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 #: SS2021-944

Owner & Property Information

Owner Name:	PHILIP ERB	**Site Address:**	NO ADDRESS YET
Mailing Address:	PHILIP ERB 36540 ST HWY 87 FRAZEE MN 56544	**Township - Sec/Twp/Rng:**	BURLINGTON - 29/138/040
Parcel #:	030405000	**Legal Description:**	Lot 001 of ACORN BEACH 1ST ADD LOT 1, 2 ACORN BCH 1ST. PT LOT 3 BLK 1 WEGNER SHRS: COMM SLY COR LOT 1 BLK 1 ACORN BCH 1ST, NE 14.78' TO POB, SE 76.26', NE 266' TO ACORN LK, NW AL LK 81.11', SW 225.72' TO POB. (03.0406)
Secondary Parcel #:		**Designer:**	JenCo Services, LLC, L4041 (James Piper)
		Installer:	PROPERTY OWNER – Self Install

Inspector Verified Specifications

Insp- Effluent Screen Installed:	No	**Insp- Tank Nbr/Size:**	1/1500/2
Insp- Alarm Required:	Yes	**Insp- Drainfield Type:**	No Drainfield
Insp- Lift Pump in System:	No	**Insp- Drainfield Size:**	
Insp- Number of Bedrooms:	2	**Insp- Soil Verification:**	#1:N/A #2:N/A #3:N/A

Inspector Verified Setbacks

Insp- Tank Dist to Road	100+	**Insp- Drainfield Dist to Road**	
Insp- Tank Dist to Nearest Prop Line	20+	**Insp- Drainfield Dist to Nearest Prop Line**	
Insp- Tank Dist to Nearest Structure	12	**Insp- Drainfield Dist to Nearest Structure**	
Insp- Tank Dist to Well	54	**Insp- Drainfield Dist to Well**	
Insp- Tank Dist to OHW	80+	**Insp- Drainfield Dist to OHW**	
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: 6/8/2021

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 # SS2021-944

Property and Owner

Owner: **PHILIP ERB**	Parcel Number: **030405000**
Site Address: **NO ADDRESS YET**	Secondary Parcel:

Home Information

Does the structure contain any of the following elements?	Designer submitted	Inspector verified
	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: **2**	Review - Number of bedrooms: 2	
Effluent screen	Effluent screen installed? Y (N) Mfr:	
Alarm: **Yes** Type: **VISUAL**	Review - Alarm? (Y) N Type & Mfr: Manual float	
Lift pump in system: **No**	Review - Lift pump in system? Y (N) Mfr:	

Component Information

* This tank cannot be used as septic/pump tank

Tank size: **1500**	Review - Tank nbr: 1 size: 1500/2 Mfr: Infiltrator
Drainfield type:	Review - Drainfield type:
Drainfield size: Full size - Reduced/warr. size -	Review - Drainfield status: (none) / installed / next spring Review - Drainfield size:
Absorption area size:	Review - Absorption area size:
Chamber type/num: Trench sqft/chamber -	Review - Chamber type: Num: Review - Trench sqft/chamber:
Drainfield rock depth:	Review - Rock depth:

Soil Verification

Vertical separation verified	Boring #1: Boring #2: none - holding tank Boring #3:

Setback Verification

	Designer submitted		Inspector verified	
Distance to...	Tank	Drainfield	Tank	Drainfield
Road	+100'	N/A	50 +	
Nearest prop line	24'	N/A	20	
Nearest structure	12'	N/A	12	
Well	+100'	N/A	54	
OHW	87'	NA	80	
Pond/Wetland	N/A	N/A		
Pressure line	N/A	N/A		

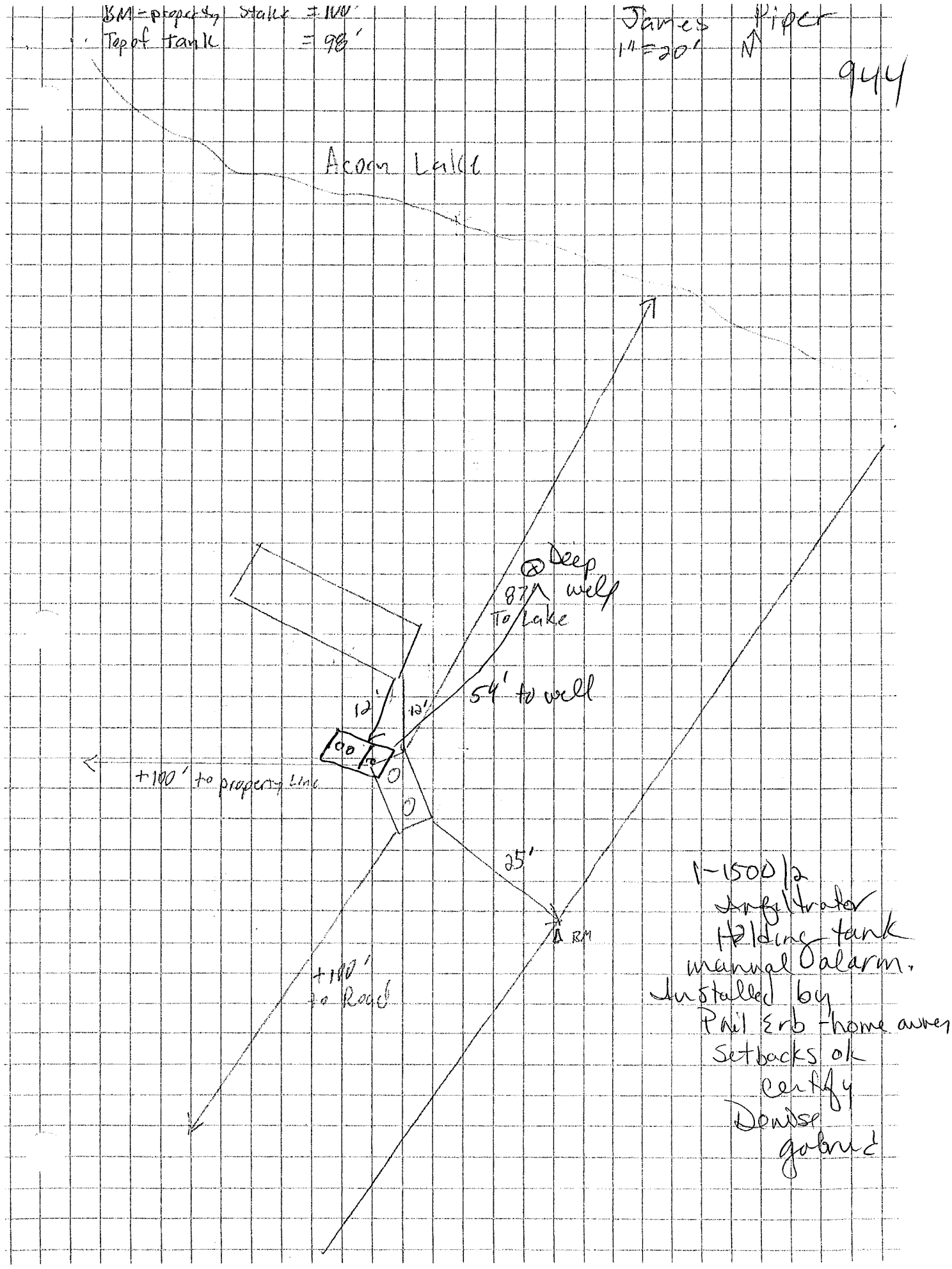
Date System Installed: 6/8/2021 Installer: PHIL Erb Inspector: Denise Gurbrud

Home owner

BM = property stake = 100'
Top of tank = 98'

James
1" = 20'
N
Piper

944



1-1500 ga
septic tank
holding tank
manual alarm.
Installed by
Paul Erb Home owner
Setbacks ok
certify
Denise
garland

18/4

ONSITE SEWAGE TREATMENT PROGRAM

Preliminary Evaluation Worksheet

MINNESOTA POLLUTION CONTROL AGENCY

v 04.01.2020

1. Contact Information

Property Owner/Client:	PHILIP ERB & TRACY ERB	Date Completed:	5/26/2021
Site Address:	NO ADDRESS YET	Project ID:	
Email:	erbfarm@loretel.net	Phone:	701-318-9477
Mailing Address:	36540 ST HWY 87, FRAZEE, MN 56544		
Legal Description:	ACORN BEACH 1ST ADD LOT 001		
Parcel ID:	030405000	SEC: 29 TWP: 138 RNG: 040	

2. Flow and General System Information

A. Client-Provided Information

Project Type: ☑ New Construction ☐ Replacement ☐ Expansion ☐ Repair

Project Use: ☑ Residential ☐ Other Establishment:

Residential use: # Bedrooms: 2 Dwelling Sq.ft.: Unfinished Sq. Ft.:

Adults: 2 # Children: # Teenagers:

In-home business (Y/N): No If yes, describe:

Water-using devices: *(check all that apply)*

☐ Garbage Disposal/Grinder ☐ Dishwasher ☐ Hot Tub*
☐ Sewage pump in basement ☐ Water Softener* ☐ Sump Pump*
☐ Large Bathtub >40 gallons ☐ Iron Filter* ☐ Self-Cleaning Humidifier*
☐ Clothes Washing Machine ☐ High Eff. Furnace* ☐ Other:

* Clear water source - should not go into system

Additional current or future uses: NONE

Anticipated non-domestic waste: NONE

The above is complete & accurate: _____

Client signature & date

B. Designer-determined flow Information

Attach additional information as necessary.

Design Flow: 300 GPD Anticipated Waste Type: Residential

BOD: <170 mg/L TSS <60 mg/L Oil & Grease <25 mg/L

3. Preliminary Site Information

A. Water Supply Wells

#	Description	Mn. ID#	Well Depth (ft.)	Casing Depth (ft.)	Confining Layer	STA Setback	Source
1	NO WELL						OWNER
2							
3							
4							

Additional Well Information:

ONSITE SEWAGE TREATMENT PROGRAM

Preliminary Evaluation Worksheet

MINNESOTA POLLUTION CONTROL AGENCY

Site within 200' of noncommunity transient well (Y/N)	No	Yes, source:	
Site within a drinking water supply management area (Y/N)	No	Yes, source:	
Site in Well Head Protection inner wellhead management zone (Y/N)	No	Yes, source:	
Buried water supply pipes within 50 ft of proposed system (Y/N)	No		
B. Site located in a shoreland district/area?	Yes	Yes, name:	ACORN LAKE
Elevation of ordinary high water level:	1366 ft	Source:	GIS
Classification: Lake- Recreational	Tank Setback: 75 ft.	STA Setbk:	75 ft.
C. Site located in a floodplain?	No	Yes, Type(s):	N/A
Floodplain designation/elevation (10 Year):	N/A ft	Source:	N/A
Floodplain designation/elevation (100 Year):	N/A ft	Source:	N/A

D. Property Line Id / Source: ☐ Owner ☑ Survey ☐ County GIS ☐ Plat Map ☐ Other:

E. ID distance of relevant setbacks on map: ☑ Water ☐ Easements ☐ Well(s) ☑ Building(s) ☑ Property Lines ☐ OHWL ☐ Other:

4. Preliminary Soil Profile Information From Web Soil Survey (attach map & description)

Map Units: Slope Range: %

List landforms:

Landform position(s):

Parent materials:

Depth to Bedrock/Restrictive Feature: in Depth to Watertable: in

Map Unit Ratings

Septic Tank Absorption Field- At-grade:

Septic Tank Absorption Field- Mound:

Septic Tank Absorption Field- Trench:

5. Local Government Unit Information

Name of LGU: BECKER COUNTY

LGU Contact: KYLE VARBERG

LGU-specific setbacks:

LGU-specific design requirements:

LGU-specific installation requirements:

Notes:

ONSITE SEWAGE TREATMENT PROGRAM

Field Evaluation Worksheet

MINNESOTA POLLUTION CONTROL AGENCY

1. Project Information

v 04.01.2020

Property Owner/Client: PHILIP ERB & TRACY ERB | Project ID:

Site Address: NO ADDRESS YET | Date Completed: 5/26/2021

2. Utility and Structure Information

Utility Locations Identified ☐ Gopher State One Call # | ☐ Any Private Utilities:

Locate and Verify (*see Site Evaluation map*) ☑ Existing Buildings ☐ Improvements ☐ Easements ☑ Setbacks

3. Site Information

Vegetation type(s): Forest | Landscape position: Back/ Side Slope

Percent slope: 14 % | Slope shape: Linear, Convex | Slope direction: northeast

Describe the flooding or run-on potential of site: NONE

Describe the need for Type III or Type IV system: NONE

Note:

Proposed soil treatment area protected? (Y/N): No | If yes, describe: NO TREATMENT AREA

4. General Soils Information

Filled, Compacted, Disturbed areas (Y/N): No

If yes, describe:

Soil observations were conducted in the proposed system location (Y/N): No

A soil observation in the most limiting area of the proposed system (Y/N): No

Number of soil observations: | Soil observation logs attached (Y/N): No

Percolation tests performed & attached (Y/N): No

5. Phase I. Reporting Information

	Depth		Elevation		
Limiting Condition*:		in		ft	**Most Restrictive Depth Identified from List Below*
Periodically saturated soil:		in		ft	Soil Texture:
Standing water:		in		ft	Percolation Rate: min/inch
Bedrock:		in		ft	Soil Hyd Loading Rate: gpd/ft^2
Benchmark Elevation:	100.0	ft			Elevations and Benchmark on map? (Y/N): Yes

Benchmark Elevation Location: PROPERTY STAKE

Differences between soil survey and field evaluation:

Site evaluation issues / comments:

Anticipated construction issues:

ONSITE SEWAGE TREATMENT PROGRAM

Design Summary Page

MINNESOTA POLLUTION CONTROL AGENCY

1. PROJECT INFORMATION

v 04.01.2020

Property Owner/Client:	PHILIP ERB & TRACY ERB	Project ID:	
Site Address:	NO ADDRESS YET	Date:	05/26/21
Email Address:	erbfarm@loretel.net	Phone:	701-318-9477

2. DESIGN FLOW & WASTE STRENGTH

Attach data / estimate basis for Other Establishments

Design Flow: 300 GPD — Anticipated Waste Type: Residential

BOD: <170 mg/L — TSS: <60 mg/L — Oil & Grease: <25 mg/L

Treatment Level: C — *Select Treatment Level C for residential septic tank effluent*

3. HOLDING TANK SIZING

Minimum Capacity: Residential =400 gal/bedroom, Other Establishment = Design Flow x 5.0, Minimum size 1000 gallons

Code Minimum **Holding Tank** Capacity: 1000 Gallons in 1 Tanks or Compartments

Recommended **Holding Tank** Capacity: 1500 Gallons in 1 Tanks or Compartments

Type of High Level Alarm: VISUAL (Set @ 75% tank capacity)

Comments:

4. SEPTIC TANK SIZING

A. Residential dwellings:

Number of Bedrooms (Residential): 2

Code Minimum **Septic Tank** Capacity: Gallons in Tanks or Compartments

Recommended **Septic Tank** Capacity: Gallons in Tanks or Compartments

Effluent Screen & Alarm (Y/N): Model/Type:

B. Other Establishments:

Waste received by: GPD x Days Hyd. Retention Time

Code Minimum **Septic Tank** Capacity: Gallons In Tanks or Compartments

Recommended **Septic Tank** Capacity: Gallons In Tanks or Compartments

Effluent Screen & Alarm (Y/N): Model/Type:

5. PUMP TANK SIZING

Pump Tank 1 Capacity (Minimum):	Gal	Pump Tank 2 Capacity (Minimum):	Gal
Pump Tank 1 Capacity (Recommended):	Gal	Pump Tank 2 Capacity (Recommended):	Gal
Pump 1 GPM Total Head	ft	Pump 2 GPM Total Head	ft
Supply Pipe Dia. in Dose Vol:	gal	Supply Pipe Dia. Dose Vol:	Gal

University of Minnesota Onsite Sewage Treatment Program

Design Summary Page

MINNESOTA POLLUTION CONTROL AGENCY

6. SYSTEM AND DISTRIBUTION TYPE

Project ID:

Soil Treatment Type:		Distribution Type:	
Elevation Benchmark:	100 ft	Benchmark Location:	PROPERTY STAKE
MPCA System Type:	Type II	Distribution Media:	
Type III/IV Details:			

7. SITE EVALUATION SUMMARY:

Describe Limiting Condition:

Layers with >35% Rock Fragments? (yes/no) [ ] If yes, describe below: % rock and layer thickness, amount of soil credit and any additional information for addressing the rock fragments in this design.

Note:

	Depth		Depth		Elevation of Limiting Condition	
Limiting Condition:		inches		ft		ft
Minimum Req'd Separation:		inches		ft	Elevation	***Critical for system compliance***
Code Max System Depth:		inches		ft		ft

This is the maximimum depth to the bottom of the distribution media for required separation. Negative Depth (ft) means it must be a mound.

Soil Texture:			
Soil Hyd. Loading Rate:	GPD/ft^2	Percolation Rate:	MPI
Contour Loading Rate:		Note:	
Measured Land Slope:	14.0 %	Note:	
Comments:			

8. SOIL TREATMENT AREA DESIGN SUMMARY

Trench:

Dispersal Area	ft^2	Sidewall Depth	in	Trench Width	ft
Total Lineal Feet	ft	No. of Trenches		Code Max. Trench Depth	in
Contour Loading Rate	ft	Length	ft	Designed Trench Depth	in

Bed:

Dispersal Area	ft^2	Sidewall Depth	in	Maximum Bed Depth	in
Bed Width	ft	Bed Length	ft	Designed Bed Depth	in

Mound:

Dispersal Area	ft^2	Bed Length	ft	Bed Width	ft
Absorption Width	ft	Clean Sand Lift	ft	Berm Width (0-1%)	ft
Upslope Berm Width	ft	Downslope Berm	ft	Endslope Berm Width	ft
Total System Length	ft	System Width	ft	Contour Loading Rate	gal/ft

University of Minnesota Onsite Sewage Treatment Program

Design Summary Page

MINNESOTA POLLUTION CONTROL AGENCY

At-Grade:

Bed Width	ft	Bed Length	ft	Finished Height	ft
Contour Loading Rate	gal/ft	Upslope Berm	ft	Downslope Berm	ft
Endslope Berm	ft	System Length	ft	System Width	ft

Level & Equal Pressure Distribution

No. of Laterals		Perforation Spacing	ft	Perforation Diameter	in
Lateral Diameter	in	Min Dose Volume	gal	Max Dose Volume	gal

Non-Level and Unequal Pressure Distribution

	Elevation (ft)	Pipe Size (in)	Pipe Volume (gal/ft)	Pipe Length (ft)	Perf Size (in)	Spacing (ft)	Spacing (in)
Lateral 1							
Lateral 2							
Lateral 3							
Lateral 4							
Lateral 5							
Lateral 6							

Minimum Dose Volume _____ gal

Maximum Dose Volume _____ gal

9. Additional Info for At-Risk, HSW or Type IV Design

A. Starting BOD Concentration = Design Flow X Starting BOD (mg/L) X 8.35 ÷ 1,000,000

_____ gpd X _____ mg/L X 8.35 ÷ 1,000,000 = _____ lbs. BOD/day

B. Target BOD Concentration = Design Flow X Target BOD (mg/L) X 8.35 ÷ 1,000,000

_____ gpd X _____ mg/L X 8.35 ÷ 1,000,000 = _____ lbs. BOD/day

Lbs. BOD To Be Removed: _____

PreTreatment Technology: _____ *Must Meet or Exceed Target

Disinfection Technology: _____ *Required for Levels A & B

C. Organic Loading to Soil Treatment Area:

_____ mg/L X _____ gpd x 8.35 ÷ 1,000,000 ÷ _____ ft^2 = _____ $lbs./day/ft^2$

10. Comments/Special Design Considerations:

HOLDING TANK ONLY

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

JAMES PIPER	[signature]	L4041	5/26/2021
(Designer)	(Signature)	(License #)	(Date)

Tank Buoyancy Worksheet

MINNESOTA POLLUTION CONTROL AGENCY

1. Tank Specifications

Project ID:

v 04.01.2020

A. Tank Manufacturer: INFILTRATOR

Tank Model: IM-1530

B. Outside Tank Dimensions and Specifications:

Tank Use: Holding Tank

Length:	176	in	Width:	62	in	Height:	55	in
Length:	14.7	ft	Width:	5.2	ft	Height:	4.6	ft

Diameter: in

Radius of Tank: in

2. Outside Volume of Tank

Rectangular Tank

A. Area of Tank = Length (ft) X Width (ft)

14.7 ft X 5.2 ft = 75.8 ft^2

B. Volume of Tank = Area of Tank (2.A) X Height (ft)

75.8 ft X 4.6 ft = 347.3 ft^3

Circular Tank

A. Area of Tank = πr^2 (3.14 X (Radius of Tank)$^{2)}$

3.14 X ____ ft^2 = ____ ft^2

B. Volume of Tank = Area of Tank X Height (ft)

____ ft^2 X ____ ft = ____ ft^3

3. Force of Tank Weight (F_{TW})

Weight of Tank (provided by manufacturer) 501 lbs/ft^3

4. Force of Soil Weight Over Tank (F_{SW})

A. Depth of Cover Over Tank: 24 in 2.0 ft

B. Weight of Soil Per Cubic Foot: 120 lbs/ft^3

C. Volume of Soil Over Tank = Depth of Cover (ft) X Area of Tank (ft^2)

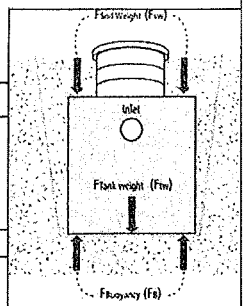
2.0 ft X 75.8 ft^2 = 151.6 ft^3

Soil Type	Weight of Soil (lbs/ft^3)
Sandy	120
Loamy	100
Clay	90

D. Weight of Soil Over Tank = Volume of Soil Over Tank X Weight of Soil Per Cubic Foot

151.6 ft^3 X 120 lbs/ft^3 18,186.7 lbs

Note: Assumes saturation does not get over the lid of the tank



$F_{SW} + F_{TW} > 1.2 \times F_B$
$F_{SW} = V_{SOIL} \times 80$ lbs/ft³
F_{TW} = Weight of tank
F_B = Total tank volume x 62.4 lbs/ft³ (8.35 lbs/gal)

5. Buoyant Force (F_B)

Buoyant Force (F_B) = Outside Volume of Tank X Weight of Water Per Cubic Foot (62.4 lbs/ft^3) X 1.2 (Safety Fctr)

347 X 62.4 lbs/ft^3 X 1.2 = 26,006.9 lbs

6. Evaluation of Net Forces

A. Downward Force = Force of Tank Weight (F_{TW}) + Force of Soil Weight of Soil (F_{SW})

501 lbs + 18187 lbs = 18,687.7 lbs

B. Net Difference = Downward Force - Buoyant Force Including Safety Factor

18688 lbs - 26007 lbs = -7,319.3 lbs

If the Net Difference is negative, countermeasures will need to be taken to prevent the tank from floating out of the ground.

7,319 lbs OF COUNTERWEIGHT NEEDED TO PREVENT FLOTATION

6-8-2012

3:00 Phil ERB

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

Septic Permit

Permit #: SS2021-944

Owner & Property Information

Owner Name:	PHILIP ERB	**Parcel #:**	030405000
Mailing Address:	PHILIP ERB 36540 ST HWY 87 FRAZEE MN 56544	**Secondary Parcel #:**	30650 Acorn Lake Rd
		Site Address:	NO ADDRESS YET
Phone #:	701-318-9477	**Township - Sec/Twp/Rng:**	BURLINGTON - 29/138/040
Lake/River(1000/300):	Yes	**Designer:**	JenCo Services, LLC, L4041 (James Piper)
Lake/River Name:	Acorn (Burlington) [RD]	**Installer:**	PROPERTY OWNER – Self Install
Pond/Wetland(50):	No		

Specifications

Tank to be Installed:	Holding Tank	**Type of Drainfield:**	
Total # Tanks Installed:	1	**Full Size of Drainfield:**	
System Status:	No Existing System	**Reduced/Warrantied Size:**	
System Serves:	Seasonal Dwelling	**Absorbtion Area Size:**	
Number of Bedrooms:	2	**Rock Depth:**	
Design Flow/GPD:	300	**Chamber Type and Number:**	
Garbage Disposal?	No	**Chamber Trench SqFt/Chamber:**	
Size of Lift Pump:		**Is System Pressurized?**	
Size of Lift Line:		**Alarm?**	Yes
Soil Sizing Factor:		**Type of Alarm:**	VISUAL

Setbacks

Road Type:	Public / Township	**Right of Way Marked:**	No
Tank Dist to Road:	+100'	**Drainfied Dist to Road:**	N/A
Tank Dist to Closest Prop Line:	24'	**Drainfied Dist to Closest Prop Line:**	24'
Tank Dist to Nearest Structure:	12'	**Drainfield Dist to Nearest Structure:**	N/A
Tank Dist to Well:	+100'	**Drainfield Dist to Well:**	N/A
Tank Dist to OHW:	87'	**Drainfield Dist to OHW:**	NA
Tank Dist to Pond/Wetland:	N/A	**Drainfield Dist to Pond/Wetland:**	N/A
Tank Dist to Pressure Line:	N/A	**Drainfield Dist to Pressure Line:**	N/A

Other Information

Date Approved:	5/27/2021
Permit Fee:	225.00
Receipt Number:	250176683
Date Paid:	5/28/2021

Notes: Install a 1500 gallon holding tank with a manual float

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! ****