Home Septic System
Site Evaluation
And
System Design

For

Rachel McGarity
8530 Nebraska Ave.
Toledo OH 43617

419-297-5290

Property Location:
Same As Above

Springfield Township, Lucas County

Replacement Leach Trench System

By

Nathan Wright

Geophyta, Inc.
2685 C.R. 254
Vickery, OH 43464

419-547-8538

January 13, 2017

To The Homeowner:

A septic system is designed based on all the information you provide and Geophyta Inc collects at the site. It must be accurate. This information includes local soil limits and topography, plus existing and future locations of your home, number of bedrooms, out buildings, driveways, drinking water wells, ponds, septic systems, and property lines. Geophyta Inc. relies on this information to construct detailed design drawings that must meet local health department regulations before installation.

Any design changes required by the local health department to meet existing regulations are the responsibility of Geophyta Inc.

Any information changes made by you after the initial site inspection are your responsibility and will result in additional charges to you above the original quote for services. These charges may include additional site inspection work, system redesign, and resubmitted drawings.

To The Installer:

The registered installer of this septic system design is responsible for preparing an "as-built" record, as stated in the Ohio Administrative Code Chapter 3701-29-09, Par. F (p.32) of the "Sewage Treatment System Rules," Ohio Department of Health, January 1, 2015. Additionally, the installer is responsible for measuring and recording distal pressure head and float switch settings as baseline measures for future operation and maintenance of any pressure distribution system (3701-29-15, Appendix B, Par. V(p.93) of above referenced rules.

If the installer requests "as-built" record creation from Geophyta Inc., additional charges will be billed to the installer by Geophyta Inc. and must be arranged prior to installation.

Geophyta Inc. must assume that any registered installer has the knowledge, equipment, ability, and experience to properly layout, install, and create as-built drawings for any septic system design approved by a local board of health. This includes the ability to read detailed design prints with an associated bill of materials. For this reason, any Geophyta Inc project supervision prior to or during installation will be billed to the installer.

Any product substitution made by the installer that is not specifically permitted in the design prints may result in Health Dept. disapproval and will result in additional re-design costs billed to the installer.

HSTS Site/Soil Evaluation Information Sheet, Geophyta, Inc.

Customer:

Name:	Rachel McGARity
Address:	8530, Nebraska Ave
City, State:	Toledo 43617
Home Phone:	
Cell Phone:	419-397-5290
Email:	rairbl@yahoo.com

Property:

Parcel #:	6503074
Current Owner:	Same
Address:	
City, State:	
Lot Size:	132.66' x 1317'
Right of Ways?	
Easements?	

Existing or Proposed or Lot Split: (circle one)

House Size: Rooms	3 bedrooms	electric:	(overhead) or buried
House Dim.w/Garage:	1700 ft.xft.	phone:	overhead; (buried); n/a
Garage Size:	1 cars, ft.xft.	gas :	(natural) propane n/a
Water Source:	well; (public) cistern	hot tub:	yes (no)
Water Softener:	(no) yes		
Outbuildings:	no (yes) size: shed	geothermal system:	(no); yes: (horizontal or vertical)
Pond:	(no) yes, size:		
System Type:	new or (replacement)		
Replacement Reason:	(failed); addition; n/a		

Comments:

I agree that the above information is accurate and can be used by Geophyta, Inc. to prepare a site/soil evaluation for septic system suitability. The site/soils report is for information purposes to be used by a designer and your local health department. This report does not guarantee build ability of a lot or approval of any septic system design. This is not a property boundary survey.

Rachel McGarity 12-9-16

Customer Signature Date

Payment received:

Site and Soil Evaluation for Sewage Treatment and Dispersal

County: **Lucas**
Township / Sec.: **Springfield**
Property Address: **8530 Nebraska Ave.**
OR Location: **Toledo**
Applicant Name: **Rachel McGarity**
Address: **8530 NebraskaA ve.**
Toledo OH 43617
Phone #: **419-297-5290**
Lot #:
Test Hole #: **A**
Latitude/Longitude: **83°44'45.876"W 41°38'50.206"N**
Method: ____ Pit ___ Auger **X** Probe; 1 1/4" dia.

Land Use / Vegetation: **Residential Turf**
Landform: **Glacial Lake Plain**
Position on Landform: **Hillslope**
Percent Slope: **2.5 - 8.0**
Shape of Slope: **Linear - Convex**
Approximate Soil Type: **Oakville - Granby Intergrade**
Date: **9-Dec-16**
Evaluator: **Nathan Wright**
Geophyta, Inc.
2685 C.R. 254
Vickery, OH 43464
Phone#: **419-547-8538**

Control #: **16 - 220 - A**

CPSS
Certified Professional Soil Scientist

Certification #: **19395**

Signature: Nathan Wright

Soil Profile		Estimating Soil Saturation			Estimating Soil Permeability							
		Munsell Color (hue, value, chroma)										
			Redoximorphic Features		Texture			Structure				
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
A	**0.0-18.0**	**10YR2/1**	**uniform**	**uniform**	**S**	**<5**	**0**	**0-NONE**	**-**	**sg**	**loose**	
Bw	**18.0-28.0**	**10YR4/3**	**uniform**	**uniform**	**S**	**<5**	**0**	**0-NONE**	**-**	**sg**	**loose**	
C1	**28.0-41.0**	**10YR5/3**	**uniform**	**uniform**	**S**	**<5**	**0**	**0-NONE**	**-**	**sg**	**loose**	
C2g	**41.0-60.0**	**10YR6/2**	**30%10YR3/6**	**matrix**	**S**	**<5**	**0**	**0-NONE**	**-**	**sg**	**loose**	

Limiting Conditions	Depth to (in.)	Descriptive Notes	Remarks / Risk Factors:
Perched Seasonal Water Table	**41.0**	Restricted below C2g	Tyler Table: A - C1 horizon (14.0 - 41.0) ILR: S, HLLR: S
Apparent Water Table	**>60**		ILR(>30mg/L) = 0.8 gal/day/ft^2, ILR(<30mg/L) = 1.6 gal/day/ft^2
Highly Permeable Material	**>60**		HLLR = 6.0 gal/day/ft
Bedrock	**>60**		3 bedroom min. required absorption area = 450 sq.ft.
Other Restrictive Layer	**>60**		5xW Soil Absorption Box: 37.5'Wx60'L

Note : The evaluation shall include a complete site plan or site drawing including all requirements in paragraphs (B)(1) through (B)(4) of OAC 3701-29-08.

ODH - Dec 2006 - Revised Sept 2007 - Modified By Geophyta, Inc.

Landforms
Upland*
Terrace
Flood Plain
Lake Pain
Beach Ridge
*Includes glacial till plain and end moraine

Position on Landform
Depression
Flat
Knoll
Crest
Hillslope
Footslope

Shape of Slope
Convex
Concave
Linear
Complex

Horizon Nomenclature

Master Horizons

O	Predominantly organic matter (litter & humus)
A	Mineral, organic matter (humus) accumulation, loss of Fe, Al, clay
E	Mineral, loss of Si, Fe, Al, clay, organic matter
B	Subsurface accumulation of clay, Fe, Al, Si, humus; sesquioxides; loss of $CaCo_3$; subsurface soil structure
C	Little or no pedogenic alteration, unconsoilidated earthy material, soft bedrock
R	Hard bedrock

Horizon Suffixes

a	Highly decomposed organic matter
b	Buried genetic horizon
d	Densic layer (physically root restrictive)
e	Moderately decomposed organic matter
g	Strong gley
i	Slightly decomposed organic matter
p	Plow layer or artificial disturbance
r	Weathered or soft bedrock
t	Illuvial accumulation of silicate clay
w	Weak color or structure within B
x	Fragipan characteristics

Horizon Modifiers

Numerical Prefixes: Used to denote lithologic discontinuities.

Numerical Suffixes: Used to denote subdivisions within a master horizon.

Soil Texture

Texture Class Abbreviations		Textural Class Modifiers	
Course Sand	cos	Gravelly	GR
Sand	s	Fine Gravelly	FGR
Fine Sand	fs	Medium Gravelly	MGR
Very Fine Sand	vfs	Coarse Gravelly	CGR
Loamy Coarse Sand	lcos	Very Gravelly	VGR
Loamy Sand	ls	Extremely Gravelly	XGR
Loamy Fine Sand	lfs	Cobbly	CB
Loamy Very Fine Sand	lvfs	Very Cobbly	VCB
Coarse Sandy Loam	cosl	Extremely Cobbly	XCB
Sandy Loam	sl	Stony	ST
Fine Sandy Loam	fsl	Very Stony	VST
Very Fine Sandy Loam	vfsl	Extremely Stony	XST
Loam	l	Bouldery	BY
Silt Loam	sil	Very Bouldery	VBY
Silt	si	Extremely Bouldery	XBY
Sandy Clay Loam	scl	Channery	CN
Clay Loam	cl	Very Channery	VCN
Silty Clay Loam	sicl	Extremely Channery	XCN
Sandy Clay	sc	Flaggy	FL
Silty Clay	sic	Very Flaggy	VFL
Clay	c	Extremely Flaggy	XFL

*Estimate approximate clay percentage within 5 percent

Soil Structure

Grade		Size		Type (Shape)	
Structureless	0	Very Fine	vf	Granular	gr
Weak	1	Fine	f	Angular Blocky	abk
Moderate	2	Medium	m	Subangular Blocky	sbk
Strong	3	Coarse	co	Platy	pl
		Very Coarse	vc	Prismatic	pr
		Extr. Coarse	ec	Columnar	cpr
		Very Thin*	vn	Single Grain	sg
		Thin*	tn	Massive	m
		Thick*	tk	Cloddy	CDY
		Very Thick*	vk		

* The sizes Very Thin, Thin, Thick, and Very Thick, are used when describing platy structure only. Substitute thin for fine, and thick for coarse when describing platy structure.

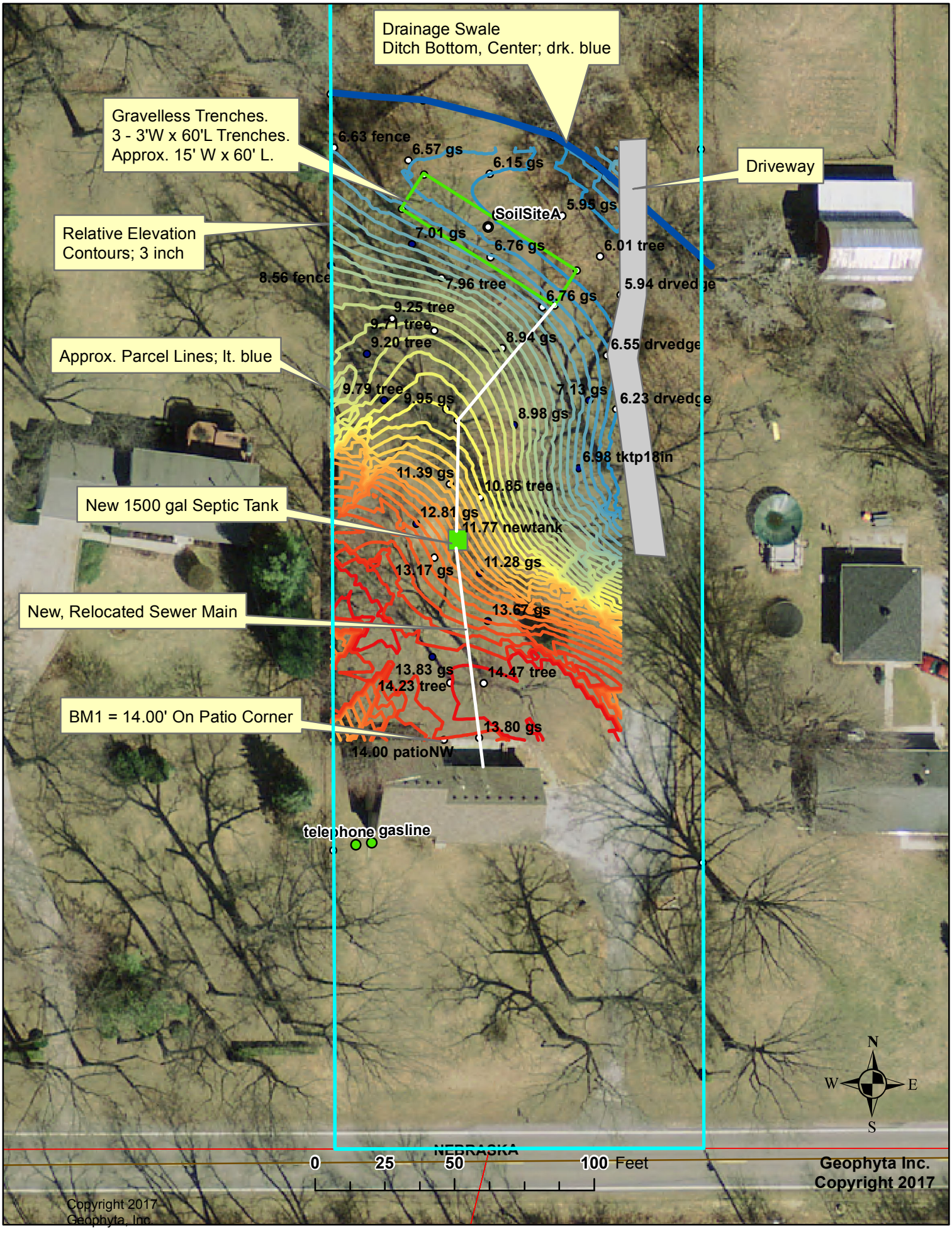
Moist Consistence	
Loose	l
Very Friable	vfr
Friable	fr
Firm	fi
Very Firm	vfi
Extremely Firm	efi

For a more detailed explanation on describing and sampling soils, please refer to the "Field Book for Describing and Sampling Soils"

Schoeneberger, P.J., Wysocki, D.A., Benham, E.C., and Broderson, W.D. (editors) 2002. Field book for describing and sampling soils, version 2.0. Natural Resources Conservation Service, USDA, National Soil Survey Center, Lincoln, NE.

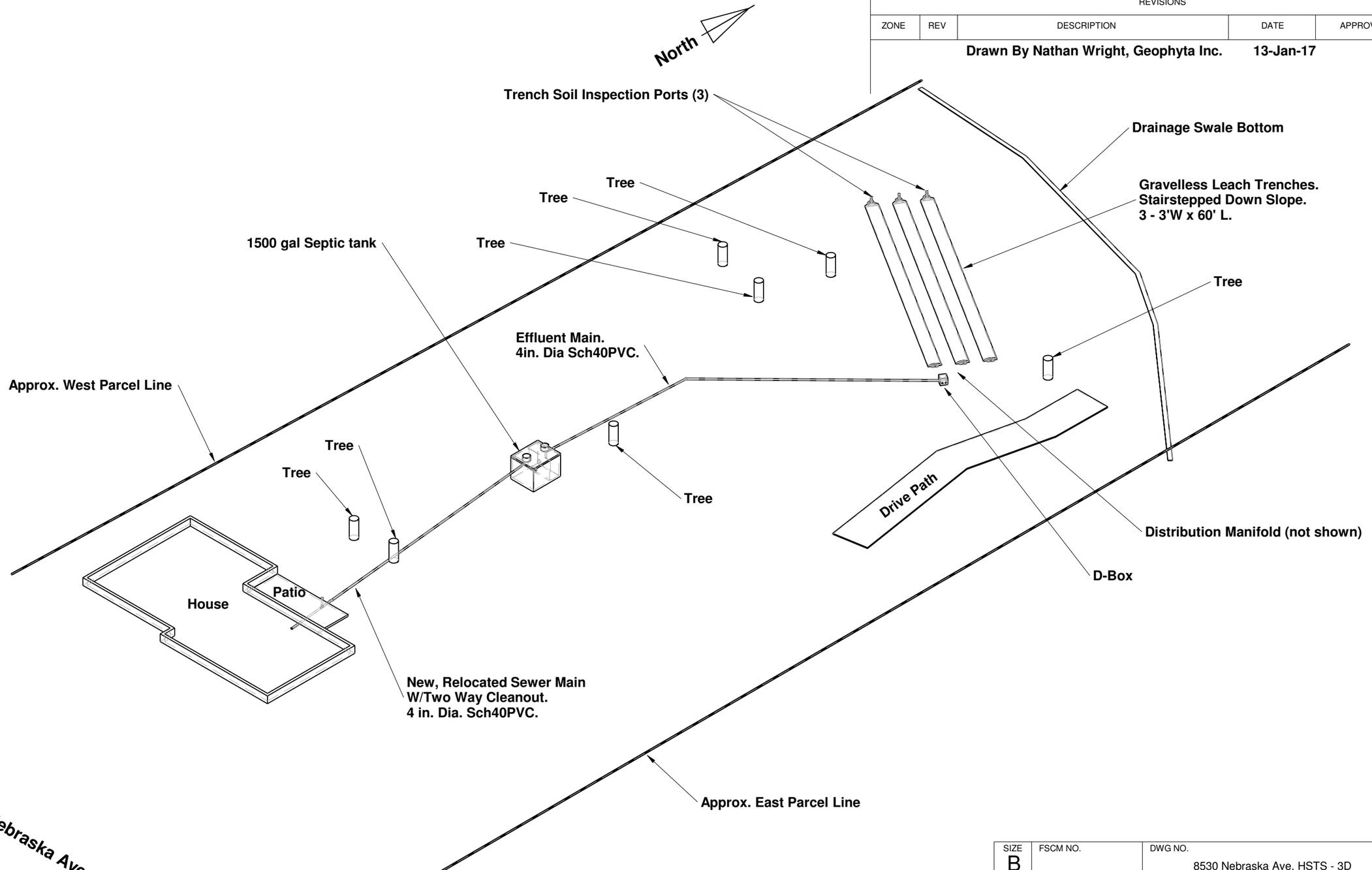
In-Soil Leachfield Calculations - Gravelless Chambers		
Owner: 8530 Nebraska Ave., Site A	**Min. Required**	**Actual:**
Home Size (bedrooms)	3	
Water Use (120 gal/day/bedroom)	360	360
Limiting Condition	PSWT	
Depth To Limiting Condition (inches)	41.0	
Depth To Bottom of Leach Trench (in.)	14.0	
Infiltration Depth (in.)	27.0	
Most Limiting Soil Texture	S	
Tyler Table Values		
Infiltration Loading Rate (gal/day/sq. ft)	0.8	0.8
Hydraulic Linear Loading Rate (gal/day/ft)	6.0	6.0
Active Trench Bottom Width (ft)(HLLR/ILR)	7.50	
Absorption Line Lengths (ft)(DDF/HLLR)	60	60.0
Leachfield Design Requirements	**Minimum**	
	Required	**Actual**
Active Absorption Area (DDF/ILR)(sq. ft.)	450	
Active Absorption Area Adjusted (0.75)(sq. ft.)	337.5	360
25% Resting Absorption Area (sq.ft.)	84	180
Total Adjusted Absorption Area (sq.ft.)	422	540
Individual Trench Bottom Width (ft)	3.0	3.0
Total Trench Bottom Width (ft)	7.03	9.0
Total Number of Leach Lines	3	3
Active Leach Lines	2	2
Resting Leach Lines	1	1
Total Lineal Feet of Trench (ft)	180	180
Trench Separation Distance (ft)	6	6
Total Leachfield Width (ft)	15	15
Total Leachfield Length (ft)	60	60

HSTS Layout - 8530 Nebraska Ave



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

Drawn By Nathan Wright, Geophyta Inc. 13-Jan-17



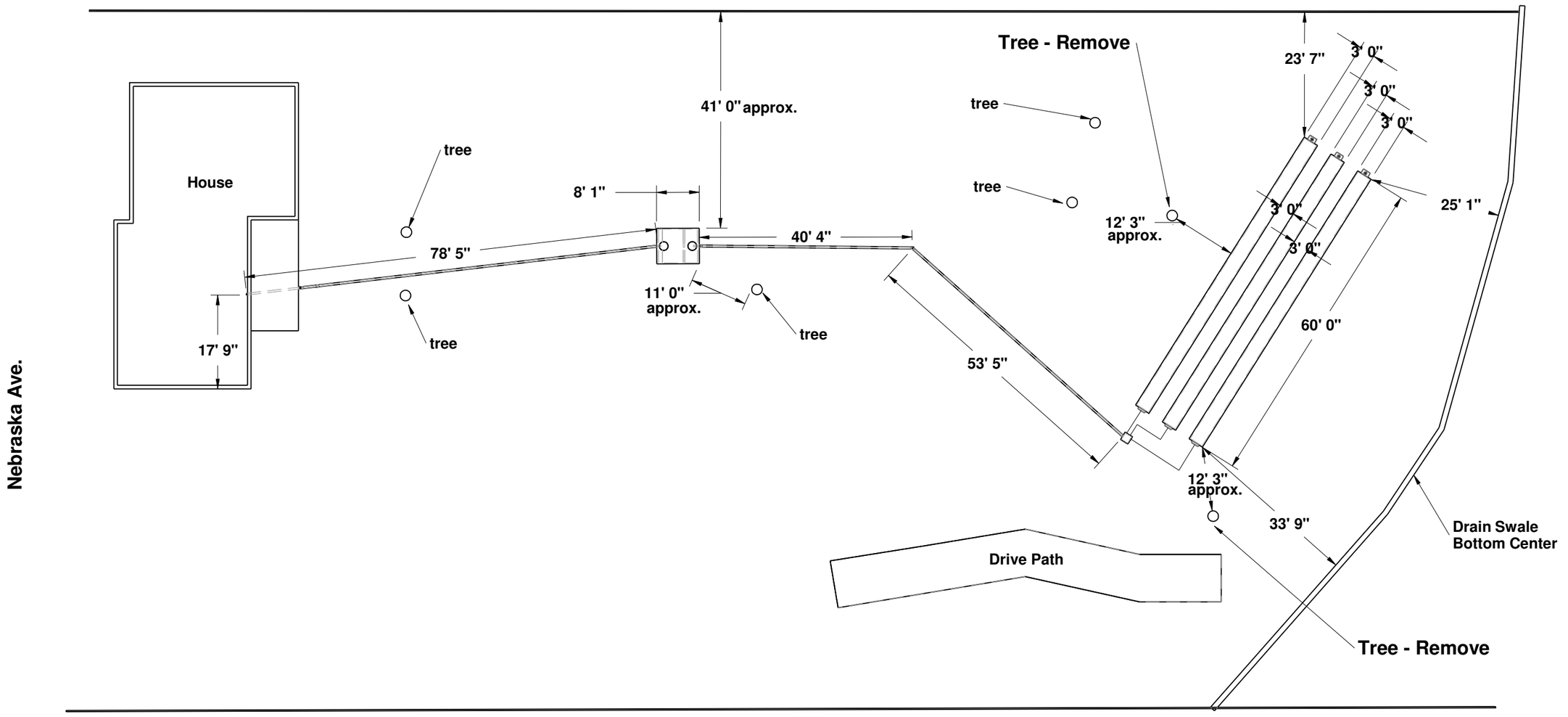
SCALE 1:250

SIZE	FSCM NO.	DWG NO.	REV
B		8530 Nebraska Ave. HSTS - 3D	
SCALE 1:1		SHEET 1 OF 1	

North

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

Drawn By Nathan Wright, Geophyta Inc. 13-Jan-17



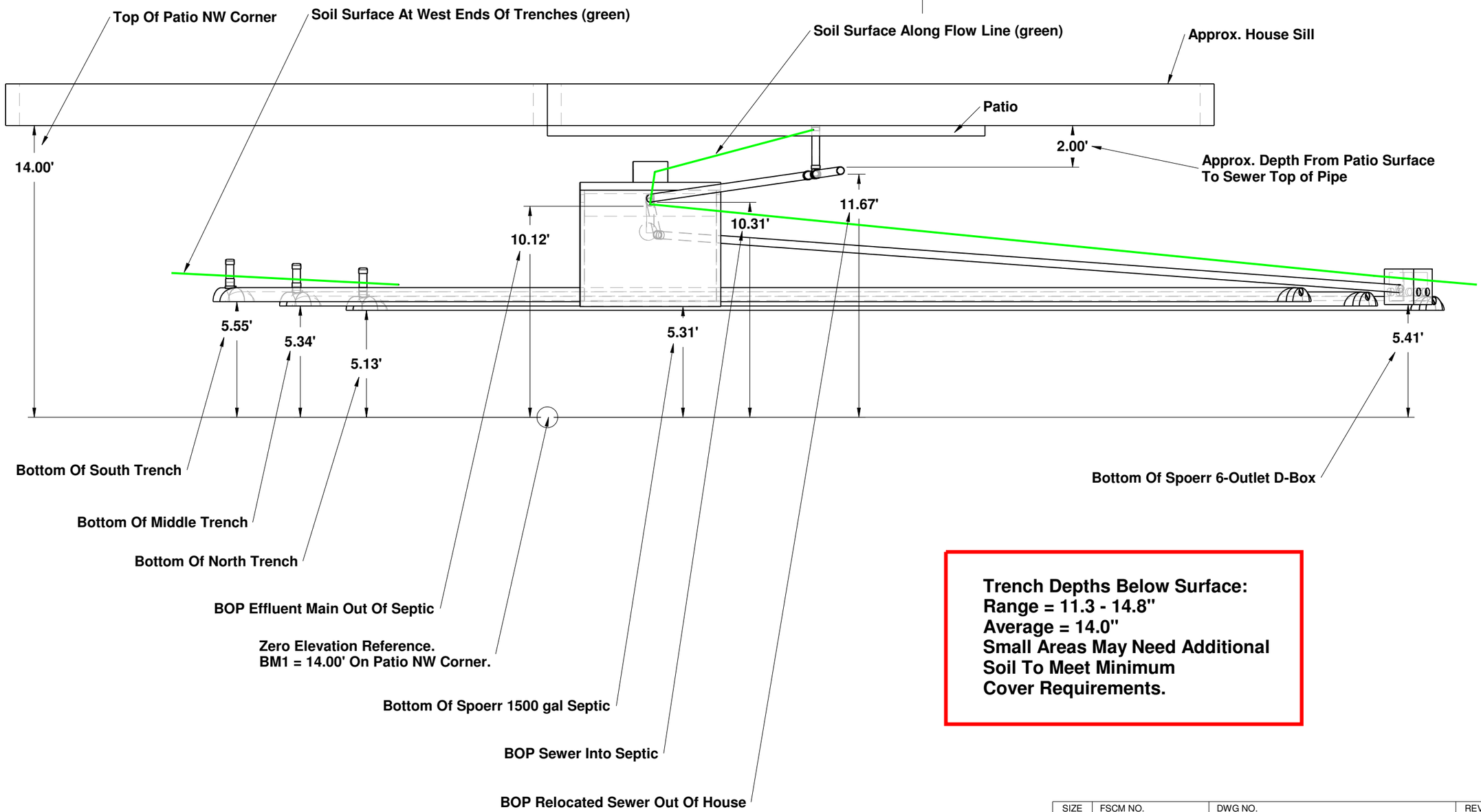
SCALE 1:250

SIZE	FSCM NO.	DWG NO.	REV
B		8530 Nebraska Ave. HSTS - Top	
SCALE 1:1			SHEET 1 OF 1

Elevation View
From South, Looking North
East

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

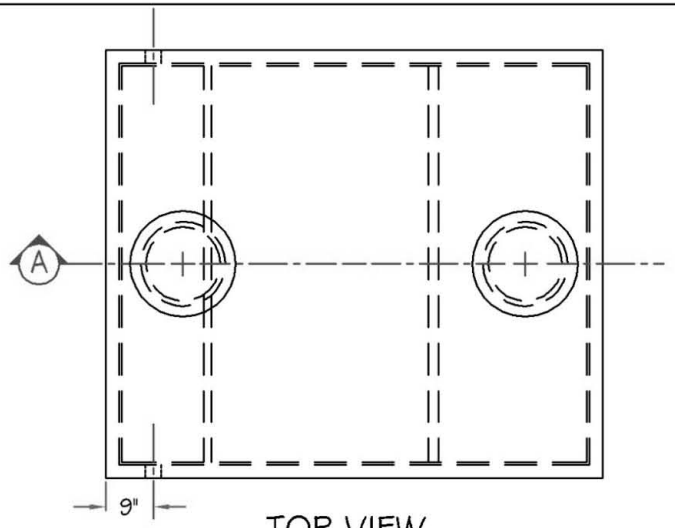
Drawn By Nathan Wright, Geophyta Inc. 13-Jan-17



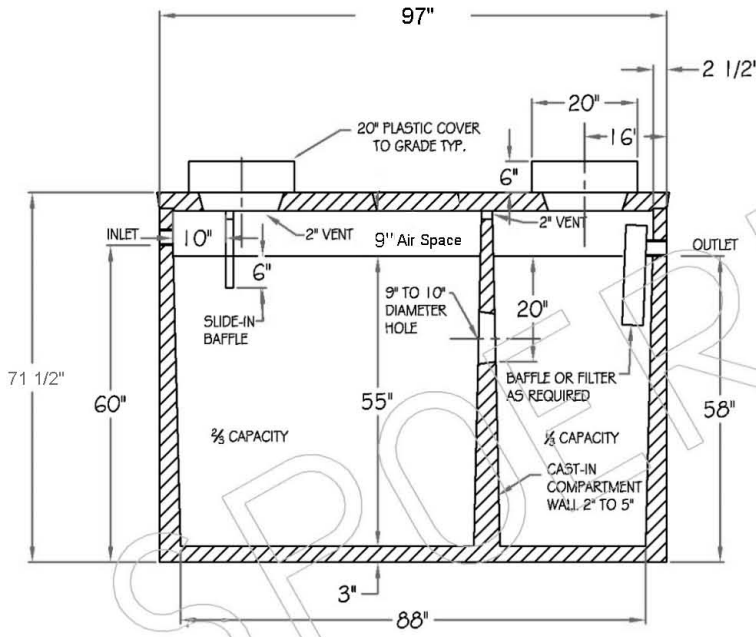
Trench Depths Below Surface:
Range = 11.3 - 14.8"
Average = 14.0"
Small Areas May Need Additional Soil To Meet Minimum Cover Requirements.

SCALE 1:60

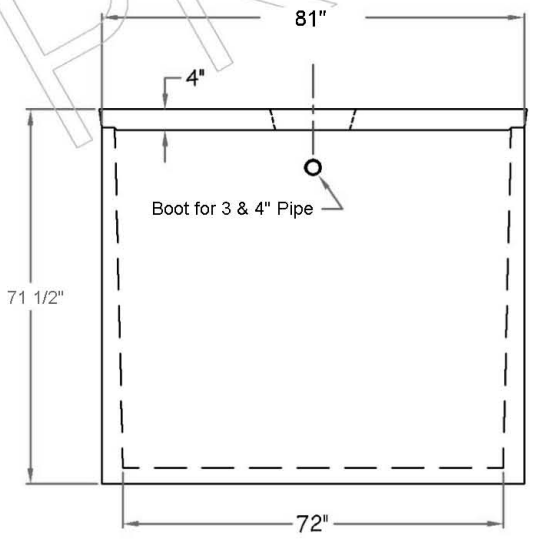
SIZE	FSCM NO.	DWG NO.	REV
B		8530 Nebraska Ave. HSTS - Elevation	
SCALE 1:1		SHEET 1 OF 1	



TOP VIEW



A SECTION VIEW (SIDE)



END VIEW

SPECIFICATIONS:

1. PIPE PENETRATIONS - MEET OR EXCEED ATMC C-1644-06

2. JOINT SEALANT - BUTYL RUBBER BLEND - MEETS OR EXCEEDS ASTM C990

3. CONCRETE - 4500 psi @ 28 DAYS

4. RISERS - CAST INTO LID AT TIME OF PRODUCTION -
INLET AND OUTLET

5. WEIGHT 12,000 lbs

SPOERR PRECAST CONCRETE, INC.
2020 CALDWELL ST.
SANDUSKY, OH 44870
PHONE 1-800-252-5205

NOTES:

Excavation 7'9" x 9'

1500 Gallon Septic Tank

DESIGNER	JHP		
ENGINEER	GKM	SCALE	VARIES
REVISION		DRAWING #	1 OF 1

PL-122 Filter

The PL-122 was the original Polylok filter. It was the first filter on the market with an automatic shut-off ball installed with every filter. When the filter is removed for regular servicing, the ball will float up and prevent any solids from leaving the tank. Our patented design cannot be duplicated.

Features:

- Offers 122 linear feet of 1/16" filter slots, which significantly extends time between cleaning.
- Has a flow control ball that shuts off the flow of effluent when the filter is removed for cleaning.
- Has its own gas deflector ball which deflects solids away.
- Installs easily in new tanks, or retrofits in existing systems.
- Comes complete with its own housing. No gluing of tees or pipe, no extra parts to buy.
- Has a modular design, allowing for increased filtration.

PL-122 Installation:

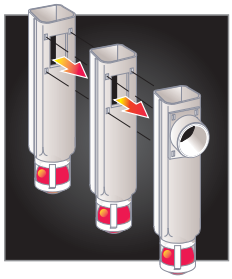
Ideal for residential waste flows up to 1,500 gallons per day (GPD). Easily installs in any new or existing 4" outlet tee.

1. Locate the outlet of the septic tank.
2. Remove the tank cover and pump tank if necessary.
3. Glue the filter housing to the outlet pipe, or use a Polylok Extend & Lok if not enough pipe exists.
4. Insert the PL-122 filter into tee.
5. Replace and secure the septic tank cover.

PL-122 Maintenance:

The PL-122 Effluent Filter will operate efficiently for several years under normal conditions before requiring cleaning. It is recommended that the filter be cleaned every time the tank is pumped, or at least every three years.

1. Do not use plumbing when filter is removed.
2. Pull PL-122 cartridge out of the tee.
3. Hose off filter over the septic tank. Make sure all solids fall back into septic tank.
4. Insert filter back into tee/housing.



Polylok offers the only filter on the market where you can get more GPD by simply snapping our filters together!

1 Filter = 1500 GPD
2 Filters = 3000 GPD
3 Filters = 4500 GPD

Patent Numbers
6,015,488 & 5,871,640

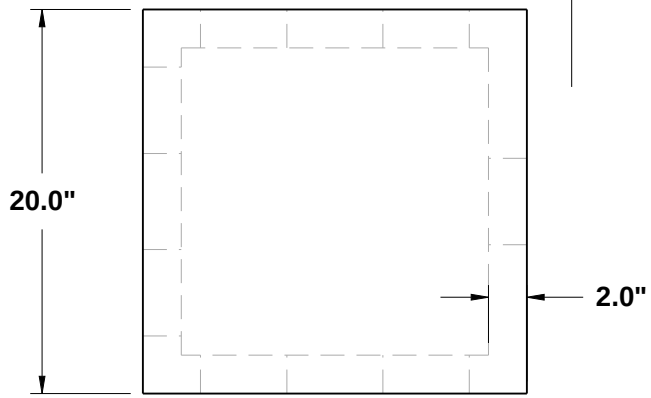
Filter Ready Adapter
Connects to Septic Tank Wall

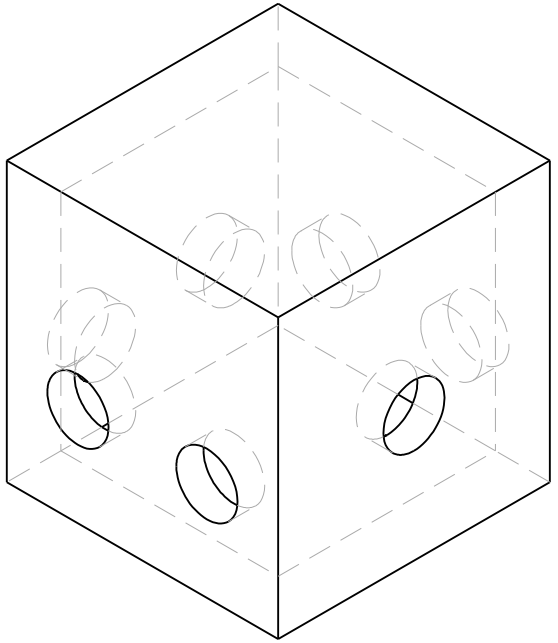
Outdoor SmartFilter® Alarm
Polylok, Zabel & Best filters accept the SmartFilter® switch and alarm.

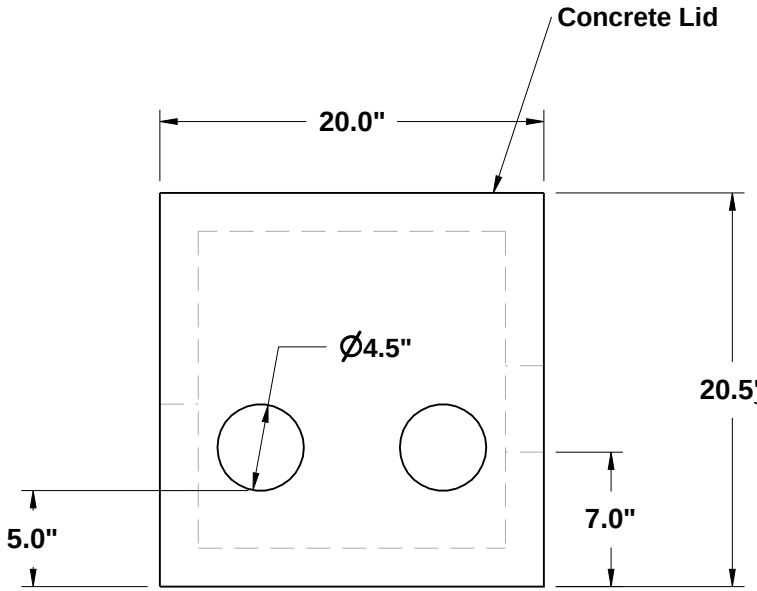
Technical Specifications: Page 87

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

Drawn By Nathan Wright, Geophyta Inc. 13-Aug-13





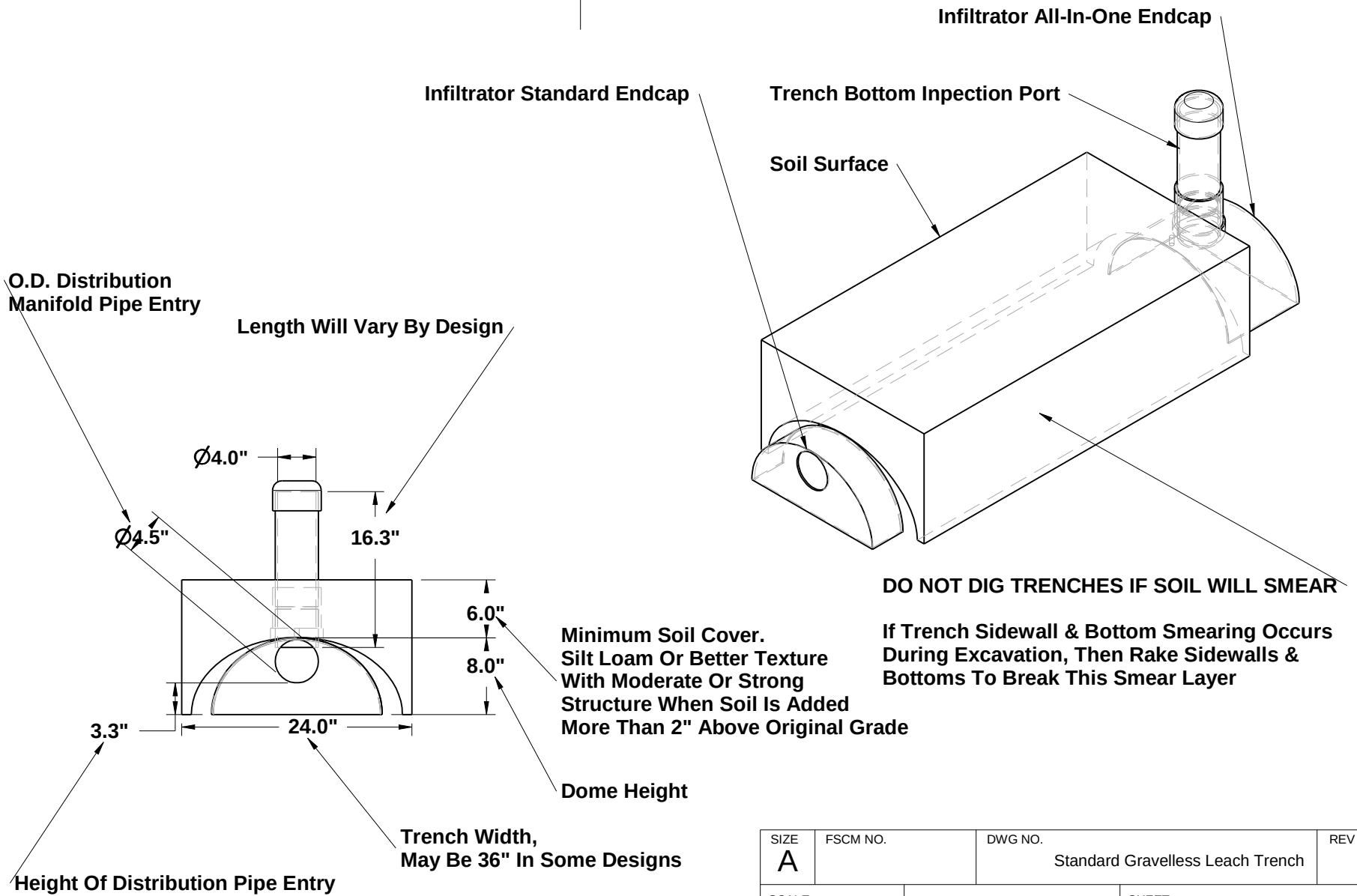


Add on risers in 6 inch increments as needed. Min. Ht = 20.5"

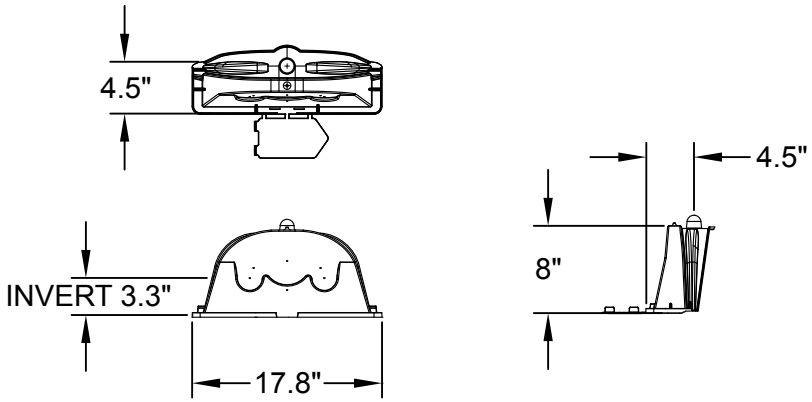
SIZE	FSCM NO.	DWG NO.	REV
A		Spoerr 6-Outlet D-Box	
SCALE 1:10			SHEET

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

Drawn By Nathan Wright, Geophyta Inc. 4-Apr-15

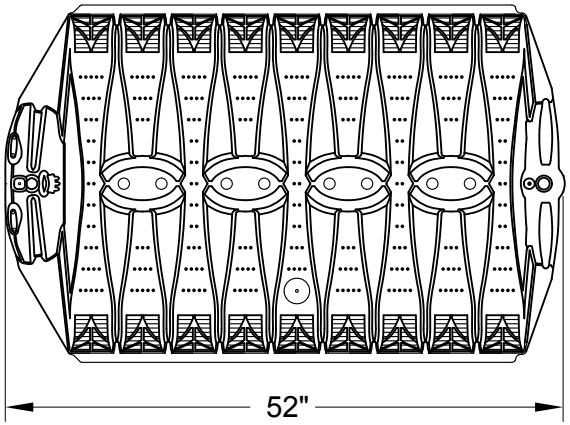


SIZE	FSCM NO.	DWG NO.	REV
A		Standard Gravelless Leach Trench	
SCALE 1:15			SHEET

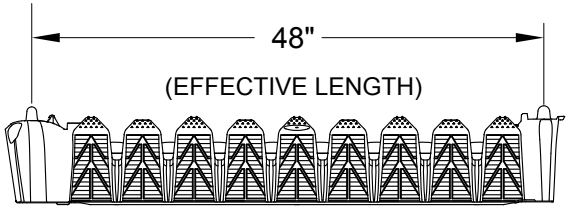


INFILTRATOR SYSTEMS, INC. 6 BUISNESS PARK ROAD P.O. BOX 768 OLD SAYBROOK, CT 06475 PH. (800) 221-4436 FX. (860) 577-7001 WWW.INFILTRATORSYSTEMS.COM	INFILTRATOR SYSTEMS QUICK4 PLUS ENDCAP
Scale NOT TO SCALE	Checked DFH
Date 12/18/2009	ACAD No.
Drawn By: RWD	Sheet 1 1 Of

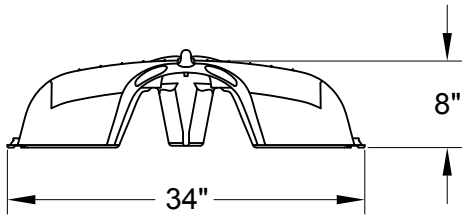
TOP VIEW



FRONT VIEW



SIDE VIEW

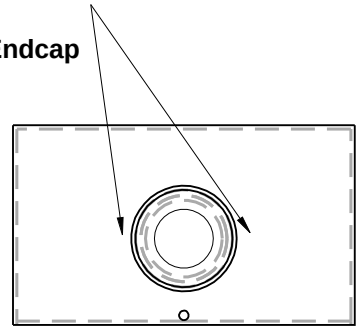


INFILTRATOR SYSTEMS, INC. 6 BUISNESS PARK ROAD P.O. BOX 768 OLD SAYBROOK, CT 06475 PH. (800) 221-4436 FX. (860) 577-7001 WWW.INFILTRATORSYSTEMS.COM	INFILTRATOR SYSTEMS QUICK4 PLUS STANDARD LOW PROFILE
Scale NOT TO SCALE	Checked DFH
Date 12/18/2009	ACAD No.
Drawn By: RWD	Sheet 1 1 Of

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

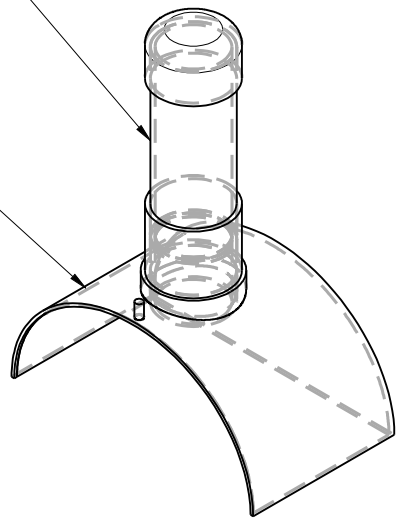
Drawn By Nathan Wright, Geophyta Inc. 9-Oct-13

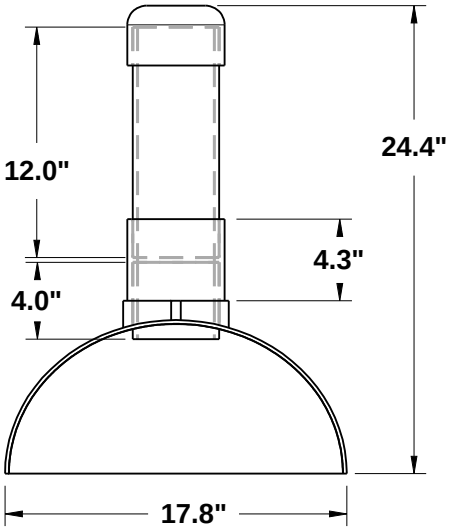
A Minimum Of Two Stainless Steel Wood Screws Required To Attach PVC Pipe To Endcap



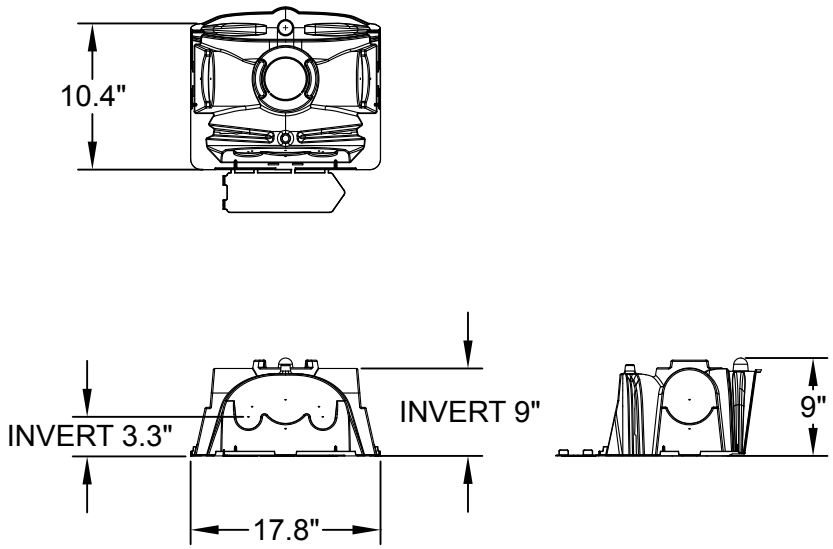
4" Sch40 PVC Pipe, Coupler, & Cap

Infiltrator All-In-One Endcap. See B.O.M. For Actual Part Number





SIZE	FSCM NO.	DWG NO.	REV
A		Trench End Soil Inspection Port	
SCALE 1:10			SHEET



INFILTRATOR SYSTEMS, INC. 6 BUISNESS PARK ROAD P.O. BOX 768 OLD SAYBROOK, CT 06475 PH. (800) 221-4436 FX. (860) 577-7001 WWW.INFILTRATORSYSTEMS.COM	INFILTRATOR SYSTEMS QUICK4 PLUS ALL-IN-ONE ENDCAP
Scale NOT TO SCALE	Checked DFH
Date 12/18/2009	ACAD No.
Drawn By: RWD	Sheet 1 1 Of

Bill Of Materials - 8530 Nebraska Ave. HSTS - Gravelless Leach Trench System			
Quantity	**Part Name**	**Section**	**Comment**
1	SCH40PVC4inchpipe2ft	Sewer Main	
1	SCH40PVC4inchpipe36in	Sewer Main	
1	SCH40PVC4inchpipe10ft	Sewer Main	
1	Sch40PVC4inchCap	Sewer Main	
1	SCH40PVC4inchpipe65.5ft	Sewer Main	
1	Sch40PVC4.0inchTwoWayCleanoutTeeSxSxS	Sewer Main	
6	Sch40PVC4.0inchCoupler	Sewer Main	
Misc.	AdaptorsAsNeededForNewOutlet	Sewer Main	
Misc.	PatioRepairAsNeeded	Sewer Main	
1	Spoerr1500galSepticW12inchRisers	Septic Tank	Spoerr 1500 gal
1	PolyLockPL122FilterHousingW11ext	Septic Tank	PolyLok or equiv.
1	SCH40PVC4inchpipe40ft	Effluent Main	
7	Sch40PVC4.0inchCoupler	Effluent Main	
1	SCH40PVC4inchpipe53.5ft	Effluent Main	
1	Sch40PVC4.0inch45Ell	Effluent Main	
1	DistributionBox6outlet	Distribution Manifold	Spoerr 6-outlet
Misc.	SD35PVC4inchPipe	Distribution Manifold	
Misc.	SD35PVC4inchFittings	Distribution Manifold	
1	SD35PVC4inch90EllTrenchRestingElbow	Distribution Manifold	
3	InfiltratorQ4PlusEQ36LPEndCap	Leach Trenches	
3	DomeStraightTrench3ftWx4ftLx8inH15SectQ4PlusEQ36LP60ftTotal	Leach Trenches	
3	Sch40PVC4inchCap	Trench Soil Inspection Port	
3	SCH40PVC4inchpipe1ft	Trench Soil Inspection Port	
3	SCH40PVC4inchpipe4.0in	Trench Soil Inspection Port	
3	InfiltratorQ4PlusAllInOneEndCap	Trench Soil Inspection Port	
3	Sch40PVC4.0inchCoupler	Trench Soil Inspection Port	
6	StainlessSteelWoodScrew	Trench Soil Inspection Port	
1	Pump, Crush, & Backfill Old Septic Tank, Replace Patio		
1	Fill Soil If Needed		
1	Grass Seed And Fertilizer As Needed		
1	**CALL BEFORE YOU DIG To Locate Utlities**		

Installer substitution of materials not specfied in this Bill Of Materials may void Health Dept. approval of this design and will result in a re-design fee and is the sole responsibility of the installer.

Design Prints Take Precedence Over This Bill of Materials. This is a best estimate of materials required and is provided as a convenience to installers. This BOM is not required for design approval.

Operation and Maintenance Procedures

Home Septic Treatment Systems With Effluent Distribution Through In-Soil Leach Trenches

Home septic treatment systems are biologically based systems. They rely on both anaerobic and aerobic microorganisms to process human waste. These systems may utilize processing, storage, and pumping tanks. A soil absorption component, the leachfield, also processes, treats, and disperses septic effluent. Any abuse of this biological treatment system will result in less efficient sewage treatment and early failure of your new system.

Improper operation and/or maintenance of your home septic treatment system will result in its failure.

Geophyta, Inc. strongly recommends that a homeowner hire a professional service provider to inspect and maintain your system. Your county health department has a list of registered service providers. Make sure that your service provider has septic tank and leachfield maintenance experience.

1) **Homeowner Responsibility:**
   a) The system owner is responsible for the continuous operation and maintenance of this home septic treatment system
   b) Your county health department may require third-party inspection and maintenance of your home septic treatment system.
   c) Home Interior Design & Appliance Selection:
      i) Install water conserving fixtures such as low flow shower heads, low flow toilets, and front loading washers.
      ii) Space out water use throughout the day and week. Avoid doing all laundry in one day.
      iii) Repair all water leaking fixtures.
      iv) Eliminate garbage disposals, or limit their use. Collect food scraps with sink strainers for disposal as trash or for composting; this includes coffee grounds.
      v) DO NOT pipe sump pump output into your sewer line.
   d) Home Landscaping Limitations:
      i) Do not pipe roof downspouts or any other rainwater drainage into the septic or dose tanks.
      ii) Divert all downspouts or other rainwater drainage away from your entire septic system.
      iii) Divert all downspouts or other rainwater drainage away from the leachfield area.
      iv) Do not drive or park cars, boats, heavy equipment, or other vehicles on or near septic system tanks and leachfield areas.

v) Do not add additional soil fill on or near the leachfield. This will limit air movement into the soil needed for effluent treatment and may cause system failure.
vi) Limit lawnmower traffic on the leachfield when soil is excessively wet.
vii) Do not plant any deep rooted plants on top of or near your leachfield soil absorption area.

e) Home Resident Responsibilities:
   i) Only flush or drain bio-degradable human waste, toilet paper, laundry and dish and personal care soaps, and water into your home septic treatment system.
   ii) Severely limit disposal of food fats, oils, and greases. These will clog your system.
   iii) Do not flush or drain undiluted bleach, cleansers, or drain cleaners.
   iv) Do not flush any non-biodegradable items. For example, plastic items.
   v) Do not flush or drain motor oils, greases, anti-freezes, cleaners, etc.
   vi) Do not flush cat litter.
   vii) Do not flush paper towels, facial tissue, cigarette butts, disposable diapers, sanitary napkins, tampons, or condoms.
   viii) Do not flush prescription or over-the-counter drugs. Antibiotics and cancer treatment drugs are very harmful to your home septic treatment system.
   ix) Do not dump solvents like dry cleaning fluid, pesticides, photographic chemicals, paint thinner down the drain.
   x) Don't use septic tank additives, unless health department approved.
   xi) Don't drain a hot tub or large amounts of water into your septic system.

f) Home Improvement/Expansion:
   i) Contact your county sanitarian before adding new driveways, decks, patios, pools, and outbuildings not identified on your original layout plan to make sure all setback distances from your septic system tanks and mound are met.
   ii) Contact your county sanitarian before adding bedrooms and/or increasing your home occupancy. This may overload your septic system. Septic system expansion may be required to prevent failure.

g) Homeowner Cautions:
   i) **DO NOT ENTER TANKS WITHOUT PROPER SAFETY EQUIPMENT.** Septic and dose tanks contain noxious and deadly gases.
   ii) Pump or dose tanks and control boxes contain electrical components. **ELECTRICAL SHOCK HAZARD CAN EXIST WITH IMPROPERLY WIRED OR FAILING COMPONENTS.**
   iii) Always keep tank fall guards in place, except for the time needed to replace components when safety equipment is present.
   iv) Always replace and secure septic and dose tank lids after completing any inspection.
   v) Any disconnection or removal of filters, screens, floats, alarms, and/or control panels will result in system failure.
   vi) Contact your county sanitarian for allowed homeowner maintenance and repair of your septic system.

2) Inspection & Maintenance Requirements:

a) Perform inspection & maintenance **every six months**.

b) Review Baseline Operation and Maintenance Data:
   i) The installer of your system set and recorded all float/liquid level heights, pump down times, cycles per day, and distal head pressures required in the design specifications.
   ii) Review all previous six month inspection data.

c) Identify any house additions, patios, pools, ponds, driveways, outbuildings, etc. added since the last inspection that may impact the home septic treatment system. Draw a sketch of these differences.

d) Inspect the house sewer main two-way cleanout tee bottom:
   i) Check for clogging.
   ii) Check for continuous clear water flows from the home.

e) Evaluate Septic Tank & Pump Tank:
   i) Measure sludge and scum depths; pump tank when cumulative thickness is 1/3 of the tank depth.
   ii) Look for signs of clogging and tank damage.
   iii) Look for signs of tank and riser leakage.
   iv) Clean & inspect septic tank outlet filter.
   v) Make sure lids are securely attached to risers.

f) Evaluate Pump/Dose Tank & Pumping Equipment:
   i) Measure sludge and scum depths; pump tank when septic tank is pumped.
   ii) Look for signs of clogging and tank damage.
   iii) Look for signs of tank and riser leakage.
   iv) Inspect and assure proper functioning of floats or other liquid level controls.
   v) Clean and inspect dose pump outlet filter. May not be present in some designs.
   vi) Inspect and assure proper condition and functioning of the effluent pump.
   vii) Make sure lids are securely attached to risers.

g) Evaluate Drain Fields:
   i) Inspect all leachfield soil inspection tubes for surface condition, surface color, and depth of ponded effluent, if present.
   ii) Look for surfacing effluent.
   iii) Look for excessively moist soil around leachfield area.
   iv) Identify appropriate vegetative cover.
   v) Look for surface disturbances, compaction, abnormal settling, and erosion.
   vi) Identify any deep rooted vegetation recently planted near the leachfield area.

h) Switch leachfield resting trench in D-box:
   i) Determine a rotation sequence for closing off flow to the resting trench/trenches.
   ii) Open the previously rested leach trench.
   iii) Close the next trench in sequence for resting.

i) Measure Pump Run Time and/or Drawdown:
   i) For demand dosed systems, verify original design effluent drawdown depth.

ii) For time dosed systems, verify original design pump run time.
iii) For systems with a cycle counter or run time meter, record the current values.

j) Test Alarms:
i) Evaluate proper function of low liquid level alarm.
ii) Evaluate proper function of high liquid level alarm and warning light.

3) Findings & Repairs:

a) All findings during inspection and maintenance must be recorded.
b) Any system adjustments must be recorded.
c) Any system deficiencies, worn out components, and/or damage must be repaired to return your septic system to a properly functioning state.
d) All repairs must be recorded.