

# APPLICATION

PERCOLATION TESTING

A 517999

P \_\_\_\_\_

HOWARD COUNTY HEALTH DEPARTMENT  
BUREAU OF ENVIRONMENTAL HEALTH  
3525-H ELLICOTT MILLS DRIVE/ELLICOTT CITY, MARYLAND 21043  
TELEPHONE: 313-2640

DISTRICT \_\_\_\_\_

DATE 11/18/02

TO: THE COUNTY HEALTH OFFICER  
ELLICOTT CITY, MARYLAND

I HEREBY APPLY FOR THE NECESSARY TEST PRIOR TO APPLICATION FOR PERMIT TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE DISPOSAL SYSTEM.

PROPERTY OWNER DAVID, HOLLY BENZE

ADDRESS 2355 Brown Bridge Rd Fulton MD 20759 PHONE 301-854-3543  
301-854-2113  
301-509-8989

AGENT OR PROSPECTIVE BUYER \_\_\_\_\_

ADDRESS \_\_\_\_\_ PHONE \_\_\_\_\_

PROPERTY LOCATION:

SUBDIVISION \_\_\_\_\_ LOT NO. \_\_\_\_\_

ROAD AND DESCRIPTION same

TAX MAP 40 PARCEL # P 105

SIZE OF LOT 3 ACRES TYPE BLDG. Single Family to replace SFD <sup>EX.</sup>  
(SINGLE FAMILY DWELLING OR COMMERCIAL)

THE SYSTEM INSTALLED UNDER THIS APPLICATION IS ACCEPTABLE ONLY UNTIL PUBLIC FACILITIES BECOME AVAILABLE. I FULLY UNDERSTAND THE FEE CONNECTED WITH THE FILING OF THIS PERC TEST APPLICATION IS NON-REFUNDABLE UNDER ANY CIRCUMSTANCES. I ALSO AGREE TO COMPLY WITH ALL M.O.S.H.A. REQUIREMENTS IN TESTING THIS LOT.

David A Benze  
(SIGNATURE OF APPLICANT)

APPROVED BY \_\_\_\_\_ FOR \_\_\_\_\_ DATE \_\_\_\_\_

DISAPPROVED BY \_\_\_\_\_ FOR \_\_\_\_\_ DATE \_\_\_\_\_

HOLD PENDING FURTHER TESTS \_\_\_\_\_

REASONS FOR REJECTION OR HOLDING \_\_\_\_\_

PERCOLATION TEST PLAT/PRELIMINARY PLAT - TITLE OR I.D. # \_\_\_\_\_ DATE \_\_\_\_\_

SITE DEVELOPMENT PLAN/FINAL PLAT - TITLE OR I.D. # \_\_\_\_\_ DATE \_\_\_\_\_

# THIS IS NOT A PERMIT

12/3/02  
9:00

COUNTY #

SOIL PROFILE

0' A  
 1' hvy brn orge cl/m  
 4-2' tan beige compacted hvy salm  
 7' dk brn mottled hvy silm  
 9-9" hvy silm s.s. nodules

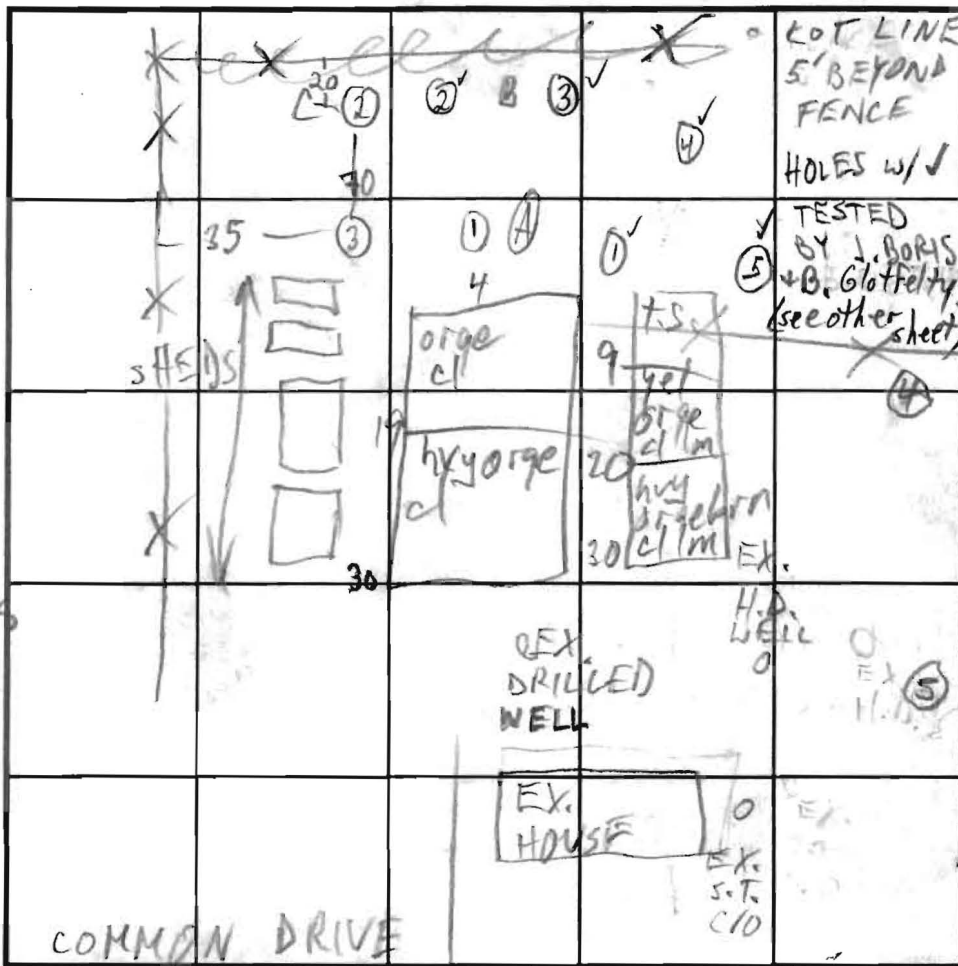
B

hvy orge brn cl/m  
 6' brn white silm mottled  
 6H RST  
 11 1/2' H<sub>2</sub>O

C

hvy orge brn cl/m  
 1' mottled gray sa  
 7-8' brn gray silm

12-9" H<sub>2</sub>O  
 13' 6H RST



SOIL PROFILE

0' ① 3  
 9-4" top soil  
 hvy orge brn cl/m  
 28' hvy orge brn cl  
 30' top soil  
 6' hvy orge brn cl/m  
 9-4" brn hvy orge  
 12' silm  
 24' orge silm

← TO INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.  
 BROWN'S BRIDGE RD

-2 MIN FROM DAVE'S

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME	
			START	STOP	START	STOP		
12/3/02	1	7" 20"	12:25	10"	4	7:19	3:18	10:40
	FAIL		12:40	9 3/32			3:33	9:56
			12:55	9 3/32				
			1:10	9 3/32			9 3/32	1:10
			1:25	9 3/32			9 3/32	1:25
	2	7" 35"	1:49	35"	5	7" 20	3:38	10
			2:04	34 3/8				
			2:19	34 2/32				
			4:00	34 3/4				
	3	NOT TESTED						9:47
		DUE TO HOLE ② RATE						

REMARKS FAILING SAND MOUND TESTS  
 TYPE OF SOIL \_\_\_\_\_  
 TESTED BY M. Ritkin ALSO PRESENT \_\_\_\_\_  
 TRENCH DESIGN DATA: AVERAGE PERCOLATION TIME \_\_\_\_\_ TRENCH WIDTH \_\_\_\_\_  
 INLET DEPTH \_\_\_\_\_ MAXIMUM BOTTOM DEPTH \_\_\_\_\_ SQ. FT./BEDROOM \_\_\_\_\_



Howard County  
Health Department

3525 H Ellicott Mills Drive • Ellicott City, MD 21043  
(410) 313-2640 Fax (410) 313-2648  
TDD (410) 313-2323 Toll Free 1-866-313-6300  
website: www.hchealth.org

Penny E. Borenstein, M.D., M.P.H., Health Officer

10/29/02

TO: File

FROM: Mark Rifkin

RE: Replacement Dwelling Proposal  
7355 Brown's Bridge Road

Owner wishes to build replacement dwelling on existing parcel. House predates HD records, no s.s. record known. Repl. well drilled in 1980. Hand dug well remains intact, not in service.

Advised owner that history of extremely shallow water table on lot in front of his (Kula property), and likely holding tank. Owner reports slight, but not significant, difference in elevation from swale downhill of failing perc on Kula parcel to highest point on his property. Owner strongly advised to consider perc on this crest, although ex. well in conflict and would need replacement. Owner advised wet season test requirement possible, depending on site plan.

Owner also advised of Elioak soils (likely deep clay), no 10K ft<sup>2</sup> requirement, and site plan requirements.

No discussion of less likely proposal to rehab ex. dwelling, and perc implications thereof.

*based on office mtg w/owner this date:*

(1)

#7

- 0-5" Brn 3m granular mufr Sil
- 5-9" 2m sbk Brown L
- 9-12" 2m sbk red/brown CL
- 12-~~10~~<sup>20</sup>" 1-2m<sup>0</sup> sbk red/brown mufr CL
- ~~10~~<sup>20</sup>"-~~20~~<sup>27</sup>" mufr 0-1 sbk Brown Sil
- 27"-42" micaceous Brown L

PSS  
 PSF  
 PF

12:25:00  
 12:33:30  
 12:50:00  
 16:30 @ 4'

by J. Boris  
 & B. Glotfelty

Designated SRA via P.C.

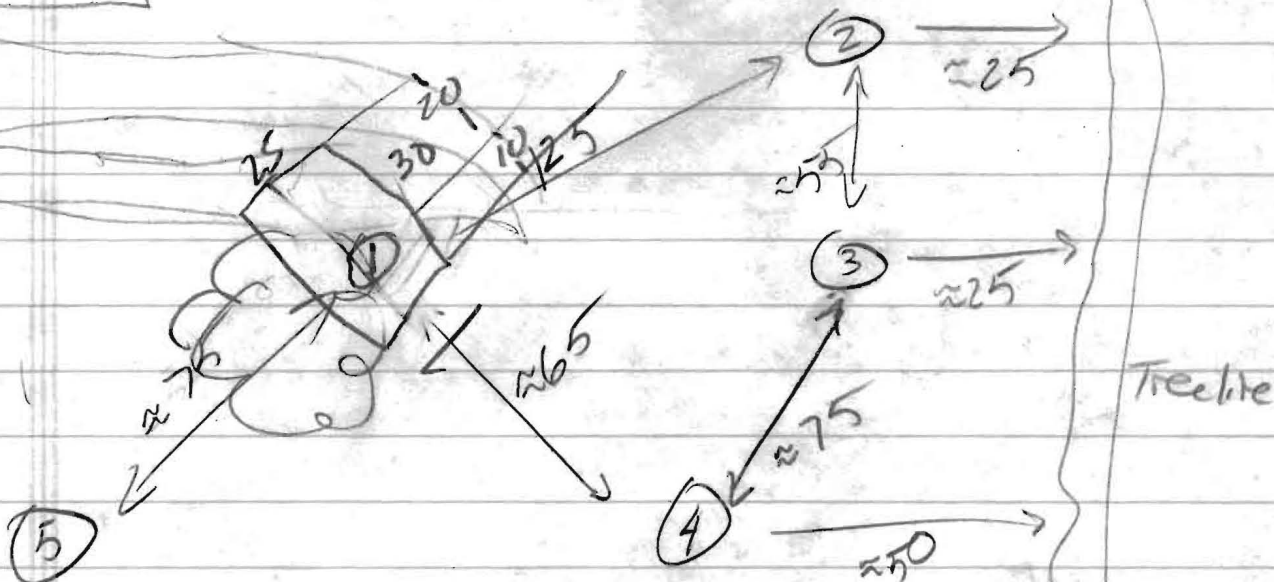
6" sand Bot + 3' GRAVEL 1 1/2 - 2 1/2

25x30

PIPE INV. @ 1 1/2

HOLE 3.57' 3" MANIFOLD 1 1/4 - 1 1/2" LATERALS

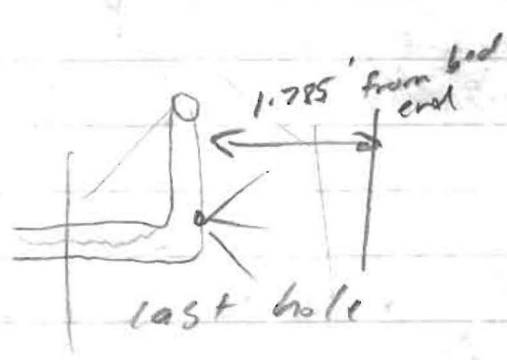
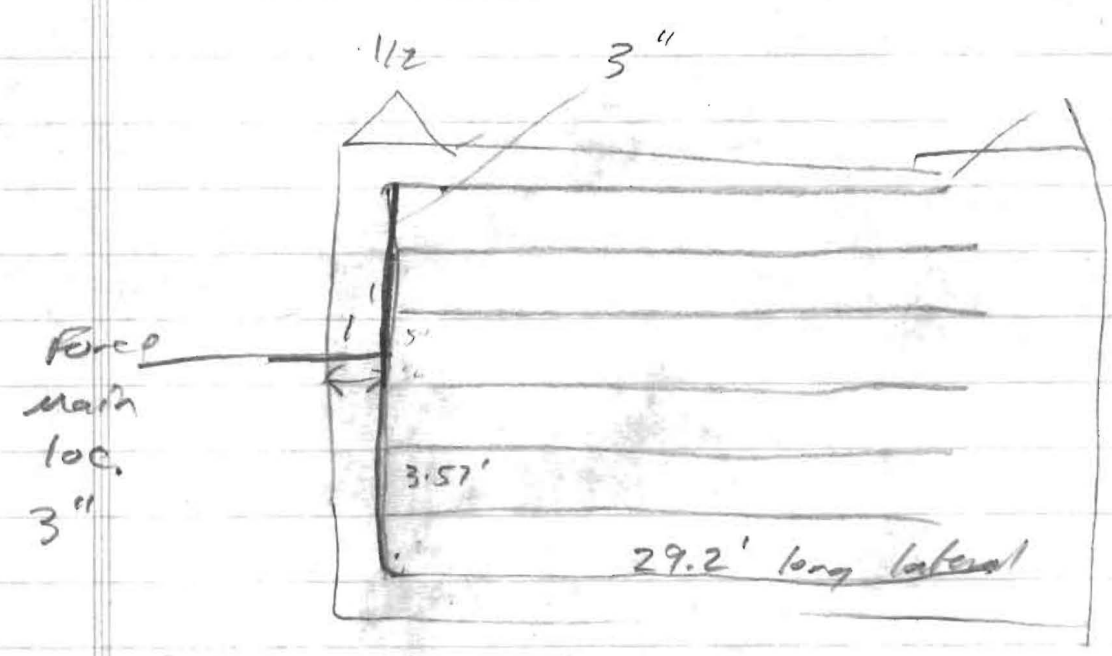
7 Laterals 3" PRESSURE LINE HIGH



H<sub>2</sub>O @ 8 1/2 in 4  
 0 - 4 1/2 Clay (Heavy Orange Brown)  
 4 1/2 - 8 1/2 smy/orange SL  
 8 1/2 - 10 1/2 heavy mottled DK Brown SIL

by J. Boris  
 & R. Glotfelty

2 laterals w/ 46" betw. holes  
 1st hole 23" from manifold  
 Sep between laterals to be 3.57' or 42"  
 Sep between laterals and bed edge = 2 1/3"  
 3.75' or 45" between holes  
 8 holes / lateral



TDM 3"

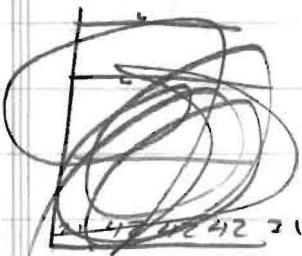
- 1) Friction loss  
1.99' / 100' run in  
3" sch 40
- 2) Discharge Head  
2'
- 3) Static - Elevation =

contour  
↓



End Face 7 lateral @ 30' w/ 42.84" between laterals

51" between holes



$$\frac{360 - [7 \times 42]}{2}$$

Flow rate  
↑

360

8 holes / lat @  $\frac{1.63 \text{ spm}}{\text{hole}} = 13 \text{ g/lateral} \times 7^{\text{laterals}} = 91 \text{ g/mine}$

7 holes / lat @  $1.63 \text{ spm} = 11.41 \times 7 = 79$

#5

0-7"

Zmsr Brown L

8-14"

Heavy SIL redbrown Zmsbk

14"-22"

redbrown CL 1/2msbk

22-43

0-2fbk SIL redbrown

43-

yellow brown SIL

perched @ 14

#4

PSS

1:48:30

PSF

1:51:45

PF

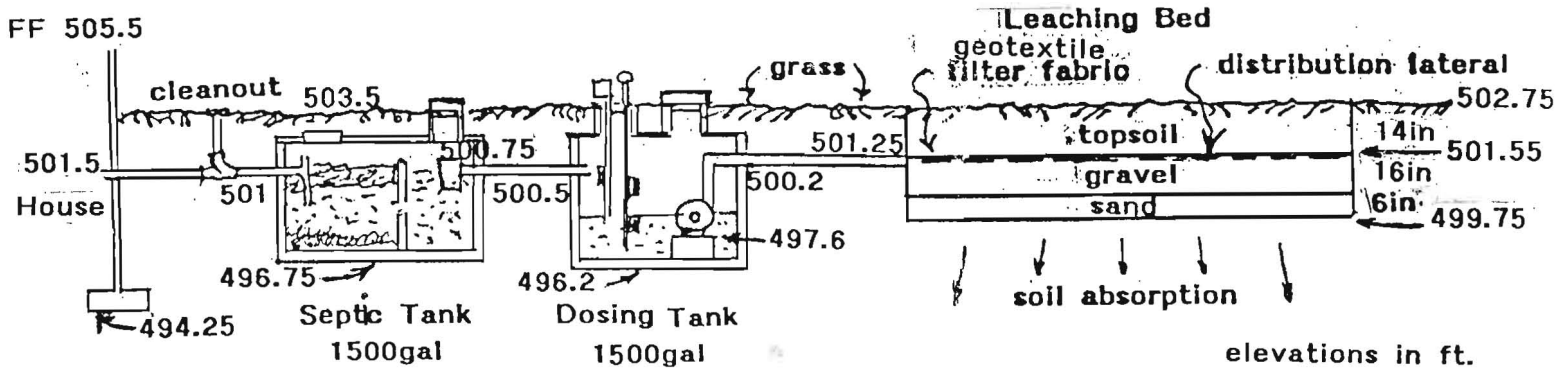
1:56:45

**PERCOLATION CERTIFICATION DETAILS**

This is a shallow bed subsurface wastewater infiltration system for a 4-bedroom house at 7355 Browns Bridge Road, Fulton, MD 20759. Percolation tests were conducted on December 3 and December 12, 2002, by Mark Rifkin, R.S., Well and Septic Program, Howard County Health Department, Maryland. The bed site, drip disposal site, and design parameters are a result of those tests.

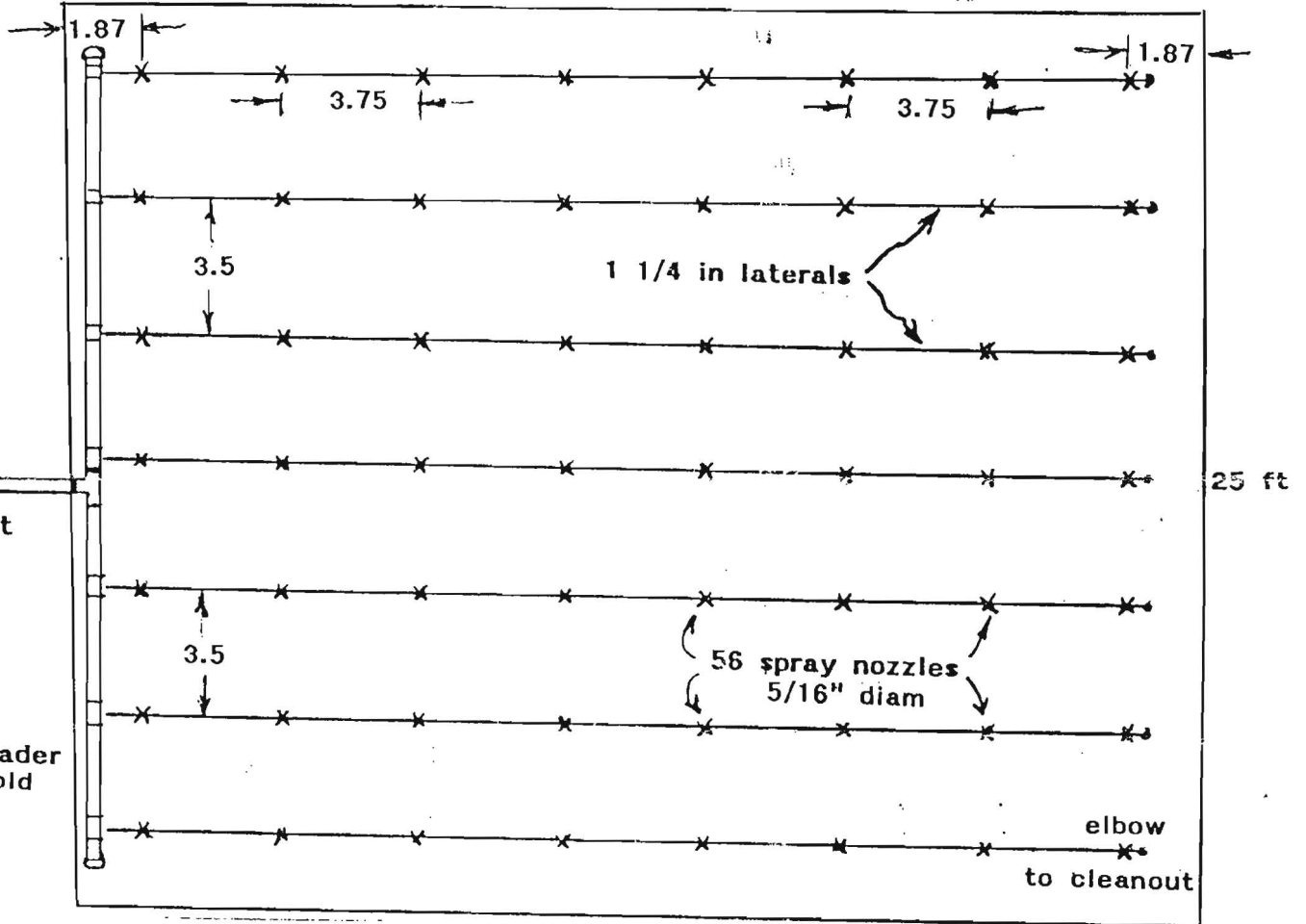
House invert output pipe, 4" PVC with cleanout. Inlet to 1500 gallon prefab 2 compartment concrete tank. Filtered outlet 4" with surface cleanout to 1500 gallon single compartment concrete tank (Dosing tank). Discharge by Myers pump, Model WHR5, 1/2 HP with optional 3-inch discharge. Liquid level sensing by 3 mini floats, Myers Model PM15. Pump control, Myers CE210, located in house basement. Approximately 200 ft. of 3-inch PVC outlet pipe connects to leaching bed. Bed design is shown in the drawings. All piping to be sealed Schedule 40 PVC. Nozzles to be clean drilled holes, spaced 3.75 feet apart, 5/16 inch in diameter. Distal ends will be drilled at upper end with 5/16-inch diameter holes. The distal ends are located 1.87 ft. from end of bed. One end, the lateral most distant from the pump, will turn up to the surface and be capped for future inspection. Bed gravel will be 2 in. to 3/4 in. washed gravel. Sand to be washed concrete sand, suitable for sand mounds: 0.25-0.50 mm. Size with U.C. <3.5. Extreme care should be taken to reduce disturbance at site. Sand and gravel shall not be contaminated with dirt or silt. Careful placement and leveling of sand and gravel should be done. Laterals and manifold are placed level with the top edge of the one-foot gravel layer. Four additional inches of gravel will be added, surrounding the manifold pipes to secure them in place. A piece of woven geotextile filter cloth is then placed on the gravel to isolate it from the fill dirt and topsoil that is returned to bring the area up to grade. The final leveled area is planted with lawn grass.

The system will be operated by a timed dosing cycle. The timed cycle will ensure full pressurization of the system for uniform distribution within the bed. Four discharge cycles will be allowed per day. Discharge quantities will be limited to 150 gallons per cycle; total discharge per day will be limited to 600 gallons.

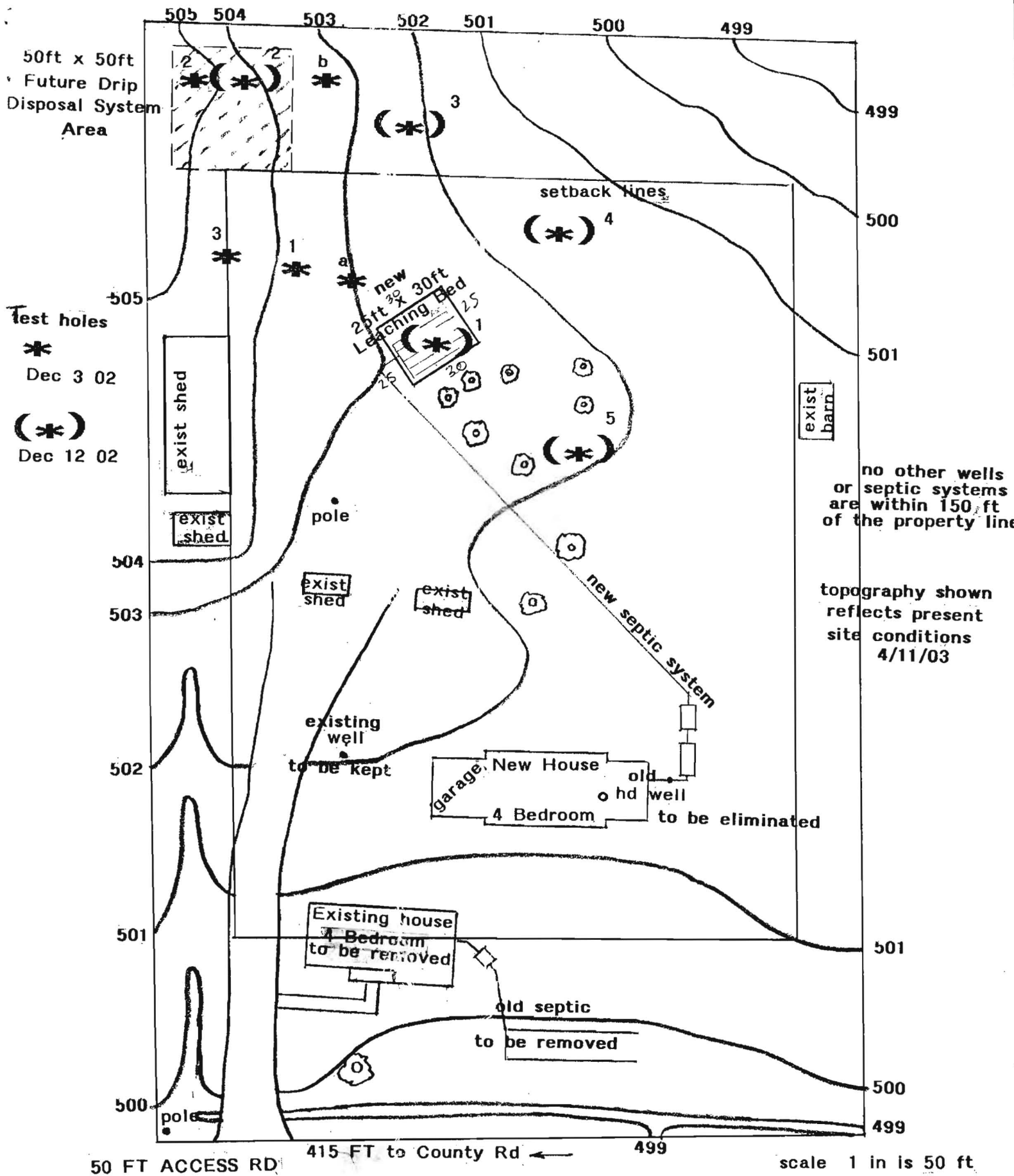


Leaching Bed Detail

30 ft scale 1 in is 5 ft



# PERCOLATION CERTIFICATION PLAN

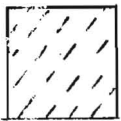


no other wells or septic systems are within 150 ft of the property line

topography shown reflects present site conditions 4/11/03

**Sequence:**

- Existing drilled well to remain
- New house foundation dug
- Existing hand-dug well filled (2' gravel 2' concrete)
- House foundation poured
- House erection completed
- Septic system installation
- Existing well shifted to new house
- New house completed
- Old septic system crushed and buried
- Old house demolished
- Site graded



This area designates a private sewage disposal area as required by the Maryland Department of the Environment for individual sewage disposal. Improvements of any nature in this area are restricted until public sewage is available. These disposal areas shall become null and void upon connection to a public system. The County Health Officer shall have the authority to grant adjustments to the disposal area.

Tax Map 40 Parcel 105 Grid 12 3-Acre Lot  
7355 Browns Bridge Road, Fulton, MD 20759

This plan is for the upgrade of an existing septic system for use with a replacement 4-bedroom house.

Survey and plan prepared by David Benze and William Groszopf, Registered Professional Engineer, 13498, State of Maryland. Survey performed April 11, 2003.

*Penny Borenstein M.D.*  
Howard County Health Officer

7/9/03  
Date