

2

3/26/01

To Follow
Harless Manor

5/25/01
9:00/ASAP
5/30/01
All day
6/5/01 - 12:00
Drip & Pump Test
5/24/01 - Septic Tank
Insps

PERMIT

RS# 351029

P 514 749-C

SEWAGE DISPOSAL SYSTEM
HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
410-313-2640

A 43284

ISSUE DATE 1/22/2001

APPROVAL DATE 6/5/01

INDEXED

Fogle's Septic Clean IS PERMITTED TO INSTALL ALTER

ADDRESS 580 Obrecht Road Skyesville, MD 21784 PHONE 410-795-5670

SUBDIVISION Cattail Creek Country Club LOT NUMBER 13 ADDRESS 3645 Broadleaf Court

PROPERTY OWNER John M Jorgenson PROPERTY OWNER'S ADDRESS 8422 Flowering Cherry Lane

SEPTIC TANK CAPACITY 2000 GALLONS - 1/23/01 OK to install 2 Laurel, MD 20723

PUMP CHAMBER CAPACITY GALLONS 1000 gal septic tanks AU

NUMBER OF BEDROOMS 6 *** LAYOUT INSPECTION REQUIRED PRIOR TO START OF INSTALLATION ***

SQUARE FEET PER BEDROOM 210

LINEAR FEET OF TRENCH REQUIRED 375 *** TOP SEAMED SEPTIC TANK REQUIRED ***

TRENCHES: Trenches to be 3 feet wide. Inlet 3.5 feet below original grade. Bottom maximum depth 5.5 feet below original grade. 2 feet of stone below distribution box.
LOCATION: Starting from the left lot corner at the end of the flagstem drive, place the distribution box 165' down the 422.95' lot line and 95' off this same lot line. Run trenches on contour toward front of lot.
Required layout: 75', 100', 100', 100'
Maintain a minimum of 100' to the well. Trenches ~~minimum~~ 10 feet apart (center-to-center).

PLANS APPROVED Mark E. Rifkin OK 5/4/00 DKS DATE 4-6-2000

PERMIT VOID AFTER 2 YEARS

NOTE: CONTRACTOR RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION INSPECTION FOR ALL INSTALLATIONS

NOTE: TOP OF SEPTIC TANKS ARE TO BE NO DEEPER THAN 3.0 FEET BELOW FINISH GRADE

NOTE: WATERTIGHT SEPTIC TANKS REQUIRED

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

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

NOTE: NO ABSORPTION TRENCH TO EXCEED 100 FEET IN LENGTH UNLESS SPECIFICALLY AUTHORIZED

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

NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS

NOTE: DISTRIBUTION BOXES MUST HAVE BAFFLES

NOTE: IF PUMPED SEPTIC SYSTEM REQUIRED, (1) SEPTIC PUMP DETAIL TO BE PROVIDED BY INSTALLER PRIOR TO ISSUANCE OF SEPTIC PERMIT (2) PUMP PERFORMANCE TEST IS NECESSARY PRIOR TO HEALTH DEPARTMENT APPROVAL OF SEPTIC PERMIT

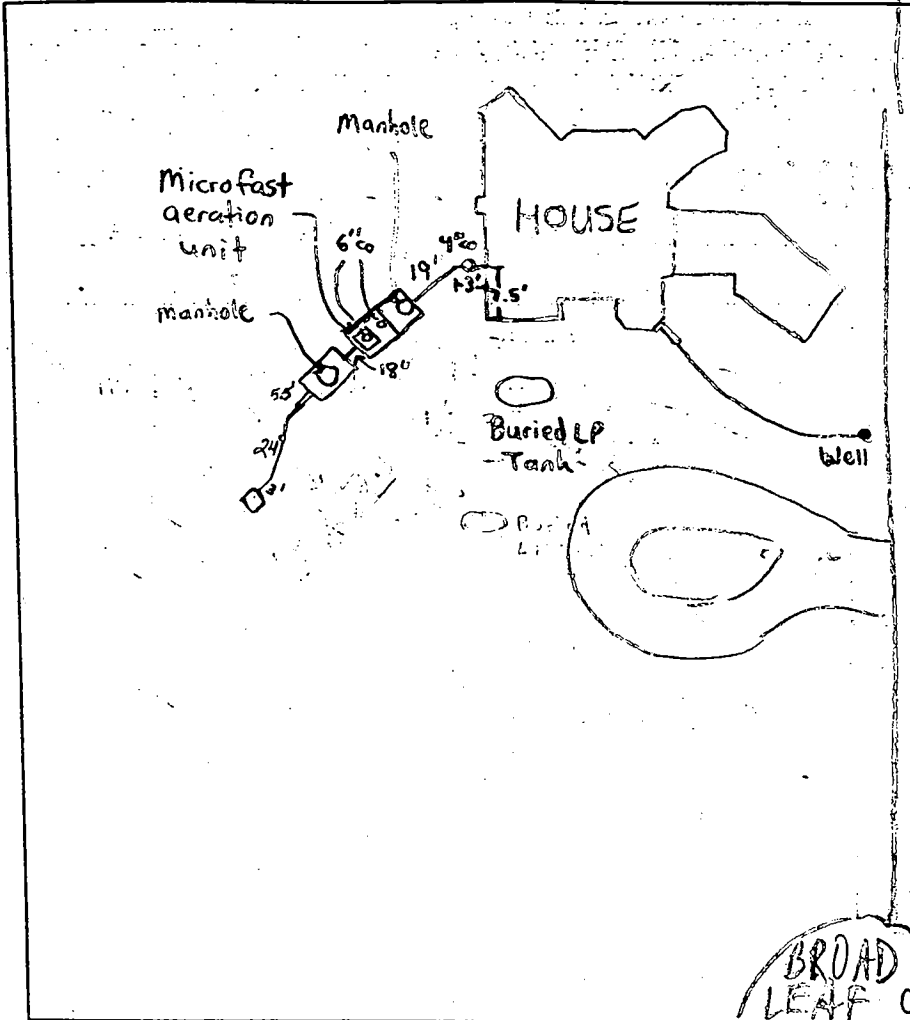
NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM
PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT
CALL 410-313-2640 FOR INSPECTION OF SEPTIC SYSTEM

514749-C

TO ADJ. HOUSE

SEE APPROVED DRIP PLANS

NOT TO SCALE



TRENCH DATA

TRENCH WIDTH _____

TRENCH INLET DEPTH _____

TRENCH BOTTOM DEPTH _____

DEPTH OF STONE _____

NUMBER OF TRENCHES _____

TOTAL TRENCH LENGTH _____

ABSORBENT AREA _____

DISTRIBUTION BOX LEVEL _____

BAFFLE IN DISTRIBUTION BOX _____

SEPTIC TANK DATA

SEPTIC TANK 1500 T.S. GALLONS

MANHOLE RISER ON FRONT

6 INCH INSPECTION PORT over 1000 gallon chamb media

PUMP CHAMBER DATA

PUMP CHAMBER GALLONS 1000 GAL (TOP SEAM)

MANHOLE RISER on center

ALARM OPERATIONAL

PUMP PERFORMANCE TEST

500 FRONT
1000 REAR
over 1000 gallon chamb media
(TOP SEAM)

BROAD LEAF CT

PRE-CONSTRUCTION INSPECTION: Flt pipe length is longer than on plans, times adjusted to 2' drain run. Permit
As built plans to be submitted by Advance System (see Mike Robbins 410-875-9100) 5/26/01

INSPECTION COMMENTS: 5/24/01 TANKS SET FOR (MR)
5/25/01 - DRIP TUBING BEING INSTALLED PER APPROVED PLAN, MIKE ROBBINS (R.S.)
EMPLOYED BY ADVANCE SYSTEMS, CONSULTANT, WORKING W/ CONTRACTOR TO ENSURE SYSTEM IS INSTALLED
CORRECTLY, DALE FOGLE, KURT CASSEL, STEVIE & RICKY PRESENT AS WELL. OK TO CONTINUE WITH
INSTALLATION PER PLAN & CALL FOR REINSPECTION AS NEEDED (SRK) 5/30/01 Field control
unit installed. Can't see all of piping. No one present. (BB)

Operational Pump Test OK, on Manual redundant pump & test/ alarm works OK. No leaks @ compression adapters.
Needs to color tanks (BB) will have concrete plastic (green) risers. 5/26/01
 INSPECTOR [Signature] DATE SYSTEM APPROVED 6/5/01

APPLICATION

PERCOLATION TESTING

A 43284
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 SYCAMORE VALLEY PARTNERSHIP

ADDRESS ~~ROUTE 97 & DORSEY MILL RD~~
8307 MAIN ST. E.C. 21043 PHONE 461-4600

PROSPECTIVE BUYER N/A

ADDRESS _____ PHONE _____

PROPERTY LOCATION:
SUBDIVISION SYCAMORE VALLEY LOT NO NEW LOT - #38

ROAD AND DESCRIPTION ROUTE 97 & DORSEY MILL ROAD

TAX MAP 21 PARCEL # 6

SIZE OF LOT 5.18 ACRE TYPE BLDG SFD
(SINGLE FAMILY DWELLING OR COMMERCIAL)

THE SYSTEM INSTALLED UNDER THIS APPLICATION IS ACCEPTABLE ONLY UNTIL PUBLIC FACILITIES BECOME AVAILABLE. I FULLY UNDERSTAND THE FEE CONNECTED WITH THE FILING OF THIS PERC TEST APPLICATION IS NON-REFUNDABLE. I ALSO AGREE TO COMPLY

WITH ALL M.O.S.H.A. REGULATIONS AND ORDINANCES.

APPROVED BY _____

REJECTED BY _____

HOLD PENDING FUI _____

REASONS FOR REJE _____

*Dave Kern
unfals
agreement*

*Dave Kern top person
water right*

THIS IS A PERMIT

HD-216

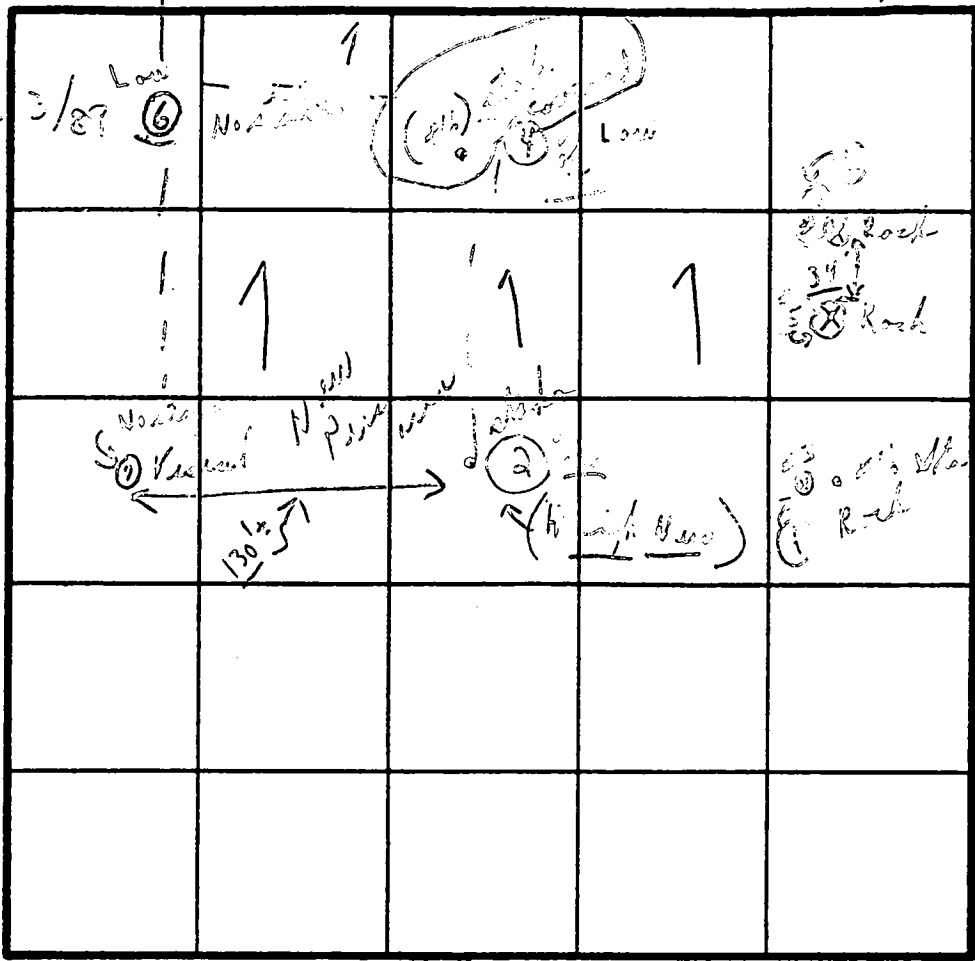
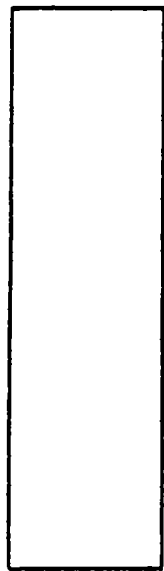
Final # 13

A 43284

#38 ←

For new

SOIL PROFILE



Σ = 9
210 # Bl
In 3 1/2
Bot 5 1/2

INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME
			START	STOP	START	STOP	
6/27/89	①	'	i	i	i	i	
#3 rd	①	'		Rock @ 3'			
LOT TNIS DRY	②	4 1/2'	2:22	2:25	2:25	2:29	4 min
	②	11'-10"		No stone			OK
	③	'					X
	③	'		Rock			X
	④ A	4 2'	2:55	3:04	3:04	3:25	2 1/2 min
	④	10' 2"		(1:20 AM, 1:50 AM)			OK
	⑤	5'	3:33	3:43	3:43	3:51	8 min
	④ B	7 1/2'	3:20	3:22	3:22	3:26	4 min

average
8/min
Inlet
4 1/2'

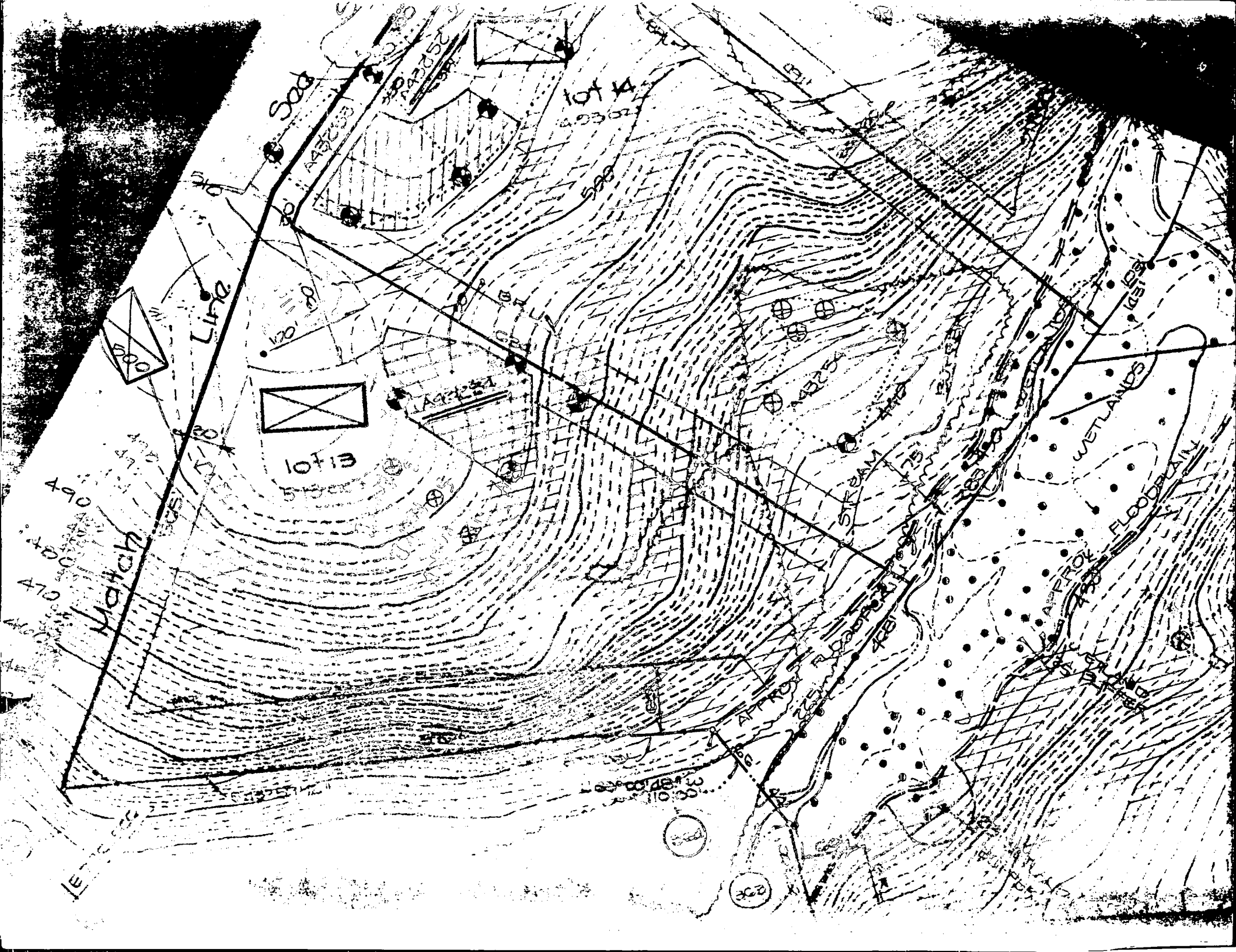
4'-11' 10" }

Soil surface
water for
1-2 min

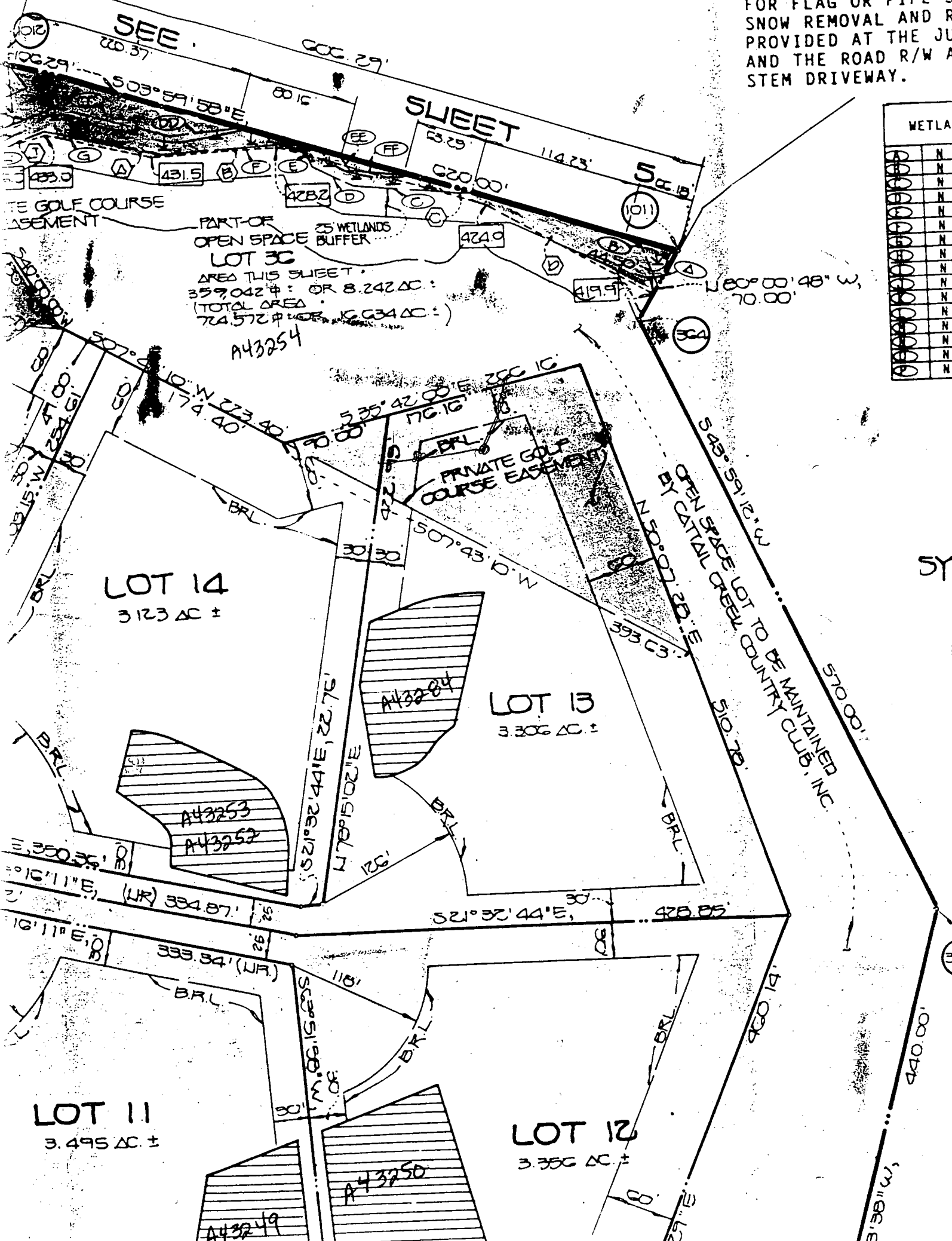
4'-10' 2"
Sandy
10 1/2'

New hole → ⑦ Visual 3'-12" Sandy, brown

REMARKS Tests in woods
TYPE OF SOIL Tests per stake then others (7 holes on lot)
TESTED BY C.B. ALSO PRESENT { O. Kettering }

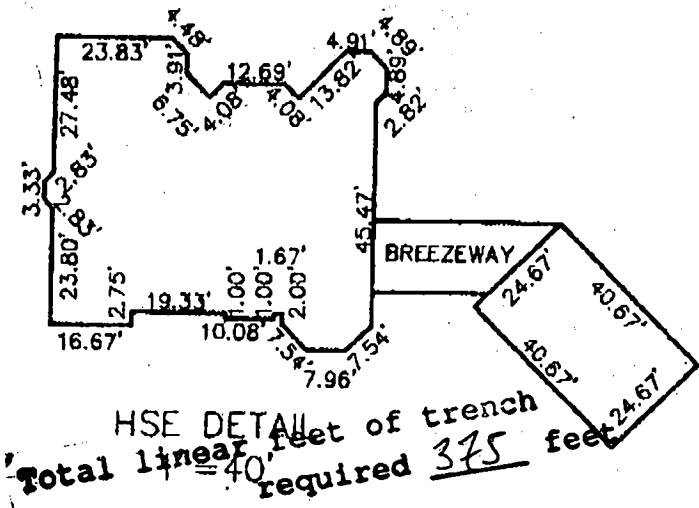


FOR FLAG OR PIPE S
 SNOW REMOVAL AND RO
 PROVIDED AT THE JUN
 AND THE ROAD R/W AP
 STEM DRIVEWAY.



WETLAND	
1	N 4
2	N 0
3	N 1
4	N 0
5	N 4
6	N 2
7	N 0
8	N 4
9	N 1
10	N 1
11	N 1
12	N 1
13	N 1
14	N 1
15	N 1
16	N 1
17	N 1
18	N 1
19	N 1
20	N 1

BROADLEAF COURT
50' R/W



Width of trench(es) 3 feet
Depth of trench(es) 5 1/2 feet

Depth of stone required below distribution pipe 2 feet

20' COMMON INGRESS AND EGRESS EASEMENT

PRIVATE GOLF COURSE EASEMENT

Approved Septic System Plan
Howard County Health Department

HSE ELEV.=505.50'
SEPTIC IN=504.90'
SEPTIC OUT=504.40'
SEPTIC TANK FINISHED GRADE=508.00'
DIST. BOX IN=503.50'
DIST. BOX EX. GRADE=507.00'

BASEMENT PLUMBING WILL REQUIRE THE USE OF AN EJECTOR PUMP

PROPOSED ELEVATIONS
F.F. ELEV.= 511.00'
C.E. ELEV.= 501.00'
GAR. ELEV.= 509.80'

DISTURBED AREA= 19,500 SF±

CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE AWAY FROM FOUNDATION AT ALL TIMES.

SEE REVERSE FOR EXPANDED VIEW

OPEN SPACE LOT TO BE MAINTAINED BY CATTAIL CREEK COUNTRY CLUB, INC.

LOT 13

"CATTAIL CREEK COUNTRY CLUB"

PLAT C.M.P. NO. 9518

4TH ELECT. DIST.

HOWARD COUNTY, MD

AMBROSE E. GMEINER II
MD REG. No. 20004

DATE

Signature
Mark E. Reffkin

Date
4/6/00



SITE PLAN
BROADLEAF COURT

SCALE:
1" = 100'

DATE:
3-3-2000
REV.
4-6-2000

McKEE & ASSOCIATES, INC.
Engineering - Surveying - Natural Resources Planning

JOB NO.

Real Estate Development

SHAWAN PLACE, 5 SHAWAN ROAD
TELEPHONE: (410) 527-1555

HUNT VALLEY, MARYLAND 21030
FACSIMILE: (410) 527-1563

00-017

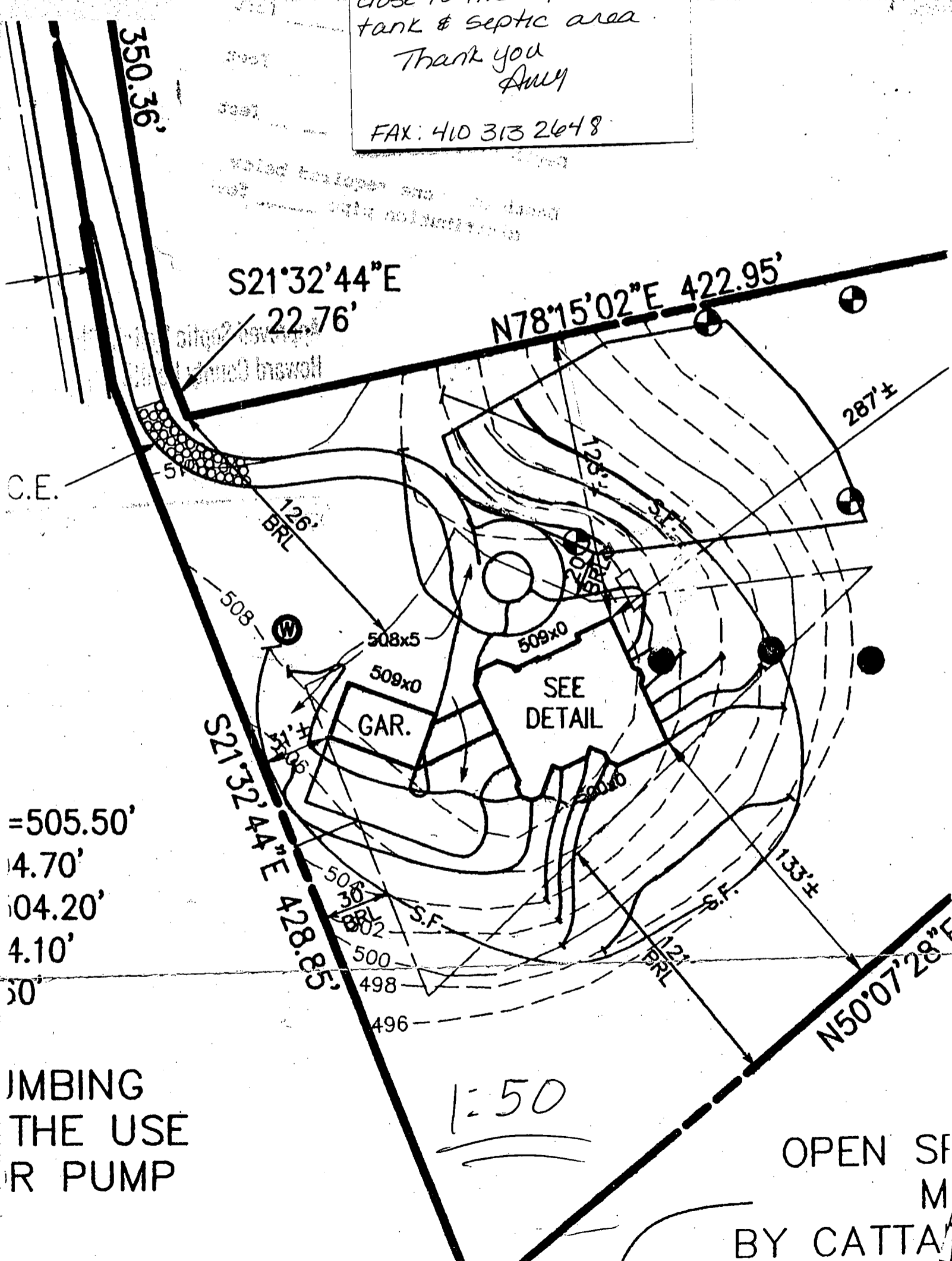
DRAWN BY: CPH
CHECKED BY: AEG

LISA Tanti - 2/26/01

Please put propane tank location on this plan. The submitted plan appears to place the tank very close to the septic tank & septic area.

Thank you
Amy

FAX: 410 313 2648



=505.50'
4.70'
04.20'
4.10'
50'

IMBING
THE USE
R PUMP

1:50

OPEN S F
M
BY CATT

BROADLEAF COURT
50' R/W

LISA Tanti - 3/24/01

Please put propane tank location on this plan. The submitted plan appears to place the tank very close to the septic tank & septic area.

Thank you
AULY

FAX: 410 313 2649

Width of trench =

Depth of trench (as) $5\frac{1}{2}$ feet

Depth of stone required below distribution pipe 2 feet

PRIVATE GOLF COURSE EASEMENT

Approved Septic System Plan
Howard County Health Department

Mark E. Reffin
Signature

4/6/01
Date

20' COMMON INGRESS AND EGRESS EASEMENT

HSE ELEV.=505.50'
SEPTIC IN=504.00'
SEPTIC OUT=504.40'
SEPTIC TANK FINISHED GRADE=508.00'
DIST. BOX IN=503.80'
DIST. BOX EX. GRADE=507.00'

BASEMENT PLUMBING WILL REQUIRE THE USE OF AN EJECTOR PUMP

PROPOSED ELEVATIONS
F.F. ELEV.= 511.00'
C.E. ELEV.= 501.00'
GAR. ELEV.= 509.80'

DISTURBED AREA= 19,500 SF±

CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE AWAY FROM FOUNDATION AT ALL TIMES

SEE REVERSE FOR EXPANDED VIEW

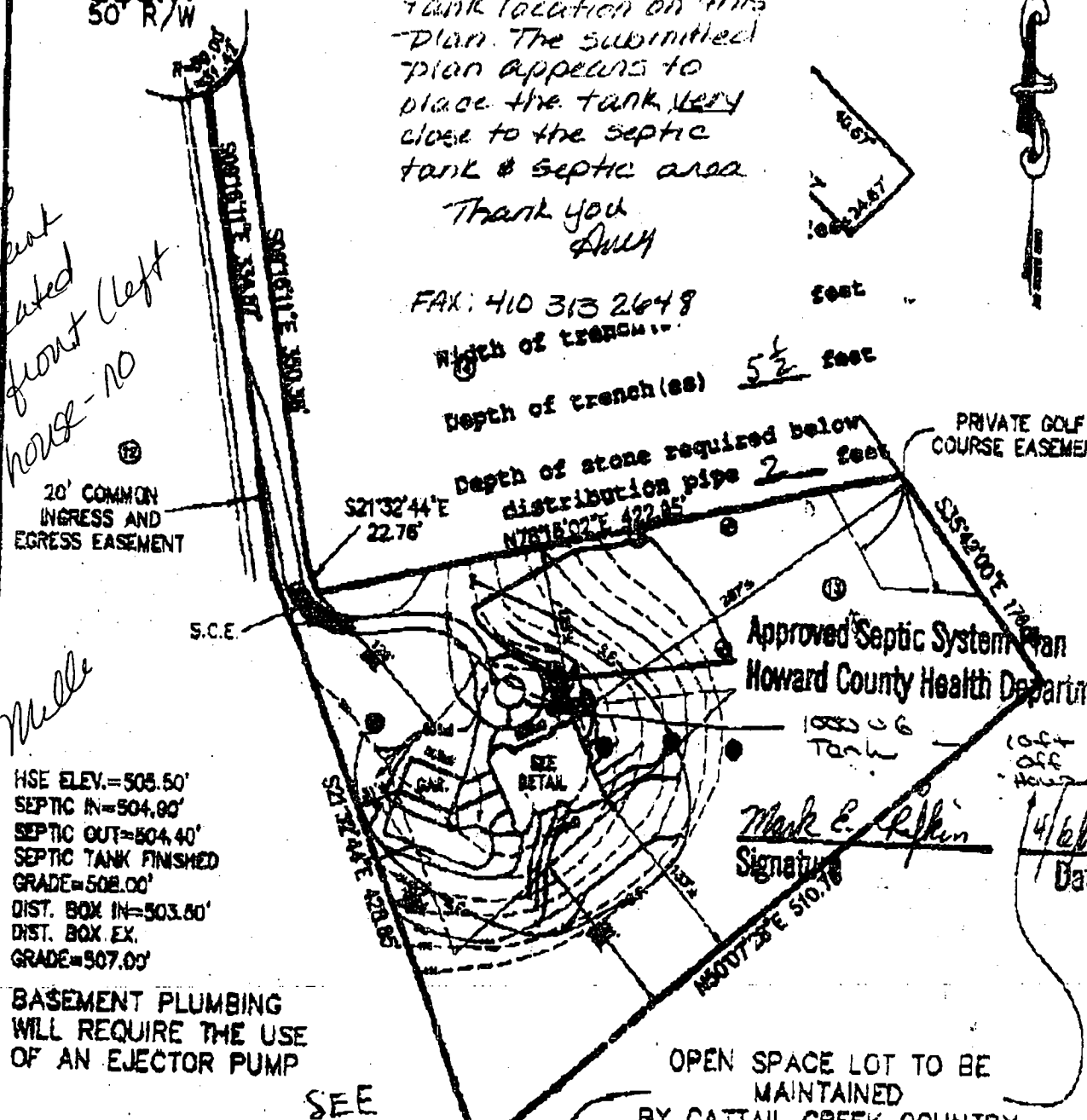
OPEN SPACE LOT TO BE MAINTAINED BY CATTAIL CREEK COUNTRY CLUB, INC.

LOT 13

"CATTAIL CREEK COUNTRY CLUB"

PLAT C.M.P. NO. 9518

3/11/01
0001286006
Propane tank will be located 10' off the front left of house - no impact to well or septic.
A. McMillan



FROM THE DESK OF

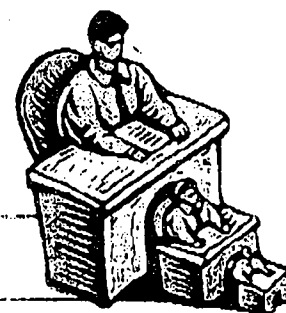
LISA TONTI

SUBURBAN PROPANE

RESIDENTIAL ENERGY REPRESENTATIVE

31 DERWOOD CIRCLE
ROCKVILLE, MD 20850

(301) 251 - 0606 *** FAX NUMBER: (301) 251 - 0608



TO: Amy

COMPANY NAME: _____

REFERENCE:

Howard County Permit

DATE: 3-1-01

FAX #: 410 313-2648

OF PAGES SENT: 3

*ALL PAPERWORK MUST BE COMPLETELY FILLED OUT AND
RETURNED BEFORE ANY INSTALLATION WILL BE SCHEDULED

Amy - Tank location - Facing house -
left side - 10ft off the home
48ft from septic

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: Fogles Well Drilling Telephone #: 410-795-5670
Address: 580 Obrecht Rd
Sylesville Md 21784

(Must circle one) Licensed Plumber Licensed Well Driller Licensed Well Pump Installer

License # and name of individual responsible for the field installation:
Name (Print): Allen Compton License# MSD009

*A licensed individual must perform the actual installation. Apprentices must be under the supervision of a licensed journeyman or master plumber, pump installer or well driller. Licenses may be subjected to field verification. Unlicensed individuals may be reported to the appropriate licensing agency.

Name of Property Owner: John Jorgenson Telephone #: 301-580-8130
Subdivision: Cattail Creek Lot #: 13 Well Tag #: HO-98-1210
Site Address: 3645 Broadleaf Ct
Glenwood, Md 21738

Submersible Pump Data Pitless Adapter Well Cap and Electric Conduit
Make: Crowl's Make: Campbell Two piece watertight cap: YES
Model #: Model#: Screened, vented well cap: YES
Pump Capacity _____ GPM Depth: 42" (36" min) Cap secured to casing: YES
Well Yield: 4 GPM NSF/WSC approved: YES Conduit min 18" B.G.: YES
Depth of well encountered at time of pump installation: 200 (feet) Conduit secured to well cap: YES
If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4
Torque arrestors, Cable guards, or other acceptable method used- Must circle one
Safety rope, if used, attached to brass rope adapter or other acceptable method inside of well casing NO

Piping to house House Connection
Type: Black Plastic PVC sleeve to undisturbed soil at wall penetration: YES
PSI: 1100 (160 psi min) Approximate length of sleeve: YES
Depth of supply line: 42 (36" min) Sleeve caulked and sealed properly: YES

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.

Allen Compton 6-6-01
Signature of company representative responsible for installation date

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

Date Insp. Requested: 2/15/01 Date Insp. Approved: 2/15/01 Inspector: (BB)^{SR4}
Inspection Data: Pitless adapter watertight & 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 not seen outside of well cap/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 **1352** SEQUENCE NO. (DENV. USE ONLY)
 1 2 3 6
 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
 FILL IN THIS FORM COMPLETELY
 PLEASE PRINT OR TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.
 COUNTY NUMBER: **A = 43284**

ST/CO USE ONLY
 DATE Received: [] [] [] [] [] []
 DATE WELL COMPLETED: **05/07/90**
 Depth of Well: **22 225 26** (TO NEAREST FOOT)
 PERMIT NO. FROM "PERMIT TO DRILL WELL": **HO-RR-1210**

OWNER: **CYCAMORE VALLEY PARTNERSHIP**
 STREET OR RFD: **BROAD LEAF COURT** TOWN: **CLEVELAND**
 SUBDIVISION: **CYCAMORE VALLEY** SECTION: **1** LOT: **13**

WELL LOG
 Not required for driven wells
 STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET		Check if water bearing
	FROM	TO	
<i>Topsoil</i>	0	2	
<i>Shale</i>	2	15	
<i>Mika</i>	15	45	
<i>Sandstone</i>	45	50	<input checked="" type="checkbox"/>
<i>Mika</i>	50	70	
<i>Sandstone</i>	70	85	<input checked="" type="checkbox"/>
<i>Mika</i>	85	225	

GROUTING RECORD
 WELL HAS BEEN GROUTED (Circle Appropriate Box) **Y** **N**
 TYPE OF GROUTING MATERIAL
 CEMENT: **CM** BENTONITE CLAY: **BC**
 NO. OF BAGS: **6** NO. OF POUNDS: **100**
 GALLONS OF WATER: **36**
 DEPTH OF GROUT SEAL (to nearest foot)
 from **0** ft. to **19** ft.

CASING RECORD
 casing types insert appropriate code below
ST **CO** **PL** **OT**
 STEEL CONCRETE PLASTIC OTHER
 MAIN CASING TYPE: **PL** Nominal diameter top (main) casing (nearest inch): **6** Total depth of main casing (nearest foot): **225**

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

SCREEN RECORD
 screen type or open hole insert appropriate code below
ST **BR** **HO** **PL** **OT**
 STEEL BRASS OPEN HOLE PLASTIC OTHER

C2

EACH SCREEN	DEPTH (nearest ft.)	
	1	2
1	110	203
2	[]	[]
3	[]	[]

SLOT SIZE 1: [] 2: [] 3: []
 DIAMETER OF SCREEN: [] (NEAREST INCH)

C3
PUMPING TEST
 HOURS PUMPED (nearest hour): **3**
 PUMPING RATE (gal. per min. to nearest gal.): **4**
 METHOD USED TO MEASURE PUMPING RATE: **Bucket**
 WATER LEVEL (distance from land surface)
 BEFORE PUMPING: **40**
 WHEN PUMPING: **50**
 TYPE OF PUMP USED (for test): **S** submersible

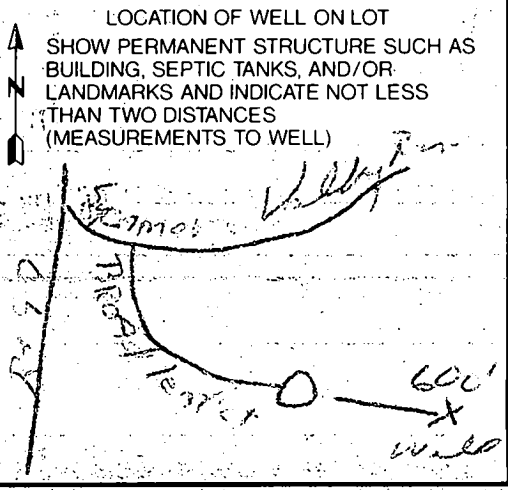
PUMP INSTALLED
 DRILLER WILL INSTALL PUMP YES NO
 IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS EXCEPT HOME USE
 TYPE OF PUMP INSTALLED: []
 PLACE (A,C,J,P,R,S,T,O) IN BOX - SEE ABOVE: []
 CAPACITY: GALLONS PER MINUTE (to nearest gallon): []
 PUMP HORSE POWER: []
 PUMP COLUMN LENGTH (nearest ft.): []
 CASING HEIGHT (circle appropriate box and enter casing height): **+** above } LAND SURFACE: **1** (nearest foot)
- below }

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, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS IDENT. NO.: **453**
 DRILLERS SIGNATURE: *Frank []*
 SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework, if different from permittee): *Frank []*

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68:
 OEP USE ONLY (NOT TO BE FILLED IN BY DRILLER)
 T (E.R.O.S.) **70** **72** **74** **75** **76**
 TELESCOPE LOG OTHER DATA CASING INDICATOR



B 1 2189

SEQUENCE NO. (DP USE ONLY)

STATE OF MARYLAND PERMIT TO DRILL WELL

STATE PERMIT NUMBER

H0-88-1210

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

please print or type

fill in this form completely

Date Received (APA)

110189

OWNER INFORMATION

SYCAMORE VALLEY PART

8307 MAIN STREET

ELLICOTT CITY MD 21403

B 3

LOCATION OF WELL

HOWARD

SYCAMORE VALLEY

SECTION 1 LOT 13

GLENELG

MILES FROM TOWN (enter 0 if in town) 2 MI

DRILLER INFORMATION

Frank Delph 453

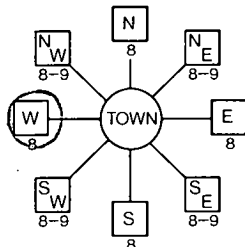
Frank Delph Well Drillers Inc.

18234 Penn Shop Rd Mt Airy Md.

Signature Frank Delph Date 10/23/89

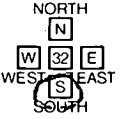
B 4

DIRECTION OF WELL FROM TOWN (CIRCLE BOX)



Broadleaf Ct

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)



600 DISTANCE FROM ROAD

ENTER FT or MI 600

B 2

WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.) 5

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 500

USE FOR WATER (CIRCLE APPROPRIATE BOX)

- Home (single or double household unit only) - circled
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)

NOT TO BE FILLED IN BY DRILLER HEALTH DEPARTMENT APPROVAL

HOWARD

43284

STATE SIGNATURE DATE ISSUED

022290 x Charles E. ... 9/22/90

NORTH GRID 523000 EAST GRID 079000

APPROXIMATE DEPTH OF WELL 200 FEET

APPROXIMATE DIAMETER OF WELL 6 INCH

METHOD OF DRILLING (circle one)

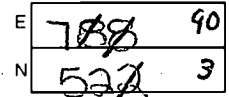
- Bored (or Augered)
Jetted
Jetted & Driven
Air-Rotary
Air-PerCussion
Rotary (Hydraulic Rotary) - circled
Cable
Reverse-Rotary
Drive-Point

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



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
D THIS WELL WILL DEEPEM AN EXISTING WELL

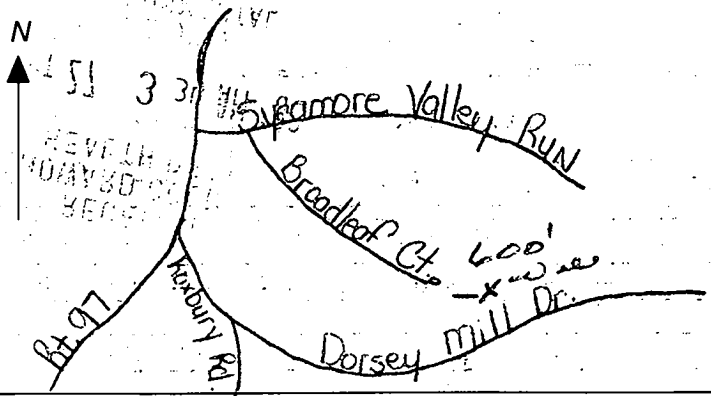
PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPEMED (IF AVAILABLE)

Not to be filled in by driller (OEP USE ONLY)

APPROX. PERMIT NUMBER GAP

FORCE C PERMIT No. H0-88-1210

DRAW A SKETCH BELOW SHOWING LOCATION OF WELL IN RELATION TO NEARBY TOWNS AND ROADS AND GIVE DISTANCE FROM WELL TO NEAREST ROAD JUNCTION.



SPECIAL CONDITIONS

SITE INSPECTION SHEET

OWNER: Jorgenson

DATE REQUESTED: _____

PHONE #: _____

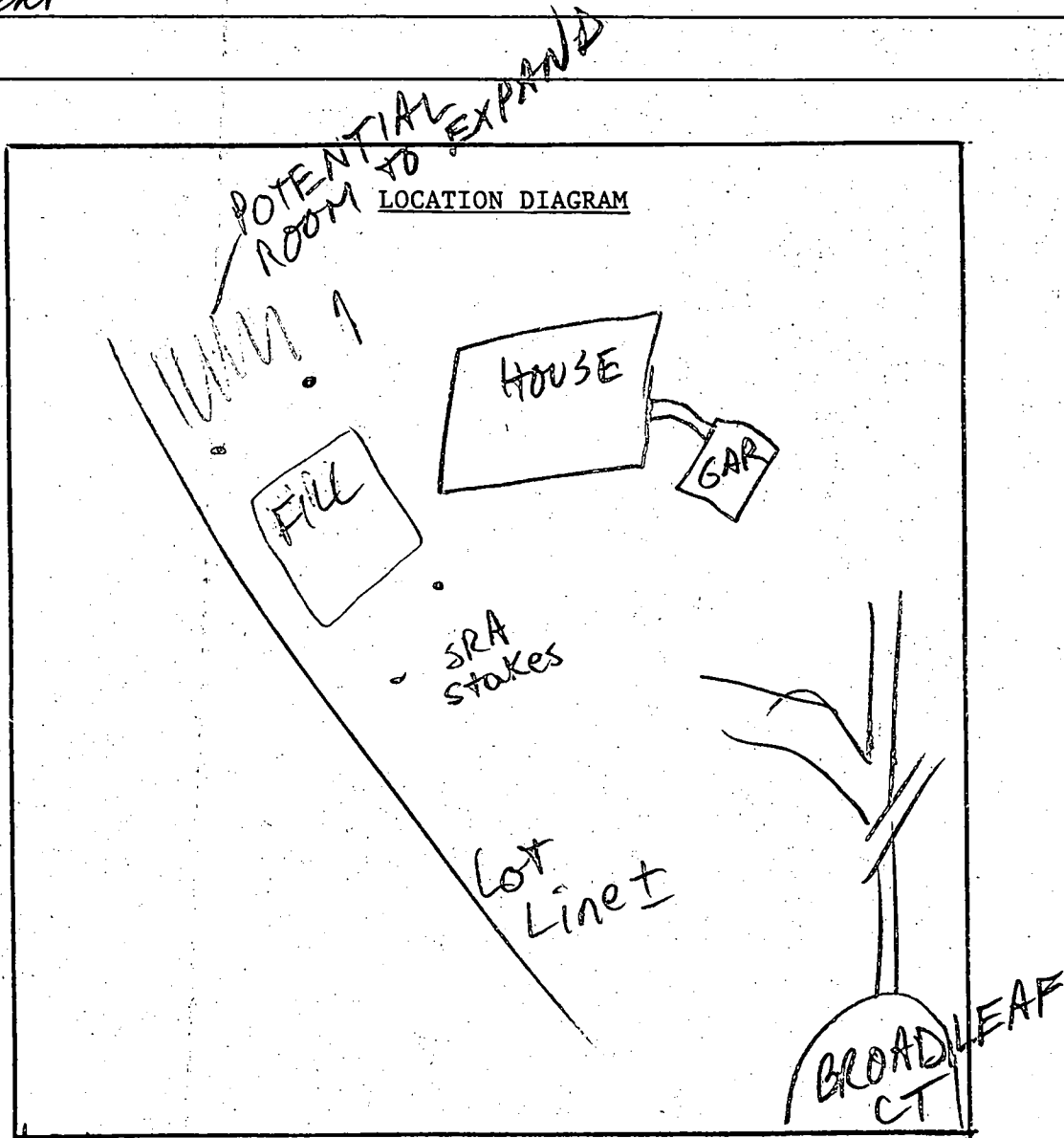
CONTRACTOR: _____

ADDRESS: 3645 Broadleaf Ct

WELL TAG #: _____

COUNTY #: _____

PROPOSAL: re-perc site insp due to up to 6' of fill over ex. easement

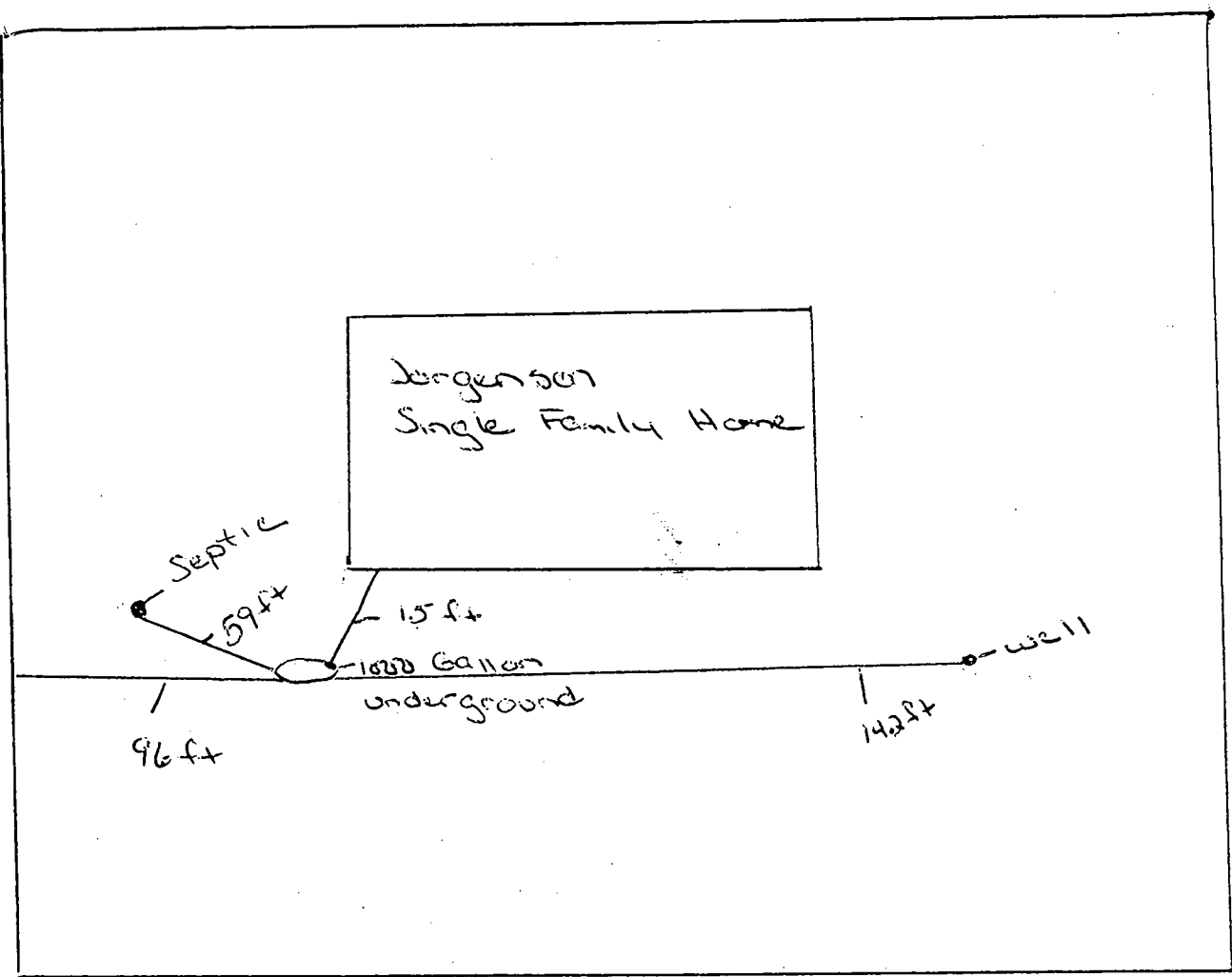


COMMENTS: 2/22/01 MET OWNER @ SITE - SLOPES @ DOWNHILL OF EX. SRA APPEAR TO BE 20-25%, PROB. 425%; ADVISED OWNER SOME POTENTIAL FOR APPROVAL EXISTS, AND TO SUBMIT PLAN w/ FIELD VERIFIED TOPO, APP. + \$225 FEE (MD)

DATE: _____

INSPECTOR: _____

367 40-05 07030040



Broadleaf Court

- Tank → well (142ft)
- Tank → septic (59ft)
- Tank → property line (96ft)

ADVANCE SYSTEMS

INNOVATIVE ONSITE WASTEWATER SOLUTIONS

A Division of DTD, Inc.

1318 New Windsor Road
New Windsor, MD 21776



Office 410-875-9110

FAX 410-635-9960

MEMORANDUM

To: Mr. Ron Pinckley, R.S.
C/o Howard Co. Environmental Health Dept.

From: Mike Robbins, R.S. 

Subject: Geoflow® Dripline System "As-built" Plan
For Jorgenson Residence at 3645 Broadleaf Ct, Glenwood, Md.

Date: July 2, 2001

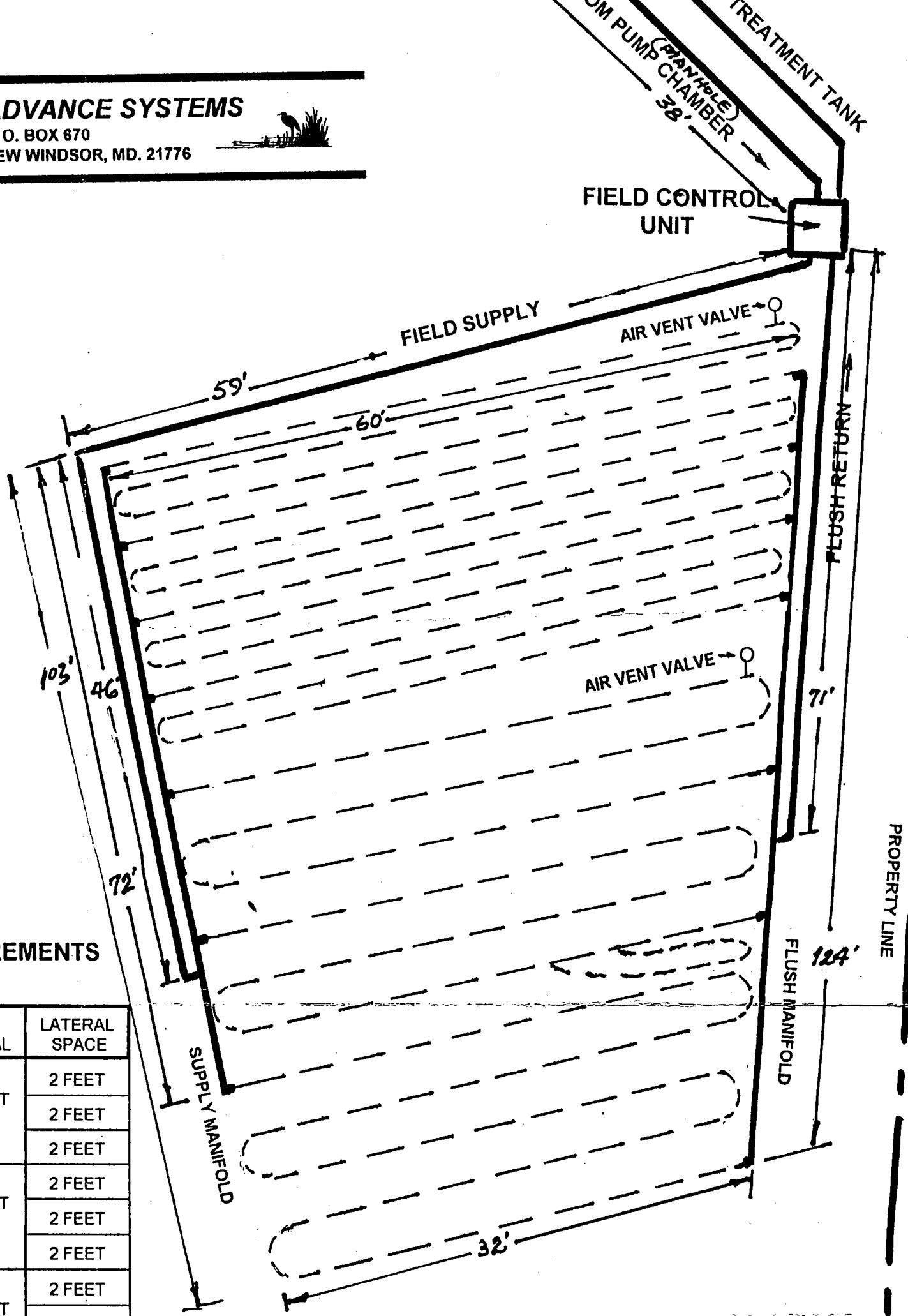
Please find enclosed the field measurements identifying the location of certain components of the recently-installed Geoflow® Dripline wastewater disposal system at 3645 Broadleaf Ct., Glenwood, Md.

A copy has been forwarded to the owner to be kept with their records for convenient reference.

DO NOT
DISCARD

ADVANCE SYSTEMS

P. O. BOX 670
NEW WINDSOR, MD. 21776



ACTUAL FIELD MEASUREMENTS

5/30/01

LINE NO.	RUN LENGTH	TOTAL LATERAL	LATERAL SPACE
#1	60 FEET	181 FEET	2 FEET
	60 FEET		2 FEET
	61 FEET		2 FEET
#2	61 FEET	188 FEET	2 FEET
	63 FEET		2 FEET
	64 FEET		2 FEET
#3	64 FEET	195 FEET	2 FEET
	64 FEET		2 FEET
	67 FEET		2 FEET
#4	67 FEET	204 FEET	2 FEET
	69 FEET		2 FEET
	68 FEET		2 FEET
#5	66 FEET	190 FEET	4 FEET
	64 FEET		4 FEET
	60 FEET		4 FEET
#6	58 FEET	210 FEET	4 FEET
	54 FEET		4 FEET
	50 FEET		4 FEET
	48 FEET		4 FEET
#7	40 FEET	184 FEET	4 FEET
	39 FEET		4 FEET
	37 FEET		4 FEET
	36 FEET		4 FEET
	32 FEET		4 FEET

PROPERTY OF
JOHN JORGENSON
3645 Broadleaf Court
Glenwood, Md. 21738

SCALE= 1:10

TOTAL LINEAR FEET = 1,352 FT. OR 676 EMMITTERS

ADVANCE SYSTEMS

INNOVATIVE ONSITE WASTEWATER SOLUTIONS

A Division of DTD, Inc.

1318 New Windsor Road

P.O. BOX 670

New Windsor, MD 21776



Toll Free 800-838-3534
email - advsystem@cct.infi.net

Office 410-875-9110
FAX 410-635-9960

*Expect as built set of plans
(extra length of digger line was added
which changed some parameters)
part of lot line / R. Pulley 6/5/01*

WASTEWATER DISPOSAL SYSTEM

PROJECT: JOHN JORGENSON
ADDRESS: 3645 BROADLEAF COURT
HOWARD CO., MARYLAND
DATE: APRIL 20, 2001

PLAN APPROVAL BLOCK

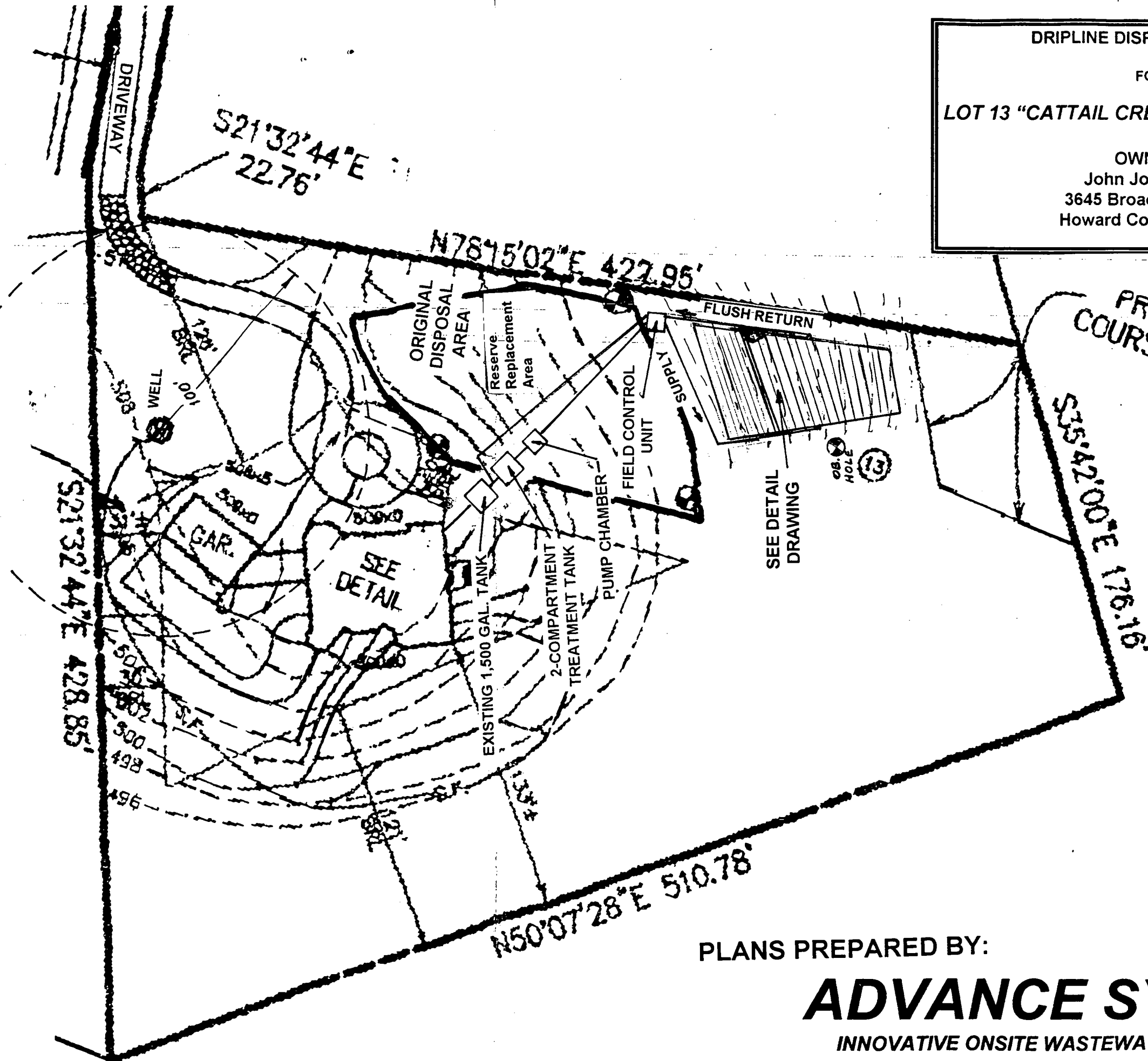
SCALE:	PROJECT:	DRAWN BY:
DATE:		REVIEWED:
MARYLAND DEPARTMENT OF THE ENVIRONMENT 2500 BROENING HIGHWAY, BALTIMORE, MD. 21224		
APPROVAL:		DRAWING NO.:
This Approval is not valid for more than 2 years from the date of issuance, but may be renewed at the discretion of the Approving Authority.		

MARYLAND DEPARTMENT OF THE ENVIRONMENT DIVISION OF RESIDENTIAL SANITATION	
PROJECT:	DATE:
	REVISED:
REVIEWED BY:	DATE:
APPROVED BY:	DATE:

NOTE Approval of final field layout is required by the Division of Residential Sanitation at least 48 hours prior to system installation	
APPROVED BY:	
DATE:	

DRIPLINE DISPOSAL DESIGN
 FOR
LOT 13 "CATTAIL CREEK COUNTRY CLUB"

OWNER:
 John Jorgenson
 3645 Broadleaf Court
 Howard County, E.D. 4



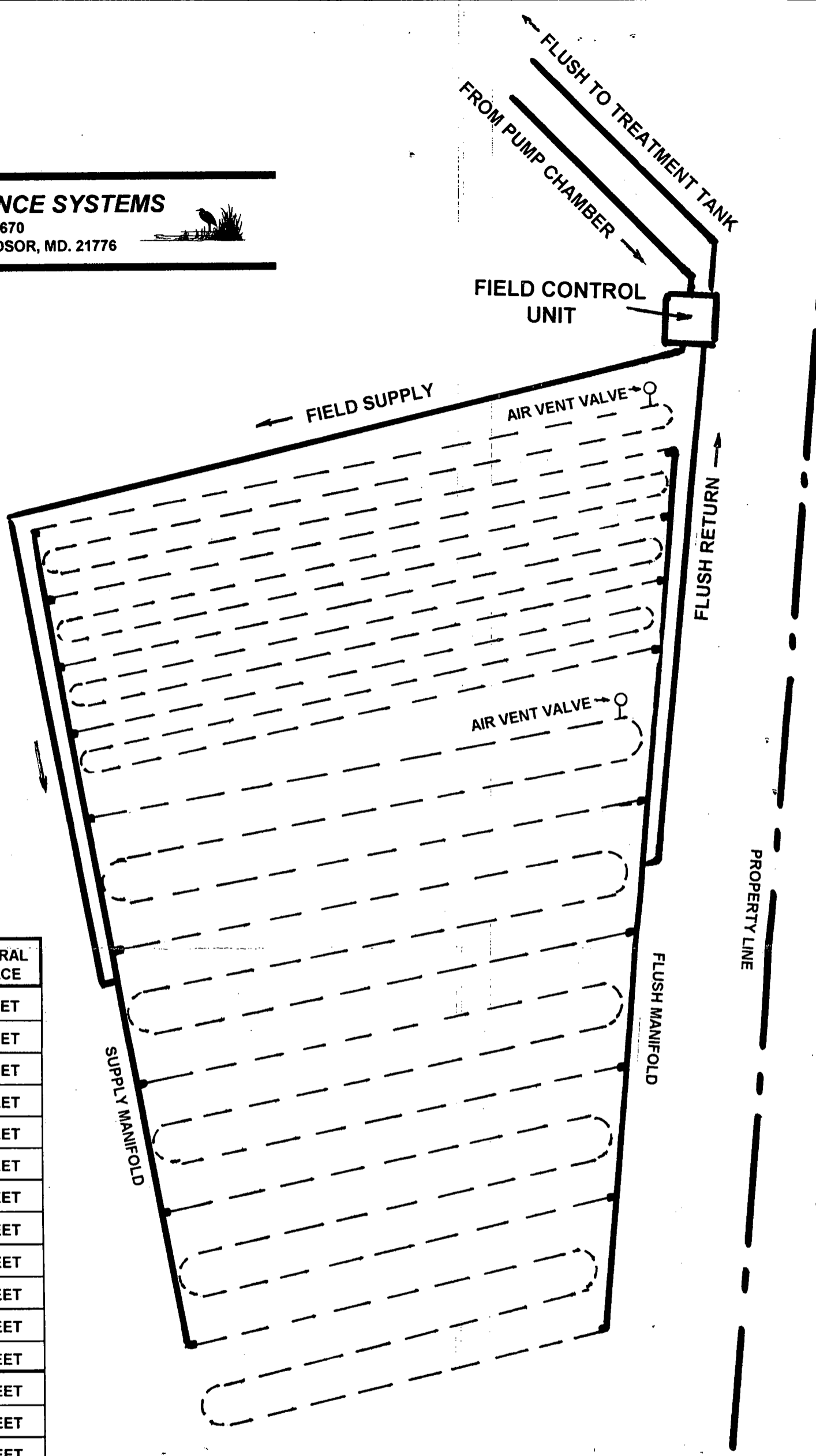
PLANS PREPARED BY:

ADVANCE SYSTEMS

INNOVATIVE ONSITE WASTEWATER SOLUTIONS

ADVANCE SYSTEMS

P. O. BOX 670
NEW WINDSOR, MD. 21776



LINE NO.	RUN LENGTH	TOTAL LATERAL	LATERAL SPACE
#1	60 FEET	177 FEET	2 FEET
	59 FEET		2 FEET
	58 FEET		2 FEET
#2	57 FEET	170 FEET	2 FEET
	57 FEET		2 FEET
	56 FEET		2 FEET
#3	55 FEET	163 FEET	2 FEET
	54 FEET		2 FEET
	54 FEET		2 FEET
#4	53 FEET	155 FEET	2 FEET
	52 FEET		2 FEET
	50 FEET		2 FEET
#5	48 FEET	143 FEET	4 FEET
	48 FEET		4 FEET
	47 FEET		4 FEET
#6	45 FEET	133 FEET	4 FEET
	45 FEET		4 FEET
	43 FEET		4 FEET
#7	42 FEET	120 FEET	4 FEET
	40 FEET		4 FEET
	38 FEET		4 FEET
#8	36 FEET	107 FEET	4 FEET
	36 FEET		4 FEET
	35 FEET		4 FEET
#9	35 FEET	105 FEET	4 FEET
	35 FEET		4 FEET
	35 FEET		4 FEET

SCALE= 1:10

Specifications For MicroFAST 0.9 Wastewater Treatment System

1. GENERAL

The contractor shall furnish and install (1) MicroFAST 0.9 treatment system as manufactured by Bio-Microbics, Inc. The treatment system shall be complete with all needed equipment as shown on the drawings and specified herein.

The principal items of equipment shall include FAST System Insert, Insert lid (or leg extensions if that option is chosen), blower assembly, blower controls and alarms. The MicroFAST 0.9 unit shall be situated within a 1,250 Gallon (4732 L) minimum tank, as shown on the plans. Tank(s) must conform to local, state, and all other applicable codes. The contractor shall provide coordination between the FAST system and tank supplier with regard to fabrication of the tank, installation of the FAST unit and delivery to the job site.

2. OPERATING CONDITIONS

The MicroFAST 0.9 treatment system shall be capable of treating the wastewater produced by typical family activities (bath, laundry, kitchen, etc.) ranging from (1) one to (14) fourteen persons and up to 900 US Gallons per day (3407 LPD).

3. MEDIA

The FAST media shall be manufactured of rigid PVC or polyethylene and it shall be supported by the polyethylene insert. The media shall be of such a design that bacterial growth is uniform over all media surfaces. The media shall be fixed in position and contain no moving or wearing parts and shall not corrode. The media shall be designed and installed to ensure that sloughed solids immediately descend through the media to the bottom of the septic tank.

4. BLOWER

The MicroFAST 0.9 unit shall come equipped with a regenerative type blower capable of delivering 17-25 CFM. The blower assembly shall include an inlet filter with metal filter element.

5. REMOTE MOUNTED BLOWER

The blower shall be mounted remote, up to 100 feet (30.5 M) maximum, from the MicroFAST unit on a contractor supplied concrete base. The blower elevation must be higher than the normal flood level. A one-piece, rectangular housing shall be provided with tamper-proof screws. The discharge air line from the blower to the MicroFAST shall be provided and installed by the contractor.

6. ELECTRICAL

The treatment system shall be designed to operate on standard current. The input power required for the blower is 115/230 Volts, Single Phase, 60/50 Hertz, 3.8/1.9 Full Load Amps (Locked Rotor Amps are 18.6/9.3). All conduit and wiring between the electrical control panel, the power supply, and the blower shall be furnished and installed by the contractor.

7. ALARMS

The alarm system shall consist of a visual and audible alarm to indicate failure of the blower. The alarm shall be located as shown on the plans. A manual silence switch is included.

8. INSTALLATION AND OPERATING INSTRUCTIONS

Installation of the MicroFAST 0.9 shall be done in accordance with the written instructions provided by the manufacturer. Operation manuals shall be furnished which will include a description of installation, operation, and system maintenance procedures. There shall be a separate manual for the installer, service provider, and owner, tailored to each.

9. WARRANTY

The manufacturer of the MicroFAST 0.9 treatment system shall warrant for three years from the date of shipment or two years from the date of start-up, whichever occurs first, that the equipment they provide will be free from defects in material and workmanship.

In the event a component fails to perform as specified or is proven defective in service during the warranty period, the manufacturer shall repair or replace such defective parts. (Cost of labor on repair/replacement is not covered under this warranty.) The replacement or repair of those items normally consumed in service such as air filter, etc., shall be considered as part of routine maintenance and upkeep.

It is not intended that the manufacturer assume responsibility for contingent liabilities or consequential damages of any nature resulting from defects in design, material or workmanship, or delays in delivery, replacement, or otherwise.

Date 7-11-00

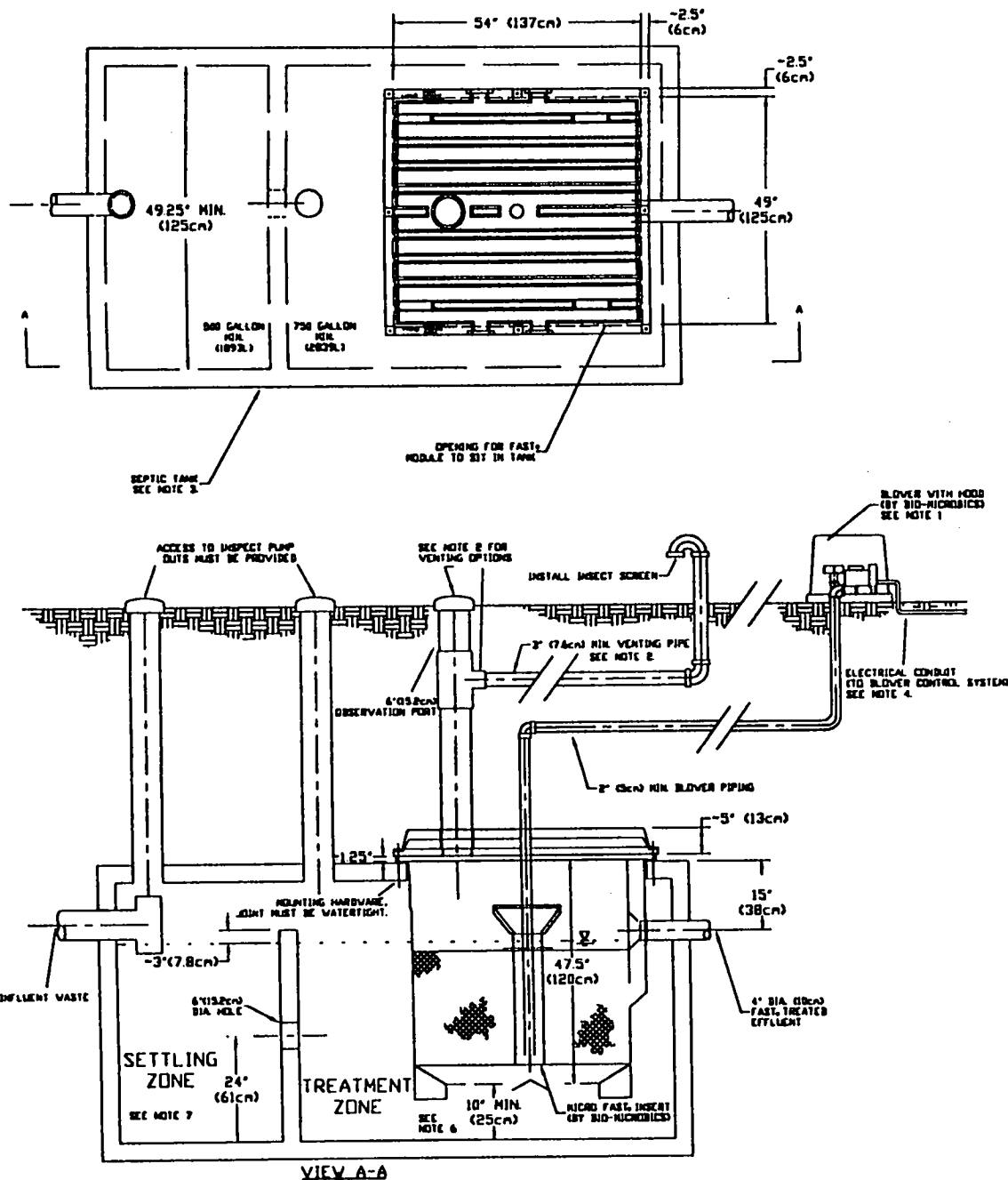
BIO-MICROBICS
INCORPORATED

MicroFAST.0.9
Specifications

THE DESIGN AND DETAIL OF THIS DRAWING IS THE PROPERTY OF BIO-MICROBICS, INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.

Drawn by SMF

(3)



NOTES

- BLOWER MUST BE WITHIN 100 FEET (30.5M) OF FAST UNIT. FOR DISTANCES GREATER THAN 100 FEET -- CONSULT FACTORY. BLOWER BASE MUST BE LOCATED ABOVE NORMAL FLOOD LEVELS.
- RUN VENT TO DESIRED LOCATION AND COVER OPENING WITH INSECT SCREEN. NOTE: DOORS MAY BE PRESENT -- SEE MANUAL.
OR:
CAP PIPES WITH 6" CLEANOUT. DRILL 8-12 HOLES IN 6" PIPE JUST UNDER PVC PIPE CAP. SEE ADDITIONAL VIEWS.
- ALL APPURTENANCES TO FAST (e.g. SEPTIC TANK, PUMPOUTS, ETC.) MUST CONFORM TO ALL COUNTRY, STATE, PROVINCE, AND LOCAL CODES.
- BLOWER CONTROL SYSTEM BY BIO-MICROBICS, INC.
- COPYRIGHT (C) 2000, BIO-MICROBICS, INC.
- MUST INCREASE TANK SIZE BY 20% IF MINIMUM OF 10 INCHES IS USED BETWEEN THE UNIT AND THE BASE OF TANK. CONSULT FACTORY FOR APPROVAL.
- THE PRIMARY COMPARTMENT MAY BE A SEPARATE TANK.
- FOUR LEG EXTENSIONS MAY BE USED TO STAND UNIT IN TANK ELIMINATING NEED FOR LID. SEE ADDITIONAL VIEWS AND REFER TO INSTALLATION MANUAL FOR MORE DETAILS.

Date 7-12-00

BIO-MICROBICS
INCORPORATED

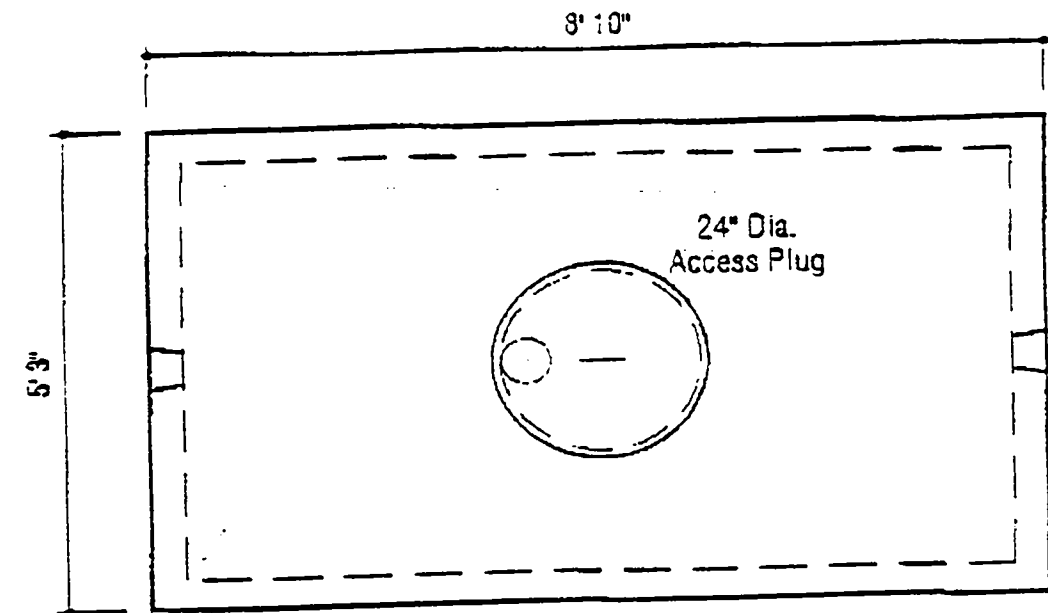
MicroFAST.0.9

THE DESIGN AND DETAIL OF THIS DRAWING IS THE PROPERTY OF BIO-MICROBICS, INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.

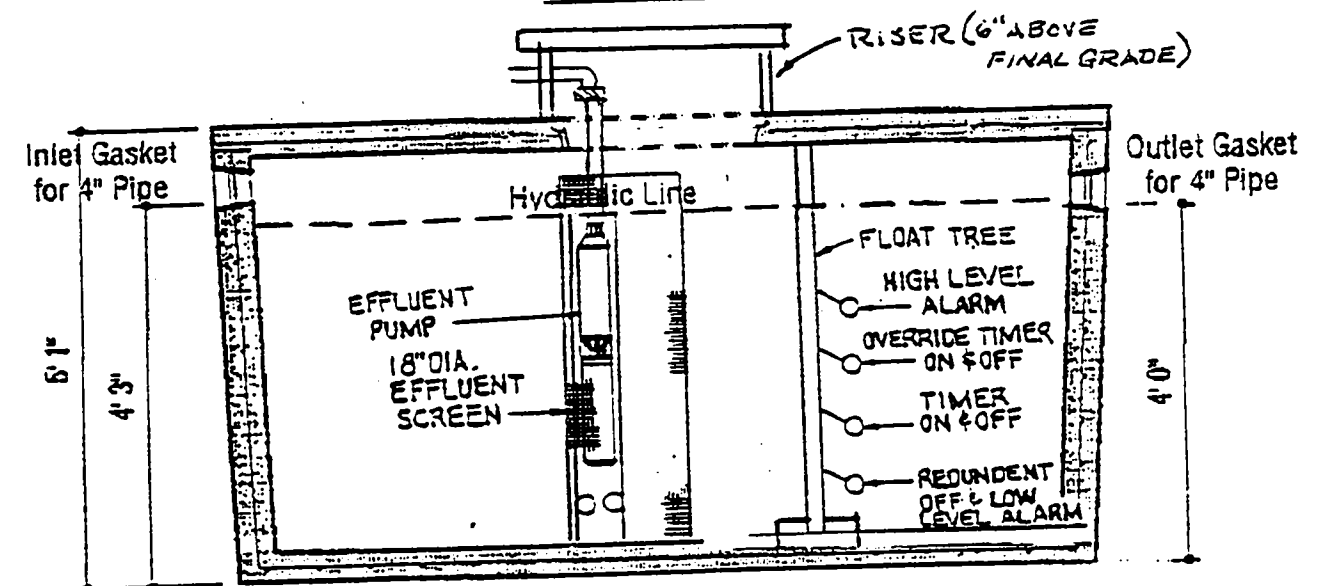
Drawn by SMF

ADVANCE SYSTEMS

P. O. BOX 670
New Windsor, MD 21776

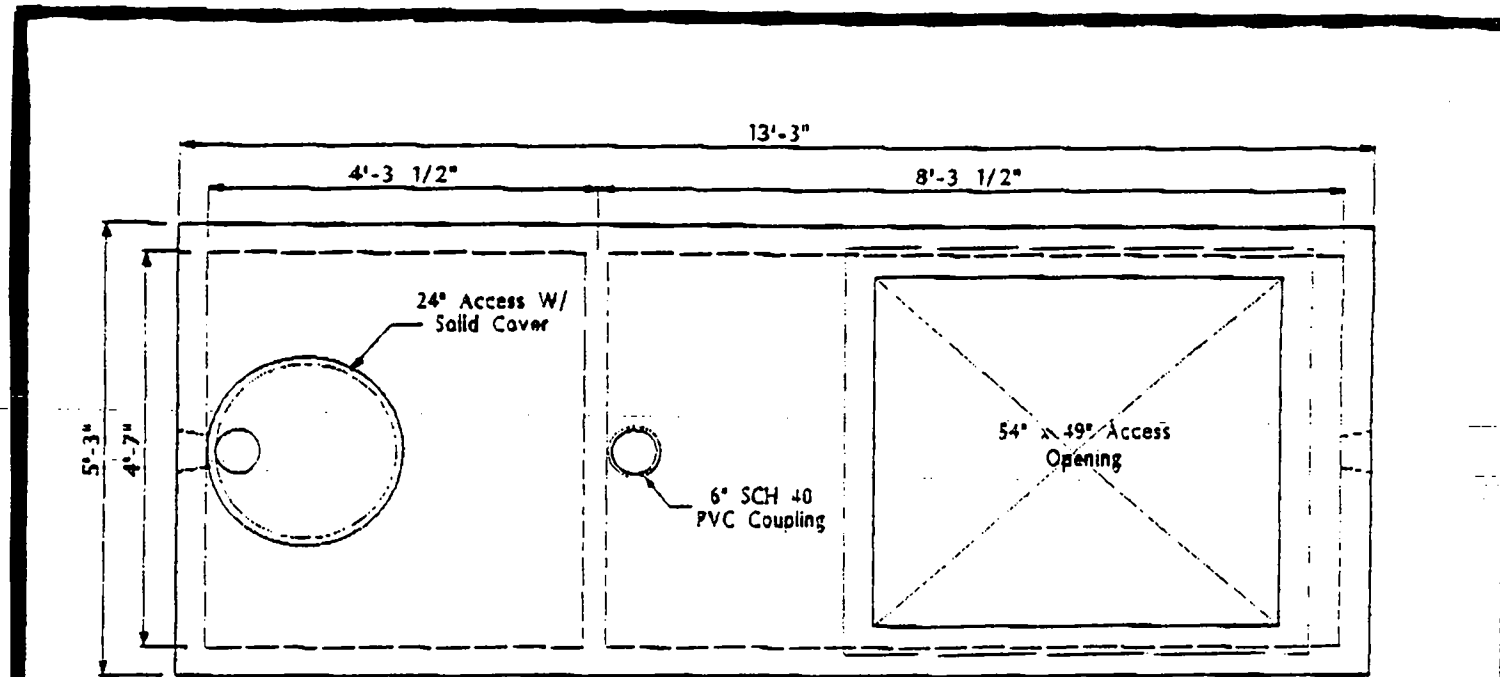


PLAN VIEW

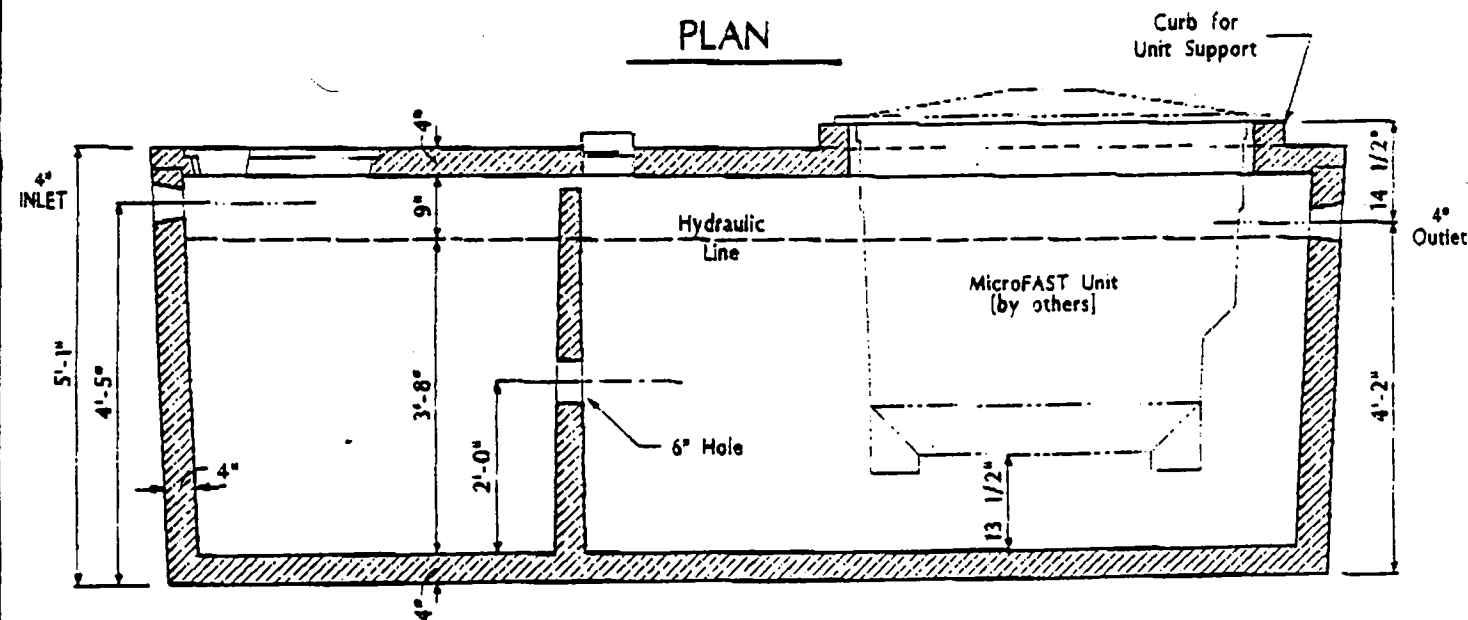


SECTION A-A

**1,000 GALLON PUMP TANK
1-Compartment**



PLAN



SECTION

DESIGN DATA & GENERAL NOTES:

- (1) Concrete strength $f'_c=4,500$ PSI @ 28 days. Density = 150 PCF.
- (2) Cement, Portland type I/II per ASTM C 150-92.
- (3) Admixtures, air & plasticizers per ASTM C 260-86 & C 494-92.
- (4) Reinforcing per ASTM A675, Grade 60, & ASTM A185, Domestic. Min. 1-1/2" cover.
- (5) Construction joints sealed with butyl rope mastic.

**1500 GALLON PROCESSING TANK
[For MicroFAST 0.9 Unit]**

Approx. Weight - 16,000 lbs.

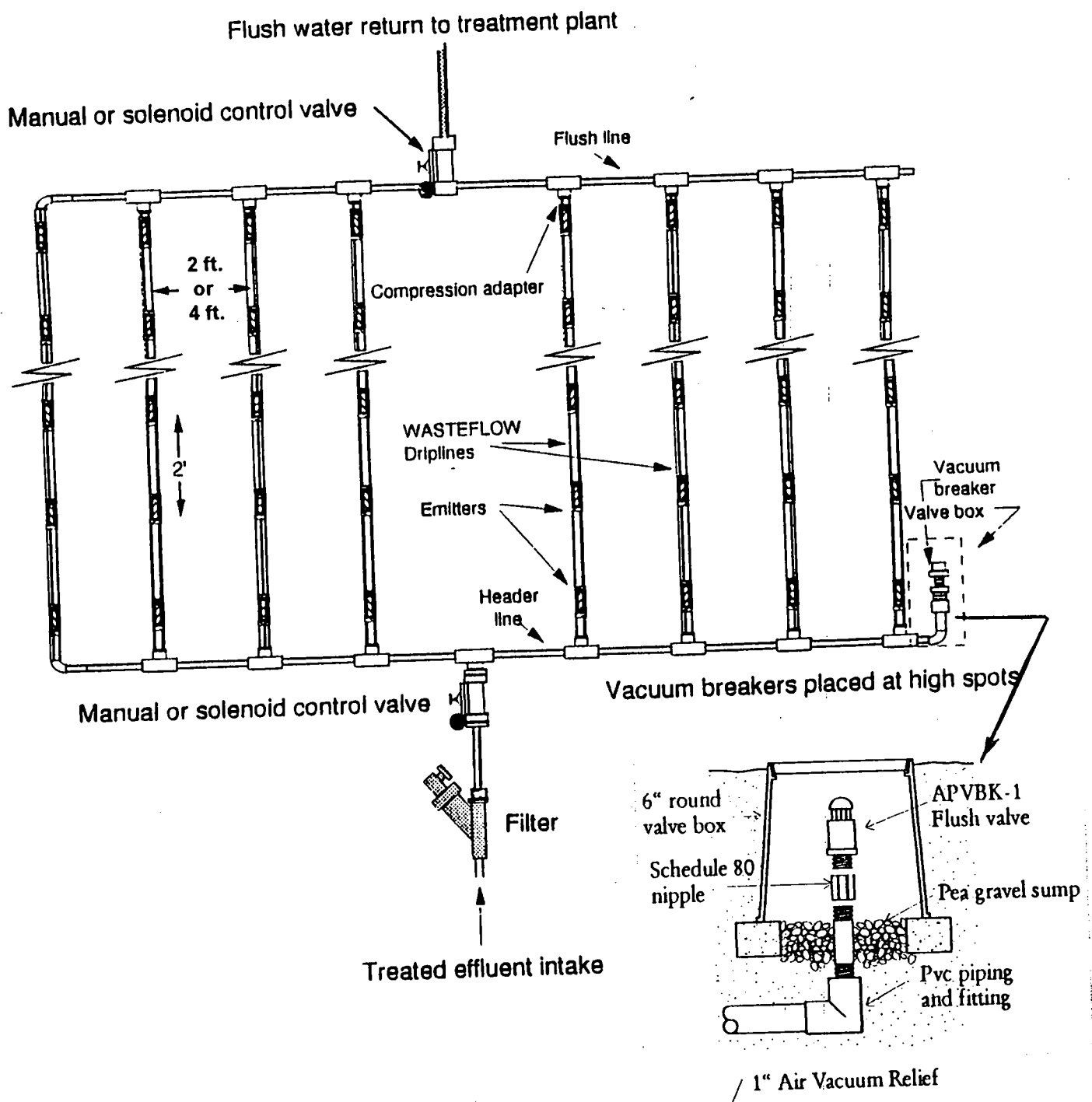
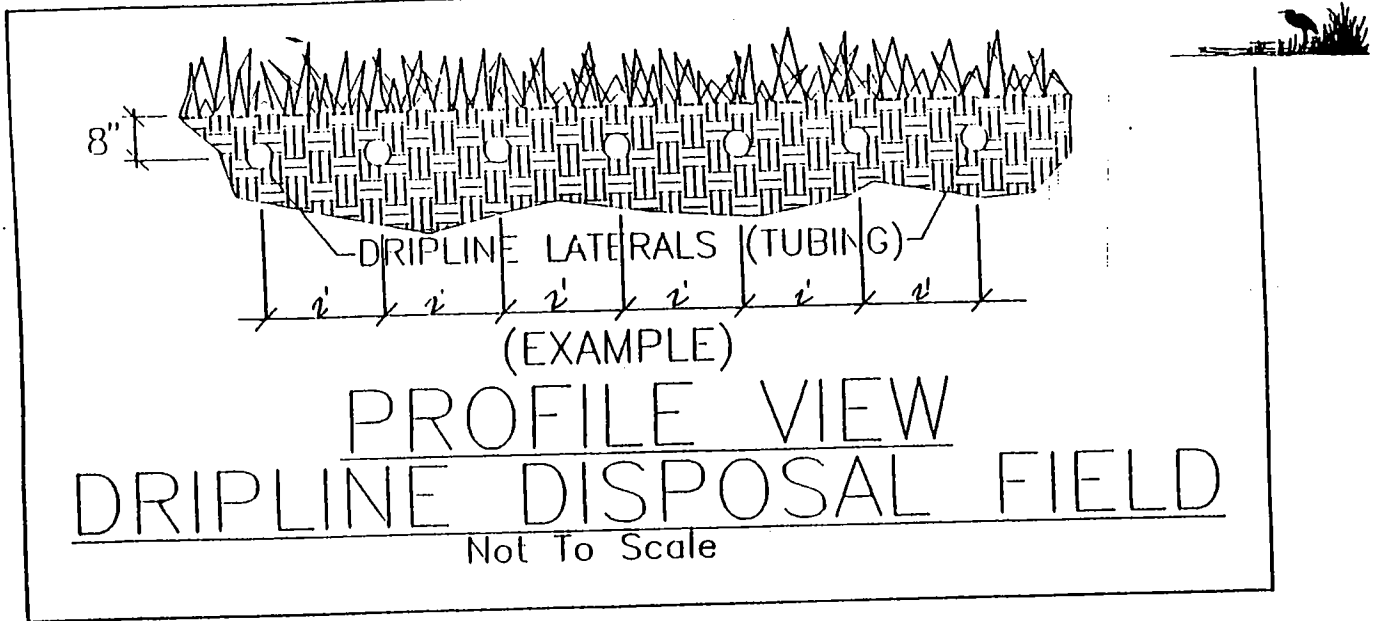
Mayer Bros. Inc.
Since 1959

MAYER BROS., INC.

Precast Concrete Products
6264 RACE ROAD
ELKRIDGE, MARYLAND 21075
VOICE: (410) 796-1434 FAX: (410) 796-1438
www.mayerbrosprecast.com

ADVANCE SYSTEMS

INNOVATIVE ONSITE WASTEWATER SOLUTIONS



Typical Subsurface Disposal Field Installation Detail

DIAGRAM 1

DRAWING NOT TO SCALE

ADVANCE SYSTEMS

INNOVATIVE ONSITE WASTEWATER SOLUTIONS

A Division of DTD, Inc.

Toll Free 800-838-3534
 Fax 410-635-9960
 Office 410-875-9110

1318 New Windsor Road
 New Windsor, MD 21776
 email: advsystem@cct.infi.net



Geoflow Subsurface Dripline Disposal field Calculation

Job Description: TREATMENT/DRIP
 Contact: JOHN JORGENSON
 Prepared by: ADVANCE SYSTEMS
 Date: 4/20/01

Please fill in the shaded area:

Area and flow calculations

Gallons per day (gpd) 900 gpd
 Hydraulic loading rate 0.4 gal/sq ft.
 Area required 2250 square ft

Notes:

Can be in inches/hour or gal/ft2-day
 See Surface Area table in Geoflow's Design manual

Wasteflow PC or Classic

Emitter spacing 2 ft.
 Dripline Spacing 2 ft.
 Pressure (normal is 20psi) 20 psi
 Emitter flow rate 0.53 gph

Pres. Comp. Dripline
2 ft.
2 ft.
20 psi
0.53 gph

Normally 2 ft. except for heavy clay or septic effluent
 Normally 2 ft. except for heavy clay or septic effluent
 Normally 20psi.
 At 20psi: PC flow rate is 0.53 gph, Classic flow rate is 1.30 gph.

Length of Wasteflow dripline 1125 ft
 Number of emitters 563 emitters
 Total Flow rate (gph) 298.12 gph
 Total Flow rate (gpm) 4.97 gpm
 Flow per square ft. per hour 0.13 gph/sq ft.
 Flow per square ft. per day 0.40 gpd/sq ft.
 Flow per emitter per day 1.60 gpd/emitter
 Water depth applied per day 0.64 inches/day

(1272'- Actual Area/spacing
 Length of Wasteflow/emitter spacing
 Flow rate x number of emitters
 Total flow rate / 60 minutes
 Total flow rate / area
 Flow per day / area
 Flow per day / number of emitters
 (Daily flow/area) x (231cu in/gal) / (144in/ft2)

Pump time required per zone:

Pumping time required/day 181.13 minutes
 Number of doses/day 12 doses
 Length of each dose 15.1 minutes
 Volume per dose 75.0 gallons

Flow per day / total flow rate/# Zones
 Frequent dosing recommended.
 Pump time / number of doses per day
 Length of each dose x flow per minute

Total Flow required to Scour lines

Scouring velocity required 1 gpm
 Number of Wasteflow lines 27 lines
 Flow required to flush field 27 gpm
 Flow required to dose field 4.97 gpm
 Total Flow 31.97 gpm

Outflow at distal end of each line

Dripline Volume

Tubing Inside diameter 0.55 inches
 Linear ft of tube 1125.00 ft
13.89 gallons

(linear inches * pi * (ID/2)squared) = cubic inches
 1728 cubic inches in a cubic ft.
 7.481 gallons in a cubic ft.

ADVANCE SYSTEMS
 GEOFLOW PUMP SIZE WORKSHEET

OWNER: J. JORGENSON DATE: 04/20/01
 PROJECT: 3645 BROADLEAF CT., HOWARD CO.

REQUIRED PUMP CAPAC: 27 GPM

STATIC HEAD: TOP TANK ELEV= 501
 (less)PUMP ELEV= 497.2
 ELEVATION DIFF: 17
 STATIC HEAD: 20.8 feet

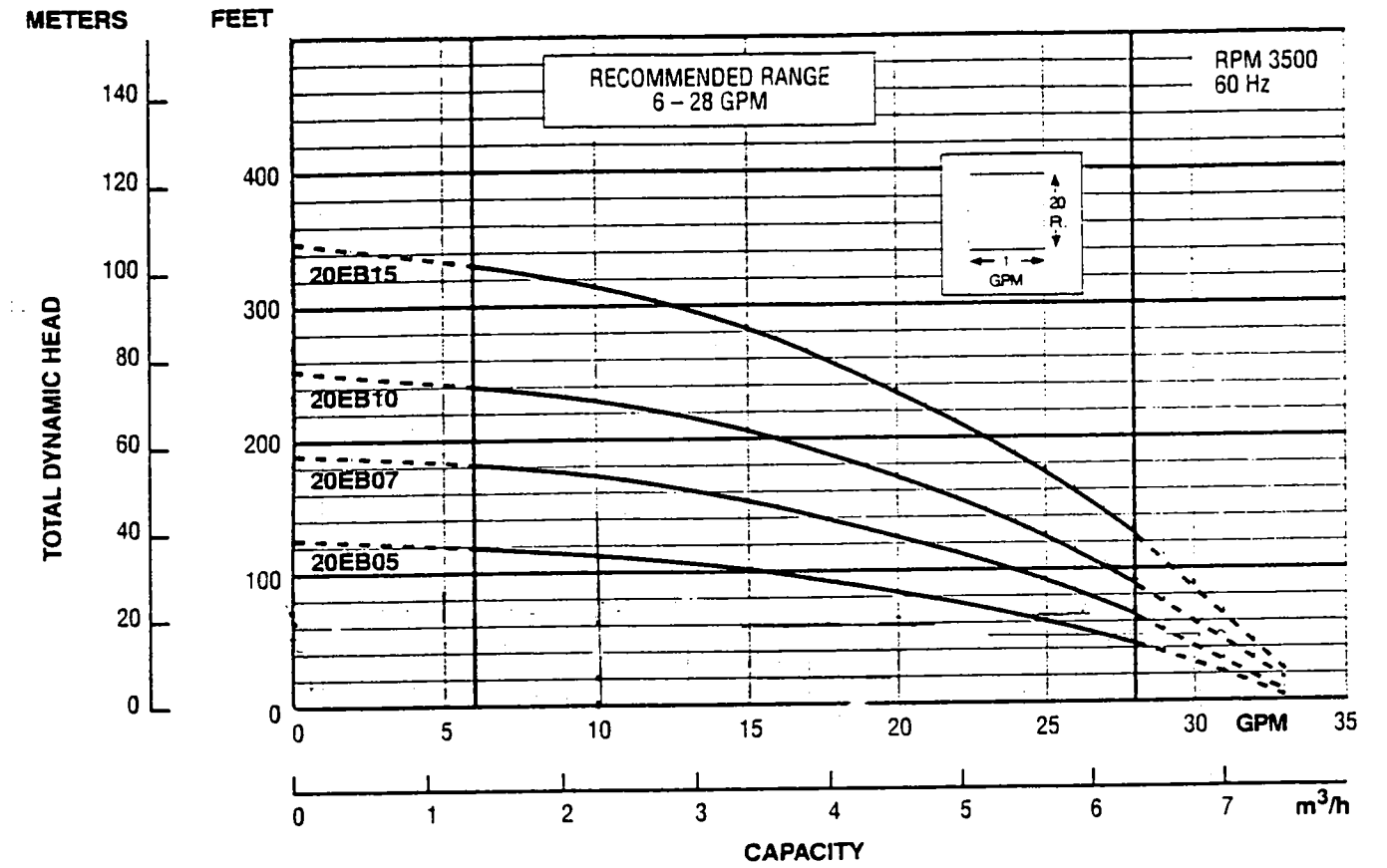
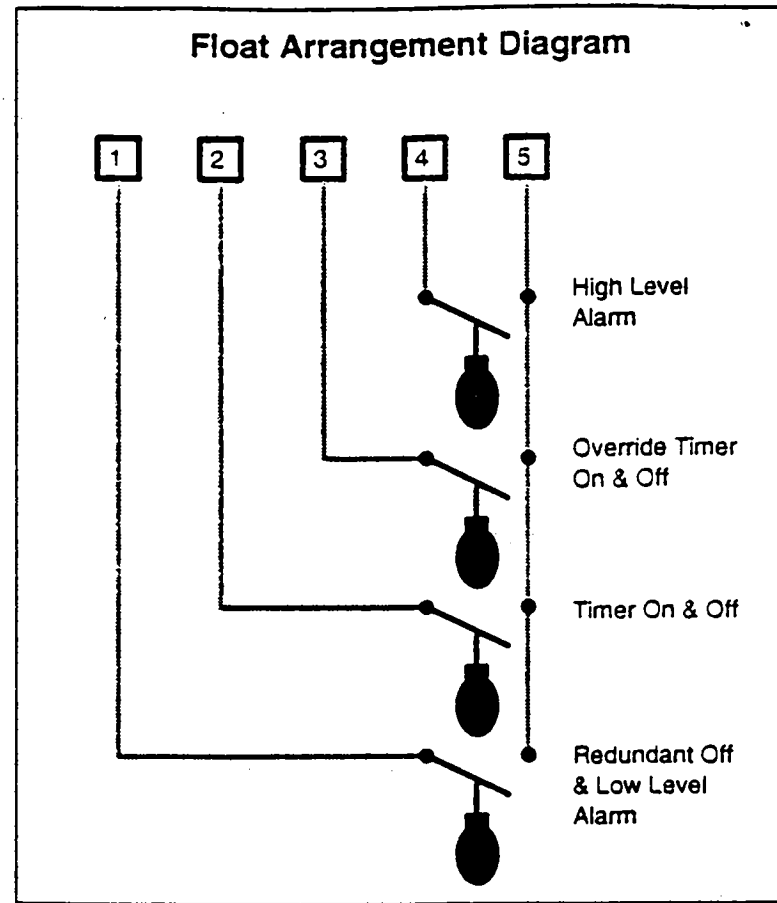
FRICION HEAD:
 (PUMP STAT TO DRIPFIELD) PUMP TO DRIPFLI 200 feet
 FITTINGS: 22 feet
 TOTAL EFF. HEAD: 2.46 feet
 HEAD AT DRIPLINE: 62.37 feet
 LOSS THRU :
 FILTERS: 16.17 feet
 SOLENOIDS: 0 feet
 TOTAL FEET= 81 feet

Friction Loss(2" PVC)=
 0.48psi/100 ft. @ 27 gpm

TOTAL DYNAMIC HEAD:
 (STATIC +FRICION HEAD) TDH = 101.8 feet

USE:
 Gould "Blaster" Effluent
 Pump: #20EB1022 (1. hp.)

Model 20EB



FLOAT SETTINGS
(From Tank Bottom)

HIGH LEVEL ALARM = 22 in.

OVERRIDE TIMER ON & OFF = 18 in.

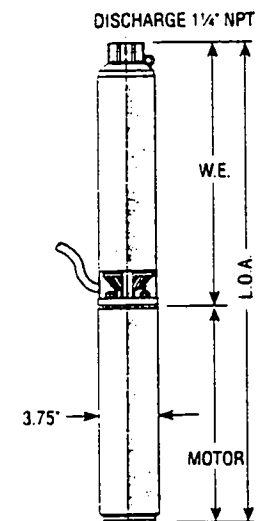
TIMER ON & OFF = 16 in.

REDUNDANT OFF & LOW LEVEL ALARM = 14 in.

DIMENSIONS AND WEIGHTS

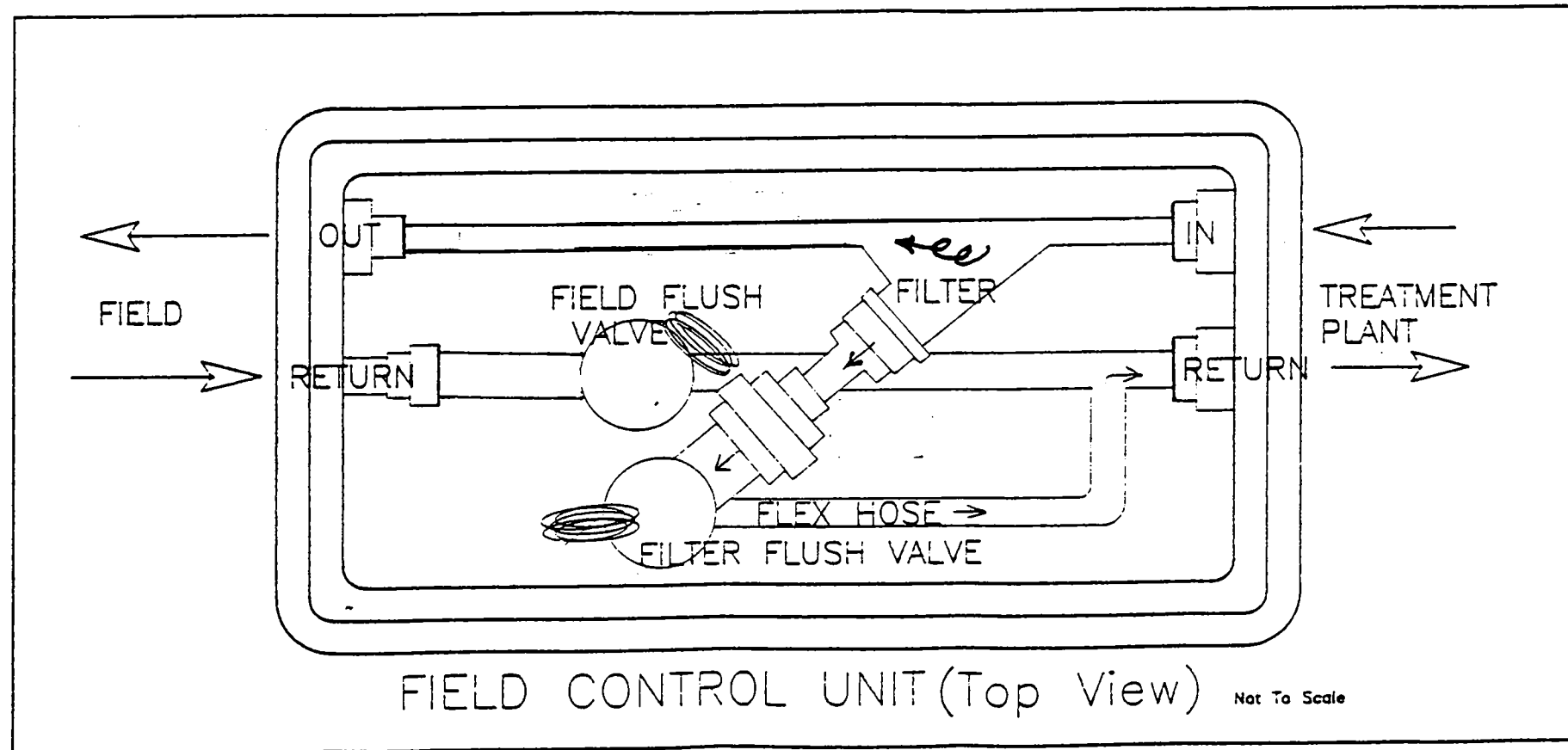
Order Number	HP	Phase	Stages	Length (inches)			Weight (lbs.)		
				W.E.①	Motor	L.O.A.②	W.E.	Motor	Total
20EB0522, 20EB0521	1/2	1	4	9.6	9.5	19.1	3	18	21
20EB0722	3/4	1	6	11.3	10.7	22.0	4	20	24
20EB1022	1	1	8	13.0	11.8	24.8	5	23	28
20EB1522	1 1/2	1	11	15.5	15.1	30.6	6	31	37

① W.E. = water end or pump without motor.
② L.O.A. = length of assembly - complete pump - water end and motor.



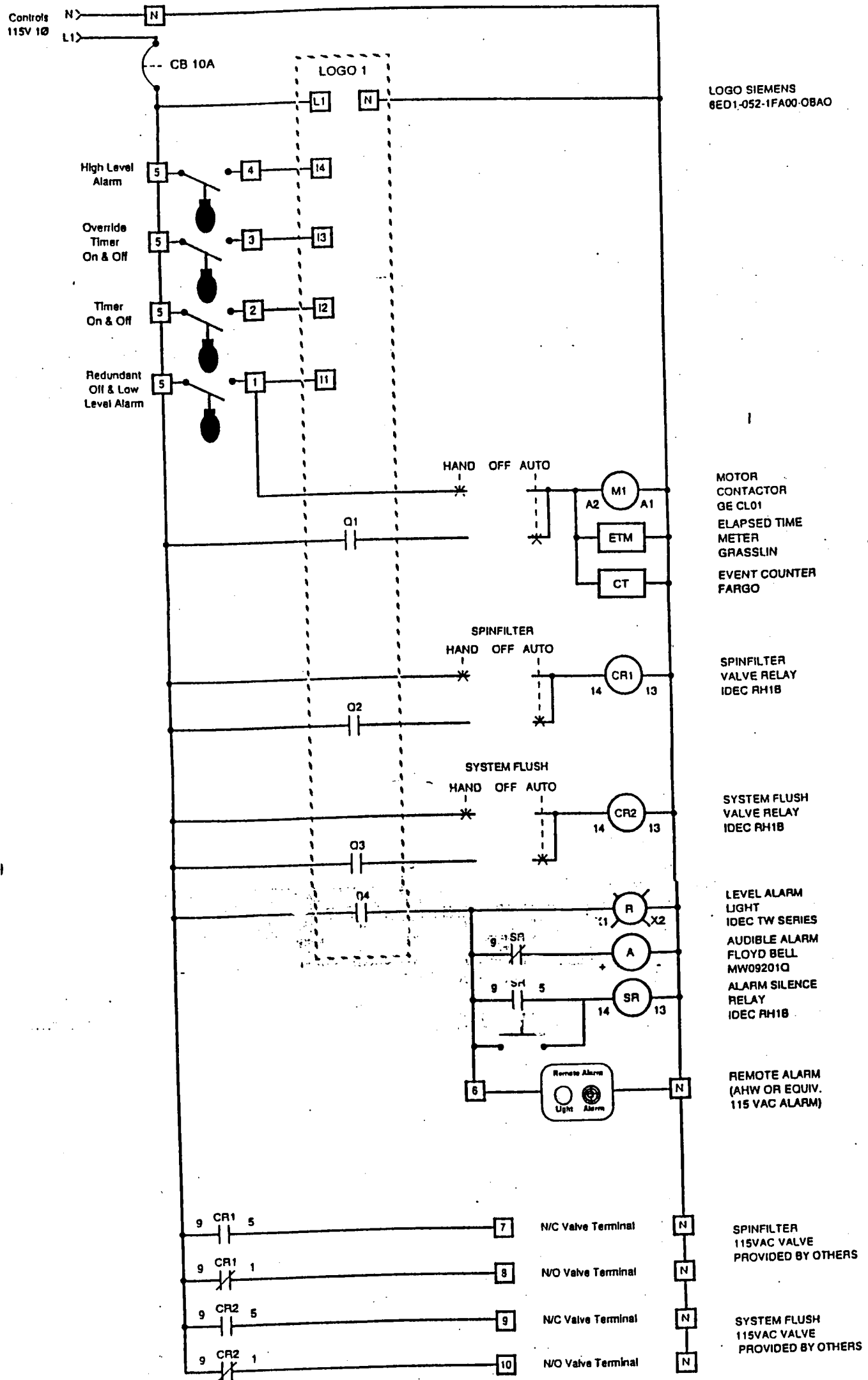
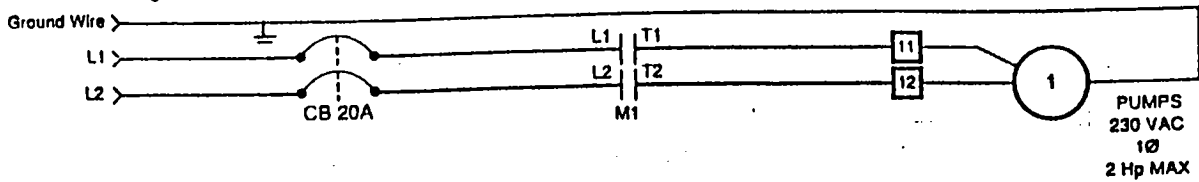
7

ADVANCE SYSTEMS
P. O. BOX 670
NEW WINDSOR, MD. 21776
800-838-3534



From Main Power Panel
 230/115 VAC, 1 Phase, 60 Hz.
 Branch circuit protection
 and main disconnect
 provided by others.

Panel Wiring Diagram Model GE02



6