Repair #355 87-26R

AMHERST HEALTH DEPARTMENT
BANGS COMMUNITY CENTER
70 BOLTWOOD WALK
AMHERST, MA 01002

SOIL EXAMINATIONS / PERCOLATION TESTS

JOB #

LOCATION OF PROP.: Fred Keiller
355 Middle Street
Amherst, MA

LOT NO.:

DATE PERFORMED: March 17, 1988

PERFORMED BY: William Sieruta P.E.

WITNESSED BY: for Amherst Bd. of Health: D. Pinski

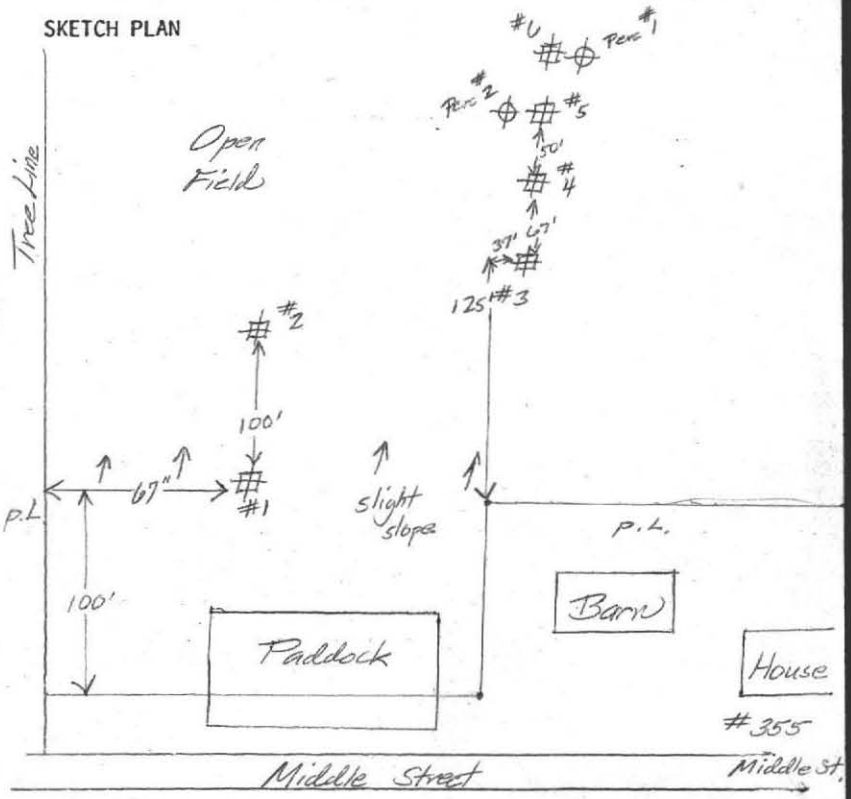
PERK TEST RESULTS: (tabulation on back)

1. Depth 46" 4 min./inch
2. Depth 52" 2 min./inch
3.
4.

COMMENTS: Best site for sewage disposal system is in area of test pits #5+6. Hold for plan.
Town Water is available at this site.
Note: High groundwater towards front of lot – street side. Some standing water in this area.

No Scale

SKETCH PLAN

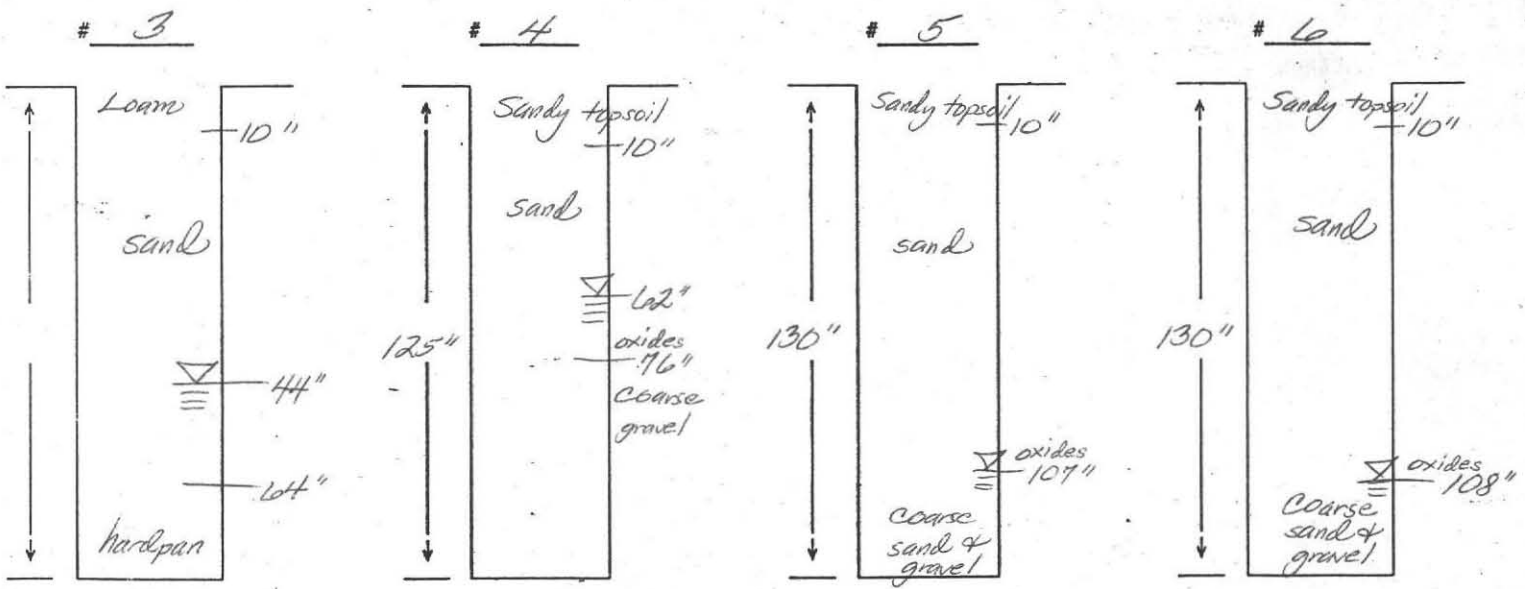


INDICATES OBSERVATION HOLES

INDICATES PERK TEST LOCATION

denotes groundwater

OBSERVATION HOLES



discontinued – moved further down slope.

T.P. #1 (discontinued) 0"-8" Loam, 8-40" sand, 25" ▽, 40"↓ hardpan

T.P. #2 0"-10" Loam, 10"-24" Subsoil, 24"-50" sand, 50"↓ hardpan, ▽ 23" (discontinued)

PERCOLATION TEST TABULATION:

	# 1	# 2	#	#
START PRESOAK	10^{37}	10^{57}		
END PRESOAK				
TIME @ 12"	10^{52}	11^{13}		
TIME @ 9" ($3\frac{1}{2}$ inch drop)	11^{04}			
TIME @ 6"	11^{13}	11^{25}		
ELAPSED TIME 9"-6"				
RATE (MIN/IN)	2.66 — use 4 min/inch for rate	2 min/inch		

BREAKDOWN BY INCH: (optional)

12"				
11"				
10"				
9"				
8"				
7"				
6"				

Wells or Septic Systems Nearby: _____

House Style: _____ Desired Orientation: _____

House Dimensions: _____ # Bedrooms: _____

Excavation By: _____

Copies Sent: Board of Health _____ Client _____ _____ _____

NOV 3 1987

No. 87-26 R

FEE 90.00

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

TOWN OF AMHERST, MASS

Application for Disposal Works Construction Permit

COMMONWEALTH OF MASSACHUSETTS WILLIAM JOHN SIERUTA CIVIL No. 30147 REGISTERED PROFESSIONAL ENGINEER

Application is hereby made for a Permit to Construct ( ) or Repair (X) an Individual Sewage Disposal System at:

355 MIDDLE STREET SOUTH AMHERST, MASS
Location - Address or Lot No.

FRED. KEILLOR 355 MIDDLE STREET SOUTH, AMHERST
Owner Address

Installer Address

Type of Building proposed Size Lot 40,060 Sq. feet

Dwelling — No. of Bedrooms 4 bedrm Expansion Attic (—) Garbage Grinder (—)

Other — Type of Building Residential No. of persons 8 Showers (2) — Cafeteria (—)

Other fixtures 1½ bathrooms, Full Bmt

Design Flow 110 gallons per ~~person~~ bedrm per day. Total daily flow 440 gallons.

Septic Tank — Liquid capacity 1500 gallons Length 12'6" Width 5'0" Diameter — Depth 5'0"

Disposal ~~Trench~~ Field — No. 1 Width 24' Total Length 24' Total leaching area 576 sq. ft.

Seepage Pit No. Diameter Depth below inlet Total leaching area sq. ft.

Other Distribution box (1) Dosing tank ( )

Percolation Test Results Performed by WILLIAM SIERUTA Date OCT. 17, 1987

Test Pit No. 1 2.0 minutes per inch Depth of Test Pit 30+18 Depth to ground water D 65"

Test Pit No. 2 minutes per inch Depth of Test Pit Depth to ground water

Description of Soil TP1-1 0-13" OTS LOAM 13"-65 FINE TO med sand 65-96 med-coarse sand 65"-H2O elev 184.58 TP1-2 0-6" OTS LOAM 6"-65 FINE TO med sand 65-97" med/coarse sand

Nature of Repairs or Alterations — Answer when applicable H2O at 65" elev 184.58

Agreement:

The undersigned agrees to install the aforedescribed Individual Sewage Disposal System in accordance with the provisions of TITLE 5 of the State Sanitary Code — The undersigned further agrees not to place the system in operation until a Certificate of Compliance has been issued by the board of health.

Signed [signature] 110287
Date

Application Approved By Peter J. Kolodziej R.S. Acting Agent 10-31-87
Date

Application Disapproved *for the following reasons:*

Date

Permit No. 87 - 26 Issued November 2, 1987
Date

CHECK OR FILL IN WHERE APPLICABLE

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

TOWN OF AMHERST

Certificate of Compliance

THIS IS TO CERTIFY, That the Individual Sewage Disposal System constructed ( ) or Repaired ( ) by
Installer

at

has been installed in accordance with the provisions of TITLE 5 of The State Sanitary Code as described in the application for Disposal Works Construction Permit No. dated

THE ISSUANCE OF THIS CERTIFICATE SHALL NOT BE CONSTRUED AS A GUARANTEE THAT THE SYSTEM WILL FUNCTION SATISFACTORY.

DATE Inspector Peter J. Kolodziej

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

No. 87 - 26 ~~XXXXXX~~ TOWN OF Amherst FEE

Disposal Works Construction Permit

Permission is hereby granted Fred Keillor

to Construct ( ) or Repair (X) an Individual Sewage Disposal System

at No. 355 Middle St. So. Amherst
Street

as shown on the application for Disposal Works Construction Permit No. 87-26 Dated 10-31-87

Peter J. Kolodziej Acting Agent
Board of Health

DATE November 2, 1987

FORM 1255 A. M. SULKIN, INC., BOSTON

No. ..... Fee .....

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

TOWN OF AMHERST, MASS

Application for Disposal Works Construction Permit

WILLIAM JOHN SIERUTA CIVIL No. 30148 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

Application is hereby made for a Permit to Construct ( ) or Repair (X) an Individual Sewage Disposal System at:

355 MIDDLE STREET SOUTH AMHERST, MASS
Location - Address or Lot No.

FRED. KEILLOR 355 MIDDLE STREET SOUTH, AMHERST
Owner Address

Installer Address

Type of Building proposed Size Lot 40,060 Sq. feet

Dwelling — No. of Bedrooms 4 bedrm Expansion Attic (—) Garbage Grinder (—)

Other — Type of Building Residential No. of persons 8 Showers (2) — Cafeteria (—)

Other fixtures 1½ bathrooms, Full Bmt

Design Flow 110 gallons per ~~person~~ bdrm per day. Total daily flow 440 gallons.

Septic Tank — Liquid capacity 1500 gallons Length 12'6" Width 5'0" Diameter — Depth 5'0"

Disposal ~~Trench~~ Field — No. 1 Width 24" Total Length 24' Total leaching area 576 sq. ft.

Seepage Pit No. ..... Diameter ..... Depth below inlet ..... Total leaching area ..... sq. ft.

Other Distribution box (1) Dosing tank ( )

Percolation Test Results Performed by William Sieruth Date Oct 17, 1987

Test Pit No. 1 2.0 minutes per inch Depth of Test Pit 36+18 Depth to ground water D 65"

Test Pit No. 2 ..... minutes per inch Depth of Test Pit ..... Depth to ground water .....

Description of Soil TP1-1 0-13" OTS loam 13"-65 Fine to med sand 65-96 med-coarse sand 65"-1120 elev 184.58 TP1-2 0-6" OTS loam 6"-65 Fine to med sand 65-87" med/coarse sand

Nature of Repairs or Alterations — Answer when applicable 1120 at 65" elev 184.58

Agreement:

The undersigned agrees to install the aforedescribed Individual Sewage Disposal System in accordance with the provisions of TITLE 5 of the State Sanitary Code — The undersigned further agrees not to place the system in operation until a Certificate of Compliance has been issued by the board of health.

Signed .....

Application Approved By [signature] R.S. Acting Agent Date 10-31-87

Application Disapproved *for the following reasons:* ..... Date

Permit No. 87-26 Issued November 2, 1987 Date

CHECK OR FILL IN WHERE APPLICABLE

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

TOWN OF AMHERST

Certificate of Compliance

THIS IS TO CERTIFY, That the Individual Sewage Disposal System constructed ( ) or Repaired ( ) by ..... Installer

at .....

has been installed in accordance with the provisions of TITLE 5 of The State Sanitary Code as described in the application for Disposal Works Construction Permit No. ..... dated .....

THE ISSUANCE OF THIS CERTIFICATE SHALL NOT BE CONSTRUED AS A GUARANTEE THAT THE SYSTEM WILL FUNCTION SATISFACTORY.

DATE ..... Inspector .....

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

No. 87 - 26 OF ..... Fee .....

Disposal Works Construction Permit

Permission is hereby granted .....

to Construct ( ) or Repair ( ) an Individual Sewage Disposal System

at No. ..... Street

as shown on the application for Disposal Works Construction Permit No. ..... Dated .....

..... Board of Health

DATE November 2, 1987

FORM 1255 A. M. SULKIN, INC., BOSTON

Town of

AMHERST Massachusetts

AMHERST HEALTH DEPARTMENT
70 BOLTWOOD WALK
AMHERST, MA 01002-2128
(413) 253-7077

Bettye Anderson Frederic, Director

November 20, 1987

COPY

Fred Keillor
355 Middle Street
Amherst, MA 01002

Dear Mr. Keillor:

I have again discussed your septic variance with our Interim Sanitarian. Together we have concluded that a variance is NOT needed due to the fact that your situation involves an existing system in need of repair or replacement. Kindly call when you are ready for your final system inspection.

Thank you for your assistance in this matter.

Sincerely,

Bettye Anderson Frederic

Bettye Anderson Frederic
Health Director

532-8525

46 UPLAND ROAD
HOLYOKE, MA 01040

William J. Sieruta, P.E.
REGISTERED CIVIL ENGINEER

CONSULTANT SERVICES
DESIGN

INSPECTIONS
CERTIFICATIONS

NOV 13 1987 File

NOVEMBER 12, 1987

AMHERST BOARD OF HEALTH

PLEASE BE ADVISED THAT I REQUEST A VARIENCE TO INSTALL / REPAIR AN EXISTING SEPTIC SYSTEM LOCATED AT 355 MIDDLE STREET, AMHERST.
THIS VARIENCE IS REQUESTED TO PLACE THE LEECH FIELD UPON 1½ FEET OF FILL.
THIS DESIGN HAS BEEN APPROVED BY THE TEMPORARY TOWN SANITARIAN (PLEASE SEE THE ATTACHED NOTE).

THANK YOU FOR YOUR CO-OPERATION.

SINCERELY,

Frederic M K

FREDERIC M. KEILLOR
355 MIDDLE STREET
AMHERST, MA. 01002
253-9272

November 17, 1987

Janet Sheppard Esq.

Burres,Fidnick and Sheppard

19 Pray Street

Amherst, Ma. 01002

Dear Janet,

I am sending you this note to notify you that there will be a Board of Health meeting Thursday November 19, 1987 at 5:00 pm. The meeting is being held to grant a variance concerning my septic system repair.

I have been informed that this meeting is more of a formality in that the system is pre-existing,meets the state code (though not the towns concerning the height above ground water),and the repairs alleviate what could be a potential health hazzard.

As you have represented Mr. Simmons up until now I felt that I should notify you of this meeting.

Please feel free to contact me if I can be of any further assistance.

Sincerely,

Frederic M.Keillor

266 Stanley Street

Amherst,Ma. 01002

253-9272

November 18, 1987-

Copy Received This Day, By The Office of Janet Sheppard-

Joan Paczkowski, Secretary

November 17,1987

Mr. Joeseph Elkington

Middle Street

Amherst, Ma. 01002

Dear Joe,

This is a letter to inform you that I have applied for a variance from the town concerning my septic system repair. The variance concerns the towns six foot minimum from ground water requirement. Where the state requirement which has been met by the systems design differs from the town requirement we must apply for a variance hearing.

The hearing will take place beginning at 5:00 pm. Thursday November 19, 1987 in the Board of Health's conference room located at the Bangs Community Cenmter.

Any questions or concerns that you might have other than those which we have discussed can be addressed there.

Please feel free to contact me should you have any further. questions.

Received
Joe Elkington

Sincerely,

Frederic M.Keillor

87-26

PERCOLATION TEST DATA

Test No.		Test No. (If required)	
Reading	Time	Reading	Time
Saturation (15min)	25 gals 11:02 11:13	Saturation(15min)	
14½	11:13		
11½	11:15		
8½	11:17		
5½	11:20		
2½	11:23		
	design rate		

3/3 = 1.0 min/INCH

Perc.Rate	2.0 Min/inch	Perc.Rate	Min/inch
Ground Elev.	184.70	Ground Elev.	
Depth of Hole	36" + 18" hole	Depth of Hole	

DEEP TEST PIT/S

Test Pit - TP1-1

Depth	Soil Description
0-13"	LOAM OTS
13"-65"	FINE TO MED SAND
65-96	MED SAND

Test Pit - TP1-2

Depth	Soil Description
0-6"	LOAM OTS
6"-65"	med to FINE SAND
65-87"	med to COARSE SAND

Groundwater	Depth 65"	Elev. 186.70"		Groundwater	Depth 65	Elev. 184.70	
Bedrock	Depth DNA	Elev.		Bedrock	Depth DNA	Elev.	
Ground Elevation	192.00			Ground Elevation	190.00		

S.C.S. Soil Designation _____ Seasonal High Water Table? _____

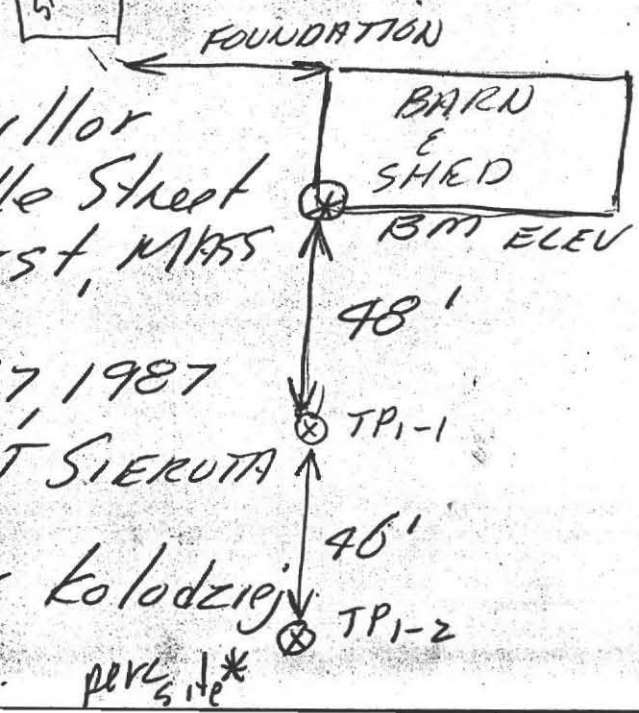
Bench Mark: Elev. 200.00 Description TOP OF BARN FOUNDATION CONC. NE CORNER

COMMENTS:

Fred Kerllor
355 middle Street
So. Amherst, MASS

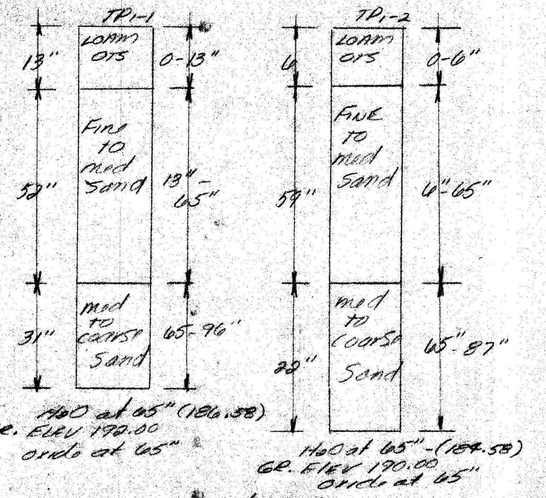
October 17, 1987

ENGR W.J SIERUTA
WITNESS
Peter Kolodziej



Witnessed
Peter Kolodziej - Acting Agent

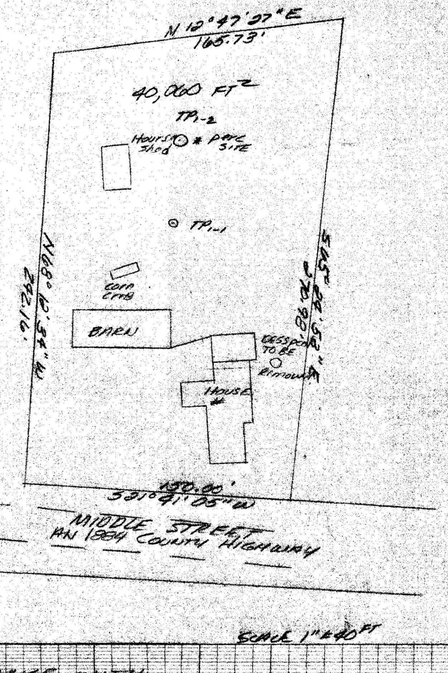
PERCOLATION TEST INFORMATION



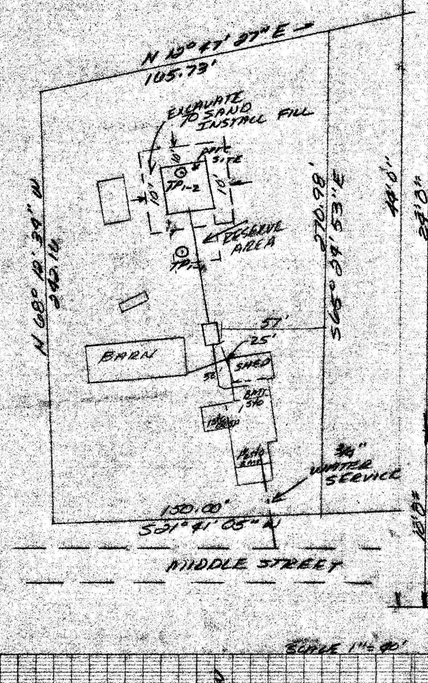
BENCH MARK ELEV
TO OF BARN
FOUNDATION N.E corner

Date: October 17, 1987
ENGR: W. J. SIERUTA PE.
Witness: Peter Kolodziej
Percolation Rate:
Actual: 1.0 min/inch
Design Rate: 2.0
Depth 36"+18" inch
ELEV 184.70'

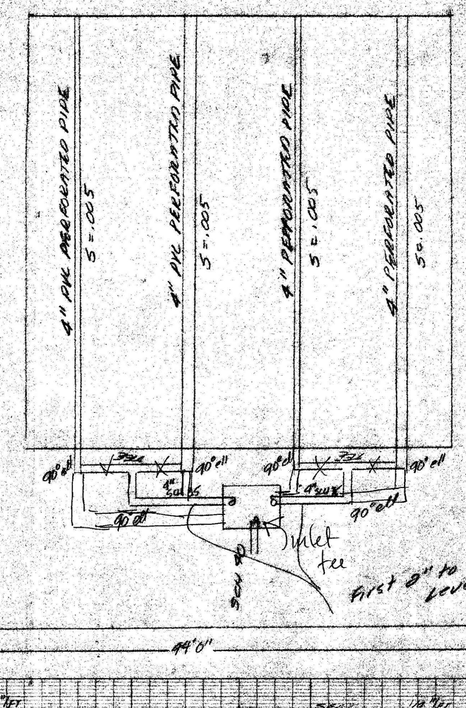
WATER pounded digging holes to 120" WASH IN OF SAND



SCALE 1"=40 FT



SCALE 1"=40'



SCALE 1"=2'

DESIGN NOTES

1) ALL CONSTRUCTION TO BE IN ACCORDANCE WITH 310 CMR 15 (TITLE 5) AND BOARD OF HEALTH REGULATIONS
2) EXISTING CONTOURS TO BE CHANGED BY PROVIDING NECESSARY SAND FILL TO MEET ALL CONDITIONS OF PRESENT REGULATIONS

DESIGN CRITERIA

USE: EXISTING 3 BEDROOM SINGLE FAMILY HOME TO BE EXPANDED TO 4 BEDROOM, NO DISPOSAL FILL EXIST

DESIGN FLOW: 310 CMR 15.02 AND BOARD OF HEALTH REGULATION
4 bedroom - 110 gal/bedroom = 440 gal/day

SEPTIC TANK
310 CMR 15.09
440 gal/day x 150% = 660 gals
USE 1500 gal tank precast conc.
10'0" x 5'0" x 5'0"

LEACHING SYSTEM
DUE TO ELEVATION OF THE EXISTING WATER TABLE, LEACH FIELD DESIGN WILL BE USED ADDITIONAL FILL WILL BE REQUIRED TO PROVIDE ADEQUATE 72" separation to WATER TABLE

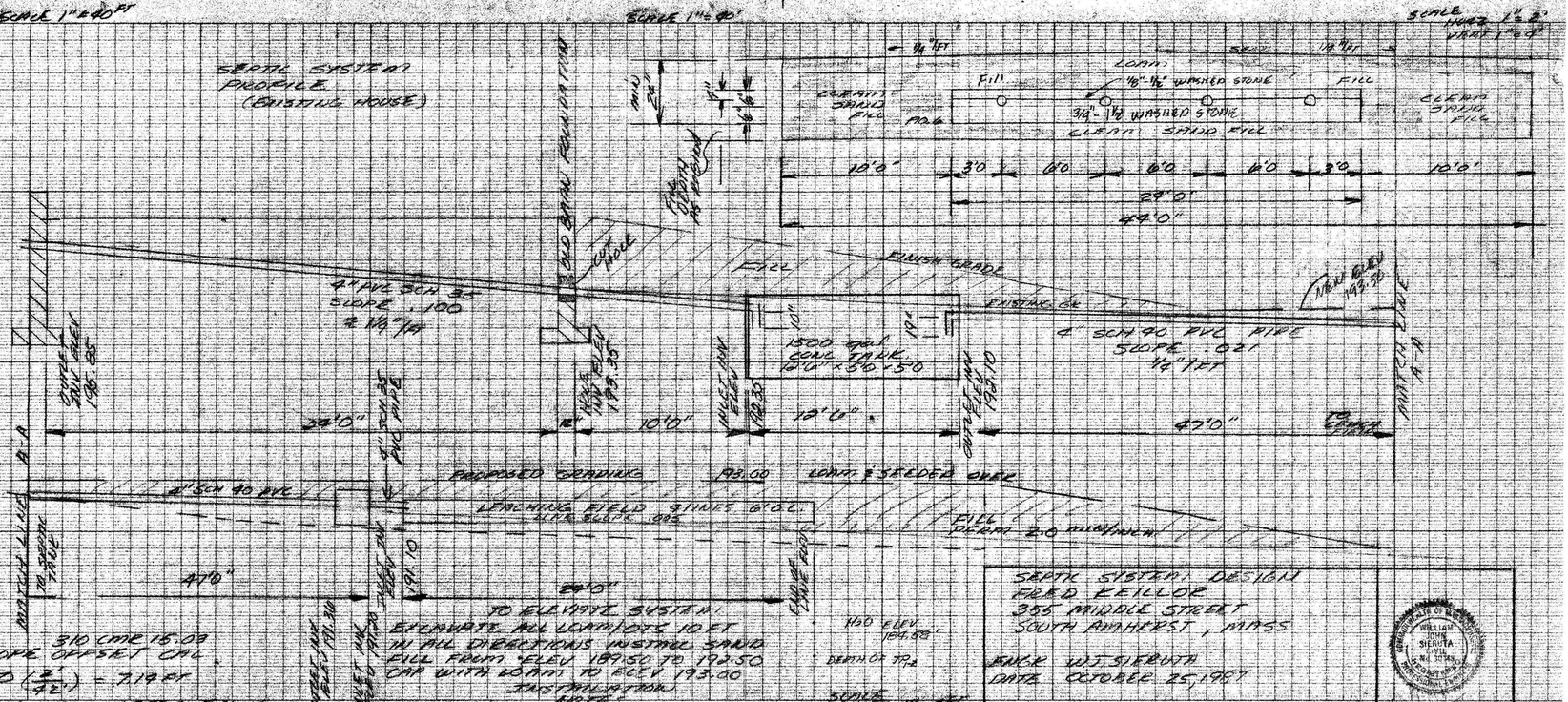
DESIGN FLOW
AMHERST HEALTH DEPT REGULATION
1.25 x 440 gal/day = 550 gal/day

USE LEACH FIELD
USE 4 LINES 6FT O.C. FIELD SIZE 24' x 24' OVER TP-2 LOCATION

TOTAL BOTTOM AREA 576 FT²
576 FT² x 1.0 gal/FT² = 576 gal/day

ELEVATION OF FIELD BOTTOM 190.60 FT.

BENCH MARK ELEVATION TOP OF FOUNDATION WALL BARN N.E CORNER 200.00 FT



SEPTIC SYSTEM DESIGN
FRED KELLOR
355 MIDDLE STREET
SOUTH AMHERST, MASS

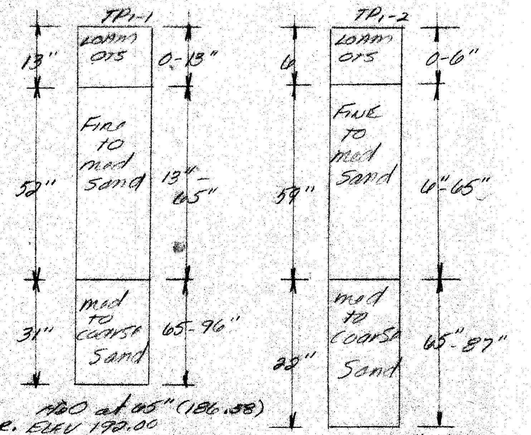
DWG W.J. SIERUTA
DATE OCTOBER 25, 1987

WILLIAM JOHN SIERUTA
No. 30745
REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS

SCALE HORZ 1"=2'
VERT 1"=0 FT

Variance

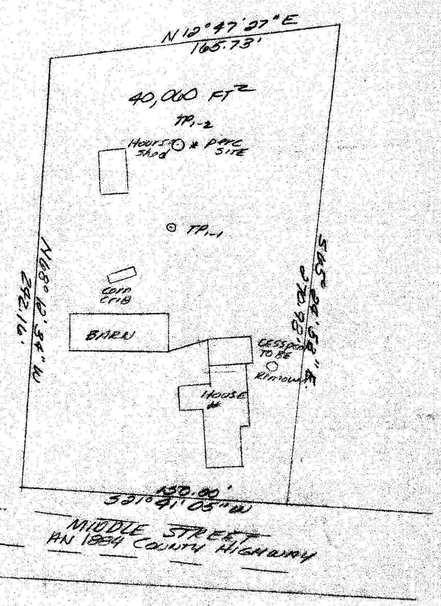
PERCOLATION TEST INFORMATION

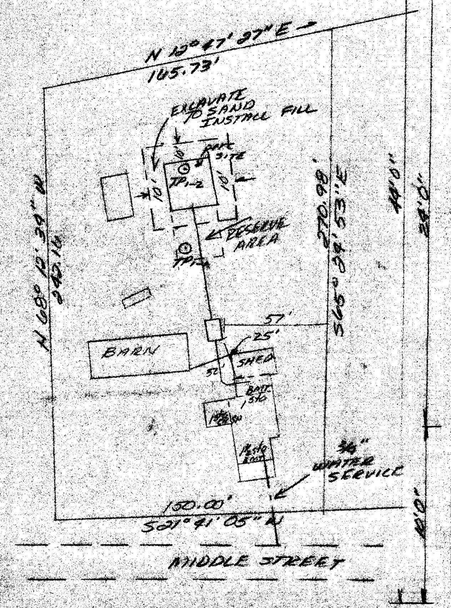


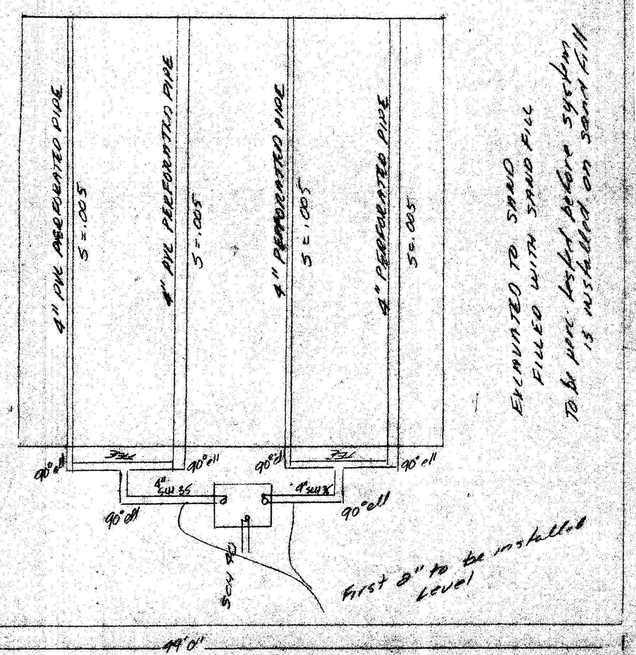
BENCH MARK ELEV TO OF BARN FOUNDATION N.E corner

Date: October 17 1987
ENGR: W.J. SIERUTA P.E.
Witness: Peter Kolodzie,
Percolation Rate:
Actual: NO minimum
Design Rate: 2.0
Depth 36"-48" hole
ELEV 194.70'

WATER pounded digging holes to 120" WASH IN OF STONE







DESIGN NOTES

1) ALL CONSTRUCTION TO BE IN ACCORDANCE WITH 310 CMR 15 (TITLE 5) AND BOARD OF HEALTH REGULATIONS
2) EXISTING CONTOURS TO BE CHANGED BY PROVIDING NECESSARY SAND FILL TO MEET ALL CONDITIONS OF PRESENT REGULATIONS

DESIGN CRITERIA

USE EXISTING 3 BEDROOM SINGLE FAMILY HOME TO BE EXPANDED TO 4 BEDROOM, NO DISPOSAL FULL BATH

DESIGN FLOW: 310 CMR 15.02 AND BOARD OF HEALTH REGULATION
4 bedroom = 110 gal/bedroom = 440 gal/day

SEPTIC TANK
310 CMR 15.09
440 gal/day x 1.50% = 660 gals
USE 1500 gal tank (minimum size)
10'L" x 5'0 x 5'0

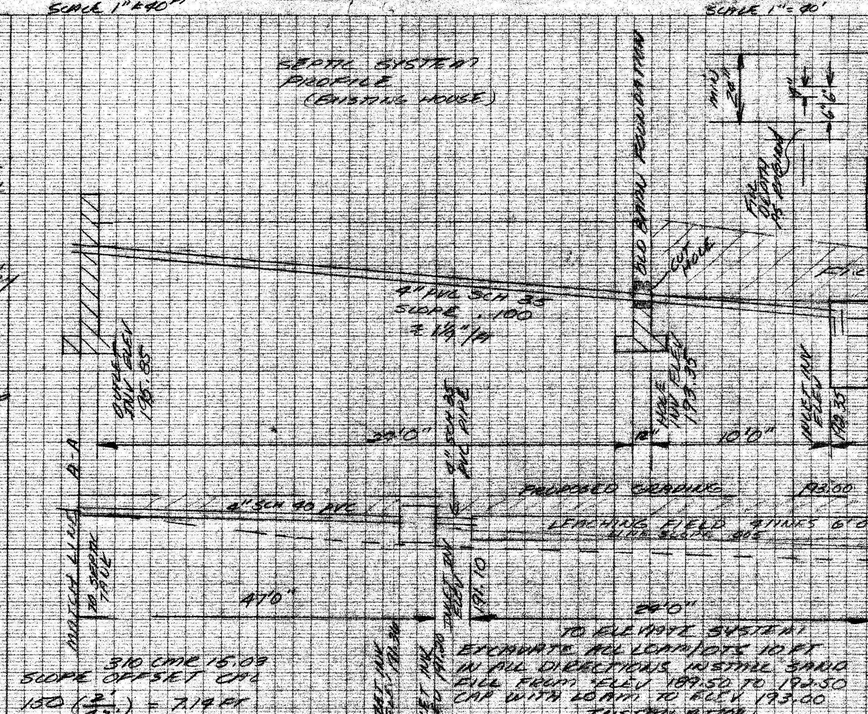
LEACHING SYSTEM
DUE TO ELEVATION OF THE EXISTING WATER TABLE, LEACH FIELD DESIGN WILL BE USED ADDITIONAL FILL WILL BE REQUIRED TO PROVIDE ADEQUATE 72" separation to WATER TABLE

DESIGN FLOW
AMHERST HEALTH DEPT REGULATION
1.25 x 440 gal/day = 550 gal/day

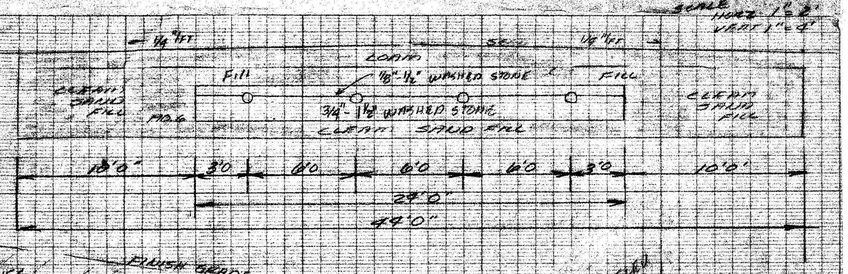
USE LEACH FIELD
USE 4 LINES 6FT O.C. FIELD SIZE 24' x 24' OVER TP1-2 LOCATION
TOTAL BOTTOM AREA 576 FT²
576 FT² x 1.0 gal/FT² = 576 gal/day
ELEVATION OF FIELD BOTTOM 190.60 FT.

BENCH MARK ELEVATION TOP OF FOUNDATION WALL BARN N.E CORNER 200.00 FT

SCALE 1" = 40 FT



310 CMR 15.09
SLOPE OF SET CAP
130 (2/42) = 7.14 FT
AVAILABLE AFTER FILL IS IN PLACE AT ELEV 191.10
MAX = 30' OF BY CODE
QUANTITY OF SAND FILL REQD 290 cu. yds +



SEPTIC SYSTEM DESIGN
FRED KELLOR
355 MIDDLE STREET
SOUTH AMHERST, MASS

ENGR W.J. SIERUTA
DATE OCTOBER 25, 1987

COMMONWEALTH OF MASSACHUSETTS
WILLIAM JOHN SIERUTA
CIVIL
No. 30748
REGISTERED PROFESSIONAL ENGINEER

SCALE HORZ 1" = 4FT
VERT 1" = 4FT