

PERMIT

*Needs these connections
Needs Pump Test*

SEWAGE DISPOSAL SYSTEM

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

P 511432
A 50036-0

HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
~~XXXXXXXX~~ 410-313-2640

OS-423643

DISTRICT _____

DATE 2/23/99

DATE SYSTEM APPROVED 5/18/99

INSPECTOR M.R. (SVL)

INDEXED

Jack Fyock Septic Services IS PERMITTED TO INSTALL X ALTER _____

ADDRESS P.O. Box 89, Triadelphia Road, Glenelg, Maryland 21737 PHONE 410-988-9270

SUBDIVISION Windy Knolls LOT 19 ROAD 6436 Prestwick Drive

PROPERTY OWNER Cornerstone Homes, Inc.

ADDRESS _____

TOP SEAMED SEPTIC TANK *** PUMP SYSTEM ONLY ***

SEPTIC TANK CAPACITY 1250 GALLONS

NUMBER OF BEDROOMS 4

180 SQUARE FEET PER BEDROOM

LINEAR FEET OF TRENCH REQUIRED 180

INSTALL: 1-1250 GALLON TOP SEAMED PUMP CHAMBER
NOTES: - Septic pump detail to be provided by installer prior to issuance of septic permit.
- Pump performance test is necessary prior to Health Department approval of pumped septic system.

TRENCHES - Trench to be 2 feet wide. Inlet 3.0 feet below original grade. Bottom maximum depth 7.0 feet below original grade. Effective area begins at 3.0 feet below original grade. 4.0 feet of stone below distribution pipe.

LOCATION - Starting from the left-rear lot corner, place the distribution box 65 feet down the left (493.42') lot line and 20 feet off this same lot line as seen when facing the lot from Prestwick Drive. Run 20 trenches on contour towards the rear lot line.

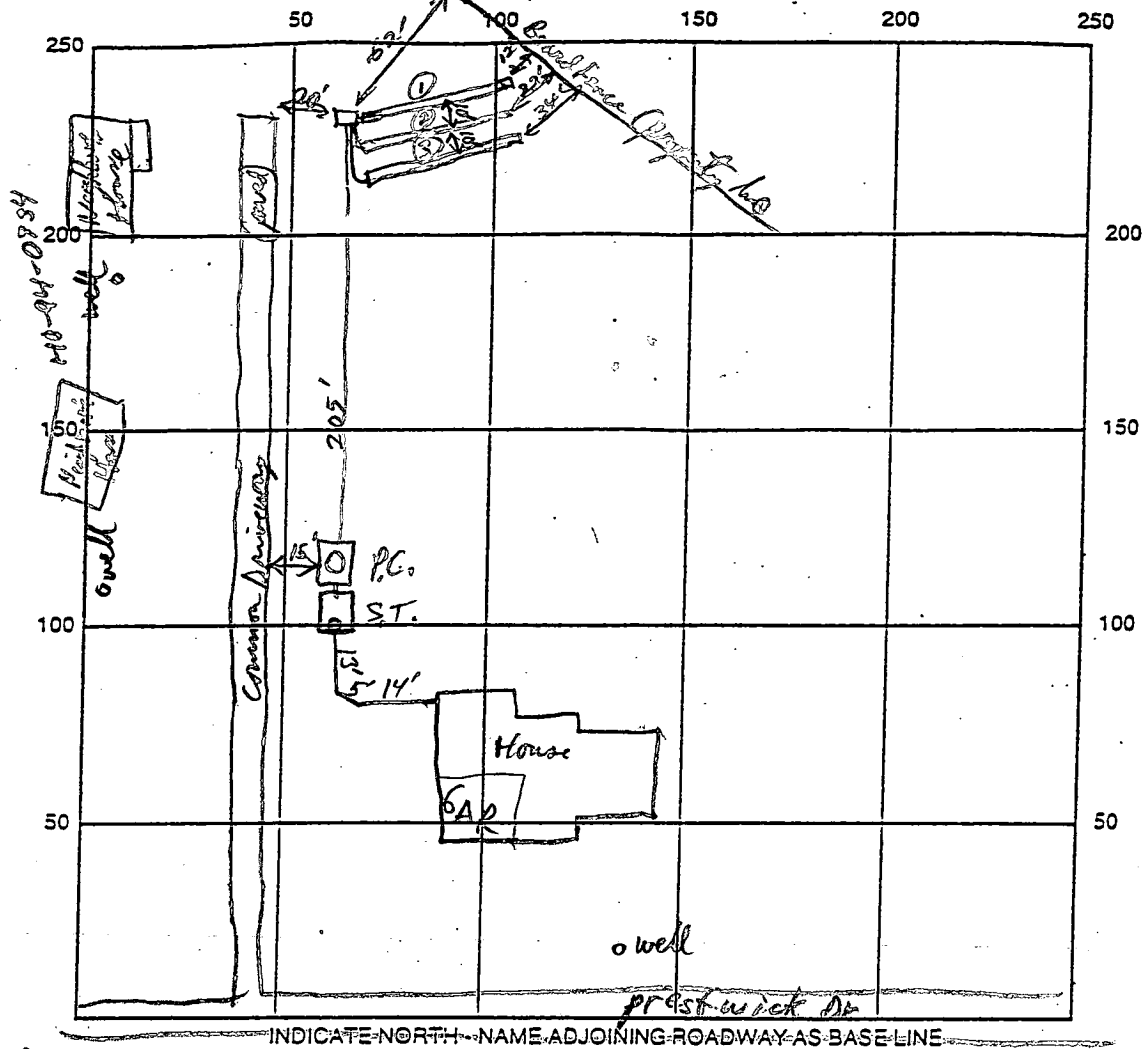
NOTES - No trench to exceed 100 feet in length. Provide 6" - 8" diameter cleanout and cap to grade or above on septic tank. 1/8/98 OK DM

PLANS APPROVED BY Donna K. Soe DATE 12-24-98

- COVER NO WORK UNTIL INSPECTED AND APPROVED
- 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**

50036-0



Pump Chamber 1250 gal Top Seamed P.C.
 SEPTIC TANK LEVEL 1250 gal Top Seamed S.T. CLEANOUTS S.T., Man hole @ P.C.

DISTRIBUTION BOX LEVEL _____
 DRAIN FIELD/TITLE DEPTH 7' FT. TRENCH WIDTH 2 FT. INLET DEPTH 3' FT.
 EFFECTIVE GRAVEL DEPTH 4 FT. TOTAL LENGTH 60/60/60 FT.
 NUMBER OF TRENCHES 3 ONE SIDEWALL/BOTTOM AREA 720 SQ. FT.
 DRYWALL INSIDE DIAMETER N/A FT. EFFECTIVE DEPTH BELOW INLET N/A FT.
 ABSORBENT AREA N/A SQ. FT.

REMARKS: Septic tanks set. 1st 2 Trenches OK to lower, 3/18/99 PMP
3rd Trench + Tanks OK to lower. Needs House Connection M/P 5/8/99
HPump Test

4/14/99 - HOUSE CONNECTION MADE. S.R.K.

4/13/99 - Grouting performed by driller inadequate. Only 10.5' of grout observed from grade down. S.R.K. INVESTIGATION WILL BE PERFORMED. (See Site Inspection Sheet for Well Construction Evaluation) Regouted on 4/22/99 at 2:34pm SRK.

DATE SYSTEM APPROVED 5/18/99 INSPECTOR M. Ripkin
5/18/99 - PUMP TEST CONFIRMED BY FYOCK, W/O INSP (MR)

JACK FYOCK SEPTIC SERVICE, INC.

SEPTIC PUMPING, INSTALLATION, AND REPAIRS

P.O. BOX 89 - GLENELO, MD 21737

PHONE (410) 988-9270 or (410) 531-2939

FAX: (410) 531-1258

5/18/99

Craig Williams

Dept. of Environmental Health

3525-H Ellicott Mills Dr.

Ellicott City, MD 21043

To Whom it May Concern,

On May 16, 1999 the pump system at the property known as Windy Knolls/Lot 19, was inspected by Jack Fyock Septic Service, by filling the tank with water to make sure the pump was operating. The pump was operating properly. Thank you.

Jack Fyock Septic Service, Inc.

531-2939
531-1258
P.O. BOX 89
GLENELO, MD 21737
JACK FYOCK SEPTIC SERVICE, INC.

Approved Septic System Plan
Howard County Health Department

Signature
Signature

Date
12/24/98

Septic ELEVATIONS

BASEMENT OUT	-	445 ⁶
TANK IN	-	445 ⁰
TANK OUT	-	444 ⁷
PUMP IN	-	444 ²
PUMP OUT	-	443 ⁴
Box IN	-	453 ⁷
Box OUT	-	454 ⁰
EXISTING ELEV. AT BOX	-	457 ⁵


* PUMP SYSTEM *

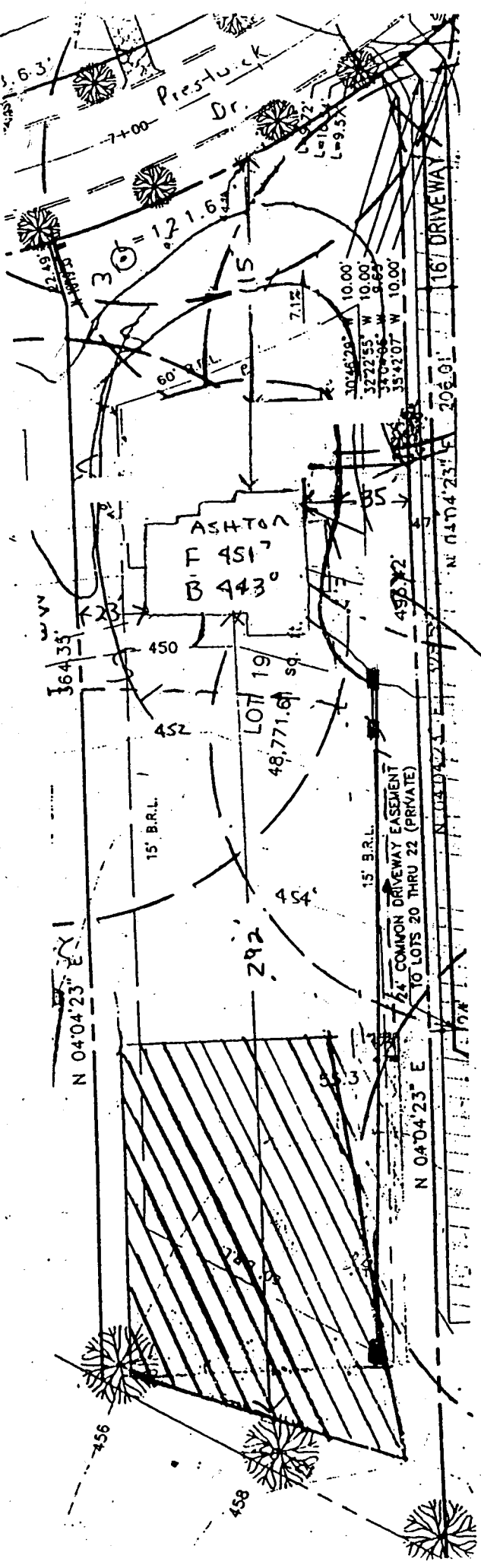
Total linear feet of trench
required 240 feet

Width of trench(es) 3 feet

Depth of trench(es) 9 feet

Depth of stone required below
distribution pipe 4 feet

PROJECT :	WINDY KNOLLS LOT 19	
LOCATION :	TAX MAP 34 , PARCEL 84 & 134 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE :	SITE DEVELOPMENT PLAN	
BUILDER :	CORNERSTONE HOMES, INC. 9671 NORFOLK AVE. Laurel, MD 20723	
DATE: 11-01-95	PROJ. NO.:	
SCALE: AS SHOWN	SHEET 2 OF 2	
		 Voria Engineering CONSULTING ENGINEER 8307 MAIN ST., HISTORIC ELLICOTT CITY TEL: 410-465-0400 FAX: 410-465-0400



APPLICATION

PERCOLATION TESTING

A 500360

P _____

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

DISTRICT _____

DATE 5/18/94

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 Clarksville Pike Joint Venture Cornerstone Homes

ADDRESS C/O Land Design + Development Inc
10805 Hickory Ridge Rd Col Md 21044 PHONE 740-2100

AGENT OR PROSPECTIVE BUYER Mark Reich

ADDRESS _____ PHONE _____

PROPERTY LOCATION:

SUBDIVISION Windy knolls LOT NO. 15 19

ROAD AND DESCRIPTION West side of Clarksville Pike (Rt 108)
(6436 Prestwick Drive)

TAX MAP 34 PARCEL # 84+134

SIZE OF LOT 1 + or - acres TYPE BLDG. _____
(SINGLE FAMILY DWELLING OR COMMERCIAL)

BLDG. PERMIT SIGNED
AND RETURNED 12-24-98
Serial # B70 115449
SFD-4Bm

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.

Mark Reich
(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

500360

COUNTY #

SOIL PROFILE

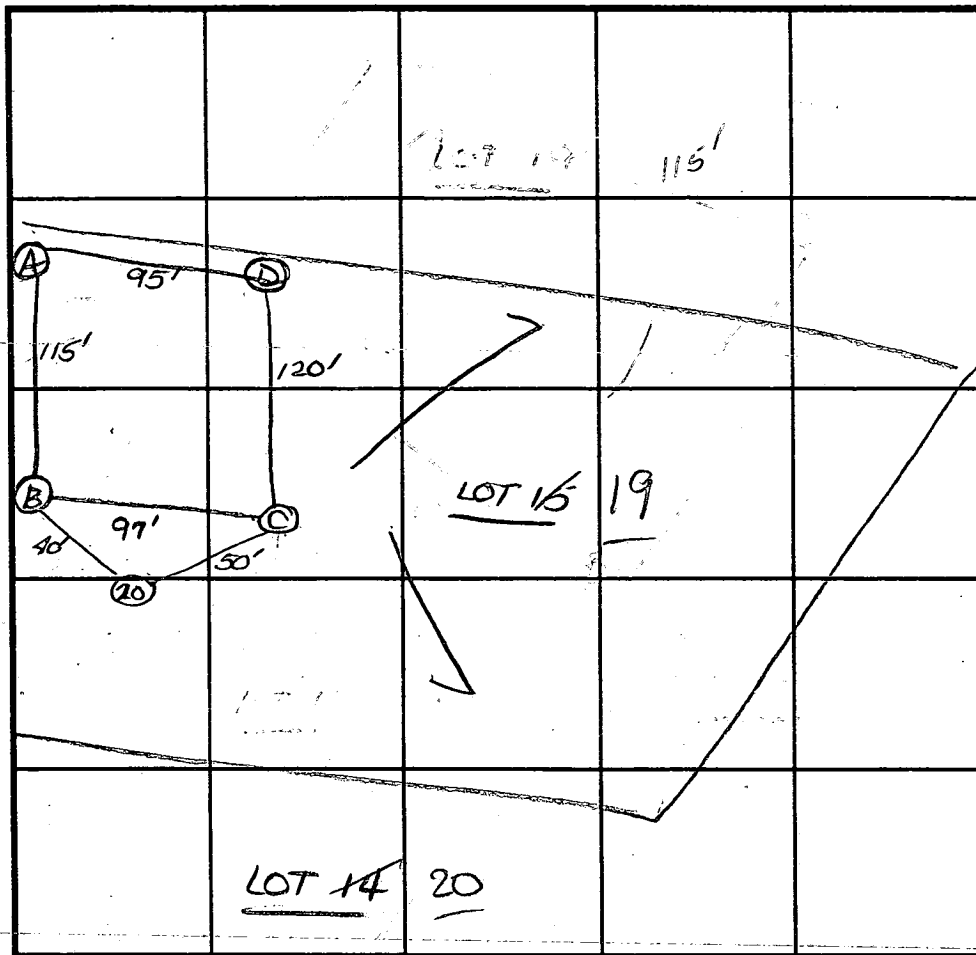
note (B)

topsoil

red br clay 10"m

tan sandy loam

SOIL PROFILE



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME
			START	STOP	START	STOP	
5/25/94	D	4.0' S	11:05	11:06 ₃₀	11:06 ₃₀	11:08	2
		8.0' M	11:04	11:07	11:07	11:11	4
		12.0' D	see profile				
	C	4.0'	11:20	11:24	11:24	11:30	6
		11.5' D	same as profile				
		5.0'	11:32	11:33 ₃₀	11:33 ₃₀	11:35	2
	A	12.0' D	same as profile				
		13.0'	Visual				
			same as profile				
12/8/94	20	11.0' D	Visual - See profile				

REMARKS Tested as stated

TYPE OF SOIL

TESTED BY D. Soe

ALSO PRESENT O.K., Jr & wife

TRENCH DESIGN DATA: AVERAGE PERCOLATION TIME 4

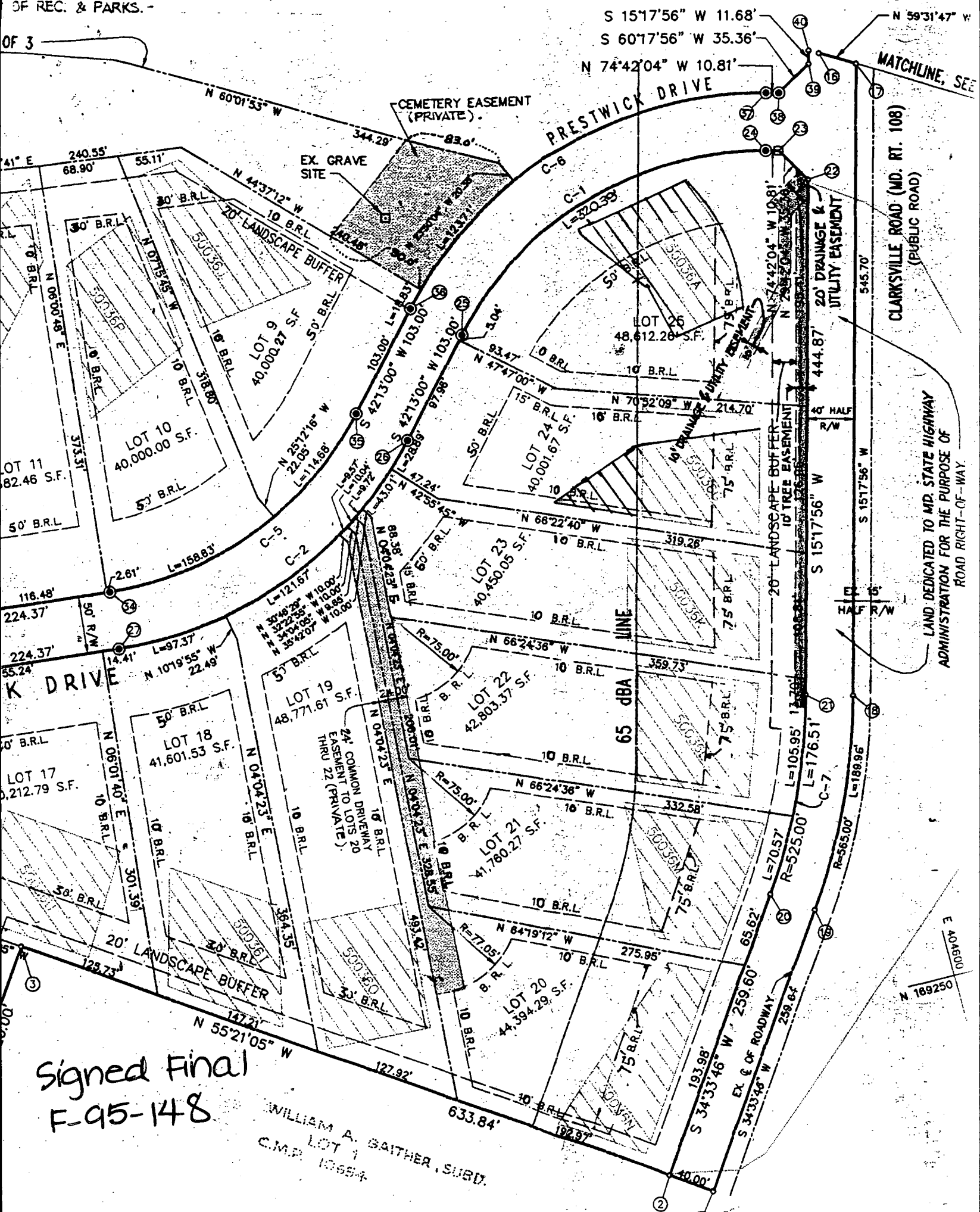
TRENCH WIDTH 2'

INLET DEPTH 3'

MAXIMUM BOTTOM DEPTH 7'

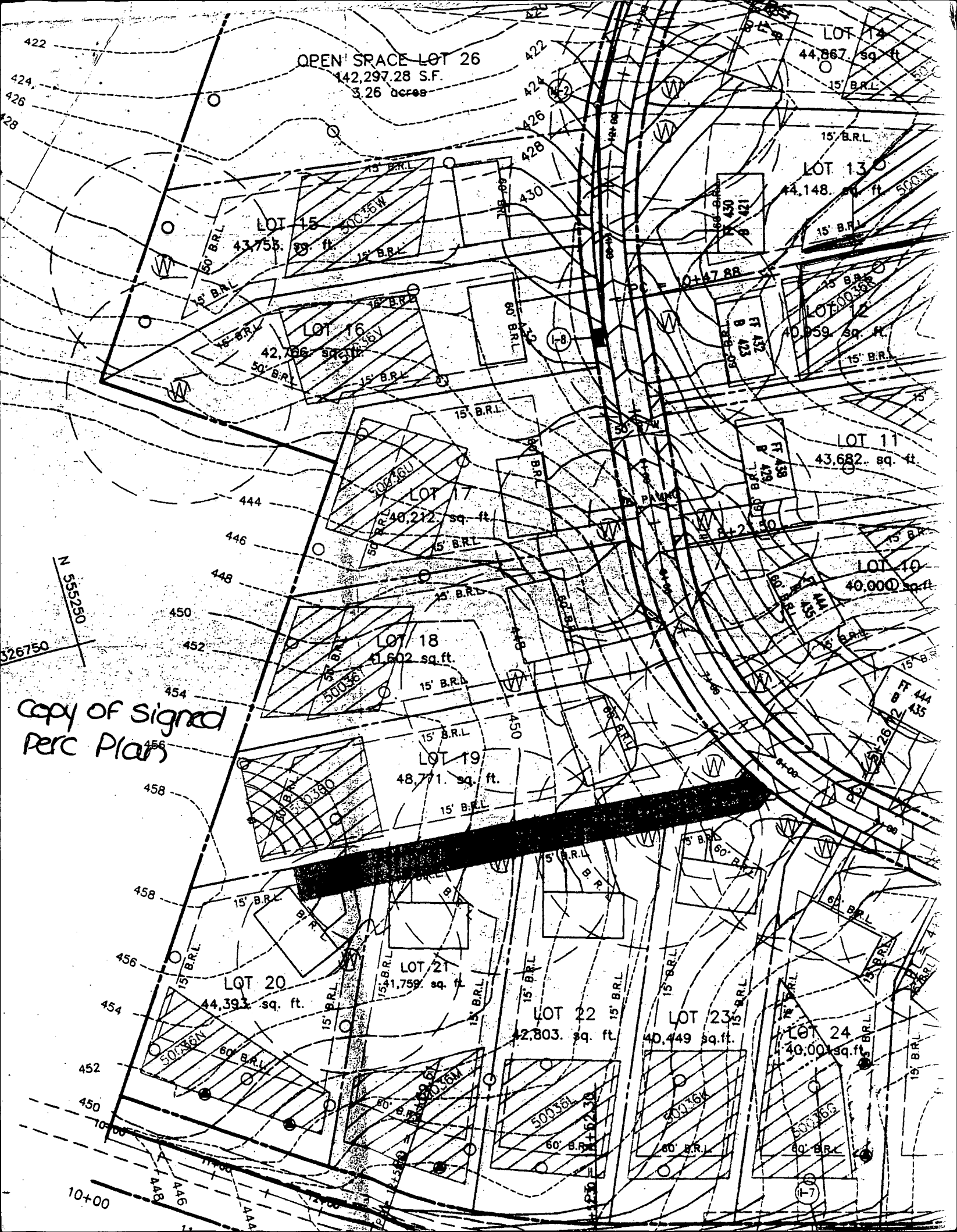
SQ. FT./BEDROOM 180

0' (20)
topsoil
1' or br cl 1m
3-4'
tan to beige silty
11-0'
5% rock frags



Signed Final
F-95-148

WILLIAM A. SAITHER, SURV.
LOT 1
C.M.P. 1965-4



OPEN SPACE LOT 26
142,297.28 S.F.
3.26 acres

LOT 15
43,753 sq. ft.

LOT 16
42,766 sq. ft.

LOT 7
40,212 sq. ft.

LOT 18
41,602 sq. ft.

LOT 19
48,771 sq. ft.

LOT 20
44,393 sq. ft.

LOT 21
41,759 sq. ft.

LOT 22
42,803 sq. ft.

LOT 23
40,449 sq. ft.

LOT 24
40,000 sq. ft.

LOT 13
41,148 sq. ft.

LOT 11
43,682 sq. ft.

LOT 10
40,000 sq. ft.

LOT 14
44,867 sq. ft.

Copy of signed
Perc Plan

N 555250

326750

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C1 7989 SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

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

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

FILL IN THIS FORM COMPLETELY PLEASE PRINT OR TYPE

COUNTY NUMBER A500360

ST/CO USE ONLY DATE Received 09.17.98

DATE WELL COMPLETED 09/6/98

Depth of Well 185 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO-94-1038

OWNER LDD last name Preswick Drive first name TOWN CLARKSVILLE SUBDIVISION Windy Knolls SECTION LOT 19

WELL LOG Not required for driven wells

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

Table with columns: DESCRIPTION (Use additional sheets if needed), FEET (FROM, TO), check if water bearing. Includes entries for Topsoil, Mica & Sandstone, Blue rock, and Got water.

Handwritten note: OPEN ANNULAR SPACE FOUND ON 4/22/99 AND REGRADED BY EASTDAY, WITNESSED BY KRIEG-HOWCO HEALTH & DOUCHEATY-MDE. 3'-4' (CW)

GROUTING RECORD

WELL HAS BEEN GROUTED (Y) (N) TYPE OF GROUTING MATERIAL (Circle one) CEMENT (CM) BENTONITE CLAY (BC) NO. OF BAGS 13 NO. OF POUNDS 1222

CASING RECORD casing types insert appropriate code below (S) STEEL (C) CONCRETE (P) PLASTIC (O) OTHER

MAIN CASING TYPE Nominal diameter top (main) casing (nearest inch)! Total depth of main casing (nearest foot) (S) 6 7/8" 67'

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

SCREEN RECORD screen type or open hole (S) STEEL (B) BRASS BRONZE (P) PLASTIC (H) OPEN HOLE (O) OTHER

DEPTH (nearest ft.) 1 40 66 185 2 3 38 39 41 45 47 51 SLOT SIZE 1 2 3 DIAMETER OF SCREEN 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) TELESCOPE CASING LOG INDICATOR OTHER DATA

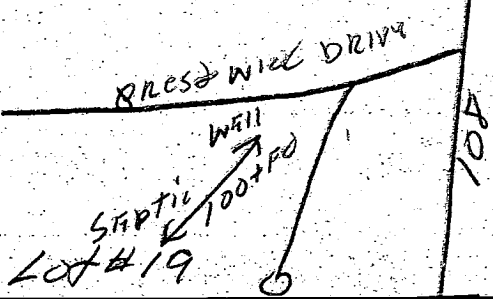
PUMPING TEST

HOURS PUMPED (nearest hour) 3 PUMPING RATE (gal. per min.) 10.0 METHOD USED TO MEASURE PUMPING RATE Submersible WATER LEVEL (distance from land surface) BEFORE PUMPING 40 ft. WHEN PUMPING 150 ft. TYPE OF PUMP USED (for test) (S) submersible

PUMP INSTALLED

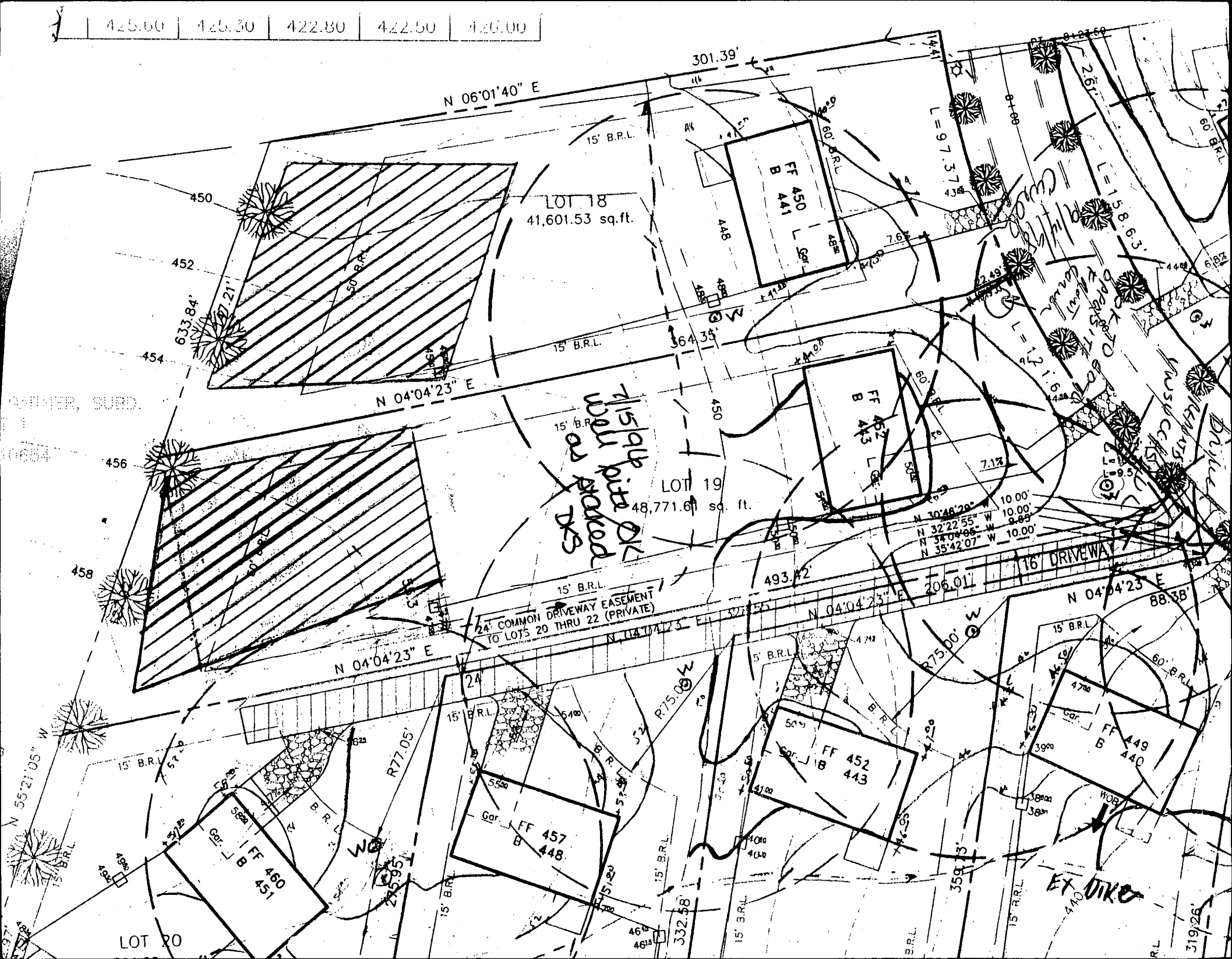
DRILLER WILL INSTALL PUMP (CIRCLE) (YES) (NO) IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS. TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. CAPACITY: GALLONS PER MINUTE (to nearest gallon) PUMP HORSE POWER PUMP COLUMN LENGTH (nearest ft.) CASING HEIGHT (circle appropriate box and enter casing height) (+) above (2) below (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)



SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

425.00	425.30	422.80	422.50	426.00
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LOT 18
41,601.53 sq. ft.

LOT 19
48,771.61 sq. ft.

24' COMMON DRIVEWAY EASEMENT
TO LOTS 20 THRU 22 (PRIVATE)

*15' B.R.L. OK
WALL RITE OK
24' B.R.L. OK*

EX DIKE

Opposite to 16' driveway

ANDOVER, SUBD.

0684

LOT 20

319.26'

N 30°48'20" W 10.00'
N 32°22'55" W 10.00'
N 34°04'06" W 9.89'
N 35°42'07" W 10.00'

16' DRIVEWAY

N 04°04'23" E

N 04°04'23" E

N 04°04'23" E

N 04°04'23" E

N 55°21'05" W

R77.05'

R75.00'

R75.00' W

332.58'

359.75'

440.00'

319.26'

FF 460
B 451

FF 457
B 448

FF 452
B 443

FF 449
B 440

FF 450
B 441

FF 452
B 443

FF 450
B 441

450

452

454

456

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301.39'

N 06°01'40" E

15' B.R.L.

15' B.R.L.

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15' B.R.L.

15' B.R.L.

15' B.R.L.

15' B.R.L.

15' B.R.L.

633.84'

67.21'

50' B.R.L.

60.95'

64.55'

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301.39'

N 06°01'40" E

15' B.R.L.

15' B.R.L.

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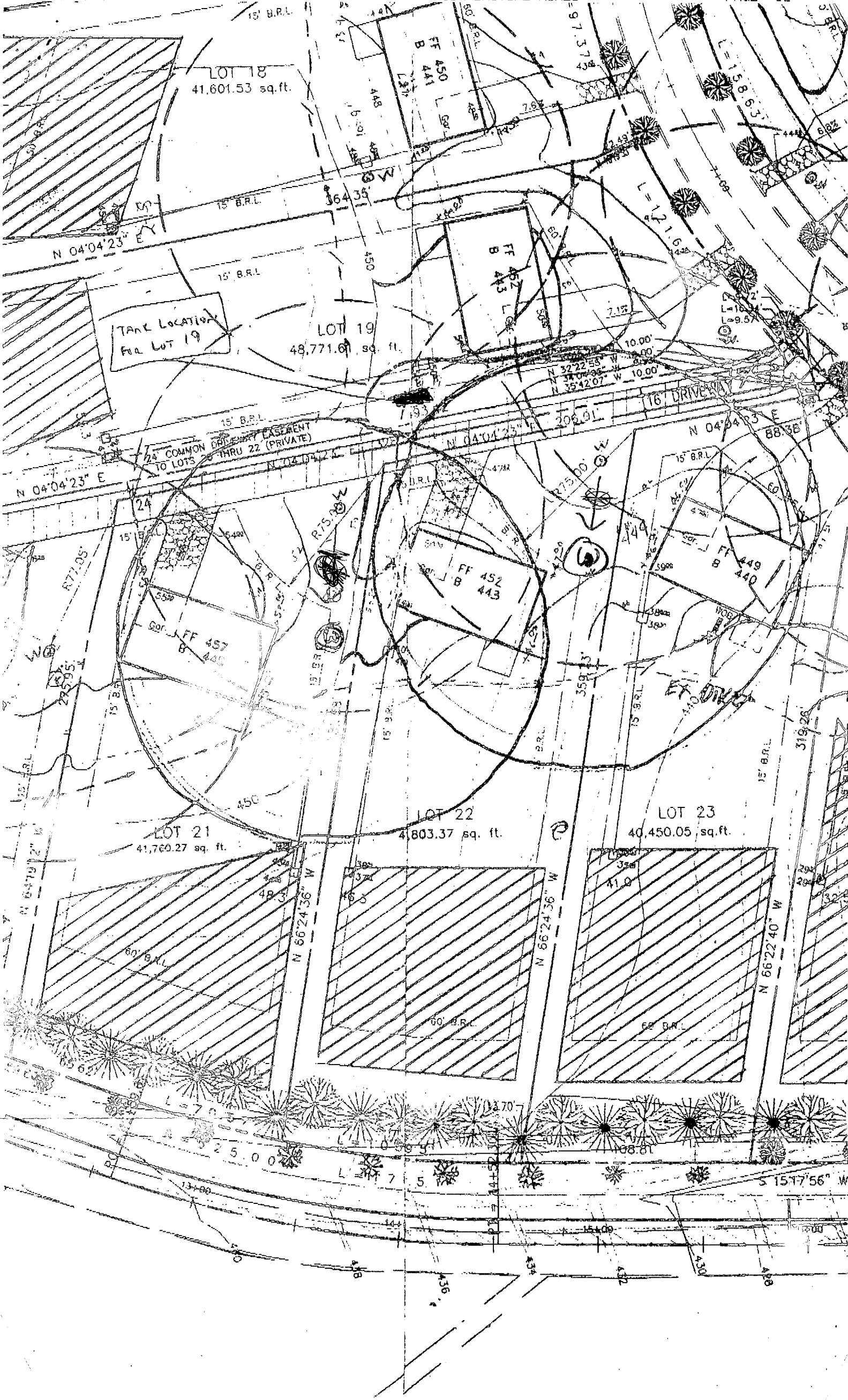
64.00'

64.00'

64.00'

64.00'

64.00'



LOT 18
41,601.53 sq. ft.

LOT 19
48,771.61 sq. ft.

TANK LOCATION
FOR LOT 19

LOT 21
41,760.27 sq. ft.

LOT 22
41,803.37 sq. ft.

LOT 23
40,450.05 sq. ft.

24' COMMON DRIVEWAY EASEMENT
THRU 22 (PRIVATE)

16' DRIVEWAY

ET ALIA

FF 452
B 443

FF 449
B 440

FF 457
B 444

FF 450
B 441

N 04°04'23" E

N 04°04'23" E

N 04°04'23" E

N 64°19'21" W

N 66°24'36" W

N 66°24'36" W

N 66°22'40" W

S 15°17'56" W

60' B.R.L.

60' B.R.L.

60' B.R.L.

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B 1 **6455** SEQUENCE NO. (MDE USE ONLY)
1 2 3 6
(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

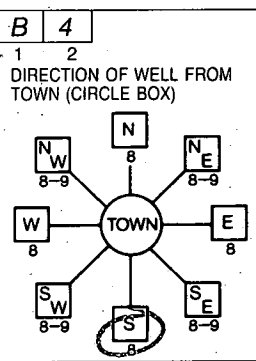
STATE OF MARYLAND
PERMIT TO DRILL WELL
please print or type

STATE PERMIT NUMBER
HD-94-11088
70 fill in this form completely

Date Received (APA) **08 19 98**
8 MM DD YY 13
OWNER INFORMATION
15 Last Name **LAW DESIGN & DEVELOPMENT** 34 First Name
36 Street or RFD **10805 HICKORY RIDGE RD** 55
57 Town **COLUMBIA** 70 State **MD** 72 Zip **21044** 76

B 3 LOCATION OF WELL
8 COUNTY **HOWARD** 21
23 SUBDIVISION **WINDY KNOLLS** 42
SECTION **I** 44 46 LOT **19** 48 50
52 NEAREST TOWN **CLARKSVILLE** 71
MILES FROM TOWN (enter 0 if in town) **I** 73 M I 76 77 78

DRILLER INFORMATION
Driller's Name **Perry Hakeley** 76 License No. **MSD 143** 81
Firm Name **Hakeley Drilling**
Address **Box 160 Walkersville MD 21793**
Signature **Perry Hakeley** 8-17-98 Date



CHESWICK DRIVE MD 108
11 NEAR WHAT ROAD 30
ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)
NORTH WEST EAST SOUTH
34 **600** 37 DISTANCE FROM ROAD ENTER FT OR MI 38 39
TAX MAP: BLK: PARCEL

B 2 WELL INFORMATION
APPROX. PUMPING RATE (GAL. PER MIN.) **3** 8 12
AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) **600** 14 20

USE FOR WATER (CIRCLE APPROPRIATE BOX)
 HOME (SINGLE OR DOUBLE HOUSEHOLD UNIT ONLY)
 FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
22 INDUSTRIAL, COMMERCIAL, STATE AND FEDERAL GOV. OTHER (REQUIRES APPROPRIATION PERMIT)
 PUBLIC OR PRIVATE WATER COMPANY (REQUIRES APPROPRIATION PERMIT AND STATE APPROVAL)
 TEST, OBSERVATION, MONITORING (MAY REQUIRE APPROPRIATION PERMIT)

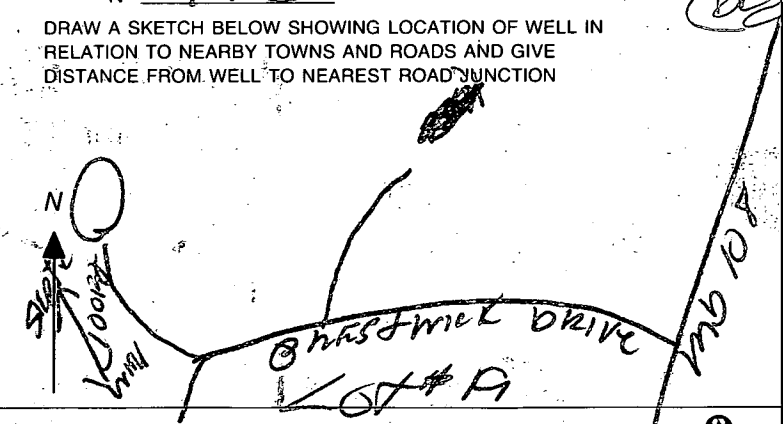
NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL
COUNTY NAME **HOWARD** COUNTY NO. **A 500310**
STATE SIGNATURE _____ INSERT S _____ 41
DATE ISSUED **08 16 98** 43 MM DD YY 48 CO SIGNATURE _____ EXP. DATE _____
NORTH GRID **496 000** 50 EAST GRID **0816 000** 57 63

APPROXIMATE DEPTH OF WELL **200** FEET 24 28
APPROXIMATE DIAMETER OF WELL **6"** NEAREST INCH

METHOD OF DRILLING (circle one)
BORED (or Augered) JETTED Jetted & DRIVEN
30 AIR-ROTARY AIR-PERCussion ROTARY (Hydraulic Rotary)
37 CABLE REverse-ROTARY Drive-POINT
other _____

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X
SOURCES OF DRILLING WATER
1. **WELL**
2. **6' casing**
3. _____
WRITE THE BOX NUMBER FROM THE MAP HERE
E **816**
N **496**
9/16/98
11:45 a.m. **CHESWICK DRIVE**
(Great not done at time of imp)

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)
 THIS WELL WILL NOT REPLACE AN EXISTING WELL
 THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
39 THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
 THIS WELL WILL DEEPEM AN EXISTING WELL
PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE) 41 _____ 52



Not to be filled in by driller (MDE OR COUNTY USE ONLY)
APPROP. PERMIT NUMBER _____ G A P _____ 63
FORCE **DS** 67 68 WRITE INITIALS IN BOX PERMIT No. **HD-94-11088** 70 71 72 73 74 75-76 77 78 79

SPECIAL CONDITIONS
NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED -
COUNTY

B 1 **3027**
(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6, ON ALL CARDS)

SEQUENCE NO. (DP USE ONLY)

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL
please print or type

STATE PERMIT NUMBER
HO-94-0880
70 fill in this form completely 78

Date Received (APA) **05/19/96**
OWNER INFORMATION
Last Name **ZAMB** Owner **DESIGN** First Name **GWADREVE**
Street or RFD **70805 Aikony Ridge**
Town **Columbia** State **MD** Zip **21044**

DRILLER INFORMATION
Driller's Name **Wayne E. Hahn, MSD/MGD**
Firm Name **Hanky Drilling & Pump Systems**
Address **Box 160 Walkersville, MD 21793**
Signature **Wayne E. Hahn** Date **4-26-96**

WELL INFORMATION
APPROX. PUMPING RATE (GAL. PER MIN.) **3**
AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) **500**

USE FOR WATER (CIRCLE APPROPRIATE BOX)
 HOME (SINGLE OR DOUBLE HOUSEHOLD UNIT ONLY)
 FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
 INDUSTRIAL, COMMERCIAL, STATE AND FEDERAL GOV. OTHER (REQUIRES APPROPRIATION PERMIT)
 PUBLIC OR PRIVATE WATER COMPANY (REQUIRES APPROPRIATION PERMIT AND STATE HEALTH DEPARTMENT APPROVAL)
 TEST, OBSERVATION, MONITORING (MAY REQUIRE APPROPRIATION PERMIT)

APPROXIMATE DEPTH OF WELL **300** FEET
APPROXIMATE DIAMETER OF WELL **6** INCH

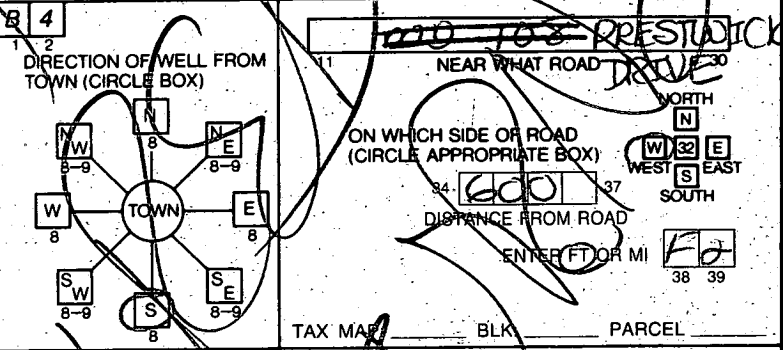
METHOD OF DRILLING (circle one)
Bored (or Augered) JETTED Jetted & Driven
AIR-ROTARY AIR-PERCUSSION ROTARY (Hydraulic Rotary)
CABLE REVERSE-ROTARY Drive-POINT
other _____

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)
 THIS WELL WILL NOT REPLACE AN EXISTING WELL
 THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
 THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
 THIS WELL WILL DEEPEM AN EXISTING WELL
PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE) _____

Not to be filled in by driller (OEP USE ONLY)
APPROX. PERMIT NUMBER **GAP**
FORCE **DS** WRITE INITIALS IN BOX PERMIT No. **HO-94-0880**

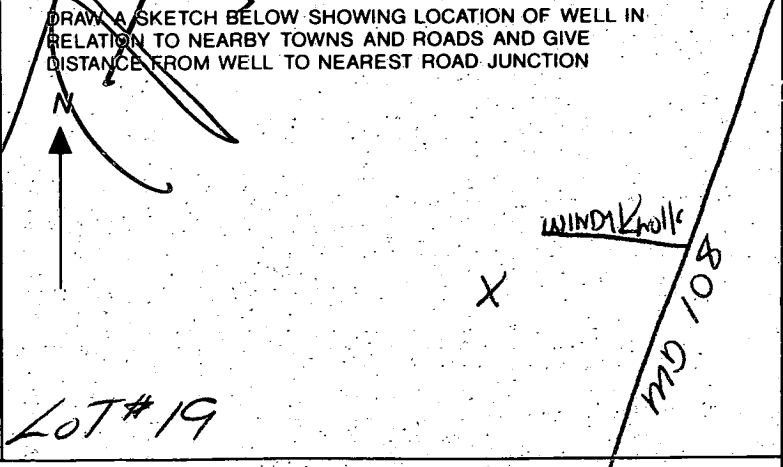
SPECIAL CONDITIONS
NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED =

LOCATION OF WELL
COUNTY **HOWARD**
SUBDIVISION **WINDY KNOLLS**
SECTION **2** LOT **19**
NEAREST TOWN **CLARKSBURG**
MILES FROM TOWN (enter 0 if in town) **2** MI



NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL
COUNTY NAME **Howard** COUNTY NO. **A 500360**
STATE SIGNATURE _____ DATE ISSUED **07/31/96** INSERT S
CO. SIGNATURE **KOMAK SOE** EXP. DATE **7/30/97**
NORTH GRID **496000** EAST GRID **0816000**

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X
SOURCES OF DRILLING WATER
1. **well**
2. _____
3. _____
WRITE THE BOX NUMBER FROM THE MAP HERE
810
496



COUNTY

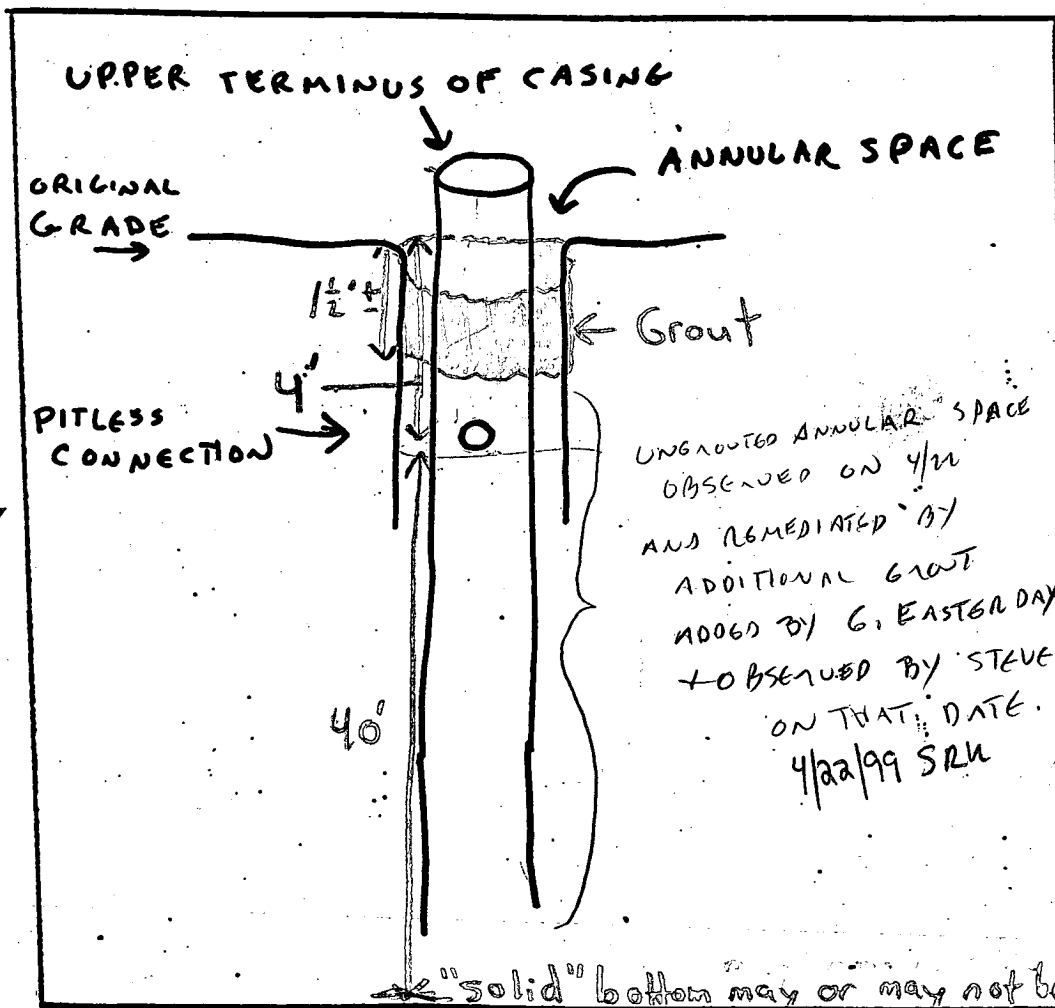
SITE INSPECTION SHEET

OWNER: _____
ADDRESS: Windy Knolls Lot #19

DATE REQUESTED: _____
DRILLER: Perry Harley
WELL TAG # HO-94-1688
COUNTY # Howard

PROPOSAL: WELL CONSTRUCTION EVALUATION -

LOCATION DIAGRAM



Regrout done on 4/22/99 at 2:34 pm
15-94lb sacks
Checked to make sure grout did not sink
Sank 1' on ✓
SRU 4/22/98
45' of grout

COMMENTS: 44' from top of casing down.
Present: George Easterday, Dave Kerr, Eric Dougherty,
Craig Williams, Frank Skinner, Brian Baker
65' of casing confirmed

DATE: 4/22/99 INSPECTOR: S.R.k.



MARYLAND DEPARTMENT OF THE ENVIRONMENT
2500 Broening Highway • Baltimore, Maryland 21224
(410) 631-3000


Craig

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

MEMORANDUM

TO: Maryland Board of Well Drillers

FROM: Eric Dougherty, Geologist
Groundwater Permit Program 

SUBJECT: Observations Made During Inspection Of Wells

DATE: April 26, 1999

On April 20 and April 22, 1999, I conducted a site inspection at Windy Knolls Subdivision, Clarksville, Howard County, Maryland in response to a request from Dave Kerr, Regional Sanitarian. On April 20, five wells were inspected. On April 22, a follow-up inspection was conducted using the MDE down-hole camera and a backhoe.

Lot 19, well tag number HO-94-1688, was found to have an open annular space to 44 ft below TOC, 62.5 ft of 6" steel casing and a total depth of 177 ft. Some cement was present at the land surface for a 1 foot thickness, but no cement was found in the exposed annular space below grade for 4 feet. The annular space was grouted on April 22, with 15 sacks of neat portland cement.

Well HO-94-1690, was inspected and found to have voids in the cement grout to a depth of 11 feet below grade. At 11 feet below grade, the grout appears solid.

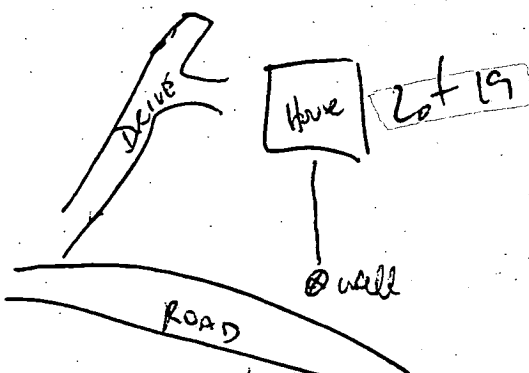
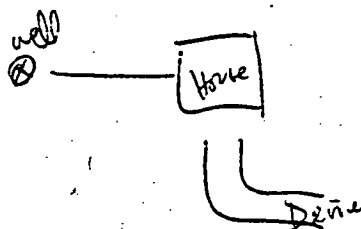
Lot 1, no well tag, the steel casing was found to be 52.5 ft in length, and the grout had voids to 15 feet below TOC. Grout staining/curtain lining of the annular space was found from 2 feet below grade to 15 feet below grade.

Wells HO-94-2005 and 2006 were also inspected for grout integrity by digging along side of the casing with a backhoe. The depth exposed was approximately 15 feet at these two locations. The grout appeared solid and completely filling the annular space below where the pitless connection would be expected.

Attached for your review and information is a copy of my field notes and well completion report for lot 19, well HO-94-1688. If you have any questions, please feel free to contact me at extension 3797. Thank you.

Cc: Dave Kerr
Craig Williams, Howard County

w/ Dave Kerr, MDE



3:44 pm w/ Dave Kerr, MDE

tag # HO-94-1688

6" steel w/ conduit cap
SCIDCS 3, 4, 5, 6, 7

w/ file probe, probe Annulus
below where pit has would be

- inserted probe 5 ft - no
resistance -

- no grout staining

Annulus wall

w/ casing depth meter - obstruction

@ 47.3 ft - could not
advance - ↓ TOC

= 2 =

#094-1688

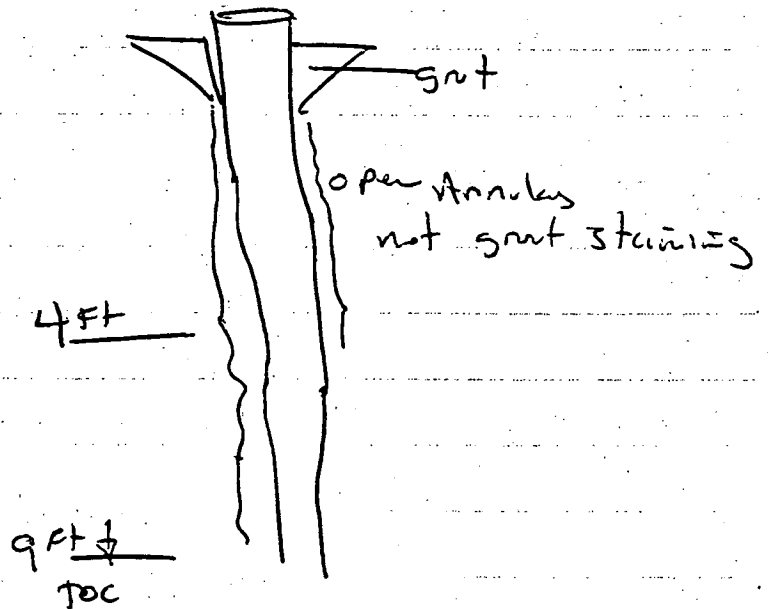
CONTINUED

20 April 99

water @ 40.75 ft ↓ TOC w/ electronic water level meter

- 4 ft deep trench -

- grout - portland cement, 1 1/2" hole thick @ grade



- measured total well depth w/ weighted string to

$$59 \text{ paces } (\times 3 \text{ ft}) = \frac{259}{3} = 177 \text{ ft TD } \downarrow \text{ TOC}$$

- re measured 6" steel to - stopped @ 43 ft ±

around all sides @ of casing (sleeve?)

April
22 1999

H094	Windy knows	st 6φ		65.2 ft			BALD Gravel	RAW 20LFT RE-BAR DOWN ANNULAS @ TOC - NO RESISTANCE - 1 ST JT - 4.5 FT; 2 ND JT 24.5 FT; H ₂ O @ 40 FT - 3 RD JT 45 FT
1688	Lot 19							57, 58 1/2 Iner Rebar - undetermined due to cloudy H ₂ O - END @ 65.2 FT ±

- placed 1/2 φ PVC to 44 FT ± TOC - SOLID

water in well cloudy

HOWARD COUNTY HEALTH DEPARTMENT
Bureau of Environmental Health
3523-W Ellicott Mills Drive
Ellicott City, MD 21043
461-9933

APPLICATION FOR PITLESS ADAPTER, WELL PUMP AND PRESSURE TANK INSTALLATION

New Installation
Replacement

Receipt # _____
Date 4/26/99

Name of Installer FARCA Piping H&S Co.

Telephone 410-465-1401

License Number _____

Certified Well Pump Installer _____

Well Driller _____

Registered Plumber

Name of Property Owner _____

Telephone _____

Subdivision WINDY HILLS

Lot # 19

Well Tag # HO-94-1688

Site Address 12736 FRIEDRICH DR

Pump

1. Type

- a. Deep well jet _____
b. Shallow well jet _____
c. Submersible

Motor

1. Horsepower 1/2
2. RPM _____
3. Voltage _____
a. 110 _____
b. 220 _____

Pitless Adapter

1. Make Crawford
2. Model # _____
3. Depth 48"

2. Make Goulds

3. Model # 226505412

4. Capacity 7 GPM

5. Pump exceeds well capacity Yes _____ No

6. If Yes, is low pressure cutoff switch installed? Yes _____ No _____

7. What methods are used to protect the pump and electrical wiring from vibrations? Torque arrestors _____ Cable guards _____ Other _____

Tank

1. Capacity 220
2. Pressure relief valve? YES

Piping

1. Type PE
2. Size 1 1/2
3. NSF and/or BOCA Code approved
4. Depth of supply line 157 ft

Well data

1. Depth 180 ft.
2. Yield 10 GPM
3. Static water level 47 ft.
4. Will water supply be disinfected by installer? YES

I understand that it is my responsibility to notify the Howard County Health Department when the installation is ready for inspection (otherwise this permit is null and void).

All information given above is true to the best of my knowledge.

Signature of Applicant: [Signature]

Date: 5/2/99

Note: A sticker indicating approval/status of the installation will be placed on the well casing at the time of the inspection.

Resolved -
Anyway



Never
Sent?

HOWARD COUNTY HEALTH DEPARTMENT

Mary Sue Baker, MBA, Acting County Health Officer

April 14, 1999

Cornerstone Homes
Attn: John Conners
Director of Construction

John,

This is to confirm our recent conversations with respect to serious concerns about a number of the water wells in the Windy Knolls subdivision that appear to be inadequately grouted.

Problems observed at time of well line installation include:

- lot 4 - large voids in the grout;
- lot 22 - no grout below the pitless adapter;
- lot 19 - inappropriate grout material - rock cuttings and soil mixed in with the grout.

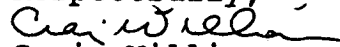
These are construction defects that do not satisfy requirements for properly constructed wells and pose severe threat for potential contamination of the water supply.

We cannot proceed further with individual permits or occupancy approvals until there is confidence that the properties in question are each served by "a properly constructed" well.

The "down-the-hole" view afforded by the well line inspection provides only a very limited window to observe the condition of the grout. A scheduled site evaluation with a backhoe and handtools would be the first step in confirming the degree of the problem. With a licensed driller present as your consultant, recommendations for remediation can be considered and agreement on an appropriate course of action can be reached.

Please contact this office to schedule the evaluation at the earliest opportunity.

Respectfully,


Craig Williams