850 Belchertown Rd.

1/5/93 cc
Pd 160
By John P Zahadnik

No. 93-1 FEE

THE COMMONWEALTH OF MASSACHUSETTS
BOARD OF HEALTH
Town OF Amherst

COMMONWEALTH OF MASSACHUSETTS
FREDERICK A. FILIOS
REGISTERED SANITARY ENGINEER
688

Application for Disposal Works Construction Permit

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

850 Belchertown Road — Location - Address
same — or Lot No.
Marian Jones Dayton — Owner
850 Belchertown Road — Address
Karls Excavating — Installer
Hadley Mass — Address

Type of Building — Size Lot 22.89 Ac ~~Sq. feet~~
Dwelling — No. of Bedrooms 3 Expansion Attic ( ) Garbage Grinder (yes)
Other — Type of Building ..... No. of persons ..... Showers ( ) — Cafeteria ( )
Other fixtures .....
Design Flow 55 gallons per person per day. Total daily flow 618.75 gallons.
Septic Tank — Liquid capacity 1500 gallons Length ..... Width ..... Diameter ..... Depth .....
Disposal Trench — No. ..... Width ..... Total Length ..... Total leaching area ..... sq. ft. Sides
Seepage Pit No. 1 ~~Diameter~~ 76" x 8' Depth below inlet 1.5 Total leaching area 32.8 sq. ft. Bottom
Other Distribution box ( ) Dosing tank ( )
Percolation Test Results Performed by Filios Enterprises Inc Date Dec. 14, 1992
Test Pit No. 1 4 minutes per inch Depth of Test Pit 10' Depth to ground water 87"
Test Pit No. 2 ..... minutes per inch Depth of Test Pit 12' Depth to ground water 9'

Description of Soil Enclosed

Nature of Repairs or Alterations — Answer when applicable

Agreement:
The undersigned agrees to install the aforedescribed Individual Sewage Disposal System in accordance with the provisions of TITLE 5 of the State Environmental 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 Marian M Dayton 3/19/93
Date

Application Approved By ..... Date

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

Permit No. 93-1 Issued ..... Date

Checked 9/21/93 JR Filios

THE COMMONWEALTH OF MASSACHUSETTS
BOARD OF HEALTH
Town OF Amherst

Jan Koniecz

Certificate of Compliance

THIS IS TO CERTIFY, That the Individual Sewage Disposal System constructed ( ) or Repaired (✓)
by ..... Installer
at 850 Belchertown Road
has been installed in accordance with the provisions of TITLE 5 of The State Environmental Code as described in the application for Disposal Works Construction Permit No. 93-1 dated .....

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

DATE 9/21/93 Inspector

THE COMMONWEALTH OF MASSACHUSETTS
BOARD OF HEALTH
Town OF Amherst

No. 93-1 FEE 160 1/5/93 cc pd

Disposal Works Construction Permit

Permission is hereby granted Marian Jones Dayton
to Construct ( ) or Repair (✓) an Individual Sewage Disposal System
at No. 850 Belchertown Road
Street
as shown on the application for Disposal Works Construction Permit No. 93-1 Dated .....
Board of Health

DATE 2/17/93

Variance granted 2/17/93

FORM 1255 HOBBS & WARREN, INC., PUBLISHERS

CHECK OR FILL IN WHERE APPLICABLE

February 26, 1993

Mr. & Ms. Dayton
850 Belchertown Road
Amherst Massachusetts 01002

Dear Mr. & Ms. Dayton:

The Amherst Board of Health at their meeting on February 17, 1993 voted to grant your request for a variance to local exceptions to Title V to allow leaching facilities closer than 100 feet to a watercourse.

Sincerely,

Bettye Anderson Frederic
Director

cc: Department of Environmental Protection
Western Region Division
Dwight Street
Springfield Massachusetts 01103

Filios Enterprises, Inc.

69 Pelham Rd., Amherst, MA 01002 (413) 256-8008

February 2, 1993

Board of Health
Town of Amherst
Bangs Community Center
Amherst, MA 01002

Dear Board Members:

I recommend that the request for a variance to the Amherst Board of Health regulations governing Subsurface Disposal of Sanitary Sewage Section 3 - d. Distances [ref 15.03 (7)] requiring a 100' setback from a subsurface sewage disposal system to a bordering vegetated wetlands (being interpreted as a form of watercourse) for James and Miriam Dayton be approved. The proposed repaired system will increase the distance from the leach area from approximately 45' for the current failed leach area to a minimum of 55' at the closest point. Further increase in this distance is precluded because of the steep slope against which the system is designed. The outlet from the house and the septic tank are maintained at between 75' and 60' from the wetland. This request does not represent a need for variance to Title 5 requirements because the State requirements for 50' setback to wetlands and 100' setback to the pond are maintained. The proposed system represents an improvement on the system being repaired which has been in use for many years in many key areas:

- The septic tank has been increased from 800 to 1500 gal. capacity.
- The distance from the foundation drain to the septic tank has been increased to 26'.
- The capacity of the leaching area has been increased to more than 629 gal./day meeting the requirements for both a garbage grinder and the Amherst safety factor of 25% over design.
- The fill requirements for breakout prevention are met (the manner in which the prior system failed).

The wetlands in question are a moist area principally vegetated with wetland fern varieties recently allowed to grow up from the area's long use as a lawn. No impact on the vegetation nor other wetland functions is anticipated. No potential public health impact is expected.

Sincerely,

Frederick A Filios Pres.

Frederick A. Filios
President

Jan.29, 1993

To Board of Health

Amherst, Mass.

From:

James & Miriam Dayton

850 Belchertown Rd.

Amherst, Mass. 01002

Dear Sirs:

We wish hearby to request a variance to the regulations of Amherst Board of Health to repair a septic system which falls all or in part within the 100 foot buffer zone, from a boardering vegetative wetland.

This is at the above address and as shown in accompanying designs.

Sincerely,

Miriam Dayton
James Dayton

Miriam Dayton

James Dayton

8 miles

John P. Zahradnik
70 Harkness Rd
Pd 160.00 for
Mr Dayton
1/15/93

TOWN OF AMHERST

PERC TEST DATA SHEET

DATE 12/14/92 LOCATION 850 Belchertown Road LOT SIZE

OWNER James Dayton ADDRESS 850 Belchertown Rd TELE # 253-7749

P.E./RS Fred Filios / Paul Filios FIRM Filios Ent Inc OBSERVED BY David Zarzinski

BACK HOE OPERATOR Hank BENCH MARK

PERC DEPTH 60" PRE SOAK TIME 9:40 PERC DEPTH PRE SOAK TIME

TEST			
12" 9:56	8" 10:06		
11" 9:59	7" 10:09		
10" 10:01	6" 10:12		
9" 10:03			

RATE 4 RATE

#1

TOP 8"
SUB 36"
Coarse Coarse Seepage 89" Cobbles Stones

10'

#2 1/28/93

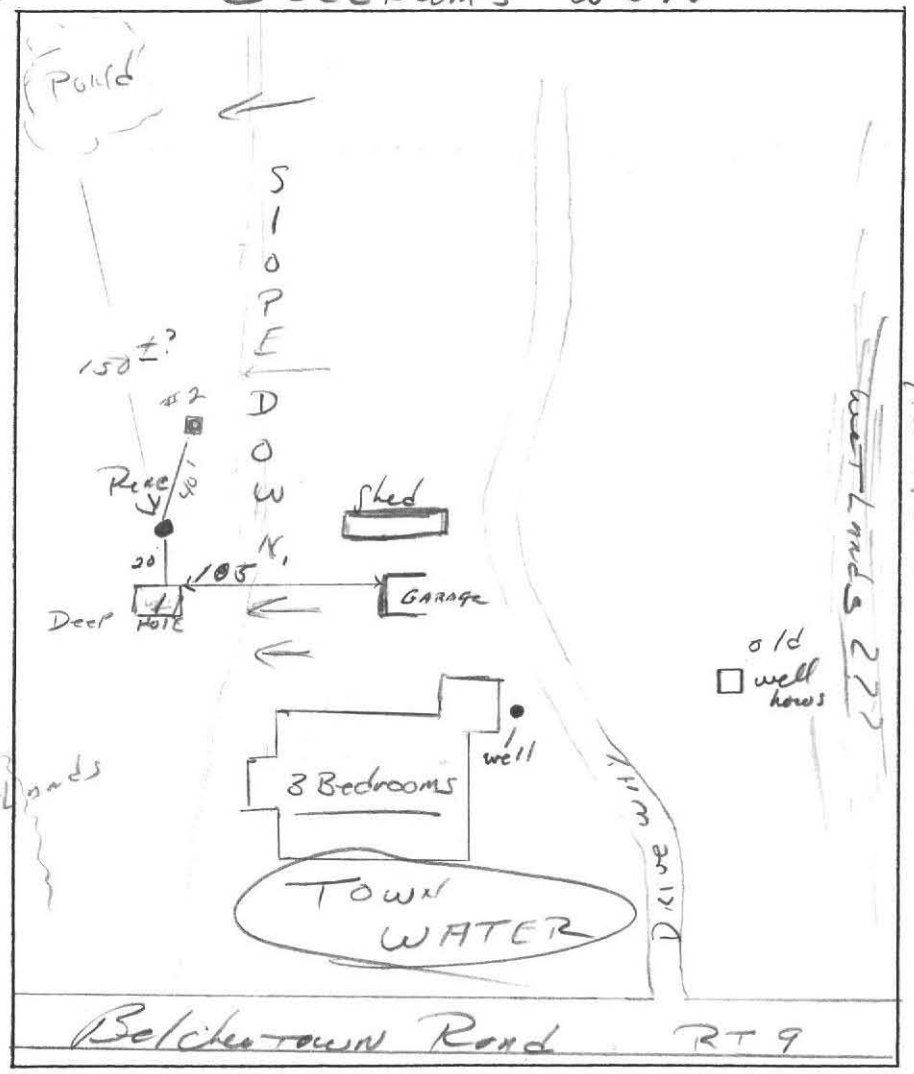
TOP 6"
SUB 53"
Sand + Gravel 0x10 9'

12'

TOP	TOP
SUB	SUB

TOP	TOP
SUB	SUB

3 Bedrooms w G/G



EH1:PERCFORM

Deep Soil Logs

Filios Enterprises, Inc.

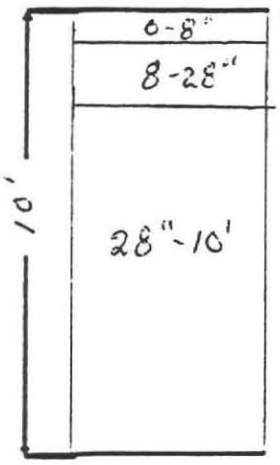
69 Pelham Rd., Amherst MA 01002, (413) 256-8008

COMMONWEALTH OF MASSACHUSETTS
FREDERICK J. FILIOS, R.S.
688

Owner: James + Mariam Dayton **Date:** Dec. 14 1992

Location: 850 Belchertown Rd Amherst Mass. 01002 **B. of H.** David Zarazinski

H_1



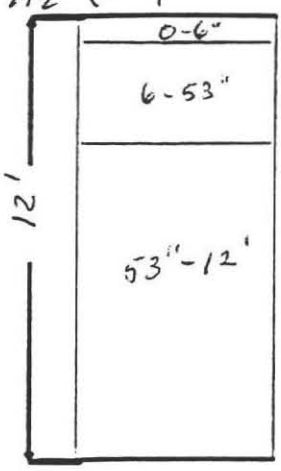
Topsoil

Subsoil

Coarse sand with stones

Ground Water 87"

H_2 (Dug Jan. 28, 1993)

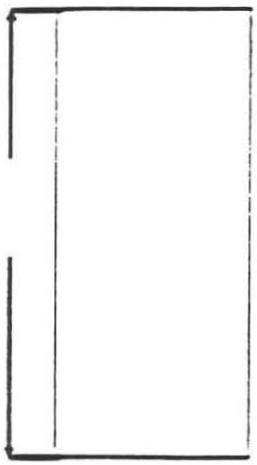


Topsoil

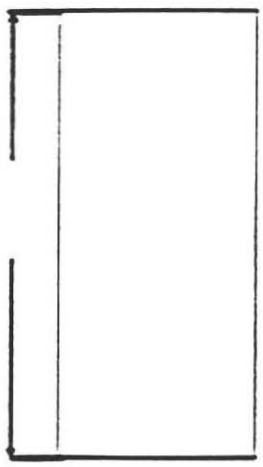
Subsoil

Sand with gravel, occasional stone

Ground Water oxide at 9'



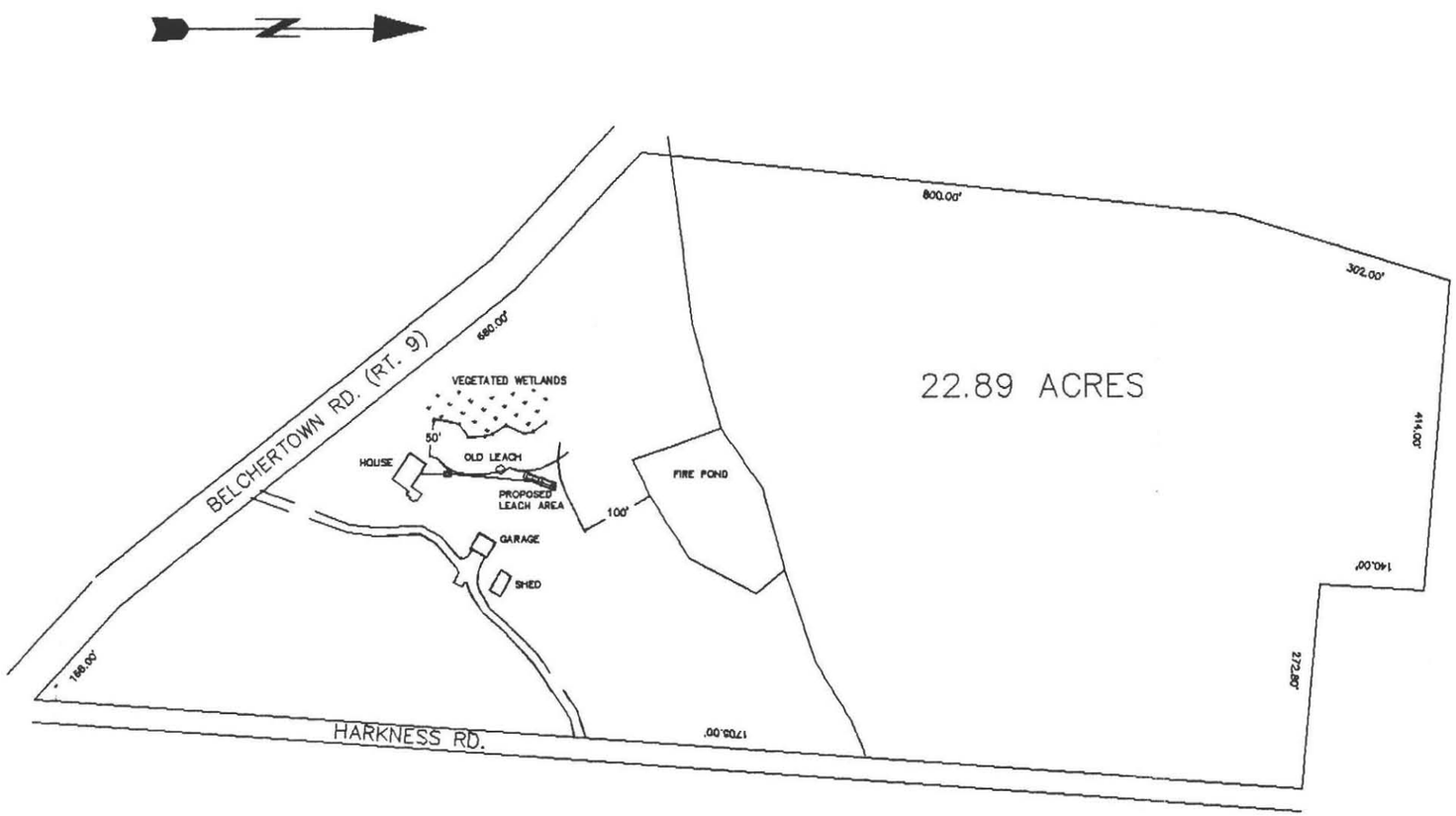
Ground Water _____



Ground Water _____

Percolation Rate at: 60 inches

4 **min./inch**



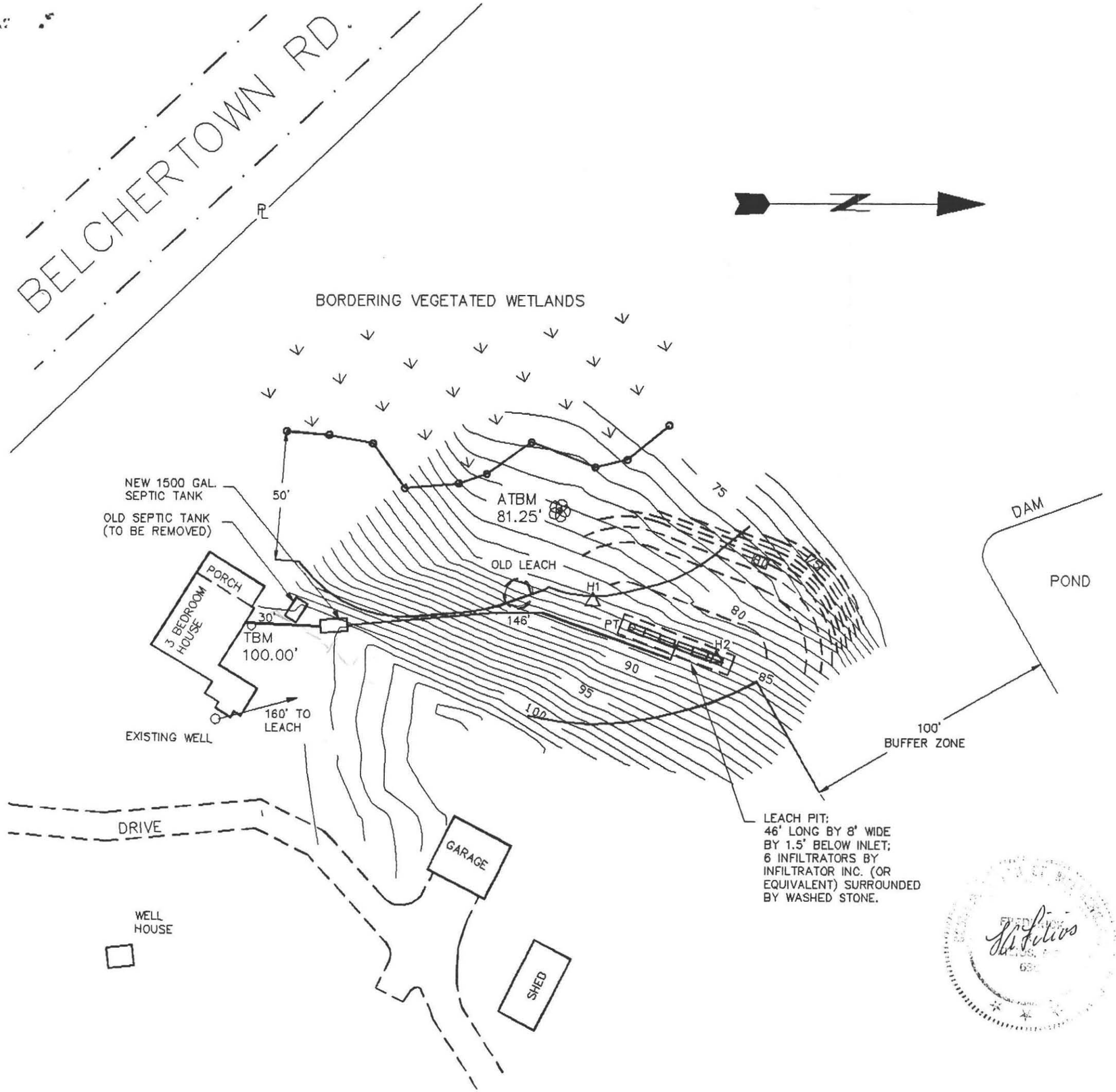
INFILTRATOR — 76" LONG X 15" high
WITH 18" OF SPACE below INLET
Each SECTION - weigh 33 lb -

LOCUS OF SEWAGE DISPOSAL SYSTEM	
AT: 850 BELCHERTOWN RD., AMHERST, MA	
BY: FILIOS ENTERPRISES, INC. 69 PELHAM RD. AMHERST MA 01002 (413)256-8008	FOR: JAMES AND MIRIAM DAYTON 850 BELCHERTOWN RD. AMHERST, MA 01002
Drawn By: P. Filios	SCALE: 1" = 200'
20 Jan 93	Page 1 of 4

Void

System New location
New Plan
because Expense
Town water
Dry well
However mind changed her

9/21/93
Inspected System used
This Plan



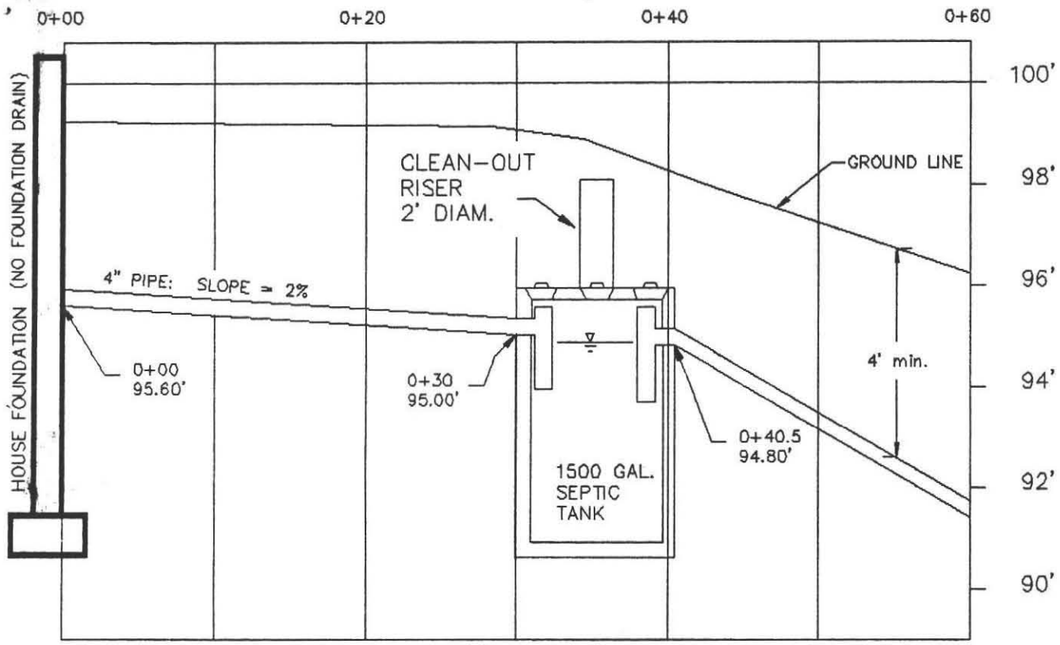
LEGEND

- ○ PT PERCOLATION TEST
- △ Hx DEEP TEST PIT
- CONTOUR LINES (1' INTERVAL)
- PROPOSED CONTOUR LINES (1' INTERVAL)

NOTES:

1. TBM IS TOP OF OIL FILL PIPE. ATBM IS NAIL IN 2' HICKORY.
2. NO OTHER WELLS WITHIN 200' OF THE LEACH AREA AT THE TIME OF SURVEY.

DETAIL OF SEWAGE DISPOSAL SYSTEM	
REPAIR AT 850 BELCHERTOWN RD., AMHERST, MA	
BY: FILIOS ENTERPRISES, INC. 69 PELHAM RD. AMHERST MA 01002 (413)256-8008	FOR: JAMES AND MIRIAM DAYTON 850 BELCHERTOWN RD. AMHERST, MA 01002
DRAWN BY: P. FILIOS	SCALE: 1" = 40'
28 JAN, 1993	PAGE 2 OF 4



100' Elevation Assumed at TBM. TBM is top of oil fill pipe as shown on planview. Alternate TBM provided at base of hill; nail in 2' hickory.

SPECIFICATIONS

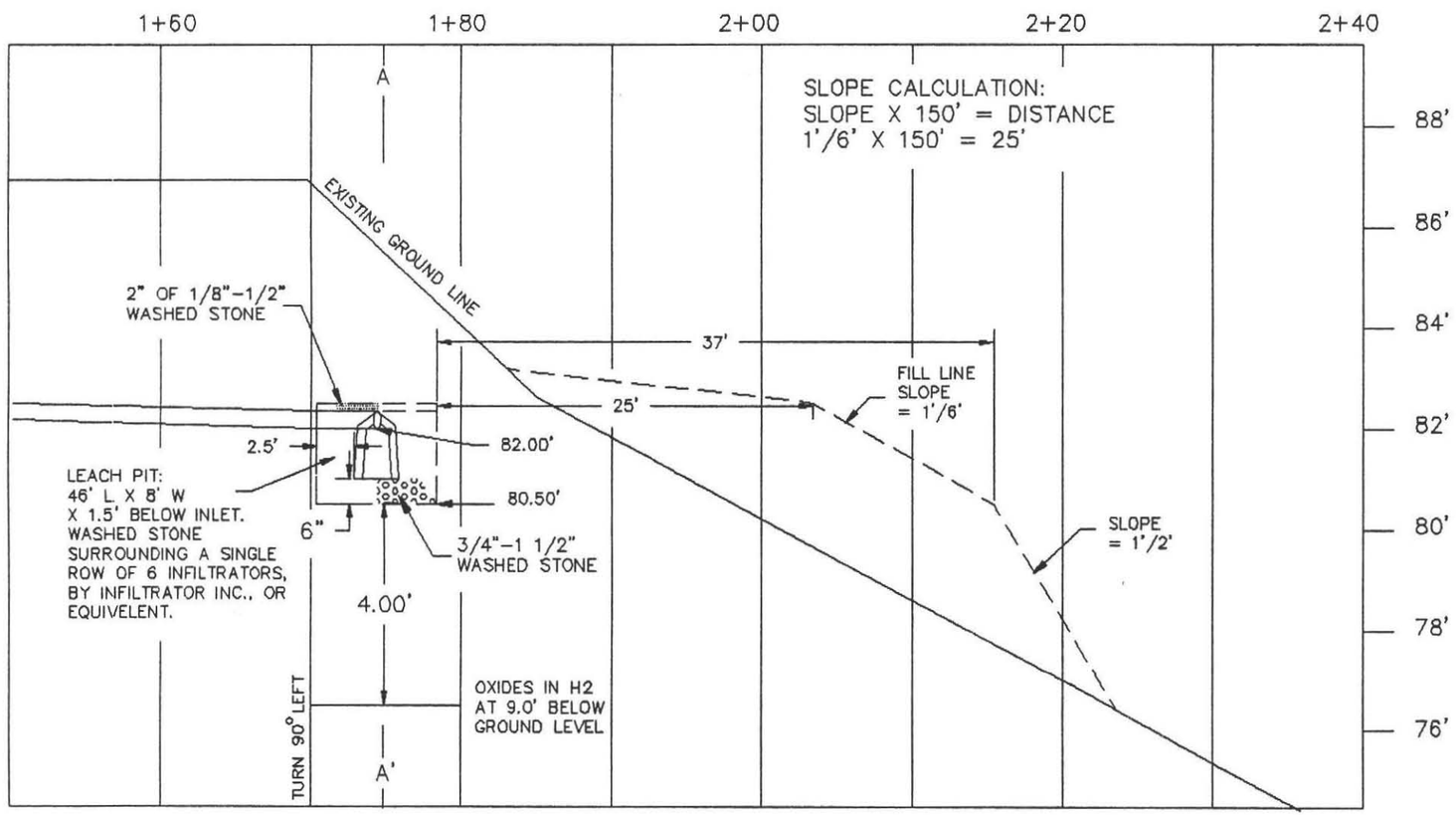
ALL MATERIALS AND CONSTRUCTION MUST BE IN ACCORDANCE WITH COMMONWEALTH OF MASSACHUSETTS DEPT. OF ENVIRONMENTAL PROTECTION STATE ENVIRONMENTAL CODE TITLE 5.

CALCULATIONS

REQUIRED: For a 3 bedroom house with a garbage grinder a capacity of 330 gal./day X 1.5 X 1.25 = 618.75 gal./day.

DESIGNED: 1 leach pit 46.0'L X 8.0'W X 1.50' below inlet (effective depth), for a perc rate of 4 min./in., yielding side and bottom loading factors of 2.00 and 0.83 gal./sq.ft. respectively.

SIDEWALL:	(46.0' + 8.0')2 X 1.5' X 2.00 Gal./Sq.ft.	= 324.0 Gal.
BOTTOM:	(46.0' X 8.0')0.83 Gal./Sq.ft.	= 305.4 Gal.
TOTAL		629.4 Gal.

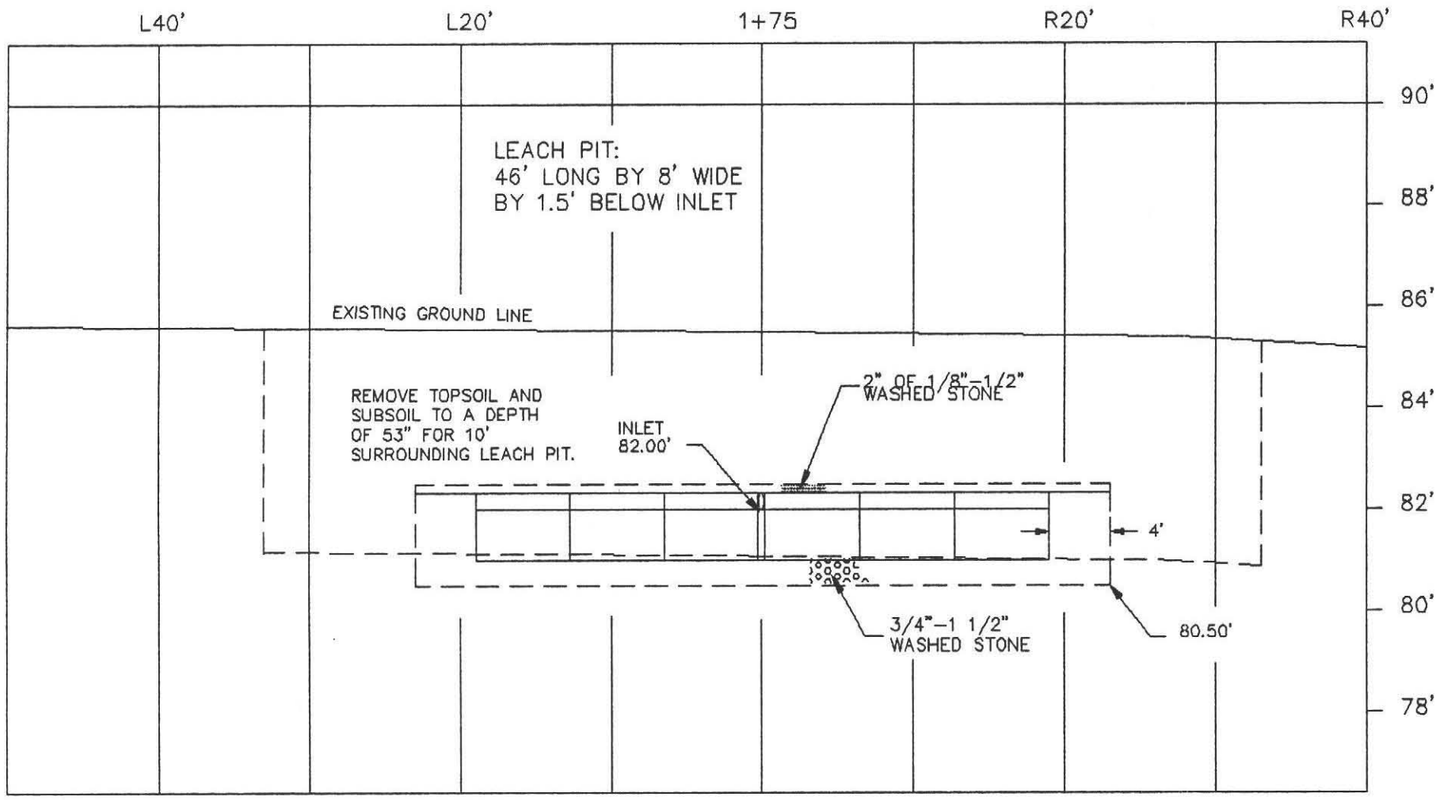


Construction Notes

1. Septic tank should be inspected and pumped annually.
2. Inlet and outlet tees must extend 10" and 14" below the flow line respectively.

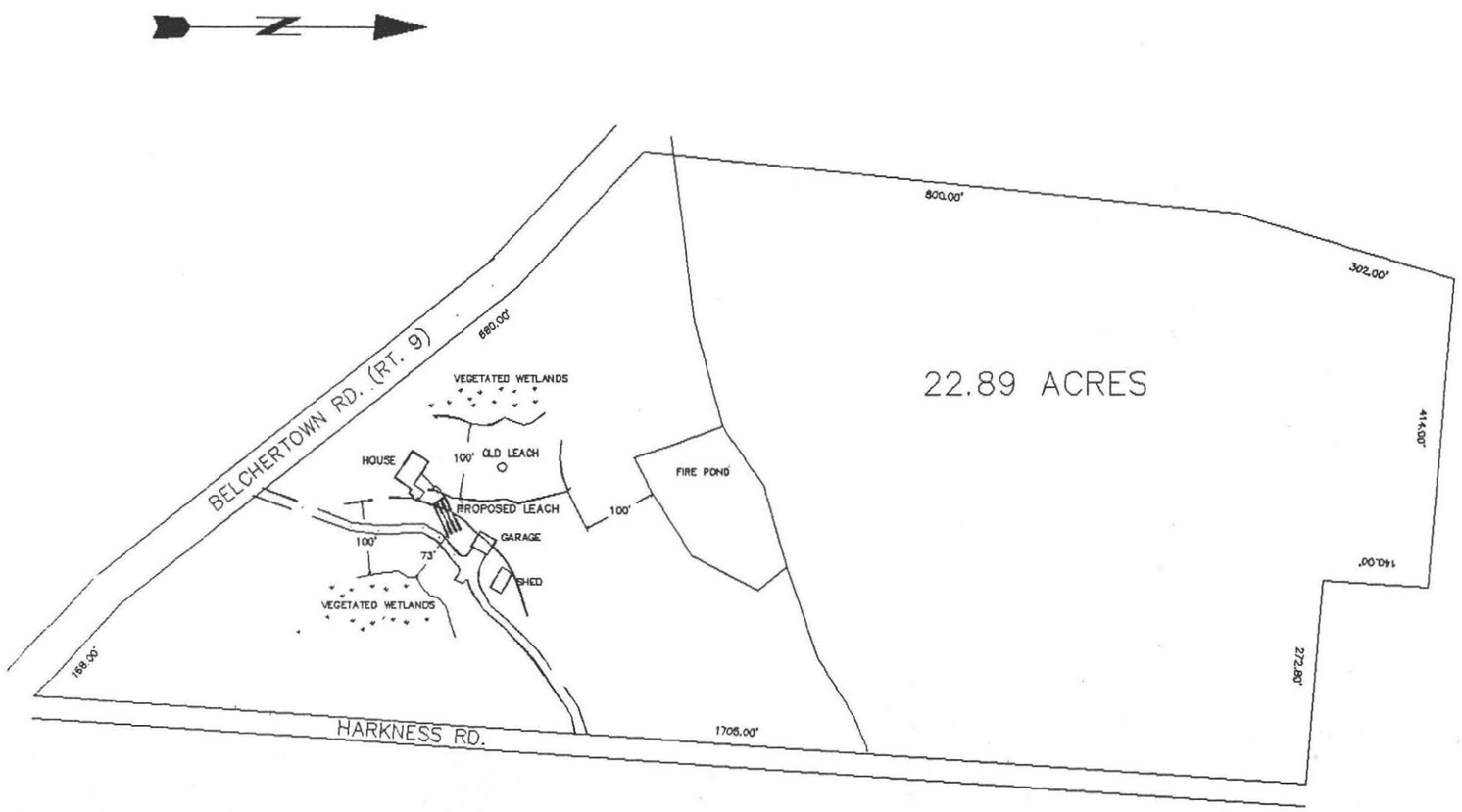
PROFILE OF SEWAGE DISPOSAL SYSTEM	
REPAIR AT 850 BELCHERTOWN RD., AMHERST	
BY: FILIOS ENTERPRISES, INC. 69 PELHAM RD. AMHERST MA 01002 (413)256-8008	FOR: JAMES AND MIRIAM DAYTON 850 BELCHERTOWN RD. AMHERST, MA 01002
DRAWN BY: P. FILIOS	SCALE: 1" = 10' HOR. / 3' VER.
28 JAN, 1993	PAGE 3 OF 4

CROSS-SECTION OF LEACH PIT AT A-A' (1+75)



100' Elevation Assumed at TBM. TBM is top of oil fill pipe as shown on planview.

CROSS-SECTION OF LEACH PIT AT A-A'	
REPAIR AT 850 BELCHERTOWN RD., AMHERST, MA	
BY: FILIOS ENTERPRISES, INC. 69 PELHAM RD. AMHERST MA 01002 (413)256-8008	FOR: JAMES AND MIRIAM DAYTON 850 BELCHERTOWN RD. AMHERST, MA 01002
DRAWN BY: P. FILIOS	SCALE: 1" = 10' HOR. / 3' VER.
28 JAN, 1993	PAGE 4 OF 4



LOCUS OF SEWAGE DISPOSAL SYSTEM	
AT: 850 BELCHERTOWN RD., AMHERST, MA	
BY: FILIOS ENTERPRISES, INC. 69 PELHAM RD. AMHERST MA 01002 (413)256-8008	FOR: JAMES AND MIRIAM DAYTON 850 BELCHERTOWN RD. AMHERST, MA 01002
Drawn By: P. Filios	SCALE: 1" = 200'
Rev. #2, 21 July, 1993	Page 1 of 3

BELCHERTOWN RD.

℄

BORDERING VEGETATED WETLANDS

SLOPE BREAKOUT POINT:
150' X 1'/4.2' = 35.7'
REQUIRED

NEW 1500 GAL.
SEPTIC TANK

OLD SEPTIC TANK
(TO BE REMOVED)

PORCH

3 BEDROOM HOUSE

TBM

26'

BOULDER

36'

SLAB

DBOX

H3

17.5'

PT

TOWN WATER

EXISTING WELL
TO BE ABANDONED

98

102

OLD LEACH

100'

H1

PT

H2

75

80

85

90

95

100

DAM

POND

100'
BUFFER ZONE

4 LEACH TRENCHES:
45'L X 2'W X 1.0'
BELOW INLET

29'

28'

38'

GARAGE

DRIVE

73'

SHED

SHED

BORDERING VEGETATED WETLANDS

100'

LEGEND

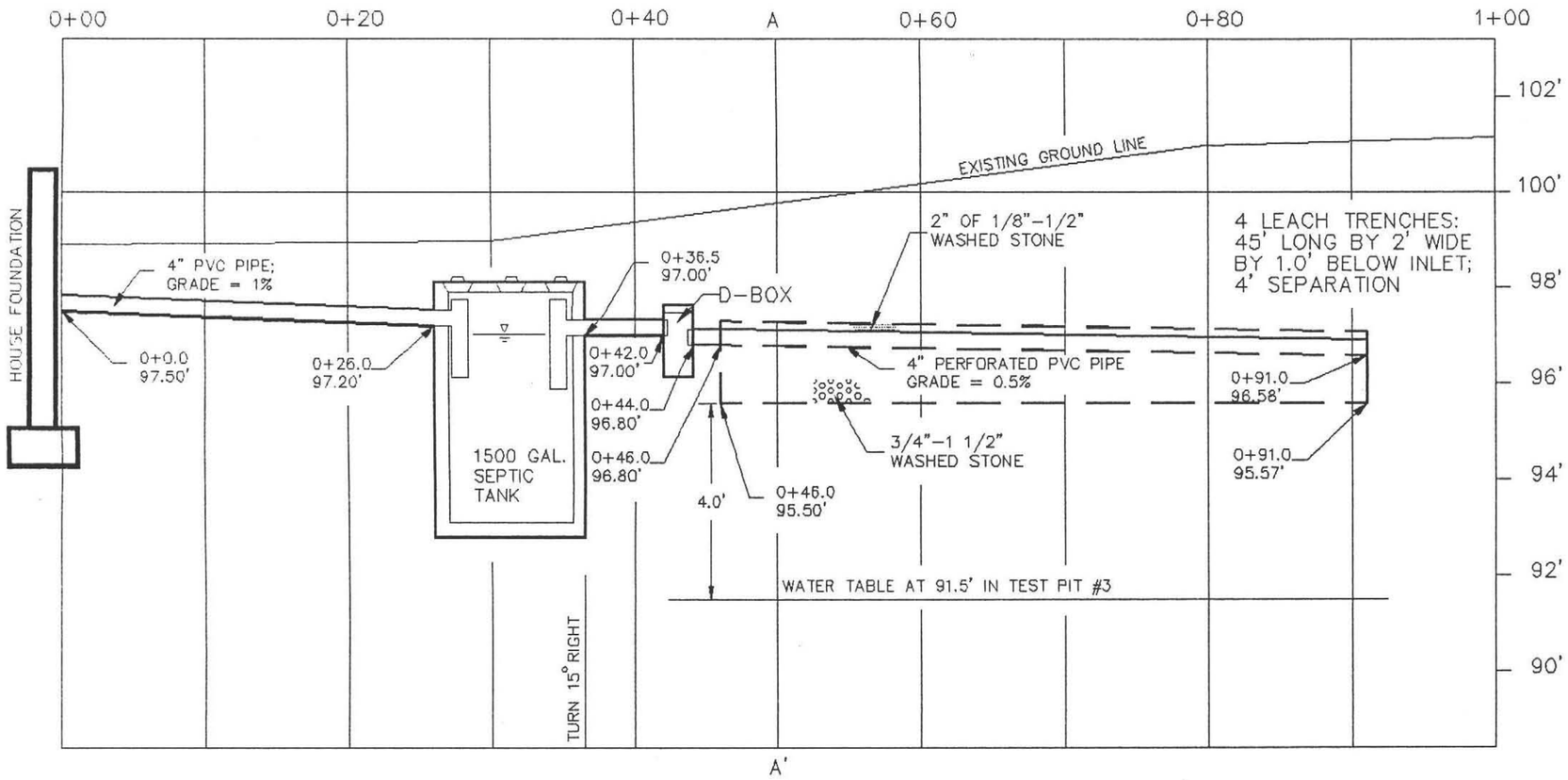
○	PT	PERCOLATION TEST
△	Hx	DEEP TEST PIT
		CONTOUR LINES (1' INTERVAL)

NOTES:

1. TBM IS TOP OF OIL FILL PIPE. ATBM IS NAIL IN 2' HICKORY.
2. NO OTHER WELLS WITHIN 200' OF THE LEACH AREA AT THE TIME OF SURVEY.

COMMONWEALTH OF MASSACHUSETTS
FREDERICK J. FILIOS, R.S.
688

DETAIL OF SEWAGE DISPOSAL SYSTEM	
REPAIR AT 850 BELCHERTOWN RD., AMHERST, MA	
BY: FILIOS ENTERPRISES, INC. 69 PELHAM RD. AMHERST MA 01002 (413)256-8008	FOR: JAMES AND MIRIAM DAYTON 850 BELCHERTOWN RD. AMHERST, MA 01002
DRAWN BY: P. FILIOS	SCALE: 1" = 40'
REV. #2, 21 JULY, 1993	PAGE 2 OF 3



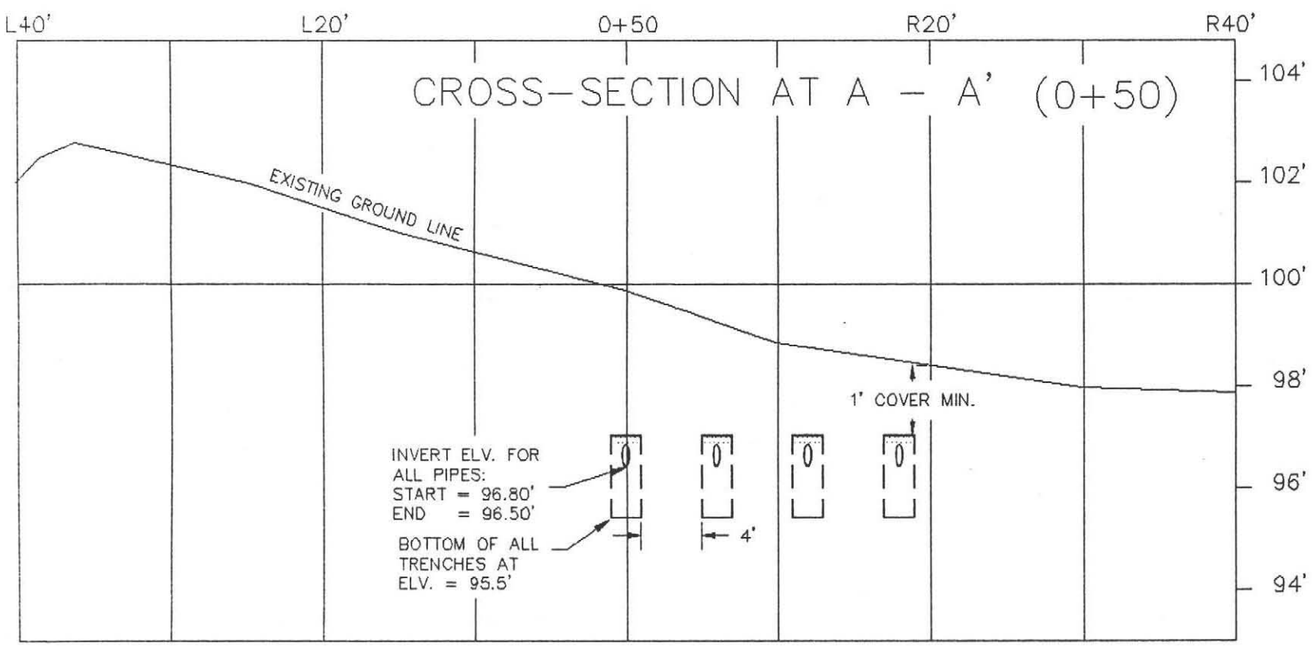
100' Elevation Assumed at TBM. TBM is top of oil fill pipe as shown on Plan view.

SPECIFICATIONS

ALL MATERIALS AND CONSTRUCTION MUST BE IN ACCORDANCE WITH COMMONWEALTH OF MASSACHUSETTS DEPT. OF ENVIRONMENTAL PROTECTION STATE ENVIRONMENTAL CODE TITLE 5.

Construction Notes

1. Septic tank should be inspected and pumped annually.
2. Inlet and outlet tees must extend 10" and 14" below the flow line respectively.



CALCULATIONS

REQUIRED: For a 3 bedroom house with a garbage grinder a capacity of 330.0 gal./day X 1.5 (garbage grinder) X 1.25 (Amherst safety factor) = 618.75 gal./day.

DESIGNED: 4 leach trenches 45.0'L X 2.0'W X 1.00' below inlet (effective depth), for a perc rate of 8 min./in., yielding side and bottom loading factors of 1.25 and 0.63 gal./sq.ft. respectively.

SIDEWALL:	8 Sides(45.0' X 1.0')1.25 Gal./Sq.Ft.	= 450.0 Gal.
BOTTOM:	4 Trenches(45.0' X 2.0')0.63 Gal./Sq.Ft.	= 226.8 Gal.
TOTAL		676.8 Gal.

COMMONWEALTH OF MASSACHUSETTS
FREDERICK FILIOS, R.S.
688

PROFILE OF SEWAGE DISPOSAL SYSTEM	
AT: 850 BELCHERTOWN RD., AMHERST, MA	
BY: FILIOS ENTERPRISES, INC. 69 PELHAM RD. AMHERST MA 01002 (413)256-8008	FOR: JAMES AND MIRIAM DAYTON 850 BELCHERTOWN RD. AMHERST, MA 01002
DRAWN BY: P. FILIOS	SCALE: 1" = 10' HOR. 3' VER.
21 JULY, 1993	PAGE 3 OF 3

Filios Enterprises, Inc.

69 Pelham Rd., Amherst, MA 01002 - (413) 256-8008 / FAX (413) 253-7475

July 21, 1993

Board of Health
Town of Amherst
Bangs Community Center
Amherst, MA 01002

Dear Board Members::

Enclosed is a revised plan for the repair of the septic system belonging to Mr. and Mrs. Dayton at 850 Belchertown Rd. The board had previously approved the repair of the system in February. In the original design for the repair the new leach facility would have been at the base of the hill towards the pond. Because of the high bids received for the original repair design Mr. and Mrs. Dayton have elected to abandon the well at the top of the hill which had prevented the repair from taking place at the top of the hill. Therefore the enclosed revised design moves the leach area up to the top of the hill to a location which was previously unavailable because of the setback requirements from the well.

Note that the revised design still requires the variance to the Town of Amherst requirement for a setback of 100' from wetlands. While the leach facility is now more than 100' from the wetlands at the base of the hill additional wetlands across the driveway are 73' away. This is an improvement on the 55' previously approved for the original repair design. In addition no fill will be required in the 100' buffer zone. It is worth noting that the area behind the garage outside of both buffer zones is not usable because of the steep slope of the hill down to the pond. Title 5 slope setback requirements dictate that the leach facility be from 35' to 50' from the slope breakout point in this case as the slope of the hill varies between 1'/4.2' and 1'/3'.

I recommend that this revised design be substituted for the previously approved design and that the previously granted variance also be allowed.

Sincerely,

Frederick A Filios

Frederick A. Filios
President

To: Bettye Anderson Frederic

From: David Zarozinski

Re: Variance Request for 850 Belchertown Road

Date: 07/28/93

On February 17, 1993 the Board of Health granted a variance (copy enclosed) to the Town's regulation requiring the leach field being no closer than 100 feet to a watercourse. The plan submitted by Mr. Filios located the septic system 55 feet away from the wetlands.

On Monday July 26, 1993, Mr. Filios submitted a revision of this plan with a new location of the system. The reason for this change was the cost of the original design's repair.

In order to make these changes, the following must take place:

1. Cap the well (house has town water).

2. Grant a new variance to the wetlands location which will now be 73 feet away from the previous area chosen.

With the added distance and the facility not requiring fill, I would recommend the following:

1. Grant the variance.
2. Recommend the garbage grinder be removed.
3. The well should be capped with bedamite or its equal, in conjunction with and/or blue clay.

No. 93-1 Revised

FEE

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

Town OF Amherst

COMMONWEALTH OF MASSACHUSETTS FREDERICK A. FILIOS, R.S. 688

Application for Disposal Works Construction Permit

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

850 Belchertown Rd
Location - Address

James and Miriam Dayton — 850 Belchertown Rd
Owner — or Lot No. Address

HARIS
Installer — Address

Type of Building — Size Lot 22.89 Acres ~~Sq. feet~~

Dwelling — No. of Bedrooms 3 — Expansion Attic ( ) — Garbage Grinder (X)

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

Other fixtures .....

Design Flow 55 gallons per person per day. Total daily flow 330 x 1.5 x 1.25 = 618.75 gallons.

Septic Tank — Liquid capacity 1500 gallons Length 10.5' Width 5.0' Diameter ..... Depth 4.0'

Disposal Trench — No. 4 Width 2.0 Total Length 180 Total leaching area 360 sq. ft. side

Seepage Pit No. ..... Diameter ..... Depth below inlet ..... Total leaching area 360 sq. ft. bottom

Other Distribution box ( ) Dosing tank ( )

Percolation Test Results Performed by Filios Enterprises, Inc Date .....

Test Pit No. 1 4 minutes per inch Depth of Test Pit 10' Depth to ground water 87"

Test Pit No. 2 ..... minutes per inch Depth of Test Pit 12' Depth to ground water 9'

" 3 8 " " 10' " 7.5'

Description of Soil Attached

Nature of Repairs or Alterations — Answer when applicable replace septic tank and leach

Agreement:

The undersigned agrees to install the aforedescribed Individual Sewage Disposal System in accordance with the provisions of TITLE 5 of the State Environmental 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 Miriam M. Dayton — Date 7/30/93

Application Approved By David Bergeron — Date 7/30/93

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

Permit No. 93-1 Revised — Issued 7/30/93 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 HARIS
Installer

at 850 Belchertown Rd.

has been installed in accordance with the provisions of TITLE 5 of The State Environmental Code as described in the application for Disposal Works Construction Permit No. 93-1 Rev 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. 93-1 Revised — Town OF Amherst — FEE

Disposal Works Construction Permit

Permission is hereby granted James - Miriam Dayton

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

at No. 850 Belchertown Rd.
Street

as shown on the application for Disposal Works Construction Permit No. 93-1 Dated 7/30/93

David Bergeron for Board of Health

DATE 7/30/93 BOARD meeting 7/27/93 / variances granted

Form 1255 (H&W) HOBBS & WARREN™ Publishers

TOWN OF AMHERST

PERC TEST DATA SHEET

DATE 7/9/93 LOCATION 850 Belchertown Road LOT SIZE _____

OWNER James Dayton ADDRESS 850 Belchertown Rd TELE # 253-7949

P.E./RS Fred Filios FIRM Filios Enterprises OBSERVED BY David Zaborowski

BACK HOE OPERATOR Hael's BENCH MARK _____

PERC DEPTH 55" PRE SOAK TIME 9:04 PERC DEPTH ___ PRE SOAK TIME _____

TEST					
	12"	9:20	8"	9:39 45	
	11"	9:25	7"	9:45 50	
	10"	9:28 50	6"	9:53 30	
	9"	9:34 20			

RATE 8 RATE _____

3 Bedroom w/GR

TOP 6"
SUB 21"
loose crane sand 50"
OXIDES 90"

TOP
SUB

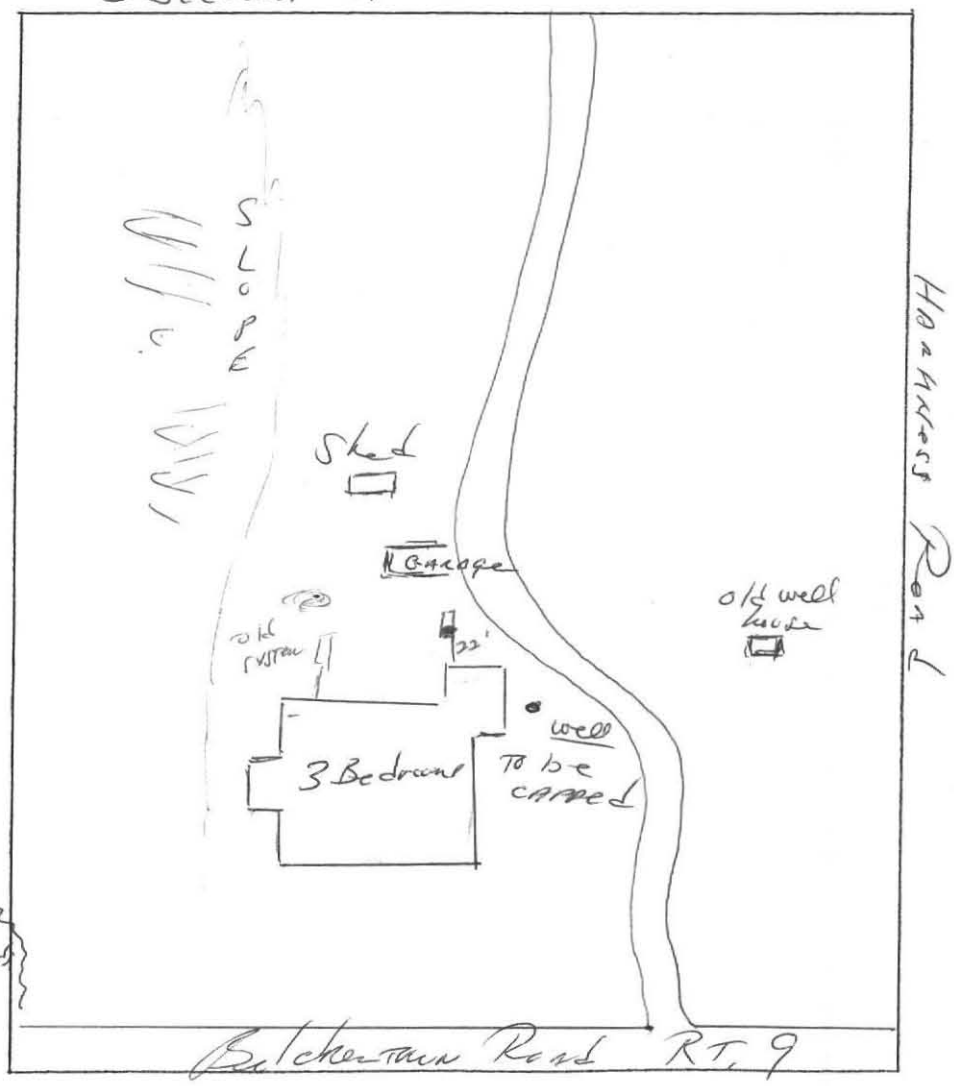
10'

TOP
SUB

TOP
SUB

TOP
SUB

TOP
SUB



EH1:PERCFORM

Deep Soil Logs

Filios Enterprises, Inc.

69 Pelham Rd., Amherst MA 01002. (413) 256-8008

COMMONWEALTH OF MASSACHUSETTS
FREDERICK J. FILIOS, R.S.
688

Owner: James + Mariam Dayton **Date:** Dec. 14 1992

Location: 850 Belchertown Rd Amherst Mass. 01002 **B. of H.** David Zarazinski

H_1

0-8"	Topsoil
8-28"	Subsoil
28"-10'	Coarse sand with stones

10'

Ground Water 87"

H_2 (Dug Jan. 28, 1993)

0-6"	Topsoil
6-53"	Subsoil
53"-12'	Sand with gravel, occasional stone

12'

Ground Water oxide at 9'

H_3 (dug 9 July, 1993)

0-6"	Topsoil
6"-21"	subsoil
21"-50"	Coarse sand with some gravel.
50"-10'	Packed sand with some gravel and cobbles

10'

Ground Water 7.5'

Ground Water _____

1. Percolation Rate at: 60 inches
   4 min./inch

2. Percolation Rate at: 55"
   8 min./inch
   (9 July '93)