

11:00 AM / 8/19/91
8-26-91 3:00 PM
9/4/91 PM
9/9/91 AM

Tag ID - 05-372534

PERMIT

SEWAGE DISPOSAL SYSTEM

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

P 474/16
A REPAIR

DISTRICT _____

DATE 8/19/91

DATE SYSTEM APPROVED 9-13-91

INSPECTOR R.P. Williams

HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
461-9933

INDEXED

Waterloo Sanitation _____ IS PERMITTED TO INSTALL _____ ALTER X

ADDRESS 7311 Washington Blvd, Baltimore, Md. 21227 PHONE 799-1942

SUBDIVISION _____ LOT _____ ROAD 7523 Brown Bridge Road

PROPERTY OWNER Robert Richard Arnett Gaylord

ADDRESS _____

SEPTIC TANK CAPACITY 1500 GALLONS

NUMBER OF BEDROOMS 4

SQUARE FEET PER BEDROOM _____

LINEAR FEET OF TRENCH REQUIRED _____

REPAIR - FAILING SEPTIC SYSTEM - DUE TO LARGE VOLUME OF USE. Call for inspection when ground is opened so sanitarian can recommend repair.

Permission Given to Set a 1500 gallon on larger top septic Tank until rest of system design is determined 8/19/91 R/P - Install 8 trenches, 3ft wide by 2ft deep; spaced 12ft apart (center to center) and along contours, in two fields of 4 trenches wide by 2 trenches long.

Space fields 10 ft apart. Make all trenches equal in length and approximately 90ft long each trench. Use 2 distribution boxes, one for each field, connected by a ball run valve. One foot gravel below drain lines and 1ft of cover fill above gravel material. Place one observation pipe at bottom of each trench. Place one observation pipe with gravel pack 7ft deep and approx 10ft down hill of one field.

PLANS APPROVED BY Craig Williams cm DATE 8/19/91

Keep trench bottoms level and start first trench as close to west (up slope) property line and as far from pond as possible.

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM

NOTE: CLEANOUT REQUIRED EVERY 70 FEET OF SEWER LINE AND/OR AT 90° SWEEPS IN LINES FROM HOUSE TO DRAIN FIELDS, 90° ELBOWS NOT ACCEPTABLE.

NOTE: ALL PARTS OF SEPTIC SYSTEMS (I.E. TANK, DISTRIBUTION BOX TRENCHES) TO BE 100 FEET FROM WELL (UNLESS OTHERWISE SPECIFICALLY AUTHORIZED)

NOTE: IF DEEP TRENCH(ES) ARE USED CALL FOR INSPECTION BEFORE AND AFTER PLACING GRAVEL IN TRENCH(ES)

NOTE: NO DRY WELL SHALL EXCEED 15 FOOT IN DIAMETER NO ABSORPTION TRENCH TO EXCEED 100 FEET IN LENGTH

NOTE: ALL PIPE FROM HOUSE TO SEPTIC TANK MUST BE CAST IRON OR SCHEDULE 35/40 PVC OR ABS

PERMIT VOID AFTER TWO YEARS

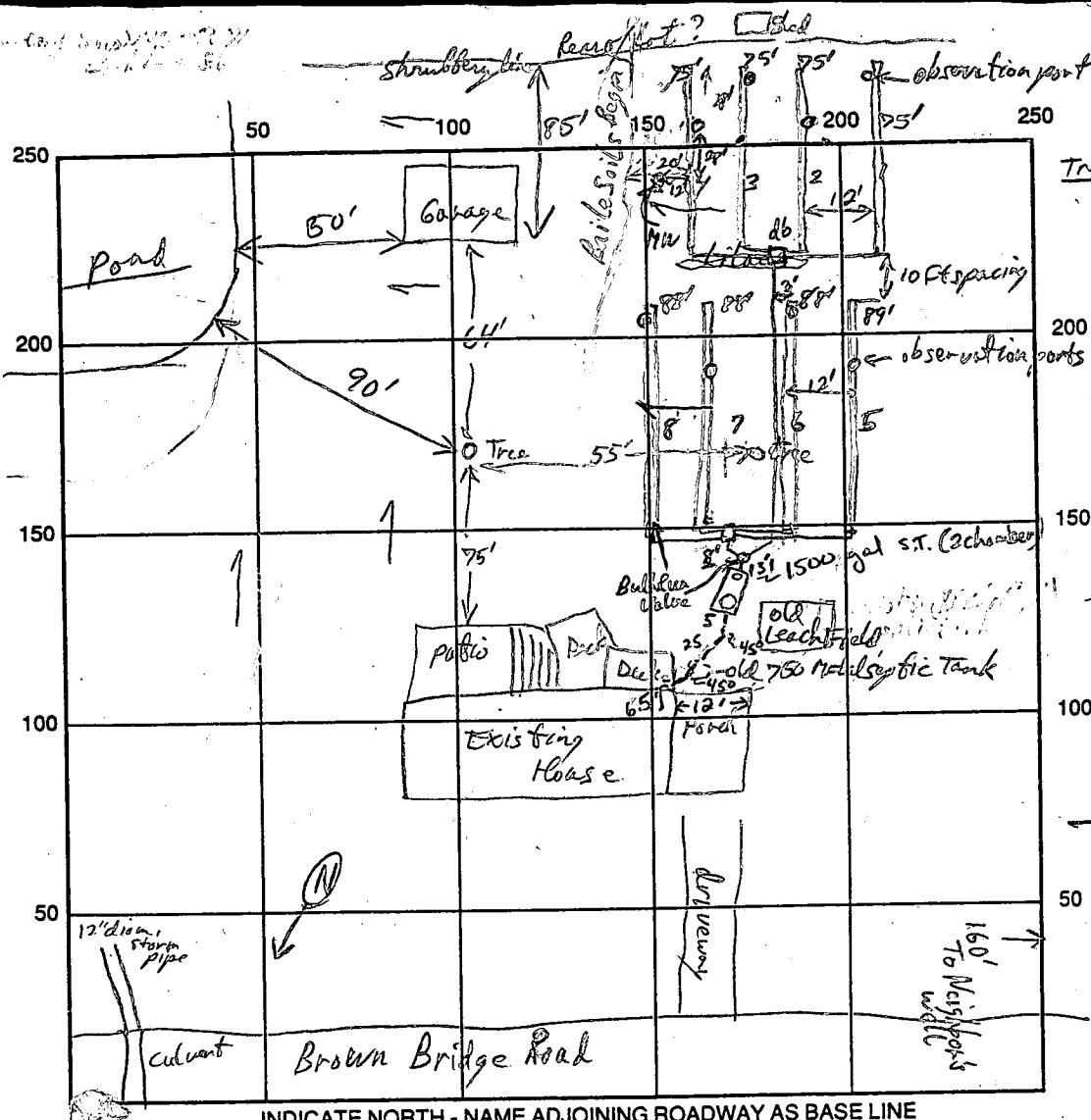
NOTE: INSTALL STAND PIPE ON SEPTIC TANK AND DRY WELL STAND PIPES MUST BE 6 INCHES IN DIAMETER CAST IRON. CONCRETE OR TERRA COTTA OR PVA OR ABS ACCEPTED. IF TOP OF SEPTIC TANK IS DEEPER THAN 3 FEET. MANHOLE TO GRADE REQUIRED.

NOTE: DISTRIBUTION BOXES MUST HAVE BAFFLES

***INSTALLER IS RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT**

*CALL 461-9933 FOR INSPECTION OF SEPTIC SYSTEM.

474/16



Trench #	Tr Depth Saturated	Tr Depth North End
1	2'4"	4'5"
2	1'9"	3'4"
3	2'4"	4'0"
4	2'4"	4'2"
5	2'6"	4'7"
6	2'4"	5'1"
7	2'4"	5'5"
8	2'4"	5'8"

Tr 5-8 Feeder lines use two 90° curved elbows into drain pipes

MW -> 7' below ground into LS-S at bottom

Water filled to 30" from bottom during installation, i.e. 4' below grade (Soil profile still a Chester SIL)

MW excavation was 1' wider x 4' long - to keep

INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE

TANK LEVEL 1500 gal, top seam ^{dbl compartment} CLEANOUTS 1 manhole on ST, 1 c/o on rear of S Tank

DISTRIBUTION BOX LEVEL with 2 db's one for each set of 4 Trenches 1st db back of diaphragm - all based by actual flow RPP 9-13-91

FIELD/TITLE DEPTH 24" to 48" FT. TRENCH WIDTH 3 FT. INLET DEPTH _____ FT.

GRAVEL DEPTH 1 FT. TOTAL LENGTH Tr 1-4 / Tr 5-8 75' / 89' FT.

NUMBER OF TRENCHES 8 ONE SIDEWALL/BOTTOM AREA 1 SQ. FT.

INSIDE DIAMETER _____ FT. EFFECTIVE DEPTH BELOW INLET _____ FT.

ABSORBENT AREA _____ SQ. FT.

REMARKS: Excavated hole has grey matrix + Matties in Yellow Soil - ST water cap in cleanout pipes. No one here to test

8-26-91 Tank in place. Contractor to connect to existing line out of house. JEN First two trenches (one gravel filled) 12" spacing + 3" wide; make trenches shallower

Can have top of gravel cover at grass level, but place 12" of topsoil cap over these (ie. South ends of Tr 3-8) RPP 9/14/91

Trenches 3 & 4 installed & covered, Trench 5 being installed now; supply line (in 1" wide trench) placed 3 ft from East edge of Tr 6. 9/19/91 RPP

Tr 6 & 7 into Yellow Soil in first 10 ft, Tr 7 rest not filled - OK 9/20/91 DB (1-4) covered - N. cleanout ring - DB (5-8) not ready yet 9/11/91

(All Trenches in Chester or Cloak Soils) 9-12-91 North East DB back + cement - pop lines OK - OK to Cover 9-13-91

SYSTEM APPROVED 9-13-91 INSPECTOR Ronald J. Peck

Need to place covered caps on observation pipes -

APPLICATION

PERCOLATION TESTING

HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
P.O. BOX 476 ELLICOTT CITY, MARYLAND 21043
TELEPHONE: 461-9933

A _____
Repair P 47416
DISTRICT _____
DATE 8/19/91 RP

TO: THE COUNTY HEALTH OFFICER
ELLICOTT CITY, MARYLAND

I, HEREBY, APPLY FOR THE NECESSARY TEST IN ORDER TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE DISPOSAL SYSTEM.

PROPERTY OWNER Richard Arnett

ADDRESS 7523 Brown Ridge Road PHONE _____

PROSPECTIVE BUYER _____

ADDRESS _____ PHONE _____

PROPERTY LOCATION:

SUBDIVISION _____ LOT NO. _____

ROAD AND DESCRIPTION 7523 Brown Ridge Rd.

TAX MAP 40 PARCEL # 180 Formerly Frances Thibon 6011

SIZE OF LOT 1 Acre TYPE BLDG SFD
(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.

(SIGNATURE OF APPLICANT)

APPROVED BY _____ FOR _____ DATE _____

REJECTED BY _____ FOR _____ DATE _____

HOLD PENDING FURTHER TESTS F/A Candidate DATE 8-19-91

REASONS FOR REJECTION OR HOLDING High water table, Penetrates ~ 120 mpi in Horizon, discuss options available RP
8/19/91

HD-216

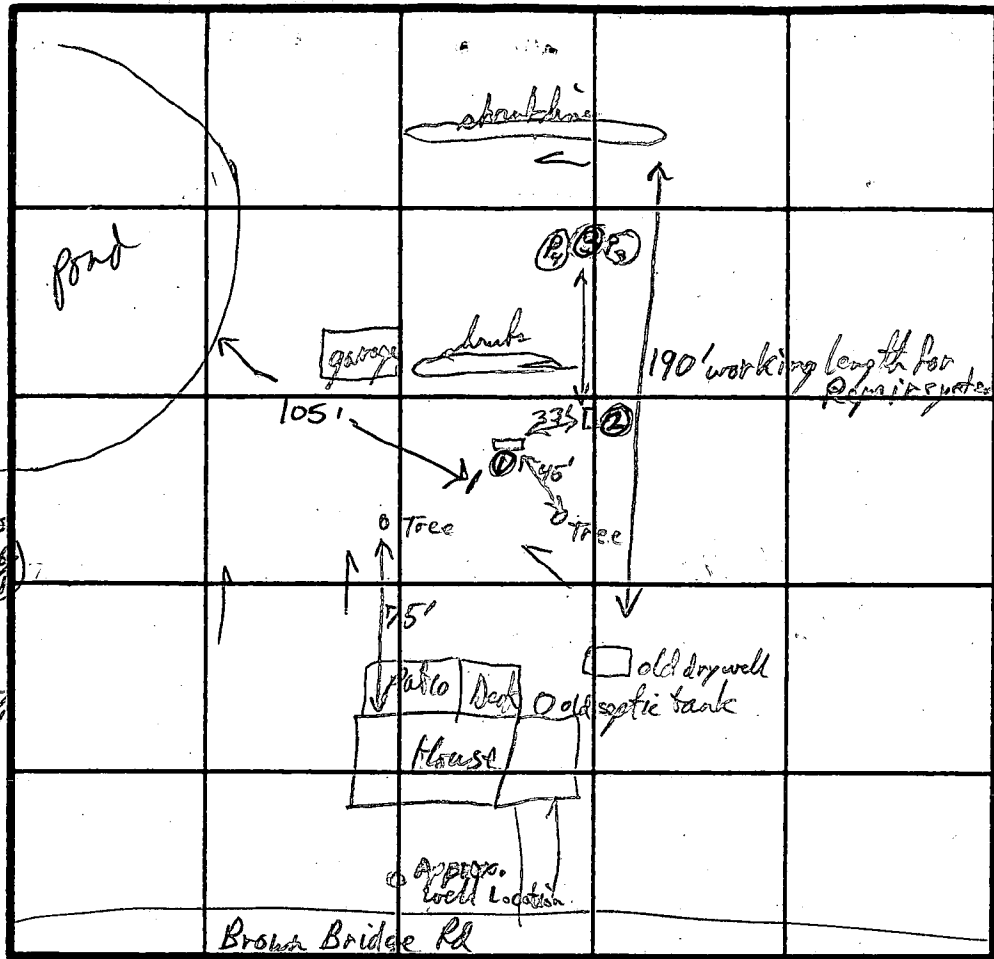
THIS IS NOT A PERMIT

See Attached I/A description of Hole #1 profile

Hole 3

SOIL PROFILE

0' Dry Brn Topsoil
 8" Strong Yel Brn to Red Brown
 2.5YR 6/8
 -7.5YR 5/6
 SCL
 4' dk Gray 10YR 5/2
 hl-BtCL
 micaceous
 EY Brn nodules
 ↓ MS sil ex, micaceous
 6ft dk Gray 10YR 7/1
 6ft Dark Brn
 2.5YR 3/4
 sil loam
 v. moist
 6ft Dark Gray 10YR 5/1
 + 10YR 5/2
 white loam
 (saturated)



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

Hole 2 same profile as Hole #1 to 5ft deep

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME
			START	STOP	START	STOP	
8/19/91	Hole 2 P1	5ft	12:12	2:12	Too Slow		1/2 hr in 2 hrs
8/19/91	Hole 1	6ft	- water @ 6ft				
	Hole 3 1	6 1/2 ft	water seepage @ 6 1/2 ft				water @ 6ft by 2 hrs
	" P2	@ 3' 9"	12:43	2:44	4 1/2" movement in		2 hrs
	Hole #4 P3	@ 2 1/2 ft	1:03	1:53	1:53	2:44	1/2 more in 50 min ≥ 100mpg
	Hole 2 P4	@ 33"	1:33	2:43	3/4" total movement in		20 min ≥ 120mpg

into grey mottled low B hor
 Hole 1 @ 6" head
 @ start 12:12
 still out top Mail 12:22
 still @ top Mail 12:34
 just past 4th Mail 12:58
 too slow

into grey mottled low B hor
 Hole 3 @ 6" head
 start
 (2) top Mail 12:43
 4th Mail by 1:23
 NC by 1:54
 NC 2:44 slow
 too slow

(P3) Mail 103 - 1/2 hr movement
 12:33 - 2ND Mail
 1:53 - 5th Mail
 2:14 - 120mpg

(P4) top Mail 1:33 - 1/2"
 2:14 - 3/4"
 2:43 - 120mpg

REMARKS I/A possibility only because of high water table
 TYPE OF SOIL Chester silt loam (Elick silt loam in front near well, baile silt loam near lower areas by Pond)
 TESTED BY R/Pudly ALSO PRESENT Hansen + Son Excavating (with Mr. Baker), Mr. Arnett 999-1942 (with Son)

R47416

Alt. Trench Design SDS for
7523 Brainerd Bridge Rd (R. Arnold property)

Calculations 4 Bdr = 600 gpd. (7 occupants @ present)

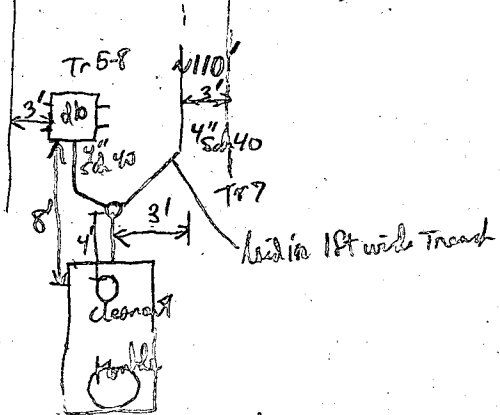
$600 \div .25 \text{ gpd/ft}^2 = 2400 \text{ sqft} \div 3 \text{ ft wide trench} = 800 \text{ LF of Trench}$ 12' spacing
= 48' wide

can only get 8' x 90' = 720 LF = 2160 sqft.

$600 \text{ gpd} \div .45 = 1333.3 \div 3 = 444.4 \text{ LF of Trench}$
 $\times 1.5 = 666.67 \text{ LF total} \div 2 = 333.333 \text{ LF/subsystem}$
 $\div 4 = 83.33 \text{ LF per trench}$

- so use ① 8 Trenches total ② (4 per subsystem)
- make ③ 90' long Coras near as possible [Keep 10 ft spacing between each one]
- ④ and 12' c to c trench spacing
- ⑤ 2' ft deep box - 1 ft gravel + 1 ft min cover.
- ⑥ place 8-OP's in bottom of gravel level in each trench (about 2/3 - 3/4 from each trench inlet) and one on. to 6 1/2 ft or 7 ft deep (10 ft down slope of system) suggested use dirt floor - divert valve

99-91 Observations
Dolls db (Tr-4)



date of S.T., S&L log
+ db

Owner would like a complete copy
of system as drawings installed

Note North 40% of Trench 5 (and prof 6 + 7 also) was dug into
red heavy clay basin of an E lock silt soil (but just penetrating the
light clay loam of the upper) So estimated percolation rates may be better
than other test for this SDS.

PP 2/2/91

SOIL DESCRIPTION

NAME Richard Arnett 7523 Brown Bridge Rd COUNTY Howard FILE NO. Repair P47416

SOIL MAP UNIT ^{Not encountered in trenches} (Elioak silt loam) Chester silt loam, (Buck silt loam Near Pond) MAP SYMBOL ERB₂ ChB₂ Ra DATE 8-19-91

GEOLOGIC MATERIAL None encountered - Very extremely micaceous Massives ssp.omite Elevation _____ GRID No. _____

No. Hole 1 DESCRIBED BY RJ Pinkley

Horizon	Depth in.	Color		Texture	Structure		% Coarse Fragments	Notes (Moisture, Density, Consistence, Biopores, Seepage)
		Matrix	Mottles		Grade	Type		
	0-11"	10YR 4/4	—	SL	1f	gran to sbk	—	Moist mfr
	11-20"	7.5YR 5/4-5/6	10YR 5/3 c2d on ped faces	SCL	2f	Sbk	—	Moist mfr 4m clay films sfp pores
	20-34"	2.5YR 4/8	10YR 5/3 c2d 7.5YR 4/6 c2d	hSCL	2m	Sbk	@ 24-32" 30% gravel & cobbles	Moist mfr 4m clay films sfp pores boundary smooth to wavy gradual (clay films)
	34-48"	10YR 7/2-6/2	7.5YR 6/8 many MnO ₂ mfr 7.5YR 5/6 mfr	HL-L		Massive	—	Very micaceous mfr V. Moist-Moist
	48"-64"	10YR 7/1-7/2	7.5YR 6/8 c2d 7.5YR 6/6	LSL-L		Massive	—	extremely micaceous - greasy feel mfr V. Moist
	64-72"	max grey st lt brns	—	SL-LS		Massive	—	Active water seepage @ 70" Saturated LS

LANDSCAPE FEATURES

Upland/Marine Summit _____
 Bench _____ Shoulder
 Terrace _____ Sidetlope
 Floodplain _____ Footslope _____
 Depression _____ Toeslope _____
 Slope % 2-4% Shape Width _____

SOIL DRAINAGE CLASS

ED _____ MWD PD _____
 WD _____ SPD _____ VPD _____

WATER TABLE

Type regular
 Depth 4-6 ft (with bear with 3 1/2 ft)
 Misc. _____

GEOLOGIC MATERIAL

Recent Alluvium _____
 Old Alluvium _____
 Coastal Plain Sediments _____
 Residuum
 Colluvium _____
 Eolian _____
 Misc. _____

LIMITING HORIZON

Depth _____
 B-Horizon _____
 Fragipan _____
 C-Strud. Saprolite _____
 Cr-Strud. Saprolite _____
 C-Horizon _____
 R-Bedrock _____
 Other with table _____