



210115000



# Minnesota Pollution Control Agency

520 Lafayette Road North  
St. Paul, MN 55155-4194

2012

Staight

# Compliance Inspection Form Existing Subsurface Sewage Treatment Systems (SSTS)

Doc Type: Compliance and Enforcement

**Instructions:** Inspection results based on Minnesota Pollution Control Agency (MPCA) requirements and attached forms – additional local requirements may also apply.

Submit completed form to Local Unit of Government (LUG) and system owner within 15 days

For local tracking purposes

RECEIVED

APR 30 2012

ZONING

## System Status

System status on date (mm/dd/yyyy): 4/25/2012

**Compliant – Certificate of Compliance**

(Valid for 3 years from report date, unless shorter time frame outlined in Local Ordinance.)

**Noncompliant – Notice of Noncompliance**

(See Upgrade Requirements on page 3)

### Reason(s) for noncompliance (check all applicable)

- Impact on Public Health (Compliance Component #1) – Imminent threat to public health and safety
- Other Compliance Conditions (Compliance Component #3) – Imminent threat to public health and safety
- Tank Integrity (Compliance Component #2) – Failing to protect groundwater
- Other Compliance Conditions (Compliance Component #3) – Failing to protect groundwater
- Soil Separation (Compliance Component #4) – Failing to protect groundwater
- Operating permit/monitoring plan requirements (Compliance Component #5) – Noncompliant

## Property Information

Parcel ID# or Sec/Twp/Range: 21.01150.00

Property address: 24975 Washington St Osage, MN 56570

Reason for inspection: Property sale

Property owner: Patricia Winter

Owner's phone: \_\_\_\_\_

Owner's representative: \_\_\_\_\_

Representative phone: \_\_\_\_\_

Local regulatory authority: Becker County ESO

Regulatory authority phone: 218-846-7314

Brief system description: 1000/500 precast combo tank & 360 sq ft drainfield 120 Ln. Ft. of 10" SB-2 gravelless pipe.

Comments or recommendations:

This system was installed on 5/23/1996 with an estimated design flow of approx. 200 gpd. Although this system is in compliance, the drainfield is undersized by todays standards.

## 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.

Inspector name: Al Winterberger

Certification number: 3433

Business name: Winterberger Inspections

License number: 1565

Inspector signature: [Signature]

Phone number: 218-573-2275

## Necessary or Locally Required Attachments

- Soil boring logs
- System/As-built drawing
- Forms per local ordinance
- Other information (list): \_\_\_\_\_

**1. Impact on Public Health – Compliance component #1 of 5**

**Compliance criteria:**

System discharge sewage to the ground surface.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
System discharge sewage to drain tile or surface waters.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
System cause 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.**

**Comments/Explanation:**

Normal liquid levels were observed in system drop box. There were no visible inspection pipes present at the ends of the trenches so I was unable to check for hydraulic loading issues. Home owner did state that there had been some surface discharge of sewage many years ago when a large group of people were staying at the house. I did not see any new evidence of this during this inspection.

**Verification method(s):**

- Searched for surface outlet
- Searched for seeping in yard/backup in home
- Excessive ponding in soil system/D-boxes
- Homeowner testimony (See Comments/Explanation)
- "Black soil" above soil dispersal system
- System requires "emergency" pumping
- Performed dye test
- Unable to verify (See Comments/Explanation)
- Other methods not listed (See Comments/Explanation)

**2. Tank Integrity – Compliance component #2 of 5**

**Compliance criteria:**

System consists of a seepage pit, cesspool, drywell, or leaching pit. <i>Seepage pits meeting 7080.2550 may be compliant if allowed in local ordinance.</i>	<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.**

**Comments/Explanation:**

Inspection records from 5/23/96 indicate that a 1000/500 precast combo tank was installed. I located a 6in. pvc inspection pipe present over the tank inlet and inserted a steel rod and felt a solid concrete bottom as far as I could reach. I located the tank outlet inspection pipe buried below grade and observed normal liquid levels.

**Verification method(s):**

- Probed tank(s) bottom
- Examined construction records
- Examined Tank Integrity Form (Attach)
- Observed liquid level below operating depth
- Examined empty (pumped) tanks(s)
- Probed outside tank(s) for "black soil"
- Unable to verify (See Comments/Explanation)
- Other methods not listed (See Comments/Explanation)

**3. Other Compliance Conditions – Compliance component #3 of 5**

- a. Maintenance hole covers are damaged, cracked, unsecured, or appear to structurally unsound.  Yes\*  No  Unknown
- b. Other issues (electrical hazards, etc.) to immediately and adversely impact public health or safety.  Yes\*  No  Unknown  
**\*System is an imminent threat to public health and safety**

Explain:

- c. System is non-protective of ground water for other conditions as determined by inspector  Yes\*  No  
**\*System is failing to protect groundwater**

Explain:

**4. Soil Separation – Compliance component #4 of 5**

Date of installation: 5/23/96  Unknown  
 Shoreland/Wellhead protection/Food Beverage Lodging?  Yes  No

**Verification method(s):**

*Soil observation does not expire. Previous soil observations by two independent parties are sufficient, unless site conditions have been altered or local requirements differ.*

- Conducted soil observation(s) (Attach boring logs)
- Two previous verifications (Attach boring logs)
- Not applicable (Holding tank(s), no drainfield)
- Unable to verify (See Comments/Explanation)
- Other (See Comments/Explanation)

**Compliance criteria:**

*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.

*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.\*

Comments/Explanation:

*"Experimental", "Other", or "Performance" systems built under pre-2008 Rules; Type IV or V systems built under 2008 Rules (7080.2350 or 7080.2400 (Advanced Inspector License required)*  Yes  No  
 Drainfield meets the designed vertical separation distance from periodically saturated soil or bedrock.

**Indicate depths of elevations**

A. Bottom of distribution media	35in.
B. Periodically saturated soil/bedrock	75in.
C. System separation	36in.
D. Required compliance separation*	36in.

**Any "no" answer above indicates the system is Failing to Protect Groundwater.**

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

**5. Operating Permit and Nitrogen BMP\* – Compliance component #5 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?  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. Operating Permit number: \_\_\_\_\_  Yes  No  
 Have the Operating Permit requirements been met?  
 b. Is the required nitrogen BMP in place and properly functioning?  Yes  No

**Any "no" answer indicates Noncompliance.**

**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.

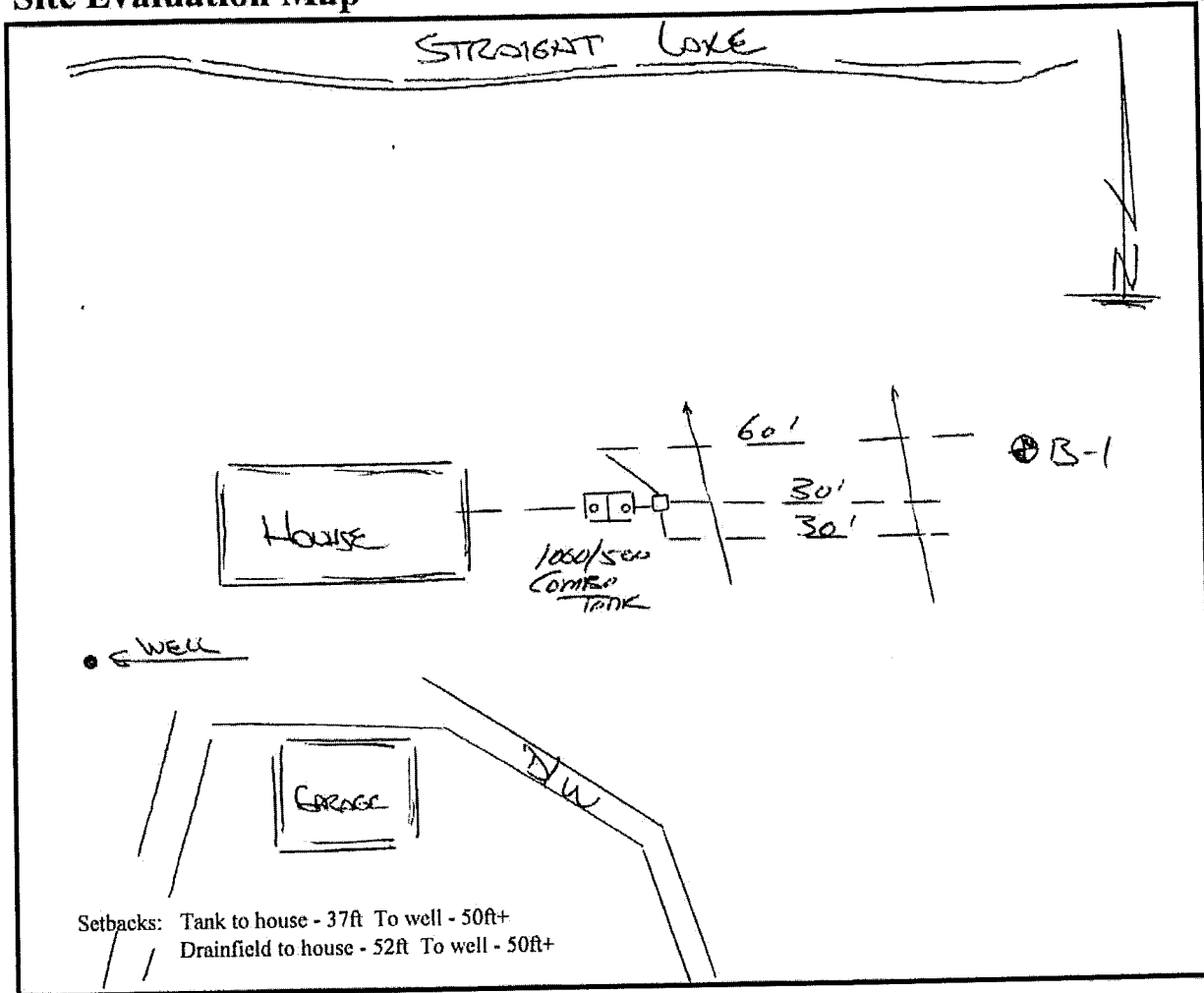
Boring 1 Elevation: Location: 21.01150.00 Depth to system bottom = 35in.				
Soil Horizons Depth (inches)	Texture	Color	Structure	Consistence
0-5	fine sandy loam	10yr 3/2	granular	friable
5--34	med sand	10yr 4/6	single grain	loose
34-75	med sand	10yr 5/6	single grain	loose

Boring 2 Elevation: Location:				
Soil Horizons Depth (inches)	Texture	Color	Structure	Consistence

Boring 3 Elevation: Location:				
Soil Horizons Depth (inches)	Texture	Color	Structure	Consistence

Boring 4 Elevation: Location:				
Soil Horizons Depth (inches)	Texture	Color	Structure	Consistence

# Site Evaluation Map



List any compliance issues: 21.01150.00 No issues. I would recommend installing tank manhole risers on both compartments for ease of tank maintenance.

## Mapping Checklist

Map scale: N/A       indicate north       show slope           % direction     

### Locate

- lot dimensions/property lines
- dwellings and other improvements
- existing and/or proposed system(s)
- replacement area
- unsuitable area(s)
- public water supply wells
- pumping access
- inner wellhead zone

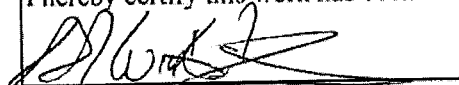
### Easements

- phone
- electric
- gas
- borings
- benchmark
- perc tests
- horiz&vert reference pts

### Setbacks

- building
- all water wells within 100ft
- pressure pipe
- water suction pipe
- streams, lakes, rivers
- floodway and fringe

I hereby certify this work has been completed in accordance with all applicable ordinances, rules and laws.



(signature)

4/25/2012 (date)

1565 (license #)

218-573-2275

(phone number)



# APPLICATION FOR SEWAGE SYSTEM

## CERTIFICATE OF COMPLIANCE With The Becker County Zoning Ordinance

Application Number <span style="font-size: 1.2em;">9694</span>
Tax Parcel Number <span style="font-size: 1.2em;">21,0115,000</span>
Fire Number of Project Location <span style="font-size: 1.2em;">W2106</span>

### A. GENERAL INFORMATION

1. Applicant's Name (Last, First, M.I.) <span style="font-size: 1.2em;">B. Henderson Jones</span>		2. Authorized Agent (if applicable)	
3. Mailing Address (Street, RFD, Box Number, City, State, Zip Code) <span style="font-size: 1.2em;">Rt. 2 Box 36 Osage, MN 56570</span>			
4. Day Phone <span style="font-size: 1.2em;">573-3047</span>	5. Evening Phone	6. Section <span style="font-size: 1.2em;">17</span>	7. Township <span style="font-size: 1.2em;">Osage</span>

### B. PROPERTY DESCRIPTION

1. Lot(s), Block, Subdivision Name

**SEWAGE SYSTEM DATA**

Anticipated Use

a.  Single Family

b.  Multiple Family

c.  Commercial

d.  Other (specify)

Type of Installation

a.  Septic Tank Only

b.  Drainfield Only

c.  Septic Tank & Drainfield

d.  Holding Tank

e.  Septic Tank/Drainfield Lift Station

Type of Drainfield

a.  Standard System

b.  Mound (pressure distribution)

Well Data

a. Depth 150'

b. Diameter 4"

Type of Well

a.  Drilled

b.  Sand Point

1 Inch Equals \_\_\_\_\_  
DESIGN

See Attached Site Plan

Show Distance Between Sewage System And Buildings,  
Property Lines, Lake, Road And All Wells Within 125 Feet.

	Tank	Drainfield		Tank	Drainfield
Distances to Well:	= <u>450'</u>	= <u>1100'</u>	Distance to Pressure Line:	= <u>410'</u>	= <u>410'</u>
Distance to Building:	= <u>30'</u>	= <u>20'</u>	Tank Capacity (gal. & Area of Drainfield (ft 2) =	= <u>1500</u>	= <u>360 sq. ft.</u>
Distance to Property Line:	= <u>410'</u>	= <u>10'</u>	Distance to Ordinary High Water Level:	= <u>75'</u>	= <u>75'</u>
Drainfield separation from Highest Known Ground Water Level, Impervious Lens or Soil Mottling:				=	<u>13'</u>

I hereby certify with my signature that all data on my application forms, plans and specifications are true and correct:

Signature of Applicant

Date

### TO BE COMPLETED BY PLANNING AND ZONING

CERTIFICATE IS HEREBY DENIED: (See back For Reasons)

CERTIFICATE IS HEREBY GRANTED: Based upon the application, addendum from, plans, specifications and all other supporting data. With proper maintenance this system can be expected to function satisfactory, however this is not a guarantee.

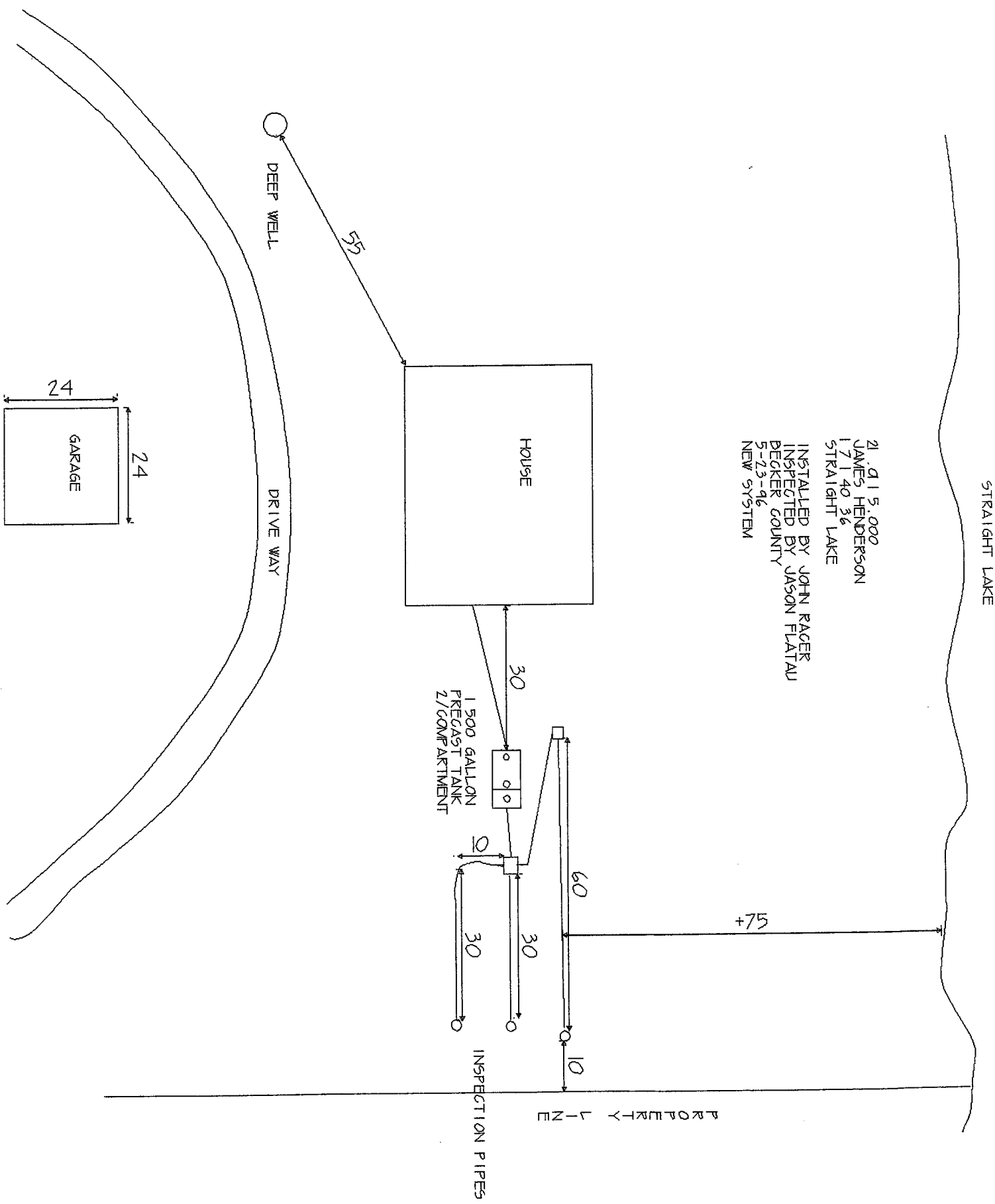
BECKER COUNTY PLANNING AND ZONING

*[Signature]*  
Signature

Inspector  
Title

5-23-96  
Date

1794  
21,015,000



21,015,000  
JAMES HENDERSON  
17140 36  
STRAIGHT LAKE  
INSTALLED BY JOHN RACER  
INSPECTED BY JASON FLATAU  
BECKER COUNTY  
5-23-96  
NEW SYSTEM

PROPERTY LINE

INSPECTION PIPES

# BECKER COUNTY PLANNING & ZONING

829 LAKE AVENUE, PO BOX 787  
 DETROIT LAKES, MN 56502-0787  
 PHONE (218) 846-7314 - FAX (218) 846-7266

INSTALLATION PERMIT FOR  
 INDIVIDUAL SEWAGE TREATMENT

FIRE NO. W2106

PERMIT/RECEIPT NO. 9694

TAX PARCEL NUMBER 21.0115.000

LEGAL DESCRIPTION  
Pt Lot 6 Bcg 2271.5' E of SW Cor Sec 17 T4E 250' N

LAKE/STREAM NAME	LK/STR CLASS	SECTION	TWP	RANGE	TOWNSHIP NAME
<u>Straight</u>	<u>RD</u>	<u>17</u>	<u>140</u>	<u>36</u>	<u>Osage</u>

PROPERTY OWNER	ADDRESS/ CITY/ STATE	PHONE NO.
<u>James Henderson</u>	<u>Route 2 Box 36 Osage</u>	<u>573-3047</u>

INSTALLER	LICENSE NO	PHONE NO
<u>John Racer</u>	<u>286</u>	<u>573-3816</u>

### SEWAGE TREATMENT SYSTEM DATA

WORK CATEGORY <input checked="" type="checkbox"/> NEW SYSTEM <input type="checkbox"/> REPAIR	SIZE OF TANK <u>210</u> <u>1500</u> GALLONS SIZE OF DRAINFIELD <u>580</u> FT <sup>2</sup> SYSTEM LENGTH <u>125</u> FT NUMBER OF TRENCHES <u>3</u> ESTIMATED FLOW <u>300</u> GPD	SIZE OF LIFT STATION _____ GALLONS SIZE OF PUMP _____ DEPTH TO RESTRICTING LAYER <u>+ 7"</u> MAXIMUM DEPTH OF SYSTEM <u>5</u> PERC RATE <u>.8</u> SSF <u>.83</u> SIZE OF GRAVELLESS PIPE <u>10"</u> DEPTH OF ROCK _____
TYPE OF SYSTEM <input checked="" type="checkbox"/> SEPTIC TANK/DRAINFIELD <input type="checkbox"/> DRAINFIELD ONLY <input type="checkbox"/> HOLDING TANK <input type="checkbox"/> ALTERNATE (specify) _____ <input type="checkbox"/> LIFT STATION	TYPE OF DRAINFIELD <input checked="" type="checkbox"/> STANDARD (gravelless) <input type="checkbox"/> STANDARD (rock trench) <input type="checkbox"/> STANDARD (bed) <input type="checkbox"/> MOUND (pressure distb)	

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.

James a. Henderson \_\_\_\_\_  
 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.



See Site Evaluation

For Office Use Only

Application Fee 45.00 State Surcharge .50 Total 45.50

Application is hereby denied

Application is hereby granted to James Anders 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:

Janece [Signature] 5/8/96  
Signature of Becker County Qualified Employee Date

This permit expires on 11/8/96

**Onsite Septic System Site Evaluation/Design**

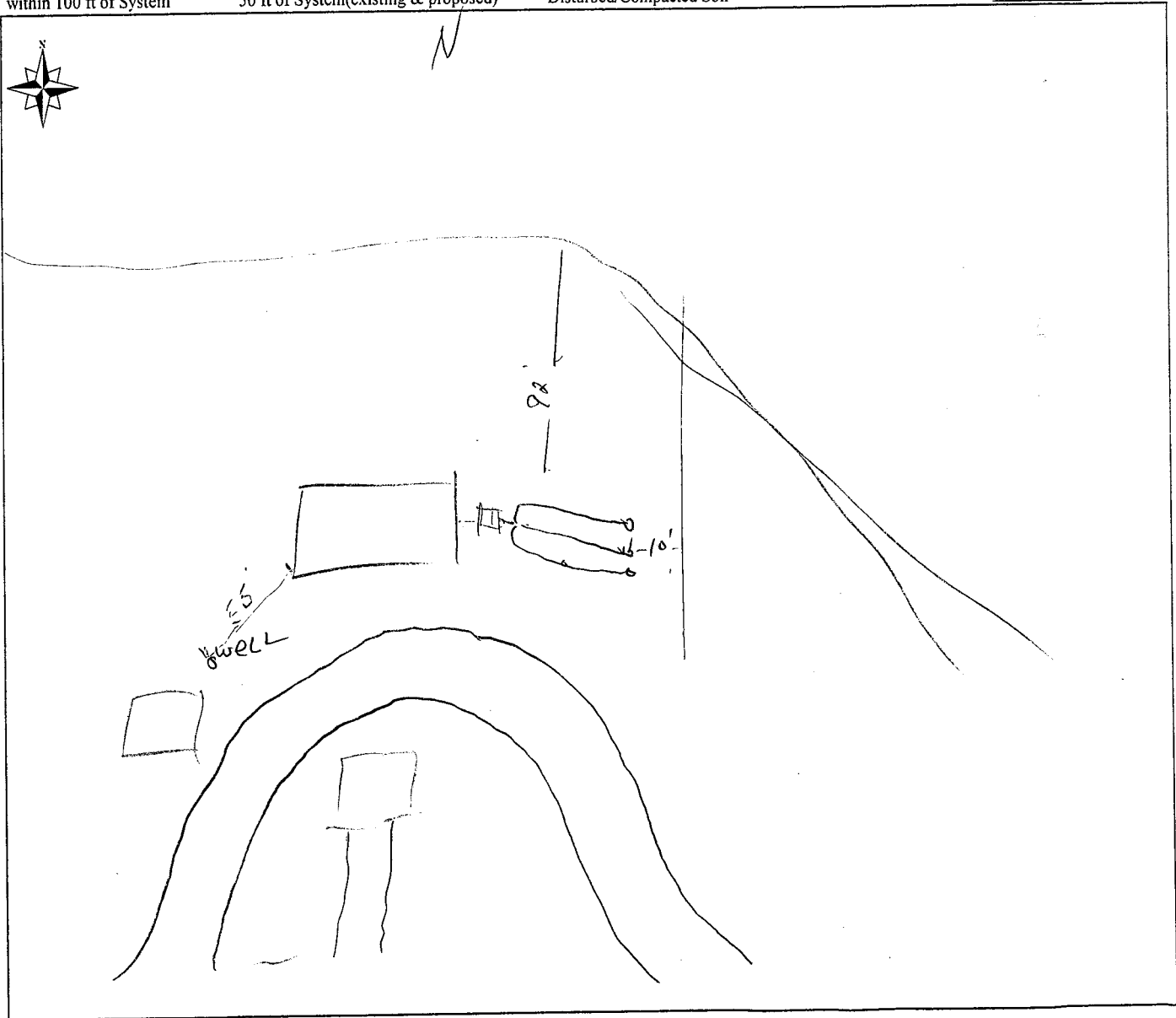
Fire Number W2106  
 Tax Parcel Number 21.0113.000

Legal Description: <u>PT 104.6 Beg 2271.5' E of SW COR SEC 17 T14E R10W</u>							<u>Osage</u>
Lake/Stream Name	Lake/Stream Class	Section	TWP	Range	Township Name		
<u>Straight</u>	<u>RD</u>	<u>17</u>	<u>140</u>	<u>36</u>	<u>Osage</u>		
Property Owner	Address		City, State, Zip Code		Phone Number		
<u>James Henderson</u>	<u>RT 2 Box 36</u>		<u>Osage 56570</u>		<u>573-3047</u>		
ISTS Designer I / Designer II	License Number	Address		Phone Number			
<u>John Racer</u>	<u>286</u>	<u>Osage</u>		<u>573 3516</u>			

**Site Plan**

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

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



# - PERCOLATION TEST SHEET -

Test hole location \_\_\_\_\_ Hole # \_\_\_\_\_ Date test hole was prepared: \_\_\_\_\_

Depth of hole bottom: \_\_\_\_\_ inches Diameter of hole: \_\_\_\_\_ inches

Soil Data from test hole:

depth, inches	soil texture:	soil color
_____	_____	_____
_____	_____	_____
_____	_____	_____

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).

Maximum water depth above hole bottom during test: \_\_\_\_\_ inches

TIME	INTERVAL (MINUTES)	WATER DEPTH	WATER DROP (fraction)	WATER DROP (decimal)	PERC RATE CALCULATION
_____ _____ _____	START ----- -----	----- ----- -----	----- ----- -----	----- ----- -----	$\frac{\text{TIME}}{\text{DROP}} = \text{PERC}$ <b>A</b> (Decimal)
_____ _____ _____	REFILL ----- -----	----- ----- -----	----- ----- -----	----- ----- -----	$\frac{\text{TIME}}{\text{DROP}} = \text{PERC}$ <b>B</b> (Decimal)
_____ _____ _____	REFILL ----- -----	----- ----- -----	----- ----- -----	----- ----- -----	$\frac{\text{TIME}}{\text{DROP}} = \text{PERC}$ <b>C</b> (Decimal)
_____ _____ _____	REFILL ----- -----	----- ----- -----	----- ----- -----	----- ----- -----	$\frac{\text{TIME}}{\text{DROP}} = \text{PERC}$ <b>D</b> (Decimal)
_____ _____ _____	REFILL ----- -----	----- ----- -----	----- ----- -----	----- ----- -----	$\frac{\text{TIME}}{\text{DROP}} = \text{PERC}$ <b>E</b> (Decimal)
_____ _____ _____	REFILL ----- -----	----- ----- -----	----- ----- -----	----- ----- -----	$\frac{\text{TIME}}{\text{DROP}} = \text{PERC}$ <b>F</b> (Decimal)
_____ _____ _____	REFILL ----- -----	----- ----- -----	----- ----- -----	----- ----- -----	$\frac{\text{TIME}}{\text{DROP}} = \text{PERC}$ <b>G</b> (Decimal)
_____ _____ _____	REFILL ----- -----	----- ----- -----	----- ----- -----	----- ----- -----	$\frac{\text{TIME}}{\text{DROP}} = \text{PERC}$ <b>H</b> (Decimal)

conversions

- 1/16 = .06
- 1/8 = .13
- 3/16 = .19
- 1/4 = .25
- 5/16 = .31
- 3/8 = .38
- 7/16 = .44
- 1/2 = .5
- 9/16 = .56
- 5/8 = .63
- 11/16 = .69
- 3/4 = .75
- 13/16 = .81
- 7/8 = .88
- 15/16 = .94

### Ten Percent Calculation \*

**A, B, C**

Largest # of ABC - Smallest # of ABC = \_\_\_\_\_

Smallest # of ABC x 0.10 = \_\_\_\_\_

**C, D, E**

Largest # of CDE - Smallest # of CDE = \_\_\_\_\_

Smallest # of CDE x 0.10 = \_\_\_\_\_

**E, F, G**

Largest # of EFG - Smallest # of EFG = \_\_\_\_\_

Smallest # of EFG x 0.10 = \_\_\_\_\_

**B, C, D**

Largest # of BCD - Smallest # of BCD = \_\_\_\_\_

Smallest # of BCD x 0.10 = \_\_\_\_\_

**D, E, F**

Largest # of DEF - Smallest # of DEF = \_\_\_\_\_

Smallest # of DEF x 0.10 = \_\_\_\_\_

**F, G, H**

Largest # of FGH - Smallest # of FGH = \_\_\_\_\_

Smallest # of FGH x 0.10 = \_\_\_\_\_

\* 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 perc rate.

- FLOW**
- A. Estimated 300 gpd  
 measured 300 x 1.5 = 450 gpd
- SEPTIC TANK VOLUME**
- B. 1500 gallons
- SOILS (Site evaluation data)**
- C. Depth to restricting layer = + 7 feet  
 D. Maximum depth of system C - 3 ft = \_\_\_\_\_ feet  
 E. Texture Sand Percolation rate .83 MPI  
 F. SSF .83 sq ft/gpd  
 G. Slope \_\_\_\_\_%

Estimated Sewage Flows in Gallons per day (gpd)				
Number of Bedrooms	Type I	Type II	Type III	Type IV
2	<u>300</u>	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

- 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;  
 $1.5 \times A \times F = 1.5 \times \underline{450} \times \_\_\_ = \underline{580} \text{ sq ft of bottom area}$

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	<u>0.83</u>
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.

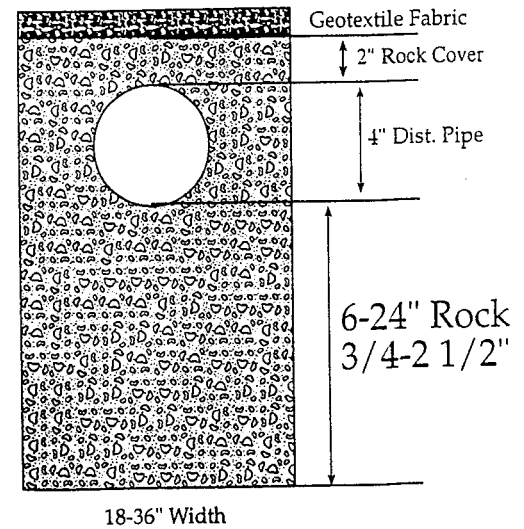
- ROCK VOLUME IN CU FT**
- M. Rock depth below distribution pipe plus 0.5 foot times bottom area:  
 $M = \text{Rock depth} + 6 \text{ inches} \times \text{Area (H,I,J,L,K)}$   
 $(\_\_\_ + 0.5 \text{ ft}) \times \_\_\_ = \_\_\_ \text{ cu ft}$
- ROCK VOLUME IN CU YDS**
- N. Volume in cu ft divided by 27  
 $M + 27 = \text{cu yds } \_\_\_ + 27 = \_\_\_ \text{ cu yds}$
- ROCK WEIGHT**
- O. Cubic yards times 1.4 = tons  
 $N \times 1.4 = \text{tons } \_\_\_ \times 1.4 = \_\_\_ \text{ tons}$

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

- SYSTEM LENGTH**
- P. Select trench width = \_\_\_\_\_ ft  
 Q. Divide bottom area by trench width:  $(H, I, J, \text{ or } K) \div P = \text{lineal feet}$   
 $\_\_\_ \div \_\_\_ = \_\_\_ \text{ lineal feet}$
- Q1. Gravelless Design  
 $A \times F \div (3 \text{ for } 10'' \text{ pipe, } 2 \text{ for } 8'' \text{ pipe, width of the Chamber})$   
 $\underline{450} \times \underline{.83} \div \underline{3} = \underline{125} \text{ feet}$

- LAWN AREA**
- R. Select trench spacing, center to center = \_\_\_\_\_ feet  
 S. Multiply trench spacing by lineal feet  $R \times Q = \text{sq ft of lawn area}$   
 $\_\_\_ \times \_\_\_ = \_\_\_ \text{ sq ft}$

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



TEST HOLE #1

TEST HOLE #2

DEPTH IN INCHES	SOIL TEXTURE	MUNSELL COLOR	STRUCTURE	DEPTH IN INCHES	SOIL TEXTURE	MUNSELL COLOR	STRUCTURE
7' +	SAND	5YR6-4	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				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.)

SYSTEM IS  NEW  REPAIR SYSTEM DESIGN  GRAVITY FLOW  PRESSURE DISTRIBUTION

WATER USES: NUMBER OF BEDROOMS 2 DEPTH OF SYSTEM \_\_\_\_\_  
 NUMBER OF BATHROOMS 2  
 WASHING MACHINE TOTAL SQ. FT OF STRUCTURE 1000 SYSTEM DESIGN FLOW \_\_\_\_\_ GPD  
 DISHWASHER TANK SIZE \_\_\_\_\_ SOIL SIZING FACTOR \_\_\_\_\_  
 WATER SOFTENER LIFT STATION SIZE \_\_\_\_\_ PUMP SIZE \_\_\_\_\_  
 GARBAGE DISPOSAL SOIL TREATMENT \_\_\_\_\_ LENGTH OF LIFT LINE \_\_\_\_\_  
 TYPE OF RESIDENCE AREA SIZE \_\_\_\_\_ SQ FT TOTAL DYNAMIC HEAD \_\_\_\_\_  
 TYPE I  TYPE II DOSE VOLUME \_\_\_\_\_  
 TYPE III  TYPE IV

Name of Designer I \_\_\_\_\_ Date of Site Evaluation 4-26-96  
 Designer II John Racer  
 MPCA Number #286 Phone 218-573-3516

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

Signature of Evaluator John E Racer Date 4-26-96

For Office Use Only  
 Date Site Evaluation / Design received 5/8/96 Received by [Signature]  
 Date Site Evaluation approved 5/8/96 Approved by [Signature]

county Road

2.50'

Drive

SWING

24'x24'  
Garage

236.7'

308.4'

Septic Tank  
& Drain Field

Patio 16'x8'

10'

ENTRY

8'

OPEN DECK

House  
26'x40'

Well

Deck 24'x6'

100'

100'

Shed

Trailer

STRAIGHT Lake



**PAGE 2**  
**FORM C -SEWAGE SYSTEM PERMIT**

**GENERAL PROVISIONS**

1. Permittee shall not cover the system authorized herein until such system has been inspected and determined to be compliant by the permitting authority. This provision can be waived only at the discretion of the permitting authority.
2. Where clay soils are predominant, no drainfield excavation can proceed if more than one (1) inch of total rainfall has been received at the nearest official rain gauge within one (1) week prior to construction. This provision can only be waived at the discretion of the permitting authority.
3. No changes in plans or specifications can be made to the work authorized herein unless such change is first approved in writing by the permitting authority.
4. Permittee shall grant access to the site at all reasonable times so that the permitting authority or his/her agents may conduct inspections to ascertain compliance with the terms and conditions of this permit.
5. The construction site shall be kept reasonably free of debris at all times so as to not create a public nuisance.
6. Permittee shall install permanent and temporary erosion control measures in order to prevent erosion of disturbed soils from the project site onto adjacent parcels of land, public waters, public roads, ditches, sewer facilities and the like. Permittee shall cease all related authorized construction activities until such time as any such problem is corrected as agreed to by the permitting authority.
7. No certificate of occupancy or zoning compliance may be issued until all the provisions and conditions of this permit are complied with in full.
8. A copy of this permit or an official notice or placard thereof must be posted in a conspicuous place protected from the effects of weather no more than 12 feet above grade on the premises which the work is to be done and shall be maintained there until completion of said work.
9. The granting of this permit does not exempt the permittee from having to secure other permits from other state, federal or local units of government which may have jurisdiction over portions of the authorized project.
10. This permit does not allow the destruction or removal of any trees or vegetation which exists more than ten (10) feet beyond the foundation of the authorized structure or more than five (5) feet beyond the edge of a driveway or parking lot unless authorized in a Special Provision below.

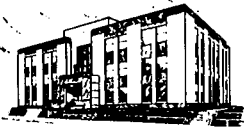
\_\_\_\_\_ Date

\_\_\_\_\_ Signature of Applicant

**SPECIAL PROVISIONS**

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_
3. \_\_\_\_\_  
\_\_\_\_\_
4. \_\_\_\_\_  
\_\_\_\_\_
5. \_\_\_\_\_  
\_\_\_\_\_
6. \_\_\_\_\_  
\_\_\_\_\_





# BECKER COUNTY

829 LAKE AVENUE, P.O. BOX 787  
DETROIT LAKES, MINNESOTA 56502-0787  
(218) 846-7314

Fire No.
Application No.
Tax Parcel No.

## SKETCH PLAN FORM H

Please be as complete as possible. Include all of the items listed below where applicable.

### GENERAL CHECKLIST

- scale
- north arrow
- lot dimensions
- structure location
- side lot setback
- road setback
- septic tank location
- drainfield location
- location of all wells within 100' of drainfield
- fill & grading limits
- vegetation alteration limits

### WATER RESOURCE CHECKLIST

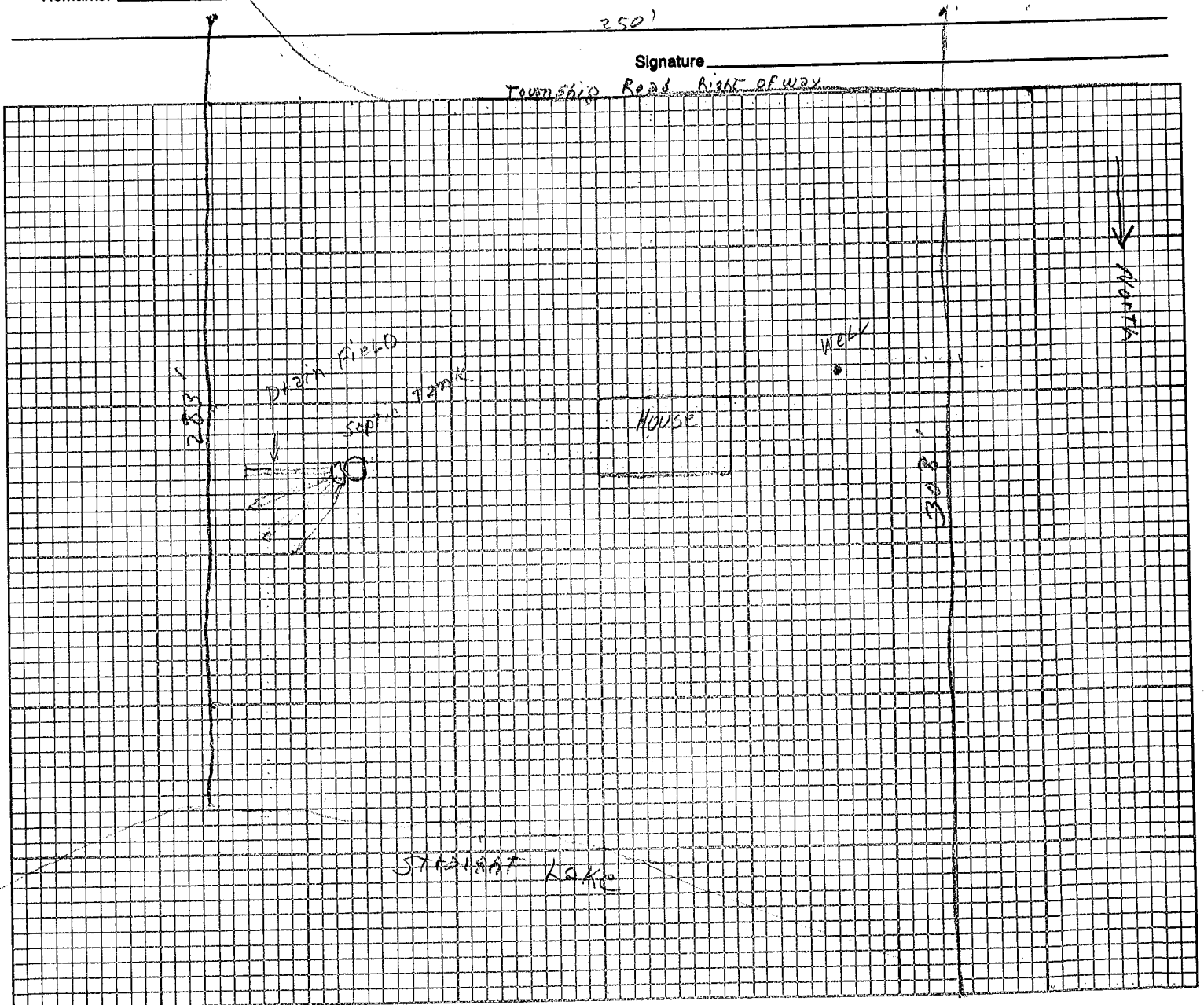
- location of ordinary high water level (OHWL)
- location of present water line
- setback from OHWL
- location of highest known water level
- existing local drainage
- location of wetland areas

Scale of Diagram: 1 inch = 50 feet

Drawing By: James Henderson

Date of Drawing: 3/1/96

Remarks: \_\_\_\_\_



QUESTIONNAIRE SURVEY

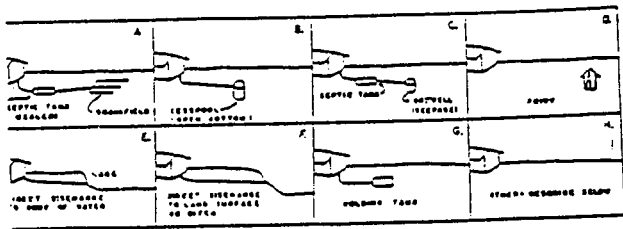
SURVEY OF INDIVIDUAL SEPTIC SYSTEMS  
ABC LAKE  
BY THE  
ABC LAKE ASSOCIATION

1. Name Henderson James A.  
last first mi

2. Phone: Residence (218) 573-3047  
Lake \_\_\_\_\_

3. What type of wastewater disposal system do you have?

A B **C** D E F G H



Describe (other) \_\_\_\_\_

4. Do you have any problems with your system?  
Yes \_\_\_ No

If yes, indicate problem. If no, proceed to #5.

	Spring	Summer	Fall	Winter
Ground wet over system	___	___	___	___
Sewage backs up into dwelling	___	___	___	___
Sewage surfaces near system	___	___	___	___
Toilets won't flush	___	___	___	___

Other \_\_\_\_\_

5. What is the approximate age of your system?  
 \_\_\_ Less than 2 years      \_\_\_ 2-5 years  
 \_\_\_ 5-10 years               10-20 years  
 \_\_\_ More than 20 years    \_\_\_ Don't know

6. Type of dwelling:  
Seasonal \_\_\_ Permanent  Other \_\_\_

7. Number of weeks per year dwelling is occupied 52  
Weekends only \_\_\_

8. Average number of occupants at residence 2

9. Does dwelling have a well? Yes  No \_\_\_  
Type Driven sand point

10. How far is the well from the septic system?  
100 feet

11. How far is the drainfield of the septic system from the lake?  
100 feet

12. Do you suspect any systems on the lake that might cause a pollution or health problem? If so, please describe.  
\_\_\_\_\_  
\_\_\_\_\_

13. Are you willing to have your system inspected?  
Yes  No \_\_\_  
Any other comments:  
\_\_\_\_\_  
\_\_\_\_\_

14. Has your septic tank been pumped? Yes  No \_\_\_  
If yes, when?

October 1991