

LAYOUT 9/1/04 INSP 4 \_\_\_\_\_  
INSP 2 9/8/04 PM INSP 5 \_\_\_\_\_  
INSP 3 \_\_\_\_\_ INSP 6 \_\_\_\_\_

ISSUE DATE: 8/10/2004

P 520817

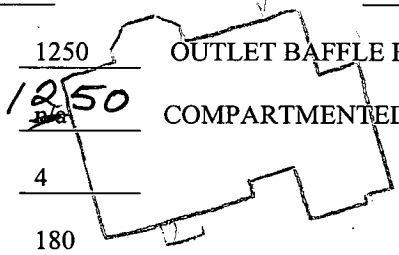
APPROVAL DATE: 11/3/04

A 49117

# PERMIT INDEXED

## ON-SITE SEWAGE DISPOSAL SYSTEM HOWARD COUNTY HEALTH DEPARTMENT BUREAU OF ENVIRONMENTAL HEALTH

Van Sant Plumbing & Heating IS PERMITTED TO INSTALL  ALTER   
ADDRESS: 3 N. Main Street, Mt Airy PHONE NUMBER: 1-800-682-6726  
SUBDIVISION: Koandah Garden Estates LOT NUMBER: 18  
ADDRESS: 6809 Koandah Gardens Court PROPERTY OWNER: M./I. Homes of D.C., LLC  
SEPTIC TANK CAPACITY (GALLONS): 1250 OUTLET BAFFLE FILTER REQUIRED   
PUMP CHAMBER CAPACITY (GALLONS): 1250 COMPARTMENTED TANK REQUIRED   
NUMBER OF BEDROOMS: 4  
SQUARE FEET PER BEDROOM: 180  
LINEAR FEET OF TRENCH REQUIRED: 240 HOUSE SERVED BY PUBLIC WATER



TRENCHES:	Trench to be 3.0 feet wide. Inlet 2.0 feet below original grade. Bottom maximum depth 4.0 feet below original grade. Effective area begins at 3.5 feet below original grade. 2.0 feet of stone below distribution pipe.
LOCATION:	Place the distribution box at the highest elevation in the approved SDA. Shallow system only!
NOTES:	No downhill adjacent to the approved SDA.

PLANS APPROVED: Kevin J. Bell Reviewed by: KN DATE: 4/23/04

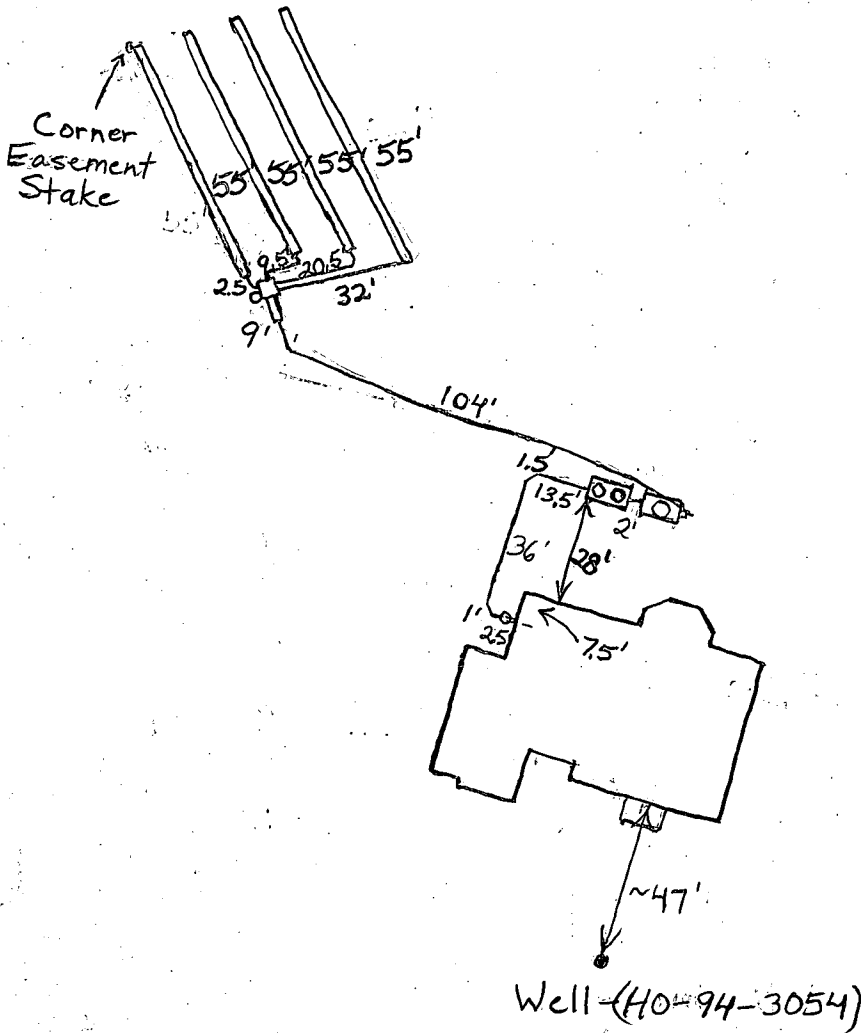
NOTES: PERMIT VOID AFTER 2 YEARS  
CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION INSPECTION FOR ALL INSTALLATIONS  
WATERTIGHT SEPTIC TANKS REQUIRED  
ALL PARTS OF SEPTIC SYSTEM SHALL BE 100 FEET FROM ANY WATER WELL UNLESS SPECIFICALLY AUTHORIZED  
MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS UNLESS SPECIFICALLY AUTHORIZED  
CONTRACTOR RESPONSIBLE FOR COMPLIANCE WITH APPLICABLE REGULATIONS, GUIDELINES AND THE TERMS OF THIS PERMIT

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM  
**BUILDING PERMIT SIGNED AND RETURNED** RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT  
ALL 410-313-2640 FOR INSPECTION OF SEPTIC SYSTEM

9/27/04 800152417-UGLP TRNK  
11/23/04 800157297-DECK + GAZEBO

449117

NOT TO SCALE



Koandah Court

TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
3'	2'	4'
NUMBER OF TRENCHES 4		
TOTAL LENGTH 220'		
ABSORPTION AREA 660 sqft		
DISTRIBUTION BOX LEVEL Levelers		
DISTRIBUTION BOX BAFFLE Yes		
DISTRIBUTION BOX PORT Yes		

SEPTIC TANK DATA	
SEPTIC TANK 1 LEVEL	✓
2-Comp CAPACITY	1500 GAL
SEAM LOC	Top
TANK LID DEPTH	~1'
BAFFLES	Yes
BAFFLE FILTER	No
MANHOLE LOC	Front+Back
6" PORT LOC	None
WATERTIGHT TEST	No
SEPTIC TANK 2 LEVEL	✓
CAPACITY	1250 GAL
SEAM LOC	Top
TANK LID DEPTH	~1.5'
BAFFLES	Front
BAFFLE FILTER	No
MANHOLE LOC	Middle
6" PORT LOC	None
WATERTIGHT TEST	No

PRE-CONSTRUCTION 9/1/04 Pump required to get to the top of the easement. Install 4-55' trenches on contour running away from the house (BB)

INSTALLATION 11/3/04 Pump and alarm working (BB)

FINAL INSPECTOR B. Baker

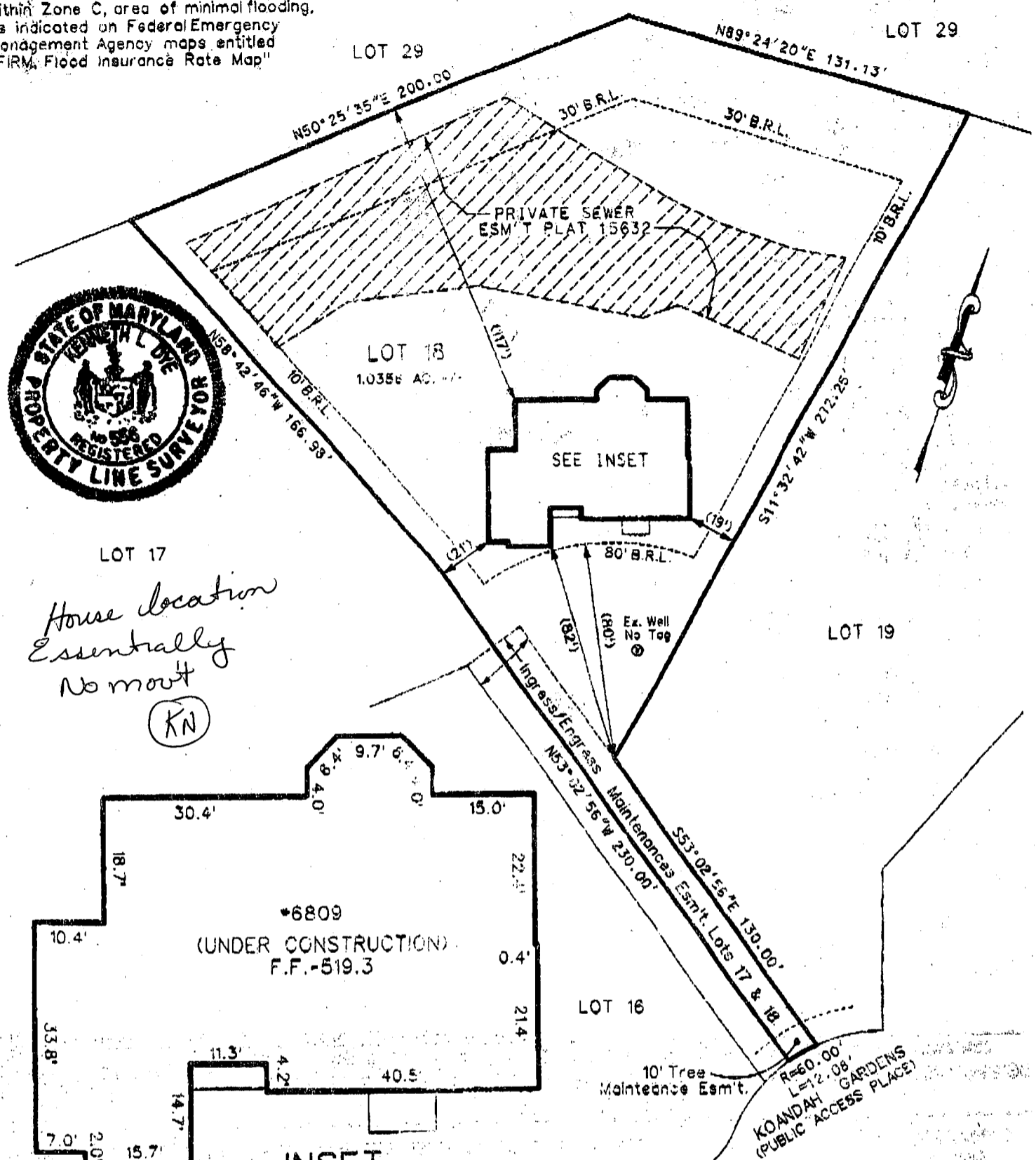
DATE OF APPROVAL 11/3/04

BUILDING PERMIT REQUIRED AND RETURNED

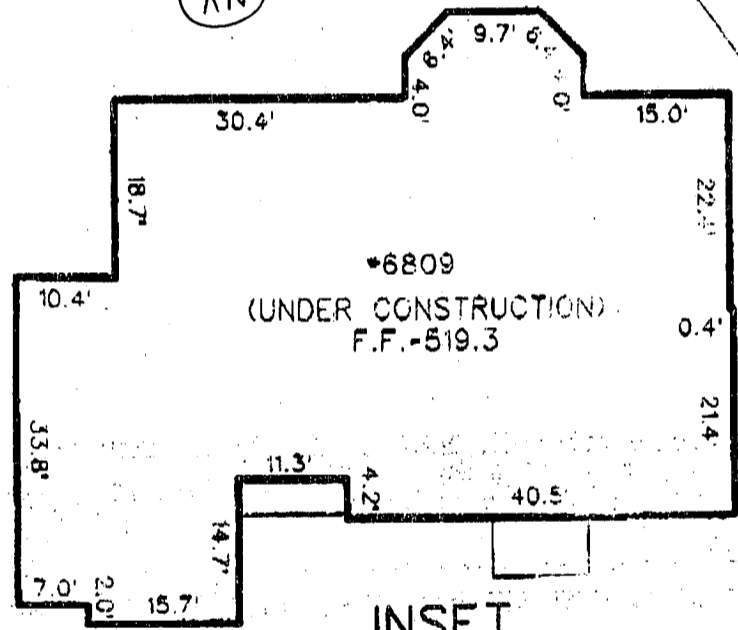
FLOOD CERTIFICATION

The house as shown on this property lies within Zone C, area of minimal flooding, as indicated on Federal Emergency Management Agency maps entitled "FIRM Flood Insurance Rate Map"

KOANDAH GARDENS ESTATES



Handwritten note: House location Essentially No movt (KN)



INSET 1" = 20'

PERMIT # B00147884

Front: PER FLAT Side: 10' Rear: 30'

PLEASE NOTE: 1) DIMENSIONS SHOWN WITHIN "( ) " ARE COMPUTED TO AN ACCURACY OF PLUS OR MINUS ONE FOOT. 2) NO TITLE REPORT WAS FURNISHED. THIS PROPERTY IS SUBJECT TO ALL APPLICABLE EASEMENTS, RIGHTS-OF-WAY, COVENANTS AND THOSE DOCUMENTS WHICH THE UNDERSIGNED HAS NOT BEEN PROVIDED. 3) THIS PLAT IS A BENEFIT TO A CONSUMER ONLY INsofar AS IT IS REQUIRED BY A LENDER OR A TITLE INSURANCE COMPANY OR ITS AGENTS IN CONNECTION WITH CONTEMPLATED TRANSFER, FINANCING OR REFINANCING. 4) THIS PLAT IS NOT TO BE RELIED UPON FOR THE CONSTRUCTION OF FENCES, GARAGES, BUILDINGS OR FUTURE IMPROVEMENTS. 5) THIS PLAT DOES NOT PROVIDE FOR THE ACCURATE IDENTIFICATION OF PROPERTY BOUNDARY LINES, BUT SUCH IDENTIFICATION MAY NOT BE REQUIRED FOR THE TRANSFER OF TITLE OR SECURING FINANCING OR REFINANCING.

Table with job details: Job No. 711-08-50, Scale: 1" = 50', WALL CHECK DRAWING, Date: JULY 13, 2004, Drawn: J.B.V., Checked: K.L.D., FINAL LOCATION DRAWING, Date, Drawn, Checked, Project Directory S:/07110800

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF THAT THIS PLAT OF THE PROPERTY SHOWN ABOVE, DESCRIBED AS: LOT 18 AS SHOWN ON A PLAT OF SUBDIVISION TITLED: KOANDAH GARDENS ESTATES WAS RECORDED IN PLAT BOOK N/A AS PLAT NO. 15632 AMONG THE LAND RECORDS OF Howard COUNTY, MARYLAND, WAS PREPARED UNDER MY SUPERVISION AND THAT THE EXISTING VISIBLE IMPROVEMENTS AS SHOWN HEREON WERE LOCATED BY RECOGNIZED SURVEYING PRACTICES AND UNLESS OTHERWISE INDICATED, NO OTHER VISIBLE EVIDENCE WAS OBSERVED OF APPARENT ENCROACHMENTS ACROSS THE PROPERTY LINES. SIGNATURE: [Signature] DATE: JULY 13, 2004 PRINTED NAME: Kenneth L. Dye TITLE: Property Line Surveyor MD. REG. NO.: 558

Handwritten note: Koandah Gard. Lot 18

LOT 18  
1.0356 Ac.

LOT 19  
1.00 Ac.

Approved Septic System Plan  
Howard County Health Department

AUGUSTA 11  
ELEV. STANDARD  
FF = 519.00  
B = 508.98

WILLIAMSBURG 11  
ELEV. REV. 3  
FF = 520.47  
B = 510.46

WELL #0-94-3054

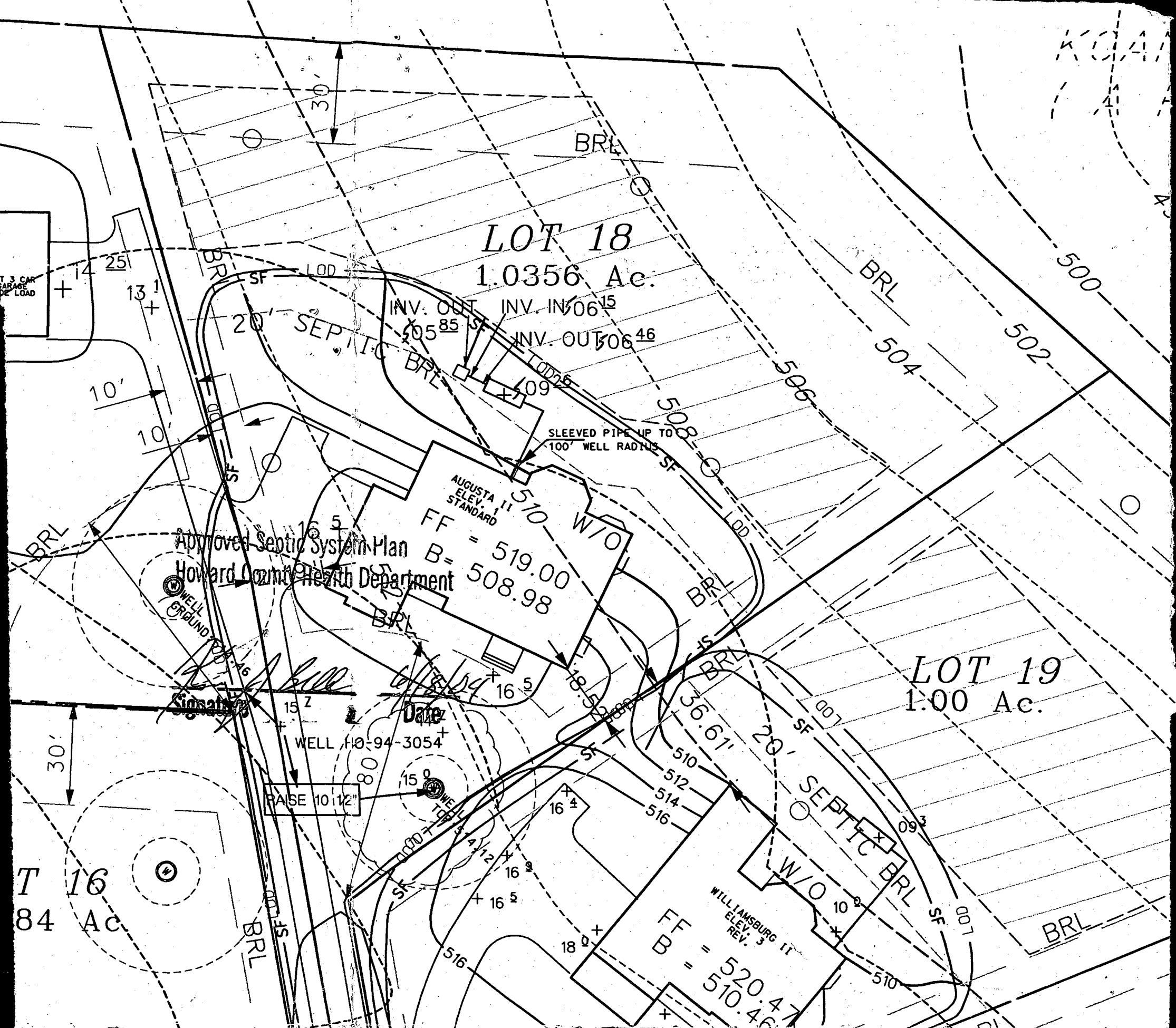
RAISE 10.12"

SLEEVED PIPE UP TO  
100' WELL RADIUS

INV. OUT 505.85  
INV. IN 506.15  
INV. OUT 506.46

3 CAR  
GARAGE  
DE LOAD

T 16  
84 Ac



C1 0266

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

FILL IN THIS FORM COMPLETELY PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER

A49117

(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

ST/CO USE ONLY DATE RECEIVED

DATE WELL COMPLETED

Depth of Well

PERMIT NO. FROM "PERMIT TO DRILL WELL"

HO-94-3054

OWNER Sand born James STREET OR RFD Kaandah Ct (NE Rte 216) TOWN High Land SUBDIVISION Kaandah Gardens Estates SECTION (Parcel of Parcel A-1) LOT 18

WELL LOG

Not required for driven wells

GROUTING RECORD

WELL HAS BEEN GROUTED (Circle Appropriate Box)

YES NO Y N

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT CM BENTONITE CLAY BC

NO. OF BAGS 14 NO. OF POUNDS 1316

GALLONS OF WATER 84

DEPTH OF GROUT SEAL (to nearest foot) from 0 ft. to 40 ft.

CASING RECORD

ST CO PL OT STEEL CONCRETE PLASTIC OTHER

MAIN CASING TYPE ST Nominal diameter top (main) casing (nearest inch)! 6 Total depth of main casing (nearest foot) 44

OTHER CASING (if used) diameter inch depth (feet) from to

SCREEN RECORD

ST BR HO STEEL BRASS OPEN HOLE PL OT PLASTIC OTHER

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

Table with columns: DESCRIPTION, FEET (FROM, TO), check if water bearing. Rows: Sand (0-40), Gray Mica Rock (40-385)

C3

PUMPING TEST

HOURS PUMPED (nearest hour) 3

PUMPING RATE (gal. per min.) 4 1/4

METHOD USED TO MEASURE PUMPING RATE Bucket

WATER LEVEL (distance from land surface)

BEFORE PUMPING 28 ft.

WHEN PUMPING 22 1/2 ft.

TYPE OF PUMP USED (for test) A air P piston T turbine C centrifugal R rotary O other J jet S submersible

PUMP INSTALLED

DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29

CAPACITY: GALLONS PER MINUTE (to nearest gallon) 31 35

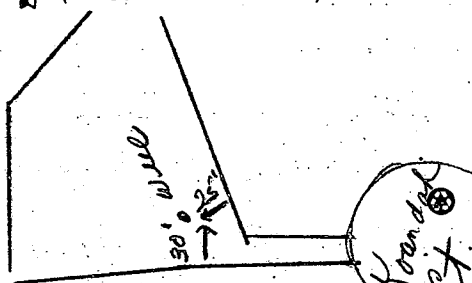
PUMP HORSE POWER 37 41

PUMP COLUMN LENGTH (nearest ft.) 43 47

CASING HEIGHT (circle appropriate box and enter casing height) LAND SURFACE 2 (nearest foot)

LOCATION OF WELL ON LOT

SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED YES NO Y N

CIRCLE APPROPRIATE LETTER A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED E ELECTRIC LOG OBTAINED P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT...

DRILLERS LIC. NO. 1 MSD024 DRILLERS SIGNATURE

LIC. NO. 1 MSD027 SITE SUPERVISOR SIGNATURE

C2 DEPTH (nearest ft.)

Table with columns: T, E, A, C, H, S, R, E, E, N. Rows: 8-11, 15-17, 23-26, 30-32, 38-41, 45-47, 51

SLOT SIZE 1 2 3 DIAMETER OF SCREEN (NEAREST INCH) 56 60

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER) T (E.R.O.S.) W Q 70 72 74 75 76 TELESCOPE CASING LOG INDICATOR OTHER DATA





WT highest in Jan 97, March drops in Mar + April 97, but still relatively high (0.3' drops from 3/17/97 to 4/1/97)

Year	Test Date	Test #	Rate-Depth	Visual Probe	P/F	WT if any	Remarks
1999	Jan 97						
	3/11/97	311A	6 @ 3 1/2	11 1/2	P		(25) + water @ 10 1/2' in Jan 97 Nearest old 197 clay to water
	3/20/97	311B	7 @ 3 1/2	10 1/2	P		Brn CL to 3, 5' OK to 8 1/2
	3/22/97	311C	7 @ 3 1/2	11'	P		(Water Table lower in March than Jan 97)
	3/22/97	311D	27 @ 3 1/2	10'	P		None of these test is in proposed SDA Apr 8/99
20	1/2/97	180	4 @ 3 1/2	11	F		OK @ 8' CL to 3', barbed wire 5' to 10'
	1/2/97	191	4 @ 2'	9 1/2'	F	Water @ 1'	
	1/2/97	192	2 @ 6'	11'	F	? WT @ 8 1/2'	
	1/2/97	198	22 Min @ 3 1/2'	11'	P	Dry	
	4/27/93	181	<del>7 @ 4'</del> 3 @ 3 1/2'	17'	P	Dry water @ 12 1/2'	OK @ 3 1/2' + 7' Typical 180 come Brn CL to 3', barbed wire on 5 1/2' 11'
19	1/2/97	182	7 @ 4'	12'	P	Dry	No soil profile assume similar to 180's
	1/2/97	183	2 @ 8'	12'	P	Dry	
	4/28/93	7	10 @ 4'	14 1/2'		Water @ 14'	
	4/28/93	8	3 @ 7'	13 1/2'	P		Red SCL to 4'
	1/2/97	184	6 K to	12'	P		Brn Clay to 2 1/2', orange SC to 5'
	1/2/97	187	10 1/2'	10 1/2'	F		Thin SL to 12'
	1/2/97	2 +	11 1/2'	11 1/2'		Water @ 10 1/2'	Brn CL to 6 1/2'
	1/2/97	13	4 @ 4 1/2'	13'	P	Dry	Dark grey brn mic clay 6 1/2' - 10 1/2'
18	1/2/97	178		9 1/2'		Water @ 8 1/2'	
	4/28/93	17	2 @ 3 1/2'	13'			some profile perc 16 psi @ 5 1/2', too slow higher
	4/28/93	18	4 @ 5', 16 @ 5 1/2'	11 1/2'		Water @ 11'	SCL to 3', tan grey F SL 6 1/2' to 7 1/2'
	4/28/93	19	9 @ 3 1/2'	10 1/2'	F	Water @ 9'	Clay @ 7 1/2' - 8'
	4/28/93	15	No Test				
	4/28/93	16	9 @ 4'	13'	P		Brn orange SCL to 3'
	4/28/93	17	4 @ 7'				Brn orange white PSL 3'-13'
	4/28/93	179	is one of number of	10 1/2'		Water @ 10 1/2'	CL to 4', Brn SCL / orange white clay to 10 1/2' ft
	4/28/93	2	4 @ 3 1/2'	11 1/2'	P	Water @ 10 1/2'	(100' from #3)
	4/28/93	3	17 @ 5 1/2'	10'	F	Water @ 9'	(280' from pond near highway)
	4/28/93	3	3 @ 2' 9"	8 1/2'	F	Water @ 8'	
	4/28/93	4	30 out @ 2 3'	13 1/2'	P	Water @ 5 1/2'	Brn SCL to 2', 5 out @ 5 L (tan) @ 2 - 13'
	4/28/93	4	3 out @ 3'	12 1/2'	P	Water @ 12'	
	4/28/93	5	5 @ 3 1/2'		P	Water @ 11'	

1000 get final prep comments for 8/24 (Tues) @ Durree  
considered for Kowach basin  
Comments for Catted Villa's

SDA  
Need to show  
These Test (180, 191, 192, 198)

open space

outlet

see SDA Community

COUNTY #

SOIL PROFILE

0' (10)  
 dk. red  
 brn yel  
 sacl m  
 3 1/2'

brn tan  
 yel beige  
 sacl m  
 10%  
 frags  
 2-13 1/2'

(15)  
 org  
 sacl m  
 2 1/2'

tan  
 mica  
 sacl m  
 13 1/2'

14' WATER

SOIL PROFILE

0'


SEE ATTACHED

INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME
			START	STOP	START	STOP	
4/28/93	11 S	3 1/2	12:13	12:20	12:20	12:32	12
	11 V	7	12:21			12:22	FAST
	11 V	13 1/2	12:25	12:46	12:46	1:16	30
	12 S	4	12:24	12:28	12:28	12:39	11
	12 V	13 1/2					
	13 S	4 1/2	12:34	12:38	12:38	12:42	4 EST
	13 V	13					
	14	3 1/2	12:44	12:56	12:56	1:18	22
	14	12					
	15	3 1/2	12:50	12:56	12:56	1:03	7
	15	14	H <sub>2</sub> O @	13 1/2			

TOT 86

REMARKS \_\_\_\_\_

TYPE OF SOIL \_\_\_\_\_

TESTED BY \_\_\_\_\_ ALSO PRESENT J. Sanborn, R. Demmitt, hoeman

TRENCH DESIGN DATA: AVERAGE PERCOLATION TIME \_\_\_\_\_ TRENCH WIDTH \_\_\_\_\_

INLET DEPTH \_\_\_\_\_ MAXIMUM BOTTOM DEPTH \_\_\_\_\_ SQ. FT/BEDROOM \_\_\_\_\_

n=6

COUNTY #

SOIL PROFILE

16 17

0' brn org  
sac l m

3

brn  
org  
white  
fine  
sa l m  
10%  
frags

13

18 19

brn  
sac l m

3

tan  
gray  
fine  
sa l m  
10% frags

10-11

WATER

5

SOIL PROFILE

0'

[Empty soil profile box]


SEE ATTACHED D

INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME
			START	STOP	START	STOP	
4/28/93	16 S	4	1:19	1:22	1:22	1:31	9
	16 M	7	1:17	1:19	1:19	1:23	4
	16 V	13	see profile				
	17 S	3 1/2	1:28	1:36	1:26	1:30	4
	17 M	7	1:24	1:26	1:26	1:30	4
	17 S2	5	1:46	2:00	1:44	1:54	4
	17 V	13	see profile				
	18 S	3 1/2	1:32	1:40	1:40	1:49	9
	18 V	11 1/2	H2O @ 11'				
	19 V	10' ±	H2O @ 9'		CAVING @ 7 1/2' - 8'		
	>17 S3	5 1/2	2:10	2:12	2:12	2:28	16

n=5

REMARKS

TOT 42

TYPE OF SOIL

TESTED BY

ALSO PRESENT J. Saborn, R. Demmit  
Weman

TRENCH DESIGN DATA: AVERAGE PERCOLATION TIME

TRENCH WIDTH

INLET DEPTH

MAXIMUM BOTTOM DEPTH

SQ. FT/BEDROOM



COUNTY #

SOIL PROFILE

0' (6) (7)  
 yel brn  
 sa cl  
 1m  
 2 1/2' brn beige  
 tan  
 sand  
 +  
 sa 1m  
 10% frags


SEE ATTACHED

SOIL PROFILE

0'


13' (8)  
 dk. red  
 sa cl 1m  
 4' brn.  
 tan mica  
 sa 1m  
 10% frags

INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

13 1/2' (9) (10)  
 dk. brn  
 red  
 sa cl 1m  
 3 1/2' tan beige  
 sa 1m  
 10% frags

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME
			START	STOP	START	STOP	
4/28/93	6 S	3 1/2	11:25	11:28	11:28	11:31	3
	6 V	13	H <sub>2</sub> O @	12 1/2			
	7 S	4	11:46	11:50	11:50	12:00	10
	7 H	7	11:47	11:49	11:49	11:52	3
	7 V	14 1/2	H <sub>2</sub> O @	14'			
	8 S	4 1/2	11:56	11:59	11:59	12:05	6
	8 V	13 1/2					
	9 S	4 1/2	12:04	12:05	12:05	12:13	8
	9 V	13 1/2					
	10 S	4	12:07	12:11	12:11	12:16	5
	10 V	14					

n=6

REMARKS \_\_\_\_\_

TOT. 35

TYPE OF SOIL \_\_\_\_\_

TESTED BY \_\_\_\_\_ ALSO PRESENT J. Sanborn, R. Demmitt, G.emas

TRENCH DESIGN DATA: AVERAGE PERCOLATION TIME \_\_\_\_\_ TRENCH WIDTH \_\_\_\_\_

INLET DEPTH \_\_\_\_\_ MAXIMUM BOTTOM DEPTH \_\_\_\_\_ SQ. FT./BEDROOM \_\_\_\_\_

WT highest in Jan 97, March drops in Nov & April 97, but still relatively high @ 0.3' drops from 3/17/00 to 4/1/00

@ 1000 get final prep comments for 8/24 (Tue) @ Durce  
 consolidated for Kowalski Gardens  
 if any Remarks + Comments for Cat Tail Villa's

on 97	on Jan 97	Test date	Test #	Rate - depth	Visual Probe	P/F	WT	Remarks + Comments for Cat Tail Villa's
23	22	3/11/97	311A	6 @ 3 1/2	11 1/2	P	sketch	(25) + water @ 10 1/2' in Jan 97 Nearest old 197 @ Clay @ water Brun CL to 3, 5' OK @ 8 1/2' (Water table lower in March than Jan 97) None of these test is in proposed SDA Apr 8/97 OK @ 8' CL to 3', dark brn. hbl SL to cl
			311B	7 @ 3 1/2	10 1/2	P		
			311C	7 @ 3 1/2	11'	P		
			311D	22 @ 3 1/2	10'	P		
20		1/2/97	180	4 @ 3 1/2	11	P		OK @ 8' CL to 3', dark brn. hbl SL to cl OK @ 3 1/2 + 7' typical 180 same Brun CL to 3', hbl w + on SL to 11
			191	4 @ 2'	9 1/2'	F	wt @ 8'	
			192	2 @ 6'	11'	F	? WT @ 8 1/2'	
			198	act in @ 3 1/2'	11'	P	dry	
		1/2/97	181	<del>7 @ 4'</del>	17	P	dry	OK @ 3 1/2 + 7' typical 180 same Brun CL to 3', hbl w + on SL to 11
		4/28/93	6	3 @ 3 1/2'	13'	P	wt @ 12 1/2'	
19	18	1/2/97	182	7 @ 4'	12'	P	dry	No soil profile as same similar to 180's
			183	6 @ 6'	12'	P	dry	
		4/29/93	7	10 @ 4'	14 1/2	P	wt @ 14'	Red SCL to 4', Brun clay to 2 1/2', orange SC to 5' Thin SL to 12' Brun CL to 6 1/2' dark grey brn. mic. loam 6 1/2 - 10 1/2
		4/29/93	8	3 @ 7'	13 1/2	P		
		1/2/97	184	6 @ 4'	12'	P		
		Typical 180/197	185	Clay to 6 1/2'	10 1/2	F		Brun clay to 2 1/2', orange SC to 5' Thin SL to 12' Brun CL to 6 1/2' dark grey brn. mic. loam 6 1/2 - 10 1/2
		4/28/93	2 + 13	4 @ 4 1/2'	13'	P	wt @ 10 1/2'	
18		1/2/97	178		8 1/2	P	water @ 8 1/2'	same profile perc 16 mpi @ 5 1/2', too slow higher SACL to 3', tan grey F SL 6% prop carry @ 7 1/2 - 8' Brun orange SCL to 3' Brun orange white PSL 3' - 13' CL to 4', Brun SCL / orange white hbl to 10 1/2' ft (100' from #3) (280' from pond near bridge)
		4/28/93	17	Too slow @ 3 1/2', too slow @ 5'	13'	P		
			18	4 @ 2', 16 @ 5 1/2'	11 1/2'	P	water @ 11'	
			19	9 @ 3 1/2'	10 1/2'	F	water @ 9'	
		4/28/93	15	No Test	10 1/2'	F	water @ 9'	Brun orange SCL to 3' Brun orange white PSL 3' - 13' CL to 4', Brun SCL / orange white hbl to 10 1/2' ft (100' from #3) (280' from pond near bridge)
			16	9 @ 4'	13'	P		
			179	4 @ 7'	10 1/2'	P	wt @ 10 1/2'	Brun orange SCL to 3' Brun orange white PSL 3' - 13' CL to 4', Brun SCL / orange white hbl to 10 1/2' ft (100' from #3) (280' from pond near bridge)
		4/28/93	2	isoc. c. m. hbl	11 1/2'	P	water @ 10 1/2'	
			3	4 @ 3 1/2'	10'	F	water @ 9'	
			4	17 @ 5 1/2'	8 1/2'	F	water @ 8'	
		4/28/93	4	3 @ 2 1/4'	13 1/2'	P	water @ 12'	
			5	30 act @ 3'	12 1/2'	P	water @ 11'	
			5	3 act @ 3'	12 1/2'	P	water @ 11'	Brun SCL to 2', faint SL (tan) @ 2 - 13'
			5	5 @ 3 1/2'	12 1/2'	P	water @ 11'	

uphill of proposed SDA

SDA

Need to draw these test holes

uphill of area

outlet area

near SDA Community

**KOANDOAH GARDENS  
Phase I  
Septic Disposal Areas (SDA)**

**SDA 1 (11,700 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
11	4/93	36"	12
12	4/93	48"	11
13	4/93	54"	4
14	4/93	42"	22

**SDA 6 (10,230 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
22D	7/99	42"	28
22B	7/99	39"	7
22C	7/99	38"	7
22A	7/99	40"	2.5

**SDA 2 (11,875 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
2	4/93	42"	4
17	4/93	62"	16
18	4/93	42"	9
178	1/97	8'6"	no test - water

**SDA 7 (10,440 sf)**

RATG: 20 mpi

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
23B	7/99	39"	45
23C	7/99	40"	11
195	1/97	48"	3

**SDA 3 (11,300 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
8	4/93	54"	6
7	4/93	48"	10
183	1/97	12'	no test - water
182	1/97	48"	7 (adj. area)

**SDA 8 (10,080 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
24A	7/99	41"	14
24B	7/99	47"	2
196	1/97	24"	2
175	1/97	42"	18
176	1/97	43"	12

**SDA 4 (10,000 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
181	1/97	11'	no test
180	1/97	42"	4
6	4/93	42"	3

**SDA 9 (10,010 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
170	1/97	42"	5
171	1/97	48"	9
172	1/97	42"	7
173	1/97	36"	18
174	1/97	48"	11

**SDA 5 (10,000 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
21A	7/99	42"	5
21B	7/99	40"	2.9
A2D	7/99	33"	10
21C	7/99	38"	15.5
21D	7/99	39"	10

**SDA 10 (10,080 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
168	1/97	48"	7
169	1/97	36"	5
169A	1/97	36"	4

**KOANDOAH GARDENS  
Phase I  
Septic Disposal Areas (SDA)**

**SDA 1 (11,700 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
11	4/93	36"	12
12	4/93	48"	11
13	4/93	54"	4
14	4/93	42"	22

**SDA 6 (10,230 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
22D	7/99	42"	28
22B	7/99	39"	7
22C	7/99	38"	7
22A	7/99	40"	2.5

**SDA 2 (11,875 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
2	4/93	42"	4
17	4/93	62"	16
18	4/93	42"	9
178	1/97	8'6"	no test - water

**SDA 7 (10,440 sf)**

RATG: 20 mpi

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
23B	7/99	39"	45
23C	7/99	40"	11
195	1/97	48"	3

**SDA 3 (11,300 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
8	4/93	54"	6
7	4/93	48"	10
183	1/97	12'	no test - water
182	1/97	48"	7 (adj. area)

**SDA 8 (10,080 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
24A	7/99	41"	14
24B	7/99	47"	2
196	1/97	24"	2
175	1/97	42"	18
176	1/97	43"	12

**SDA 4 (10,000 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
181	1/97	11'	no test
180	1/97	42"	4
6	4/93	42"	3

**SDA 9 (10,010 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
170	1/97	42"	5
171	1/97	48"	9
172	1/97	42"	7
173	1/97	36"	18
174	1/97	48"	11

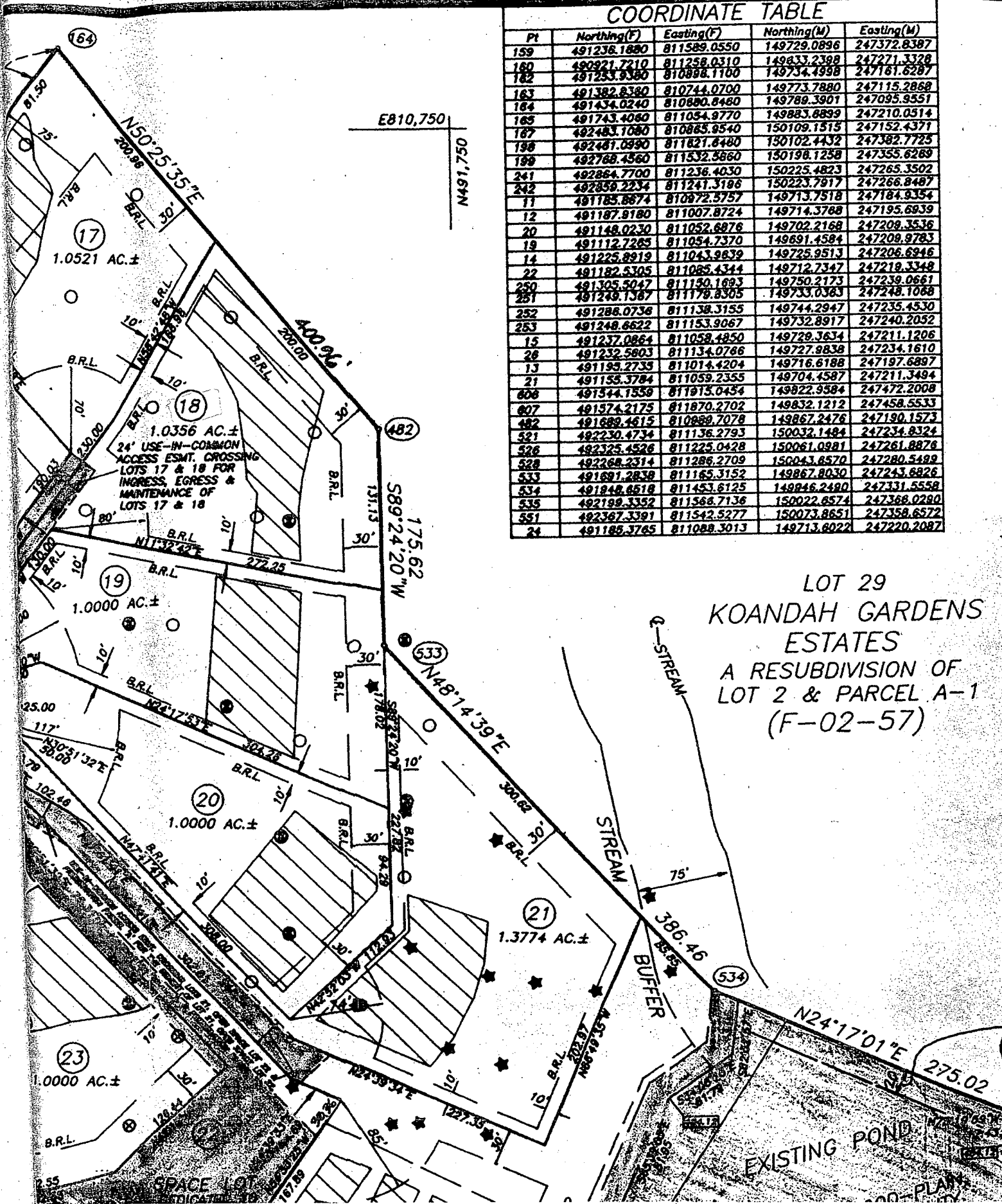
**SDA 5 (10,000 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
21A	7/99	42"	5
21B	7/99	40"	2.9
A2D	7/99	33"	10
21C	7/99	38"	15.5
21D	7/99	39"	10

**SDA 10 (10,080 sf)**

<u>Test</u>	<u>Yr.</u>	<u>Depth</u>	<u>Minutes</u>
168	1/97	48"	7
169	1/97	36"	5
169A	1/97	36"	4

All perc test hole  
excavated not shown F-07-05 Signed



COORDINATE TABLE

Pt	Northing(F)	Easting(F)	Northing(M)	Easting(M)
159	491236.1880	811589.0550	149729.0896	247372.8387
160	490921.7210	811258.0310	149833.2388	247271.3328
182	491253.9380	810888.1100	149734.4598	247161.6287
183	491382.8380	810744.0700	149773.7880	247115.2868
184	491434.0240	810880.8460	149789.3901	247095.9551
185	491743.4080	811054.9770	149883.8899	247210.0514
187	492483.1080	810865.9540	150109.1515	247152.4371
198	492481.0990	811821.8480	150102.4432	247382.7725
189	492768.4560	811532.5860	150198.1258	247355.6269
241	492864.7700	811236.4030	150225.4823	247265.3502
242	492359.2234	811241.3186	150223.7917	247266.8487
11	491185.8674	810872.5757	149713.7518	247184.9354
12	491187.8180	811007.8724	149714.3768	247195.6939
20	491148.0230	811052.6876	149702.2168	247208.3536
19	491112.7283	811054.7370	149691.4584	247209.8783
14	491225.8919	811043.9839	149725.9513	247206.6946
22	491182.5305	811085.4344	149712.7347	247219.3348
250	491305.5047	811150.1693	149750.2173	247239.0661
251	491248.1587	811178.8305	149733.0383	247248.1068
252	491288.0738	811138.3155	149744.2947	247235.4530
253	491248.6622	811153.9067	149732.8917	247240.2052
15	491237.0864	811058.4850	149729.3634	247211.1206
28	491232.5803	811134.0786	149727.9838	247234.1610
13	491193.2739	811014.4204	149716.6188	247197.6897
21	491158.3784	811059.2355	149704.4587	247211.3494
806	491344.1559	811915.0454	149822.9584	247472.2008
807	491374.2175	811870.2702	149832.1212	247458.5533
482	491689.4615	810889.7078	149867.2476	247190.1573
521	492230.4734	811136.2793	150032.1484	247234.8324
526	492325.4526	811225.0428	150061.0981	247261.8876
528	492268.2314	811286.2709	150043.8570	247280.5489
533	491691.2838	811185.3152	149867.8030	247243.6826
534	491848.6518	811453.8125	149846.2480	247331.5558
535	492199.3352	811568.7136	150022.8574	247368.0280
551	492387.3391	811542.9277	150073.8651	247358.6572
24	491185.3765	811089.3013	149713.8022	247220.2087

LOT 29  
KOANDAH GARDENS  
ESTATES  
A RESUBDIVISION OF  
LOT 2 & PARCEL A-1  
(F-02-57)



LOT 18  
1.0356 Ac.

LOT 19  
1.00 Ac.

Approved Septic System Plan  
Howard County Health Department

Signature

Date

WELL HO-94-3054

RAISE 10 1/2"

AUGUSTA  
ELEV. 11  
STANDARD

FF = 519.00  
B = 508.98

SLEEVED PIPE UP TO  
100' WELL RADIIUS

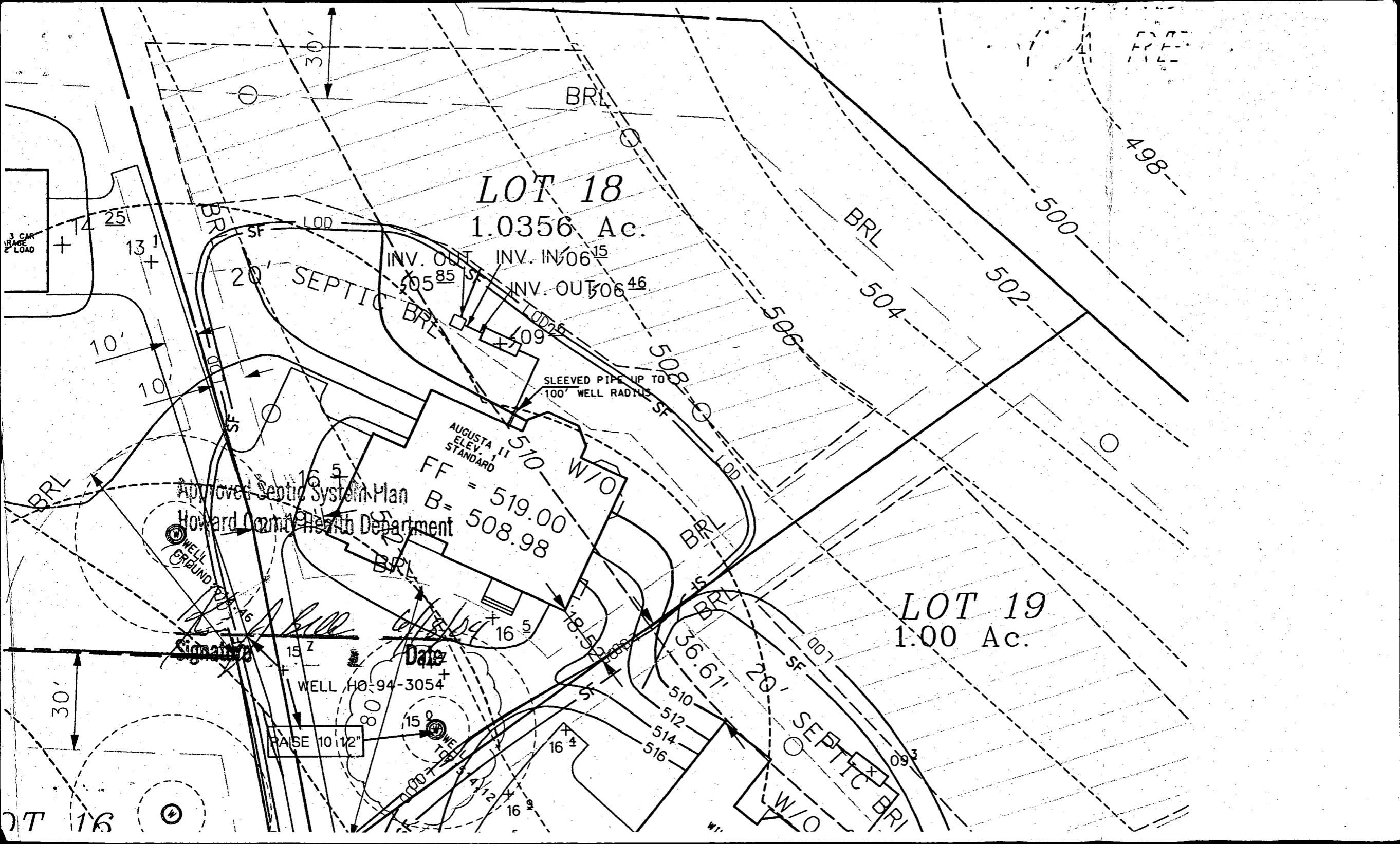
INV. OUT 505 85 SF  
INV. IN 506 15  
INV. OUT 506 46

20' SEPTIC

20' SEPTIC

3 CAR  
BRACK  
LOAD

LOT 16



# HOWARD COUNTY PERMIT APPLICATION

PERMIT NUMBER

300147684 KJB

Building Address 6809 Kowallah Gardens Ct  
Highland Md, 21077  
Suite/Apt. #: \_\_\_\_\_ SDP/WP/Petition #: \_\_\_\_\_  
Census Tract 60501 Subdivision Kowallah Gardens  
Section \_\_\_\_\_ Area \_\_\_\_\_ Lot 18  
Tax Map 40 Parcel 78 Grid 4  
Zoning R1 Map Coordinates 14/12 Lot size 1 AC.

Property Owner's Name M/I Homes of D.C. LLC  
Address 5101 Mountville Rd.  
City Federick State MD Zip Code 21703  
Home Phone 301-874-0013 Work Phone \_\_\_\_\_  
Applicant's Name & Mailing Address, (if other than stated hereon):  
same  
Phone \_\_\_\_\_ Fax \_\_\_\_\_

Existing Use VACANT LOT  
Proposed Use Single Family dwelling  
Estimated Construction Cost \$ 250,000  
Description of Work construct a  
single family home.

Contractor Company M/I Homes of D.C. LLC  
Contact Person John Berger  
Address 5101 Mountville Rd  
City Federick State MD Zip Code 21703  
License No. \_\_\_\_\_  
Phone 301-874-0013 Fax 301-874-0015

Occupant or Tenant \_\_\_\_\_  
Contact Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Phone \_\_\_\_\_ Fax \_\_\_\_\_

Engineer or Architect Company Pinnacle Design  
Contact Person Wei Lu  
Address 4085 Chain Bridge Rd  
City Fairfax State VA Zip Code 22030  
Phone 703-918-3400 Fax 703-918-3107

**BUILDING DESCRIPTION - COMMERCIAL**

**BUILDING DESCRIPTION - RESIDENTIAL**

Building Characteristics	Utilities
Height: _____	Water Supply: _____ Public _____ Private _____
No. of stories: _____	Sewage Disposal: _____ Public _____ Private _____
Gross area, sq. ft. per floor: _____	Electric Yes <input type="checkbox"/> No <input type="checkbox"/>
Use group: _____	Gas Yes <input type="checkbox"/> No <input type="checkbox"/>
Construction type: _____ Reinforced Concrete _____ Structural Steel _____ Masonry _____ Wood Frame _____	Heating System: _____ Electric <input type="checkbox"/> Oil <input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane Gas <input type="checkbox"/>
State Certified Modular _____	Sprinkler system: N/A <input type="checkbox"/> Full _____ Partial _____ Other Suppression _____ # of Heads _____

Building Characteristics	Utilities
SF Dwelling <input checked="" type="checkbox"/> SF Townhouse <input type="checkbox"/>	Water Supply: _____ Public _____ Private <input checked="" type="checkbox"/>
1st floor: Depth <u>74</u> Width <u>60</u>	Sewage Disposal: _____ Public _____ Private <input checked="" type="checkbox"/>
2nd floor: <u>64</u> <u>43</u>	Electric Yes <input type="checkbox"/> No <input type="checkbox"/>
Basement: <u>52</u> <u>64</u>	Gas Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Finished Basement <input checked="" type="checkbox"/> Unfinished Basement <input type="checkbox"/>	Heating System: _____ Electric <input checked="" type="checkbox"/> Oil <input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane Gas <input checked="" type="checkbox"/>
Crawl space <input type="checkbox"/> Slab on Grade <input type="checkbox"/>	Sprinkler system: N/A <input checked="" type="checkbox"/> NFPA #13D _____ NFPA #13R _____ Other: _____
No. of Bedrooms <u>4</u>	
Multi-family dwellings: _____ No. of efficiency units: _____ No. of 1 BR units: _____ No. of 2 BR units: _____ No. of 3 BR units: _____	
Other Structure: _____ Dimensions: _____ Footings: _____ Roof: _____	
State Certified Modular _____ Manufactured Home _____	

THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

JM By  
Applicant's Signature  
Title/Company \_\_\_\_\_

John Berger  
Print Name  
4/20/04  
Date

Checks payable to: **DIRECTOR OF FINANCE OF HOWARD COUNTY**  
\*\* PLEASE WRITE NEATLY AND LEGIBLY. \*\*  
- FOR OFFICE USE ONLY -

AGENCY	DATE	SIGNATURE APPROVAL
Land Development, DPZ		
Public Highway		
Building Official		
Dev. Engineering, DPZ		
Health	<u>6/18/04</u>	<u>[Signature]</u>
Fire Protection		
Is Sediment Control approval required prior to issuance? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		
CONTINGENCY CONSTRUCTION START: <input type="checkbox"/>		
ONE STOP SHOP: <input type="checkbox"/>		

**DPZ SETBACK INFORMATION**

Front: \_\_\_\_\_  
Rear: \_\_\_\_\_  
Side: \_\_\_\_\_  
Side St.: \_\_\_\_\_  
All minimum setbacks met? YES  NO   
Is Entrance Permit required? YES  NO   
Historic District? YES  NO   
Lot Coverage for NewTown Zone \_\_\_\_\_  
SDP/Red-line approval date \_\_\_\_\_

**PROPERTY ID#** 61795

Filing fee \$ 100.00  
Permit fee \$ \_\_\_\_\_  
Excise tax \$ \_\_\_\_\_  
Add'l per. fee \$ \_\_\_\_\_  
TOTAL FEES \$ \_\_\_\_\_  
Sub-total paid \$ \_\_\_\_\_  
Balance due \$ \_\_\_\_\_  
Check # 1087  
Validation # 15131  
Accepted by [Signature]

The house as shown on this property lies within Zone C, area of minimal flooding, as indicated on Federal Emergency Management Agency maps entitled "FIRM, Flood Insurance Rate Map"

KOANDAH GARDENS ESTATES

LOT 29

LOT 29

N50°25'35"E 200.00'

N69°24'20"E 131.13'

30' B.R.L.

30' B.R.L.

APPROVED  
WALK-THRU BUILDING PERMIT  
APP. SAN PAY  
DESC. OF WORK: Pav +  
DATE: 7/23  
#19117  
# 000151291  
APR 26 2004

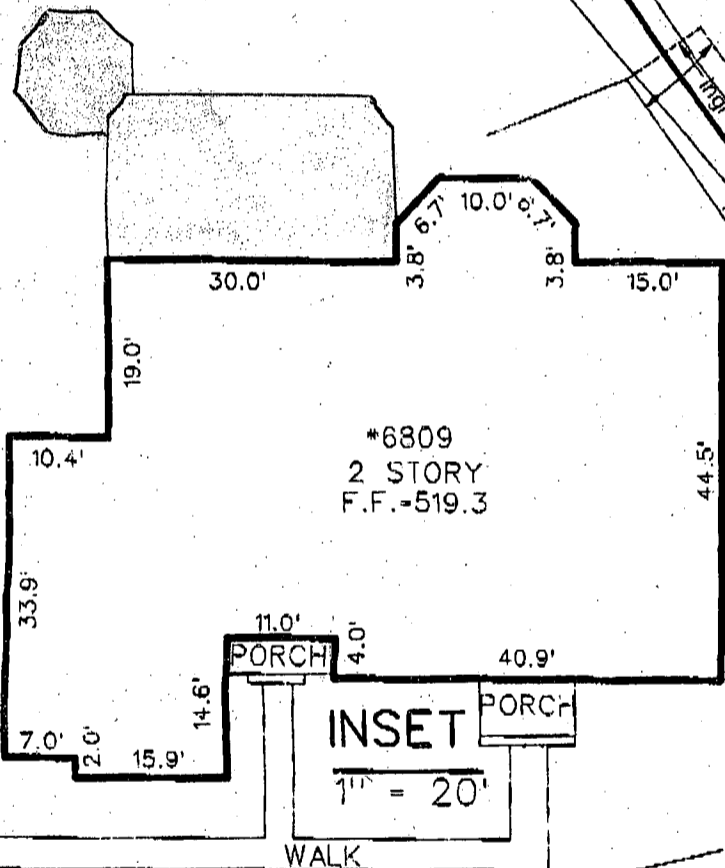
PRIVATE SEWER  
ESM'T PLAT 15632

LOT 18  
1.0356 AC

SEE INSET

Ex. Well  
No Tag

LOT 19



\*6809  
2 STORY  
F.F.-519.3

LOT 16

10' Tree  
Maintenance Esm't.

KOANDAH GARDENS  
(PUBLIC ACCESS PLACE)

Front: PER PLAT  
Side: 10'  
Rear: 30'

PERMIT # B00147684

PLEASE NOTE:

- 1) DIMENSIONS SHOWN WITHIN "( )" ARE COMPUTED TO AN ACCURACY OF PLUS OR MINUS ONE FOOT.
- 2) NO TITLE REPORT WAS FURNISHED. THIS PROPERTY IS SUBJECT TO ALL APPLICABLE EASEMENTS, RIGHTS-OF-WAY, COVENANTS AND THOSE DOCUMENTS WHICH THE UNDERSIGNED HAS NOT BEEN PROVIDED.
- 3) THIS PLAT IS A BENEFIT TO A CONSUMER ONLY INsofar AS IT IS REQUIRED BY A LENDER OR A TITLE INSURANCE COMPANY OR ITS AGENTS IN CONNECTION WITH CONTEMPLATED TRANSFER, FINANCING OR REFINANCING.
- 4) THIS PLAT IS NOT TO BE RELIED UPON FOR THE CONSTRUCTION OF FENCES, GARAGES, BUILDINGS OR FUTURE IMPROVEMENTS.
- 5) THIS PLAT DOES NOT PROVIDE FOR THE ACCURATE IDENTIFICATION OF PROPERTY BOUNDARY LINES, BUT SUCH IDENTIFICATION MAY NOT BE REQUIRED FOR THE TRANSFER OF TITLE OR SECURING FINANCING OR REFINANCING.

Job No.: 711-08-SO.

Scale: 1" = 50'

WALL CHECK DRAWING

Date: JULY 13, 2004

Drawn: J.B.V.

Checked: K.L.D.

FINAL LOCATION DRAWING

Date: OCTOBER 28, 2004

Drawn: D.G.S.

Checked: K.L.D.

Project Directory  
S:/07110800

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF THAT THIS PLAT OF THE PROPERTY SHOWN ABOVE, DESCRIBED AS: LOT 18 AS SHOWN ON A PLAT OF SUBDIVISION TITLED: KOANDAH GARDENS ESTATES AS RECORDED IN PLAT BOOK N/A AS PLAT NO. 15632 AMONG THE LAND RECORDS OF Howard COUNTY, MARYLAND, WAS PREPARED UNDER MY SUPERVISION AND THAT THE EXISTING VISIBLE IMPROVEMENTS AS SHOWN HEREON WERE LOCATED BY RECOGNIZED SURVEYING PRACTICES AND UNLESS OTHERWISE INDICATED, NO OTHER VISIBLE EVIDENCE WAS OBSERVED OF APPARENT ENCROACHMENTS ACROSS THE PROPERTY LINES.

SIGNATURE: *[Signature]* DATE: OCTOBER 28, 2004

PRINTED NAME: Kenneth L. Dye TITLE: Property Line Surveyor MD. REG. NO.: 556

ROCKVILLE OFFICE

1390 Piccard Drive, Suite 100 Rockville, MD 20850 t.301.948.2750 f.301.948.9067  
Engineering Planning Surveying Environmental Sciences www.LSAssociates.net