585 STATION ROAD

**FORM 1-APPLICATION FOR DSCP**

No 12-05 Fee #150.00

MUNIS BATCH #739

Commonwealth of Massachusetts

**AMHERST, Massachusetts**

## *Application for Disposal System Construction Permit*

Application is hereby made for a Permit to Construct () or Repair (X) an On-site Sewage Disposal system at:

| Location Address or Lot No. | Owner's Name, Address and Tel. # |
|---|---|
| 585 STATION ROAD | KJOT1951@comcast.net<br>KEVIN OTTO<br>585 STATION ROAD<br>AMHERST, MA<br>413.575.8869 |
| Installer's Name, Address, and Tel. # | Designer's Name, Address and Tel. # |
| L+F CONST.<br>Leverett, Mt. | S.K. Kimberley Engineering<br>309 Thompson Road<br>COLRAIN, MA 01340<br>(413) 624-9621 |

Type of Building:

Dwelling No. of Bedrooms 4 Garbage Grinder NO

Other Type of Building _____ No. of Persons _____ Showers__ Cafeteria_____
Other Fixtures _____

Design Flow 466 gallons per day. Calculated daily flow 440 gallons
Plan Date 11/17/09 Number of Sheets ONE Revision Date _____
Title SUBSURFACE SEWAGE DISPOSAL PLAN IN AMHERST, MASS FOR KEVIN OTTO , 585 STATION ROAD .

Description of Soil LOAMY SAND/COARSE SAND/FINE SAND

Nature of Repairs or Alterations (Answer when applicable) INSTALL SEPTIC TANK & LEACHING TRENCHES
Date last inspected: _____

-*Agreement:

The undersigned agrees to ensure the construction and maintenance of the aforedescribed on-site sewage disposal system in accordance with the provisions of Title 5 of the Environmental Code and not to place the system in operation until a Certificate of Compliance has been issued by this Board of Health.

X Signed Kevin J. Otto Date 8/23/11

Application Approved by _____ Date 8.23.2011

Application Disapproved for the following reasons _____

Permit No. 12-05 Date Issued 8.23.2011

Commonwealth of Massachusetts

**AMHERST, Massachusetts**

# *Application for Disposal System Construction Permit*

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|---|---|
| 585 STATION ROAD | KEVIN OTTO<br>585 STATION ROAD<br>AMHERST, MA |
| Installer's Name, Address, and Tel. # | Designer's Name, Address and Tel. # |
| | S.K. Kimberley Engineering<br>309 Thompson Road<br>COLRAIN, MA 01340<br>(413) 624-9621 |

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Date last inspected: _____
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The undersigned agrees to ensure the construction and maintenance of the aforedescribed on-site sewage disposal system in accordance with the provisions of Title 5 of the Environmental Code and not to place the system in operation until a Certificate of Compliance has been issued by this Board of Health.

X Signed _____ Date _____.

Application Approved by _____ Date _____.

Application Disapproved for the following reasons_____

Permit No. _____ Date Issued _____.

## AMHERST, Massachusetts

### *Disposal System Construction Permit*

No. 12-5

Permission is hereby granted to **KEVIN OTTO** to construct () or repair (X) an On-site Sewage System located at

**585 STATION ROAD**

and as described in the above Application for Disposal System Construction Permit. The applicant recognizes his/her duty to comply with Title 5 and the following local provisions or special conditions.

All construction must be completed within two years of the date below.

Date 8.23.2011

Approved by Edward R Gutkin

**Commonwealth of Massachusetts**

## AMHERST, Massachusetts

### *Certificate of Compliance*

This is to Certify, that the On-site Sewage Disposal System installed ()
or repaired/replaced (X) on 3/23/2012 by L+F Construction
for **KEVIN OTTO** at **585 STATION ROAD**

has been constructed in accordance with the provisions of Title 5 and the for
Disposal System Construction Permit No. 12-5 dated
8/23/2011 Use of this system is conditioned on compliance
with the provisions set forth below:

The issuance of this certificate shall not be construed as a guarantee that the system will function as designed. The Certificate expires on

Date 3/23/2012 Inspector Edward C Smith

FORM 11: Soil Evaluation Form NO:_____

Commonwealth of Massachusetts
Town of Amherst

## Soil Suitability Assessment: On-Site Sewage Disposal

Performed By: Gary Courtemanche Date: 11/3/09
Witnessed By: Shawn Kimberley

Location Address of: 585 Station Road
Lot #:
Owner's Name: Kevin Otto
Address of: 585 Station Road
Amherst, MA
New Construction ☐ Repair ☒ Telephone:

Number of bedrooms: 4

### Office Review

Published Soil Survey Available? No ☐ Yes ☒
Year Published 1967 Publication Scale 1"=1320' Soil Map Unit _____
Drainage Class _____ Soil Limitations _____

Surficial Geologic Report Available? No ☐ Yes ☐
Year Published _____ Publication Scale _____
Geologic Material (map unit) _____
Landform _____

Flood Insurance Rate Map:
Above 500 year flood boundary? No ☐ Yes ☒
Within 500 year flood boundary? No ☒ Yes ☐
Within 100 year flood boundary? No ☒ Yes ☐

Wetland Area:
National Wetland Inventory Map (map unit) _____
Wetlands Conservancy Program Map (map unit) _____

Current Water Resource Conditions (USGS): month _____
Range: Above Normal ☐ Normal ☒ Below Normal ☐

Other Reference Reviewed:

## Determination: Seasonal High Water Table

### Methods Used:

☐ Depth observed standing in observation hole _____ inches
☐ Depth weeping from side of observation hole _____ inches
☒ Depth to soil mottles >140" inches
☐ Ground water adjustment _____ feet

Index Well No. _____ Reading Date _____ Index Well Level _____
Adjustment factor _____ Adjusted ground water _____

### Depth of Naturally Occurring Pervious Material

Does at least four feet of naturally occurring pervious materials exist in all areas observed throughout the area proposed for this soil absorption system? yes

If not, what is the depth of naturally occurring pervious material?
_____

### Certification

*I certify that on* 6/97 *(date) I have passed the soil evaluator examination approved by the Department of Environmental Protection and that the above analysis was performed by me consistent with the required training, expertise, and experience described in 310 CMR 15.017.*

Signature _____

Date 11/3/09

**On-Site Review**

Deep Hole Number 1 Date: 11/3/09 Time 8:30
Weather clear
Land Use lawn Slope (%) 3%
Surface Stone none
Vegetation:
grass

Landform:

Position on Landscape (sketch on back)
Distances from:
Open Water Body >100 feet Drainageway feet
Possible Wet Areas >100 feet Property Line 25 feet
Drinking Water Well town feet Other

**DEEP OBSERVATION HOLE LOG**

| depth from surface (inches) | soil horizon | soil texture (USDA) | soil color (Munsel) | soil mottling | other (structure, stones, boulders) consistency, % gravel |
|---|---|---|---|---|---|
| 0-5 | Af | LOAMY SAND | | | |
| 5-32 | F | MIXED | | - | |
| 32-40 | Ab | LOAMY SAND | 10YR 4/3 | - | CRUMB |
| 40-50 | Bb | FINE SAND | 10YR 5/6 | - | SI.GR. |
| 50-132 | C | FINE SAND | 2.5Y 5/4 | - | SI.GR. |
| - | | | | | |
| - | | | | | |
| - | | | | | |
| - | | | | | |

Parent Material (geologic) OUTWASH
Depth to Bedrock >132"
Depth to Groundwater:
Standing Water in the Hole NONE
Weeping from Pit Face NONE
Estimated Seasonal High Water NONE OBS
Comments:

**On-Site Review**

Deep Hole Number 2 Date: 11/3/09 Time 9:00
Weather clear
Land Use lawn Slope (%) 3%
Surface Stone none
Vegetation:
grass

Landform:

Position on Landscape (sketch on back)
Distances from:
Open Water Body >100 feet Drainageway feet
Possible Wet Areas >100 feet Property Line 25 feet
Drinking Water Well town feet Other

**DEEP OBSERVATION HOLE LOG**

| depth from surface (inches) | soil horizon | soil texture (USDA) | soil color (Munsel) | soil mottling | other (structure, stones, boulders) consistency, % gravel |
|---|---|---|---|---|---|
| 0-16 | F | | | | |
| 16-23 | Ab | LOAMY SAND | 10YR 3/4 | - | CRUMB |
| 23-30 | Bb | LOAMY SAND | 10YR 5/6 | - | SI.GR. |
| 30-60 | C1 | FINE SAND | 2.5Y 5/4 | - | SI.GR |
| 60-96 | C2 | COARSE SAND | 2.5Y 4/3 | - | SI.GR. |
| 96-140 | C3 | FINE SAND | 5Y 4/3 | - | SI.GR. |
| - | | | | | |
| - | | | | | |
| - | | | | | |

Parent Material (geologic) OUTWASH
Depth to Bedrock >140"
Depth to Groundwater:
Standing Water in the Hole NONE
Weeping from Pit Face NONE
Estimated Seasonal High Water NONE OBS.
Comments:

FORM 12 – PERCOLATION TEST

Owner's name: _____
Location address: _____ Lot # _____
Job number: _____

COMMONWEALTH OF MASSACHUSETTS
AMHERST, Massachusetts

| Percolation Test | | |
|---|---|---|
| Date: 11/3/09 Time: 8:30 | | |
| Observation Hole # | 1 | |
| Depth of Perc. (in.) | 72 | |
| Start Pre-soak | 8:52 | |
| End Pre-soak | 9:07 | |
| Time at 12" | 9:09 | |
| Time at 9" | 9:11 | |
| Time at 6" | 9:14 | |
| Time (9" – 6") (min.) | 3 | |
| Rate (min. / inch) | <2 | |

Site Passed ☒ Site Failed ☐

**Performed by:** Shawn Kimberley

**Witnessed by:** GARY COURTEMANCHE

Comments:

FORM 12 – PERCOLATION TEST

Owner's name: _____
Location address: _____ Lot # _____
Job number: _____

COMMONWEALTH OF MASSACHUSETTS
_____, Massachusetts

| Percolation Test | | |
|---|---|---|
| Date: Time: | | |
| Observation Hole # | | |
| Depth of Perc. (in.) | | |
| Start Pre-soak | | |
| End Pre-soak | | |
| Time at 12" | | |
| Time at 9" | | |
| Time at 6" | | |
| Time (9" – 6") (min.) | | |
| Rate (min. / inch) | | |

Site Passed ☐ Site Failed ☐

**Performed by:** _____

**Witnessed by:** _____

Comments:

FORM 12 - PERCOLATION TEST

Location Address or Lot No. 585 STATION

# COMMONWEALTH OF MASSACHUSETTS

, Massachusetts

| Percolation Test* | | |
|---|---|---|
| Date: 11/3/09 | Time: 9:00 | |
| Observation Hole # | P1 | |
| Depth of Perc | 72" | |
| Start Pre-soak | 9:00 | |
| End Pre-soak | 9:00 | |
| Time at 12" | 9:09 | |
| Time at 9" | 9:11 | |
| Time at 6" | 914 | |
| Time (9"-6") | 3 MIN. | |
| Rate Min./Inch | L 2 MIN- | |

* Minimum of 1 percolation test must be performed in both the primary area AND reserve area.

Site Passed ☑ Site Failed ☐

Performed By: Shawn Kimberly

Witnessed By: Gary Coultemanche

Comments:

DEP APPROVED FORM - 12/07/95

✓

4188-300

Location Address or Lot No. 585 STATION

## *On-site Review*

Deep Hole Number P1 Date: 11/3/09 Time: 9:00 Weather SUNNY

Location (identify on site plan)

Land Use RESIDENTIAL Slope (%) Surface Stones

Vegetation GRASS

Landform

Position on landscape (sketch on the back)

Distances from:

Open Water Body feet Drainage way feet

Possible Wet Area feet Property Line feet

Drinking Water Well NA feet Other

### DEEP OBSERVATION HOLE LOG*

| Depth from Surface (Inches) | Soil Horizon | Soil Texture (USDA) | Soil Color (Munsell) | Soil Mottling | Other (Structure, Stones, Boulders, Consistency, % Gravel) |
|---|---|---|---|---|---|
| 0-5 | A | LS | | | |
| 5-32 | F | MK | | | |
| 32-40 | Ab | LS | 10YR4/3 | | CRUMB. |
| 40-50 | Bb | FS | 10YR5/6 | | S, GR. |
| 50-132 | C | FS | 25Y 5/4 | | |
| 0-16 | F | | | | |
| 16-23 | Ab | LS | 10YR3/4 | | |
| 23-30 | Bb | LS | 10YR5/6 | | |
| 30-60 | C1 | FS | 25YR5/4 | | |
| 60-96 | C2 | CS | 25YR4/3 | | |
| 96-140 | C3 | FS | 5YR4/3 | | |

* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Parent Material (geologic) Depth to Bedrock: 140" +

Depth to Groundwater: Standing Water in the Hole: 0 Weeping from Pit Face: NONE

Estimated Seasonal High Ground Water: NONE

**Location Address or Lot No.** _____

# *Determination for Seasonal High Water Table*

Method Used:

- ☐ Depth observed standing in observation hole ..... inches
- ☐ Depth weeping from side of observation hole ..... inches
- ☐ Depth to soil mottles ..... inches
- ☐ Ground water adjustment ..... feet

Index Well Number ..... Reading Date ..... Index well level .....

Adjustment factor ..... Adjusted ground water level .....

Depth of Naturally Occurring Pervious Material

Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system? _____

If not, what is the depth of naturally occurring pervious material? _____

Certification

I certify that on _____ (date) I have passed the soil evaluator examination approved by the Department of Environmental Protection and that the above analysis was performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017.

Signature _____ Date _____

PERMITS/INSP PAYMENT  RECPT#: 10041357
***TOWN OF AMHERST***
TOWN HALL
4 BOLTWOOD AVENUE
AMHERST MA 01002

DATE: 11/03/09  TIME: 13:04
CLERK: courteman  DEPT:

PAID BY: OTTO, KEVIN
PAYMENT METH: CHECK 4188

REFERENCE: A3814 DJB

AMT TENDERED: 300.00
AMT APPLIED: 300.00
CHANGE: .00

SITE ADDRESS: 585 STATION RD

FEES:
HEA011 PERCOLATIONS TE 300.00

TOTAL PAID: 300.00

PERMITS/INSP PAYMENT  RECPT#: 12018223
***TOWN OF AMHERST***
TOWN HALL
4 BOLTWOOD AVENUE
AMHERST MA 01002

DATE: 08/23/11  TIME: 15:22
CLERK: publichea  DEPT:

PAID BY:
PAYMENT METH: CHECK  4407

REFERENCE:

AMT TENDERED: 150.00
AMT APPLIED: 150.00
CHANGE: .00

SITE ADDRESS: KEVIN OTTO 575-8869

FEES:
HEA017 150.00

TOTAL PAID: 150.00

batch #740

# August 2011
# INVOICE

AMHERST PUBLIC HEALTH DEPARTMENT

Bangs Community Center
70 Boltwood Walk
Amherst, MA 01002

DATE: August 23, 2011

TO Kevin Otto
585 Station Road
Amherst, MA 01002

RE: Invoice for **Plan Review**

Services provided by **Edmund Smith**

**PAYMENT TERMS: Due Upon Receipt**

| QUANTITY | DESCRIPTION | UNIT PRICE | LINE TOTAL |
|---|---|---|---|
| | | | |
| 1.00 | Plan Review | $ 150.00 | $ 150.00 |
| | | | |
| | | | |
| | | | |
| | Rec'd today your check #4407 for $150.00 | | |
| | this invoice is paid in full/thank you | | |
| | | | |
| | | | |
| | | | |
| | | SUBTOTAL | $ 150.00 |
| | | SALES TAX | |
| | | TOTAL | $ 150.00 |

MUNIS BATCH # 739

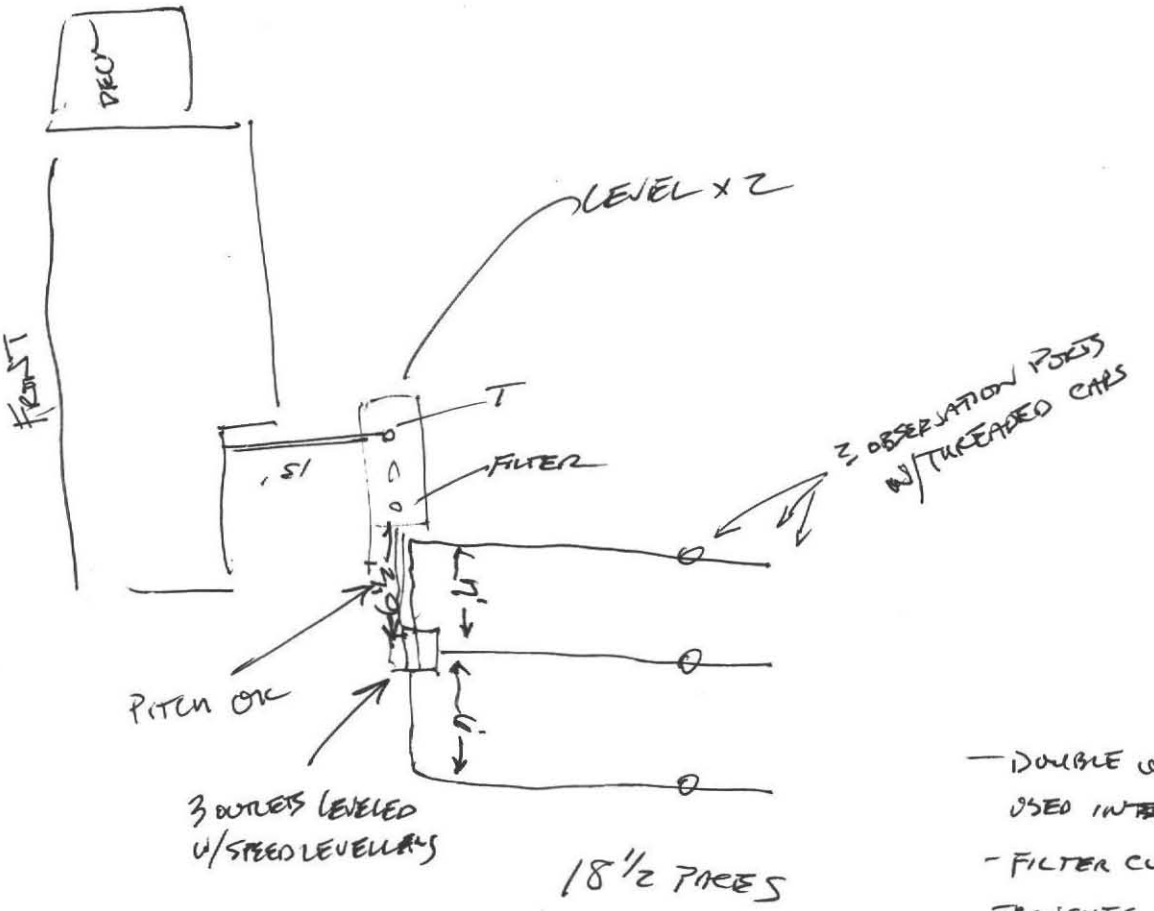
Plan: 8.23.2011 Designed by: SHAWN KIMBERLY

CHECK LIST FOR SEPTIC PLANS

- [✓] Application page attached to plan
- [ ] PE or RS stamp, date, signature
- [NA] Variances to property line setback distances must have Surveyor Stamp 15220.(3)
- [✓] Legal boundaries noted
- [✓] Easements noted
- [✓] Dwellings and buildings existing or proposed noted
- [✓] Location of driveway or parking areas, other impervious areas
- [NA] Location and dimensions of reserve area (new) CMR 15.248(1), 15.104(4)
- [ ] System design calculations
- [✓] Garbage grinder Y or (N)
- [✓] Benchmark not disturbed during construction, within 75 feet of facility CMR15.220 (4)(q)
- [✓] North arrow CMR 15.200 (4) (g)
- [✓] Contours
- [✓] Deep hole location and data
- [✓] Perc hole location and data
- [✓] Elevations
- [✓] Names of approving authority and soil evaluator CMR 15.211 p. 49
- [✓] Location of every water supply, public and private CMR 15.220(k):
  - Within 400 feet of system in case of surface water and gravel packed public water supply
  - Within 250 feet of system in case of tubular public water supply
  - Within 150 feet of private supply wells - 100' septic sys. ; 50' tank
- [✓] **Well statement if applicable**
- [✓] Location of any surface waters, rivers, vegetated wetlands
- [✓] Location of water lines and other subsurface utilities
- [✓] Observed and adjusted ground water elevation in the vicinity of system 15.220 (4)(n)
- [✓] Profile of system
- [✓] Locus plan to show location of facility, including nearest street
- [✓] Materials of construction and specs for system
- [✓] Gas Baffle 15.227.4
- [✓] Pipe in center line of tank 310 CMR 15.227, 15.06(8)
- [✓] Double washed stone
- [✓] Schedule 40 PVC for trafficked areas, house to tank
- [✓] Distances noted from house to tank, etc.
- [NA] If dosing is proposed, design and specs of dosing system
- [NA] When alternative technology is required, complete plan and specs, including hydraulic profile
- [✓] Trenches preferred over beds CMR 15.240 (6)
- [NA] Buoyancy calculations for tanks or components partly below H20 table 15.221(8) p. 56
- [✓] 3 to 1 slope outside of mound, toe ending 5 feet from property line
- [NA] Local upgrade requests on the plan
- [NA] Local upgrade forms attached to application
- [NA] Note on plan listing all variances sought in conjunction with the plan

NOTES: Called Shawn Kimberley to let Homeowner Kevin Otto is going ahead

585 STATION ROAD
KEVIN OTTO




18½ PACES

- DOUBLE WASHED STONE USED IN ~~BED~~ TRENCHES
- FILTER CLOTH ON TOP OF TRENCHES
- APPROPRIATE FILL
- EACH TRENCH + PIPE MARKED W/ MAGNETIC TAPE
- no grinder
- no softener, granules,

FINAL INSPECTION - 3/23/2012 3:00 pm

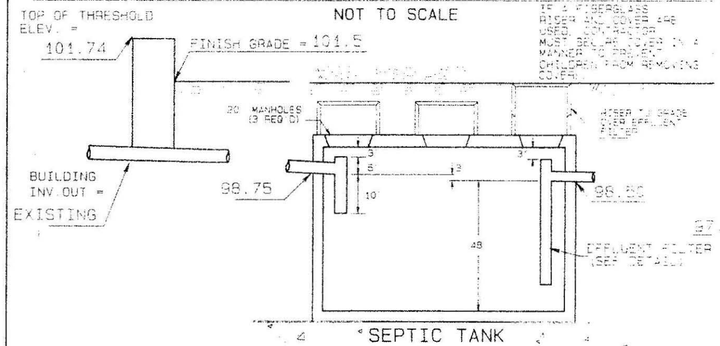
Installation passes inspection.

| Area or Element | Type of Violation<br>Use blank boxes for ones not listed | Possible Code Section(s) | ✓if Violation Observed | Responsible Party | |
|---|---|---|---|---|---|
| | | | | Owner | Occupant |
| Pests | Free of pests (rodents, skunks, cockroaches, insects) | 550 | | | |
| | Structural maintenance and elimination of harborage | 550 | | | |
| | | | | | |
| Asbestos or Lead Paint | | 353, 502 | | | |
| Curtailment | | 620 | | | |
| Access | | 810 | | | |
| Other | | | | | |
| | | | | | |

| |
|---|
| **Referral:** ☐ Electric ☐ Fire ☐ Plumbing ☐ Building ☐ Other |
| ***This inspection report is signed and certified under the pains and penalties of perjury.*** |
| **Inspector Signature:** |
| **Occupant or Occupant's Representative Signature:** |
| **Reinspection Date:** **Time:** |

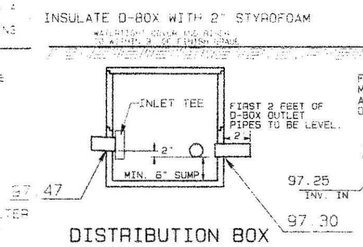
# SANITARY SYSTEM PROFILE

NOT TO SCALE



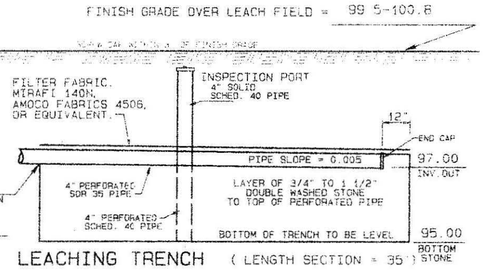

1500 GALLON CONCRETE TANK
LENGTH 10'-6", WIDTH 5'-8", DEPTH
TANK TO BE INSTALLED ON A STABLE LEVEL BASE (6" DEEP CRUSHED STONE)
INLET AND OUTLET TEES LOCATED ON THE CENTERLINE OF THE TANK.

ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED. PER 15.221: (12)




DISTRIBUTION BOX

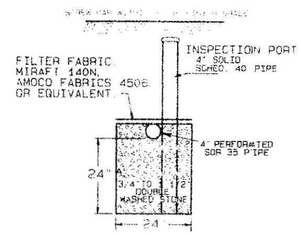
BOX TO BE INSTALLED ON STABLE LEVEL BASE OF 6" OF CRUSHED STONE




LEACHING TRENCH ( LENGTH SECTION = 95' )

GROUND WATER ELEV.

EXISTING GROUND ELEVATION AT HIGHEST CORNER OF THE PROPOSED LEACH AREA=100.85
ESHWT DEPTH ASSUMED AT 140" BELOW GRADE
BASED ON THE ESHWT IN TP #2
THE ESHWT ELEVATION AT THE HIGHEST CORNER=89.18



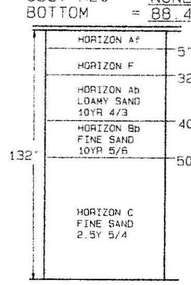

LEACHING TRENCH
( CROSS SECTION )
AT INVERT OUT

# TEST PIT DATA

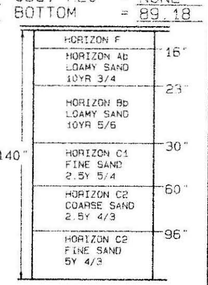
BOARD OF HEALTH WITNESS: GARY COURTEMANCHE
DATE: NOVEMBER 3, 2009
SOIL EVALUATOR: SHAWN K. KIMBERLEY

| PERC TEST ID | PERC RATE (MIN/IN) | PERC DEPTH (IN) |
|---|---|---|
| 1 | 2 | 72 |

TEST PIT # 1
ELEV. TOP = 99.45
ESHWT = NONE
OBS. H20 = NONE
BOTTOM = 88.45




TEST PIT # 2
ELEV. TOP = 100.85
ESHWT = NONE
OBS. H20 = NONE
BOTTOM = 89.18



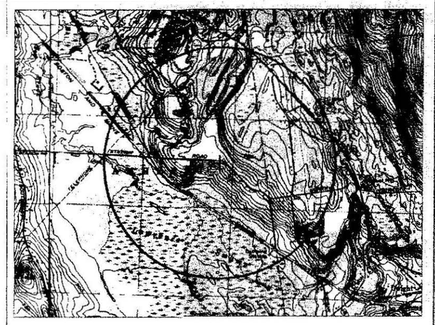

NOTES:

1. THIS PLAN IS FOR THE REPAIR OF AN EXISTING SEPTIC SYSTEM.
2. TITLE 5 REQUIRES OBSERVATION OF THE INSTALLED SYSTEM BY THE DESIGN ENGINEER AND A BOARD OF HEALTH MEMBER OR AGENT FOR THE BOARD OF HEALTH. THE SYSTEM MUST NOT BE BACKFILLED PRIOR TO OUR OBSERVATION. CONTACT OUR OFFICE AND THE BOARD OF HEALTH TWO BUSINESS DAYS BEFORE REQUESTED DATE FOR OBSERVATION.
3. ALL DISTURBED AREAS SHOULD BE LOAMED, RAKED, FERTILIZED, SEEDED AND MULCHED AT THE COMPLETION OF CONSTRUCTION

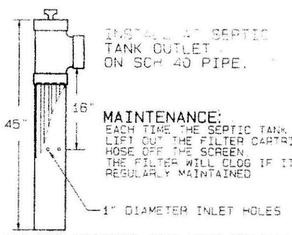
PROPERTY LINE REFERENCE:
PROPERTY LINES AS SHOWN ARE BASED ON A PLAN OF LAND IN AMHERST, MASSACHUSETTS. PREPARED FOR JOSEPH & LENA MESSIER. PREPARDED BY RUSSELL SNOW, R.L.S. DATED OCTOBER 23, 1959, H.C. REG. OF DEEDS.

PROPER SEPTIC SYSTEM USE:

1. DO NOT POUR GREASE, OILS, OR CHEMICALS IN DRAINS
2. DO NOT WASH PAINT BRUSHES INTO DRAINS
3. DO NOT USE OR INSTALL GARBAGE DISPOSAL
4. USE LIQUID DETERGENTS LABELED 'SEPTIC SYSTEM SAFE' OR 'BIODEGRADABLE'
5. PUMP TANK EVERY 3 YEARS OR AS NEEDED



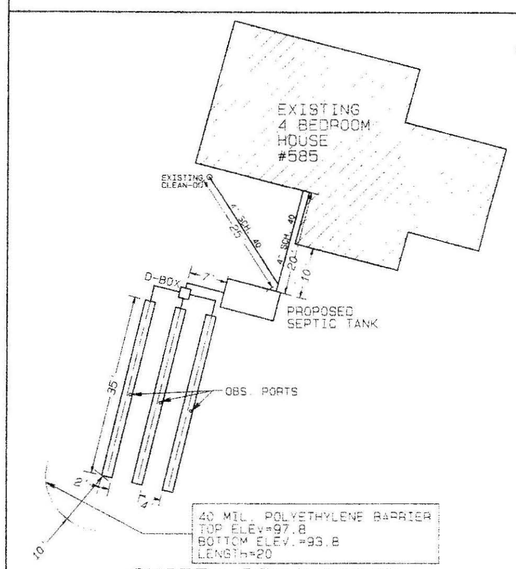
SITE LOCUS
1" = 3000'



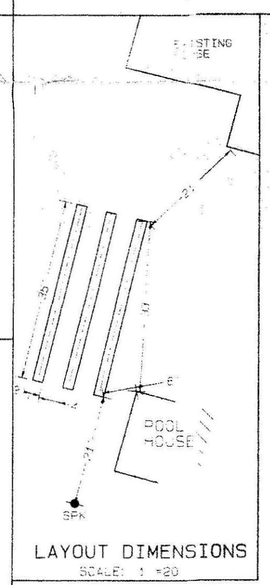

MAINTENANCE:
EACH TIME THE SEPTIC TANK IS PUMPED, LIFT OUT THE FILTER CARTRIDGE AND HOSE OFF THE SCREEN. THE FILTER WILL CLOG IF IT IS NOT REGULARLY MAINTAINED

1" DIAMETER INLET HOLES

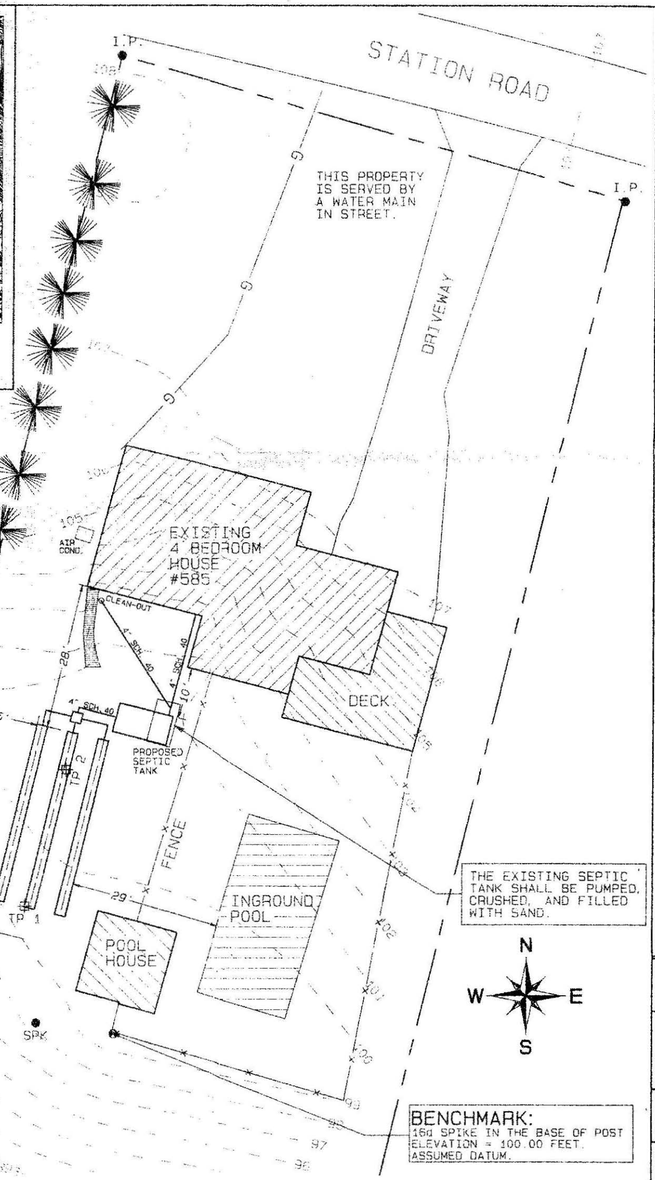
ORENCO BIOTUBE EFFLUENT FILTER
MODEL # FT0436
AVAILABLE FROM WASTEWATER TECHNOLOGIES, INC., 18 PRECAST ROAD, MILTON, VT. 05468 (802) 888-3219




SYSTEM DIMENSIONS
SCALE: 1" = 20'




LAYOUT DIMENSIONS
SCALE: 1" =20'




SITE PLAN

GRAPHIC SCALE 1"=20'

0 20 40 60

# DESIGN DATA

DESIGN BASED ON SINGLE FAMILY RESIDENCE (4 BEDROOM)
DESIGN FLOW 110 GALLON PER DAY PER BEDROOM
TOTAL DESIGN FLOW 440 GALLON PER DAY.

SEPTIC TANK

440 GALLONS X 200% = 880 GALLONS DESIGN CAPACITY.
USE NEW 1500 GALLON SEPTIC TANK.

LEACHING TRENCHES

SIDEWALL:
2 X 35' LENGTH X 2.0' DEPTH = 140 SQUARE FEET.
140 SQ. FT. X 74 GAL. PER SQ.FT. = 103.6 GAL. LEACHING.

BOTTOM:
35 LENGTH X 2.0' WIDTH = 70 SQUARE FEET.
70 SQ. FT. X 74 GAL. PER SQ.FT. = 51.8 GAL. LEACHING.
TOTAL NUMBER OF LEACHING TRENCHES 3
TOTAL LEACHING AREA = 630 SQUARE FEET.
TOTAL LEACHING CAPACITY = 466 GALLONS PER DAY.

# GENERAL NOTES

1. 4" PIPE WITH TIGHT JOINTS TO BE USED IN DISPOSAL SYSTEM EXCEPT WHERE OTHERWISE NOTED.
2. FROM HOUSE OUT TO SEPTIC TANK: SCHEDULE 40 PVC MINIMUM GRADE: 1/4 INCH PER FOOT (2%)
3. FROM SEPTIC TANK TO DISTRIBUTION BOX TO TRENCHES: SDR 35 PVC MINIMUM GRADE: 1/8 INCH PER FOOT (1%)
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5. 1500 GALLON REINFORCED CONCRETE SEPTIC TANK.
6. AMHERST BOARD OF HEALTH MUST BE NOTIFIED WHEN SYSTEM IS NEARLY COMPLETE AND PRIOR TO BACKFILLING.
7. ELEVATIONS BASED ON ASSUMED DATUM
8. UNLESS OTHERWISE NOTED, ALL SYSTEM COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH TITLE 5 OF THE STATE SANITARY CODE AND ANY APPLICABLE LOCAL RULES.
9. ANY CHANGE TO THIS PLAN MUST BE APPROVED BY THE BOARD OF HEALTH AND THE DESIGN ENGINEER.
10. THIS SYSTEM IS NOT DESIGNED FOR A GARBAGE GRINDER.

# LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- 4" SDR 35 PERFORATED PIPE
- 4" SDR 35 SOLID PIPE
- WATER LINE
- FENCE
- PROPERTY LINE
- STONEWALL

SHEET NO. 1 OF 1.

SCALE AS SHOWN
DRN. BY S.K.
CHECKED S.K.
APPROVED:

COMMONWEALTH OF MASSACHUSETTS SHAWN K. KIMBERLEY CIVIL NO. 45041 REGISTERED PROFESSIONAL ENGINEER

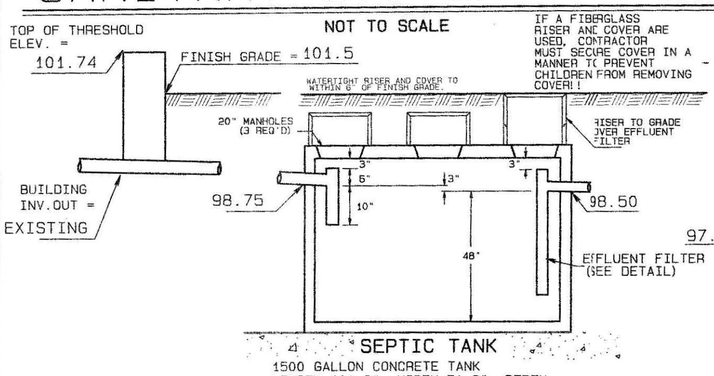
| REV. | DATE | BY | DESCRIPTION | APPR. |
|---|---|---|---|---|

TITLE: SUBSURFACE SEWAGE DISPOSAL PLAN IN AMHERST, MASS.
FOR: KEVIN OTTO
585 STATION ROAD
DATE: NOVEMBER 17, 2009
JOB NO. 2009-055


**S.K. Kimberley Engineering**
309 Thompson Road, Colrain, MA 01340
phone: (413) 624-9621 fax: (413) 624-9621 email: shawnkimberley@hotmail.com

# SANITARY SYSTEM PROFILE

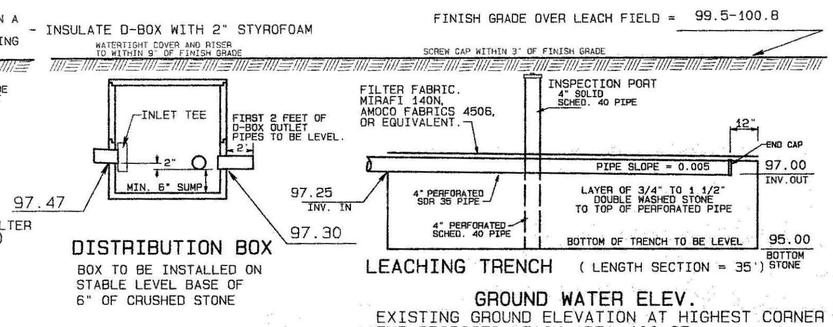
NOT TO SCALE




## SEPTIC TANK

1500 GALLON CONCRETE TANK
LENGTH 10'-6", WIDTH 5'-8", DEPTH
TANK TO BE INSTALLED ON A STABLE LEVEL BASE (6" DEEP CRUSHED STONE)
INLET AND OUTLET TEES LOCATED ON THE CENTERLINE OF THE TANK.

ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED. PER 15.221: (12)




## DISTRIBUTION BOX

BOX TO BE INSTALLED ON STABLE LEVEL BASE OF 6" OF CRUSHED STONE




## LEACHING TRENCH

( LENGTH SECTION = 35' )

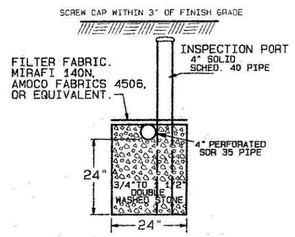
## GROUND WATER ELEV.

EXISTING GROUND ELEVATION AT HIGHEST CORNER OF THE PROPOSED LEACH AREA=100.85
ESHWT DEPTH ASSUMED AT 140" BELOW GRADE
BASED ON THE ESHWT IN TP #2
THE ESHWT ELEVATION AT THE HIGHEST CORNER=89.18

# TEST PIT DATA

BOARD OF HEALTH WITNESS: GARY COURTEMANCHE
DATE: NOVEMBER 3, 2009
SOIL EVALUATOR: SHAWN K. KIMBERLEY

| PERC TEST ID | PERC RATE (MIN/IN) | PERC DEPTH (IN) |
|---|---|---|
| 1 | 2 | 72 |

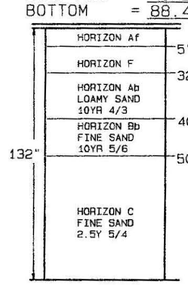



## LEACHING TRENCH

( CROSS SECTION ) AT INVERT OUT

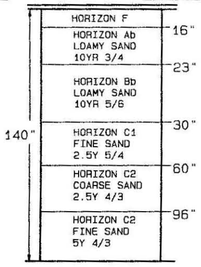
**TEST PIT # 1**

ELEV. TOP = 99.45
ESHWT = NONE
OBS. H20 = NONE
BOTTOM = 88.45




**TEST PIT # 2**

ELEV. TOP = 100.85
ESHWT = NONE
OBS. H20 = NONE
BOTTOM = 89.18



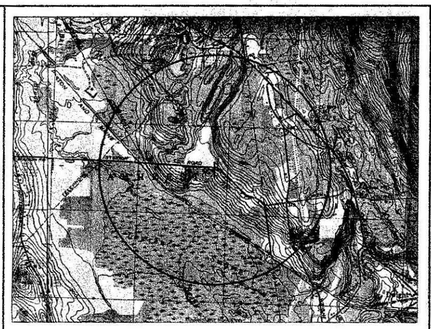

**NOTES:**

1. THIS PLAN IS FOR THE REPAIR OF AN EXISTING SEPTIC SYSTEM.
2. TITLE 5 REQUIRES OBSERVATION OF THE INSTALLED SYSTEM BY THE DESIGN ENGINEER AND A BOARD OF HEALTH MEMBER OR AGENT FOR THE BOARD OF HEALTH. THE SYSTEM MUST NOT BE BACKFILLED PRIOR TO OUR OBSERVATION. CONTACT OUR OFFICE AND THE BOARD OF HEALTH TWO BUSINESS DAYS BEFORE REQUESTED DATE FOR OBSERVATION.
3. ALL DISTURBED AREAS SHOULD BE LOAMED, RAKED, FERTILIZED, SEEDED AND MULCHED AT THE COMPLETION OF CONSTRUCTION.

**PROPERTY LINE REFERENCE:**
PROPERTY LINES AS SHOWN ARE BASED ON A PLAN OF LAND IN AMHERST, MASSACHUSETTS. PREPARED FOR JOSEPH & LENA MESSIER. PREPARDED BY RUSSELL SNOW, R.L.S. DATED OCTOBER 23, 1959. H.C. REG. OF DEEDS.

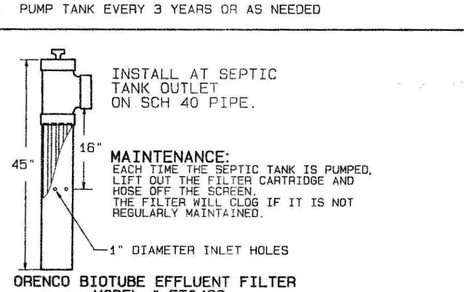
**PROPER SEPTIC SYSTEM USE:**

1. DO NOT POUR GREASE, OILS, OR CHEMICALS IN DRAINS
2. DO NOT WASH PAINT BRUSHES INTO DRAINS
3. DO NOT USE OR INSTALL GARBAGE DISPOSAL
4. USE LIQUID DETERGENTS LABELED "SEPTIC SYSTEM SAFE" OR "BIODEGRADABLE"
5. PUMP TANK EVERY 3 YEARS OR AS NEEDED



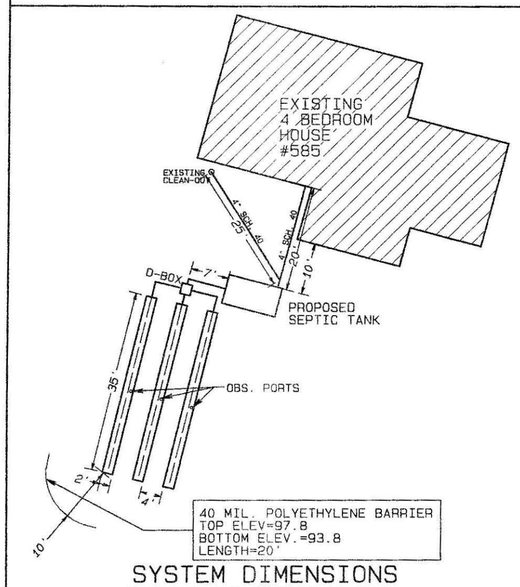
## SITE LOCUS

1" = 3000'



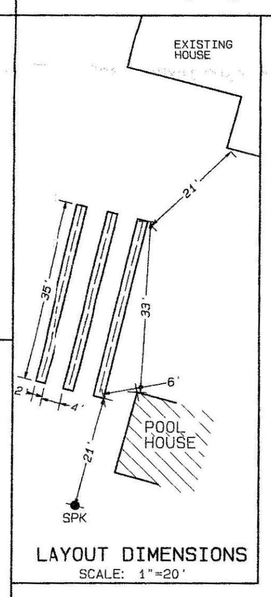

**MAINTENANCE:**
EACH TIME THE SEPTIC TANK IS PUMPED, LIFT OUT THE FILTER CARTRIDGE AND HOSE OFF THE SCREEN. THE FILTER WILL CLOG IF IT IS NOT REGULARLY MAINTAINED.

**ORENCO BIOTUBE EFFLUENT FILTER MODEL # FT0436**
AVAILABLE FROM WASTEWATER TECHNOLOGIES, INC., 18 PRECAST ROAD, MILTON, VT. 05468 (802) 869-3219




## SYSTEM DIMENSIONS

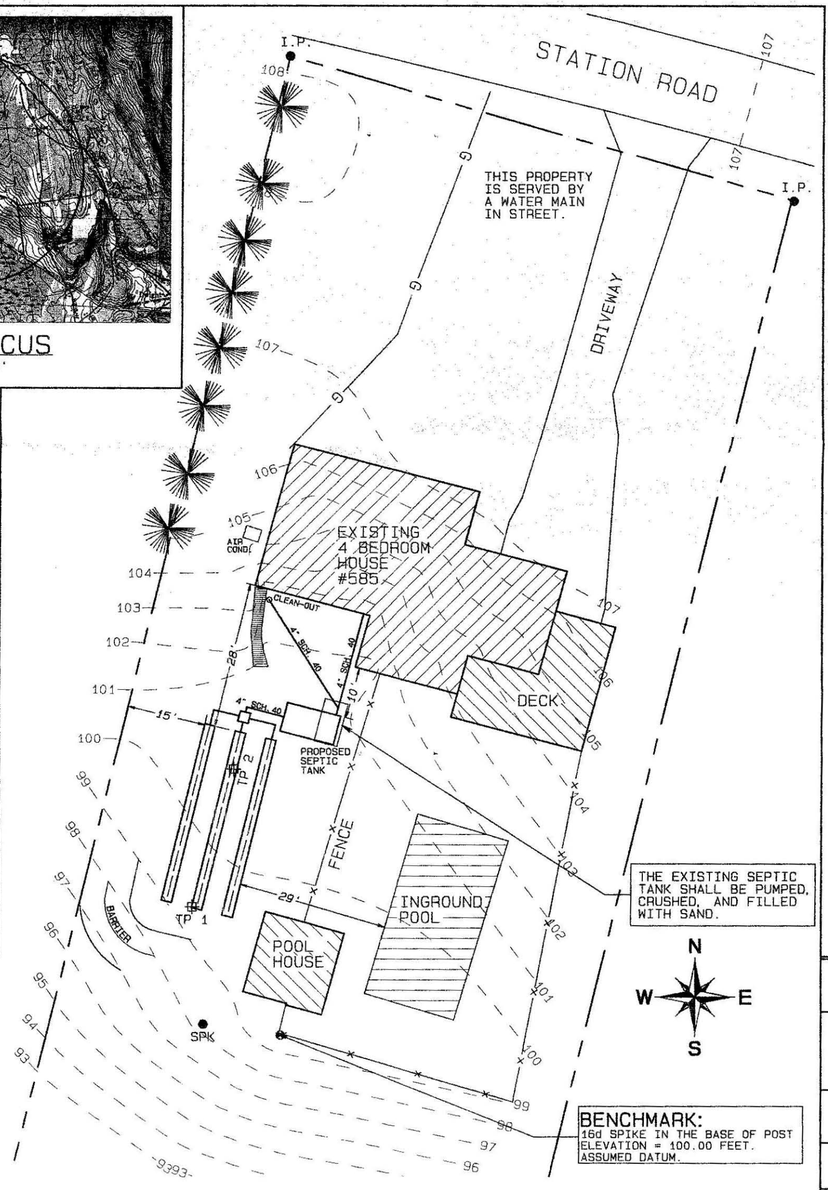
SCALE: 1" = 20'




## LAYOUT DIMENSIONS

SCALE: 1"=20'

PARCEL ID # 24B-20
DEED BOOK 5931
PAGE 345




## SITE PLAN

GRAPHIC SCALE 1"=20'

0 20 40 60

# DESIGN DATA

DESIGN BASED ON SINGLE FAMILY RESIDENCE (4 BEDROOM)
DESIGN FLOW 110 GALLON PER DAY PER BEDROOM
TOTAL DESIGN FLOW 440 GALLON PER DAY.

## SEPTIC TANK

440 GALLONS X 200% = 880 GALLONS DESIGN CAPACITY.
USE NEW 1500 GALLON SEPTIC TANK.

## LEACHING TRENCHES

SIDEWALL:
2 X 35' LENGTH X 2.0' DEPTH = 140 SQUARE FEET.
140 SQ. FT. X .74 GAL. PER SQ.FT. = 103.6 GAL. LEACHING.

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10. THIS SYSTEM IS NOT DESIGNED FOR A GARBAGE GRINDER.

# LEGEND

- 100 EXISTING CONTOURS
- 100 PROPOSED CONTOURS
- 4" SDR 35 PERFORATED PIPE
- 4" SDR 35 SOLID PIPE
- W W WATER LINE
- X X X FENCE
- PROPERTY LINE
- STONEWALL

SHEET NO. 1 OF 1.

| REV. | DATE | BY | DESCRIPTION | APPR. |
|---|---|---|---|---|

SCALE: AS SHOWN
DRN. BY: S.K.
CHECKED: S.K.
APPROVED:

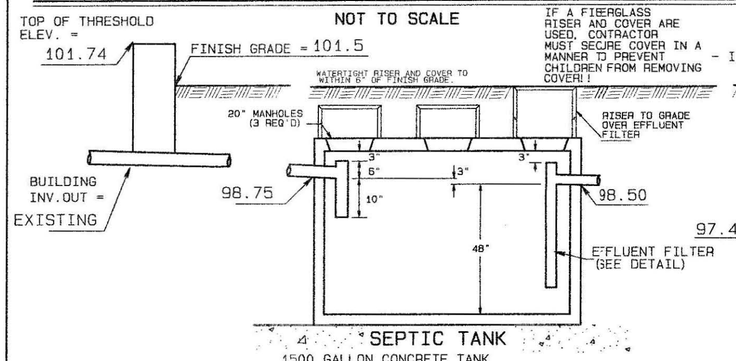
COMMONWEALTH OF MASSACHUSETTS SHAWN K. KIMBERLEY CIVIL NO. 40361 REGISTERED PROFESSIONAL ENGINEER

TITLE: SUBSURFACE SEWAGE DISPOSAL PLAN IN AMHERST, MASS.
FOR: KEVIN OTTO
585 STATION ROAD
DATE: NOVEMBER 17, 2009
JOB NO. 2009-055


**S.K. Kimberley Engineering**
309 Thompson Road, Colrain, MA 01340
phone: (413) 624-9621 fax: (413) 624-9621 email: shawnkimberley@hotmail.com

# SANITARY SYSTEM PROFILE

NOT TO SCALE




## SEPTIC TANK

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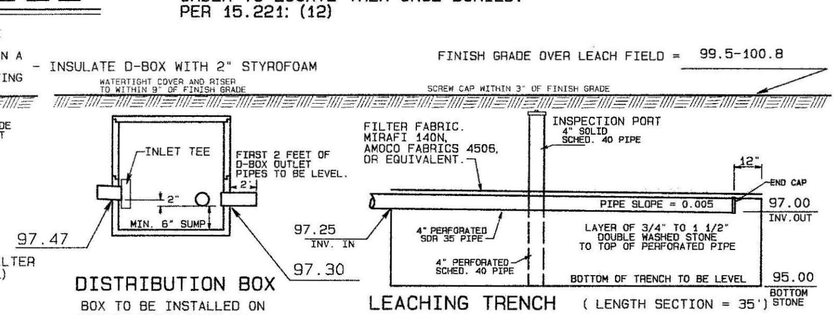


## DISTRIBUTION BOX

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## LEACHING TRENCH ( LENGTH SECTION = 35' )

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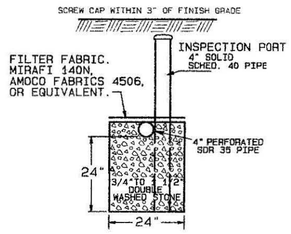


## LEACHING TRENCH

( CROSS SECTION ) AT INVERT OUT

## TEST PIT DATA

BOARD OF HEALTH WITNESS: GARY COURTEMANCHE
DATE: NOVEMBER 3, 2009
SOIL EVALUATOR: SHAWN K. KIMBERLEY

| PERC TEST ID | PERC RATE (MIN/IN) | PERC DEPTH (IN) |
|---|---|---|
| 1 | 2 | 72 |

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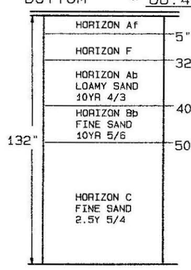


**TEST PIT # 2**
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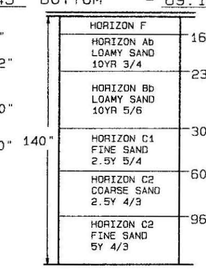
ESHWT = NONE
OBS. H20 = NONE
BOTTOM = 89.18

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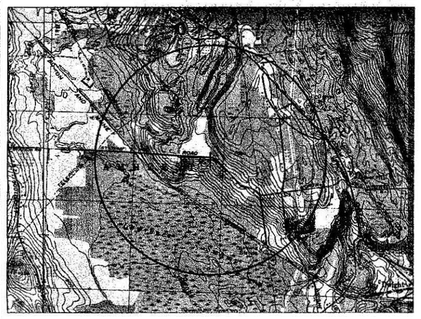
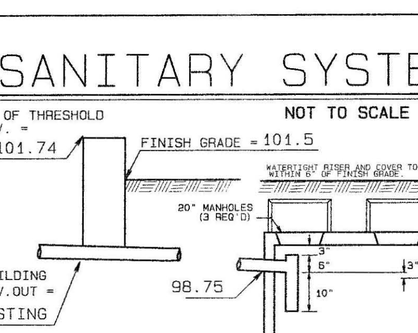


## SITE LOCUS

1" = 3000'

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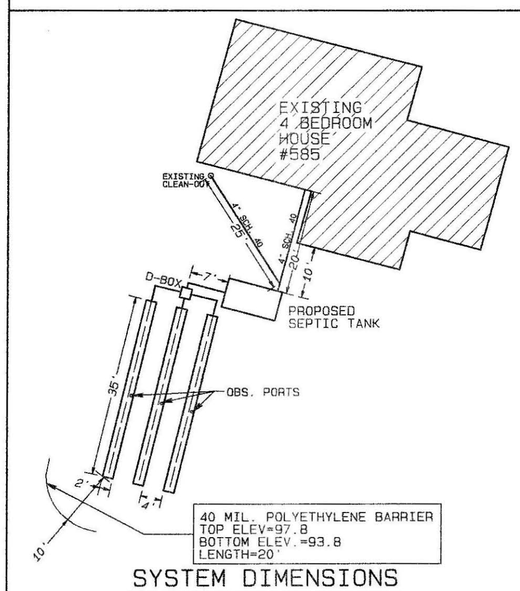


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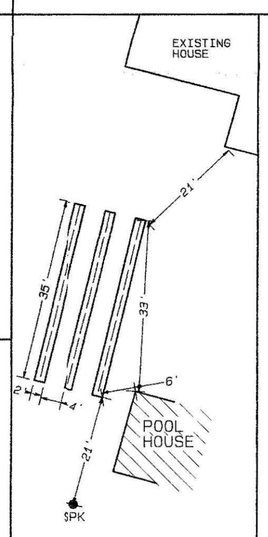
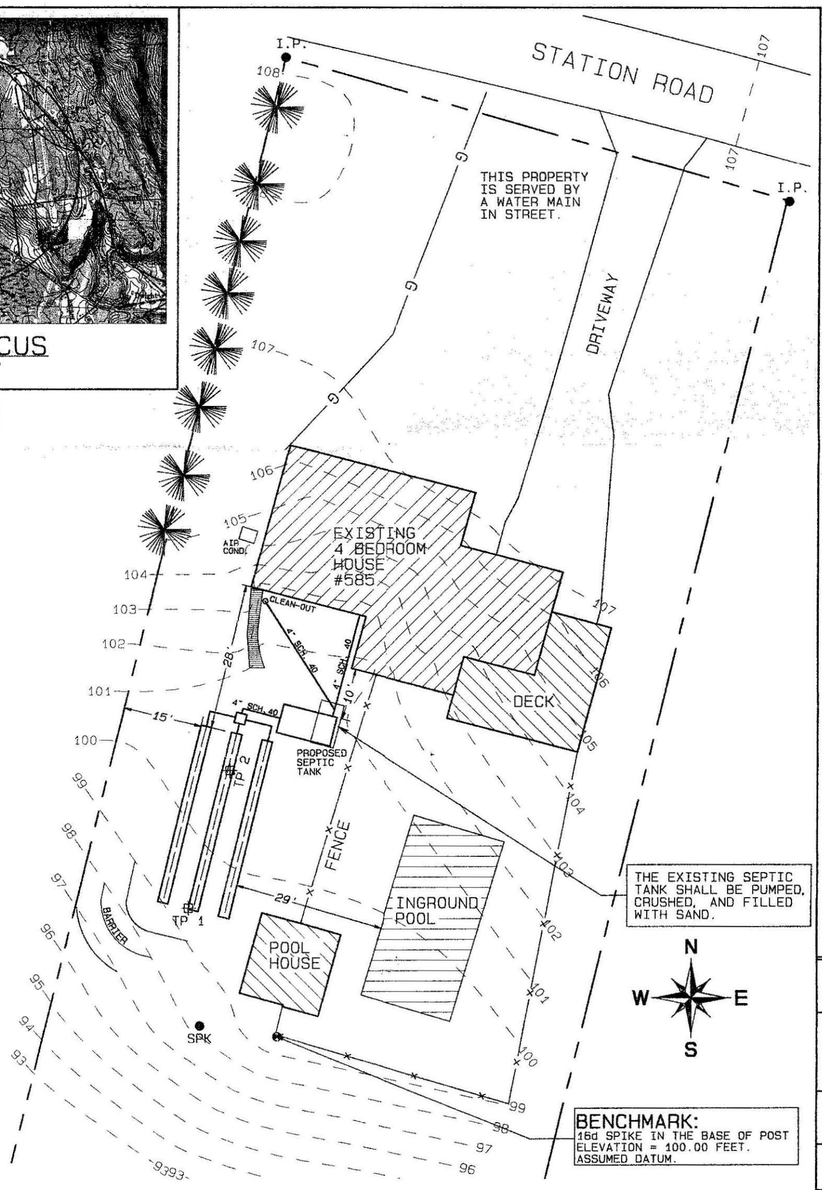
SCALE: 1" = 20'




## LAYOUT DIMENSIONS

SCALE: 1"=20'

PARCEL ID # 24B-20
DEED BOOK 5931 PAGE 345




## SITE PLAN

GRAPHIC SCALE 1"=20'

0 20 40 60

## DESIGN DATA

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440 GALLONS X 200% = 880 GALLONS DESIGN CAPACITY.
USE NEW 1500 GALLON SEPTIC TANK.

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## LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- 4" SDR 35 PERFORATED PIPE
- 4" SDR 35 SOLID PIPE
- WATER LINE
- FENCE
- PROPERTY LINE
- STONEWALL

SHEET NO. 1 OF 1.

| REV. | DATE | BY | DESCRIPTION | APPR. |
|---|---|---|---|---|

SCALE: AS SHOWN
DRN. BY: S.K.
CHECKED: S.K.
APPROVED:

SHAWN K. KIMBERLEY CIVIL NO. 45057 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

TITLE: SUBSURFACE SEWAGE DISPOSAL PLAN IN AMHERST, MASS.
FOR: KEVIN OTTO 585 STATION ROAD
DATE: NOVEMBER 17, 2009
JOB NO. 2009-055


**S.K. Kimberley Engineering**
309 Thompson Road, Colrain, MA 01340
phone: (413) 624-9621 fax: (413) 624-9621 email: shawnkimberley@hotmail.com