

C1 36145

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

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

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

FILL IN THIS FORM COMPLETELY PLEASE TYPE

COUNTY NUMBER

ST/CO USE ONLY DATE RECEIVED

DATE WELL COMPLETED

Depth of Well

PERMIT NO. FROM "PERMIT TO DRILL WELL"

OWNER Rawlings, Justin + Lourda WELL SITE ADDRESS 1011 Reed Ln TOWN Ellicott City MD SUBDIVISION SECTION LOT

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 like Brn Mlg + Sand, Whit Brn Clay, etc.

2 LOOPS GROUTING RECORD yes no WELL HAS BEEN GROUTED (Circle Appropriate Box) Y N

TYPE OF GROUTING MATERIAL (Circle one) CEMENT CM BENTONITE CLAY BC NO. OF BAGS 38 NO. OF POUNDS 1700

DEPTH OF GROUT SEAL (to nearest foot) from 0 ft. to 400 ft. CASING RECORD

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

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

screen type or open hole SCREEN RECORD ST BR HO PL OT

NUMBER OF UNSUCCESSFUL WELLS: WELL HYDROFRACTURED yes no Y N

Table with columns: DEPTH (nearest ft.), SLOT SIZE, DIAMETER OF SCREEN. Includes rows for ACCHS, R, E, N.

CIRCLE APPROPRIATE LETTER A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED

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 MWD 553 DRILLERS SIGNATURE LIC. NO. 1 D 097

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

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

C 3 PUMPING TEST

HOURS PUMPED (nearest hour) 8 9 PUMPING RATE (gal. per min.) 11 15 METHOD USED TO MEASURE PUMPING RATE WATER LEVEL (distance from land surface) BEFORE PUMPING 17 20 ft. WHEN PUMPING 22 25 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 YES NO (CIRCLE) (YES or 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) + above - below LAND SURFACE (nearest foot) 49 50 51

LATITUDE 39.28995 LONGITUDE 76.85800 (DEFAULT COORD. WGS 84)

Pursuant to Article 24 of the State Govt. Article of the Maryland Code personal info. requested on this form is used in processing this form pursuant to COMAR 26.04.04. Failure to provide the info. may result in this form not being processed. You have the right to inspect, amend, or correct this form. The Maryland Department of the Environment is subject to the Maryland Public Information Act. This form may be made available on the Internet via MDE's website and is subject to inspection or copying, in whole or in part, by the public and other governmental agencies, if not protected by federal or state law.

B 1

SEQUENCE NO. (MDE USE ONLY)

STATE OF MARYLAND APPLICATION FOR PERMIT TO DRILL WELL

STATE PERMIT NUMBER

41105

558785 please type

HO-15-0285 fill in this form completely

Date Received (APA)

8 MM DD YY 13

OWNER INFORMATION

Last Name: Howlings, Owner: Justin+Lorinda, First Name: Justin, Street or RFD: 20 E Preston Street, Baltimore MD 21002, Town: Baltimore, State: MD, Zip: 21002

B 3

LOCATION OF WELL

8 COUNTY: Howard, 23 SUBDIVISION: Harvey S Reed, SECTION: 44-46, LOT: 13, 52 NEAREST TOWN: Ellicott City

DRILLER INFORMATION

Driller's Name: John Hess, License No.: MWD 53, Firm Name: Allied Environmental Services, Address: Annapolis Junction MD 20701, Signature: John Hess, Date: 07/28/16

B 4

SOURCES OF DRILLING WATER

- 1. Public

10011 Reed Lane, STREET ADDRESS

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)



DISTANCE FROM ROAD ENTER FT OR MI

TAX MAP: 0007, BLK: , PARCEL: 0106

B 2

WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.): 8-12, AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY): 14-20

USE FOR WATER (CIRCLE APPROPRIATE BOX)

- D DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION
F FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
I INDUSTRIAL, COMMERCIAL, DEWATERING
P PUBLIC WATER SUPPLY WELL
T TEST, OBSERVATION, MONITORING
O OPEN LOOP GEOTHERMAL
C CLOSED LOOP GEOTHERMAL

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

COUNTY NAME: Howard, COUNTY NO.: 13, STATE SIGNATURE: [Signature], DATE ISSUED: 7/28/16, CO SIGNATURE: [Signature], EXP. DATE: 7/28/17

APPROXIMATE DEPTH OF WELL: 400 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

REPLACEMENT OR DEEPEMED WELLS (CIRCLE APPROPRIATE BOX)

- N THIS WELL WILL NOT REPLACE AN EXISTING WELL
Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
S THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
D THIS WELL WILL DEEPEM AN EXISTING WELL

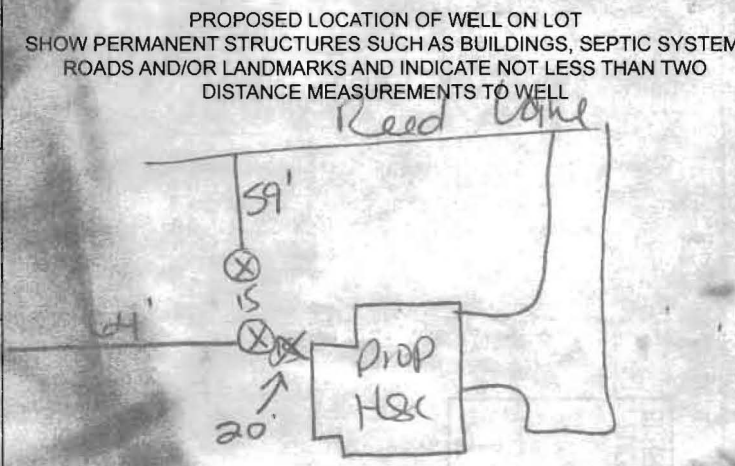
PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE)

Not to be filled in by driller (MDE OR COUNTY USE ONLY)

APPROP. PERMIT NUMBER: G

PERMIT No. HO-15-0285

SPECIAL CONDITIONS: Grout bottom to top.



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GRADE

EACH BORE HOLE (TYP.)

MINIMUM
HORIZONTAL BURY
DEPTH 4 FT

FOR CONT.
SEE PLANS

HORIZONTAL
PIPING

GROUT ENTIRE ANNULAR
SPACE AND VERTICAL
U-TUBE WITH (BENTONITE)
GROUT.

BORE DEPTH

TAPE

5 TO 10 FOOT SECTION OF
REBAR TO GUIDE TUBE
INTO BORE DURING
INSTALLATION

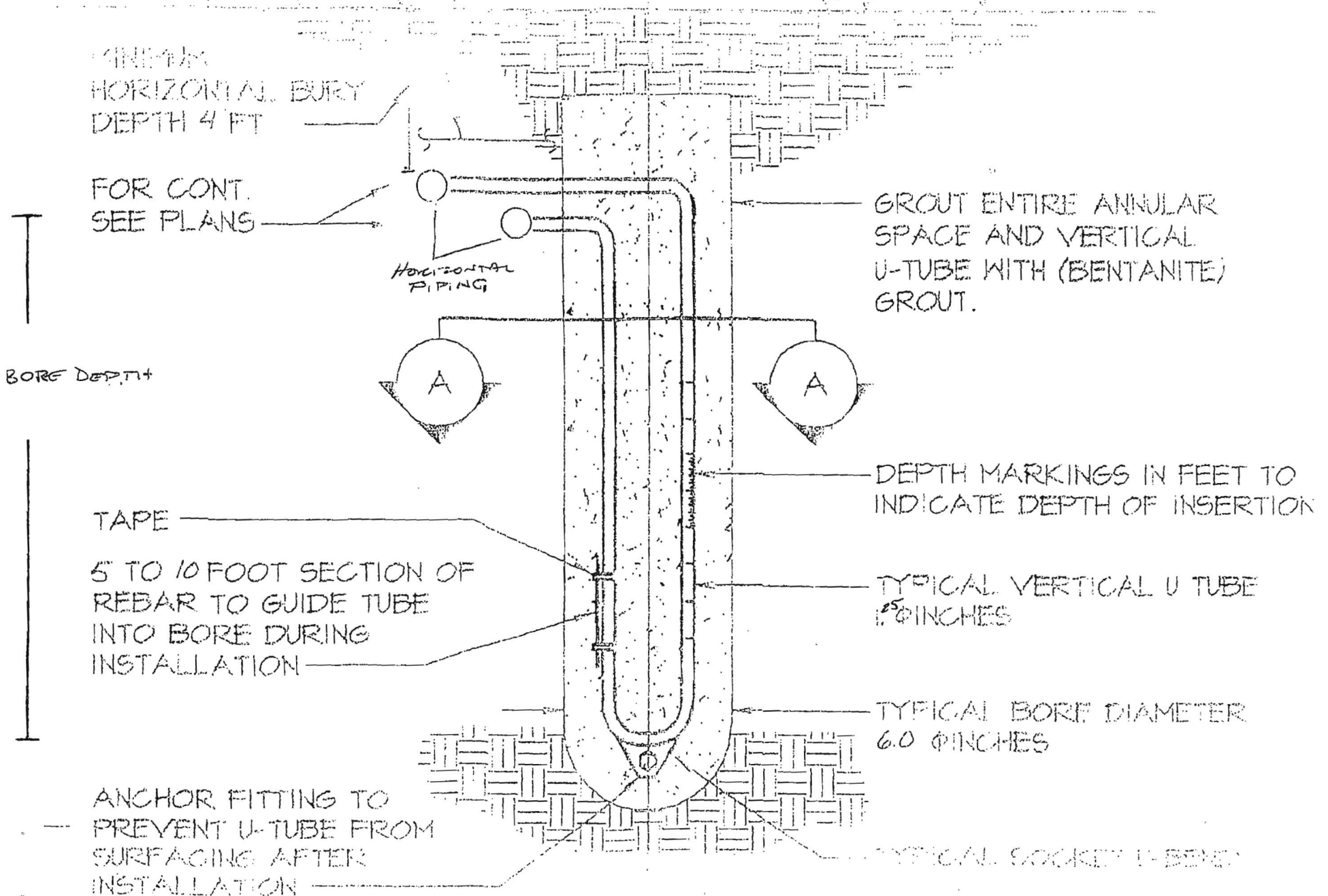
DEPTH MARKINGS IN FEET TO
INDICATE DEPTH OF INSERTION

TYPICAL VERTICAL U TUBE
1.5 INCHES

TYPICAL BORE DIAMETER
6.0 INCHES

ANCHOR FITTING TO
PREVENT U-TUBE FROM
SURFACING AFTER
INSTALLATION

TYPICAL SOCKET U-BEND



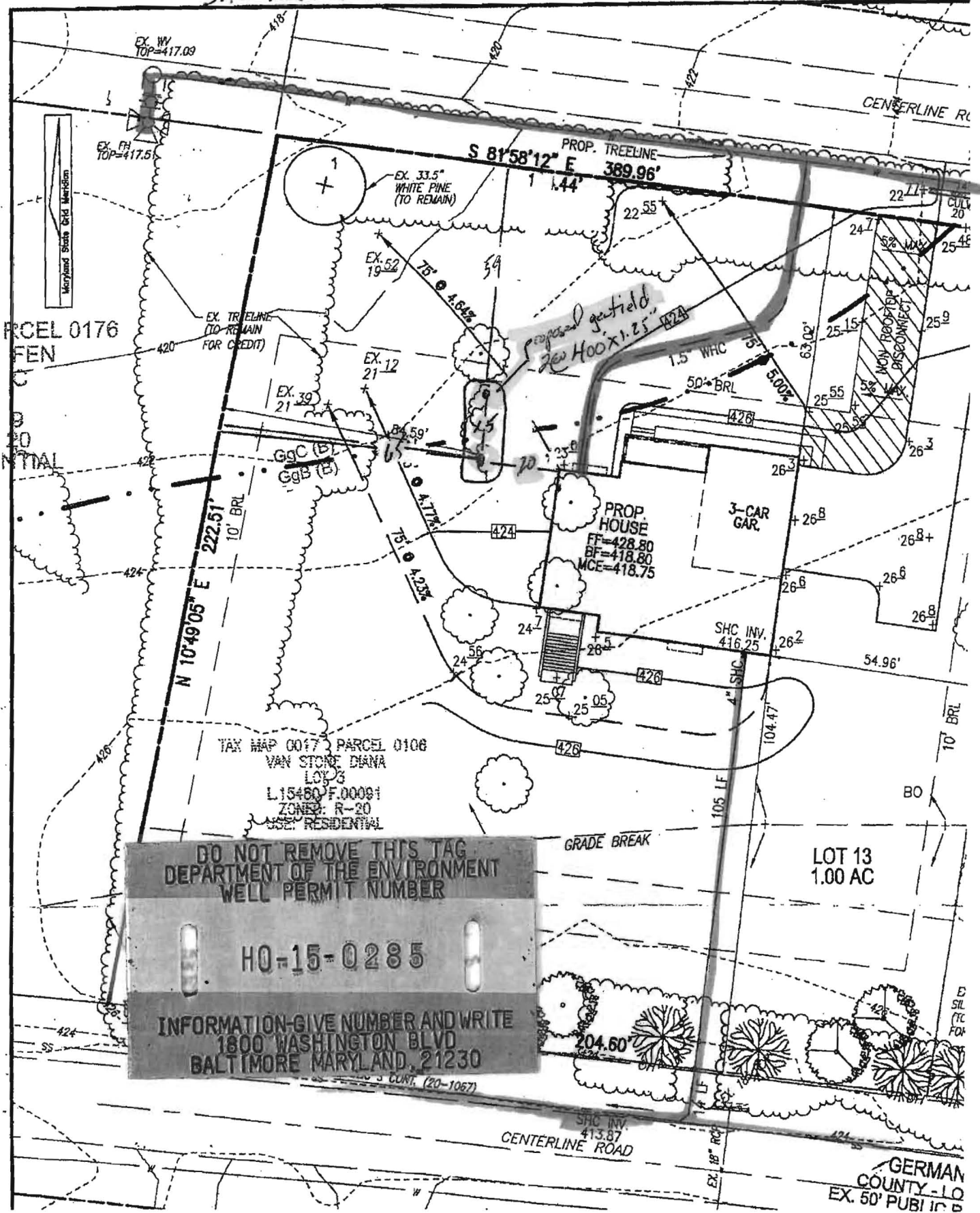
HOWARD COUNTY GROUTING PROCEDURE

Boreholes will be grouted from the bottom to the top via a tremie pipe and positive displacement pump. Bentonite grout, known as Quik-Grout will be used according to the manufacturer's specifications to achieve a consistency of at least 20% solids (24 gallons potable water/50 lb. sack of grout) and a permeability no more than $2.5 \text{ E}(-08) \text{ cm/sec}$. Grouting will be completed immediately after installing the geothermal loop and no later than twenty-four (24) hours after installing the geothermal loop. Open boreholes/annular space will be protected as necessary to prevent the entry of surface water or pollutants.

Site Plan for Geo

7/28/16
Geo Sites
Approved
(Signature)

1" = 30'



PARCEL 0176

FEN

TO

NTIAL

TAX MAP 0017 PARCEL 0106
 VAN STONE DIANA
 LOT 3
 L15460 F.00091
 ZONE: R-20
 USE: RESIDENTIAL

DO NOT REMOVE THIS TAG
 DEPARTMENT OF THE ENVIRONMENT
 WELL PERMIT NUMBER

H0-15-0285

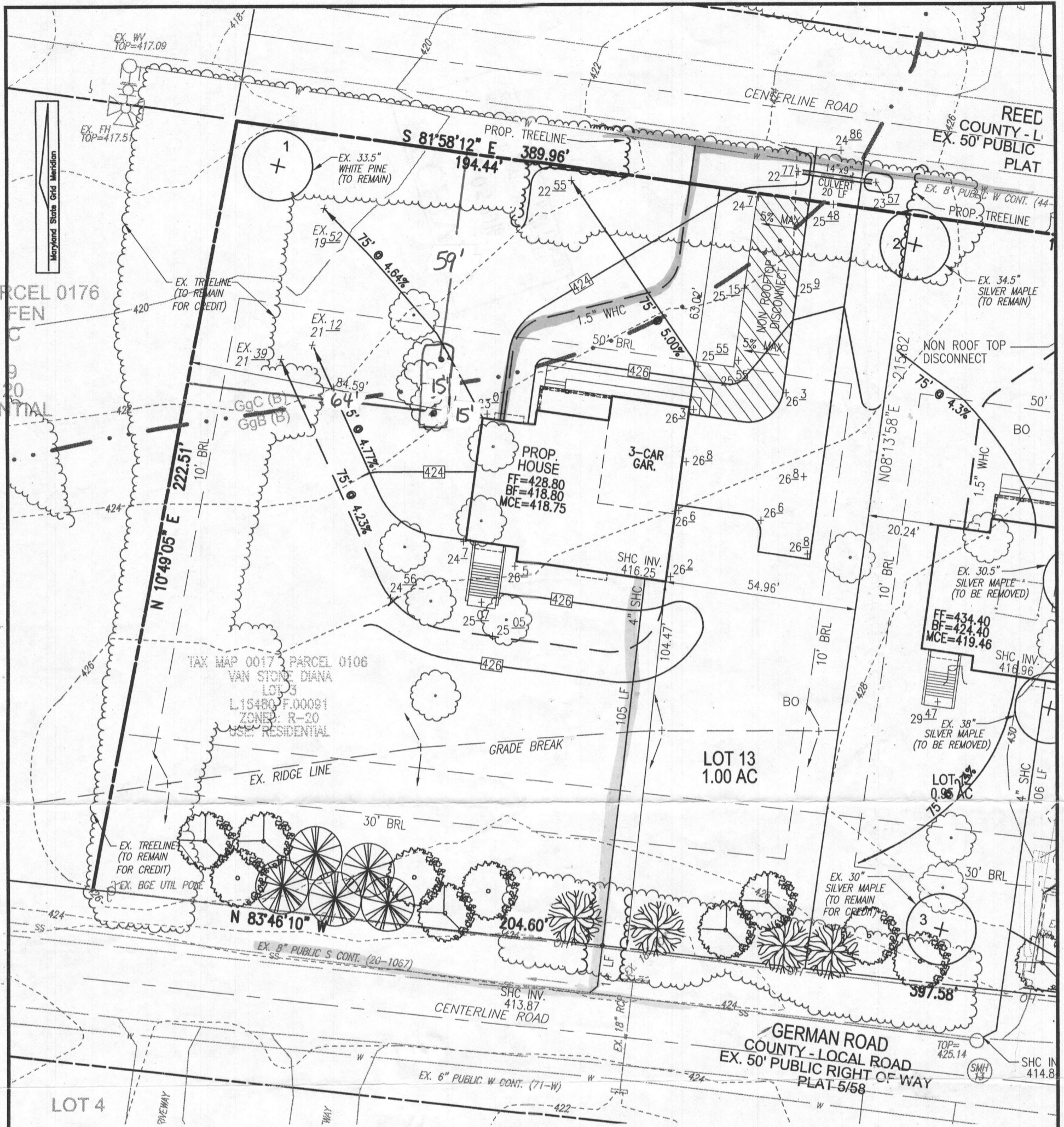
INFORMATION-GIVE NUMBER AND WRITE
 1800 WASHINGTON BLVD
 BALTIMORE MARYLAND, 21230

GRADE BREAK

LOT 13
1.00 AC

CENTERLINE ROAD

GERMAN COUNTY - LO
EX. 50' PUBI IC B

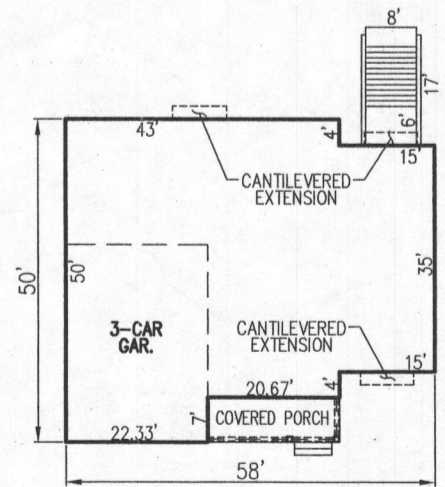


ITEM DESCRIPTION	UNIT	QUANTITY	ITEM DESCRIPTION	UNIT	QUANTITY
DRIVEWAY	SY	260	SEWER CONNECTION	LF	119
LEADWALK	LF	52	FROST	LF	N/A
PUBLIC SIDEWALK	LF	N/A	WELLED EXIT	NO. OF RISERS	12
SEED	SF	15,615	SILT FENCE	LF	348
MULCHED AREA	SF	N/A	SUPER SILT FENCE	LF	276
WATER CONNECTION	LF	111	HOUSE FACING	NORTH	

MINIMUM B.R.L.	
FRONT	50'
SIDE	10'
REAR	30'

STORMWATER MANAGEMENT FOR THIS PROJECT IS PROVIDED BY THE USE OF NON-STRUCTURAL PRACTICES IN ACCORDANCE WITH ENVIRONMENTAL SITE DESIGN CRITERIA. THESE PRACTICES INCLUDE ROOFTOP (N-1) AND NON-ROOFTOP (N-2) DISCONNECTS. REF: F-15-051.

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961



LAKESTONE HOMES
 W/ STONE & SIDING VENEER
 SCALE: 1"=30'

SCALE 1"=30'
 DRAWN BY JMR
 CHECKED BY EDS
 DATE MARCH 2016
 W. O. # 14-13
 SHEET# 1 OF 1

PLOT PLAN
HARVEY S. REED SUBDIVISION
 LOT 13
 REED LANE

2ND ELECTION DISTRICT
 TAX MAP: 17 BLOCK: 20

ZONED: R-20
 PARCEL: 106
 HOWARD COUNTY, MARYLAND