

INSTALLATION PERM
INDIVIDUAL SEWAGE TREATMENT



030011003

PERMIT
NUMBER

12308

Property Owner: Ron Erb

Parcel Number: 03-0011-003

WORK CATEGORY	SIZE OF TANK <u>1000</u> GALLONS	SIZE OF LIFT STATION _____ GALLONS
<input checked="" type="checkbox"/> NEW SYSTEM	SIZE OF DRAINFIELD <u>381</u> FT ²	SIZE OF PUMP _____
<input type="checkbox"/> REPAIR	SYSTEM LENGTH _____ FT	DEPTH TO RESTRICTING LAYER <u>41</u>
TYPE OF SYSTEM	NUMBER OF TRENCHES _____	MAXIMUM DEPTH OF SYSTEM <u>21</u>
<input checked="" type="checkbox"/> SEPTIC TANK/DRAINFIELD	ESTIMATED FLOW <u>480</u> GPD	PERC RATE _____
<input type="checkbox"/> DRAINFIELD ONLY	TYPE OF DRAINFIELD	SSF <u>1.27</u>
<input type="checkbox"/> HOLDING TANK	<input checked="" type="checkbox"/> STANDARD (gravelless)	SIZE OF GRAVELLESS PIPE _____
<input type="checkbox"/> ALTERNATE (specify) _____	<input type="checkbox"/> STANDARD (rock trench)	DEPTH OF ROCK _____
<input type="checkbox"/> LIFT STATION	<input type="checkbox"/> STANDARD (bed)	
	<input type="checkbox"/> MOUND (pressure distb)	
ADDITIONAL INFORMATION _____		
INSTALLER <u>Tony Stenge</u>		LICENSE NUMBER _____
ADDRESS/PHONE _____		

I hereby certify with my signature that all the data contained herein as well as all supporting data are true and correct to the best of my knowledge. I also understand that this permit is valid for a period of six (6) months.

Ron Erb

7-2-98

Signature

Date

Any changes to the permit must first be approved by Becker County Planning & Zoning. No system shall be covered up without inspection by Becker County Planning & Zoning.

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Application Fee 75⁰⁰ State Surcharge 1.50 Total 75⁵⁰

Application is hereby denied

Application is hereby granted to Ron Erb to install an individual septic system according to the specifications of the site evaluation and design submitted to the Becker County Environmental Services Office. By Order of:

Hebi Motts 7/2/98

Signature of Becker County Qualified Employee Date

This permit expires on 4/2/98

Date Inspected _____ Inspector _____

Onsite Septic System Site Evaluation/Design

Fire Number _____

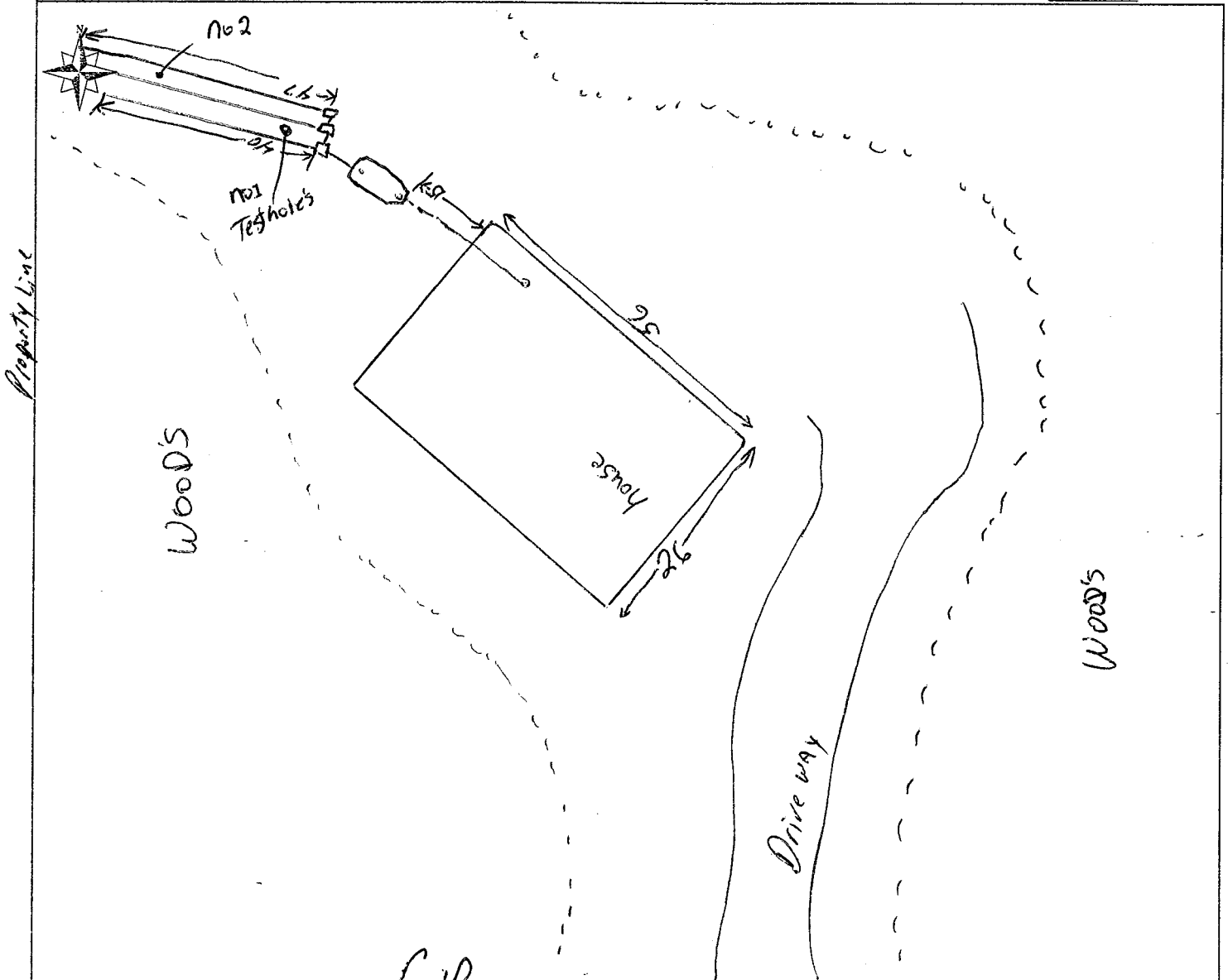
Tax Parcel Number _____

Legal Description: <i>Part of section 3 Township 148.</i>				<i>40</i>	<i>Burlington Township</i>
Lake/Stream Name	Lake/Stream Class	Section	TWP	Range	Township Name
Property Owner <i>Ron. Erb</i>		Address <i>HC-9 Box 247</i>		City, State, Zip Code <i>N.L. MN. 56501</i>	Phone Number <i>847-5609</i>
ISTS Designer I / Designer II <i>Tony Stenger</i>		License Number <i>388</i>	Address <i>HC9 Box 305 DL</i>		Phone Number <i>846-1575</i>

Site Plan

The site plan must be drawn to dimension or to scale:

- *All Wells within 100 feet of the System
- *Existing & Proposed Buildings
- *Distance from OHW
- *Soil Boring & Perc Test Locations
- *Distance from all Wells within 100 ft of System
- *Easements
- *Distance from Property Lines
- *Dimensions of Lot
- *Distance from Water Lines within 50 ft of System(existing & proposed)
- *Location of any Unsuitable Disturbed/Compacted Soil
- *Tank Access Route
- *Scale - One inch = _____ ft



TEST HOLE #1

TEST HOLE #2

DEPTH IN INCHES	SOIL TEXTURE	MUNSELL COLOR	STRUCTURE	DEPTH IN INCHES	SOIL TEXTURE	MUNSELL COLOR	STRUCTURE
0 To 6 6 To 18 19 Down	Black lean sand sand	10YR	BLOCKY PLATY PRISMATIC NONE	0 to 8 8 To 19 19 Down	Black lean sand SAND	Brown	BLOCKY PLATY PRISMATIC NONE
			BLOCKY PLATY PRISMATIC NONE				BLOCKY PLATY PRISMATIC NONE
			BLOCKY PLATY PRISMATIC NONE				BLOCKY PLATY PRISMATIC NONE
			BLOCKY PLATY PRISMATIC NONE				BLOCKY PLATY PRISMATIC NONE
Depth to standing water				Depth to standing water			
Depth to mottling				Depth to mottling			

Describe the surface features (slope, runoff, weather conditions, vegetation type, evidence of compaction, etc.)

Very Good Run off

SYSTEM IS NEW REPAIR SYSTEM DESIGN GRAVITY FLOW PRESSURE DISTRIBUTION

WATER USES:

- WASHING MACHINE
- DISHWASHER
- WATER SOFTENER
- GARBAGE DISPOSAL

NUMBER OF BEDROOMS 3
 NUMBER OF BATHROOMS 2
 TOTAL SQ. FT OF STRUCTURE 26x56
 TANK SIZE 1000

DEPTH OF SYSTEM 22"

SYSTEM DESIGN FLOW 300 GPD

SOIL SIZING FACTOR 1.27

PUMP SIZE ✓

TYPE OF RESIDENCE

- TYPE I TYPE II
- TYPE III TYPE IV

LIFT STATION SIZE ✓
 SOIL TREATMENT _____
 AREA SIZE 381 SQ FT
 DOSE VOLUME _____

LENGTH OF LIFT LINE _____

TOTAL DYNAMIC HEAD _____

WELL INFORMATION-Property's Well DEPTH OF WELL None

TYPE OF WELL None

Neighboring wells (within 100 ft of system) Depth of Wells _____

Type of Wells None

Name of Designer I Tony Stenger
 Designer II _____

Date of Site Evaluation _____

MPCA Number 388

Phone 646 4575

I certify that the site evaluation has been completed in accordance with all provisions of ISTS Minnesota Rules Chapter 7080.

Signature of Evaluator Tony Stenger Date 10/20/96

For Office Use Only

Date Site Evaluation / Design received _____ Received by _____

Date Site Evaluation approved _____ Approved by _____

FLOW

A. Estimated 300 gpd
 measured $300 \times 1.5 = 450$ gpd

B. 1000 gallons

SEPTIC TANK VOLUME

C. Depth to restricting layer = None feet
 D. Maximum depth of system C - 3 ft = None feet
 E. Texture _____ Percolation rate _____ MPI
 F. SSF 1.27 sq ft/gpd
 G. Slope 3 %

TRENCH BOTTOM AREA

H. For trenches with 6 inches of rock below the pipe:
 $A \times F = ___ \times ___ = ___ \text{ sq ft of bottom area}$
 I. For trenches with 12 inches of rock below the pipe:
 $A \times F \times 0.8 = ___ \times ___ \times 0.8 = ___ \text{ sq ft of bottom area}$
 J. For trenches with 18 inches of rock below the pipe:
 $A \times F \times 0.66 = ___ \times ___ \times 0.66 = ___ \text{ sq ft of bottom area}$
 K. For trenches with 24 inches of rock below the pipe:
 $A \times F \times 0.6 = ___ \times ___ \times 0.6 = ___ \text{ sq ft of bottom area}$

BED BOTTOM AREA

L. For seepage beds with 6 or 12 inches of rock below the pipe;
 $1.5 \times A \times F = 1.5 \times ___ \times ___ = ___ \text{ sq ft of bottom area}$

ROCK VOLUME IN CU FT

M. Rock depth below distribution pipe plus 0.5 foot times bottom area:
 $M = \text{Rock depth} + 6 \text{ inches} \times \text{Area (H,I,J,L,K)}$
 $(___ + 0.5 \text{ ft}) \times ___ = ___ \text{ cu ft}$

ROCK VOLUME IN CU YDS

N. Volume in cu ft divided by 27
 $M \div 27 = \text{cu yds } ___ \div 27 = ___ \text{ cu yds}$

ROCK WEIGHT

O. Cubic yards times 1.4 = tons
 $N \times 1.4 = \text{tons } ___ \times 1.4 = ___ \text{ tons}$

SYSTEM LENGTH

P. Select trench width = _____ ft
 Q. Divide bottom area by trench width: (H, I, J, or K) ÷ P = lineal feet
 $___ \div ___ = ___ \text{ lineal feet}$
 Q1. Gravelless Design
 $A \times F \div (3 \text{ for } 10" \text{ pipe, } 2 \text{ for } 8" \text{ pipe, width of the Chamber})$
 $___ \times ___ \div ___ = \underline{127} \text{ feet}$

LAWN AREA

R. Select trench spacing, center to center = _____ feet
 S. Multiply trench spacing by lineal feet R x Q = sq ft of lawn area
 $___ \times ___ = ___ \text{ sq ft}$

If the site evaluation determines a mound system, please attach the mound design worksheets.

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 columns
3	450	300	218	
4	600	375	256	
5	750	450	294	
6	900	525	332	
7	1050	600	370	
8	1200	675	408	

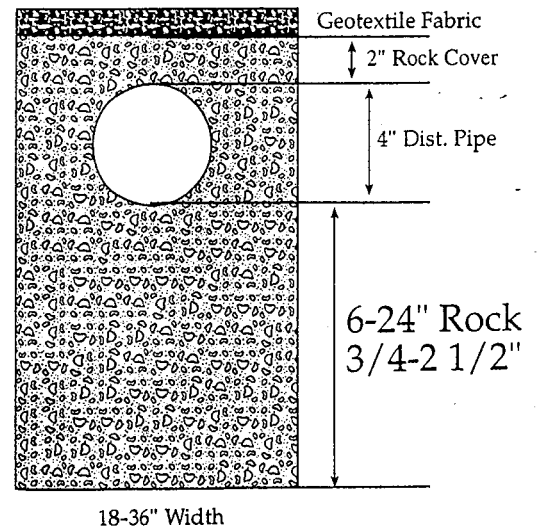
Septic Tank Capacities (in gallons)		
Number of Bedrooms	Minimum Liquid Capacity	Liquid capacity with garbage disposal
2 or less	750	1125
3 or 4	1000	1500
5 or 6	1500	2250
7, 8 or 9	2000	3000

Soil Characteristics and Required Areas for Sewage Treatment

Percolation Rate in Minutes per Inch (MPI)	Soil Texture	Square feet per gallon per day
Faster than 0.1 *	Coarse Sand	-----
0.1 to 5	Sand	0.83
0.1 to 5	Fine Sand **	1.67
6 to 15	Sandy Loam	1.27
16 to 30	Loam	1.67
31 to 45	Silt Loam	2.00
46 to 60	Clay Loam	2.20
Slower than 60***	Clay	-----

- * Soil too coarse for sewage treatment. Use systems for rapidly permeable soils.
- ** Soil having 50% or more of fine sand plus very fine sand.
- *** Soil with too high a percentage of clay for installation of an inground standard system.

6 inches= 0% Reduction*
12 inches= 20% Reduction
18 inches= 34% Reduction
24 inches= 40% Reduction
 * sizing for gravelless trench



SAND AFTER 18"

- PERCOLATION TEST SHEET -

Test hole location END OR SYSTEM Hole # Diameter of hole: inches Date test hole was prepared:
Depth of hole bottom: inches
Soil Data from test hole: depth, inches

depth, inches soil texture: Cusky Sand lean SAND soil color: Black Brown

Method of scratching sidewall: Depth of pea size gravel in bottom of hole: inches
Date and hour of initial water filling: Depth of initial water filling: above hole bottom
Method used to maintain 12" of water depth in hole for 4 hours:
Percolation test conducted by: Percolation test started at (am / pm).

Table with columns: TIME, INTERVAL (MINUTES), WATER DEPTH, WATER DROP (fraction), WATER DROP (decimal), PERC RATE CALCULATION, conversions. Includes rows for START, REFILL, and PERC RATE CALCULATION for intervals A through H.

Ten Percent Calculation *

Form for Ten Percent Calculation with sections A, B, C; C, D, E; E, F, G; F, G, H and B, C, D; D, E, F; F, G, H.

* If the top number in each set of boxes is larger than the bottom number then take another reading. If the top number is equal or smaller than bottom number, average the three numbers for the per rate.

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