIABLE
18-66" C1 GRAVELLY LOAMY SAND 2.5%4/4 SINGLE GRAIN LOOSE 30% GRAVEL
66-74" C2 NESTED ROCKS WITH MINIMAL SANDY LOAM (UNABLE TO OBTAIN SAMPLE)
ESHGW @ 26' STANDING @ 32'

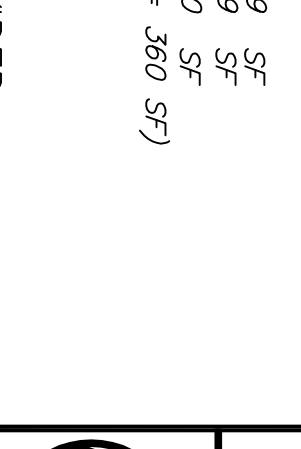
T-2:
0-16" AP FINE SANDY LOAM 10%R2/2 MASSIVE FRIABLE
16-24" B1 GRAVELLY SANDY LOAM 10%R3/4 MASSIVE FRIABLE
24-80" C1 GRAVELLY LOAMY SAND 2.5%4/4 SINGLE GRAIN LOOSE 30% GRAVEL
ESHGW @ 36' STANDING @ 44'

DESIGN CRITERIA:

FACILITY TYPE:	CLASS 1
SOIL CLASS:	< 5 MIN/INCH
LONG PERM ACCEPTANCE RATE:	0.74 GAL/SF/DAY
REQUIRED LEACH AREA:	669 SF (STATE)
PROVIDED LEACH AREA:	360 SF (LEACH AREA: 15' X 24' = 360 SF)

LEGEND:

EXISTING	PROPOSED
100'0	100'0
100'0	100'0
SPOT SHOTS	SPOT SHOTS
APPROX. PROPERTY LINES	APPROX. PROPERTY LINES
WATER SERVICE LINE	WATER SERVICE LINE
GAS SERVICE LINE	GAS SERVICE LINE
STONE WALL	STONE WALL
LIMIT BORDERING	LIMIT BORDERING
VEGETATED WETLAND	VEGETATED WETLAND
LIMIT OF 100-FOOT BUFFER ZONE	LIMIT OF 100-FOOT BUFFER ZONE
LIMIT OF 75-FOOT BUFFER ZONE	LIMIT OF 75-FOOT BUFFER ZONE
LIMIT OF 50-FOOT BUFFER ZONE	LIMIT OF 50-FOOT BUFFER ZONE
LIMIT OF 25-FOOT BUFFER ZONE	LIMIT OF 25-FOOT BUFFER ZONE
LIMIT OF 100-FOOT INNER RIPARIAN ZONE	LIMIT OF 100-FOOT INNER RIPARIAN ZONE
SITUATION BARRIER	SITUATION BARRIER
TEST PIT & NO. PERC TEST	TEST PIT & NO. PERC TEST
BUILDING	BUILDING
EDGE OF PAVEMENT	EDGE OF PAVEMENT
FORCE MAIN	FORCE MAIN
DECIDUOUS TREE	DECIDUOUS TREE
CONIFEROUS TREE	CONIFEROUS TREE
DIRECTION OF SURFACE FLOW TO BE ABANDONED	DIRECTION OF SURFACE FLOW TO BE ABANDONED
TBA	TBA



SUBSURFACE SEWAGE DISPOSAL SYSTEM UPGRADE

68 MIDDLETON ROAD
BOXFORD, MA 01921

REGISTRY INFORMATION:
DEED:
BOOK NO.: 6964
PAGE NO.: 7

ASSESSORS INFORMATION:
MAP: 32
BLOCK: 2
LOT: 4

PREPARED FOR:
KENNETH SEUS
68 MIDDLETON ROAD
BOXFORD, MA 01921

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#	BY	DATE	REVISIONS TO PLANS
1	JBS	8/19/19	CONSERVATION ADDITIONS
2	JBS	9/10/19	CONSERVATION ADDITIONS

DATE: JULY 2, 2019
DESIGN BY: JBS
DRAWN BY: JBS

PLAN & FLOW PROFILE

SHEET 1 OF 2 SCALE: 1" = 20'
PROJECT # 0964