340112000-2021

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 #: SS2021-913

Owner & Property Information

Owner Name:	ROBERT TSCHIDA	**Site Address:**	31855 TWO INLETS DR
Mailing Address:	ROBERT TSCHIDA 2122 ROBLYN AVE SAINT PAUL MN 55104	**Township - Sec/Twp/Rng:**	TWO INLETS - 14/141/036
Parcel #:	340112000	**Legal Description:**	14-141-36 PT GOVT LOT 2: COMM NW COR SEC 14, E 924', S 761.5' TO POB; S 205.6', E 374.05' TO TWO INLETS LK, N AL LK 224.95', W 445.73' TO POB.
Secondary Parcel #:		**Designer:**	Backhoe Pete, L909 (David Hacker)
		Installer:	Backhoe Pete, L909 (David Hacker)

Inspector Verified Specifications

Insp- Effluent Screen Installed:	No	**Insp- Tank Nbr/Size:**	2/1000 insulated low profile and 500 low profile
Insp- Alarm Required:	Yes	**Insp- Drainfield Type:**	Pressure Bed
Insp- Lift Pump in System:	Yes	**Insp- Drainfield Size:**	20' X 29' =580 square feet
Insp- Number of Bedrooms:	3	**Insp- Soil Verification:**	#1:attached #2:N/A #3:N/A

Inspector Verified Setbacks

Insp- Tank Dist to Road	50+	**Insp- Drainfield Dist to Road**	50+
Insp- Tank Dist to Nearest Prop Line	10+	**Insp- Drainfield Dist to Nearest Prop Line**	10+
Insp- Tank Dist to Nearest Structure	10	**Insp- Drainfield Dist to Nearest Structure**	50+
Insp- Tank Dist to Well	100+	**Insp- Drainfield Dist to Well**	100+
Insp- Tank Dist to OHW	130+	**Insp- Drainfield Dist to OHW**	130+
Insp- Tank Dist to Pond/Wetland		**Insp- Drainfield Dist to Pond/Wetland**	
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: 6/14/2021

Zoning Office Signature:

Denise Gubrud

Denise Gubrud - ISTS Inspector

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

Field Review Form

Permit # SS2021-913

Property and Owner

Owner: **ROBERT TSCHIDA**	Parcel Number: **340112000**
Site Address: **31855 TWO INLETS DR**	Secondary Parcel:

Home Information

	Designer submitted	Inspector verified
Does the structure contain any of the following elements?	Garbage disposal: No Dishwasher: Invalid Field Grinder pump: Invalid Field Lift pump in bsmt: Invalid Field	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: Sunder elec.	
Lift pump in system: **Yes**	Review - Lift pump in system? (Y) N Mfr: BN 98	

Component Information

Tank size: **1000**	Review - Tank nbr: 2 size: 1000 & 500 Mfr: Thelen - Long Prairie
Drainfield type: **Pressure Bed**	Review - Drainfield type: Pressure bed
Drainfield size: Full size - **572** Reduced/warr. size -	Review - Drainfield status: none / (installed) / next spring Review - Drainfield size: 20 x 29
Absorption area size: **12"**	Review - Absorption area size: 20 x 29
Chamber type/num: Trench sqft/chamber -	Review - Chamber type: X Num: Review - Trench sqft/chamber:
Drainfield rock depth: **12"**	Review - Rock depth: 6" under pipe

Soil Verification

Vertical separation verified	Boring #1: Boring #2: attached Boring #3:

Setback Verification

	Designer submitted		Inspector verified	
Distance to...	Tank	Drainfield	Tank	Drainfield
Road	50+	50+	100+	100+
Nearest prop line	10+	10+	10+	30+
Nearest structure	10+	20+	10'6"	50
Well	100+	100+	100+	100+
OHW	100+	100+	130'	130'
Pond/Wetland				
Pressure line				

Date System Installed: 6/14/2021 Installer: Dave Hacker Inspector: Denise Gudgel

PARCEL	
APP	SEPTIC
YEAR	2018

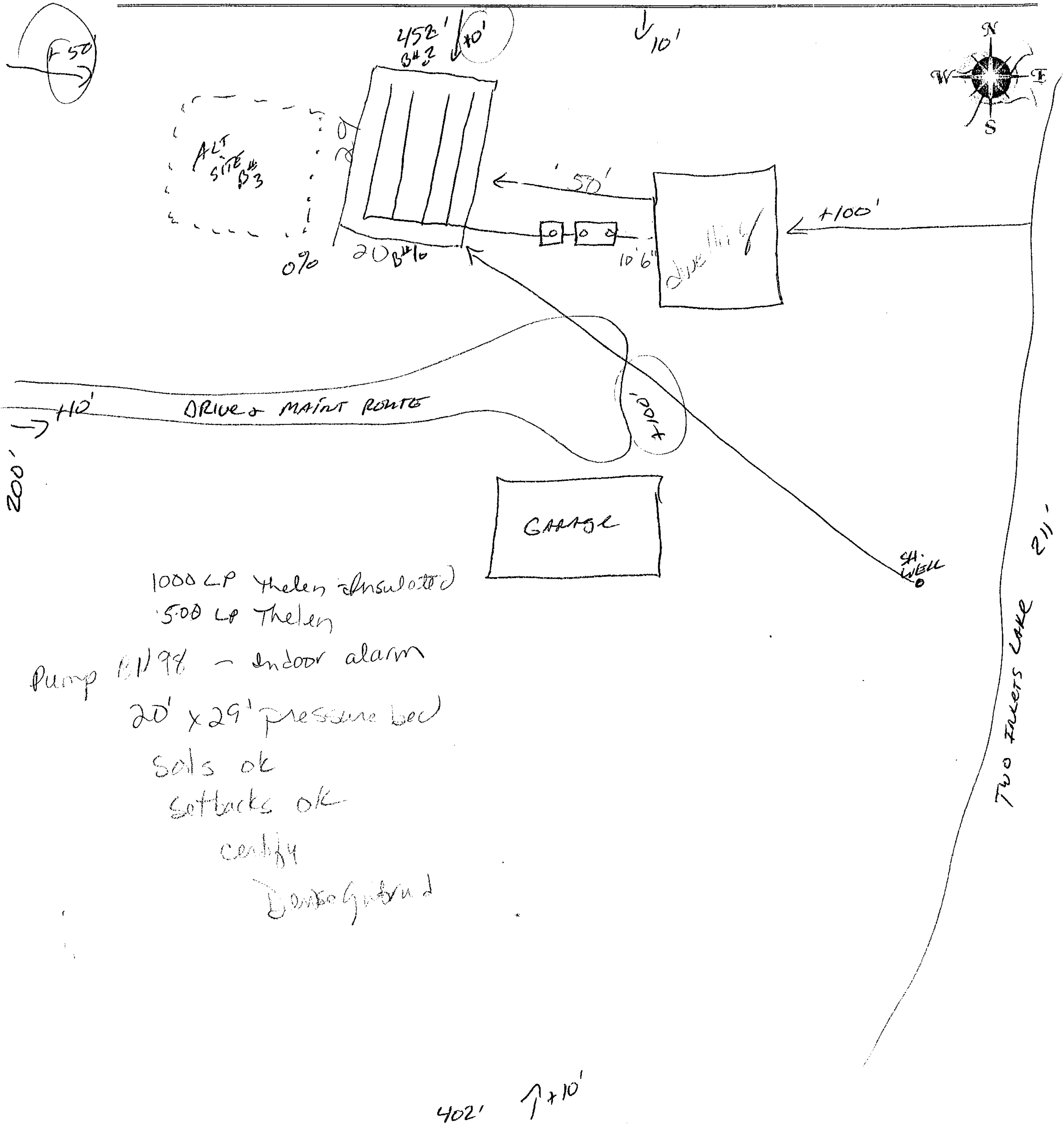
SKETCH OF PROPERTY

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

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



1000 LP Thelen Insulated
500 LP Thelen
Pump 11/98 – Indoor alarm
20' x 29' pressure bed
Soils ok
Setbacks ok
certify
[illegible signature]

Becker County Restrictive Layer Verification

Client: Robert Tschida	Parcel: 34012000	Date: 6-14-2021
Address:		
Vegetation: Lawn		
Weather Conditions/Time of Day: Sunny 11:00	Observation#/Location/Method: Tank Excavation	

Depth (in)	Texture	Matrix Color(s)	Mottle Color(s)
45"	S	10yr 4/4	Damp Sand

Comments/Notes:

45" - Restrictive - damp sand - standing water @ 54"

Certified Statement: I hereby certify that I have completed this work in accordance with all applicable ordinace, rules and laws.			
(Designer) Dave Hacker	(Inspector) Denise Gutzrud	(License #) C8952	(Date) 6-14-2021

PARCEL	
APP	SEPTIC
YEAR	
SCANNED	
LAKE	

2019 Onsite Septic System Application

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

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

Parcel Number of property where the system will be installed: 34011 2000

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: JEFF KJELLBERG

Owner Mailing Address: 2030 SELBY AVE. City, State, Zip: ST. PAUL, MN 55104

Owner Phone Number: 651-274-0159 Owner Email Address: _____

Property Site Address: 31855 TWO INLETS DR City, State, Zip: PARK RAPIDS MN. 56470

Township Name: TWO INLETS Section/Township/Range: 14 141 36

LegalDescription: 1.12 AC

3. DESIGNER/INSTALLER INFORMATION

David E. Hacker
57125 County Highway 40
Menahga MN 56464

909

Phone Number: 218-255-1215

Installer and License#: BACKHOE PETE 909

Installer Email Address: _____

Address: _____

Company: SAME

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: $150.00
_____ 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)
48" DAMP SAND
Maximum Depth of System 12"

Does the Septic Design Include a Drain Field? ✓ Yes _____ No
New or Existing Tank? ✓ New _____ Existing

Type of All Tank(s) to be installed :
1000 gal Single Compartment Septic Tank
_____ gal Compartmented Tank
_____ Pit Privy
_____ gal Holding Tank
_____ Existing Tank
_____ Existing Tank w/ New Additional Tank
_____ Existing tank w/new Lift Station
_____ Holding Tank with Privy

Total Number of Tanks to be Installed: 2 *This number will be reported to the MPCA at the end of the year.
Size of Tank(s) 1000 – 500
Is There an Alarm? ✓ Yes _____ No
Type of Alarm: ELEC.
Is there an effluent screen? ___ Yes ✓ No

Is There a Lift Pump? ✓ Yes _____ No
If Yes, What is the Size of the Lift Pump? ZOELLER BN 98
What is the Size of the Lift Line? 2"

Type of Drainfield	Full Size of Drainfield	Reduced/Warrantied Size
_____ Chamber Trench	_____sq. ft.	_____sq. ft.
_____ Rock Trench	_____sq. ft.	_____sq. ft.
_____ Graveless	_____sq. ft.	_____sq. ft.
_____ Mound	_____sq. ft.	
✓ Pressure Bed	572 sq. ft.	
_____ Seepage Bed	_____sq. ft.	
_____ At-Grade	_____sq. ft.	
_____ Alternative/Performance	_____sq. ft.	

Size of Absorption Area 572
Depth of Rock 12" TOTAL
Chamber Type and Number_____
Total Sq. Ft. Per Chamber
_____

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? 1.27

*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**

Depth	Texture	Color	Structure Shape	Structure Grade	Structure Constancy
0-3	T.S	4/3 10YR	GR.	L	L
3-12	S.L	5/4	S.GR.	L	L
12-48"	S.	6/4	"	L	L

DAMP SAND AT 48" WATER AT 54"

Depth	Texture	Color	Structure Shape	Structure Grade	Structure Constancy
0-3	T.S	4/3 10YR	GR.	L	L
3-12	S.L	5/4	S.GR.	"	"
12-48	S.	6/4	"	"	"

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

University of Minnesota Pump Selection Procedure - 10/25/04

All boxed rectangles must be entered, the rest will be calculated.

ONSITE SEWAGE TREATMENT PROGRAM

1. **Determine pump capacity:**

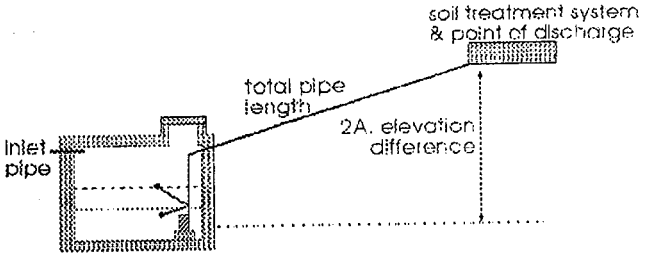
   A. Gravity Distribution

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

   For other establishments at least 10% greater than the water supply rate, but no faster than the rate at which effluent will flow out of the distribution device.

   B. Pressure Distribution - see pressure design worksheet

   Selected Pump Capacity: [30] **gpm**



2. **Determine Total Dynamic Head (TDH)**

A. Elevation difference between pump and point of discharge.
[4] feet

B. Special head requirement? *(See Figure - Special Head Requirements)*
[5] feet

Special Head Requirements	
Gravity Distribution	0ft
Pressure Distribution	5ft

C. Friction loss in supply pipe

1. Select pipe diameter [2] in
2. Enter Figure E-9 with gpm (1A or B) and pipe diameter (C1)
   Read friction loss in feet per 100 feet from Figure E-9
   Friction loss= [1.55] ft/ 100 ft of pipe

E-9 Friction Loss in Plastic Pipe per 100 ft

Flow Rate (gpm)	nominal pipe diameter 1.5"	2.0"	3"
20	2.47	0.73	0.11
25	3.73	1.11	0.16
30	5.23	1.55	0.23
35	6.96	2.06	0.3
40	8.91	2.64	0.39
45	11.07	3.28	0.48
50	13.46	3.99	0.58
55		4.76	0.7
60		5.6	0.82
65		6.48	0.95
70		7.44	1.09

3. Determine total pipe length from pump discharge to soil system discharge point. Estimate by adding 25 percent to pipe length for friction loss in fittings.
   Pipe length times 1.25 = equivalent pipe length
   [20] ft x 1.25 = [25] feet

4. Calculate total friction loss by multiplying friction loss (C2) by the equivalent pipe length (C3) and divide by 100.
   Friction Loss = [1.55] ft/100ft X [25]ft / 100 = [1] feet

D. Total head requirement is the sum of elevation difference (A), special head requirements (B), and total friction loss (C4).
[4] ft + [5] ft + [1] ft

Total Head: [10] feet

3. **Pump Selection**

1. A pump must be selected to deliver at least 30 gpm (1A or B)
with at least 10 feet of total head (2D).

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

Dave E Anderson (signature) 909 (license #) 5-8-21 (date)

University of Minnesota Pressure Distribution System Design - 10/25/04

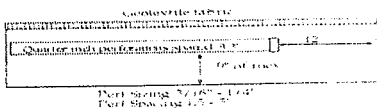
All boxed rectangles must be entered, the rest will be calculated.

ONSITE SEWAGE TREATMENT PROGRAM

1. Select number of perforated laterals: [4]

2. Select perforation spacing = [3] ft

3. Since perforations should not be placed closer that 1 foot to the edge of the rock layer (see diagram), subtract 2 feet from the rock layer length
   [28.5] - 2 ft = [26.5] ft



4. Determine the number of spaces between perforations.
   Divide the length (3) by perforation spacing (2) and round down to nearest whole number.
   Perforation spacing = [3] ft / [26.5] ft = [9]

5. Select perforation size [1/4] inch

6. Number of perforations is equal to one plus the number of perforation spaces (4).
   ** Check figure E-4 to assure the number of perforations per lateral guarantees < 10% discharge variation.*
   [9] spaces + 1 = [10] perforations/lateral

E-4 Maximum Number of 1/4 inch perforations per lateral to guarantee <10% discharge variation

Perforation Spacing ft	Pipe Diameter 1 inch	1.25 inch	1.5 inch	2.0 inch
2.5	8	14	18	28
3.0	8	13	17	26
3.3	7	12	16	25
4.0	7	11	15	23
5.0	6	10	14	22

E-5 Maximum Number of 3/16 inch perforations per lateral to guarantee <10% discharge variation

Perforation Spacing feet	Pipe Diameter 1 inch	1.25 inch	1.5 inch	2.0 inch
2.5	12	19	25	39
3	11	18	24	37
3.3	10	17	23	36
4	10	16	21	33
5	9	15	20	31

7. A. Total number of perforations = perforations per lateral (5) times number of laterals (1).
   [10] perfs/ lat x [4] laterals = [40] perforations

   B. Calculate the square footage per perforation.
   Recommended value is 6-10 sqft/perf. Does not apply to at-grades.
   1. Rock bed area = rock width (ft) x rock length (ft)
   [20] ft x [28.5] ft = [572] ft^2
   2. Square foot per perforation=Rock Bed Area/number of perfs(6)
   [572] ft^2 / [40] perfs = [14.3] ft^2/ perf

8. Determine required flow rate by multiplying the total number of perforations(6A) by flow per perforations (see figure E-6)
   [40] perfs x [.74] gpm / perfs = [30] gpm

E-6 Perforation Discharge in GPM

Head (feet)	Perforations diameter (inches) 3/16	7/32	1/4
1[a]	0.42	0.56	0.74
2[b]	0.59	0.80	1.04
5	0.94	1.26	1.65

a. Use 1.0 foot for single-family homes.
b. Use 2.0 feet for anything else

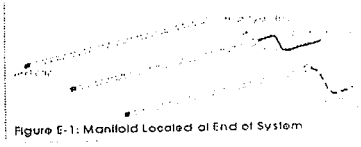


Figure E-1: Manifold Located at End of System

9. Determine Minimum Pipe Size

A. **Manifold on End.** If laterals are connected to header pipe as shown in Figure E-1, to select minimum required lateral diameter; enter figure E-4 or E-5 with perforation spacing and number of perforations per lateral. Select minimum diameter for perforated laterals = [2] inches

B. **Center Manifold.** If perforated lateral system is attached to manifold pipe near the center, like Figure E-2, perforated lateral length (3) and number of perforations per lateral (5) will be approximately one half of that in step A. Using these values, select minimum diameter for perforated lateral = [ ] inches

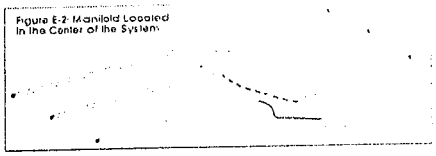


Figure E-2: Manifold Located in the Center of the System

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

David C Hacker (signature) 909 (license #) 5-8-21 (date)

Dave
11:00
Monday 6/14/2021

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

Septic Permit

Permit #: SS2021-913

Owner & Property Information

Owner Name:	ROBERT TSCHIDA	**Parcel #:**	340112000
Mailing Address:	ROBERT TSCHIDA 2122 ROBLYN AVE SAINT PAUL MN 55104	**Secondary Parcel #:**	
		Site Address:	31855 TWO INLETS DR
Phone #:	651-274-0159	**Township - Sec/Twp/Rng:**	TWO INLETS - 14/141/036
Lake/River(1000/300):	Yes	**Designer:**	Backhoe Pete, L909 (David Hacker)
Lake/River Name:	Two Inlets (Two Inlets) [RD]	**Installer:**	Backhoe Pete, L909 (David Hacker)
Pond/Wetland(50):	No		

Specifications

Tank to be Installed:	Single Septic Tank	**Type of Drainfield:**	Pressure Bed
Total # Tanks Installed:	2	**Full Size of Drainfield:**	572
		Reduced/Warrantied Size:	
System Status:	Failing System (Cesspool, Seepage Pit, other)	**Absorbtion Area Size:**	20' X 28.5' pressure bed
		Rock Depth:	12"
System Serves:	Full-Time Dwelling	**Chamber Type and Number:**	
Number of Bedrooms:	3	**Chamber Trench SqFt/Chamber:**	
		Is System Pressurized?	Yes
Design Flow/GPD:	450	**Alarm?**	Yes
Garbage Disposal?	No	**Type of Alarm:**	electric
Size of Lift Pump:	Zoeller BN98		
Size of Lift Line:	2"		
Soil Sizing Factor:	1.27		

Setbacks

Road Type:	Public / Township	**Right of Way Marked:**	No
Tank Dist to Road:	50+	**Drainfied Dist to Road:**	50+
Tank Dist to Closest Prop Line:	10+	**Drainfied Dist to Closest Prop Line:**	10+
Tank Dist to Nearest Structure:	10+	**Drainfield Dist to Nearest Structure:**	20+
Tank Dist to Well:	100+	**Drainfield Dist to Well:**	100+
Tank Dist to OHW:	100+	**Drainfield Dist to OHW:**	100+
Tank Dist to Pond/Wetland:		**Drainfield Dist to Pond/Wetland:**	
Tank Dist to Pressure Line:		**Drainfield Dist to Pressure Line:**	

Other Information

Date Approved:	5/17/2021
Permit Fee:	225.00
Receipt Number:	1363
Date Paid:	5/17/2021

Notes: Install a 1000 gallon septic tank, a 500 gallon lift tank, and a pressure bed measuring 20' X 28.5'

Zoning Office Signature: Denise Gubrud

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