

FIELD EVALUATION SHEET

PRELIMINARY EVALUATION DATE 10-10-19, FIELD EVALUATION DATE 8-1-20

PROPERTY OWNER: JOHN CASSADY PHONE

ADDRESS: 29257 420TH AVE CITY, STATE, ZIP: AITKEN WA 98511

LEGAL DESCRIPTION:

PIN# 07-0-057600 SEC 26 T4E R27 TWP NAME FARM ISLAND

LAKE/RIVER LAKE CLASS OHWL

DESCRIPTION OF SOIL TREATMENT AREAS

AREA #1	AREA #2	REFERENCE BM ELEV. 100 FT.
DISTURBED AREAS	YES NO	
COMPACTED AREAS	YES NO	
FLOODING	YES NO	
RUN ON POTENTIAL	YES NO	
SLOPE %	12	
DIRECTION OF SLOPE	E/NE	
LANDSCAPE POSITION	LAWN	
VEGETATION TYPES		

DEPTH TO STANDING WATER OR MOTTLED SOIL: BORING# 16', 14', 2, 2A

BOTTOM ELEVATION--FIRST TRENCH OR BOTTOM OF ROCK BED: #1 92 FT., #2 FT.

SOIL SIZING FACTOR: SITE #1 1.27, SITE #2

CONSTRUCTION RELATED ISSUES: REUSE EXISTING TANK AND DRAINFIELD ADD 95' OF TRENCH ON DRAINFIELD

LIC# 127 SITE EVALUATOR SIGNATURE: Janny Dylmugus

SITE EVALUATOR NAME: LARRY LITENDOVSTI TELEPHONE# 218 820 8886

LUG REVIEW DATE

Comments:

SOIL BORING LOGS ON REVERSE SIDE

TRENCH AND BED WORKSHEET

A-1: Estimated Sewage Flows in Gallons per Day

number of bedrooms	Class I	Class II	Class III	Class IV
8	1200	675	408	columns.
7	1050	600	370	ll. or III
6	900	525	332	Class I
5	750	450	294	in the
4	600	375	256	volumes
3	450	300	218	of the
2	300	225	180	50%
1	150	112.5	90	liquid capacity
2 or less	750	450	270	with disposal
3 or 4	1500	900	540	lift inside
5 or 6	2250	1350	810	
7, 8 or 9	3000	1800	1080	

C-1: Septic Tank Capacities (in gallons)

Number of Bedrooms	Minimum Liquid Capacity	Liquid capacity with garbage disposal
2 or less	750	1125
3 or 4	1500	2250
5 or 6	2250	3375
7, 8 or 9	3000	4500

D-15: Soil Characteristics and Soil Sizing Factor (SSP) (> 3' separation)

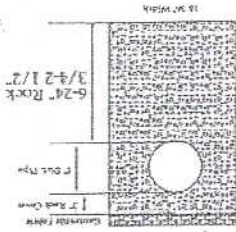
Soil Texture	Soil Sizing Factor
Coarse sand	0.83
Medium sand	1.07
Loamy sand	1.27
Fine sand	1.47
Sandy loam	1.67
Loam	1.87
Silt loam	2.00
Silt	2.20
Clay loam	4.20
Silty clay	
Sandy clay	
Clay	
over 61 to 120"	
slower than 120"	

Use systems for rapidly permeable soils: pressure distribution or serial distribution with no trench > 2 1/2' of the total system. Soil having 50% or more fine sand + very fine sand... A mound must be used. An other or performance system must be used.

D-9: Soil Characteristics and Soil Sizing Factor (SSP) for Cravelless Pipe

Soil Texture	Soil Sizing Factor
Coarse sand	0.28
Medium sand	0.4
Loamy sand	0.42
Fine sand	0.56
Sandy loam	0.67
Loam	0.74
Silt loam	
Silt	
Clay loam (CL)	
Sandy CL	
Silty CL	
Sandy Clay	
Silty Clay	
Clay	
slower than 60"	
46 to 60"	
31 to 45"	
16 to 30"	
6 to 15"	
0.1 to 5"	
Faster than 0.1"	

percolation rate (minutes/inch) soil texture gallon/day
factor (SSP) for Cravelless Pipe



- AVERAGE DESIGN FLOW
A. Estimated 600 gpd (see figure A-1) or measured 15 (safety factor) = 600 gpd
B. Septic tank capacity 1000 gal (see figure C-1)
- SOILS (Site evaluation data)
C. Depth to restricting layer = 6' ft
D. Max depth of system Item 2C - 3 ft = 3 ft
E. Texture SMUD Percolation rate 6-15 MPI
F. Soil Sizing Factor (SSP) 1.27 sqft/gpd (see figure D-15)
G. % Land Slope 12 %
- TRENCH or BED BOTTOM AREA
H. For trenches with 6 inches of rock below the pipe: $A \times F = \text{sqft/gpd} = \text{sqft}$
I. For trenches with 12 inches of rock below the pipe: $A \times F \times 0.8 = 600 \text{ gpd} \times 1.27 \text{ sqft/gpd} \times 0.8 = 609 \text{ sqft}$
J. For trenches with 18 inches of rock below the pipe: $A \times F \times 0.66 = \text{sqft} \times 0.66 = \text{sqft}$
K. For trenches with 24 inches of rock below the pipe: $A \times F \times 0.6 = \text{sqft} \times 0.6 = \text{sqft}$
L. For gravity beds with 6 or 12 inches of rock below the pipe: $A \times F \times 0.6 = \text{sqft} \times 0.6 = \text{sqft}$
M. For pressure beds with 6 or 12 inches of rock below the pipe: $1.5 \times A \times F = 1.5 \times \text{sqft/gpd} = \text{sqft}$
N. If using rock, divide bottom area by width: $(H, I, J, K \text{ or } L) \div M = \text{ft}$
O. If using 10" Cravelless Pipe, Flow (A) x Cravelless SSP (see figure D-9)
P. If using Chambers, I(L), or K (based on height of chamber slats) + width of chamber in feet (M) $\text{sqft} + \text{ft} = \text{lineal ft}$

- DISTRIBUTION (Check all that apply)
X Bed (< 6% slope)
X Drop boxes (any slope)
X Rock
X Trenches
Pressure
Gravelless
Chamber
Gravelless

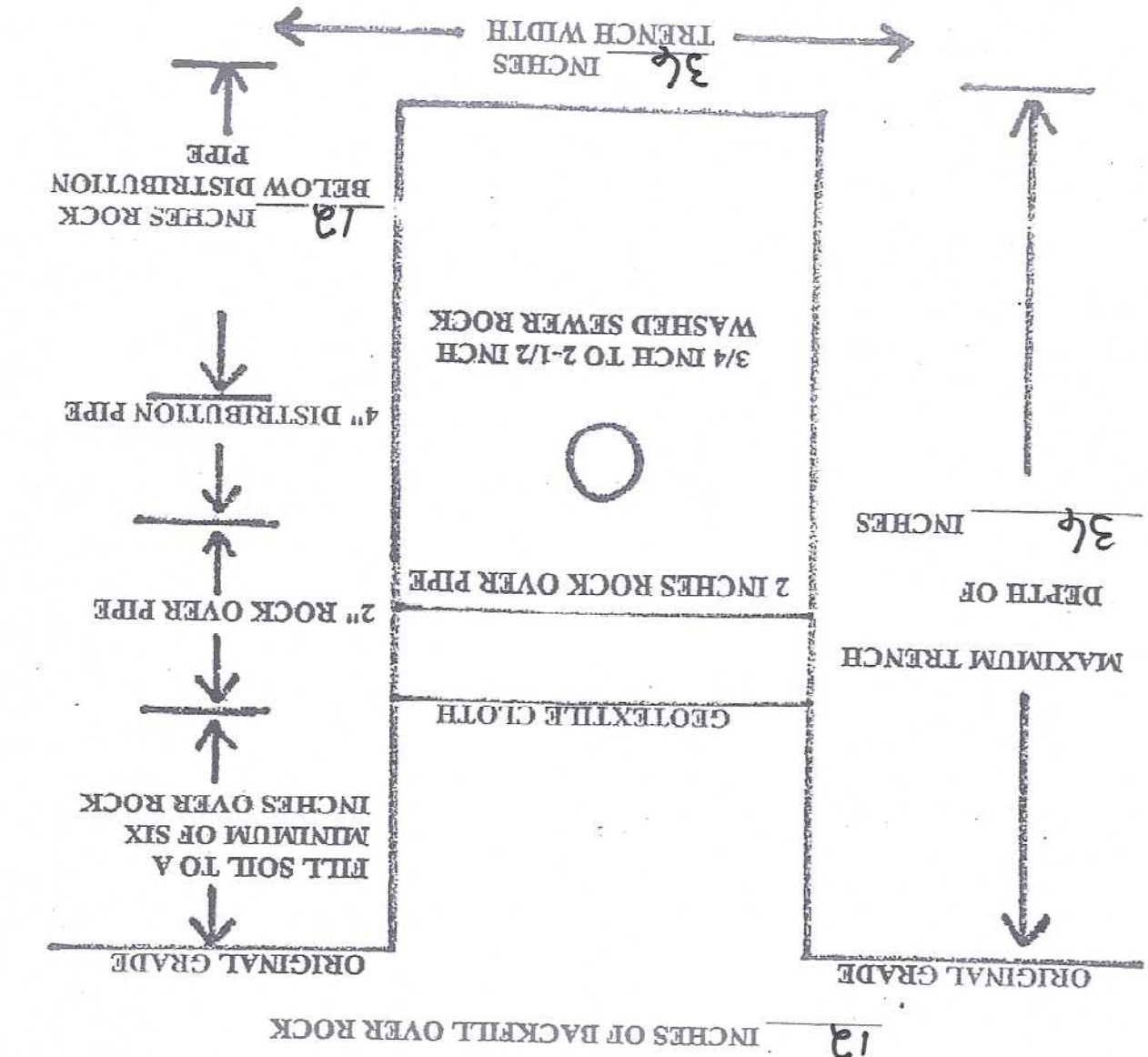
- SYSTEM WIDTH, LENGTH and VOLUME
M. Select trench width = 3 ft
N. If using rock, divide bottom area by width: $(H, I, J, K \text{ or } L) \div M = \text{ft}$
O. If using 10" Cravelless Pipe, Flow (A) x Cravelless SSP (see figure D-9)
P. If using Chambers, I(L), or K (based on height of chamber slats) + width of chamber in feet (M) $\text{sqft} + \text{ft} = \text{lineal ft}$
- LAWN AREA
Q. Select trench spacing, center to center = 6 feet
R. Multiply trench spacing by lineal feet $R \times Q = \text{sqft of lawn area}$
6 ft x 205 ft = 1218 sqft
7. Include a drawing with scale (one inch = ft). Show pertinent boundaries, right of way, easements, location of house, garage, driveway, all other improvements, existing or proposed soil treatment system, well and dimensions of all elevations, setbacks and separation distances.

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

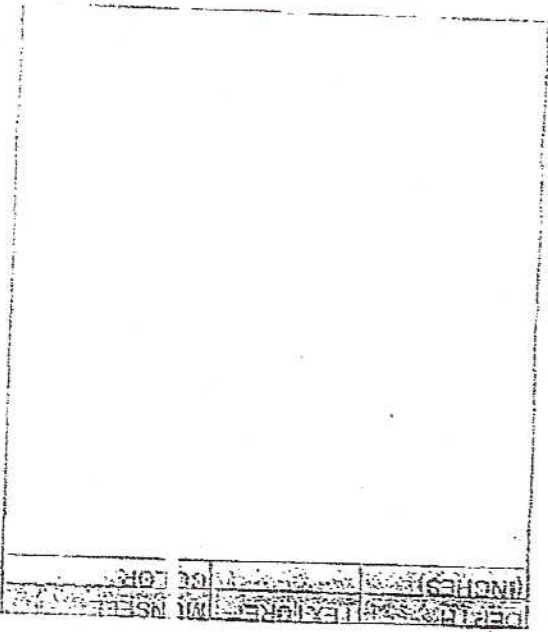
(signature) Danny Flynn (license #) 127 (date) 8-15-20

TRENCH CROSS-SECTION

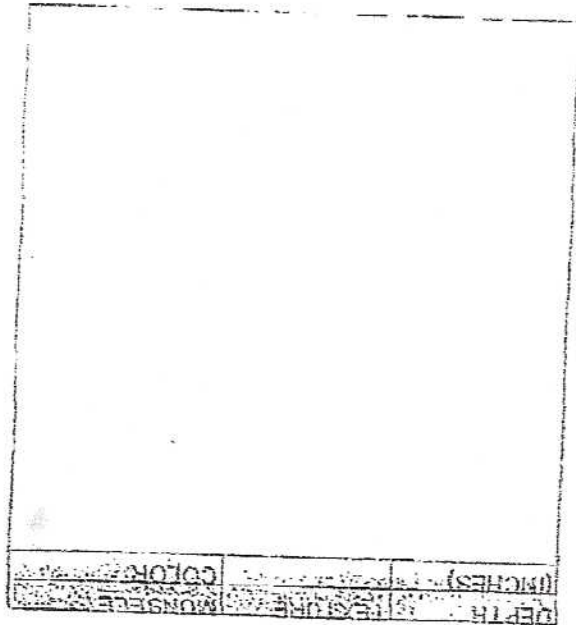
FINISHED GRADE



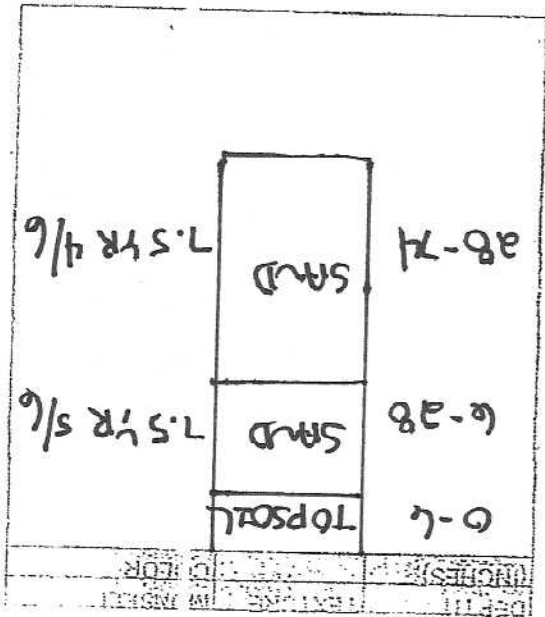
ADDITIONAL SOIL SAMPLES MAY BE REQUIRED



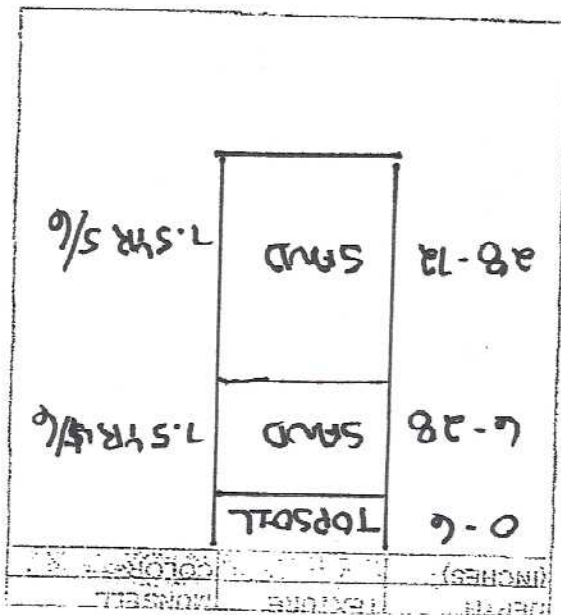
2 (PROPOSED) SOILS DATA



2 (PROPOSED) SOILS DATA



2 (PROPOSED) SOILS DATA



2 (PROPOSED) SOILS DATA

SOIL CHARTS FOR BOTH PROPOSED AND ALTERNATE SITES

SEPTIC INSPECTION SOIL BORING WORKSHEET

PROPERTY OWNER: GEORGE LEMIRE

PARCEL# 07-0-057600

8/14/2007

TYPE OF DRAINFIELD: TRENCHES

DEPTH TO BOTTOM OF ROCK = 30"

PIT #1		
DEPTH (inches)	TEXTURE	COLOR
0 - 2	Grass	
2 - 14	Sandy Loam -FILL	7.5YR 5/4
14 - 17	Original Top Soil	10YR 3/3
17 - 84	Sand	7.5YR 5/4
0 - 84	NO MOTTLES FOUND	

Soil Boring Depth/Restricting Layer 84
 Less Bottom of Rock Depth 30
 = 54
 Amount of Vertical Separation *** (inches)

SOIL BORING #1		
DEPTH (inches)	TEXTURE	COLOR
0 - 2	Grass	
2 - 20	Sandy Loam -FILL	7.5YR 5/4
20 - 24	Original Top Soil	10YR 3/3
24 - 66	Sand	7.5YR 5/4
0 - 66	NO MOTTLES FOUND	

Soil Boring Depth/Restricting Layer 66
 Less Bottom of Rock Elev. 30
 = 36
 Amount of Vertical Separation *** (inches)

** AMOUNT OF VERTICAL SEPARATION MUST = 36" OR MORE TO MEET THE 3' SEPARATION REQUIREMENT

Maintenance Log

Activity	Date Accomplished
Leaks: check for plumbing leaks	
Soil treatment area check for surfacing	
Lint filter: check, clean if needed	
Effluent screen: if owner-maintained	
Water usage rate (monitor frequency)	
Check annually:	
Caps: inspect, replace if needed	
Sludge & Scum/Pump	
Inlet & Outlet baffles	
Drainfield effluent leaks	
Pump, alarm, wiring	
Flush & clean laterals if cleanouts exists	
Other:	
Other:	

Notes:

Mitigation/corrective action plan:

Call a licensed septic professional with problems

Subsurface Sewage Treatment System Management Plan

Property Owner: _____ Phone: _____ Date: _____
 Mailing Address: _____ City: _____ Zip: _____
 Site Address: _____ City: _____ Zip: _____

This management plan will identify the operation and maintenance activities necessary to ensure long-term performance of your septic system. Some of these activities must be performed by you, the homeowner. Other tasks must be performed by a licensed septic service provider.

System Designer: check every 36 months.
 Local Government: check every 36 months.
 State Requirement: check every 36 months.

(State requirements are based on MN Rules Chapter 7080.2450, subp. 2 & 3)

Homeowner Management Tasks

- Leaks - Check (look, listen) for leaks in toilets and dripping faucets. Repair leaks promptly.
- Surfacing sewage - Regularly check for wet or spongy soil around your soil treatment area.
- Effluent filter - Inspect and clean twice a year or more.
- Alarms - Alarm signals when there is a problem. Contact a service provider any time an alarm signals.
- Event counter or water meter - Record your water use.
- recommend meter readings: be conducted (circle one): DAILY · WEEKLY · MONTHLY

My system needs to be checked every 36 months.

Professional Management Tasks

- Check to make sure tank is not leaking
- Check and clean the in-tank effluent filter
- Check the sludge/scum layer levels in all septic tanks
- Recommend if tank should be pumped
- Check inlet and outlet baffles
- Check the drainfield effluent levels in the rock layer
- Check the pump and alarm system functions
- Check wiring for corrosion and function
- Check dissolved oxygen and effluent temperature in tank
- Provide homeowner with list of results and any action to be taken
- Flush and clean laterals if cleatours exist

"I understand it is my responsibility to properly operate and maintain the sewage treatment system on this property, utilizing the Management Plan. If requirements in the Management Plan are not met, I will promptly notify the permitting authority and take necessary corrective actions. If I have a new system, I agree to adequately protect the reserve area for future use as a soil treatment system."

Property Owner Signature: _____ Date: _____
 Designer Signature: Danny Johnson Date: _____

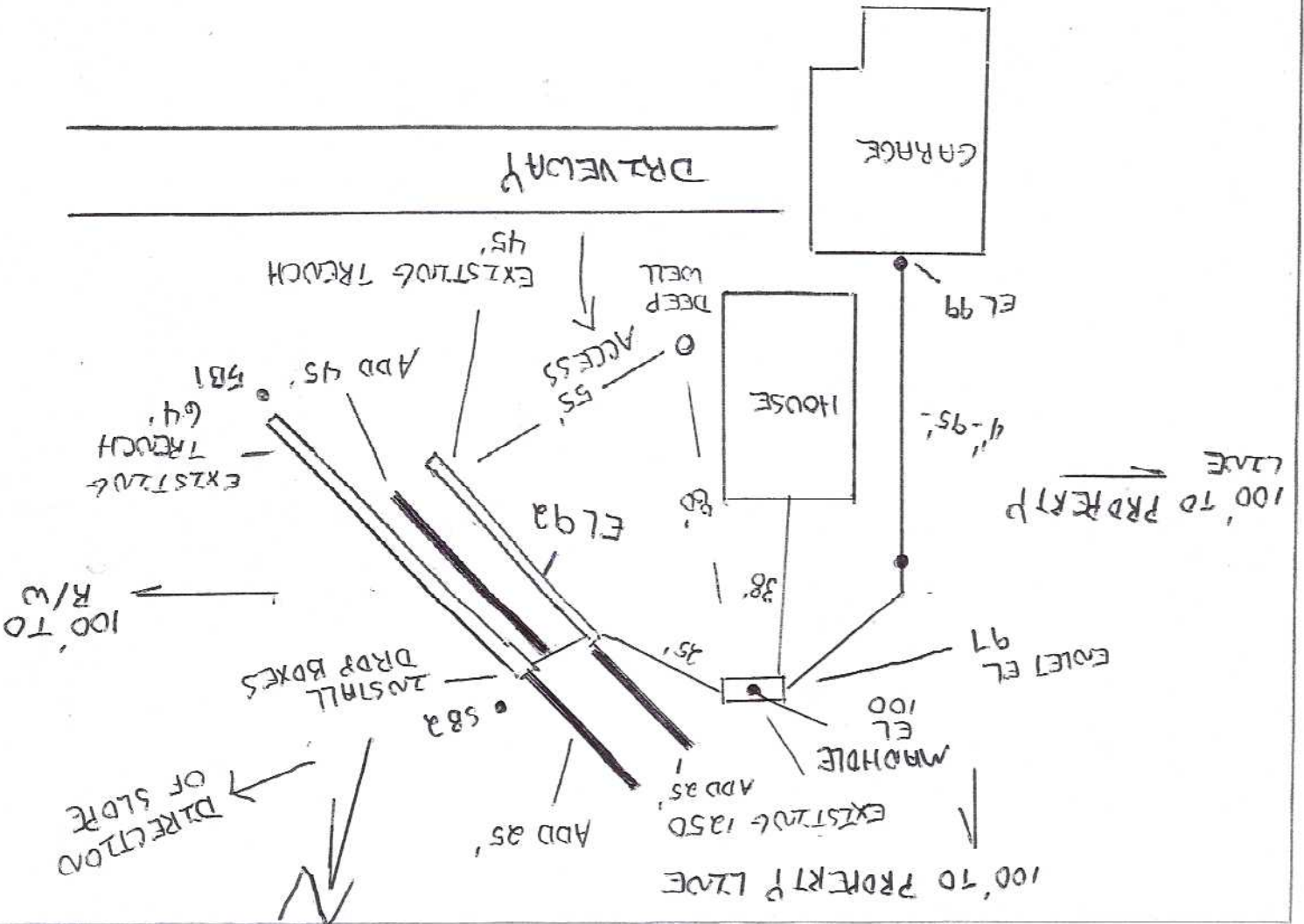
See Reverse Side for Management Log

SKETCH SHEET

DATE: 8-1-20

CLIENT: CASSADY

MAP DRAWN TO SCALE WITH A NORTH ARROW



CHECK OFF LIST-HAVE ALL OF THE FOLLOWING BEEN DRAWN ON THE MAP??

- SHOW EXISTING OR PROPOSED
- WATER WELLS WITHIN 100 FT OF TREATMENT AREAS
- PRESSURE WATER LINES WITHIN 10 FT OF TREATMENT AREAS
- STRUCTURES
- ALL SOIL TREATMENT AREAS
- ALL LOT IMPROVEMENTS
- ALL LISTS COMPONENTS
- HORIZONTAL AND VERTICAL REFERENCE
- POINT OF SOIL BORINGS
- DIRECTION OF SLOPE
- ALL LOT DIMENSIONS
- DISTURBED/COMPACTED AREAS
- SITE PROTECTION-LATHE AND RIBBON EVERY 15 FT
- ACCESS ROUTE FOR TANK MAINTENANCE
- REQUIRED SETBACKS
- STRUCTURES
- OHW

COMMENTS:

DESIGNER SIGNATURE: *James Dymally*
 LICENSE # 127

DATE 8-1-20

- BENCHMARK 100
- ELEVATION OF SEWER LINE @ HOUSE 99
- ELEVATION @ TANK INLET 97
- ELEVATION @ BOTTOM OF ROCK LAYER
- ELEVATION @ BOTTOM OF BORING OR RESTRICTIVE LAYER 86
- ELEVATION OF PUMP
- ELEVATION OF DISTRIBUTION DEVICE

INDICATE ELEVATIONS

Septic tank fact sheet: Tim Woodrow
 System inspector or installer

Current septic tank owner: John Cassidy

Site address: 29257 420th Ave

Aitkin MN 56431

Phone number: 763-370-6045

Tank type: Precast Concrete

Approx. size (gallons): 1250

Approx. age:

Lift station (how many): No

Our procedure for inspecting a septic tank is as follows.

Open the access cover.

Clean the septic and lift tanks removing all of the solid and liquid waste.

Do a fresh water rinse (not available during cold winter months).

Look at the septic & or lift tank from the access opening looking for cracks, breaks or

other signs of deterioration.

Check to see if the baffles are still functional.

Replace the access cover.

Defects are listed below:
 NONE

Recommendations or comments:

Tank is ok and does not appear to leak.

Observed by: Dan Swanson

Observation date: September 4, 2019

Note: This tank appears water tight within the normal operating range of the tank, there are no guarantees that it will keep ground water out.

Note: This is a septic tank fact sheet, not a complete sewer system inspection form and does not replace a complete sewer inspection for transfer of property. In some instances, this form may be used in conjunction with a sewer inspection.



Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

Compliance Inspection Form

Existing Subsurface Sewage Treatment Systems (SSTS)

Doc Type: Compliance and Enforcement

Inspection results based on Minnesota Pollution Control Agency (MPCA) requirements and attached forms – additional local requirements may also apply.
Submit completed form to Local Unit of Government (LUG) and system owner within 15 days

For local tracking purposes:

System Status

System status on date (mm/dd/yyyy): 11/7/2019

Compliant – Certificate of Compliance (Valid for 3 years from report date, unless shorter time frame outlined in Local Ordinance.)
 Noncompliant – Notice of Noncompliance (See Upgrade Requirements on page 3.)

Reason(s) for noncompliance (check all applicable)

- Impact on Public Health (Compliance Component #1) – Imminent threat to public health and safety
- Other Compliance Conditions (Compliance Component #3) – Imminent threat to public health and safety
- Tank Integrity (Compliance Component #2) – Failing to protect groundwater
- Other Compliance Conditions (Compliance Component #3) – Failing to protect groundwater
- Soil Separation (Compliance Component #4) – Failing to protect groundwater
- Operating permit/monitoring plan requirements (Compliance Component #5) – Noncompliant

Property Information

Parcel ID# or Sect/Twp/Range: 07-0-057600
 Property address: 29257 420th Ave Aitkin MN 56431
 Reason for inspection: Building Permit
 Property owner: John Cassidy
 Owner's representative: Larry Liljenquist
 Owner's phone: 218-820-8886
 Local regulatory authority: Aitkin County
 Brief system description: 1250 Septic to 2 Trenches (3' wide and 45 and 65' Long)

Comments or recommendations:

Certification

I hereby certify that all the necessary information has been gathered to determine the compliance status of this system. No determination of future system performance has been made due to unknown conditions during system construction, possible abuse of the system, inadequate maintenance, or future water usage.

Inspector name: Tim Woodrow
 Business name: Gobles Sewer Service
 Inspector signature:

Necessary or Locally Required Attachments

- Soil boring logs
- System/As-built drawing
- Forms per local ordinance
- Other information (list): Tank report

1. Impact on Public Health – Compliance component #1 of 5

Compliance criteria:

System discharges sewage to the ground surface.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
System discharges sewage to drain tile or surface waters.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
System causes sewage backup into dwelling or establishment.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Any "yes" answer above indicates the system is an imminent threat to public health and safety.

Comments/Explanation:

Verification method(s):

- Searched for surface outlet
- Searched for seeping in yard/backup in home
- Excessive ponding in soil system/D-boxes
- Homeowner testimony (See Comments/Explanation)
- "Black soil" above soil dispersal system
- System requires "emergency" pumping
- Performed dye test
- Unable to verify (See Comments/Explanation)
- Other methods not listed (See Comments/Explanation)

2. Tank Integrity – Compliance component #2 of 5

Compliance criteria:

System consists of a seepage pit, cesspool, drywell, or leaching pit. Seepage pits meeting 7080.2550 may be compliant if allowed in local ordinance.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Sewage tank(s) leak below their designed operating depth. If yes, which sewage tank(s) leaks:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Any "yes" answer above indicates the system is failing to protect groundwater.

Comments/Explanation:

See attached tank report

Verification method(s):

- Probed tank(s) bottom
- Examined construction records
- Examined Tank Integrity Form (Attach)
- Observed liquid level below operating depth
- Examined empty (pumped) tanks(s)
- Probed outside tank(s) for "black soil"
- Unable to verify (See Comments/Explanation)
- Other methods not listed (See Comments/Explanation)

3. Other Compliance Conditions – Compliance component #3 of 5

a. Maintenance hole covers are damaged, cracked, unsecured, or appear to be structurally unsound. Yes* No Unknown

b. Other issues (electrical hazards, etc.) to immediately and adversely impact public health or safety. Yes* No Unknown

Explain:
*System is an imminent threat to public health and safety.

c. System is non-protective of ground water for other conditions as determined by inspector. Yes* No

Explain:
*System is failing to protect groundwater.

4. Soil Separation – Compliance component #4 of 5

Date of installation: 6/26/1979 (mm/dd/yyyy) Unknown Yes No

Shoreland/Wellhead protection/Food beverage lodging? Yes No

Compliance criteria:

For systems built prior to April 1, 1996, and not located in Shoreland or Wellhead Protection Area or not serving a food, beverage or lodging establishment: Drainfield has at least a two-foot vertical separation distance from periodically saturated soil or bedrock.

Yes No

Non-performance systems built April 1, 1996, or later or for non-performance systems located in Shoreland or Wellhead Protection Areas or serving a food, beverage, or lodging establishment: Drainfield has a three-foot vertical separation distance from periodically saturated soil or bedrock.*

Yes No

"Experimental", "Other", or "Performance" systems built under pre-2008 Rules; Type IV or V systems built under 2008 Rules (7080, 2350 or 7080.2400 (Advanced Inspector License required) Drainfield meets the designed vertical separation distance from periodically saturated soil or bedrock.

Yes No

Any "no" answer above indicates the system is failing to protect groundwater.

Verification method(s): Conducted soil observation(s) (Attach boring logs) Two previous verifications (Attach boring logs) Not applicable (Holding tank(s), no drainfield) Unable to verify (See Comments/Explanation) Other (See Comments/Explanation)

Comments/Explanation:

*May be reduced up to 15 percent if allowed by Local Ordinance.

Indicate depths or elevations	
A. Bottom of distribution media	100
B. Periodically saturated soil/bedrock	Below 97"
C. System separation	> 36"
D. Required compliance separation*	31" (2.55')

5. Operating Permit and Nitrogen BMP* – Compliance component #5 of 5 Not applicable

Is the system operated under an Operating Permit? Yes No If "yes", A below is required

Is the system required to employ a Nitrogen BMP? Yes No If "yes", B below is required

BMP = Best Management Practice(s) specified in the system design

If the answer to both questions is "no", this section does not need to be completed.

Compliance criteria

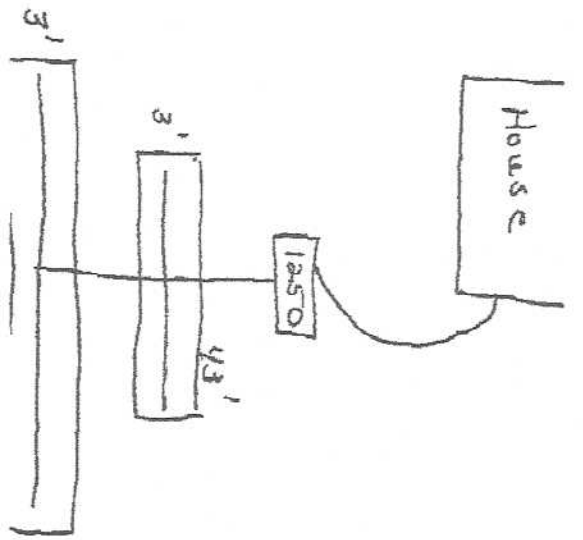
a. Operating Permit number: () Yes No

Have the Operating Permit requirements been met?

b. Is the required nitrogen BMP in place and properly functioning? Yes No

Any "no" answer indicates Noncompliance.

Upgrade Requirements (Minn. Stat. § 115.55) An imminent threat to public health and safety (TPHS) must be upgraded, replaced, or its use discontinued within ten months of receipt of this notice or within a shorter period if required by local ordinance. If the system is failing to protect ground water, the system must be upgraded, replaced, or its use discontinued within the time required by local ordinance. If an existing system is not falling as defined in law, and has at least two feet of design soil separation, then the system need not be upgraded, repaired, replaced, or its use discontinued, notwithstanding any local ordinance that is more strict. This provision does not apply to systems in shoreland areas, Wellhead Protection Areas, or those used in connection with food, beverage, and lodging establishments as defined in law.



Added

4 x 6.5 Trench
 Installed 6-20-79

2 TRENCHES

$$43 + 65 = 108 \text{ LF. EXISTING}$$