

LAYOUT 4/16/03 INSP 4 4/22/03 2pm
INSP 2 4/17/03 INSP 5 5/1/03 11:30
INSP 3 4/21/03 2:30 INSP 6 _____

ISSUE DATE: 12-6-02

APPROVAL DATE: 5/1/03

PERMIT
INDEXED

P _____

A 46871

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

INDEXED

South Carroll Backhoe, Inc. IS PERMITTED TO INSTALL ☒ ALTER ☐

ADDRESS: 4410 Salem Bottom Rd., Westminster PHONE NUMBER: 410-875-4197

SUBDIVISION: Zubovic Property LOT NUMBER: 1

ADDRESS: 1125 Ridge Road PROPERTY OWNER: Van Knauss

SEPTIC TANK CAPACITY (GALLONS): 1500 OUTLET BAFFLE FILTER REQUIRED ☐

PUMP CHAMBER CAPACITY (GALLONS): 1500 COMPARTMENTED TANK REQUIRED ☐

NUMBER OF BEDROOMS: 3

LOCATION:	Sand Mound to be installed. See Plans for Sand Mound approved on 6/17/2002 and memo from Ronald J. Pinkley, dated 5/13/2002.
NOTES:	All three(3) Sand Mound sites are to be staked. Heavy equipment is not allowed on or directly down hill of any of the three (3) Sand Mound sites. Inspection on 7/10/02 revealed that the fence was installed but there were not any engineer stakes in place.

PLANS APPROVED: Ronald J. Pinkley DATE: 7/12/2002

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

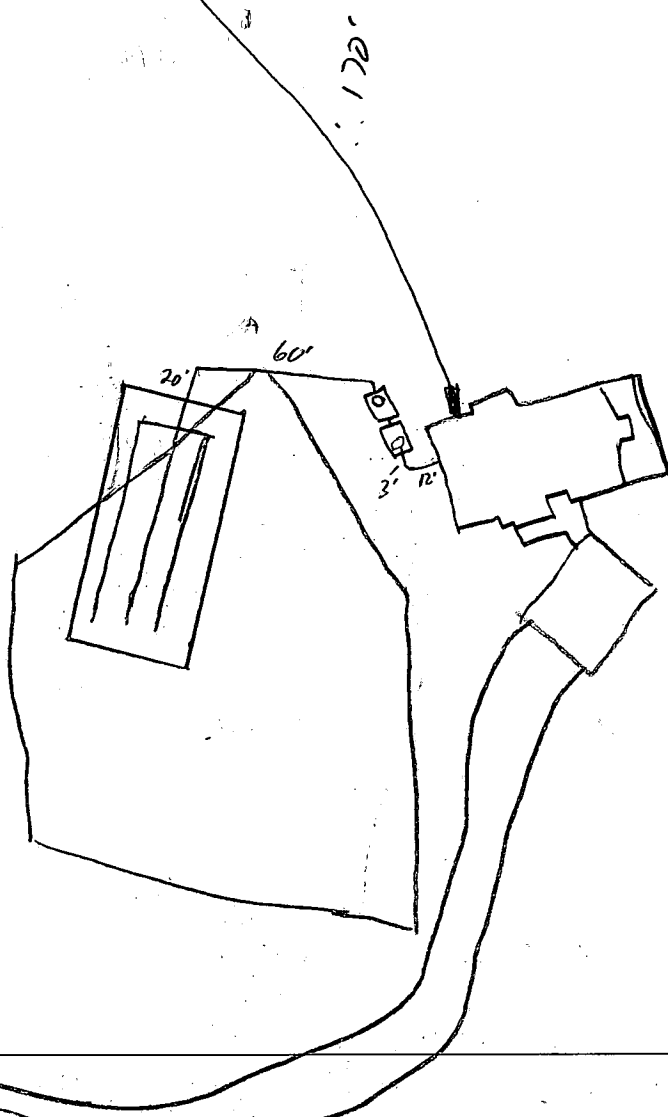
CONTRACTOR RESPONSIBLE FOR COMPLIANCE WITH APPLICABLE REGULATIONS, GUIDELINES AND THE TERMS OF THIS PERMIT

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

946871

NOT TO SCALE

Ridge Rd



DOSING CHAMBER

Tank Level ✓
Capacity 1500 Gal
Seam Location Top
Tank Lid Depth 3'
Manhole Location Back
Water Tight Test ✓

FLOAT SETTINGS

Low Off 1
Low On 2
High On 3
Alarm 4
Dose Volume

SAND MOUND I

Bed Length 40'
Bed Width 6'
Bed Area 240 sq ft
Mound Length 69
Mound Width 33.5
Mound Area 2311.5
Basal Area sq ft

SAND MOUND II

Bed Length
Bed Width
Bed Area sq ft
Mound Length
Mound Width
Mound Area
Basal Area sq ft

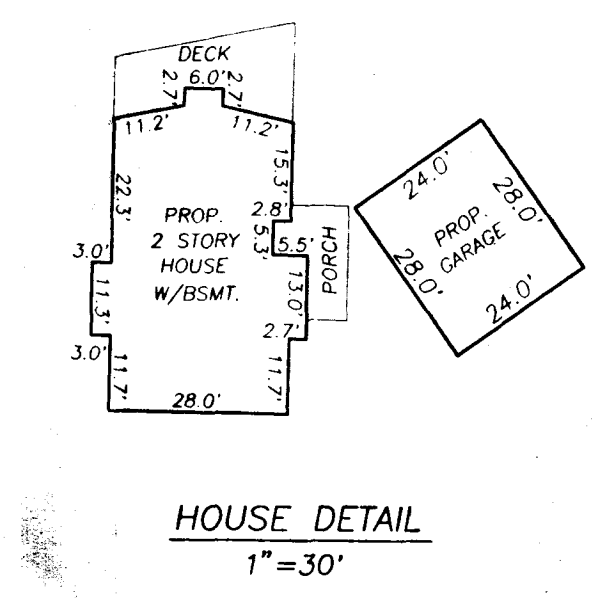
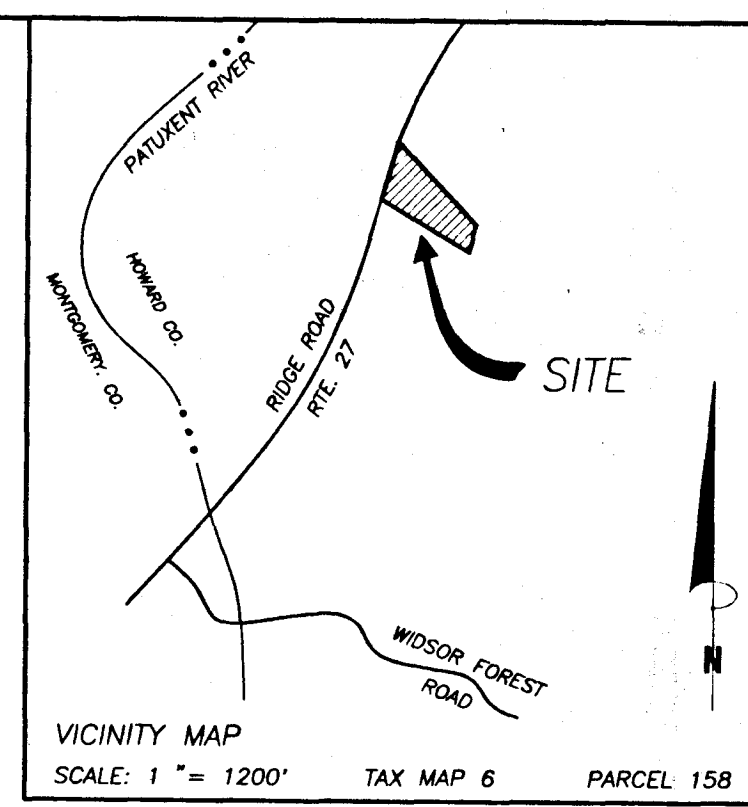
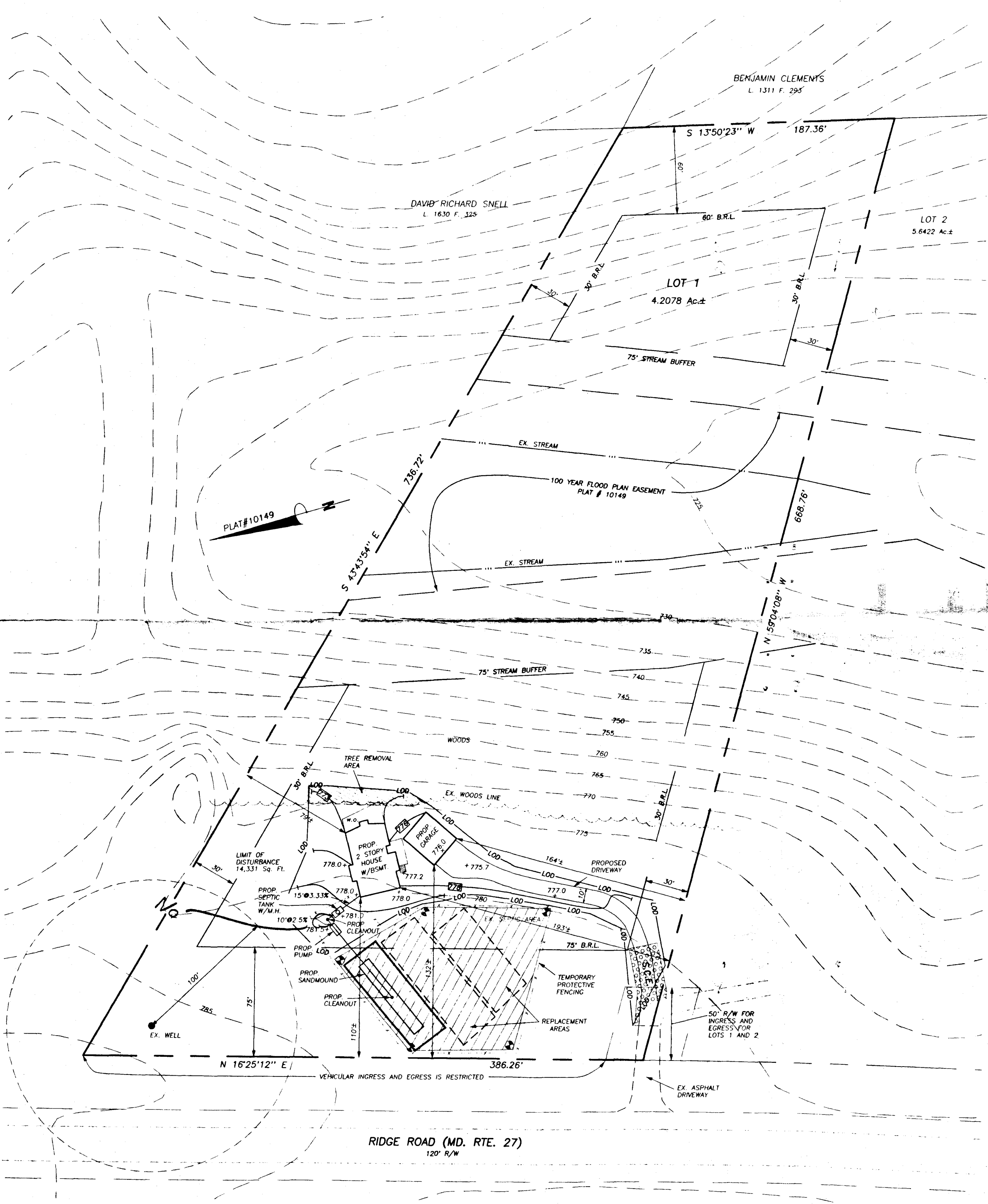
4/16/03 Contractor has same plans. Contour not as shown. Should still be able to get 3 systems in if the area towards the driveway is also used (SO)
PRE-CONSTRUCTION
4/16/03 Ground surface scratched w/ chisel disc on tractor. Sand delivered. Do they need observation ports - how many, at what depth? (SO)
INSTALLATION
4/17/03 Started, equipment broke, got a quarter completed (SO)
4/21/03 Sand completed, stone & laterals installed (SO)
4/22/03 Geotex fabric, clay cap, topsoil installed. Tanks set. (SO)
5/1/03 Pump & Alarm OK (SO)

FINAL INSPECTOR

[Signature]

DATE OF APPROVAL

5/1/03



PROPOSED HOUSE:
F.F. ELEV. = 781.7
BSMT. ELEV. = 772.7 (WALK OUT)
INV. OUT = 778.0 (HUNG SEWER)

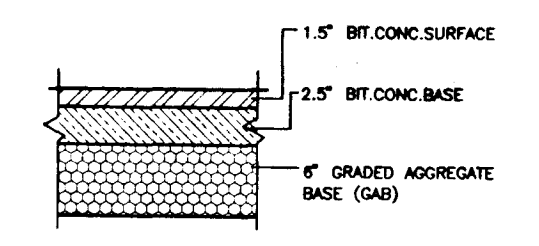
PROPOSED SEPTIC TANK:
EX GRD. ELEV. = 781.0
INV. IN = 777.5
INV. OUT = 777.25
BOTTOM TANK = 773.25

PROPOSED SEPTIC PUMP:
EX GRD. ELEV. = 781.5
INV. IN = 777.0
INV. OUT = 776.75
PUMP OFF = 774.0
BOTTOM CHAMBER = 772.75

PROPOSED SANDMOUND:
EX GRD. ELEV. = 782.0
INV. IN = 781.0
TOP OF MOUND = 784.0
TOP OF CLEANOUT = 784.66

LIMIT OF DISTURBANCE: (LOD) 14,331 Sq. Ft.

TOPOGRAPHY IS BASED ON
HOWARD COUNTY CONTROL
CONTOUR INTERVALS ARE AT 5 FEET.



300135477
REVISED
Date: 6/17/02
Comments: Revised plot plan / sandmound per health

DATE	REVISIONS
4-19-02	WALK OUT BASEMENT
6-17-02	SEPTIC (SANDMOUND)

SITE PLAN
LOT 1
ZUBOVIC
LIBER 5428 FOLIO 93
SITUATED ON RIDGE ROAD (MD. RTE. 27)
ELECTION DISTRICT No. 4
HOWARD COUNTY, MARYLAND
SCALE: 1" = 50' MARCH, 2002

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 328 Mount Airy, Maryland 21771
(301) 829 2890 (301) 831 5015 (410) 549 2751

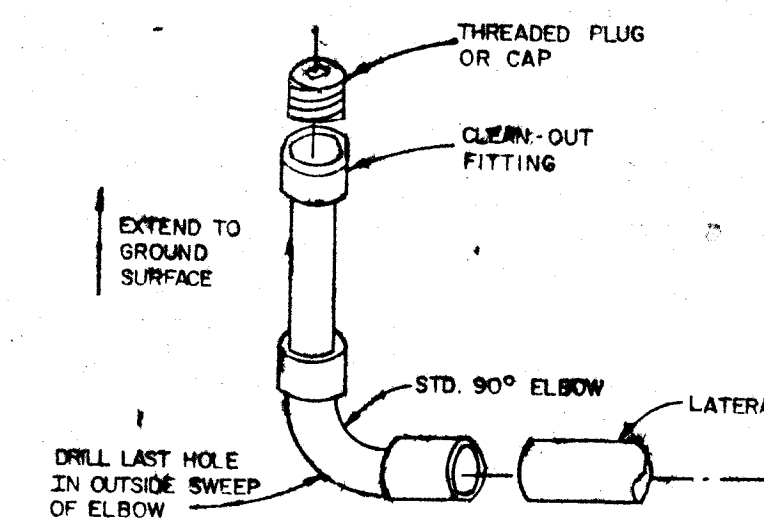
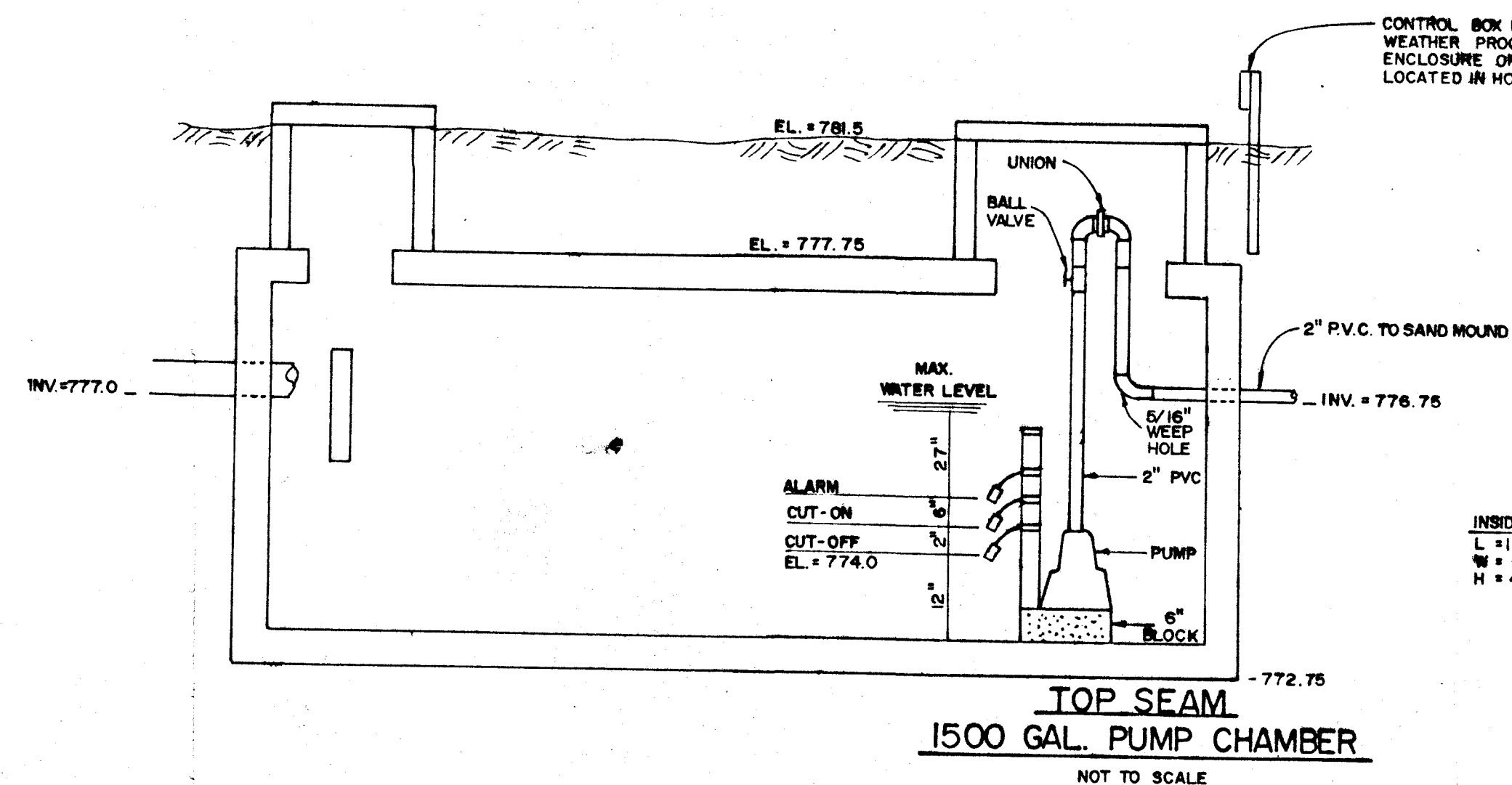
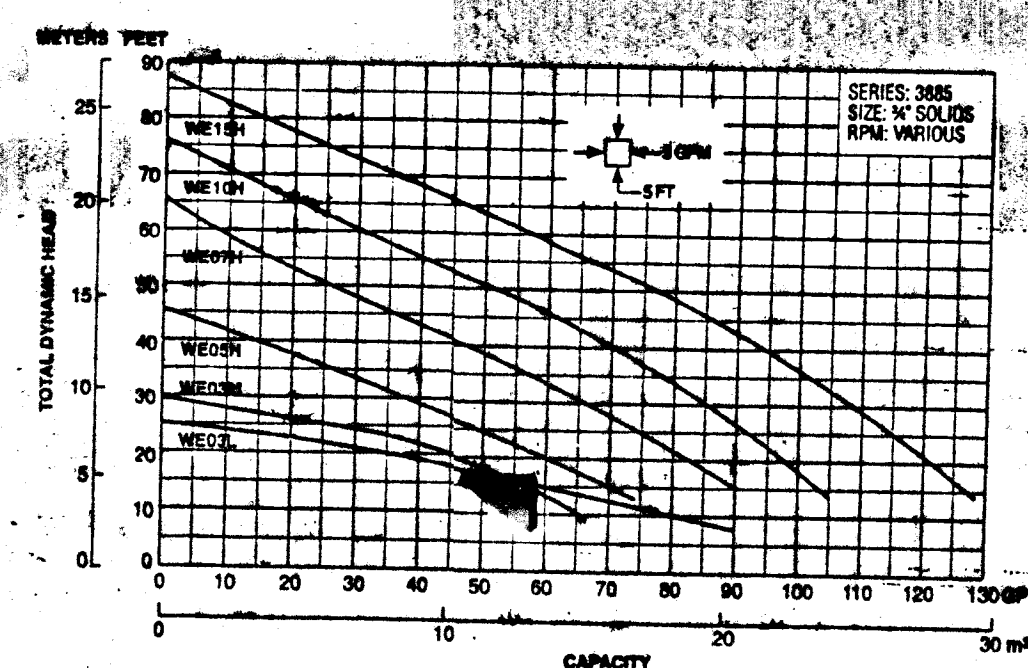


3 Bed Rooms x 150 = 450 GPD
Loading Rate : 1.2 GPD/Sq. Ft. = 375 Sq. Ft.
Bed 9' x 42' = 378 Sq. Ft.
1 - 1,500 GAL. Top Seam Septic Tank
1 - 1,500 GAL. Top Seam Pump Chamber
Pump Rate - 36 Perforations @ 1.63 GPM = 59 GPM
Mound Width = 33' - 6"
Mound Length = 69' - 2"

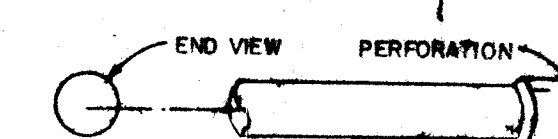
See Ron Pinkley's memo dated 5/13/02

SPECIFICATIONS

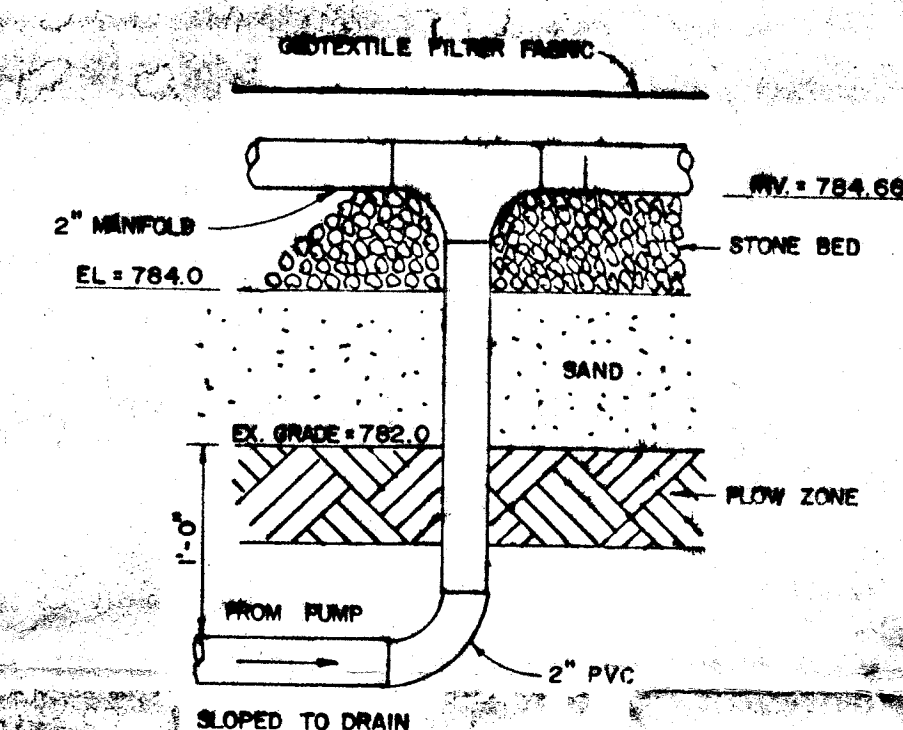
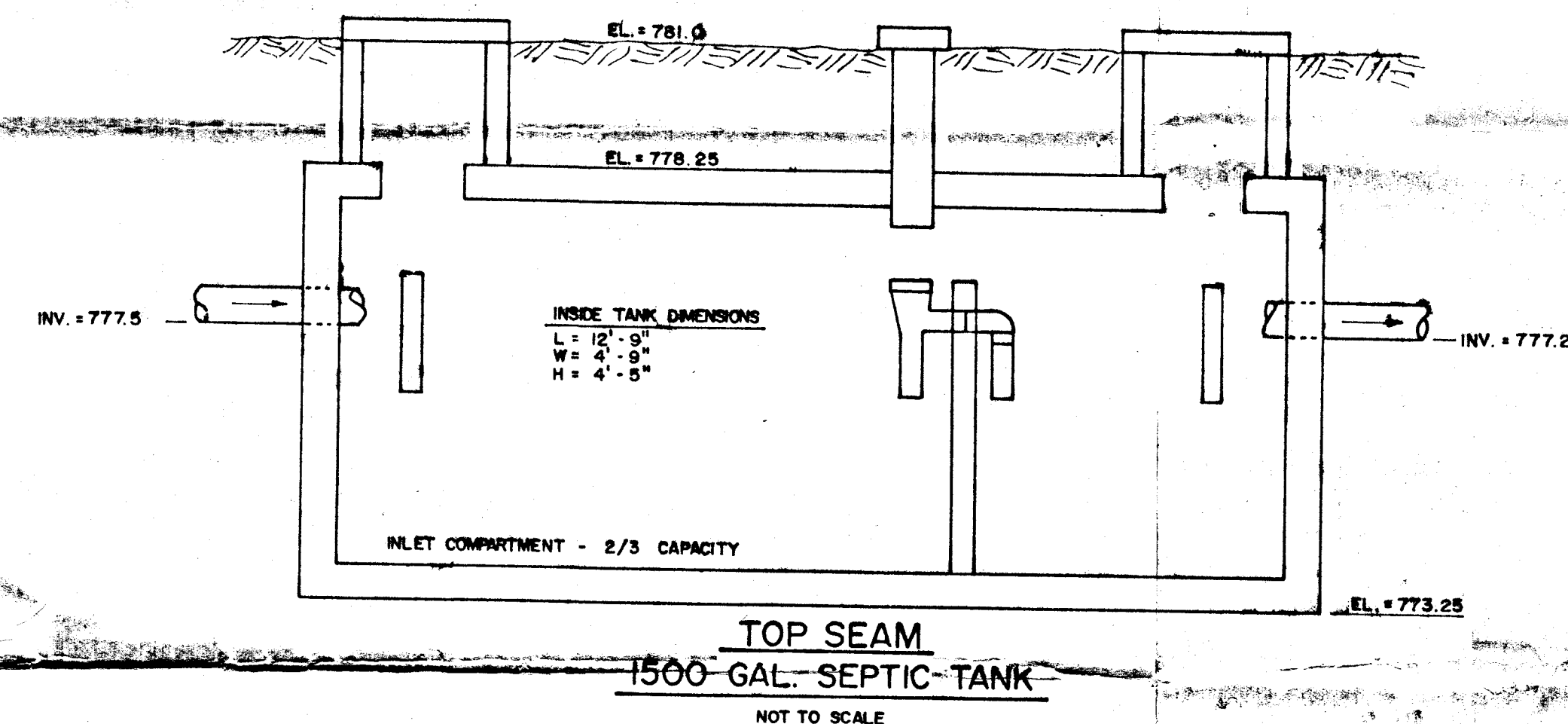
- Tank measurements and elevations are based on septic tanks and pump chambers as manufactured by Mayer Bros., Elkhridge, Md. (410) 796-1434.
- All piping to be schedule 40 PVC of sizes shown.
- The force main from the pump chamber to the sand bed is to be installed with a continuous slope back to the chamber to assure complete drainage following each pump cycle.
- A subsurface pump to remove 59 GPM against 17' TDD is to be provided. Pump to be a Goulds Model 38B-WSE-03H - ½ H.P. or equal.
- A test of the pump system and distribution piping is required prior to covering the system.
- The High Water Alarm is to be on a separate circuit.
- Alarm to be located in the house.



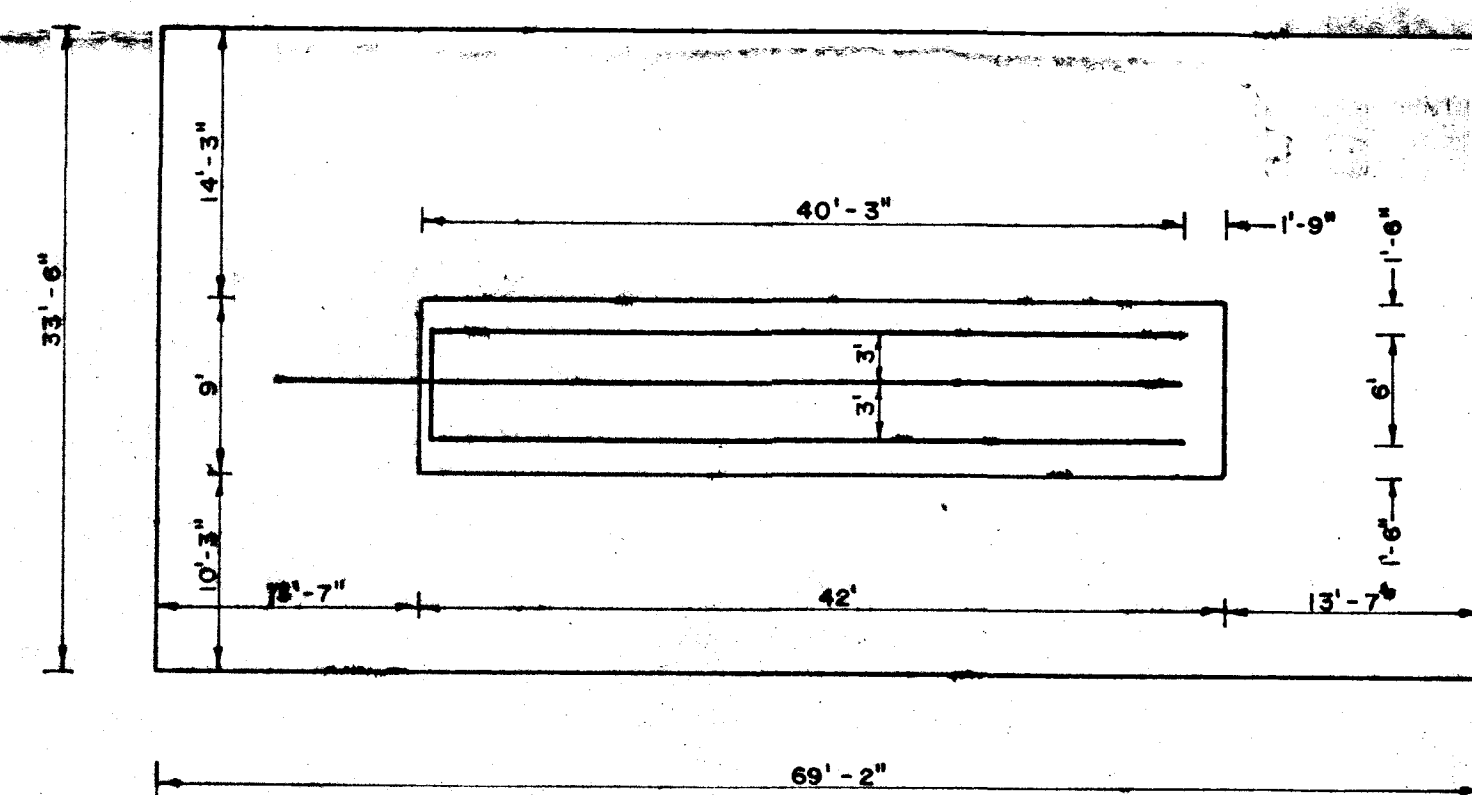
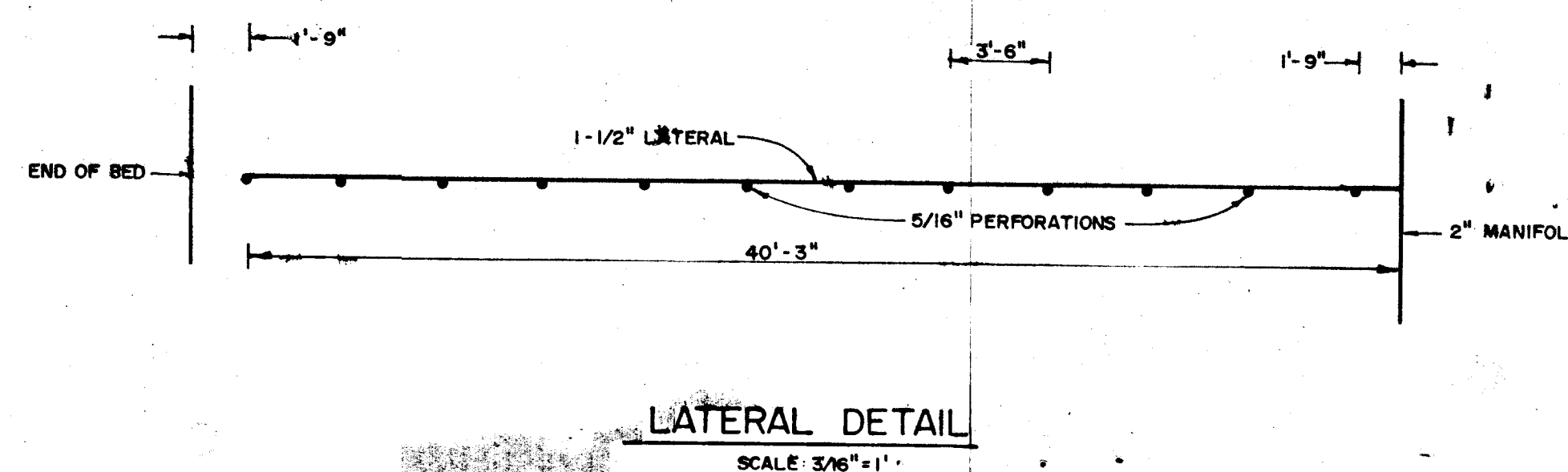
LATERAL END TURN-UP
USE ON ONE LATERAL



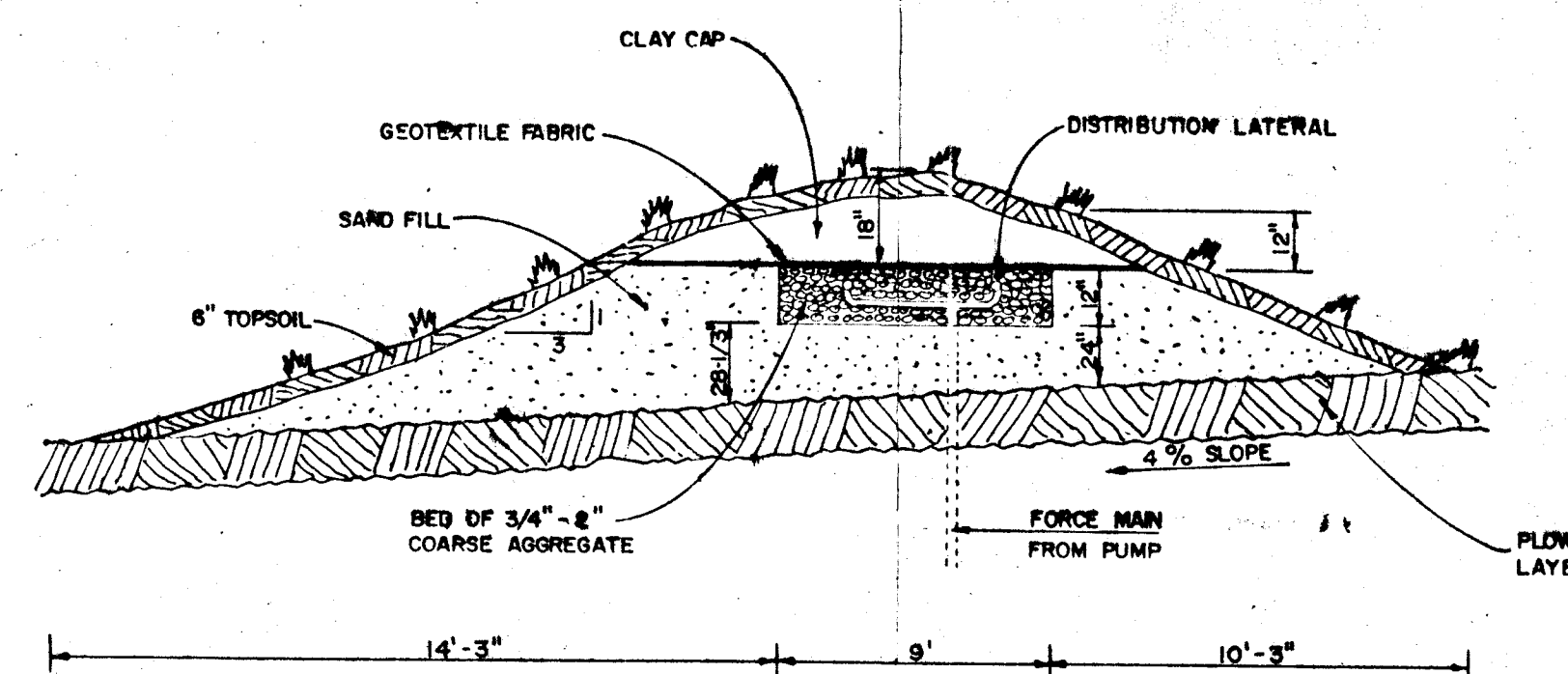
LATERAL END CAP
USE ON LATERALS NOT
EQUIPPED WITH TURN-UP
NOT TO SCALE



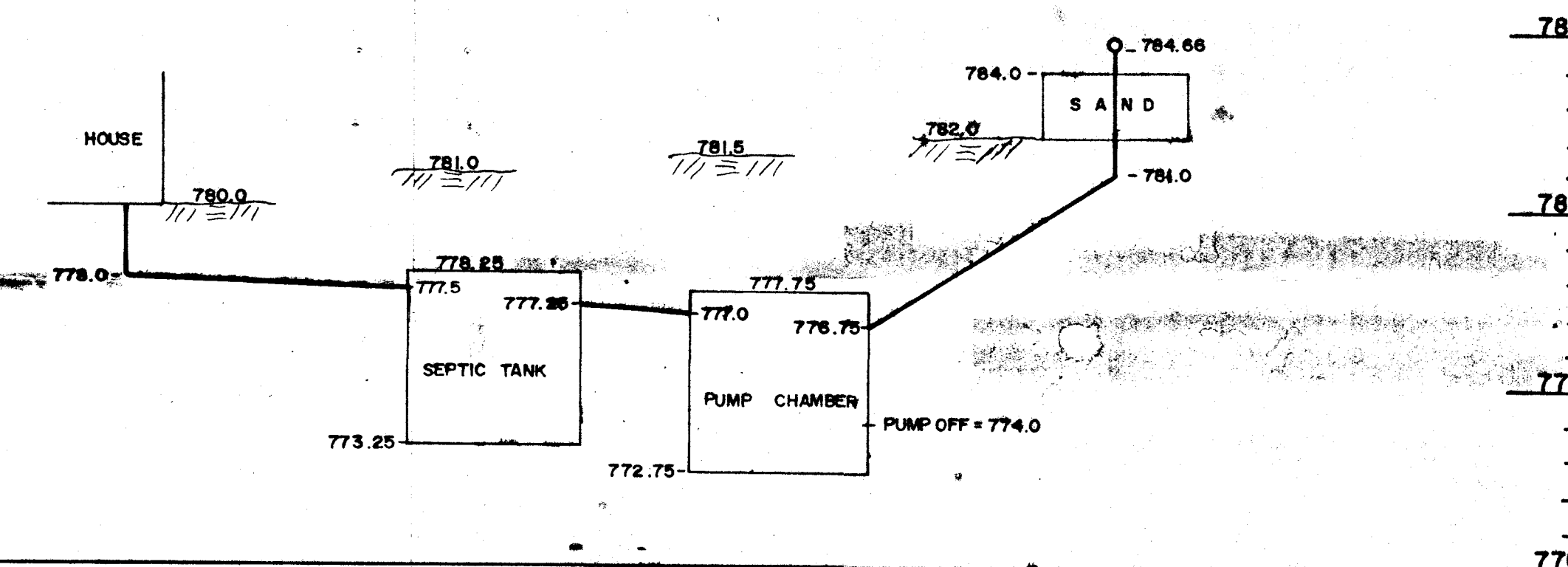
SUPPLY LINE - MANIFOLD DETAIL
NOT TO SCALE



MOUND LAYOUT
SCALE: 1" = 10'



MOUND DESIGN
NOT TO SCALE

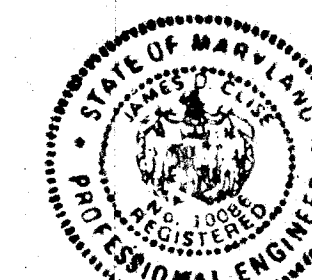


HYDRAULIC PROFILE

SCALE: V: 1/4" = 1'
H: N.T.S.

Approved By: System Plan
Howard County Health Department

Ron Pinkley SRK 6/17/02
Signature Date



James H. Chase

S/E ENGINEERING, INC.
WESTMINSTER, MARYLAND

SCALE: AS SHOWN		APPROVED:	DRAWN: RSK
DATE: JUNE, 2002		JDC	DES: JDC
1125 RIDGE ROAD HOWARD COUNTY			
SANDMOUND			DRAWING NO. 1 OF 1

1) THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF 10000 SQUARE FEET AS REQUIRED BY MARYLAND STATE DEPT. OF HEALTH AND MENTAL HYGIENE FOR INDIVIDUAL SEWERAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS. RECORDATION OF A MODIFIED SEWERAGE EASEMENT SHALL NOT BE NECESSARY.

2) WELL SITE FOR LOT 2 ELEVATION LOWER THAN SEPTIC AREA HAS BEEN APPROVED BY DIVISION OF RESIDENTIAL SANITATION UPON RECOMMENDATION BY LOCAL HEALTH DEPARTMENT.

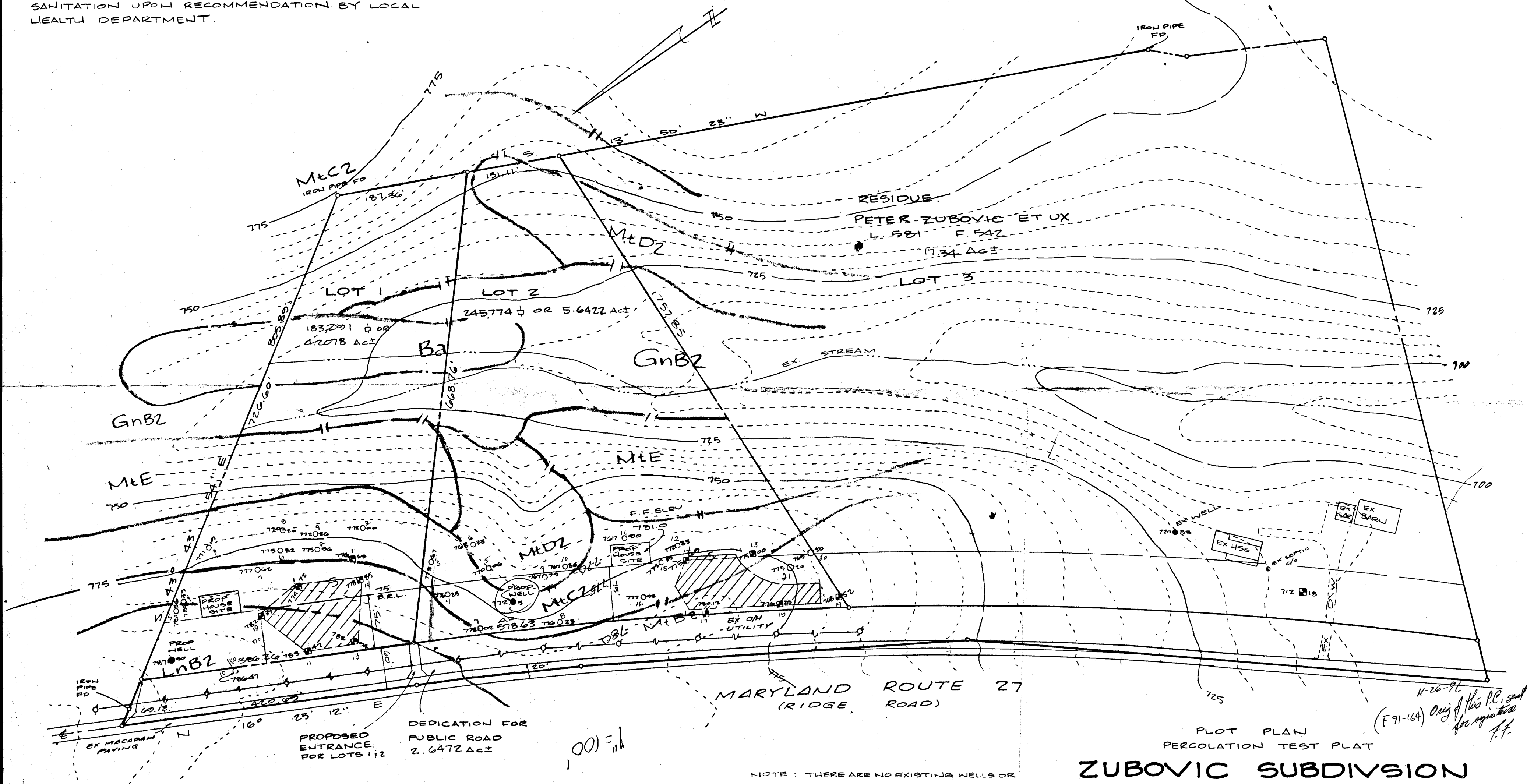
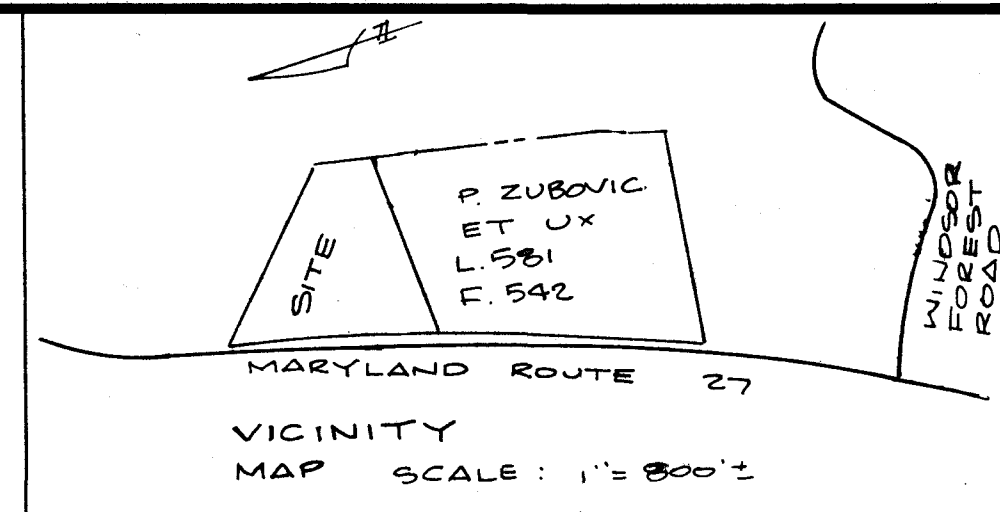
ORIGINAL AREA P. ZUBOVIC
L. 581 F. 542

29.84 AC±

- AREA LOT 1, ZUBOVIC SUBDIVISION 183,291 ± OR 4.2078 AC±
- AREA LOT 2, ZUBOVIC SUBDIVISION 245,774 ± OR 5.6422 AC±
- AREA ROAD DEDICATION 115,310 ± OR 2.6472 AC±
RESIDUE: P. ZUBOVIC
L. 581 F. 542 17.34 AC±

OWNERS:

PETER & ELIZABETH ZUBOVIC
1259 RIDGE ROAD
MT. AIRY, MD 21771
301-831-7154



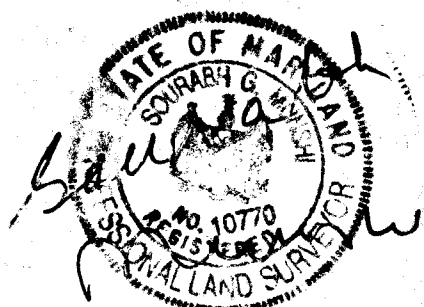
PLAT PLAN PERCOLATION TEST PLAT ZUBOVIC SUBDIVISION

TAX MAP 6 PARCEL 158
SITUATED ON MARYLAND ROUTE 27
FOURTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: 1" = 100'

FEBRUARY 1990

APPROVED:
FOR PRIVATE WATER AND
PRIVATE SEWERAGE
SYSTEMS HOWARD COUNTY
HEALTH DEPARTMENT



John Boyd 10-17-91
HOWARD COUNTY HEALTH OFFICER DATE

NOTE: THERE ARE NO EXISTING WELLS OR SEPTIC SYSTEMS WITHIN 100' OF ANY PROPERTY BOUNDARIES UNLESS OTHERWISE SHOWN HEREON.

- PROPOSED PERCOLATION TEST SITE
- PROPOSED WELL SITE
- SUCCESSFUL PERCOLATION TEST SITE
- EXISTING PERCOLATION TEST SITE



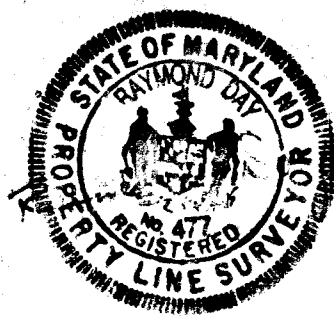
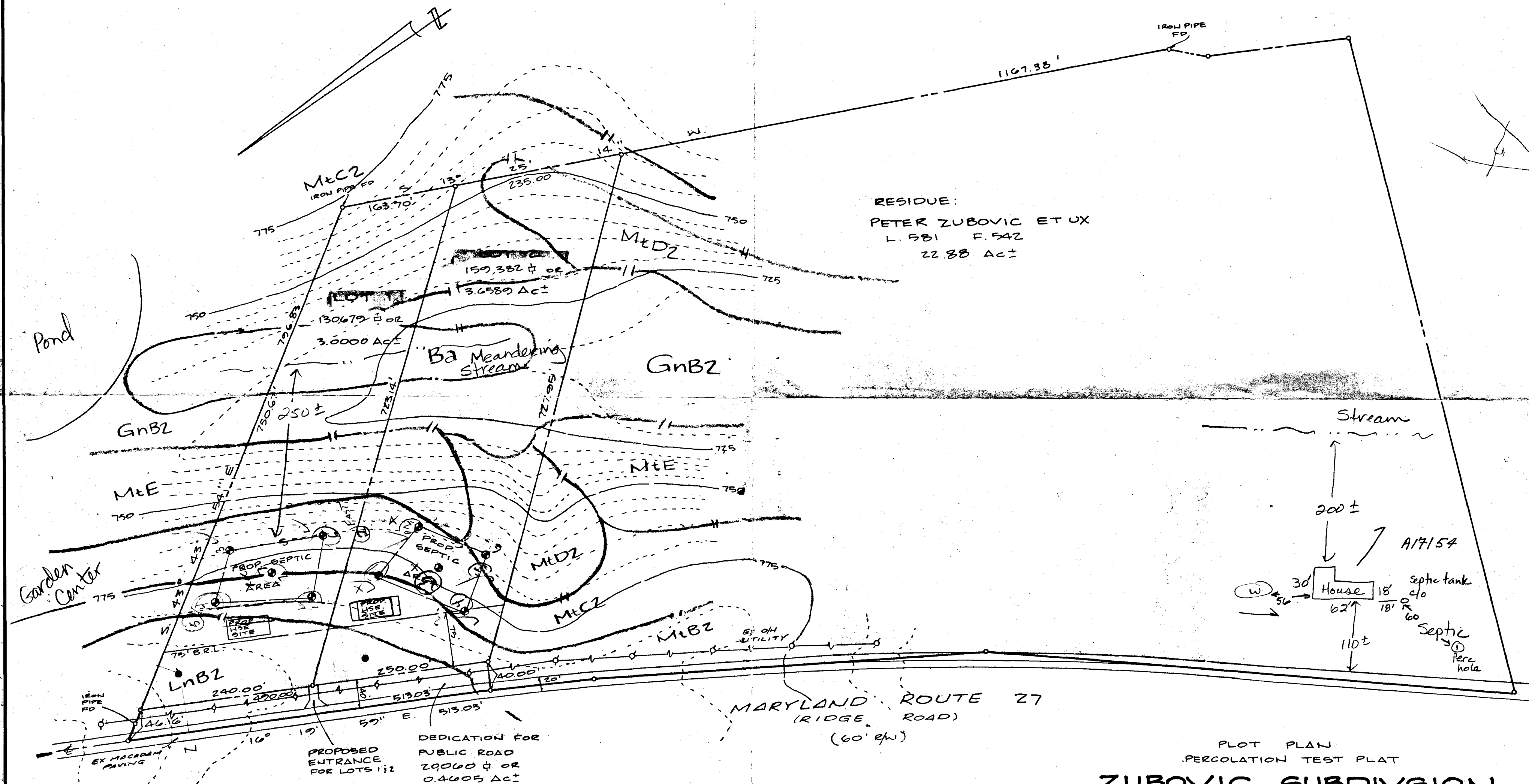
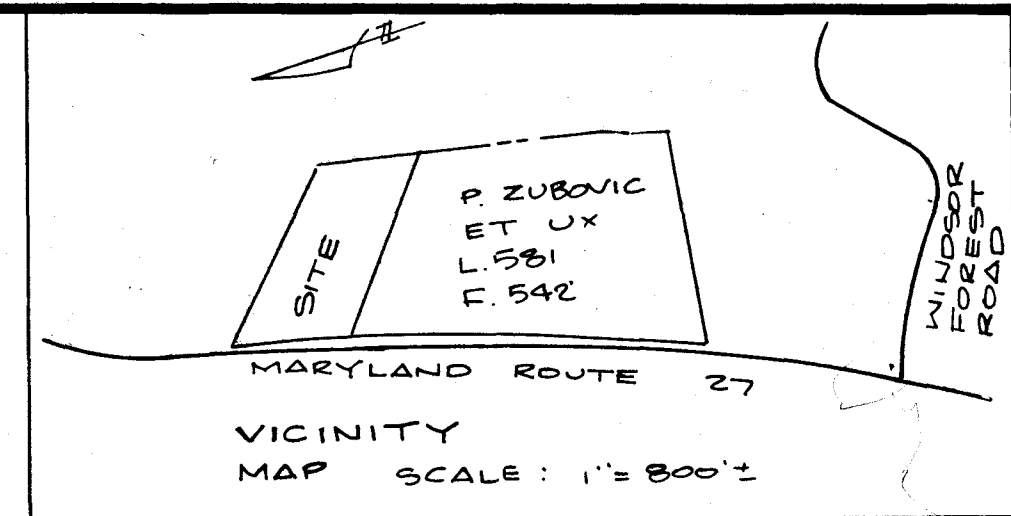
VANMAR ASSOCIATES INC.
Engineers-Surveyors-Planners
310 South Main Street, Mount Airy, Maryland 21771
(301) 829-2890 (301) 831-5015 (301) 549-2751

REVISED: 8/23/91, EX. PERC
10/11/91, PER COMMENTS

ORIGINAL AREA P. ZUBOVIC
L. 581 F. 542

30.00 AC±

- AREA LOT 1, ZUBOVIC SUBDIVISION 130,679 ± OR 3.0000 AC±
- AREA LOT 2, ZUBOVIC SUBDIVISION 159,382 ± OR 3.6589 AC±
- AREA ROAD DEDICATION 20,000 ± OR 0.4605 AC±
- RESIDUE: P. ZUBOVIC ET UX 22.88 AC±



2/23/90

PLOT PLAN PERCOLATION TEST PLAT ZUBOVIC SUBDIVISION

TAX MAP 6 PARCEL 158
SITUATED ON MARYLAND ROUTE 27
FOURTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: 1" = 100'

FEBRUARY 1990



VANMAR ASSOCIATES, INC.
Engineers-Surveyors-Planners
310 South Main Street, Mount Airy, Maryland 21771
(301) 829-2890 (301) 831-5015 (301) 549-2751

ORIGINAL AREA P. ZUBOVIC
L. 581 F. 542

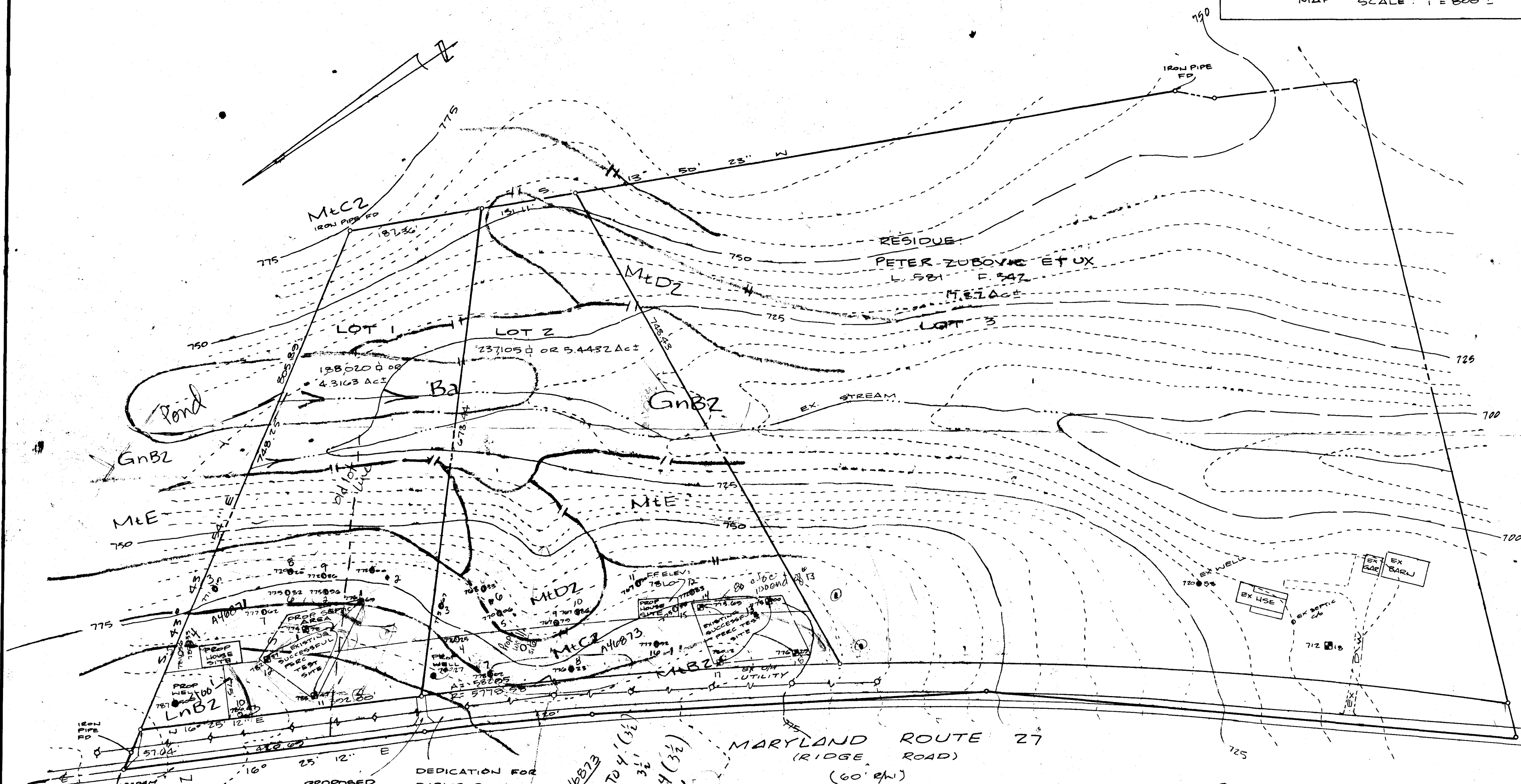
29.84 AC±

- AREA LOT 1, ZUBOVIC SUBDIVISION 188,020 ± OR 4.3163 AC±
- AREA LOT 2, ZUBOVIC SUBDIVISION 237,105 ± OR 5.4432 AC±
- AREA ROAD DEDICATION 26,307 ± OR 2.2109 AC±
RESIDUE: P. ZUBOVIC
L. 581 F. 542 17.87 AC±

P. ZUBOVIC
ET UX
L. 581
F. 542

MARYLAND ROUTE 27

VICINITY
MAP SCALE: 1" = 800'±



MARYLAND ROUTE 27
(RIDGE ROAD)
(60' ± W)

DEDICATION FOR
PUBLIC ROAD
2.2109 AC±

PROPOSED
ENTRANCE
FOR LOTS 1 & 2

NOTE: THERE ARE NO EXISTING WELLS OR
SEPTIC SYSTEMS WITHIN 100' OF ANY
PROPERTY BOUNDARIES UNLESS OTHERWISE
SHOWN HEREON.

PLOT PLAN PERCOLATION TEST PLAT ZUBOVIC SUBDIVISION

TAX MAP 6 PARCEL 158
SITUATED ON MARYLAND ROUTE 27
FOURTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: 1" = 100'

FEBRUARY 1990

OWNERS:
PETER & ELIZABETH ZUBOVIC
1259 RIDGE ROAD
MT. AIRY, MD. 21771
301-831-7154

1 OK TO 2'
11 OK TO 2'
12 OK TO 2'-3 1/2'
1 OK TO 2'

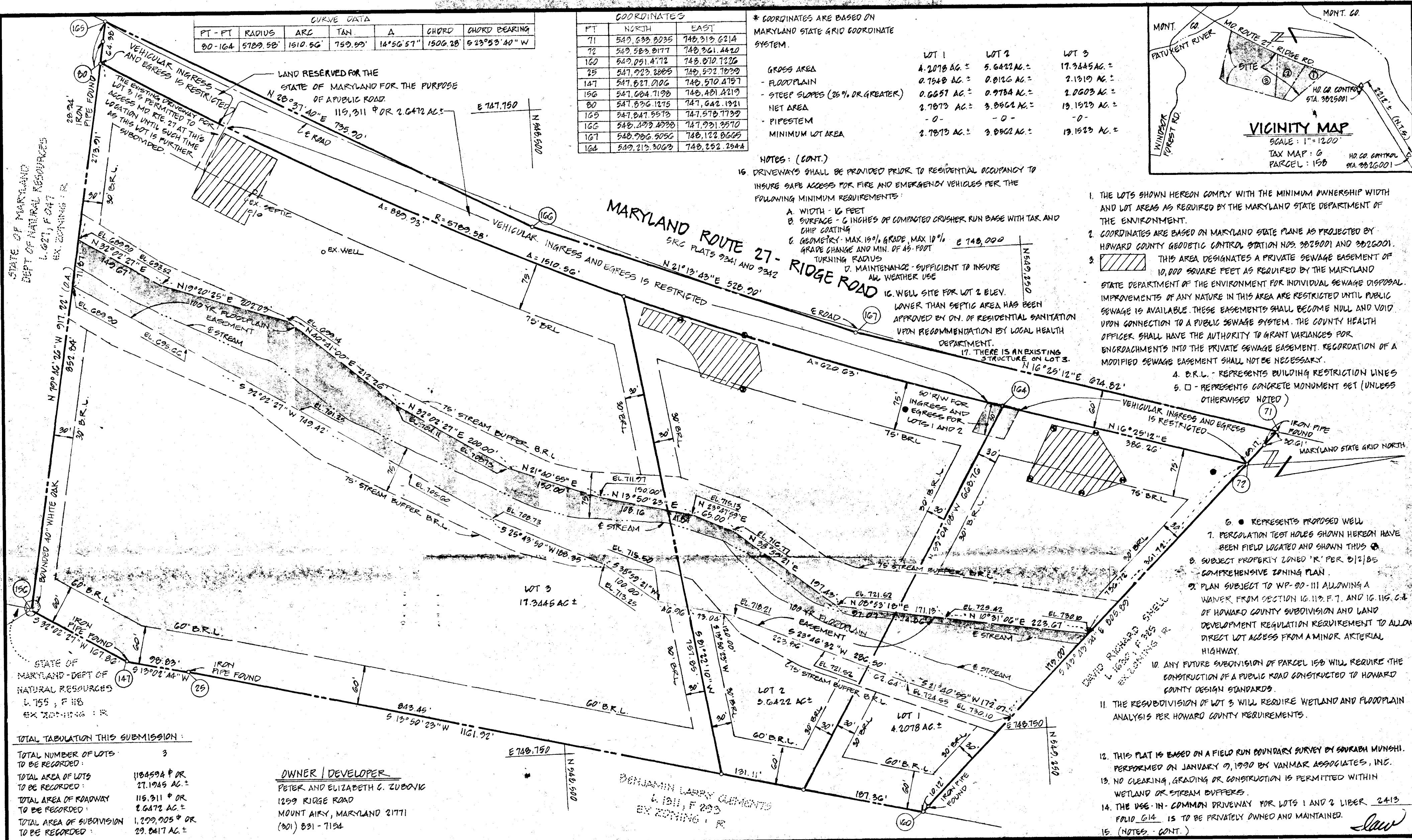


- PROPOSED PERCOLATION TEST SITE
- PROPOSED WELL SITE
- SUCCESSFUL PERCOLATION TEST SITE
- EXISTING PERCOLATION TEST SITE



VANMAR
ASSOCIATES, INC.
Engineers-Surveyors-Planners
310 South Main Street, Mount Airy, Maryland 21771
(301) 829-2890 (301) 831-5015 (301) 549-2751

REVISED: 8/23/91, EX. PERC



APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT.
James Boyle 11-26-91
HOWARD COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Joseph Butler 12/9/91
PLANNING DIRECTOR DATE

APPROVED: FOR STORM DRAINAGE SYSTEMS, AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
James Boyle 12/9/91
DIRECTOR DATE

OWNERS CERTIFICATE

WE, PETER ZUBOVIC AND ELIZABETH C. ZUBOVIC, HIS WIFE, OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON, HEREBY ADAPT THIS PLAN OF SUBDIVISION, AND IN CONSIDERATION OF THE APPROVAL OF THIS FINAL PLAT BY THE DEPARTMENT OF PLANNING AND ZONING, ESTABLISH THE MINIMUM BUILDING RESTRICTION LINES AND GRANT UNTO HOWARD COUNTY, MARYLAND, ITS SUCCESSORS AND ASSIGNS, (1) THE RIGHT TO LAY, CONSTRUCT AND MAINTAIN SEWERS, DRAINS, WATER PIPES AND OTHER MUNICIPAL UTILITIES AND SERVICES, IN AND UNDER ALL ROADS AND STREET RIGHT-OF-WAYS AND THE SPECIFIC EASEMENT AREAS SHOWN HEREON; (2) THE RIGHT TO REQUIRE DEDICATION FOR PUBLIC USE THE BEDS OF THE STREETS AND/OR ROADS AND FLOODPLAINS AND OPEN SPACE WHERE APPLICABLE, AND FOR GOOD AND OTHER VALUABLE CONSIDERATION, HEREBY GRANT THE RIGHT AND OPTION TO HOWARD COUNTY TO ACQUIRE THE FEE SIMPLE TITLE TO THE BEDS OF THE STREETS AND/OR ROADS AND FLOODPLAINS, STORM DRAINAGE FACILITIES AND OPEN SPACE WHERE APPLICABLE; (3) THE RIGHT TO REQUIRE DEDICATION OF WATERWAYS AND DRAINAGE EASEMENTS FOR THE SPECIFIC PURPOSE OF THEIR CONSTRUCTION, REPAIR, AND MAINTENANCE; AND (4) THAT NO BUILDING OR SIMILAR STRUCTURE OF ANY KIND SHALL BE ERRECTED ON OR OVER THE SAID EASEMENTS AND RIGHT-OF-WAYS.

WITNESS OUR HANDS THIS DAY OF December 1991.

Peter Zubovic DATE
ELIZABETH C. ZUBOVIC DATE

Benjamin Larry Clements DATE
WITNESS DATE

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THE FINAL PLAT SHOWN HEREON IS CORRECT; THAT IT IS A SUBDIVISION OF ALL OF THE LANDS CONVEYED BY THOMAS SHAPIRO AND IDA SHAPIRO, HIS WIFE, RAYMOND E. GREENFIELD AND VIRGINIA G. GREENFIELD, HIS WIFE, CAM L. SALLADAY AND MARY E. SALLADAY, HIS WIFE, AND JOSEPH M. MAMANA AND MARY LOV MAMANA, HIS WIFE, TO PETER ZUBOVIC AND ELIZABETH C. ZUBOVIC, HIS WIFE, BY DEED DATED JANUARY 8, 1972 AND RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND IN LIBER 581 AT FOLIO 542 AND THAT ALL MONUMENTS ARE IN PLACE OR WILL BE IN PLACE PRIOR TO THE ACCEPTANCE OF THE STREETS IN THE SUBDIVISION BY HOWARD COUNTY AS SHOWN IN ACCORDANCE WITH THE ANNOTATED CODE OF MARYLAND, AS AMENDED.

Sourabh Munshi
SOURABH G. MUNSHI, PROF. L.S. NO. 10770
DATE 6/5/91

RECORDED AS PLAT 10149 ON 12-11-91
AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND

MINOR SUBDIVISION PLAT
ZUBOVIC SUBDIVISION
SECTION ONE - LOTS 1, 2, AND 3

EXISTING ZONING: R
TAX MAP: G PARCEL: 15B
FOURTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE: 1"=100' MAY, 1991
D.P.Z. FILE NOS.: F-91-164
SHEET 1 OF 1

VANMAR ASSOCIATES INC
Engineers - Planners - Surveyors
310 South Main Street Mount Airy, MD 21771
(301) 812-2990 (301) 831-5015 (301) 249-2151

**HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
WATER AND SEWERAGE PROGRAM
TEL: (410)313-2640 FAX: (410)313-2648**

Information Form for the Installation of the Well Pump, Pitless Adapter, and Supply Piping

NOTE: The installer is responsible for requesting an inspection prior to 9 am on the day of the desired inspection. No work is to be covered until approved by the Health Department. All installations must comply with the National Standard Plumbing Code (NSPC, as amended locally) and COMAR 26.04.04 (MD Well Construction Regulations). Submission of a complete form is required prior to Use and Occupancy approval.

Company Name: Berleus Telephone #: 301-483-500
Address: 23407 Frederick Rd
Chesapeake, MD 20811

(Must circle one) Licensed Plumber Licensed Well Driller Licensed Well Pump Installer
License # and name of individual responsible for the field installation:

Name (Print): FRANK HUNKLE License #: 17867
*A licensed individual must perform the actual installation. Apprentices must be under the direct supervision of a licensed journeyman or master plumber, pump installer or well driller. Licenses may be subjected to field verification.

Name of Property Owner: Pinecrest Bedies Telephone #: 301-718-4113
Subdivision: 2ubonys Lot #: 1 Well Tag #: HO-94-3012
Site Address: 1125 Ridge Rd
mt Airy, MD 21771

Submersible Pump Data

Make: Binks
Model #: _____
Pump Capacity: 43 GPM
Well Yield: 3 GPM

Pitless Adapter

Make: Campbell
Model #: _____
Depth: 42 (36" min)
NSF approved: ☒

Well Cap and Electric Conduit

Two piece watertight cap: ☒
Screened, vented well cap: ☒
Cap secured to casing: ☒
Conduit min 13" B.G.: ☒
Conduit secured to well cap: ☒

Depth of well encountered at time of pump installation: _____ (feet)
If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4
Torque arrestors or Cable guards are required - Must circle one

Safety rope, if used, attached to inside of well casing with eye bolt _____

Piping to house

Type: BLK 1"
PSI: 200 (160 psi min)
Depth of supply line: 30 (36" min)

House Connection

PVC sleeved to undisturbed soil at wall penetration: ☒
Approximate length of sleeve: 36"
Sleeve caulked and sealed properly: ☒

The water supply line is required to be at least ten feet from the septic tank, pump chamber, sewage piping, distribution box, drainfields, and sewage reserve area. If this cannot be accomplished, contact this office for approval prior to installation.

Signature of company representative responsible for installation _____

date 11/7/02

For Health Department Use Only - Not to be completed by Installer

Date Insp. Requested: 11/7/02 Anytime

Date Insp. Approved: 11/7/02 (60)

Inspection Data: Pitless adapter and water supply line at least 36" below grade

Two piece cap installed and attached to casing securely

Elec. conduit extends at least 18" below grade/attached to cap properly

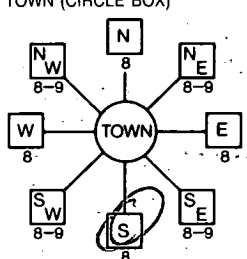
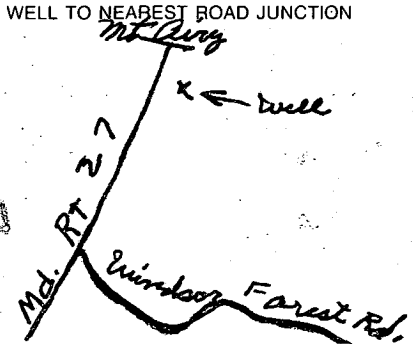
Safety rope installed inside of well casing

Correct well tag attached properly and casing 8" above finished grade

Water supply line sleeved adequately at house connection

Adequate grout observed below pitless adapter

C1 0840		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 (13) A46871	
ST/CO USE ONLY DATE RECEIVED MM DD YY 8 13		DATE WELL COMPLETED MM DD YY 3 15 2001		Depth of Well 22 305 26 (TO NEAREST FOOT)		
OWNER <u>Knauss</u> STREET OR RFD <u>Ridge Road</u> SUBDIVISION <u>Zubovic</u>		TOWN <u>Mount Airy</u> LOT		PERMIT NO. FROM "PERMIT TO DRILL WELL" <u>HO-94-3012</u>		
WELL LOG Not required for driven wells		GROUTING RECORD WELL HAS BEEN GROUTED (Circle Appropriate Box) TYPE OF GROUTING MATERIAL (Circle one) CEMENT ☒ CM BENTONITE CLAY ☒ BC NO. OF BAGS <u>35</u> NO. OF POUNDS <u>3290</u> GALLONS OF WATER <u>210</u> DEPTH OF GROUT SEAL (to nearest foot) from <u>0</u> ft. to <u>90</u> ft. (enter 0 if from surface)		PUMPING TEST HOURS PUMPED (nearest hour) <u>3</u> PUMPING RATE (gal. per min.) <u>7.5</u> METHOD USED TO MEASURE PUMPING RATE <u>Bucket</u> WATER LEVEL (distance from land surface) BEFORE PUMPING <u>45</u> ft. WHEN PUMPING <u>137</u> ft. TYPE OF PUMP USED (for test) ☒ A air ☒ P piston ☒ T turbine ☒ C centrifugal ☒ R rotary ☒ O other (describe below) ☒ J jet ☒ S submersible		
DESCRIPTION (Use additional sheets if needed)		FEET FROM TO <u>Brown Shale</u> 0 97 <u>Blue Rock</u> 97 305		CASING RECORD casing types insert appropriate code below ST STEEL CO CONCRETE PL PLASTIC OT OTHER MAIN CASING TYPE <u>ST</u> Nominal diameter top (main) casing (nearest inch) <u>6</u> Total depth of main casing (nearest foot) <u>100</u> 60 61 63 64 66 70		
		OTHER CASING (if used) A C H S C A S I N G diameter inch depth (feet) from to		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		
NUMBER OF UNSUCCESSFUL WELLS: <u>0</u>		C2 DEPTH (nearest ft.) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 <u>10</u> <u>28</u> <u>305</u>		C3 Casing Height (circle appropriate box and enter casing height) ☒ + above } LAND SURFACE ☒ - below } <u>2</u> (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) <u>Well 32</u>		
WELL HYDROFRACTURED yes ☒ Y no ☒ 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		GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68		
DRILLERS LIC. NO. <u>M 5 D 24</u> DRILLERS SIGNATURE <u>Robert L. Mayre</u> (MUST MATCH SIGNATURE ON APPLICATION) LIC. NO. <u>M D</u>		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				
SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)						

B 1 03712 1 2 3 6	SEQUENCE NO. (MDE USE ONLY)	STATE OF MARYLAND PERMIT TO DRILL WELL <i>W514936</i> please print or type	STATE PERMIT NUMBER H0 - 94 - 3012 70 79 fill in this form completely
Date Received (APA) 8 MM DD YY 13 Knauss Van 15 Last Name Owner First Name 34 200 Greenspring Lane 36 Street or RFD 55 Belton Spring Md 20904 57 Town 70 State 72 Zip 76		B 3 Howard LOCATION OF WELL 8 COUNTY 21 Zubovic Sub 23 SUBDIVISION 42 SECTION 1 LOT 1 44 46 48 50 Mt. Airy 52 NEAREST TOWN 71 MILES FROM TOWN (enter 0 if in town) 3.2 M I 73 76 77 78	
DRILLER INFORMATION Joseph L. Mayne MS D 24 Driller's Name 76 License No. 81 Joseph L. Mayne Well Drilling Firm Name 5512 Ridge Rd Int. Airy Md 21771 Address Joseph L. Mayne 2/14/2001 Signature Date		B 4 1 2 DIRECTION OF WELL FROM TOWN (CIRCLE BOX)  Md Rt 27 11 NEAR WHAT ROAD 30 ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX) 34 75 37 DISTANCE FROM ROAD 75 FT ENTER FT OR MI 38 39 TAX MAP: 6 BLK: 1 PARCEL 158	
B 2 WELL INFORMATION 1 2 APPROX. PUMPING RATE (GAL. PER MIN.) 5 8 12 AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 500 14 20		NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL Howard (13) A46871 COUNTY NAME COUNTY NO. STATE SIGNATURE Brian Baker 2/26/01 DATE ISSUED 549 000 748 000 43 MM DD YY 48 CO SIGNATURE EXP. DATE NORTH GRID 50 55 EAST GRID 57 63	
USE FOR WATER (CIRCLE APPROPRIATE BOX) ☒ DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION ☐ FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION) ☐ INDUSTRIAL, COMMERCIAL, DEWATERING ☐ PUBLIC WATER SUPPLY WELL ☐ TEST, OBSERVATION, MONITORING ☐ GEO-THERMAL		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 E 748 N 549 000 000	
APPROXIMATE DEPTH OF WELL 280 FEET 24 28 APPROXIMATE DIAMETER OF WELL 6 INCH 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	
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 DEEPMEN AN EXISTING WELL PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE) 41		DRAW A SKETCH BELOW SHOWING LOCATION OF WELL IN RELATION TO NEARBY TOWNS AND ROADS AND GIVE DISTANCE FROM WELL TO NEAREST ROAD JUNCTION 	
Not to be filled in by driller (MDE OR COUNTY USE ONLY) APPROP. PERMIT NUMBER 54 G A P 63 PERMIT No. H0 - 94 - 3012 70 71 72 73 74 75 76 77 78 79			
SPECIAL CONDITIONS NOTE - APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED			

APPLICATION

Received
3-5-91

PERCOLATION TESTING

A 46871

P _____

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

DISTRICT _____

DATE 3/6/91

3-5-91 Preview ok.
Existing house - repair.
200 ft stream restriction.
Meandering stream has changed
location over time. JEN

113

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 PETER & ELIZABETH C. Zubovic

ADDRESS 1259 RIDGE RD. MT AIRY, MD. PHONE 831-7154

PROSPECTIVE BUYER JOHN & BETSY ZUBOVIC DAVIS + MARGARET ZUBOVIC TUCKER
ANNAPOLIS, MD

ADDRESS WHEATFIELD TERRACE, GAITHERSBURG. PHONE _____

PROPERTY LOCATION:

SUBDIVISION Zubovic Property LOT NO. 158 ^{LOT 1}

ROAD AND DESCRIPTION RIDGE RD (RTE 27)

TAX MAP _____ PARCEL # _____

SIZE OF LOT _____ TYPE BLDG. SINGLE FAMILY
(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 _____ DATE _____

REASONS FOR REJECTION OR HOLDING 5-1-91 Recommend rejection. Shallow depths to
rock, fast percolation times, less than 7500 sq. ft. area. JEN

HD-216

THIS IS NOT A PERMIT

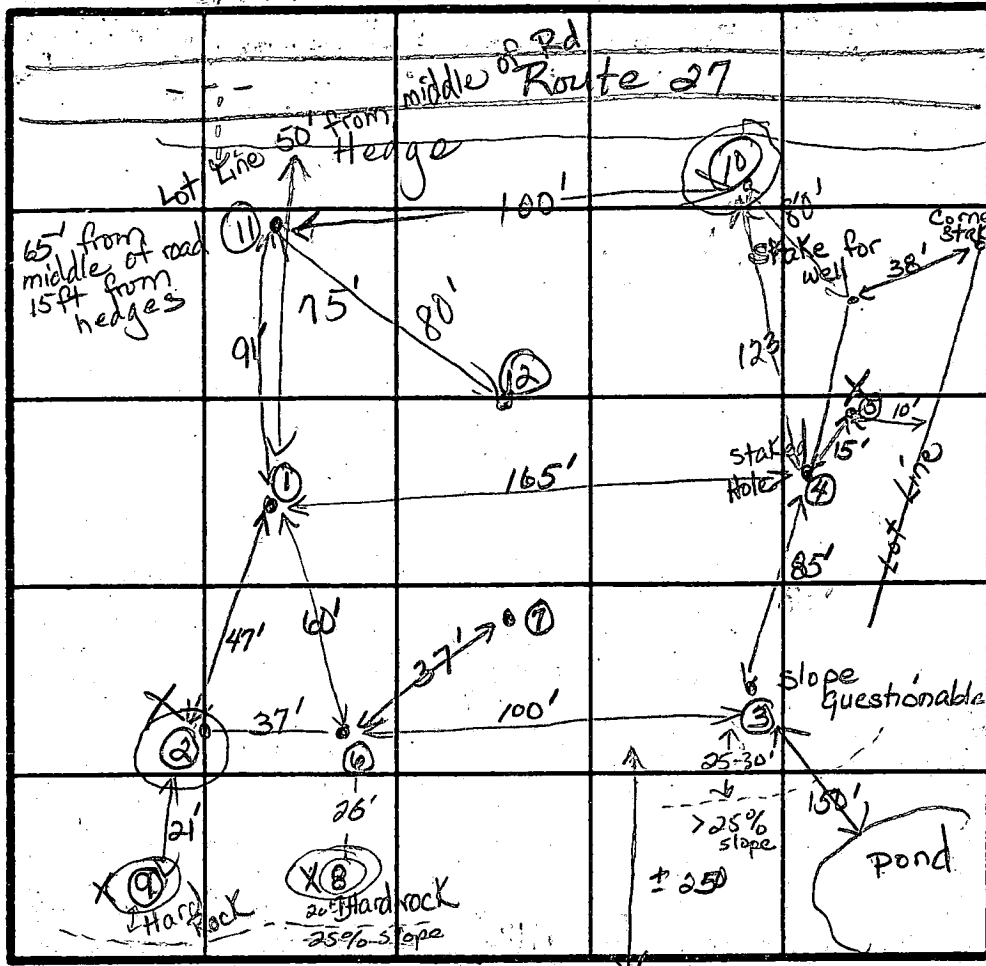
Zubovic lot 1
A-46871

Lot # 1

#4 #4

#1
SOIL PROFILE

0' topsoil
9" Red/brown clay
3' 5% small Rx
Clay sand Loam
70% shale
5% Quartz
9' Rx Bottom



#4 #4
topsoil
Red Clay Loam with 70% Shale 2% Quartz

#5
topsoil
Brown Clay
Orange Clay Loam
70% Shale 1% Quartz

INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE

Stream

7'

#2

topsoil
3' orange/magenta clay with small shale
4' orange/red clay with small shale
Gray clay with shale
55' magenta orange clay loam
70% shale
1% Quartz
9' Rx Bottom

#3

1' topsoil
Brown/orange clay with small shale
4' Clay Loam
70% Brown to gray shale
Looks like wood chunks rust color inside chunks
9'

DATE	TEST NO.		DEPTH	PRE-WET		TEST - 1' DROP		TIME
				START	STOP	START	STOP	
4-30-91	①	S	3.5'	11:00	11:01	11:01	11:03	②
		V	9'					
	②	S	3'	11:14	11:14	11:14	11:15	③0 sec
		V	9'			Too fast		
	③	S	3'	11:28	11:34	11:34	11:40	⑥
		V	9'					
	④	S	3.5'	12:15	12:21	12:21	12:32	⑪
		V	8'					
	⑤	S	3.5'	12:04	over	30 minutes (too slow)		
		V	7'					
	⑥	S	3.5'	12:35	12:51	12:51	1:19	③0
		V	7'					
	⑦	V	see profile					
REMARKS	⑧	V	2.5'	eliminated - too much Rx				
	⑨	V	3'	eliminated - too much Rx				

TYPE OF SOIL #5 had water 24 hrs later

TESTED BY D. Buggs

ALSO PRESENT

Craig Williams
(owner) Peter Zubovic
Wayne Eckard
Ken Mayne

#6
topsoil
Orange clay with small shale
4.5' orange clay loam with shale

#7
topsoil
orange brown clay with 80% shale
(gray on outside with rust inside)

APPLICATION

PERCOLATION TESTING

A 46871

P _____

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

DISTRICT _____

DATE _____

2/3

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 Peter Zubvic

ADDRESS 1259 Ridge Road PHONE _____

PROSPECTIVE BUYER _____

ADDRESS _____ PHONE _____

PROPERTY LOCATION:

SUBDIVISION _____ LOT NO. 1

ROAD AND DESCRIPTION Ridge Road

TAX MAP _____ PARCEL # _____

SIZE OF LOT _____ TYPE BLDG. _____

(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 _____ DATE _____

REASONS FOR REJECTION OR HOLDING _____

HD-216

THIS IS NOT A PERMIT

Zubovic
Lot-1

A-46871

Route - 27

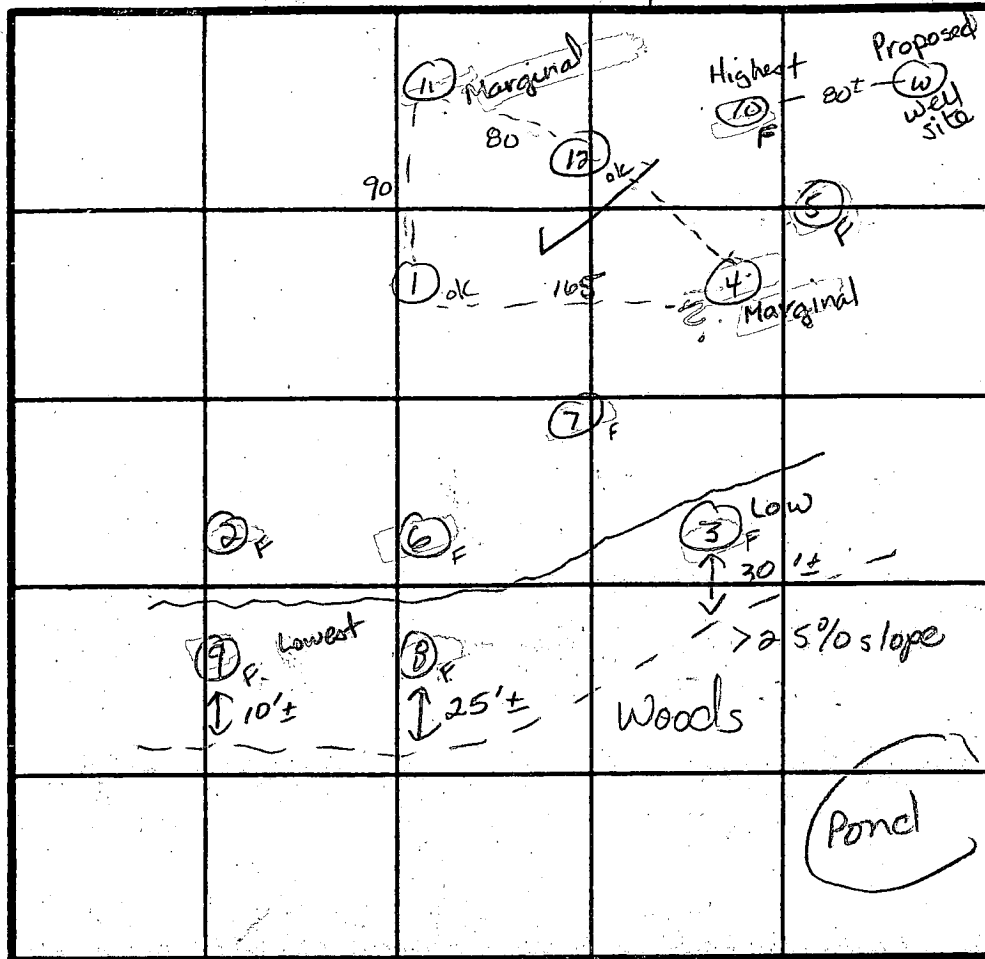
SOIL PROFILE

0-1.5 Dk br si
cl organics
full soil
1.5-2.5 Br sicl,
some
rock
frags < 10%
2.5-4.0 Red br
si loam
< 15%
rock frags
4.0-6.0 Red si li
< 45%
rock frags
6.0-12.5 Red si l
< 60% rx
Bottom

0-1.5 Dk br sicl
organics
1.5-3.5 Red-br si
loam

3.5-7.5 Red si l
< 30%
rock frags,
slight
structure
at 4.5 ft
on one side
7.5 Bottom

0-1.5 Br sicl
< 10% rx
frags
1.5-6.0 Br-gray c
si l
< 30% rock
frags,
clay gouge
between
rock frags
< 30%
6.0-11.0 Structured
at 6.0 ft.
11.0 Bottom



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

0-2.5 Dk br si
cl
2.5-5.0 Red br si
< 15%
rock frags
5.0-9.0 Red si l
some struct.
at 5.0 ft
< 60% rock
frags
9.0 Bottom

0-1.5 Dk br si
cl
1.5-5.0 Red si cl
< 20%
rock frags
5.0-11.5 Red si l
< 75% rx
frags
structured
at 5 ft
11.5 Bottom

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME
			START	STOP	START	STOP	
5-1-91	(4)	6.5 M	11:10:07	11:11:14	11:11:14	11:13:00	106 sec
		6.5 M	11:08:00	11:08:43	11:08:43	11:09:43	60 sec
		12.5 D	Bottom	struct	used rock	at 6.0 ft	Marg.
	*	7.5 V	slight	structure	on one side		
			of hole	< 30% rock	fragment		ok
	(3)	4.5	11:34:24	11:35:12	11:35:12	11:36:16	64 sec
		4.5 M	11:32:41	11:33:14	11:33:14	11:34:05	51 sec
		11.0 D	structured at	6.0 ft			Fail
	(7)	9.0 V	structured rock	at 5.0 ft			Fail
	(9)	3.0 V	Rock at	2.0 ft	< 50% (3' x 0.5')		Fail
	(8)	2.5 V	Rock at	1.0 ft	< 60% (4' x 2')		Fail
	(6)	6.0 M	11:59:00	12:02:29	12:02:29	12:59	30 min
		11.5 D	structured at	5.0 ft	< 75% rock		Fail
	(2)	9.0 V	clay to 2.0 ft,	< 30% rock frags			(Fast) Fail

REMARKS

TYPE OF SOIL

TESTED BY

J. Nadeau / D. Bugge

ALSO PRESENT

D. Eckert
Mr. Zubovic

Retest same hole

above 6.0 ft

Retest same hole.

APPLICATION

PERCOLATION TESTING

A 46871

P _____

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

DISTRICT _____

DATE _____

TO: THE COUNTY HEALTH OFFICER
ELLICOTT CITY, MARYLAND

3/3

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

PROPERTY OWNER Peter Zubovic

ADDRESS 1259 Ridge Road PHONE _____

PROSPECTIVE BUYER _____

ADDRESS _____ PHONE _____

PROPERTY LOCATION:

SUBDIVISION _____ LOT NO. 1

ROAD AND DESCRIPTION Ridge Road

TAX MAP _____ PARCEL # _____

SIZE OF LOT _____ TYPE BLDG _____
(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 _____ DATE _____

REASONS FOR REJECTION OR HOLDING _____

HD-216

THIS IS NOT A PERMIT

Zubovic
Lot-1

A-46871

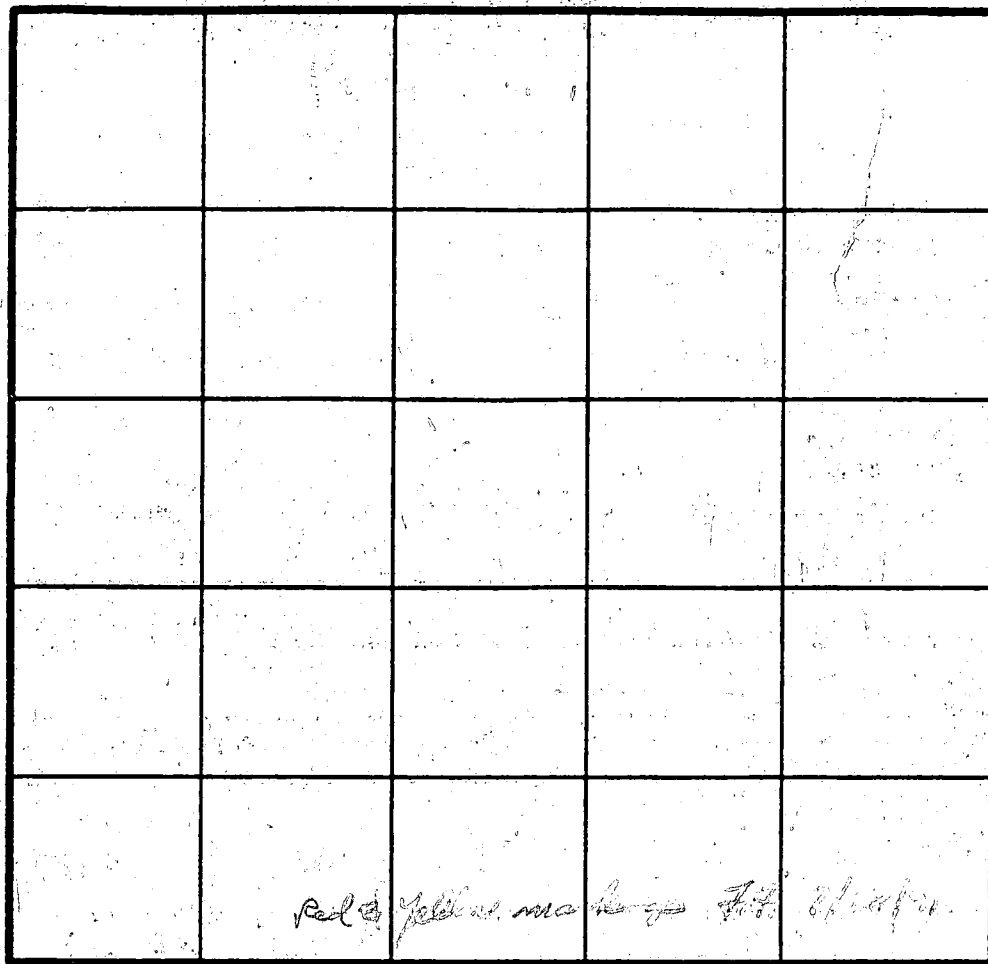
(10)

SOIL PROFILE

0-1.0 Dk-br si
cl
1.0-3.0 Red-gray
si cl
L 10%
rock frags
3.0-11.0 Red si
L 50%
rock frags
structured
at 6.5 ft
11.0 Bottom

(12)

0-2.0 Dk-br si
cl
2.0-4.0 Red si, loam
L 5% rock
frags
4.0-7.5 Red si
L 10%
rock frags
No struct
7.5 Bottom
unlog depth



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

(2)

0-1.0 Dk-br si cl
1.0-2.5 Red si cl
L 5% rock
frags
2.5-9.0 Red si cl
L 30%
rock frags
9.0 Bottom

(11)

0-1.0 Dk-br si cl
1.0-3.0 Red si cl
L 15% rock
frags
3.0-13.0 Red si
L 35%
rock frags
structured
at 5.0-9.0 ft
on one wall
13.0' Bottom

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME
			START	STOP	START	STOP	
5-1-91	(10)	3.0 S	12:46:53			12:47:00	Fast
		3.0 S	12:47:21	12:47:27	12:47:27	12:47:33	6 sec
		6.0 M	12:50:22	12:51:07	12:51:07	12:52:21	74 sec
		6.0 M	12:48:09	12:48:56	12:48:56	12:50:06	70 sec
		11.0 D	L 50% rock frags structured at 6.5 ft				Fail
	* 11	3.0 S	1:14:42	1:25:41	1:25:41	1:39:21	14 min
		5.5 M	1:18:45	1:20:21	1:20:21	1:22:01	100 sec
		5.5 M	1:15:43	1:16:26	1:16:26	1:17:47	81 sec
		13.0 D	structured from 5.0 ft to 9.0 ft (along one wall only)				Marginal
	* 12	7.5 V	Clay to	2.0 ft	L 10% rock		OK

Estimate less than 7500 sq. ft. of SDA

REMARKS

Use holes 1, 4, 11 & 12 with shallow system,
Inlet at 1.0 ft bottom maximum at 3.0 ft.

TYPE OF SOIL

TESTED BY

L. Nadeau / D. Buggs

ALSO PRESENT

D. Eckert

Mr. Zubovic

9/23/91
10 AM

APPLICATION

PERCOLATION TESTING

A 46871
P _____

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

DISTRICT _____

DATE _____

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 PETER ZUBOVIC

ADDRESS 1259 RIDGE RD. PHONE 831-7154
MT AIRY MD. 21771

PROSPECTIVE BUYER _____

ADDRESS _____ PHONE _____

PROPERTY LOCATION:

SUBDIVISION ZUBOVIC LOT NO. 1 - TESTING CONTINUED.

ROAD AND DESCRIPTION _____

TAX MAP 6 PARCEL # 158

SIZE OF LOT _____ TYPE BLDG. _____
(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 OK FOR ADJUST. - PLAT PENDING C.W. 00 DATE 9/23/91

REASONS FOR REJECTION OR HOLDING _____

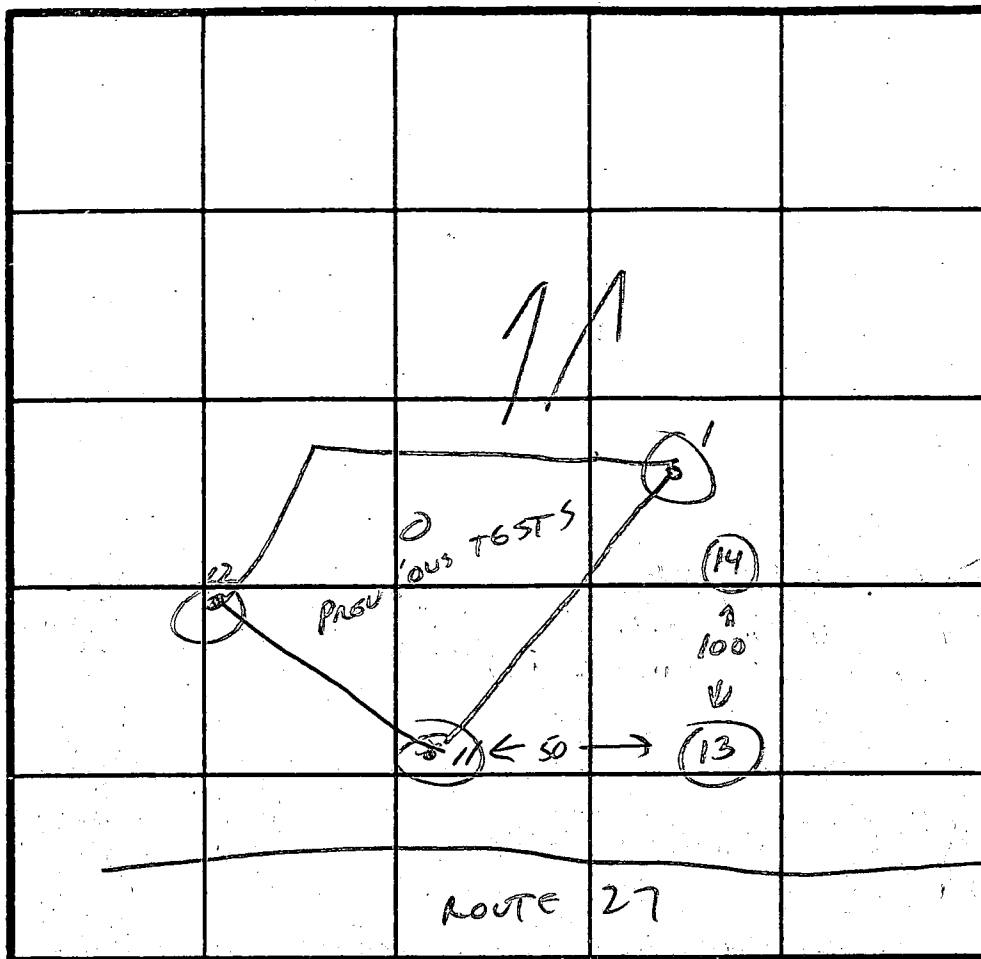
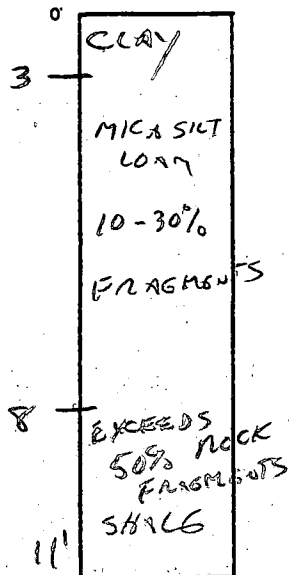
HD-216

THIS IS NOT A PERMIT

Zubovic lot 1

(13) 9

SOIL PROFILE



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME
			START	STOP	START	STOP	
9/23/91	13	3					
		7					
		11'					
	14	3					
		8					
		12					

REMARKS OK TO INCLUDE TEST HOLS 13 & 14 IN TEST PATTERN, ELIMINATE # 1

TYPE OF SOIL MICA LOAN - SHALE

TESTED BY CWL

ALSO PRESENT OKSIA, WAYNE

SANITARY/ENVIRONMENTAL ENG., INC.

Consulting Engineers
1414 Washington Road
WESTMINSTER, MARYLAND 21157
(410) 876-7740
FAX (410) 840-9924

1125 RIDGE ROAD
VAN KNAUSS
JOB _____
SHEET NO. _____ OF _____
CALCULATED BY _____ DATE _____
CHECKED BY SAUND MOULD DATE _____
SCALE HOWARD COUNTY

3 BED ROOMS $\times$ 150 = 450 GPD - SLOPE = 4.7.

LOADING RATE - 1.2 GPD / SQ FT. = 375 Sq. Ft.

BED 9' $\times$ 42' = 378 Sq. Ft.

High Side Sand depth = 24"

Low Side Sand depth = 24" + (.04 $\times$ 108") = 24 + 4 1/3" = 28 1/3"

UP SLOPE SET BACK = (24" + 22") (3) (0.89) = 123" = 10' - 3"

DOWN SLOPE SET BACK = (28.33" + 22") (3) (1.14) = 172" = 14' - 8"

SIDE SLOPE SET BACK = $\frac{(24" + 28.33")}{2} \times 3 = 163" = 13' - 7"$

MOUND LENGTH = 42' + 13' - 7" + 13' - 7" = 69' - 2"

MOUND WIDTH = 9' + 10' - 3" + 14' - 3" = 33' - 6"

PUMP RATE = 36 Perforations @ 1.63 = 59 GPM

Dose = 5 $\times$ 3 $\times$ 40.25' = 604 sq. ft. = 1 1/2' Lateral =

@ 10.6 GAL / 100' = 6.04 $\times$ 10.6 = 64 GAL

37' - 2" f. main + MANIFOLD @ 17.4 GAL / 100'

0.37 $\times$ 17.4 = 6.4 GAL + 64 GAL = 70

450 / 6 = 75 GAL DOSE / 7.48 = 10 cu ft.

PUMP CHAMBER FLOOR AREA = 58 Sq. Ft.

10 cu ft / 58 Sq. Ft. = 0.17' = 2"

EMERGENCY STORAGE = 58 Sq. Ft. $\times$ 2.25' = 130.5 cu ft = 976 GAL.

TDH = ELEV. DIFFERENCE = 784.66 - 774.0 = 10.66'

DISTAL HEAD =

2.00'

f = 2" PVC @ 59 GPM

6' + VALVE + L + UNION + L + L + L + T + 31'

6 + 1.3 + 7 + 2 + 7 + 7 + 7 + 10 + 31 = 78'

$f = 0.0984 \frac{59^{1.85}}{2.067^{4.87}} = 0.0984 \frac{1888}{34.33} = 5.5' / 100'$

$f = 0.78 \times 5.5 = 4.3'$

TDH = 10.66 + 2.0 + 4.3 = 16.96 (17')

Pump To Remove 59 GPM AGAINST 17' TDH

COULDS MODEL 3885 WE 05 H-1/2 hp equal,

SANITARY/ENVIRONMENTAL ENG., INC.

Consulting Engineers

1414 Washington Road

WESTMINSTER, MARYLAND 21157

(410) 876-7740
FAX (410) 840-9924

LETTER OF TRANSMITTAL

DATE <u>6/11/02</u>	JOB NO.
ATTENTION	
RE: <u>1125 RIDGE ROAD</u>	
<u>SANDMOUND</u>	
<u>Van Knauss</u> <u>301-718-4153</u>	

TO HOWARD CO. HEALTH DEPT.
BUREAU OF ENV. HEALTH
3525 H ELLICOTT MILLS DR.
ELLICOTT CITY, MD. 21043

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via _____ the following items:

☐ Shop drawings ☒ Prints ☐ Plans ☐ Samples ☐ Specifications

☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
<u>2</u>			<u>PRINTS - PLANS & SPECIFICATIONS</u>
<u>1</u>			<u>CALCULATIONS</u>

B o 135 477

THESE ARE TRANSMITTED as checked below:

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REMARKS _____

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