

LAKE COUNTY ENVIRONMENTAL HEALTH DEPARTMENT
 FINAL INSPECTION AND USE PERMIT OF WASTEWATER TREATMENT SYSTEM

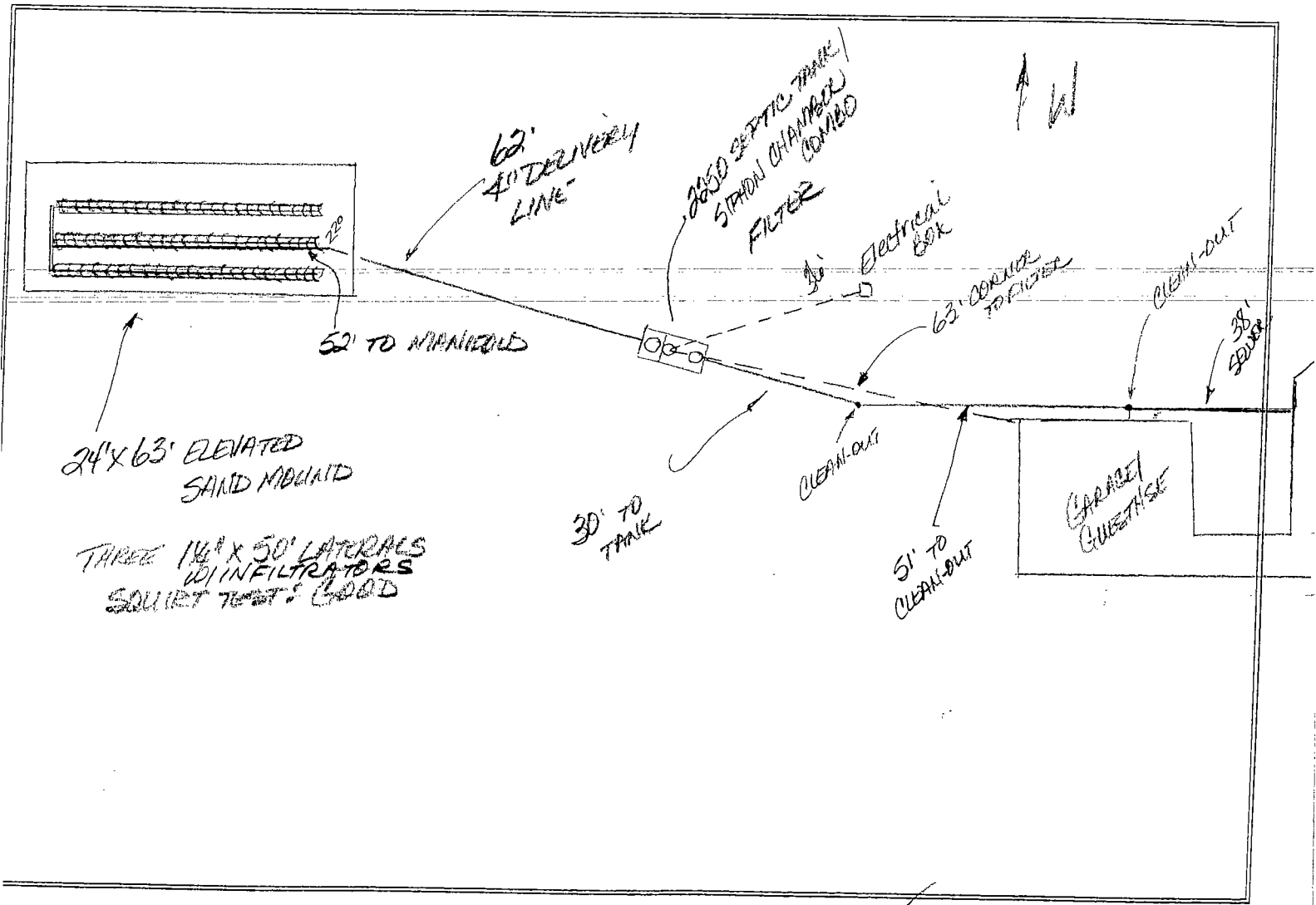
PROPERTY OWNER: GERALD & SYLVIA SAILOR

PHYSICAL ADDRESS: 1325 LAKE TO SKY RD, POLSON

LEGAL DESCRIPTION: SECTION 10, TWP 24 N, RNG 19 W 1/2 1/4 1/4

GEOCODE: 3469-10-1-01-04 SUBDIVISION: COS 5054 LOT: C

PERMIT NO: 5636 CONTRACTOR: ROBERTO ZAVALA

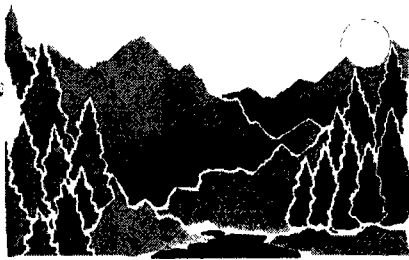


APPROVED FOR 5 BEDROOMS 400 GPD

INSPECTED BY: Laurie Greenwood DATE 12/5/03

SIGNATURE OF APPLICANT OR AUTHORIZED AGENT: Robert R. Watt

662 ✓



APPLICATION FOR LAKE COUNTY WASTEWATER TREATMENT INSTALLATION PERMIT

LAKE COUNTY ENVIRONMENTAL HEALTH
106 FOURTH AVENUE EAST
POLSON, MT 59860-2175

PH: 406-883-7236
FAX: 406-883-7205

Email: envhealth@lakecounty-mt.org

Return the completed application with the \$150.00 permit fee to the above address.

Property Owner: Gerald & Sylvia Saylor Phone # 513-829-1167
 Mailing Address: 1325 Lake to Sky City Bigfork, MT State/Zip 59911
 Property Address: Same
 Legal Description: Section: 10 Township 24 Range 19
 Subdivision Name: C.O.S. 5054 Lot C Block _____ Parcel Size 23.18
 Wastewater System: (Circle) New Replacement Bedroom # 5
 Water System: (Circle) Well Lake Spring Community
 (Circle) Existing Proposed
 Dwelling: (Circle) Single Family Multi-Family Mobile Home Commercial Garage

I hereby declare that the information submitted herein is true and completed to the best of my knowledge. I understand that a final inspection and approval of the system must be conducted by Lake County Environmental Health prior to back filling and use of the system. My signature also authorizes access to the described property for purposes of reviewing this application.

Owner Signature: _____ Date: _____

OFFICE USE ONLY

Geo Code: 3469-10-1-01-04 Tax Statement # 36058
 Property Type: (Circle) Residential Commercial Agricultural Lakeshore
 State Septic Approval: (Circle) Required Completed Not Required
 Name: _____ Reference Date: _____ States Es # _____
 Soil Type: Gravelly silt loam
 Percolation Test Results: C10 Shallow Bedrock Absorption Area Required: 150 - Sandmound
 Contractor: Roberto Zavala Required Septic Tank: 2250 Siphon
 Drainfield Sizing Reference: # of Bedrooms 5 Other: _____
 Type of Absorption Area Required: A 24' x 63' Elevated Sandmound
Constructed as per accompanying material.

[Signature] _____ 12-18-07 5636 2440
 Signature of Registered Sanitarian Date of Issue Permit Number Check Number

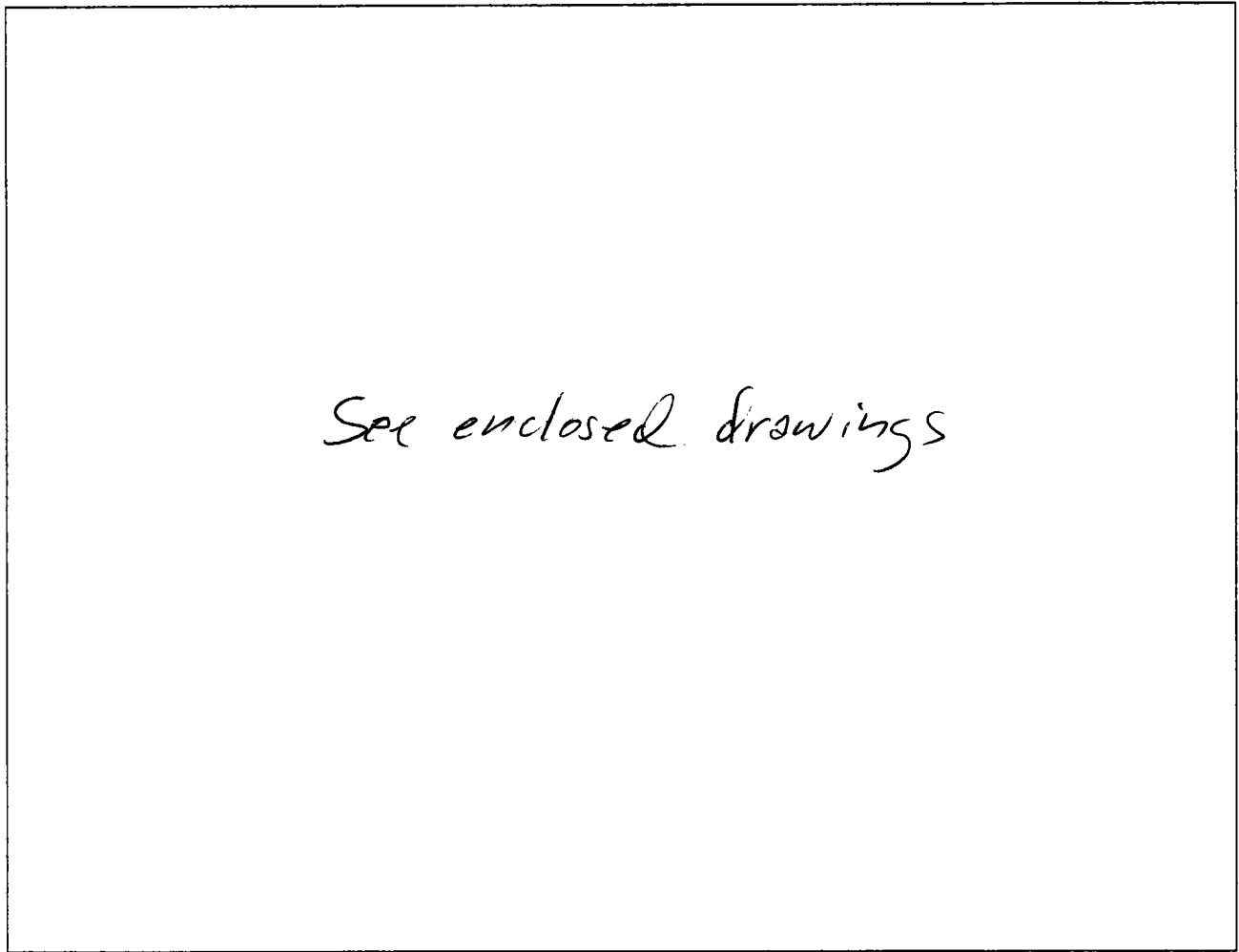
THE DESIGN, LOCATION, & ORIENTATION OF THE DRAINFIELD MAY NOT BE ALTERED
WITHOUT PRIOR APPROVAL FROM LAKE COUNTY ENVIRONMENTAL HEALTH.
APPROVED PERMIT IS INVALID IF SYSTEM IS NOT INSTALLED WITHIN TWELVE MONTHS OF ISSUANCE.

NOV 21 2007

[Handwritten mark]

Lot Layout:

- Including:
- a. property lines
 - b. existing and proposed structures, including basements
 - c. all existing or proposed wells, spring and cisterns on or within 100 feet of the property lines
 - d. all streams, lakes, springs, ponds, irrigation ditches, and other surface water sources on or within 100 feet of property lines
 - e. driveways, parking areas
 - f. utility lines
 - g. any existing wastewater disposal facilities
 - h. a scale (for example: 1 inch=20 feet)
 - i. direction of slope on the property
 - j. a north directional arrow
 - k. replacement area or plan for proposed wastewater treatment system



I hereby declare that the information submitted herein is true and completed to the best of my knowledge. I understand that a final inspection and approval of the system must be conducted by Lake County Environmental Health prior to back filling and use of the system. My signature also authorizes access to the described property for purposes of reviewing this application

Owner Signature: Gerald B. Saylor Date: 11/10/02

For office use only:
Date Received: _____ Permis# 5636 Check# 2440

K-Value for Multiple Wells Using Fetter

Project: Gerald & Sylvia Saylor county check
 Date: 18-Dec-02
 Reviewer: Terry Murphy R.S.

$T = 33.6 (Q/S)^{0.67}$ T = transmissivity S = drawdown
 Q = ft³/day (gpm)(192.5) = ft³/day
 Convert Q from gpm to ft³/day

Gwic well #	196159	Gwic well #		Gwic well #	
Yield in gpm	20	Yield in gpm	0	Yield in gpm	0
convert to ft ³	3850	convert to ft ³	0	convert to ft ³	0
Static water level	265	Static water level	18	Static water level	104
Pumping water level	596	Pumping water level	38	Pumping water level	106
Drawdown	331	Drawdown	20	Drawdown	2
T=	173.905	T=	0	T=	0
well depth	596	well depth	38	well depth	125
Casing length	596	Casing length	38	Casing length	125
slot length	20	slot length	0	slot length	0
open bottom	0	open bottom	10	open bottom	10
Aquifer depth	20	Aquifer depth	10	Aquifer depth	10
K=T/b	8.695	K=T/b	0	K=T/b	0

Gwic well #		Gwic well #		Gwic well #	
Yield in gpm	0	Yield in gpm	0	Yield in gpm	0
convert to ft ³	0	convert to ft ³	0	convert to ft ³	0
Static water level	0	Static water level	246	Static water level	193
Pumping water level	58	Pumping water level	374	Pumping water level	265
Drawdown	58	Drawdown	128	Drawdown	72
T=	0	T=	0	T=	0
well depth	100	well depth	374	well depth	265
Casing length	100	Casing length	369	Casing length	265
slot length	0	slot length	0	slot length	0
open bottom	10	open bottom	5	open bottom	10
Aquifer depth	10	Aquifer depth	10	Aquifer depth	10
K=T/b	0	K=T/b	0	K=T/b	0

AVERAGE K

8.7

Total number of wells used

1

K-Value 8.7 ft/day

Flow direction	South 62.5 West			
Slagle 1988 USGS	Study	1/3 topographic	Triangulation	
Slope calculation	drop	150 ft	drop	0 ft
	Miles	0.625 miles	run	100 ft
	run	3300 ft	percent slope	0.00%
Calculate Hydraulic gradient		0.045 ft/ft	calculated gradient	0 ft/ft
			default	0
				0 ft/ft

i= hydraulic gradient	0.0450	f= discharge: gpd	200
d= Mixing zone thickness	16.41	Qf= effluent discharge	26.7
w= width of drainfield	63	p= precipitation	17
L= length of mixing zone	100	l= prec. In ground water	0.2
Ng= nitrogen in background ground water	1	conversion factor	0.0039
Nr= nitrogen in recharge ie. Rainwater	1		
Ne= nitrogen in drainfield	50		

W= .175*L+w	W=	80.5	mixing zone width
Am=W*d	Am=	1321	mixing zone area
As=W*L	As=	8050	mixing zone surface area
Qg=K*i*Am	Qg=	517.18	ground water volumetric rate
Qr=As*p*l	Qr=	6.28	precipitation volumetric rate
Qe=f*Qf	Qe=	26.7	effluent volumetric rate
Qt=Qg+Qr+Qe	Qt=	550.16	total water volumetric rate
Nt=((Ng*Qg)+(Nr*Qr)+(Ne*Qe))/Qt	Nt=	3.38	ppm nitrogen

Nitrogen value at the end of mixing zone 3.38 ppm

Gerald B. Saylor

5683 Green Oak Court
Fairfield, Ohio 45014-3590
Phone (513) 829-1167
FAX (513) 829-1754

*5683 Green Oak Ct
Fairfield, OH 45014-3590*

E-mail: gbsaylor@hotmail.com

February 7, 2003

Lake County Environmental Health
Lake County Court House
106 Fourth Avenue East
Polson, Montana 59860-2175

Subject: Permit 5636

Dear Sir or Madam:

I have reviewed your design for the septic system associated with the above subject permit. I would like to know the purpose of the pump. If possible/permitted, may this pump be eliminated by designing the system to be gravity fed in its entirety? I would like to eliminate all unnecessary mechanical devices where possible as a way to avoid initial cost of purchase/installation, mechanical failure and future replacement/repair costs.

Obviously, I am not a sanitary engineer and I mean no disrespect to the designer. I am somewhat familiar with septic systems in Ohio, Illinois and Indiana but have not run across pump requirements except where the effluent had to be lifted to a higher elevation to reach the leach field.

The old saying that, and I paraphrase, "Excrement runs downhill," would imply that gravity may suffice!

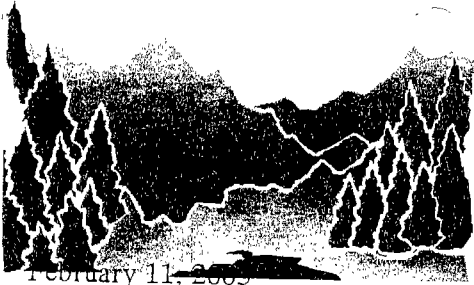
Please advise.

Thanks.

Very truly yours,

Gerald B. Saylor

*cc: 2/7/03/2
JRS Custom Homes*



LAKE COUNTY ENVIRONMENTAL HEALTH

106 FOURTH AVENUE EAST
POLSON, MT 59860-2175

PH: 406-883-7236 FAX: 406-883-7205
Email: envhealth@lakecounty-mt.org

Gerald B. Saylor
5683 Green Oak Court
Fairfield, OH 45014-3590

RE: Wastewater Treatment Systems Installation Permit # 5636

Mr. Saylor:

Regarding your request to alter the design of the above-referenced permit; the issue has been reviewed by this office and denied. The denial is based upon the following:

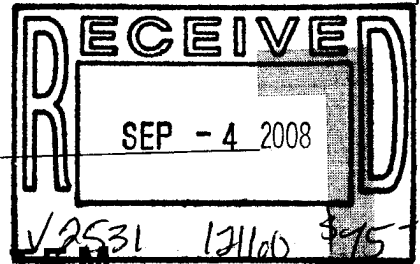
- ✦ The only available area to locate a drainfield near the home site is limited in size and encumbered by shallow fractured bedrock. The sight conditions require that the drainfield be an elevated sand mound to meet the required separation to bedrock and facilitate the treatment of effluent from a five-bedroom home.
- ✦ Lake County incorporates pressure-distribution in all residential wastewater systems designs; additionally elevated sandmounds must be pressure-dosed as part of the State of Montana minimum designs standards.
- ✦ Pressure-distribution can be accomplished with an effluent pump or with a dosing siphon. Siphons maybe incorporated into the design when the elevation difference between the top of the tank and the manifold in the drainfield exceeds five-feet provided that the discharge line can be installed on a relatively constant grade. Given the location of the house in relationship to the drainfield, shallow bedrock, and the steep and variable slopes installation of a properly functioning siphon is very questionable.

If you want to pursue the siphon option you will need to hire a Montana licensed Professional Engineer or Registered Sanitarian in private practice to design the system and submit it for review. The cost of the private design is solely your responsibility and there will be an additional application fee of \$150.00 to review the design. The system as permitted can be installed at any time up to the time in which the permit expires.

Should you have any questions regarding this correspondence contact our office at 406-883-7236.

Sincerely,

Terry Murphy
Registered Sanitarian



LAKE COUNTY WASTEWATER TREATMENT SYSTEM CHANGE OF USE REQUEST

Lake County
Environmental Health
106 4th Avenue East
Polson, Montana 59860

Phone: 406-883-7236
Fax: 406-883-7205
Email: envhealth@lakemt.gov

Remit \$75.00 Fee with Request

Current Property Owner: Jim Victor
Mailing Address: 31572 Lake to Sky RD.
City & State: Big Fork - Mt 59911
Property Address: Same
Phone Number: 209-761-7562 / 209-756-8401
Legal Description: Section 10 Township 24 Range 19
Subdivision Name _____
Lot _____ Block _____ Geo 3469-10-1-01-04

Owner (at time of installation): Gerald + Sylvia Saylor
Year Installed: 2003 Permit #: 5636

Planning review: East State Zoning District - re-submitted 9/29/08

Proposed Change of Use:
Add Bathroom with new Garage and mud room

FOR INCREASE OF WASTEWATER FLOW OR STRENGTH ONLY: By submitting this application, I/we acknowledge that if we are increasing wastewater flow or strength to an existing wastewater treatment system it may cause the system to fail prematurely. I/we also understand that because of the additional flow or strength of wastewater, the septic tank should be checked a minimum of every three (3) years and pumped if necessary.

Property Owner(s) Signature: [Signature]

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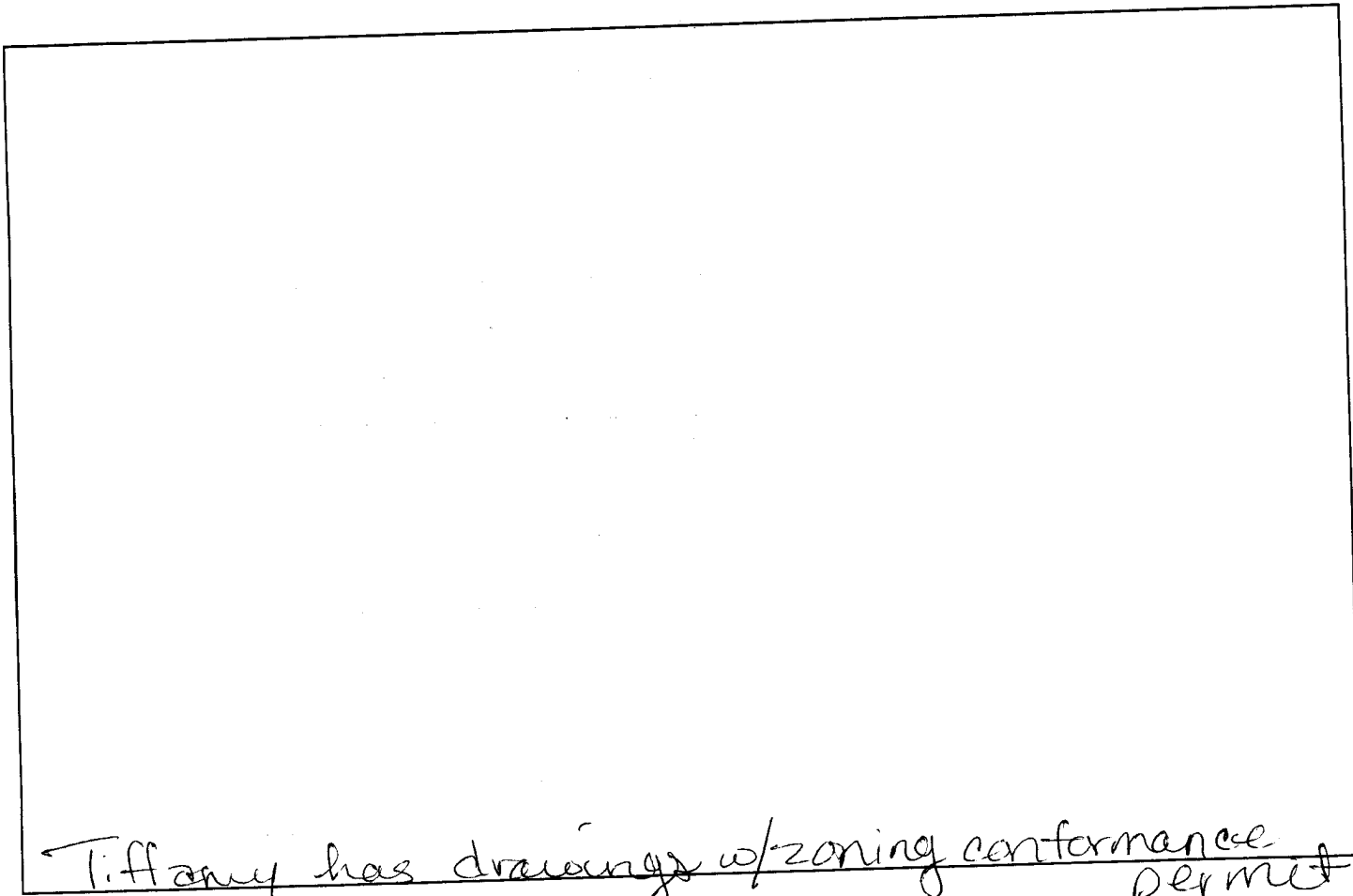
Approved for: Addition of a garage with bathroom and mud room - bonus room above. garage = total flow not to exceed 400 gpd

Approved by: [Signature] Date: OCT. 20, 2008

Lot Layout:

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- i. direction of slope on the property
- j. a north directional arrow
- k. replacement area or plan for proposed wastewater treatment system
- l. **Attach floor plan for each level**



Tiffany has drawings w/ zoning conformance permit.

Location Information: Draw a road map or write directions to the property. Include landmarks, road names, branch roads, distance mile markers, adjoining neighbors, building colors/features, etc.

