



110045000

110045000



Becker County Planning & Zoning
915 Lake Ave
Detroit Lakes, MN 56501
(218) 846-7314
www.co.becker.mn.us

Certificate of Compliance Inspection Report - Permit #: SS2019-139

Owner & Property Information

Owner Name:	KYLE C & STEPHANIE A KING	Site Address:	44484 140TH ST
Mailing Address:	KYLE C & STEPHANIE A KING 44484 140TH ST FRAZEE MN 56544-9022	Township - Sec/Twp/Rng:	EVERGREEN - 10/138/038
Parcel #:	110045000	Legal Description:	350' N&S BY 350' E&W IN SE COR OF SW1/4
Secondary Parcel #:		Designer:	Stenger Excavating LLC, L553 (Timothy Stenger)
		Installer:	Stenger Excavating LLC, L553 (Timothy Stenger)

Inspector Verified Specifications

Insp- Effluent Screen Installed:	No	Insp- Tank Nbr/Size:	1/1500/2
Insp- Alarm Required:	Yes	Insp- Drainfield Type:	Pressure Bed
Insp- Lift Pump in System:	Yes	Insp- Drainfield Size:	390 square feet - 13' X 30'
Insp- Number of Bedrooms:	3	Insp- Soil Verification:	#1:see attached log dated 7-12-2019 #2:N/A #3:N/A

Inspector Verified Setbacks

Insp- Tank Dist to Road	70+	Insp- Drainfield Dist to Road	50+
Insp- Tank Dist to Nearest Prop Line	100+	Insp- Drainfield Dist to Nearest Prop Line	100+
Insp- Tank Dist to Nearest Structure	26	Insp- Drainfield Dist to Nearest Structure	70
Insp- Tank Dist to Well	150+	Insp- Drainfield Dist to Well	100+
Insp- Tank Dist to OHW	n/a	Insp- Drainfield Dist to OHW	n/a
Insp- Tank Dist to Pond/Wetland	n/a	Insp- Drainfield Dist to Pond/Wetland	n/a
Insp- Tank Dist to Pressure Line		Insp- Drainfield Dist to Pressure Line	

Certificate of Compliance

(Yes) 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.
Certification Date: 7/12/2019

Zoning Office Signature:

Denise Gubrud

Denise Gubrud - ISTS Inspector

* Certificate of Compliance is not valid unless signed by a Registered Qualified Employee *



3:00

2/12/19

Tim



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Septic Permit

Permit #: SS2019-139

Owner & Property Information

Owner Name:	KYLE C & STEPHANIE A KING	Parcel #:	110045000
Mailing Address:	KYLE C & STEPHANIE A KING 44484 140TH ST FRAZEE MN 56544-9022	Secondary Parcel #:	
Phone #:	none	Site Address:	44484 140TH ST
Lake/River(1000/300):	No	Township - Sec/Twp/Rng:	EVERGREEN - 10/138/038
Lake/River Name:		Designer:	Stenger Excavating LLC, L553 (Timothy Stenger)
Pond/Wetland(50):	No	Installer:	Stenger Excavating LLC, L553 (Timothy Stenger)

Specifications

Tank to be Installed:	Single Tank plus Compartmented Tank	Type of Drainfield:	Pressure Bed
Total # Tanks Installed:	3 1	Full Size of Drainfield:	380
System Status:	No Existing System	Reduced/Warrantied Size:	
System Serves:	Dwelling	Absorbtion Area Size:	12.5 x 30
Number of Bedrooms:	3	Rock Depth:	12"
Design Flow/GPD:	450	Chamber Type and Number:	
Garbage Disposal?	No	Chamber Trench SqFt/Chamber:	
Size of Lift Pump:	4/10 hp EPO411A	Is System Pressurized?	Yes
Size of Lift Line:	2"	Alarm?	Yes
Soil Sizing Factor:	.83	Type of Alarm:	electric

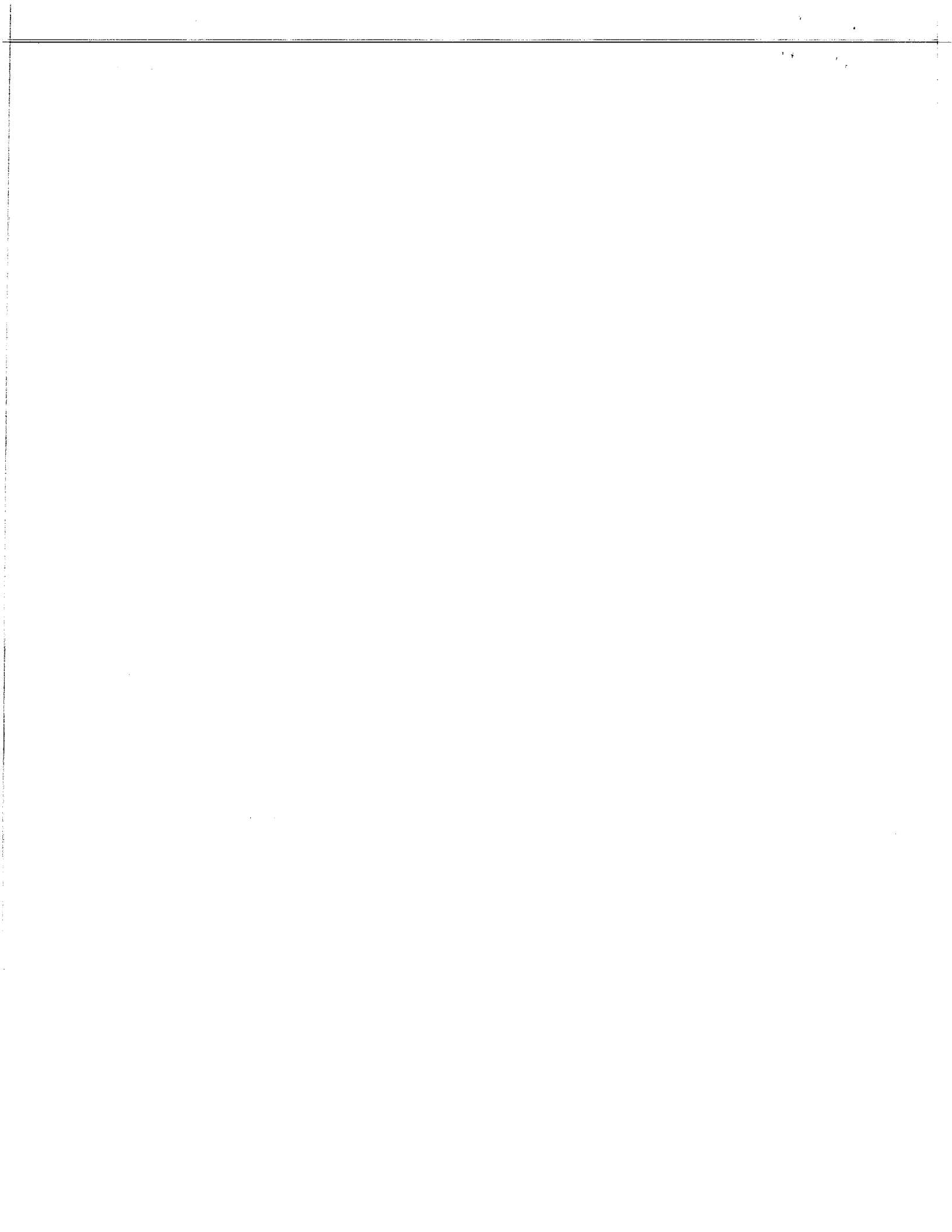
Setbacks

Road Type:	Public / Township	Right of Way Marked:	No
Tank Dist to Road:	100+	Drainfield Dist to Road:	50
Tank Dist to Closest Prop Line:	100+	Drainfield Dist to Closest Prop Line:	100+
Tank Dist to Nearest Structure:	15	Drainfield Dist to Nearest Structure:	70
Tank Dist to Well:	200+	Drainfield Dist to Well:	150+
Tank Dist to OHW:		Drainfield Dist to OHW:	
Tank Dist to Pond/Wetland:		Drainfield Dist to Pond/Wetland:	
Tank Dist to Pressure Line:	20+	Drainfield Dist to Pressure Line:	20+

Other Information

Date Approved:	7/12/2019	Zoning Office Signature:	<u>Denise Gubrud</u>
Permit Fee:	225.00		
Receipt Number:	161560/716562		
Date Paid:	7/12/2019		
Notes:	Install a 1500 gallon septic tank, a 1000-gallon-lift tank and a 12.5' X 30' pressure bed (380 sq. ft) <i>existing</i>		

PERMIT MUST BE POSTED AT JOB SITE. PERMIT EXPIRES ONE YEAR FROM DATE PAID.
** Please schedule for inspection prior to installation! **



Field Review Form

Permit # SS2019-139

Property and Owner

Owner: KYLE C & STEPHANIE A KING

Parcel Number: 110045000

Site Address: 44484 140TH ST

Secondary Parcel:

Home Information

Does the structure contain any of the following elements?

Designer submitted

Inspector verified

Garbage disposal: No
Dishwasher: Yes
Grinder pump: No
Lift pump in bsmt: No

Garbage disposal? Y N
Dishwasher? Y N
Grinder pump? Y N
Lift pump in basement? Y N

Number of bedrooms: 3

Review - Number of bedrooms: 3

Effluent screen

Effluent screen installed? Y N Mfr:

Alarm: Yes Type: electric

Review - Alarm? Y N Type & Mfr: STE

Lift pump in system: Yes

Review - Lift pump in system? Y N Mfr: gonlds EPO 1/2 hp

Component Information

Tank size: 1500/2 & ~~1000~~

Review - Tank nbr: 1 size: 1500/2 Mfr: BROWN

Drainfield type: Pressure Bed

Review - Drainfield type: Pressure bed

Drainfield size: Full size - 380
Reduced/warr. size -

Review - Drainfield status: none / installed / next spring
Review - Drainfield size: 13 x 30

Absorption area size: 12"

Review - Absorption area size: 390

Chamber type/num:
Trench sqft/chamber -

Review - Chamber type: Num:
Review - Trench sqft/chamber:

Drainfield rock depth: 12"

Review - Rock depth: 9"

Soil Verification

Vertical separation verified

Boring #1:
Boring #2: see attached log
Boring #3:

Setback Verification

Distance to...	Designer submitted		Inspector verified	
	Tank	Drainfield	Tank	Drainfield
Road	100+	50	70+	50+
Nearest prop line	100+	50	100+	100+
Nearest structure	15	70	26	70
Well	200+	150+	150+	100+
OHW				
Pond/Wetland				
Pressure line	20+	20+	20+	20+

Date System Installed: 7-12-19 Installer: Tim Stenger

Inspector: Denise Gubrud



SKETCH OF PROPERTY

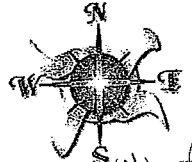
Please sketch all structures and septic systems on the property;
Include setbacks and wells within 100 feet of the property.

PARCEL	
APP	SEPTIC
YEAR	2018

Site Plan/Septic Sketch

A Detailed site plan/septic sketch must be submitted. Please include:

- Location of Structures
- Location of septic tank, drain field and well (if applicable)
- Setbacks from all property lines, roadways, lake/river/pond, and wells within 100 ft of the property



existing 1000 infiltrator
(by owner)

① Brown 1500/2
Insulated tank

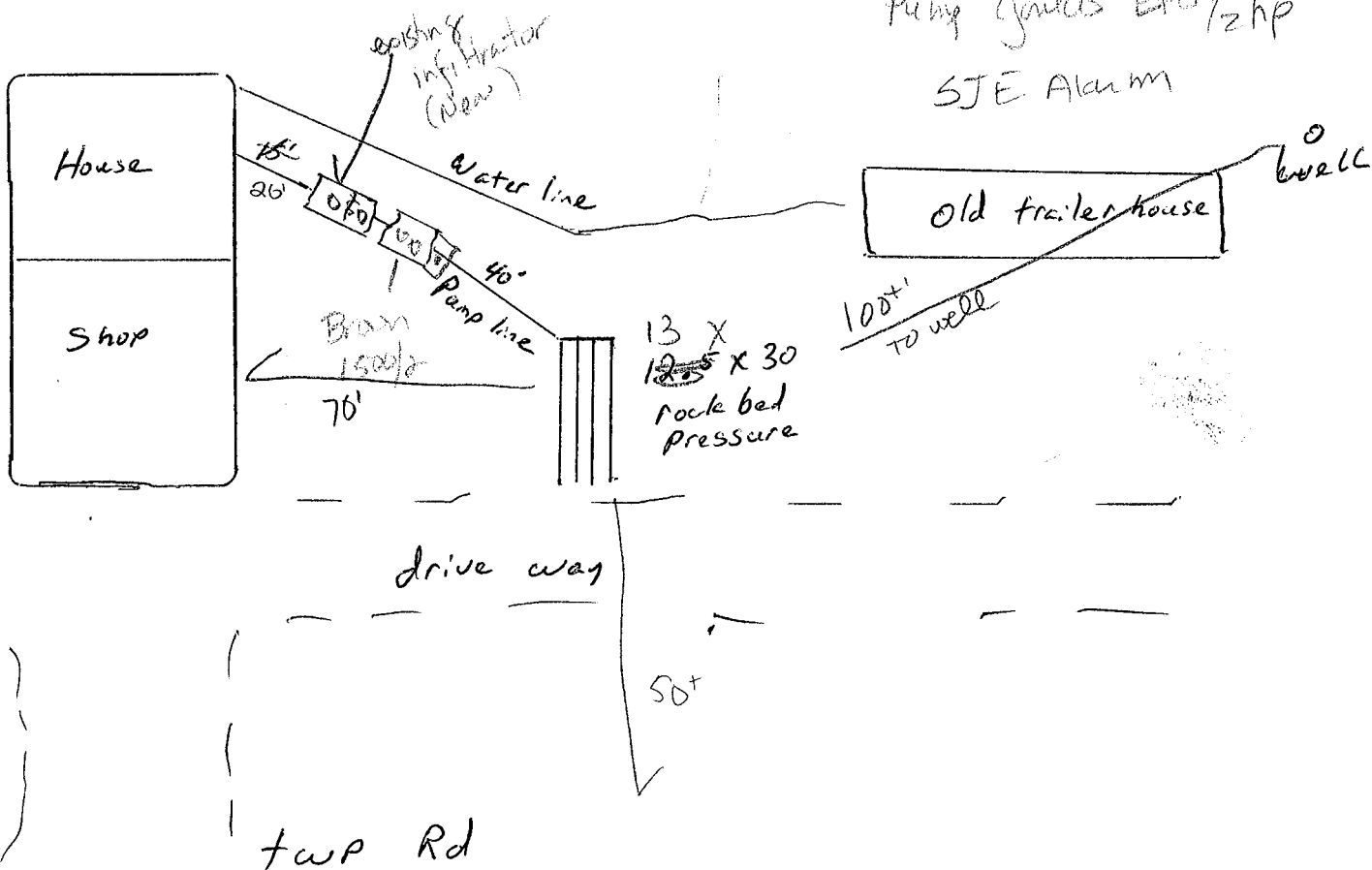
4 - 2" laterals
3' space
1/4" perfs

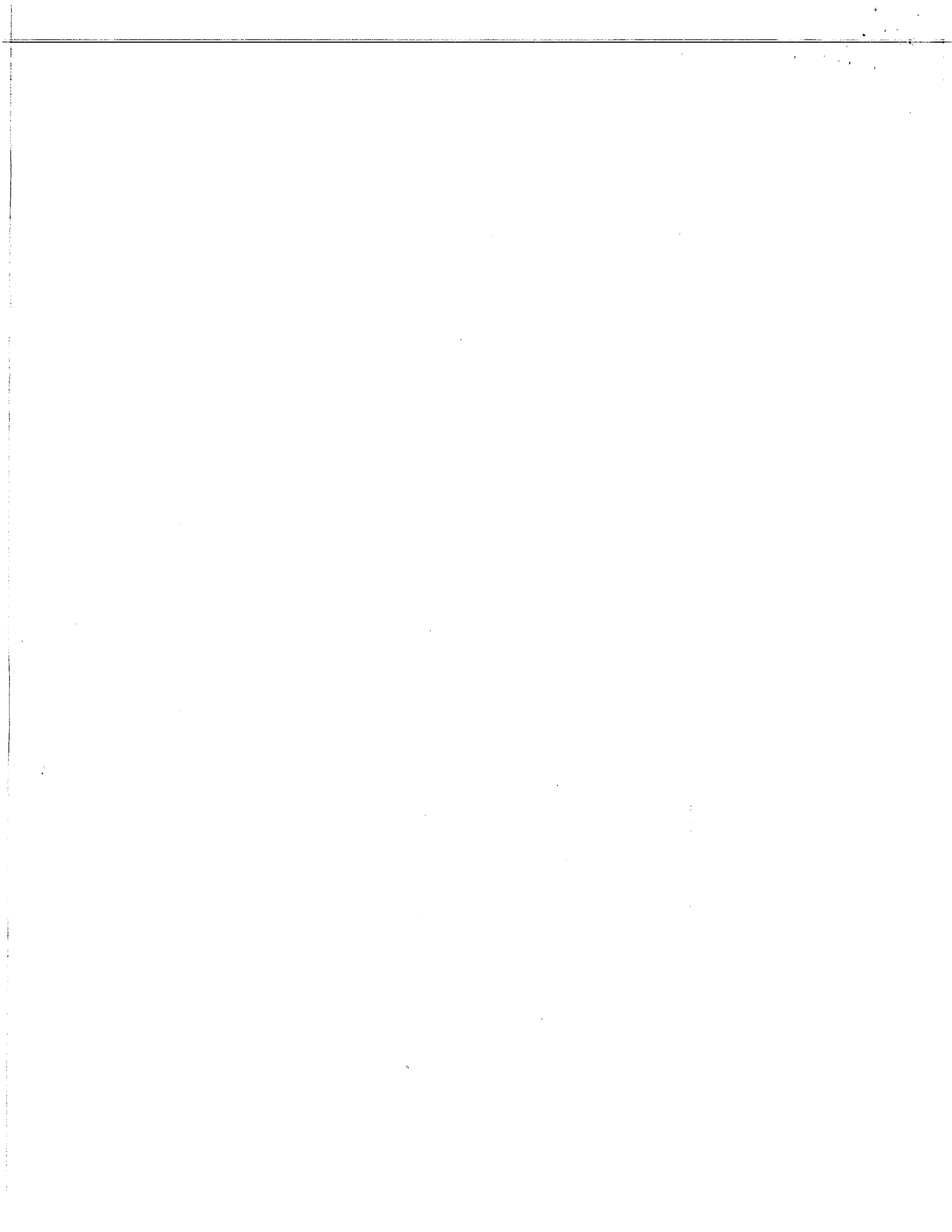
1 - 1500/2 Brown

Pump Goulds EPD 1/2 hp

SJE Alum

No lot lines
or other wells > 100'





1000
500

10:30 7-12-19

Tim Steyer
Evergreen 10

Becker County Restrictive Layer Verification

Client: King, Kyle Parcel: 110045000 Date: 7-12-19

Address: 44484 140th St

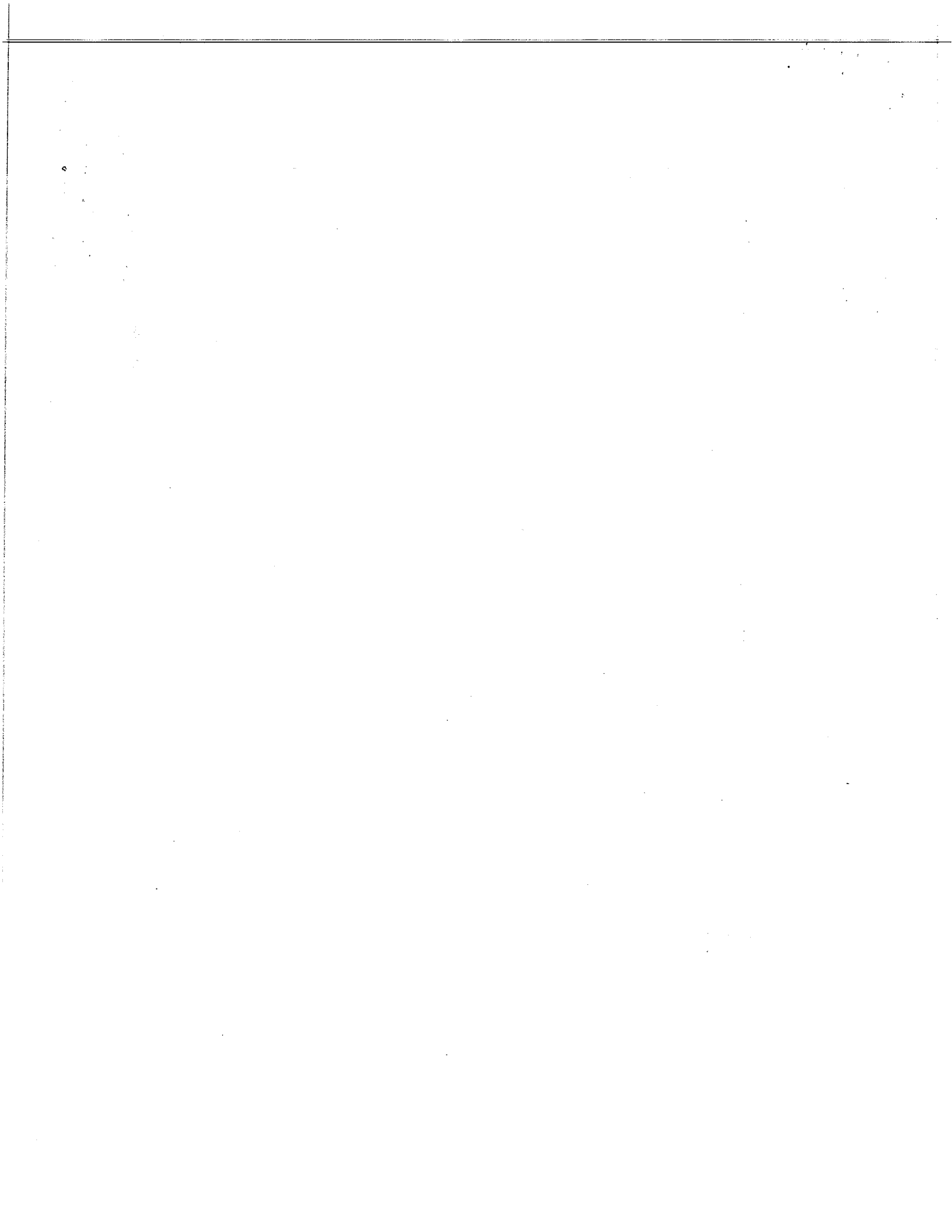
Vegetation:
Weather Conditions/Time of Day: Sunny 10:30 Observation#/Location/Method: Aug 1

Depth (in)	Texture	Matrix Color(s)	Mottle Color(s)
* under bottom 6 bed 48"	sand	10yr	none

Comments/Notes:
 No restrictive layer within 48" under rock bed
 at 20" a 4-6" clay layer 10yr 4/4 - not restrictive

Certified Statement: I hereby certify that I have completed this work in accordance with all applicable ordinance, rules and laws.
 (Designer) X Tim Steyer (Inspector) Denise Guiraud (License #) C 8950 (Date) 7-12-19

~~at~~ Hwy 10E / co Hwy 10 /
 (L) on 87 (11m)
 (L) on 440th to 140th



2019 Onsite Septic System Application

Becker County Planning & Zoning
915 Lake Ave, Detroit Lakes, MN 56501
Phone (218)-846-7314; Fax (218)-846-7266

PARCEL	110045000
APP	SEPTIC
YEAR	
SCANNED	
LAKE	

1. PROPERTY DATA (as it appears on the tax statement or deed)

Parcel Number of property where the system will be installed: 110045000
If septic system is on more than one parcel, what is the number of the secondary parcel? _____

2. OWNER INFORMATION (as it appears on the tax statement or deed)

Owner Name: Kyle King
Owner Mailing Address: 44484 140th St City, State, Zip: Frazee, MN 56544
Owner Phone Number: _____ Owner Email Address: _____
Property Site Address: 44484 140th St City, State, Zip: Frazee, MN 56544
Township Name: Evergreen Section/Township/Range: 10 138 38
Legal Description: 350' N & S by 350' E & W in SE cor of SW 1/4

3. DESIGNER/INSTALLER INFORMATION

Designer and License#: Tim Stenger L553 Installer and License#: same
Designer Email Address: steng_guc@hotmail.com Installer Email Address: _____
Address: 35295 St Hwy 34 Detroit Lakes Address: _____
Company: Stenger Exc. LLC Company: _____
Phone Number: 847-2912 Phone Number: _____

4. SYSTEM DESIGN INFORMATION

System Status

- Vacant Lot-No existing system-new structure
- Replacement - structure removed and being rebuilt
- Failing -Replacement- cesspool/seepage pit or other
- Enlargement of system-Undersized
- Repairs Needed to existing
- Additional system on property

What will new system serve? Check one.

- Dwelling Fee: \$225.00
- Resort/Commercial Fee: \$300.00
- Commercial (Non-resort) Fee: \$300.00
- Other - Explain: _____

Date of Site Evaluation: _____

Design Flow 450 Gallons Per Day

Number of Bedrooms 3

Garbage Disposal: Yes No

Dishwasher: Yes No

Lift station in Structure Yes No

Grinder Pump in Structure: Yes No

Well Depth:

- Deep Well
 - Shallow Well
 - Well not Installed-To be Drilled
- Depth of Other Wells within 100 ft. of System: (if applicable):
- Deep Well
 - Shallow Well
 - Well not Installed-To be Drilled

Original Soil Compacted Soil

Type of Soil Observation:
 Pit Probe Boring

Depth to Restricting Layer (inches or feet)

66"
Maximum Depth of System 30"

Does the Septic Design Include a Drain Field? Yes No

New or Existing Tank? New Existing

Type of All Tank(s) to be installed :

- gal Single Compartment Septic Tank
- gal Holding Tank
- 1500 gal Compartmented Tank
- Existing Tank
- Pit Privy
- Existing Tank w/ New Additional Tank
- 1000 Existing tank w/ new Lift Station
- Holding Tank with Privy

Total Number of Tanks to be Installed: two *This number will be reported to the MPCA at the end of the year.

Size of Tank(s) 1500 - 1000

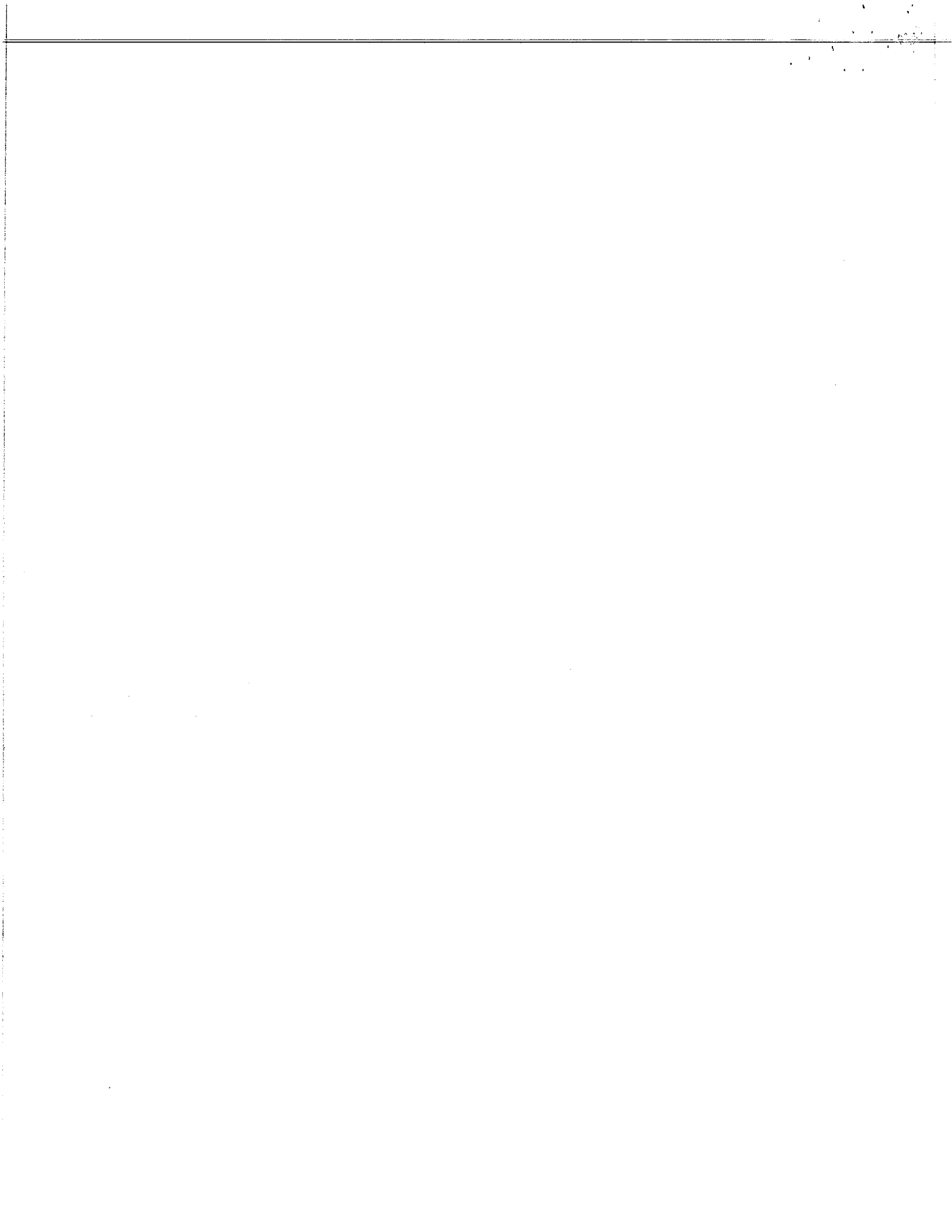
Is There an Alarm? Yes No

Type of Alarm: electric

Is there an effluent screen? Yes No

Is There a Lift Pump? Yes No
If Yes, What is the Size of the Lift Pump? 4/10 EP0411A
What is the Size of the Lift Line? 2"

Receipt # 161560 / 716562



Type of Drainfield	Full Size of Drainfield	Reduced/Warrantied Size	Size of Absorption Area
_____ Chamber Trench	_____ sq. ft.	_____ sq. ft.	Depth of Rock <u>12"</u>
_____ Rock Trench	_____ sq. ft.	_____ sq. ft.	Chamber Type and
_____ Graveless	_____ sq. ft.	_____ sq. ft.	Number _____
_____ Mound	_____ sq. ft.	_____ sq. ft.	Total Sq. Ft. Per Chamber
<input checked="" type="checkbox"/> Pressure Bed	<u>380</u> sq. ft.		
_____ Seepage Bed	_____ sq. ft.		
_____ At-Grade	_____ sq. ft.		
_____ Alternative/Performance	_____ sq. ft.		

Is System Pressurized? Yes _____ No

*If System is pressurized, you must submit the applicable forms as listed below.

- Pressure Distribution System
- At Grade Design Worksheet
- Mound Design Worksheet- Slope 1% or Less
- Mound Design Worksheet- Slope 1% or More

What is the Perc Rate? _____ What is the Soil Sizing Factor? .83

*If SSF other than .83, you must attach the Perc Test Data

_____ 0.00 _____ 0.45 _____ 0.60 _____ 0.83 _____ 1.67

_____ 0.24 _____ 0.50 _____ 0.78 _____ 1.27

Soil Borings (three are required) and ALL FIELDS ARE MANDATORY

top soil Has been removed ALL borings

Depth	Texture	Color	Structure Shape	Structure Grade	Structure Constancy
0-16	S	10YR 7/6	SG	S	L
16-64	S	10YR 7/4	SG	S	L

Depth	Texture	Color	Structure Shape	Structure Grade	Structure Constancy
0-12	S	10YR 7/6	SG	S	L
12-64	S	10YR 7/4	SG	S	L

Depth	Texture	Color	Structure Shape	Structure Grade	Structure Constancy
0-24	S	10YR 5/6	SG	S	L
24-48	S	10YR 5/4	SG	S	L
48-64	S	10YR 7/4	SG	S	L

Depth	Texture	Color	Structure Shape	Structure Grade	Structure Constancy

- Options for Texture:**
- Loamy Sand
 - Loamy Coarse Sand
 - Fine Sand
 - Very Fine Sand
 - Loamy Fine Sand
 - Sandy Loam
 - Coarse Sandy Loam
 - Fine Sandy Loam
 - Very Fine Sandy Loam
 - Loam
 - Silt Loam
 - Silt
 - Clay Loam

- Sandy Clay Loam
- Silty Clay Loam
- Clay
- Sandy Clay
- Silty Clay
- Top Soil
- Redox/Limiting Layer

- Options for Structure Shape**
- Granular
 - Platy
 - Blocky
 - Prismatic
 - Strong
 - Single Grain

- Options for Structure Grade:**
- Massive
 - Weak
 - Moderate
 - Loose

- Options for Soil Structure Consistency:**
- Loose
 - Friable
 - Firm
 - Extremely Firm
 - Rigid

10/10/10
10/10/10
10/10/10

10/10/10

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10/10/10

Measurements & Setbacks: For a list of current required setbacks, see attached page.

Lake/River/Wetlands Info (If Applicable)

Is the property within 1000 Feet of a lake or within 300 feet of a river? Yes No
Lake Name NA Drainfield Distance from the OHW of Lake or River
Township Evergreen Does the property contain or is it within 50 feet of a pond or wetland?
Classification Yes No
River Name Tank Distance from Closest Pond/Wetland
Tank Distance from OHW of Lake or River Drainfield Distance from the Closest Pond/Wetland

Road Type:

State
County
Public/Township
Private Easement
4 Lane Highway

I have found and marked the road right-of-way: Yes No.
Please note: Measurement is taken from the property pins (measure from pins into property).

Setback Verification

Table with 3 columns: Description, TANK, DRAINFIELD. Rows include Distance to Road, Distance to Property Line, Distance to Buildings, Distance to Pressure Line, Distance to Wetland/Protected Water, Distance to Well.

Depth of Well: Shallow Deep

5. REQUIRED DOCUMENTS: If any of the following is required, please submit along with application:

- Property Line Agreement Form
Township Road Right of Way Encroachment Form
County Road Right of Way
U of MN worksheets are required for mounds, pressure beds, seepage beds, at grades or Type IV or type V systems.

Are the required worksheets attached? Yes No

6. DESIGNER'S CERTIFIED STATEMENT

I, Tim Stenger certify that I have completed the preceding design work in accordance with all applicable requirements (including, but not limited to Minnesota Chapter 7080 and the Becker County Individual Sewage Treatment System Ordinance).

Signature of Designer

Date July 8

100
100

1

PUMP SELECTION PROCEDURE

A. Determine pump capacity: gravity distribution

1. Minimum required discharge is 10 gpm
2. Maximum suggested discharge is 45 gpm

pressure distribution

see pressure design worksheet

Selected pump capacity: 29.6 gpm

Perforation Discharges in gpm				
head (feet)	perforation diameter (inches)			
	1/8*	3/16	7/32	1/4
1.0 ^a	0.18	0.42	0.56	0.74
2.0 ^b	0.26	0.59	0.80	1.04
5.0	0.41	0.94	1.26	1.65

^a Use 1.0 foot for single-family homes.
^b Use 2.0 feet for anything else.
 * Potential for plugging

B. Determine head requirements:

1. Elevation difference between pump and point of discharge.
10 feet

2. Special head requirement:

If pumping to a pressure distribution system, five feet for pressure required at manifold. If gravity system, zero. 5 feet

3. Friction loss

a. Enter friction loss table with gpm and pipe diameter.

Read friction loss in feet per 100 feet from table.

F.L. = 1.55 ft./100 ft of pipe

b. Determine total pipe length from pump to discharge point. Estimate by adding 25 percent to pipe length for fitting loss. Equivalent pipe length times 1.25 = total pipe length

40 x 1.25 = 50 feet

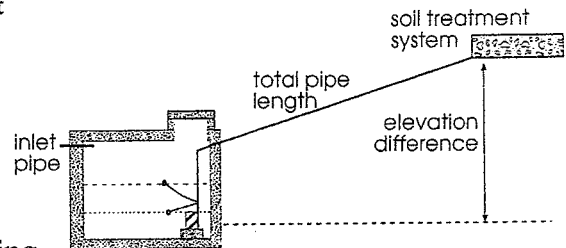
c. Calculate total friction loss by multiplying friction loss in ft/100 ft by equivalent pipe length.

Total friction loss = 1.55 x 50 ÷ 100 = 1 feet

4. Total head required is the sum of elevation difference, special head requirements, and total friction loss.

10 + 5 + 1 (1) (2) (3c)

Total head: 16 feet



flow rate gpm	Friction Loss in Plastic Pipe Per 100 feet		
	nominal pipe diameter		
	1.5"	2"	3"
20	2.47	0.73	0.11
25	3.73	1.11	0.16
30	5.23	<u>1.55</u>	0.23
35	6.96	2.06	0.30
40	8.91	2.64	0.39
45	11.07	3.28	0.48
50	13.46	3.99	0.58
55		4.76	0.70
60		5.60	0.82
65		6.48	0.95
70		7.44	1.09

C. Pump selection

1. A pump must be selected to deliver at least 29.6 gpm (Step A) with at least 16 feet of total head (Step B).

EPO 411A 7/10



