

Preliminary & Field Evaluation Form

Design for New tanks Only

www.SepticResource.com vers 12.4

Owner Information			
Date	<u>5/8/2023</u>	Sec / Twp / Rng	<u>S-30, T-46, R-26</u>
Parcel ID	<u>24-0-056501</u>	LUG (county, city, township)	<u>Aitkin Co.</u>
Property Owner:	<u>Robert Lawson</u>	Owners address (if different)	
Property Address:	<u>29982 391st PL. Aitkin MN 56431</u>	<u>3307 Katie Ln.</u>	
City / State / Zip:		<u>Ardan Hills MN 55112</u>	

Flow Information and Waste Type / Strength			
Estimated Design flow	<u>50 3 bedroom</u>	Anticipated Waste strength	<input type="checkbox"/> Hi Strength <input checked="" type="checkbox"/> Domestic
Comments: Existing pressure bed is a 3 bedroom type I sizing. Owner is building new house, Needs new septic/pump tanks Pump , collapse, fill or remove existing tanks.		Any Non-Domestic Waste	<input type="checkbox"/> Yes (class V) <input checked="" type="checkbox"/> No
		Sewage ejector/grinder pump	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		Water softener	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Garbage Disposal	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Daycare / In home business	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Site Information					
Existing & proposed lot improvements located (see site map)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Well casing depth	Existing deep well	
Easements on lot located (see site map)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Drainfield w/in 100' of residential well	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Property lines determined (see site map)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Site w/in 200' of transient noncommunity water supply (TNCWS)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Req'd setbacks determined (see site map)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Site w/in an inner wellhead mgmt zone (CWS/NTNCWS)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Utilities located & identified (gopher state one call)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Buried water supply pipe w/in 50' of system	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Access for system maintenance (shown on site map)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Site located in Shoreland (w/in 1000' of lake, 300' of river)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Soil treatment area protected	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Site map prepared with previous items included	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Construction related issues	<u>Existing Pressure bed is Compliant just needs new tanks.</u>				

Soil Information

		Evidence of site:	
		Cut	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Filled	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Compacted	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Disturbed	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Original soils	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Soil logs completed and attached	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Perk test completed and attached (if applicable) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Soil loading rate (gpd/ft ²)	_____		
Depth/elev to SHWT	_____		
Depth to system bottom maximum (or elev minimum)	_____		
Depth/elev to standing water (if applicable)	_____		
Depth/elev to bedrock (if applicable)	_____		
Soil Survey information determined (see attachment)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Flood elevation (if applicable) _____
			Elevation of ordinary high water level (if applicable) _____
			Floodplain designation and elev - 100 yr/10 yr (if applicable) _____
Differences between soil survey and field evaluation (if applicable)	_____ _____		

I hereby certify this evaluation was completed in accordance with MN 7080 and any local req's.

Designer Signature

Brummer Septic LLC.

Company

L-1347

License #

Tank Design - Aitkin county

Property Owner: Robert Lawson

Date: 5/8/2023

Site Address: 29982 391st PL. Aitkin MN 56431

PID: 24-0-056501

Comments: _____

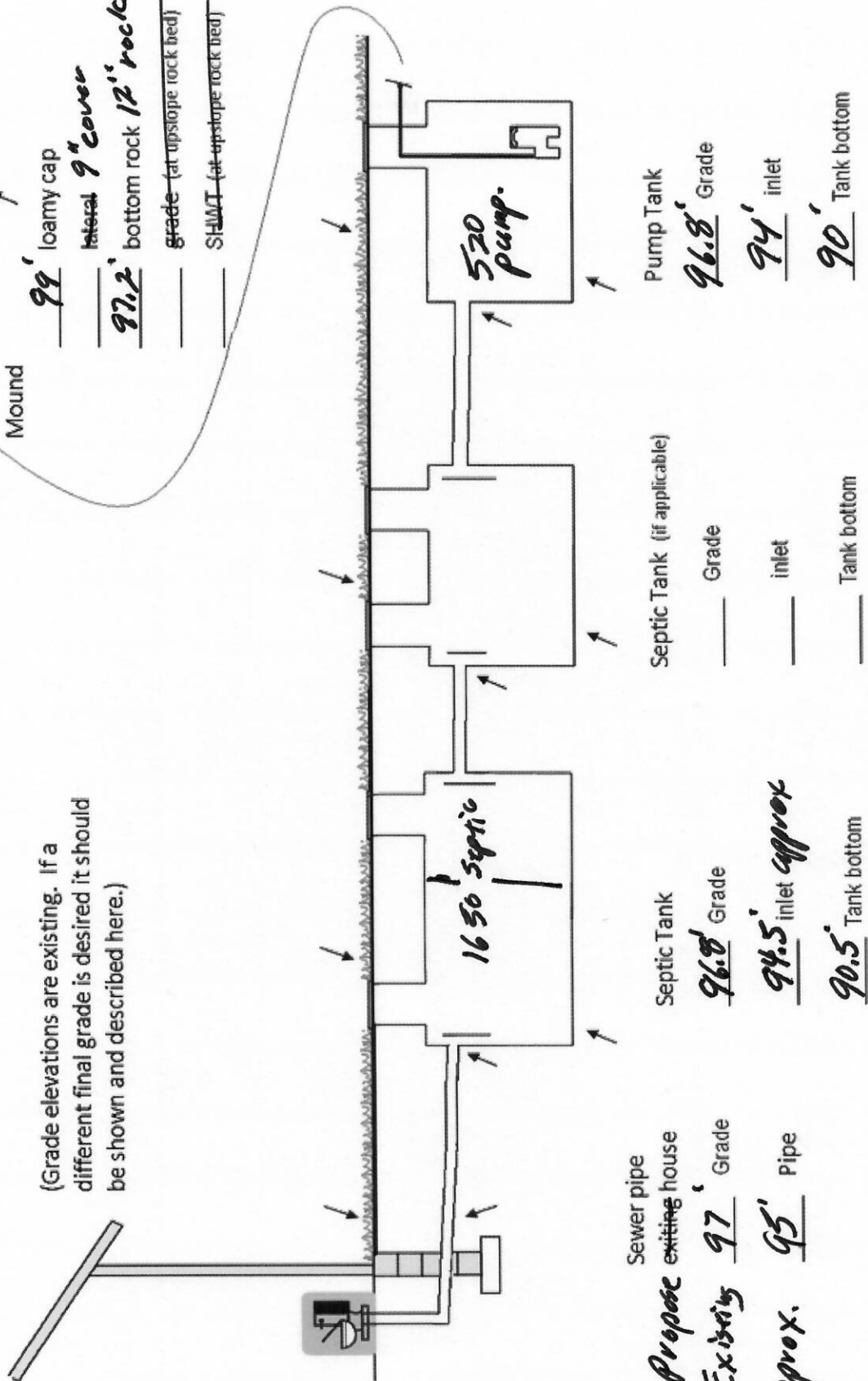
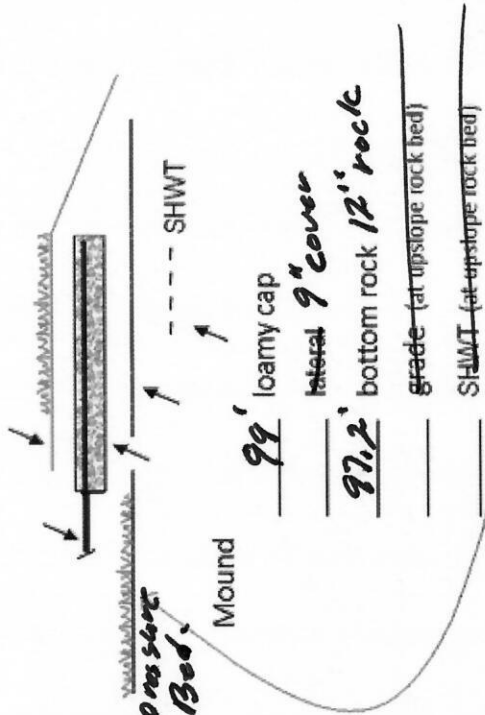
Instructions: = enter data = adjust if desired = computer calculated - DO NOT CHANGE!

- 1) bedroom Type Residential System
- 2) GPD design flow
- 3) Garbage disposal or pumped to septic Lift Pump Install 1650 Jacobson 2/Compartment septic tank
- 4) Gal Septic tank (code minimum) Gal Septic tank (design size / LUG req'd)
Tank options: Multiple tanks or compartments req'd
- 5) GPD/ft² mound sand loading rate contour loading rate of req's a min ft. long rockbed
- 6) ft rockbed width ft rockbed length
- 7) ft lateral spacing ft perforation spacing (maximum of 3 for both)
 manifold connection
- 8) laterals feet long perfs / lateral perfs total
(1/2 a perf means the first perf starts at the middle feed manifold)
- 9) inch perfs at feet residual head gives gpm flow rate per perforation
for this perf size & spacing, & pipe size on line 12, max perfs/lateral = , line #8 must be less --> OK
- 10) doses per day (4 minimum)
- 11) gallons per dose (treatment volume) 1.50 5x
- 12) inch diameter laterals must be used to meet "4x pipe volume" requirement 2.00 3x
- 13) feet of inch supply line leads to gallons of drainback volume
(Tip: "top feed" manifold to control the drainback)
- 14) gallons TOTAL pump out volume (treatment + drainback)
- 15) feet vertical lift from pump to mound laterals, leads to a: Install Jacobson 520 pump tank
- 16) GPM @ feet of head, Pump requirement (note: >50gpm may require an extra 3-6' of head)
- 17) gal Dose tank (code minimum) gal Dose tank (design size / LUG req'd) at gpi
leads to a
- 18) inch swing on Demand float, or timed dosing of min ON (confirm pump rate with drawdown
(this delivers Average flow, =70% of Peak design flow) hrs OFF test and adjust as necessary)
- 19) inches from bottom of tank to "Pump OFF" float
- 20) inches from bottom of tank to "Pump ON" float, or inches to "Timer ON" float if time dosed
- 21) inches from bottom of tank to "Hi Level" float, or inches to "Hi Level" float if time dosed
- 22) gallons reserve capacity (after High Level Alarm is activated)

System Elevations

EL = 100' benchmark Nail on Power Pole Near prostore Bed.

(Grade elevations are existing. If a different final grade is desired it should be shown and described here.)



Sewer pipe
 exiting house
 Proposed 97' Grade
 Existing 95' Pipe

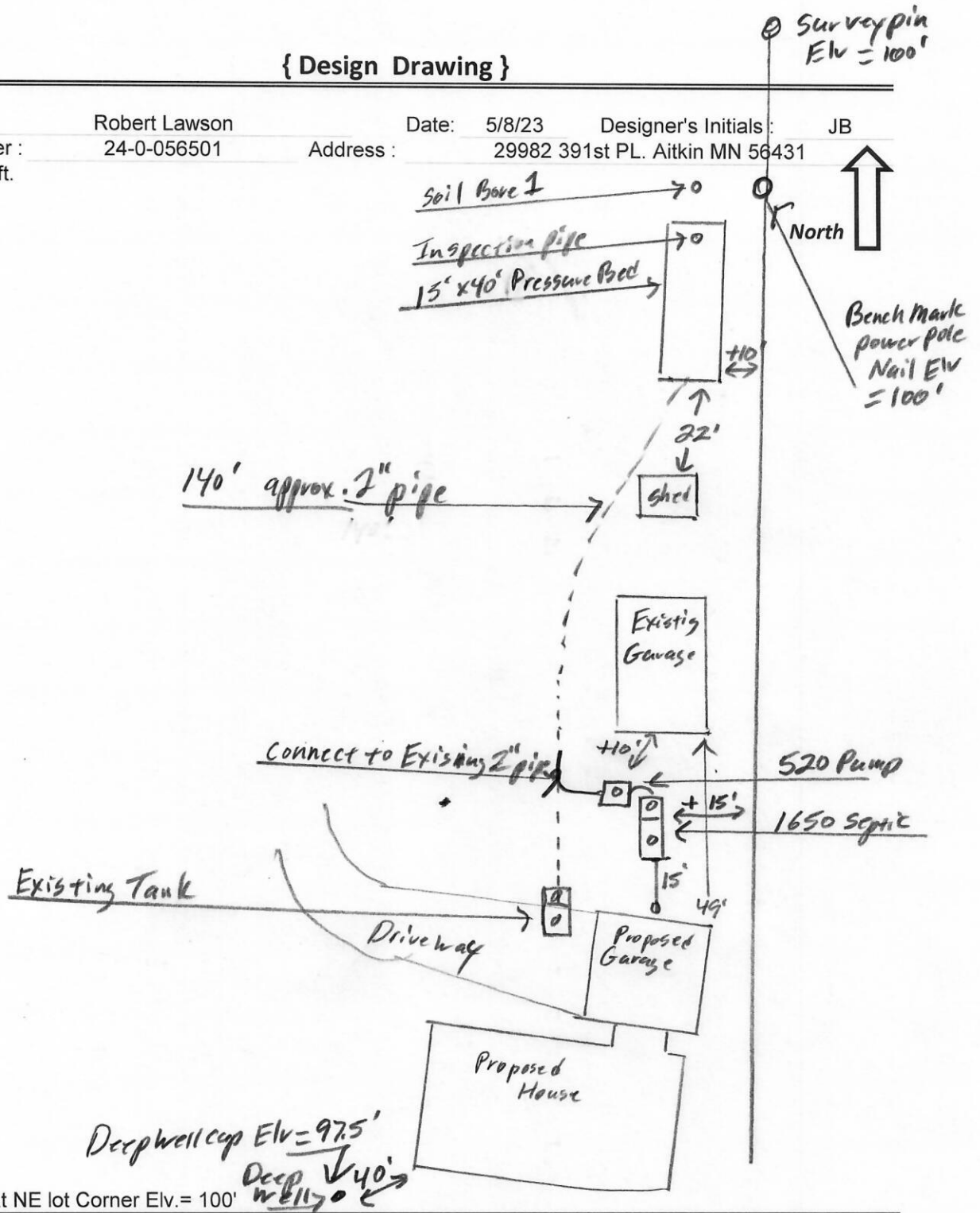
Septic Tank
96.8' Grade
94.5' inlet approx
90.5' Tank bottom

Septic Tank (if applicable)
 Grade
 inlet
 Tank bottom

Pump Tank
96.8' Grade
94' inlet
90' Tank bottom

{ Design Drawing }

Property Owner: Robert Lawson Date: 5/8/23 Designer's Initials: JB
 Parcel ID. Number: 24-0-056501 Address: 29982 391st PL. Aitkin MN 56431
 one Inch = 40ft.



Top of Survey pin at NE lot Corner Elev. = 100'

Surface/ SHWT		Nail on Power pole = Bench Mark 100'		Existing Grade	
Soil Bore 1	98.4'	Bench Mark	100'	Existing 2" pipe at pump tank	Elev. = 94.8'
Soil Bore 2		Ground Elev. BM	98.6'	Existing Garage grade SW corner	Elev. = 96.8'
Soil Bore 3		Ground Elev. Tank	96.8'	Deep well Cap	Elev. = 97.5'
		Ground at Proposed house	97'	Approx. Sewer pipe at House	Elev. = 95'

Please show all that apply (Existing)

Wells within 100ft. Of Drain field.

Water lines within 10 ft. of Drain field.

Drain field Areas:

Please Draw to Scale with North to Top or Left Side of Page:

Disturbed/Compacted Areas

Component Location

OHW ordinary high water

Lot Easements

Access Route for Tank Maintenance

Property Lines

Structures

Setbacks

New tank Design Notes - Aitkin county

Property Owner: Robert Lawson

Date: 5/8/23

Site Address: 29982 391st PL. Aitkin MN 56431

PID: 24-0-056501

Comments: **Mound design may not follow Aitkin co. Auto fill form for mound design.**

- 1 This is a type I pressure bed for a 3 bedroom House. Existing deep well location is SW of House.
- 2 Existing 15' x 40' 3 bedroom pressure bed is compliant and will be reused.
Existing tanks will be pumped, collapsed, filled or removed.
- 3 New house will be 3 bedrooms with a lift in the basement.
Sewer pipe will exist north side of proposed garage. House elevation not set at time of design.
- 4 Bench Mark Elevation = 100' is a nail on a power pole near pressure bed.
Top of survey pin at NE lot corner is Elv.= 100'
- 5 Install Jacobson 1650 Compartment tank for gravity flow from main floor of house (Elv. not set)
Install clean out near house.
- 6 Install 520 Jacobson pump tank with gravity flow from septic tank . Install the pump for 6 demand doses per day. approx. 99 gallons per dose, 6.0 inches of tank level. Install alarm at 3 inches from pump on level.
Install all manholes, inspection pipes and clean-outs to grade or above, insulate top of tank.
Recommend raising manholes to 4" above finished grade.
- 7 Connect Existing 2" supply pipe to 520 pump tank ,install so pipe drains back to tank.
- 8 Recommend Installing an Effluent filter and Alarm on septic tank outlet.
- 9 Recommend installing an event counter on all systems with a pump.

Designed to Aitkin Co. and MPCA recommendations and requirements.

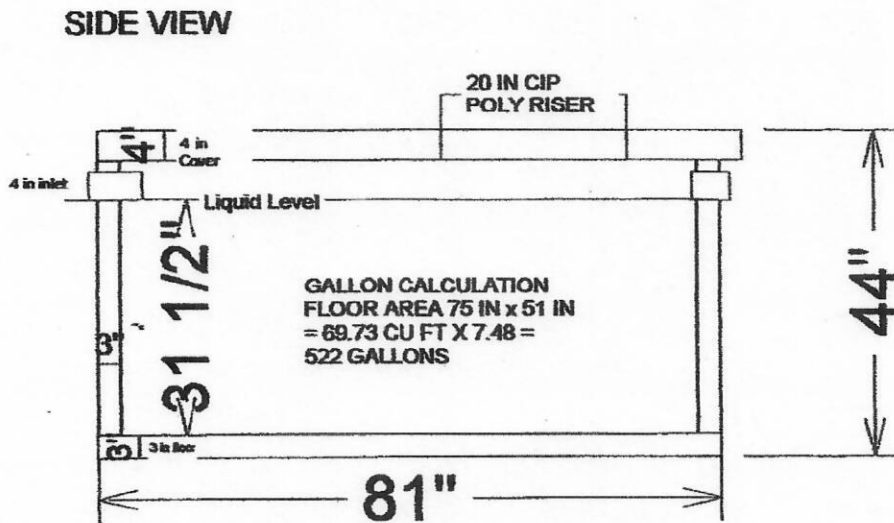
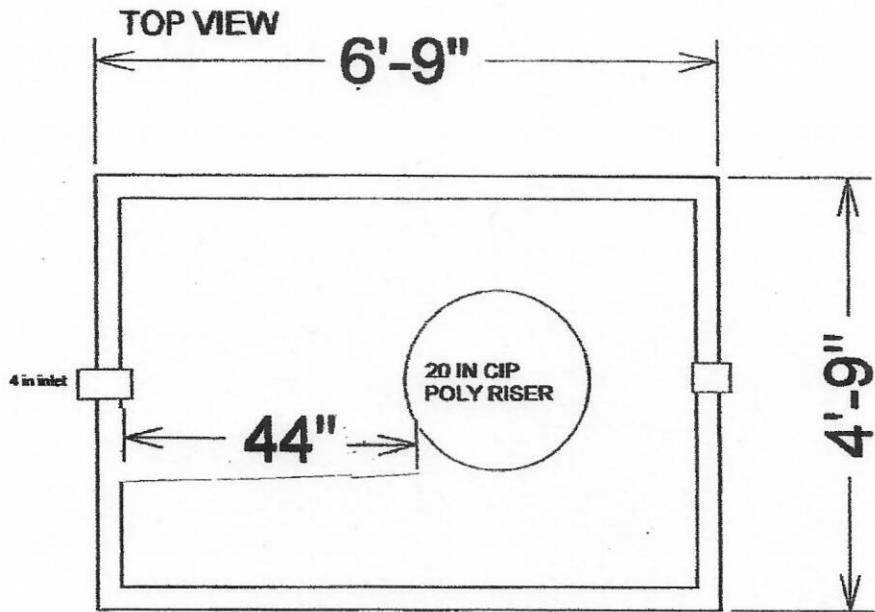


Designer Signature

Brummer Septic LLC.
Design Company

L-1347
License#

520 Gallon Pump Tank



522 gals. / 31.5" = 16.57 GPI

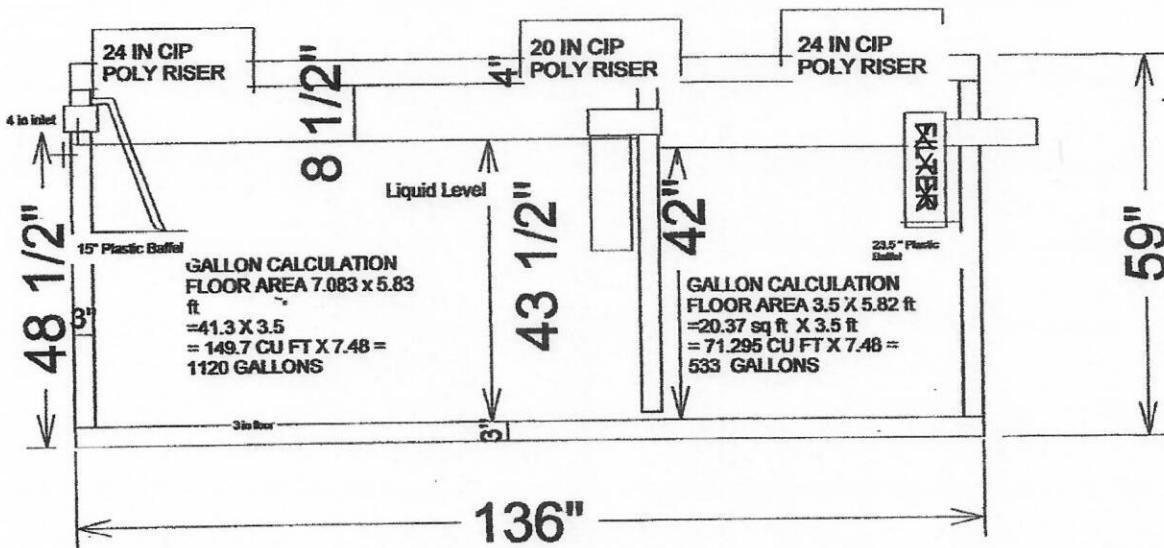
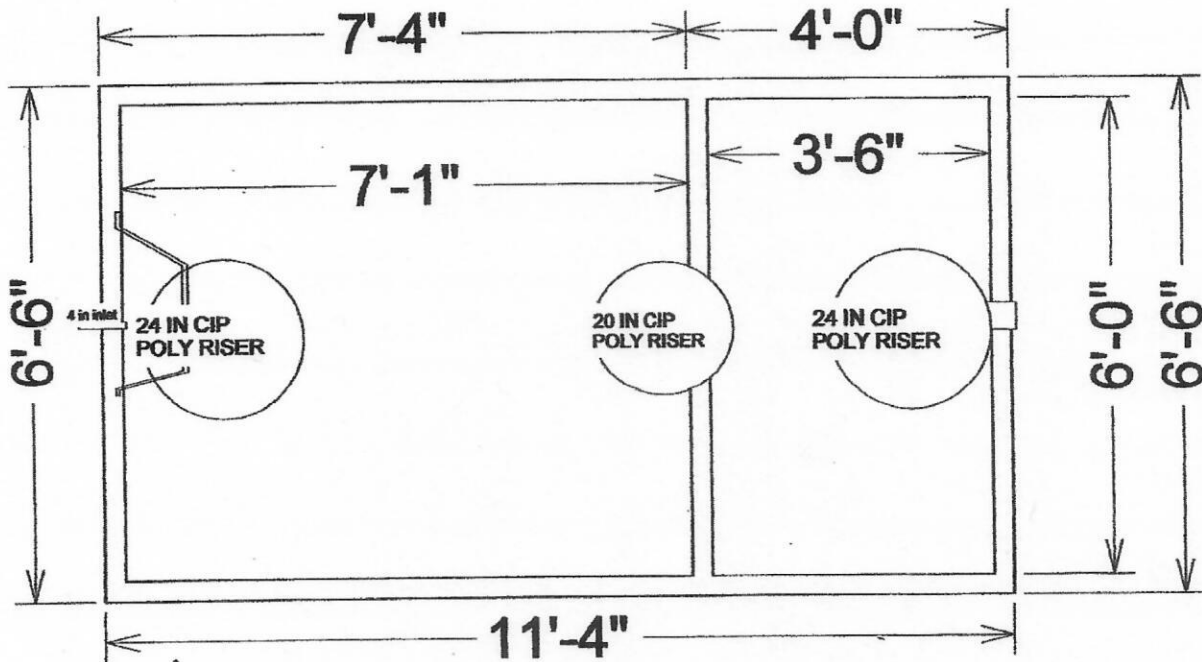
Drawings Owned BY Jacobson Precast, Inc.

36641 HWY 169, Aitkin, Mn 56431

DDo not copy drawings without permission of the Owner

1650 Gallon 2 Compartment Septic Tank

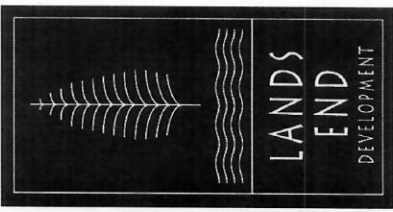
TOP VIEW



SIDE VIEW

$533 / 42" = 12.69 \text{ GPI}$

Drawings Owned BY Jacobson Precast, Inc.
 36641 HWY 169, Aitkin, Mn 56431



Lawson Lake Home

- Lone Lake, Aitkin -

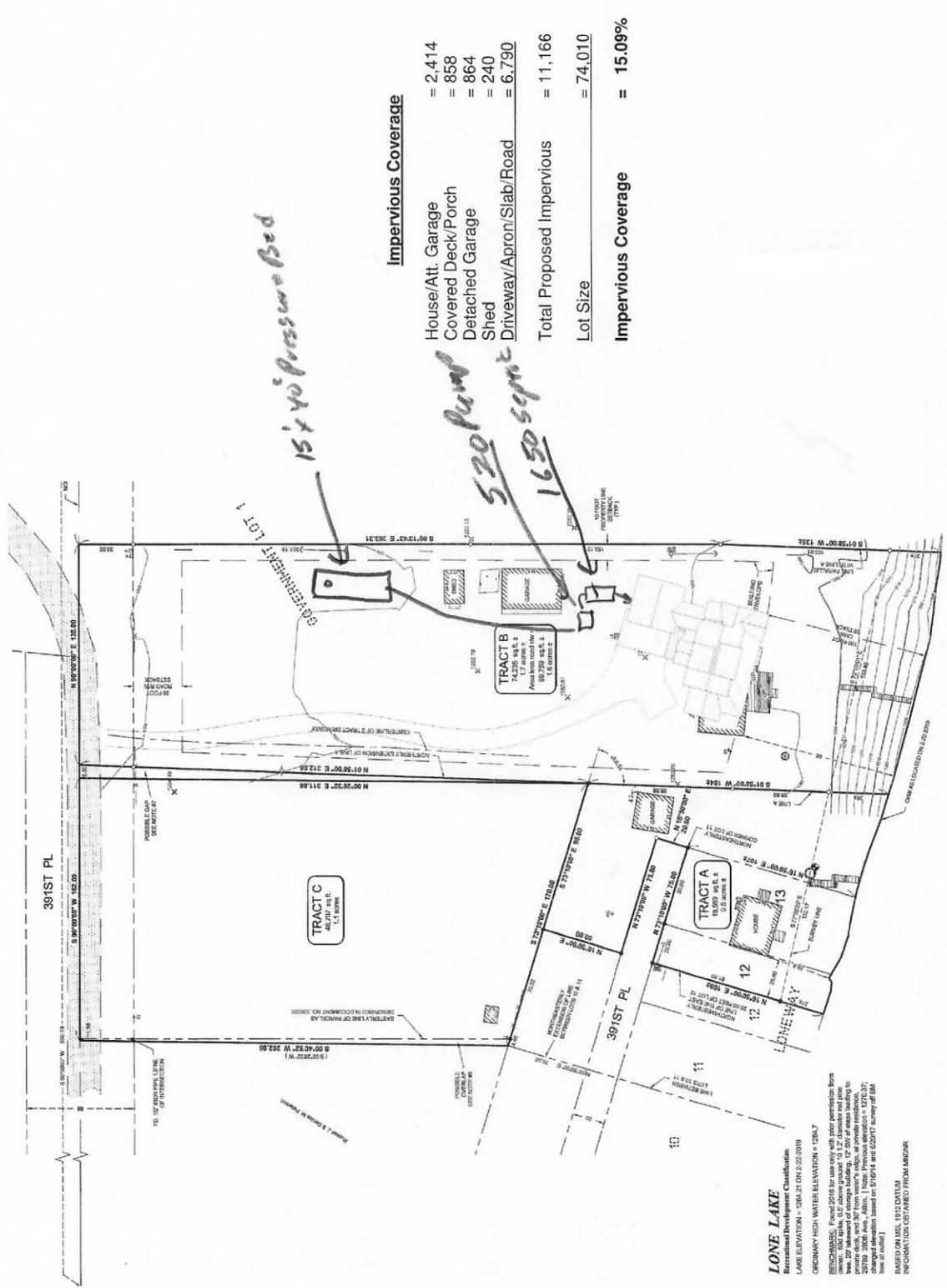
No.	Description	Date

Site Plan

Project Status: Concept #1
 Date: May 28, 2019
 Quarry: Application

SI

Scale: 1" = 30' 0"



Impervious Coverage

House/Att. Garage	= 2,414
Covered Deck/Porch	= 858
Detached Garage	= 864
Shed	= 240
Driveway/Apron/Slab/Road	= 6,790
Total Proposed Impervious	= 11,166
Lot Size	= 74,010
Impervious Coverage	= 15.09%



1 Site Plan
 1" = 30'-0"

LONE LAKE
 Recreational Development Classification
 LAKE ELEVATION = 1361.21 ON 222 2019
 ORDINARY HIGH WATER ELEVATION = 1281.7
 BENCHMARK: Found 2018 for use only with prior permission from
 the State of Minnesota. This benchmark is located on the east side of
 the road, 220' from the corner of the intersection of the road and
 private dock, and 50' from the water's edge, at private residence.
 This benchmark was established by the State of Minnesota on 12/20/14
 and was last checked on 5/16/19. The 2019 survey (see BM
 list at end) is based on the 2014 survey.
 BASED ON NAD 83 DATUM
 INFORMATION OBTAINED FROM AMORIS



Detailed Parcel Report

Parcel Number: 24-0-056501

General Information

Township/City: NORDLAND TWP
 Taxpayer Name: LAWSON, ROBERT P
 Taxpayer Address: 3307 KATIE LANE
 ARDEN HILLS MN 55112
 Property Address: 29982 391st Pl
 Township: 46 Lake Number: 1012500
 Range: 26 Lake Name: LONE LAKE
 Section: 30 Acres: 1.70
 Green Acres: No School District: 1.00
 Plat:
 Brief Legal Description: 1.70 AC OF LOT 1 IN DOC #244352

Tax Information

Class Code 1: Non-Comm Seasonal Residential Recreational
 Class Code 2: Unclassified
 Class Code 3: Unclassified
 Homestead: Non Homestead
 Assessment Year: 2023

Estimated Land Value:	\$302,200.00
Estimated Building Value:	\$24,500.00
Estimated Total Value:	\$326,700.00
Prior Year Total Taxable Value:	\$269,600.00
Current Year Net Tax (Specials Not Included):	\$1,630.00
Total Special Assessments:	\$0.00
**Current Year Balance Not Including Penalty:	\$0.00
Delinquent Taxes:	No

* For more information on delinquent taxes, please call the Aitkin County Treasurer's Office at 218-927-7325.

** Balance Due on a parcel does not include late payment penalties.