

ZIERKE SOIL TESTING

Glen Eiden
22888 Imperial Ave N
Forest Lake, MN 55025

5/21/2023

Dear Glen Eiden,

At your request, I have conducted a septic inspection to determine the compliance status of your septic system pursuant to Minnesota Rules Chapter 7080.1500.

The compliance test set out in 7080.1500 has three main inquiries: 1). Is the system functioning hydraulically (disposing of effluent in a manner that prevents it from coming in contact with people)? 2). Are the septic tanks water tight? 3). Does the system have sufficient vertical separation between the bottom of the septic system and restrictive layers (bedrock, standing water, seasonally wet layers, etc) to provide full treatment of effluent?

Based off of these criteria, your septic system is compliant. A certification of compliance is in effect for three years from the date it is issued. To be clear, this should not be construed as a guarantee of future system function – there are too many factors that influence the lifespan of a septic system for an inspector to predict or even guess how long a septic system will last. A copy of this report will be filed with your local unit of government for their records.

Sincerely,



Benjamin Zierke
MPCA Lic 119, Cert 9594

ADDRESS:
28587 Jeffrey Ave
Chisago City, MN 55013

PHONE 651-249-1346
EMAIL benzierke@gmail.com

Compliance inspection report form

Existing Subsurface Sewage Treatment System (SSTS)

Doc Type: Compliance and Enforcement

Instructions: Inspector must submit completed form to Local Governmental Unit (LGU) and system owner within 15 days of final determination of compliance or noncompliance. Instructions for filling out this form are located on the Minnesota Pollution Control Agency (MPCA) website at <https://www.pca.state.mn.us/sites/default/files/wq-wwists4-31a.pdf>.

Property information

Local tracking number: _____

Parcel ID# or Sec/Twp/Range: 1003221110007 Reason for Inspection Sale

Local regulatory authority info: Washington County

Property address: 22888 Imperial Ave N Forest Lake, MN 55025

Owner/representative: Glen Eiden Owner's phone: 651-353-5141

Brief system description: (2) 1000 gallon septic tanks, 1000 gallon lift tank, mound dispersal system

System status

System status on date (mm/dd/yyyy): 5/21/2023

Compliant – Certificate of compliance*

(Valid for 3 years from report date unless evidence of an imminent threat to public health or safety requiring removal and abatement under section 145A.04, subdivision 8 is discovered or a shorter time frame exists in Local Ordinance.)

***Note: Compliance indicates conformance with Minn. R. 7080.1500 as of system status date above and does not guarantee future performance.**

Noncompliant – Notice of noncompliance

Systems failing to protect ground water must be upgraded, replaced, or use discontinued within the time required by local ordinance.

An imminent threat to public health and safety (ITPHS) must be upgraded, replaced, or its use discontinued within ten months of receipt of this notice or within a shorter period if required by local ordinance or under section 145A.04 subdivision 8.

Reason(s) for noncompliance (check all applicable)

- Impact on public health (Compliance component #1) – *Imminent threat to public health and safety*
- Tank integrity (Compliance component #2) – *Failing to protect groundwater*
- Other Compliance Conditions (Compliance component #3) – *Imminent threat to public health and safety*
- Other Compliance Conditions (Compliance component #3) – *Failing to protect groundwater*
- System not abandoned according to Minn. R. 7080.2500 (Compliance component #3) – *Failing to protect groundwater*
- Soil separation (Compliance component #5) – *Failing to protect groundwater*
- Operating permit/monitoring plan requirements (Compliance component #4) – *Noncompliant - local ordinance applies*

Comments or recommendations

System functioning normally during site visit 5/5/2023.

Certification

I hereby certify that all the necessary information has been gathered to determine the compliance status of this system. No determination of future system performance has been nor can be made due to unknown conditions during system construction, possible abuse of the system, inadequate maintenance, or future water usage.

By typing my name below, I certify the above statements to be true and correct, to the best of my knowledge, and that this information can be used for the purpose of processing this form.

Business name: Zierke Soil Testing Certification number: 9594

Inspector signature: Benjamin Zierke License number: 119

(This document has been electronically signed)

Phone: 651-249-1346

Necessary or locally required supporting documentation (must be attached)

- Soil observation logs
- System/As-Built
- Locally required forms
- Tank Integrity Assessment
- Operating Permit
- Other information (list): _____

1. Impact on public health – Compliance component #1 of 5

Compliance criteria:

System discharges sewage to the ground surface	<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No
System discharges sewage to drain tile or surface waters.	<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No
System causes sewage backup into dwelling or establishment.	<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No

Any "yes" answer above indicates the system is an imminent threat to public health and safety.

Describe verification methods and results:

None of the above observed during site visit 5/5/2023. Glen reported no past issues with the mound.

Attached supporting documentation:

- Other: _____
- Not applicable

2. Tank integrity – Compliance component #2 of 5

Compliance criteria:

System consists of a seepage pit, cesspool, drywell, leaching pit, or other pit?	<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No
Sewage tank(s) leak below their designed operating depth?	<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No
If yes, which sewage tank(s) leaks:	

Any "yes" answer above indicates the system is failing to protect groundwater.

Describe verification methods and results:

See attached tank integrity report from Olson's Sewer.

Attached supporting documentation:

- Empty tank(s) viewed by inspector
- Name of maintenance business: _____
- License number of maintenance business: _____
- Date of maintenance: _____
- Existing tank integrity assessment (Attach)
- Date of maintenance (mm/dd/yyyy): 8/8/2022
(must be within three years)
- (See form instructions to ensure assessment complies with Minn. R. 7082.0700 subp. 4 B (1))
- Tank is Noncompliant (pumping not necessary – explain below)
- Other: _____

3. Other compliance conditions – Compliance component #3 of 5

3a. Maintenance hole covers appear to be structurally unsound (damaged, cracked, etc.), or unsecured?

Yes* No Unknown

3b. Other issues (electrical hazards, etc.) to immediately and adversely impact public health or safety? Yes* No Unknown

***Yes to 3a or 3b - System is an imminent threat to public health and safety.**

3c. System is non-protective of ground water for other conditions as determined by inspector?

Yes* No

3d. System not abandoned in accordance with Minn. R. 7080.2500?

Yes* No

***Yes to 3c or 3d - System is failing to protect groundwater.**

Describe verification methods and results:

Attached supporting documentation: Not applicable

4. Operating permit and nitrogen BMP* – Compliance component #4 of 5 Not applicable

Is the system operated under an Operating Permit?

Yes No **If "yes", A below is required**

Is the system required to employ a Nitrogen BMP specified in the system design? Yes No

If "yes", B below is required

BMP = Best Management Practice(s) specified in the system design

If the answer to both questions is "no", this section does not need to be completed.

Compliance criteria:

a. Have the operating permit requirements been met?

Yes No

b. Is the required nitrogen BMP in place and properly functioning?

Yes No

Any "no" answer indicates noncompliance.

Describe verification methods and results:

Attached supporting documentation: Operating permit (Attach)

5. Soil separation – Compliance component #5 of 5

Date of installation 8/13/1999 Unknown
(mm/dd/yyyy)

Shoreland/Wellhead protection/Food beverage lodging? Yes No

Compliance criteria (select one):

5a. For systems built prior to April 1, 1996, and not located in Shoreland or Wellhead Protection Area or not serving a food, beverage or lodging establishment: Yes No*

Drainfield has at least a two-foot vertical separation distance from periodically saturated soil or bedrock.

5b. Non-performance systems built April 1, 1996, or later or for non-performance systems located in Shoreland or Wellhead Protection Areas or serving a food, beverage, or lodging establishment: Yes No*

Drainfield has a three-foot vertical separation distance from periodically saturated soil or bedrock.*

5c. "Experimental", "Other", or "Performance" systems built under pre-2008 Rules; Type IV or V systems built under 2008 Rules 7080.2350 or 7080.2400 (Intermediate Inspector License required ≤ 2,500 gallons per day; Advanced Inspector License required > 2,500 gallons per day) Yes No*

Drainfield meets the designed vertical separation distance from periodically saturated soil or bedrock.

Attached supporting documentation:

- Soil observation logs completed for the report
- Two previous verifications of required vertical separation
- Not applicable (No soil treatment area)
- _____

Indicate depths or elevations

A. Bottom of distribution media	101.8'
B. Periodically saturated soil/bedrock	99.0'
C. System separation	2.8'
D. Required compliance separation*	3.0' (2.55' with allowance)

*May be reduced up to 15 percent if allowed by Local Ordinance.

***Any "no" answer above indicates the system is failing to protect groundwater.**

Describe verification methods and results:

Recorded elevations, borings, and site sketch. See attached.

Upgrade requirements: (Minn. Stat. § 115.55) An imminent threat to public health and safety (ITPHS) must be upgraded, replaced, or its use discontinued within ten months of receipt of this notice or within a shorter period if required by local ordinance. If the system is failing to protect ground water, the system must be upgraded, replaced, or its use discontinued within the time required by local ordinance. If an existing system is not failing as defined in law, and has at least two feet of design soil separation, then the system need not be upgraded, repaired, replaced, or its use discontinued, notwithstanding any local ordinance that is more strict. This provision does not apply to systems in shoreland areas, Wellhead Protection Areas, or those used in connection with food,

beverage, and lodging establishments as defined in law.

22888

**Relative Elevations
in Decimal Feet:**
B1: 100.0
B1 Redox: 99.0
Bottom of rock: 101.8
B1 Separation: 2.8
Benchmark: 101.9
(top of 1st tank)

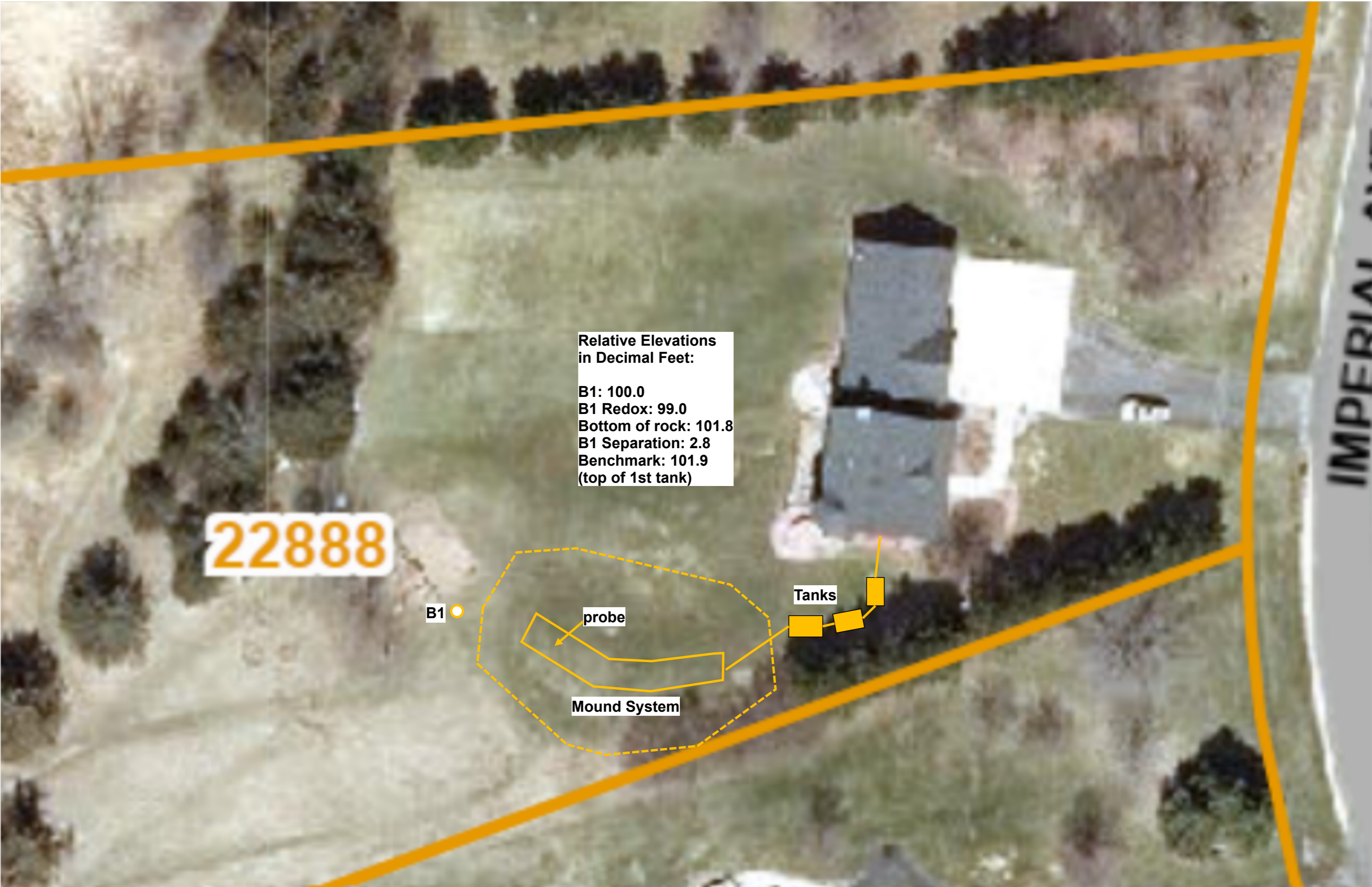
B1

probe

Mound System

Tanks

IMPERIAL



Logs of Soil Borings

Location of Project: 22888 Imperial Ave N Forest Lake, MN 55025

Borings Made by Ben Zierke

Date:

5/5/2023

Hand bucket auger used for borings; USDA - SCS Soil Classification used.

Depth, in Inches	Boring Number 1	Depth, in Inches	Boring Number 2
0-----	-----	0-----	-----
0-11"	10YR 3/2 sandy loam		
11-12"	10YR 4/3 sandy loam		
12-16"	10YR 5/4 clay loam, 7.5YR 5/8 iron and 10YR 6/2 depletions		

End of boring at 1.3 feet
Standing water table:
 Present at _____ feet of depth _____ Hours after boring
 Standing water not present in hole
Mottled Soil:
 Observed at 1 feet of depth
 Mottled soil not present in bore hole
 Comments:

End of boring at _____ feet
Standing water table:
 Present at _____ feet of depth _____ Hours after boring
 Standing water not present in hole
Mottled Soil:
 Observed at _____ feet of depth
 Mottled soil not present in bore hole
 Comments:

Depth, in Inches	Boring Number 3	Depth, in Inches	Boring Number 4
0-----	-----	0-----	-----

End of boring at _____ feet
Standing water table:
 Present at _____ feet of depth _____ Hours after boring
 Standing water not present in hole
Mottled Soil:
 Observed at _____ feet of depth
 Mottled soil not present in bore hole
 Comments:

End of boring at _____ feet
Standing water table:
 Present at _____ feet of depth _____ Hours after boring
 Standing water not present in hole
Mottled Soil:
 Observed at _____ feet of depth
 Mottled soil not present in bore hole
 Comments:



Purpose: This form may be used to certify the compliance status of the sewage tank components of the SSTS. This form is not a complete SSTS inspection report, only a tank integrity assessment, and may only certify sewage tank compliance status when entirely completed and signed by a qualified professional.

Instructions: This form may be completed, and signed, by a Designated Certified Individual (DCI) of a licensed SSTS inspection, maintenance, installation, or service provider business who personally conducts the necessary procedures to assess the compliance status of each sewage tank in the system.

When this form is signed by a qualified certified professional, it becomes necessary supporting documentation to an Existing System Compliance Inspection Report: Compliance inspection form - Existing system (wq-wwists4-31b).

The information and certified statement on this form is required when existing septic tank compliance status is determined by an individual other than the SSTS Inspector that submits an inspection report. This form represents a third party assessment of SSTS component compliance and is allowable under Minn. R. 7082.0700, subp. 4(B)(1).

Owner information

Owner/Representative: DARIA Eiden
Property address: 22888 Imperial Ave North
Local Regulatory Authority: WASHINGTON Parcel ID: 55025

System status

System status on date (mm/dd/yyyy): 8-8-23

[X] Certificate of sewage tank compliance [] Notice of sewage tank non-compliance

Compliance criteria:

Table with 2 columns: Compliance criteria and Yes/No options. Row 1: The SSTS has a seepage pit... Failure to Protect Groundwater. Row 2: The SSTS has a sewage tank that leaks... Failure to Protect Groundwater. Row 3: The SSTS presents a threat to public safety... Imminent Threat to Public Health or Safety.

Any "yes" answer above indicates sewage tank non-compliance.

Company information

Company name: Olson's Sewer Service, Inc.
Business license number: 216

Designated Certified Individual (DCI) information

Print name: BRION SUKART
Certification number: 91646

I personally conducted the work described above as a Designated Certified Individual of a Minnesota-licensed SSTS inspection, maintenance, installation, or service provider Business.

By typing/signing my name below, I certify the above statements to be true and correct, to the best of my knowledge, and that this information can be used for the purpose of processing this form.

Designated Certified Individual's signature: [Signature] Date (mm/dd/yyyy): 8-8-23

SSTS MAINTENANCE REPORT 048126 28365

Date of Maintenance 8/8/22 Reason for Maintenance: Dim.

Property Address: 22888 Droyperal Ave N Property Owner's Name: Danka Eiden

Municipality: Forest Lake State MN Zip Code 55025 GEO Code/Property I.D. #:

What was done to the system	Tank Measurements (must be completed if tank is NOT pumped)
<input checked="" type="checkbox"/> Tank(s) Pumped <input type="checkbox"/> Sludge and scum measured. Do tanks need to be pumped? <input type="checkbox"/> Yes <input type="checkbox"/> No (If no provide measurements)	Liquid Level of Tank _____ in. Sludge Level _____ in. Scum Level _____ in. Total (Sludge + Scum) _____ / Liquid Level _____ = % Sludge & Scum _____

1. Access used to remove septage: Maintenance Hole Other (Go to #3 below) * Tank must be pumped if this value is greater than 25%.
2. If maintenance hole was used, were all covers securely replaced? Yes No please explain

Explanation: _____

3. If owner refuses to allow a Subsurface Sewage Treatment System (SSTS) to be pumped through the maintenance hole, have them complete and sign the following statement:

I, _____ (owner's name), refuse to allow the removal of solids and liquids through the maintenance hole. I understand that removal of solids and liquids through other access points is not considered maintenance.

4. Is the tank designed as a leaky tank? example: seepage pit, cesspool, drywell, leaching pit
- Tank #1 Yes No Verification Method Used: _____
- Tank #2 Yes No Verification Method Used: _____
5. Is there evidence of tank leakage from a septic, holding, pretreatment or pump tank below the operating depth or evidence of damaged, cracked, or structurally unsound maintenance hole covers?

Tank	Leaking Out	Leaking In	Cover Damage
Septic/Holding Tank #1	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Septic/Holding Tank #2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Pretreatment Tank	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Pump Tank	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

6. How many gallons of septage were removed?

Tank #1 1000 Tank #2 1000 Pretreatment Tank _____ Pump Tank 1000

7. Other Information: List any troubleshooting, minor repairs conducted, tank safety concerns, or other concerns.
Tanks overfill due to problems with pump. Homeowner will fix.

8. Certification: I hereby certify as a State of Minnesota certified SSTS Maintainer that I personally conducted the work and made the observations, or directly supervised others in the performance of this job.

Maintainer's Name: Olson's Sewer Service, Inc. Maintainer's Address: 17638 Lyons Street NE, Forest Lake, MN

Maintainer's License #: 216 Maintainer's Phone #: 651-464-2082

Maintainer's Signature: [Signature] Date: 8-8-22



WASHINGTON COUNTY, MINNESOTA
 Department of Public Health
 and Environment 651/430-6708

PERMIT NUMBER FOREST LAKE TOWNSHIP
 000598059 SEWAGE PERMIT

Owner : GLEN RIDEN
 IMPERIAL AVE N
 FOREST LAKE MN 55025
 Applicant : GLEN RIDEN 612-753-0040

NEW MOUND PERMIT 250.00
 SEPTIC APPLICATION/SOIL REVIEW 150.00
 Total Fees : 400.00
 Total Paid : 400.00
 Total Due : .00

0005-98059

PERMISSION IS HEREBY GRANTED

To execute the work specified in this permit on the following described property upon express condition that said persons and their agents, employees and workmen shall conform in all respects to the provisions of the Building Code, and/or Ordinances. This permit may be revoked at any time upon the violation of any of the provisions of said code and ordinances.

Project Address : 22890 IMPERIAL AVE N FOREST LAKE MN 55025
 Legal Description: LOT 004 BLOCK 001 CAMERON HIGHLANDS Gen : 10-032-21-11-0007
 Flow Capacity 600 Gal/Day Tank Volume 2000
 Soil Conditions: Depth to Restriction 16 Inches Perc Rate 30 Min/Inch

Soil Treatment Type:
 Bottom Area 600 Rock Depth 9

Authorized Work / Special Conditions

- Install individual sewage treatment system as per approved design in area tested and shown on site plan.
- THIS SYSTEM MUST BE INSTALLED BY A CERTIFIED/LICENSED SEWAGE TREATMENT SYSTEM INSTALLER HOLDING A CURRENT LICENSE WITH THE MINNESOTA POLLUTION CONTROL AGENCY. (A list of installers is available at your request.)
- Rope off and protect tested area from all vehicle traffic.
- Back-up area for second future on-site system must be protected from all traffic.
- Install mound with 18 inch sand base.

** Permit Expiration Date : Sewage Treatment : 1999-09-18

A CERTIFICATE OF OCCUPANCY MUST BE REQUESTED AND ISSUED PRIOR TO USE OR OCCUPANCY OF WORK PERMITTED BY A BUILDING PERMIT.

** This permit shall expire and be null and void if the work authorized by the Building Permit is not commenced within 60 days of the date of issuance or if work is abandoned or suspended for a period of 120 days. Term of the Building Permit is 12 months from date of issue. Term of sewage treatment permit is 12 months from date of issue.

Penalty for violation of any of the provisions of building code: Fine not to exceed five hundred dollars (\$500.00) or imprisonment for not more than ninety (90) days, or both.

Permit Issue Date 1995-09-18 Code Enforcement Officer Allen Goodwin

INSPECTION RECORD

BUILDING	DATE	INSP.	COMMENTS
Foundation.....			
Foundation Wall.....			
Plumbing (Groundwork).....			
Heating (Groundwork).....			
Rough Plumbing.....			
Rough Gas Piping.....			
Rough Heating and Ventilation.....			
Framing.....			
Insulation.....			
Fireplace.....			
Chimney.....			
Wallboard or Lath and Plaster.....			
Final Electrical.....			
Final Plumbing.....			
Final Gas Piping.....			
Final Heating and Ventilation.....			
Final Building.....			

SEWAGE TREATMENT SYSTEM	DATE	INSP.	COMMENTS
Installation.....	8-13-99	ALZ	1000 gpd TANK MOUND Tank Size: 2-1000 Treatment Area: 600 sq ft
As Built.....			Installer: LEIF CONST

DRIVEWAY	DATE	INSP.	COMMENTS
Access.....			
Installation.....			

NOTES: 8-6-99 Tanker set OK
 8-11-99 rough up OK reviewed rock bed location with installer & agreed to maintain a controlled flow. Poor location with different slopes & angles. OK
 sand in place rock bed area OK



WASHINGTON COUNTY
DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
GOVERNMENT CENTER

Mary L. McGlothlin
Director

14949 62ND STREET NORTH • P. O. BOX 3803 • STILLWATER, MINNESOTA 55082-3803
Office: (651) 430-6655 • TTY (651) 439-3220 • Facsimile Machine: (651) 430-6730

December 14, 1999

Mark Leaf
Leaf Construction
3176 Hwy 95 NE
PO Box 549
Cambridge MN 55008

CERTIFIED LETTER

Dear Mr. Dona:

As I had received no response from you on, December 7, 1999, I stopped by the Eiden residence at 22888 Imperial Ave N in Forest Lake Township to both reinspect the system and see if the Eidens had heard from you. At that time the system was observed to be bleeding out on both the north and south sides of the mound making it quite clear that this is a failed system and will require replacement.

As of this time we have a new house without a sewer system which is a violation of the building code, zoning ordinance, and on-site sewage regulations based on the fact that it is bleeding out onto the ground surface. As a result a copy of this letter is being sent to Joel Grams of Home Sweet Homes Design, Inc. who is the general contractor.

Considering the time of year I would expect, at a bare minimum, that some fill be brought in to extend the toe of the mound in the areas that are bleeding out, with soil testing and design being completed so that plans can be made to replace the system in the spring when weather allows.

If I do not hear from you by Monday, December 20, 1999, I will assume you do not intend to solve this problem and I will turn the matter over to the State Pollution Control Agency, and at that point I will order the general contractor to solve the problem.

If you have any questions I can be reached at 651-473-6001.

Respectfully,

Al Goodman
Washington County Building Official

cc: Mrs. Darla Eiden
22888 Imperial Ave NE
Forest Lake Township

Dennis Johnson
7505 Lent Trail
Stacy MN 55079

Joel Grams
Home Sweet Homes Design, Inc.
27587 Xzlite Street NE
Isanti MN 55040

Handwritten notes: 12-17-99 4:20 PM Mark Leaf called + will deal w/ water problem. 12-15-00 No further calls from anyone. Owner has not called for a year. Assume OK. [Signature]



WASHINGTON COUNTY
DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
GOVERNMENT CENTER

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Director

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Office: (651) 430-6655 • TDD (651) 438-3220 • Facsimile Machine: (651) 430-6730

November 29, 1999

Mark Dona
Leaf construction
3176 Hwy 95 NE
PO Box 549
Cambridge MN 55008

Dear Mr. Dona:

On November 23, 1999, at the request of the owner, Mrs. Darla Eiden, I inspected the mound type system at their residence at 22888 Imperial Avenue North. The inspection verified that the mound is bleeding out at the toe and according to Mrs. Eiden, they moved in on August 15, 1999 and the system was wet at the toe sometime within a month of their occupancy. Based on the limited use before the problem showed up, the simple fix of extending the toe of the mound would not seem to be the answer.

I suggest you contact the building contractor and the designer and look at a long term solution to this problem. I would expect to hear from you no later than Monday, December 6, 1999.

If you have any questions feel free to call me at 651/430-6661.

Respectfully,

A handwritten signature in cursive script, appearing to read "Allan R. Goodman".

Allan R. Goodman
Building Official

ARG/mlp

xc: Mrs. Darla Eiden
Dennis Johnson

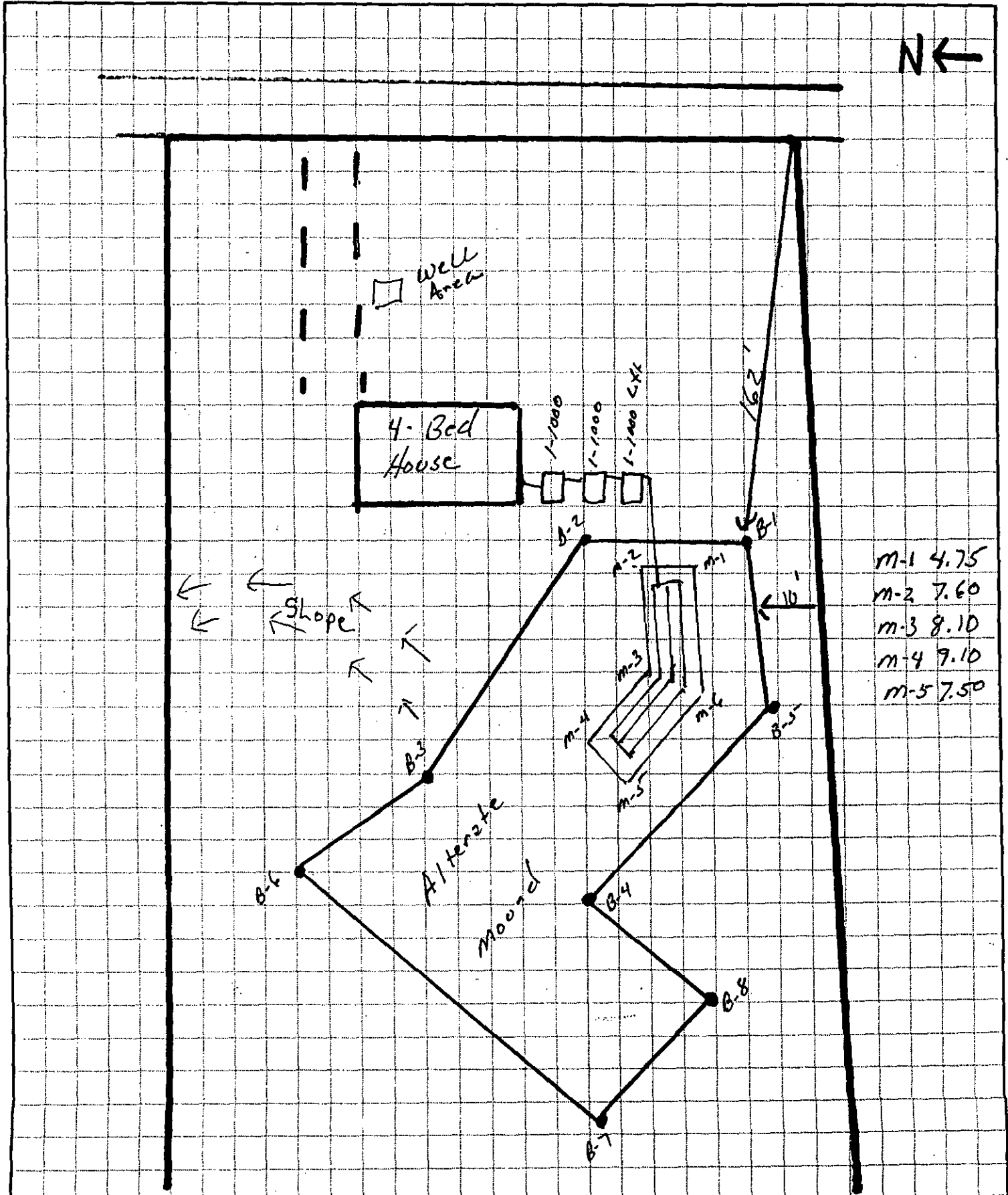


Site Evaluation Map

Date: 8/21/98 Site Evaluator: Dennis A. Johnson

Legal Location and Directions to Lot: Lot 4 BK1 Cameron Highland

Any Surface Signs of Compaction: _____





MOUND SYSTEM DESIGN INDIVIDUAL SEWAGE TREATMENT SYSTEM

WASHINGTON COUNTY HEALTH, ENVIRONMENT & LAND MANAGEMENT
14900 N. 61ST STREET, P.O. BOX 3803, STILLWATER, MN 55082-3803
612/430-6708 OR 612/430-6656 FAX 612/430-6730

Owner's Name	Glen Eiden	753-0040
Job Site Address	Lot 4, Blk.1, Cameron Highland	
City or Township	Forest Lake Twp.	
Use of Building	New Home	

Design Flow Rate	600	Perc Rate	30	Land Slope	2	Percent
Two Required Tank Sizes	1,000 Gallons	1,000 Gallons	Lift Station Tank Size	1,000	Gallons	
Rock Bed Width	10'	Rock Bed Length	60'			
Required Absorption Width	20'	Feet	Depth of Clean Sand Fill at Upslope Edge of Rock Layer	1½	Feet	
Minimum Downslope Dike Width After Accounting for the Absorption Area				16.6	Feet	
Minimum Upslope Dike	13.36	Feet	Minimum Length of Dike	87	Feet	
Any Other Special Conditions						

COMPLETE THE PRESSURE DISTRIBUTION SYSTEM WORK SHEET ATTACHED.

This design must be accompanied by a site plan that clearly shows the location of the area tested and approved by the following (MOUND SYSTEMS SITE PLANS MUST CLEARLY SHOW THE LOCATION OF THE MOUND):

1. Use an appropriate scale and indicate direction by use of a north arrow.
2. Show ALL property boundaries, rights-of-way, easements, wetlands. If necessary, an enlarged detail of house site may also be required.
3. Show location of house, garage, driveway and all other improvements existing or proposed.
4. Show location and layout of sewage treatment mound, and back-up mound.
5. Show location of water supply (well and/or community supply line).
6. Dimension all setbacks and separation distances.

This system has been designed by a Pollution Control Agency (PCA) Certified Professional.

Designer Name	Dennis A. Johnson	PCA Certification #	191
Address	7505 Lent Trail, Stacy, Mn.	Phone #	651-462-5410
Signature	55079	Date	8-21-98

An Equal Employment Opportunity/Affirmative Action Employer
If You Need Assistance Due to Disability or Language Barrier, Please Call 430-6656 OR 430-6708 (TDD 430-3220)

COPY

MOUND DESIGN WORKSHEET

(For Flows up to 1200 gpd)

A. FLOW

Estimated 600 gpd
 or measured _____ x 1.5 = _____ gpd.

Estimated Sewage Flows in Gallons per day (gpd)

Number of Bedrooms	Type I	Type II	Type III	Type IV
2	300	225	180	60% of the values in Type I, II or III column
3	450	300	218	
4	600	375	256	
5	750	450	294	
6	900	525	332	
7	1050	600	370	
8	1200	675	408	

B. SEPTIC TANK LIQUID VOLUMES

$\frac{2-1000}{1-1000}$ gallons
 6.25 ft

C. SOILS (refer to site evaluation)

- Depth to restricting layer = 18 inches 1 1/2 feet
- Depth of percolation tests = 12 inches
- Texture Sandy Loam Percolation rate 30 mpi
- Land slope _____ %

Septic Tank Capacity (in gallons)

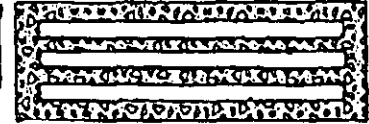
Number of Bedrooms	Minimum Liquid Capacity	Liquid capacity with garbage disposal	Liquid capacity with disposal lift inside
2 or less	750	1125	1500
3 or 4	1000	1500	2000
5 or 6	1500	2250	3000
7, 8 or 9	2000	3000	4000

D. ROCK LAYER DIMENSIONS

- Multiply flow rate by 0.83 to obtain required area of rock layer: $A \times 0.83 =$
 $600 \text{ gpd} \times 0.83 \text{ sq. ft./gpd} = 600 \text{ sq. ft.}$
- Select width of rock layer (max 10' if <120 mpi max 5') = 10' ft.
- Length of rock layer = area \div width =
 $600 \text{ sq. ft.} \div 10 \text{ ft.} = 60 \text{ ft.}$



Width 10 ft
 <120mpi <10'
 >120mpi <5'



Length 60 ft

E. ROCK VOLUME

- Multiply rock area by rock depth to get cubic feet of rock; $600 \text{ sq. ft.} \times 1 \text{ ft.} = 600 \text{ cu. ft.}$
- Divide cu. ft. by 27 cu. ft./cu. yd. to get cubic yards;
 $600 \text{ cu. ft.} \div 27 = 22 \text{ cu. yd.}$
- Multiply cubic yards by 1.4 to get weight of rock in tons; $22 \text{ cu. yd.} \times 1.4 \text{ ton/cu. yd.} = 31 \text{ tons.}$

F. ABSORPTION WIDTH

- Percolation rate in top 12 inches of soil is 30 mpi
 Texture Sandy Loam

- Select allowable soil loading rate from table;
.60 gpd/ft²

- Calculate adsorption width ratio by dividing rock layer

loading rate of 1.20 gpd/ft² by allowable soil loading rate;
 $1.20 \text{ gpd/ft}^2 \div .60 \text{ gpd/ft}^2 = 2$

- Multiply adsorption width ratio by rock layer width to get required adsorption width;

$2 \times 10 \text{ ft} = 20 \text{ ft}$

Absorption Width Sizing Table

Percolation Rate in Minutes per Inch (MPI)	Soil Texture	Gallons per day per square foot	Ratio of Adsorption width to Rock Layer Width
Faster than 0.1	Coarse Sand	1.20	1.00
0.1 to 5	Sand	1.20	1.00
0.1 to 5	Fine Sand	0.60	2.00
6 to 15	Sandy Loam	0.79	1.52
16 to 30	Loam	<u>0.60</u>	2.00
31 to 45	Silt Loam	0.50	2.40
46 to 60	Clay Loam	0.45	2.67
60 to 120	Clay	0.24	5.00
Slower than 120	Clay	0.20	6.00

G. DOWNSLOPE BERM WIDTH

1. If landslope is 1% or more, subtract rock layer width from adsorption width to obtain minimum downslope berm toe

$$20 \text{ ft} - 10 \text{ ft} = 10 \text{ feet}$$

2. Calculate Minimum mound Size

a. Determine depth of clean sand fill at upslope edge of rock layer:

$$\text{Separation } 3' - 18'' \text{ ft} = 18'' \text{ feet}$$

b. Add depth of clean sand for separation (2a)

at upslope edge, depth of rock layer (1 foot) to depth of cover (1 foot) to find the mound height at the upslope edge of rock layer;

$$18'' \text{ ft} + 1 \text{ ft} + 1 \text{ ft} = 3\frac{1}{2} \text{ feet}$$

c. Enter table with landslope and upslope berm ratio. Select berm multiplier of 3.70

d. Multiply berm multiplier by upslope mound height to find upslope berm width:

$$3.70 \times 3\frac{1}{2} = 13.32 \text{ feet}$$

e. Multiply rock layer width by landslope to determine drop in elevation;

$$10 \times 2\% \div 100 = .2 \text{ feet}$$

f. Add depth of clean sand for slope difference (2e) at downslope edge, to the mound height at the upslope edge of rock layer (2b) to find the downslope height;

$$.2 \text{ ft} + 3\frac{1}{2} \text{ ft} = 3.8 \text{ feet}$$

g. Enter table with landslope and downslope berm ratio. Select berm multiplier of 4.35

h. Multiply berm multiplier by downslope mound height to get downslope berm width:

$$3.8 \times 4.35 = 16.6 \text{ feet}$$

i. Compare the values of step G.1 10 and Step G.2h 16.6

Select the greater of the two values as the downslope berm width; 16.6 feet

j. Total mound width is the sum of upslope berm (G.2d)

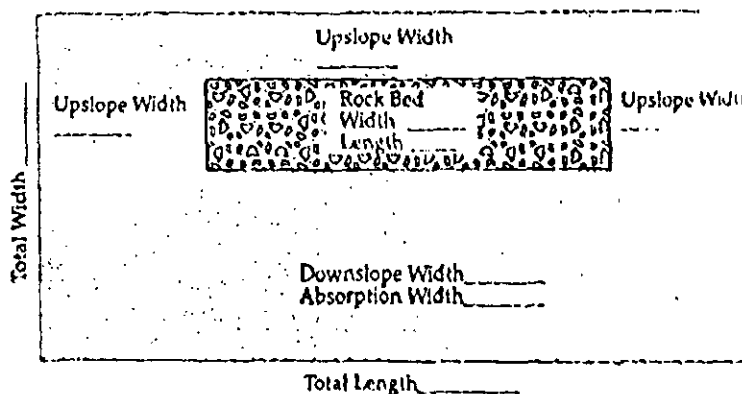
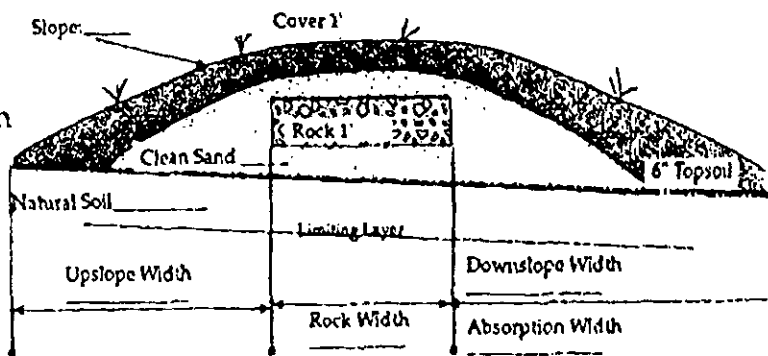
width plus rock layer width (D.2)

plus downslope berm width (G.2i);

$$13.32 \text{ ft} + 10 \text{ ft} + 16.6 \text{ ft} = 43 \text{ feet}$$

k. Total mound length is the sum of upslope berm width (G.2d) plus rock layer length (D.3) plus upslope berm width (G.2d);

$$60 \text{ ft} + 13.32 \text{ ft} + 13.32 \text{ ft} = 87 \text{ feet}$$



BERM SLOPE MULTIPLIERS

Land Slope in %	DOWNSLOPE berm multipliers for various berm slope ratios					UPSLOPE berm multipliers for various berm slope ratios				
	3:1	4:1	5:1	6:1	7:1	3:1	4:1	5:1	6:1	7:1
0	3.0	4.0	5.0	6.0	7.0	3.0	4.0	5.0	6.0	7.0
1	3.09	4.17	5.26	6.38	7.53	2.91	3.85	4.76	5.66	6.54
2	3.19	4.35	5.56	6.82	8.14	2.83	3.70	4.54	5.36	6.14
3	3.30	4.54	5.88	7.32	8.86	2.75	3.57	4.35	5.08	5.79
4	3.41	4.76	6.25	7.89	9.72	2.68	3.45	4.17	4.84	5.46
5	3.53	5.00	6.67	8.57	10.77	2.61	3.33	4.00	4.62	5.19
6	3.66	5.26	7.14	9.38	12.07	2.54	3.23	3.85	4.41	4.93
7	3.80	5.56	7.69	10.34	13.73	2.48	3.12	3.70	4.23	4.70
8	3.95	5.89	8.33	11.54	15.91	2.42	3.03	3.57	4.05	4.49
9	4.11	6.25	9.09	13.04	18.92	2.36	2.94	3.45	3.90	4.30
10	4.29	6.67	10.00	15.00	23.33	2.31	2.86	3.33	3.75	4.12
11	4.48	7.14	11.11	17.65	30.43	2.26	2.78	3.23	3.61	3.95
12	4.69	7.69	12.50	21.43	43.75	2.21	2.70	3.12	3.49	3.80

Note: The product of the multiplier and the height results in the horizontal distance to where the berm meets the original land slope. Example: Height at upper edge of rock layer is 3.0 feet, rock layer is 10 feet wide, land slope is 6% and berm slope ratio is 4:1. Upslope berm width is $3.0 \times 3.0 = 9.7$ ft; height at lower edge of rock layer is $3.0 + 10 \times 0.6 = 3.6$ ft and downslope berm width is $3.26 \times 3.6 = 18.9$ ft.

Final Dimensions:

$$43' \times 87'$$

PRESSURE DISTRIBUTION SYSTEM

1. Select number of perforated laterals 3
2. Select perforation spacing = 3 feet.
3. Since perforations should not be placed closer than 1 ft. to the edge of the rock layer (see diagram), subtract 2 ft. from the rock layer length.

$$\frac{60}{\text{Rock layer length}} - 2 \text{ ft.} = \underline{58} \text{ feet.}$$

4. Determine the number of spaces between perforations. Divide the length above by perforation spacing and round down to nearest whole number.

$$\text{Length perf. spacing} = \frac{58 \text{ ft.}}{(3)} \div \frac{3 \text{ ft.}}{(2)} = \underline{19} \text{ spaces}$$

5. Number of perforations is equal to one plus the number of perforation spaces.

$$\underline{19} \text{ spaces} + 1 = \underline{20} \text{ perforations/lateral}$$

6. Multiply perforations per lateral by number of laterals to get total number of perforations.

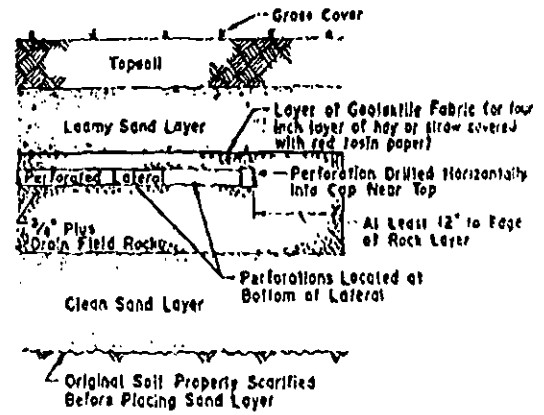
$$\frac{2}{\text{laterals}} \times \frac{20}{\text{perfs/lateral}} = \underline{60} \text{ perforations.}$$

7. Determine required flow rate by multiplying number of perforations by flow per perforation

$$\frac{60}{\text{perfs}} \times \frac{.74}{\text{gpm/perf}} = \underline{44} \text{ gpm.}$$

8. If laterals are connected to header pipe as shown on upper example, to select minimum required lateral diameter; enter table with perforation spacing and number of perforations per lateral. Select minimum diameter for perforated lateral = 1 1/2 inches.

END PERFORATION OF A PERFORATED LATERAL

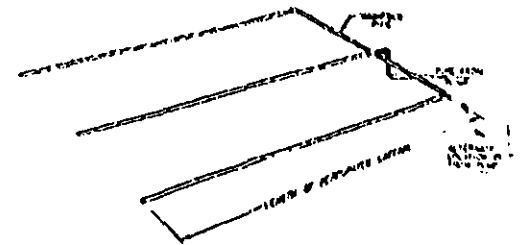


Required Perforation Discharge in gallons per minute (gpm)		
Discharge Head (feet)	$\frac{1}{2}$ inch	$\frac{3}{4}$ inch
1.0a	0.56	0.74
2.0b	0.80	1.04

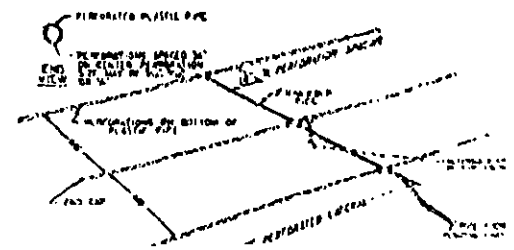
a. Use for single family homes
b. Use for all other applications

Maximum number of quarter inch perforations per lateral to guarantee < 10% discharge variation			
Perforation Spacing (feet)	1 1/4	1 1/2	2
2.5	14	18	28
3.0	13	17	26
3.3	12	16	25
4.0	11	15	23
5.0	10	14	22

MANIFOLD LOCATED AT END OF PRESSURE DISTRIBUTION SYSTEM



LAYOUT OF PERFORATED PIPE LATERALS FOR PRESSURE DISTRIBUTION IN GROUND



9. If perforated lateral system is attached to manifold pipe near the center, lower diagram, perforated lateral length and number of perforations per lateral will be approximately one half of that in step 8. Using these values, select minimum diameter for perforated lateral = 1 1/2 inches.



SOIL REVIEW/SEPTIC PERMIT APPLICATION

14949 62nd St. N.
STILLWATER, MN.
ATTN: AL GOODMAN
FEE \$400.00 due
as of 09/09/98
Receipt #

RECEIVED

SEP 19 1998

HELM

Washington County Health, Environment & Land Management

14900 61st Street N., P.O. Box 3803

Stillwater, MN 55082-3803

612/430-6708 or 612/430-6656 FAX 612/430-6730

29890 Imperial Ave N

Make checks payable to WASHINGTON COUNTY TREASURER

\$150 - Application Fee (site review)

\$25 - Additional Review Fee (1 hour minimum)

\$100 base fee, plus \$50 per lot - Subdivision Fee

\$150 - New Drainfield System Permit Fee

\$70 - Replacement Drainfield System Permit Fee

\$250 - New Mound System Permit Fee

\$170 - Replacement Mound System Permit Fee

0005-98059

Legal Description and Parcel Identification Number (especially if this is for a NEW SUBDIVISION OR MINOR SUBDIVISION)

LOT 4 BLOCK 1, CAMERON HIGHLAND geo: 10-032-21-11-0007

Applicant GLEN EIDEN Address 930 227TH AVE NW City OAK GROVE MN. State MN. Zip 55005 Phone 753-0040

Owner (if different from applicant) Address City State Zip Phone

New Home Existing Home ___ New Business ___ Existing Business ___ Number Of Bedrooms: 4 Gallons Per Day:

Check the following fixture(s) which are or will be installed: Garbage Disposal ___ Recreational Bathing Facility: (jacuzzi, hot tub, etc.) ___

New Drainfield System ___ New Mound System Replacement Drainfield System ___ Replacement Mound System ___ Permit Renewal ___
Approval Only ___ If this site has been approved, attach copy of approval letter Additional Soil Test Data for Previously Approved Site ___

The following exhibits are required as part of this application and shall be attached hereto: Percolation Test Reports; Soil Boring Logs; Site Plan drawn to scale showing location of buildings, lot lines, percolation test holes, soil boring holes, proposed location of system and well; one (1) copy of the System Design; and one (1) copy of the Final Building Plan. The house and the drainfield areas must be staked. Inaccurate or incomplete information will result in delays in processing.

AGREEMENT: The undersigned hereby makes Application for Permit to Install or Extend Sewage Treatment System herein specified, agreeing that all such work shall be done in strict accordance with ordinances and regulations of the County of Washington, Minnesota. Applicant agrees that the Site Plan, Sketches and Design submitted herewith, and which are reviewed by the Washington County Building Official or his agent, together with any requirement and/or restriction made necessary by conditions peculiar to a particular location, shall become a part of the permit. Applicant further agrees to provide access, at reasonable times, to the Building Official or his agent for the purpose of performing inspections required and that no part of the system shall be covered until it has been inspected and accepted. APPLICATION IS FOR AN INSTALLATION AT A SPECIFIC LOCATION; ANY DEVIATION FROM THE APPROVED LOCATION WILL VOID THE PERMIT. It shall be the responsibility of the applicant for the permit to notify the Office of the Building Official that the installation is ready for inspection.

In connection with your request for a soil review/septic permit, you are hereby giving us permission to enter upon your property during normal business hours for the purpose of determining the suitability of the location, which may include minor excavation or soil borings.

[Signature]
Signature of Applicant (Owner or Builder)

CONST. MGR.

9-3-98

Date

THE AREA BELOW IS FOR COUNTY USE ONLY

SITE EVALUATION: BY INSPECTOR _____ DATE _____

Setbacks:	Required (circle appropriate item(s))					Actual
	50'	75'	100'	150'		
Well (including adjacent property)						
Wetland, Pond, Lake, Stream, River, or Bluffline						

CONCLUSIONS: Site Suitable: ___ Site Unsuitable: ___ Additional Tests Required: ___ Verify Use: ___ Bedrooms

NOTES: Lot Size _____ Year Built _____

Logs of Soil Borings

B-31

Location or Project Lot 4, Blk. 1, Cameron Highlands
 Borings made by Dennis A. Johnson Date 8-21-98
 Classification System: AASHO _____; USDA-SCS X; Unified _____; other _____
 Auger used (check two): Hand X, or Power _____; Flight _____, or Bucket _____; other _____

Depth, in feet	Boring number <u>B-1</u>	Surface elevation <u>3.84</u>	Depth, in feet	Boring number <u>B-2</u>	Surface elevation <u>7.60</u>
0	0"-6"	Dark Grayish Brown, Sandy Loam 4/2 10YR	0	0"-6"	Dark Grayish Brown Sandy Loam 4/2 10YR
1	6"-12"	Dark Yellowish Brown	1	6"-12"	Dark Yellowish Brown
	12"-18"	Sandy Loam 4/4 10YR		12"-18"	Sandy Loam 4/4 10YR
2	18"-30"	Dark Yellowish Brown Clay Loam 4/4 10YR	2	18"-30"	Dark Yellowish Brown Clay Loam 4/4 10YR
		Dark Yellowish Brown Clay Loam, Mottled			Dark Yellowish Brown Clay Loam, Mottled
3			3		
4			4		
5			5		
6			6		
7			7		
8			8		

End of boring at 2½ feet.
 Standing water table:
 Present at _____ feet of depth,
 _____ hours after boring.
 Not present in boring hole X.
 Mottled soil:
 Observed at 1½ feet of depth.
 Not present in boring hole _____.
 Observations and comments:

End of boring at 2½ feet.
 Standing water table:
 Present at _____ feet of depth,
 _____ hours after boring.
 Not present in boring hole X.
 Mottled soil:
 Observed at 1½ feet of depth.
 Not present in boring hole _____.
 Observations and comments:

Logs of Soil Borings

B-31

Location or Project Lot 4, Blk. 1, Cameron Highlands

Borings made by Dennis A. Johnson Date 8-21-98

Classification System: AASHO _____; USDA-SCS X; Unified _____; other _____

Auger used (check two): Hand X, or Power _____; Flight _____, or Bucket _____; other _____

Depth, in feet	Boring number <u>B-3</u> Surface elevation <u>8.10</u>	Depth, in feet	Boring number <u>B-4</u> Surface elevation <u>9.10</u>
0	0"-6" Dark Grayish Brown Sandy Loam 4/2 10YR	0	0"-6" Dark Grayish Brown Sandy Loam 4/2 10YR
1	6"-12" Dark Yellowish Brown Sandy Loam 4/4 10YR	1	6"-12" Dark Yellowish Brown Sandy Loam 4/4 10YR
2	12"-18" Dark Yellowish Brown Clay Loam 4/4 10YR	2	12"-18" Dark Yellowish Brown Clay Loam 4/4 10YR
3	18"-30" Dark Yellowish Brown Clay Loam 4/4 10YR Mottled	3	18"-30" Dark Yellowish Brown Clay Loam, Mottled 4/4 10YR
4		4	
5		5	
6		6	
7		7	
8		8	

End of boring at 2½ feet.
 Standing water table:
 Present at _____ feet of depth,
 _____ hours after boring.
 Not present in boring hole X.

Mottled soil:
 Observed at 1½ feet of depth.
 Not present in boring hole _____.
 Observations and comments:

End of boring at 2½ feet.
 Standing water table:
 Present at _____ feet of depth,
 _____ hours after boring.
 Not present in boring hole X.

Mottled soil:
 Observed at 1½ feet of depth.
 Not present in boring hole _____.
 Observations and comments:

Logs of Soil Borings

B-31

Location or Project Lot 4, Blk. 1, Cameron Highlands

Borings made by Dennis A. Johnson Date 8-21-98

Classification System: AASHO _____; USDA-SCS X; Unified _____; other _____

Auger used (check two): Hand X, or Power _____; Flight _____, or Bucket _____; other _____

Depth, in feet	Boring number <u>B-5</u>	Surface elevation <u>7.50</u>
0	0"-6" Dark Grayish Brown	
	6"-12" Sandy Loam 4/2 10YR	
1	Dark Yellowish Brown	
	12"-18" Sandy Loam 4/4 10YR	
2	Dark Yellowish Brown	
	18"-30" Clay Loam 4/4 10YR	
	Dark Yellowish Brown	
	Clay Loam, Mottled	
3	4/4 10YR	
4		
5		
6		
7		
8		

Depth, in feet	Boring number <u>B-6</u>	Surface elevation <u>7.70</u>
0	0"-6" Dark Grayish Brown	
	6"-12" Sandy Loam 4/2 10YR	
1	Dark Yellowish Brown	
	12"-18" Sandy Loam 4/4 10YR	
2	Dark Yellowish Brown	
	18"-30" Clay Loam 4/4 10YR	
	Dark Yellowish Brown	
	Clay Loam, Mottled	
3	4/4 10YR	
4		
5		
6		
7		
8		

End of boring at 2½ feet.
 Standing water table:
 Present at _____ feet of depth,
 _____ hours after boring.
 Not present in boring hole X.

Mottled soil:
 Observed at 1½ feet of depth.
 Not present in boring hole _____.
 Observations and comments:

End of boring at 2½ feet.
 Standing water table:
 Present at _____ feet of depth,
 _____ hours after boring.
 Not present in boring hole X.

Mottled soil:
 Observed at 1½ feet of depth.
 Not present in boring hole _____.
 Observations and comments:

Logs of Soil Borings

B-31

Location or Project Lot 4, Blk. 1, Cameron Highlands

Borings made by Dennis A. Johnson Date 8-21-98

Classification System: AASHO _____; USDA-SCS X; Unified _____; other _____

Auger used (check two): Hand X, or Power _____; Flight _____; or Bucket _____; other _____

Depth, in feet	Boring number <u>B-7</u>	Surface elevation <u>13.90</u>
0	<u>0"-10"</u> Dark Grayish Brown Sandy Loam 4/2 10YR	
1	<u>10"-12"</u> Dark Yellowish Brown <u>12"-18"</u> Sandy Loam 4/4 10YR	
2	<u>18"-24"</u> Dark Yellowish Brown Clay Loam 4/4 10YR	
3	Dark Yellowish Brown Clay Loam, Mottled 4/4 10YR	
4		
5		
6		
7		
8		

Depth, in feet	Boring number <u>B-8</u>	Surface elevation <u>13.90</u>
0	<u>0"-10"</u> Dark Grayish Brown Sandy Loam 4/2 10YR	
1	<u>10"-12"</u> Dark Yellowish Brown <u>12"-18"</u> Sandy Loam 4/4 10YR	
2	<u>18"-24"</u> Dark Yellowish Brown Clay Loam 4/4 10YR	
3	Dark Yellowish Brown Clay Loam, Mottled 4/4 10YR	
4		
5		
6		
7		
8		

End of boring at 2 feet.
 Standing water table:
 Present at _____ feet of depth,
 _____ hours after boring.
 Not present in boring hole X.

End of boring at 2 feet.
 Standing water table:
 Present at _____ feet of depth,
 _____ hours after boring.
 Not present in boring hole X.

Mottled soil:
 Observed at 1½ feet of depth.
 Not present in boring hole _____.
 Observations and comments:

Mottled soil:
 Observed at 1½ feet of depth.
 Not present in boring hole _____.
 Observations and comments:

EARTH SCIENCE TESTING™

SOILS INFORMATION SERVICE CO.



PERCOLATION TEST

TEST HOLE NO: 1

TEST HOLE NO: 2

DEPTH OF TEST HOLE: (12")

DEPTH OF TEST HOLE: (12")

TEST HOLE DIA: 6"

TEST HOLE DIA: 6"

PREPARED: (07/96)

PREPARED: (07/96)

TEST HOLE PROFILE:

0" - 3" DRK. BRN. FINE SANDY LOAM
3" - 12" LT. TAN BRN. FINE SANDY LOAM

TEST HOLE PROFILE:

0" - 7" DRK. BRN. FINE SANDY LOAM
7" - 12" LT. TAN BRN. FINE SANDY LOAM

.....
PERCOLATION TEST CONDUCTED BY: II. WEAVER - MPCA LIC'S.# 977
.....

START: 07/96 AM (X) — PM ()

TIME: 8:00 6" WATER LEVEL: DROP LEVEL:

PERC. HOLE # 1

PERC. HOLE # 2

TIME	DROP	MPL.	TIME	DROP	MPL.
8:00 - 8:30	1 1/8"	25	8:05 - 8:35	1"	30
8:32 - 9:02	1 1/8"	25	8:37 - 9:07	1"	30
9:06 - 9:36	1"	30	9:09 - 9:39	7/8"	34

AVERAGE PERCOLATION RATE

AVERAGE PERCOLATION RATE

(30)

(34)



**AS-BUILT REPORT
INDIVIDUAL SEWAGE TREATMENT SYSTEM**

RECEIVED
FEB 25 2003
PUBLIC HEALTH

Washington County Public Health & Environment
14949 - 62ND ST N, PO BOX 6, ST. CLOUD WATER, MN 55082-0006
651/430-6688 OR 651/430-6655 FAX 651/430-6730

Legal Description or Complete Street Address		City of Township FOREST LAKE		
Owner Name GLEN EIDEN	Mail Address 22890 IMPERIAL AVEN.	City FOREST LAKE	State MN.	Zip
Installer LEAF CONSTRUCTION.	Mail Address P.O. BOX. 549	City CAMBRIDGE	State MN.	Zip 55008.
Septic Tank Information Tank Manufacturer: MADSON - PRINCETON.		Liquid Capacity 2) 1000 GALLON.		

PUMP CHAMBER (if installed)			
Tank Manufacturer: MADSON	Liquid Capacity: 1000	Horsepower of Pump: .4	Type of Warning Device: AUDIO - ALARM
Pump Discharge in Gallons Per Minute: 58 GALLONS		at Feet of Head: AT 15 FT. HEAD	Number of Gallons Per Cycle: 100

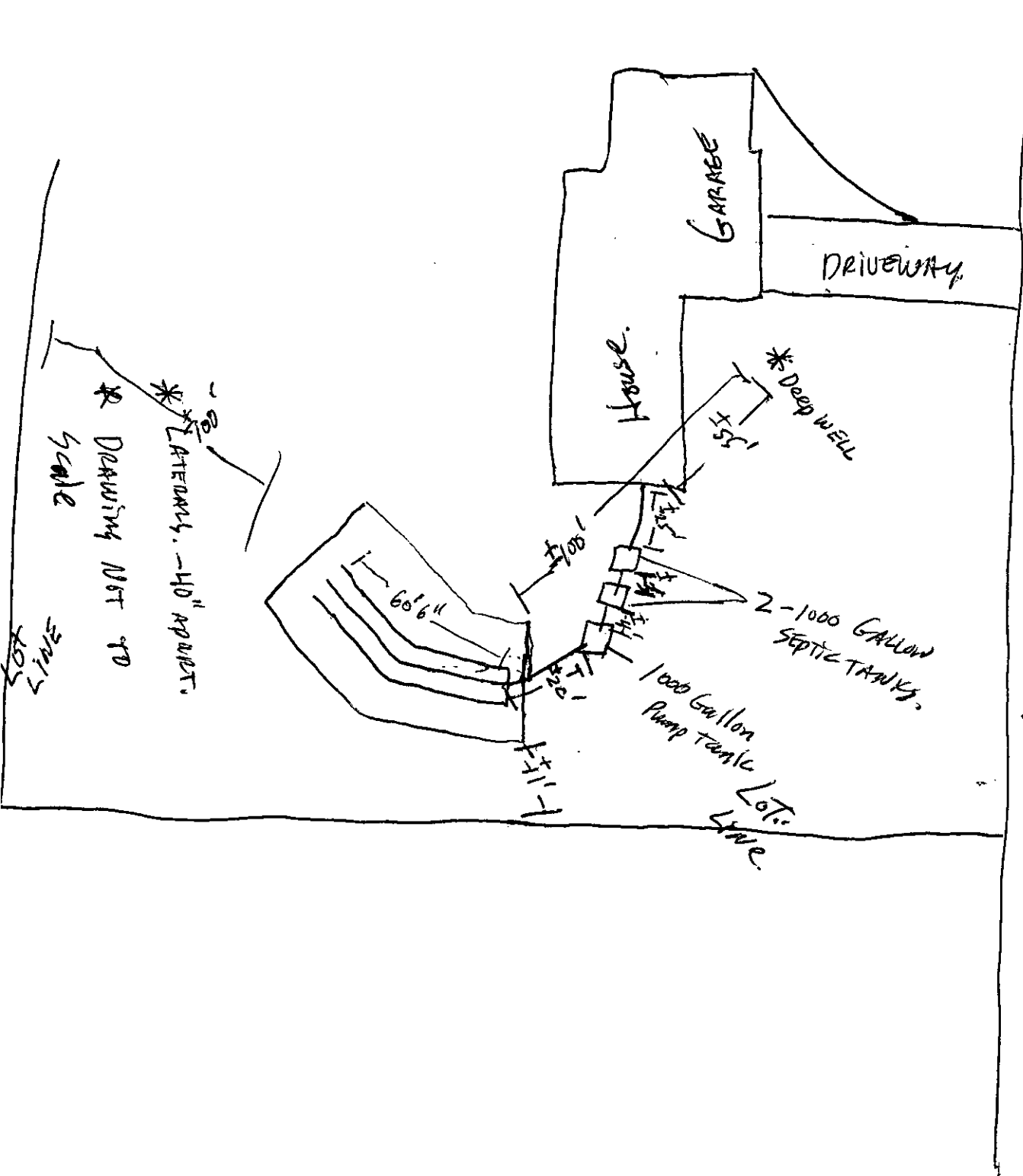
DRAINFIELD TRENCH		BED OR MOUND		
Width:	Length of Each Trench:	Rock Bed Length: 62'6"	Width: 10'	Area:
Depth of Trench Bottom from Finished Grade:		Bed Depth from Grade: SAND - 24"-36" - TOTAL MOUND 42"-54"		
Method of Distribution: <input type="checkbox"/> Pressure <input type="checkbox"/> Distribution Box <input type="checkbox"/> Drop Box		MOUND: Upslope Sand Base Depth: +24"		
Depth of Rock Under Distribution Pipe:		Downslope Sand Base Depth: +36"		
Square Footage of Tested Area Used:		Depth of Rock Under Pipe: 9"		
Trench Bottom Square Footage Required:		PRESSURE DISTRIBUTION SYSTEM:		
Area As Built:		Lateral Inside Diameter: 2"	Length: 60'6"	Perforation Size: 1/4"
		Spacing: 40"	Number: 3	Perforation Spacing: 36"

Complete site plan on attached sheet. On the site plan, include location of the following items.
Structures, septic tank, pump chamber, line from house to tank treatment system, distribution lines, distribution or drop boxes, well, and driveway. Show all distances applicable to the sewage treatment system (distance from structure to tank, tank to treatment system, distance between distribution lines, length of distribution lines, and distance between well and sewage treatment system). Indicate NORTH on the site plan and the sale of the plan.

I hereby certify that the system at the above referenced address was installed according to the Washington County Individual Sewage Treatment System Ordinance requirements.

Signed: *Mark R. Leaf* MPCA License #: 172 Dated: 2/20/03

WASHINGTON COUNTY SEPTIC PERMIT NUMBER 0005-98059



IMPERIAL AVE.

DRAWING NOT TO SCALE

LATERAL. - 40" APERT.

2 - 1000 GALLON SEPTIC TANKS.

1000 Gallon Pump Tank Lot Line

GARAGE

House.

DRIVEWAY

* Deep well

1.5'

60'6"

100'

150'

IMPERIAL AVE.