

LAYOUT 7/24/03 1pm INSP 4 10/6/03 12pm Pump & Alarm  
INSP 2 7/25/03 3pm INSP 5 \_\_\_\_\_  
INSP 3 7/29/03 2pm INSP 6 \_\_\_\_\_

ISSUE DATE:

7/25/2003

## PERMIT

P

P 519066

APPROVAL DATE:

10/6/03

A

58225-MM

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

*Fogles*

Classic Plumbing & Heating

IS PERMITTED TO

INSTALL ☒

ALTER ☐

ADDRESS: 5806 Hub Nail Ct., Frederick, MD 21702

PHONE NUMBER: 301-695-7934

SUBDIVISION: Vineyards at Cattail Creek

LOT NUMBER: 6

ADDRESS: 3563 Cattail Creek

PROPERTY OWNER: Rylea Homes

SEPTIC TANK CAPACITY (GALLONS):

1500

OUTLET BAFFLE FILTER REQUIRED ☒

PUMP CHAMBER CAPACITY (GALLONS):

1500

COMPARTMENTED TANK REQUIRED ☒

NUMBER OF BEDROOMS:

4

LOCATION:	Sand mound to be installed. Install as per plan. Mound site should be staked.
NOTES:	Both sand mound sites are to be staked. Mound is to be installed from both ends. Limit traffic on upslope and down slope mound areas. Stay off of reserve mound site.

PLANS APPROVED: Brian Baker

DATE: 6/6/2003

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**

**BUILDING PERMIT SIGNED  
AND RETURNED**

7/28/03 B00143203 1000 gal. UG LP TANK

7-04 B00149251-FINISH BASEMENT

*NDE Thrice (410) 537-3774*

A 58225-MM

NOT TO SCALE

A hand-drawn site plan on a grid background. At the top is a rectangular structure with a smaller rectangle inside it. Below this is a small rectangular structure with a circle inside, labeled '2' with a prime symbol. A line labeled '10'' connects this to another small rectangular structure. A line labeled '34'' connects this to a larger, irregularly shaped structure. A line labeled '6'' with a prime symbol connects this to a small circle. A line labeled '3'' with a prime symbol and an arrow points to a small rectangular structure. Below this is a large, irregularly shaped structure. To the left of this structure are two 'X' marks. At the bottom left is a point labeled 'HO-44' and '3094'. At the bottom is a line labeled 'Cattail Creek Dr' with an arrow pointing right, and 'ROAD' with an arrow pointing right.

2'

10'

34'

6'

3'

HO-44  
3094

Cattail Creek Dr ROAD

WIDTH	INLET	BOTTOM
10	10	10
20	20	20
30	30	30
40	40	40
50	50	50
60	60	60
70	70	70
80	80	80
90	90	90
100	100	100

NUMBER OF TRENCHES

TOTAL LENGTH

ABSORPTION AREA

DISTRIBUTION BOX LEVEL

### DISTRIBUTION BOX BAFFLE

DISTRIBUTION BOX PORT

SEPTIC TANK 1 LEVEL ✓

✓	CAPACITY	151313 GAL
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Comp. CAPACITY 1500 GAL

SEAM LOC 10P

TANK LID DEPTH 2.5'

RAFFLES

BATTLES \_\_\_\_\_

BAFFLE FILTER \_\_\_\_\_

MANHOLE LOC FEB

6" PORT LOC

U. S. PORT LOG \_\_\_\_\_

WATERTIGHT TEST           

SEPTIC TANK 2 LEVEL 1

CAPACITY 1.540 GAL

SEAMING Top

SEAM LOC 10pTANK LID DEPTH 2.5

BAFFLES ✓

RAFFLE FILTER

BAFFLE FILTER 2 1MANHOLE LOC B90K

6" PORT LOC

### WATERTIGHT TEST

PRE-CONSTRUCTION 7/24/03 - S.M. staked, contours not accurate, shot & staked gravel bed. More weep hole to bottom of pipe at ends. Tanks set. (SO)

INSTALLATION 7/25/03 - Sand installed, cutting out gravel bed. Pressure 3' line installed (SO) 7/29/03 - Sand completed (SO) 7/30/03 Clay cap & topsoil installed. Pump & Alarm tests needed (SO)

10/6/03 Pump + Alarm test OK (KB/SO)

## BUILDING PERMIT SIGNED

AND RETURNED

FINAL INSPECTOR

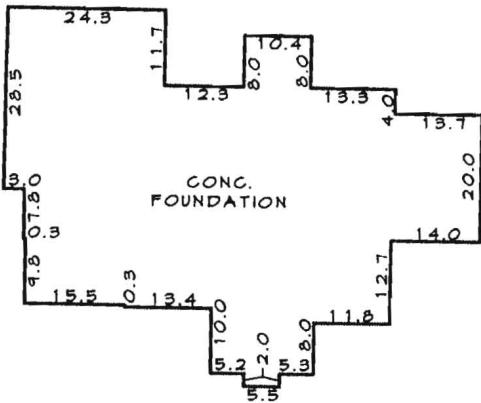
DATE OF APPROVAL 10/6/03

Ken Bell



**CATTAIL CREEK DRIVE**  
50' R/W  
R=325.00'  
A=6.01'

PRIVATE USE-IN-COMMON DRIVE ACCESS  
EASEMENT FOR THE BENEFIT OF LOTS 5  
THRU 8. MAINTENANCE OBLIGATION  
AGREEMENT RECORDED AMONG THE LAND  
RECORDS OF HOWARD COUNTY, MARYLAND.



DETAIL  
1"=30'

5/16/03

House location has no  
apparent effect on existing  
well or proposed septic system

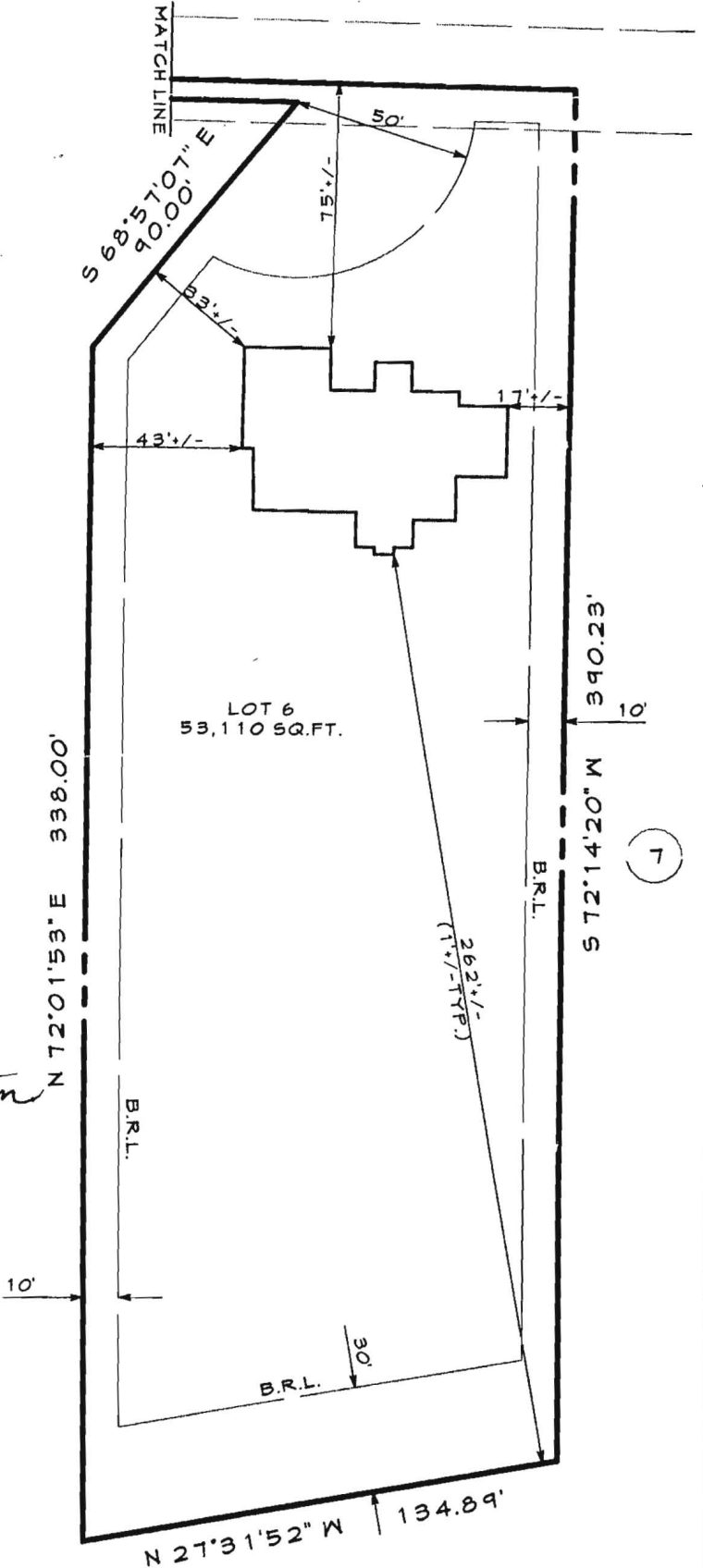
(BB)



3/7/03

I hereby certify that I have surveyed the property shown hereon for the sole purpose of locating the Improvements. This plan is a benefit to the consumer only in so far as it is required by a lender or a title insurance company or its agent in connection with contemplated transfer, financing or refinancing. It is not to be relied upon for the establishment of boundary, easement or right-of-way lines for any reason, such as the location of fences, garages, buildings, or other existing or future improvements.

By Eugene S. Slum Date 3/7/03  
Eugene S. Slum Property Line Surveyor No. 284



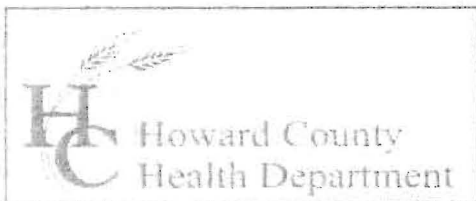
# LOCATION DRAWING LOT 6 **VINEYARDS @ CATTAIL CREEK**

4th ELECTION DISTRICT • HOWARD COUNTY, MARYLAND  
PLAT # 12645

**CLSI**

Carroll Land Services  
Inc. o r p o r a t e d  
Engineers • Surveyors • Land Development Consultants  
Landscape Architects • Environmental Specialists  
439 East Main Street Westminster, MD 21157-5539  
(410) 876-2017 FAX (410) 876-0009

DRAWN BY:	CDD
DESIGN BY:	
REVIEW BY:	ESS
DATE:	3-7-03
SCALE:	1"=50'
JOB NO:	2001225
SHEET:	1 OF 1



3525 H Ellicott Mills Drive • Ellicott City, MD 21043  
(410) 313-2640 Fax (410) 313-2648  
TDD (410) 313-2323 Toll Free 1-866-313-6300  
website: [www.hchealth.org](http://www.hchealth.org)

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**Penny E. Borenstein, M.D., M.P.H., Health Officer**  
**AGREEMENT AND EASEMENT FOR**  
**INSTALLATION OF AN INNOVATIVE AND ALTERNATIVE**  
**ON-SITE SEWAGE DISPOSAL SYSTEM**

THIS AGREEMENT is made this 12th day of June, 2003, among James Ryan of Rylea Homes, hereinafter referred to as "Owner", the Howard County Health Department hereinafter collectively referred to as the "County", and the Department of the Environment, hereinafter referred to as the "Department".

WHEREAS, Owner owns a tract of land addressed as 3563 Cattail Creek, in the 4th Election District of Howard County, Maryland, and the deed to same is recorded among the Land Records of Howard County, Maryland, in LIBER 6044 FOLIO 78.

WHEREAS, Owner's land is unsuitable for the installation of a conventional on-site sewage disposal system and owner has requested the County's approval to install an innovative/alternative system of sewage disposal.

NOW, THEREFORE, the parties hereto agree as follows:

A. Owner hereby grants to the Department and the County the right to enter upon the property at any reasonable time for access to the system to make periodic inspections and the Owner agrees to provide any information and data requested and needed by the County to develop accurate and thorough test results.

B. Owner acknowledges and agrees that the proposed innovative/alternative system is experimental and that his or her participation is voluntary. Owner agrees that there shall be no liability on the part of the County or Department to Owner if this innovative/alternative system fails, and that the County and the Department do not warrant or guarantee that the system will adequately or properly function.

C. Owner acknowledges and agrees that neither the County nor the Department nor any of its agents or employees, either officially or individually, underwrites the operation of any system approved by them.

D. The Owner will devote such care and effort to the maintenance of the system so that a system malfunction is not the result of poor maintenance, faulty operation, or neglect.

E. The Owner agrees, that, should the system be determined by the County to pose a threat to the public health, safety or comfort, the County may order any necessary changes or corrections and the Owner agrees to pay for all such changes or corrections. System modifications may include requirements for holding of sewage waste in tanks and regular pumping from the holding tanks. Upon the County's request, the Owner agrees to enter into a contract acceptable to the County to allow and pay a private entity to pump on a regularly scheduled basis an approved holding tank system.

F. The Owner agrees to contact the County at least forty-eight (48) hours before system installation begins, so that a layout may be scheduled in the field with the contractor. The Owner must install this system according to the plans and specifications approved by the County and any changes required by the County as a result of the field layout. If installation deviates substantially from the approved plans or changes such that the system will be compromised or reduced, the Owner agrees to pay for all necessary corrections.

G. This agreement shall run with the land and binds the current Owner and future owners. Paragraph A shall be binding for a period of 5 years after installation of the system and occupation of the home. Owner and future owners further agree that they shall inform in writing any purchaser or lessee of



the property that the system may require maintenance or other attention. The Owner agrees to record this agreement in the land records of Howard County.

H. This agreement shall not be construed to limit any authority of the County to protect the public health, safety or comfort or to issue any other orders to take action which is now or may hereafter be within its authority.


I. This agreement may be voided at the discretion of the County if the system construction is not completed within six (6) months of the effective date of this agreement.

J. This agreement contains the entire agreement and understanding between the County and the Owner and the Department. There are no additional terms other than as contained in this agreement. This agreement may not be modified except in writing signed by each of the parties or by their authorized representatives.

K. The laws of the State of Maryland govern the provisions of all transactions pursuant to this agreement.

IN WITNESS WHEREOF, the parties have signed and sealed this agreement on the date indicated above.

DATE: 12 June 03

  
\_\_\_\_\_  
Owner

DATE: \_\_\_\_\_

Department of the Environment  
James Dieter  
Wastewater Permits Program

DATE: 6/12/2003

  
\_\_\_\_\_  
Howard County Health Department

Ph-1  
031-024

Circuit Court for  
HOWARD COUNTY  
Clerk of the Court,  
MARGARET D. RAPPAPORT  
8368 COURT AVENUE  
ELLICOTT CITY, MD 21043-  
(410) 313-2111

Transaction Block:	2927
Ref: 321	
MISC	AMOUNT
IMP FD SURE \$5	20.00
RECORDING FEE \$20.00	20.00
 SUBTOTAL:	 40.00
 TOTAL CHARGES:	 40.00
 PAYMENTS	
CASH	100.00
 TOTAL TENDERED:	 100.00
 CHANGE:	 60.00

Cashier: MLF Reg # H002  
Rcpt # 27441  
Date: Jun 12, 2003 Time: 02:48 pm



Howard County  
Health Department

3525 H Ellicott Mills Drive, Ellicott City, MD 21043  
(410) 313-2640 Fax (410) 313-2648  
TDD (410) 313-2323 Toll Free 1-866-313-6300  
website: www.hchealth.org

Penny E. Borenstein, M.D., M.P.H., Health Officer

FACSIMILE TRANSMITTAL SHEET

TO: <u>James Ryan</u>	FROM: <u>Brian Baker</u>
COMPANY: <u>Rylca Homes</u>	DATE: <u>6/6/03</u>
FAX NUMBER: <u>(301) 829-9225</u>	TOTAL NO. OF PAGES INCLUDING COVER: <u>4 Total</u>
PHONE NUMBER:	SENDER'S REFERENCE NUMBER:

RE: Vineyards at Cattail Creek - CC  
Lot 6 File

☐ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

The sand mound system to be installed on this lot is considered a type of innovative and alternative septic system. This is because the percolation test rates for the mound averaged >60 minutes per inch. Sand mounds aren't approvable at this time unless the test rates are < 60 minutes. However, because of the rock encountered on the lot a sand mound was the only option. In order to get the septic permit the following agreement needs to be completed and deeded with the lot. A fax cannot be used, so you need to come to our office. The form can then be recorded at the nearby courthouse. If you have any questions you can reach me at (410) 313-2643.  
Thanks.







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## HOWARD COUNTY HEALTH DEPARTMENT

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*Diane L. Matuszak, M.D., M.P.H., County Health Officer*

December 6, 2001

Mr. Chris Rachuba  
946-A Marimich Court  
Eldersburg, Maryland 21784

Dear Mr Rachuba:

This is an update regarding lots 6 & 7 in the Vineyards at Cattail Creek. After several days of percolation testing and discussions conducted in the last couple months, the Howard County Health Department and the Maryland Department of the Environment (Dave Kerr) have decided on some possible areas on lots 6 & 7 that may be sufficient to support an initial system and two repairs for both lots. Several areas on these lots were numbered by Paul Scott. This numbering will be used to help identify locations.

Area 1 on lot 7 appears to be able to support an initial system and one repair for a house on lot 7. These systems may have to be sized for a three bedroom house due to limited available area.

Area 2 is not usable. Trenches cannot be placed within 25 feet of 25% or greater slopes as per Code of Maryland regulations.

One system can probably be squeezed into area 3. The contour makes this area difficult to use.

The three remaining systems required for two houses will have to be comprised of sand mounds. That is if the topography is consistent for the use of sand mounds. Onsite evaluation revealed three sites that showed some promise. Field run topography showing one foot contour levels within and directly around these three sites will be required to determine topographic suitability. Red flags were placed at the rectangular corners of the three possible mound sites.

Some of the sand mound tests showed percolation rates that were slower than the hour time limit that is required for new construction. Sand mounds classified as alternative can be used if percolation rates are under two hours. This type of sand mound is only installed in special situations. Approval of this type of mound requires an agreement by the owner with the Maryland Department of the Environment and the Howard County Director of Environmental Health. This agreement is to be recorded with the deed. Furthermore, there will have to be a recorded easement on part of lot 7 for the construction of a sand mound for lot 6.

The approximate sand mound sites and conventional easement areas are shown on the enclosure.

Sincerely,

*Brian Baker*

Brian Baker, R.S.

Well and Septic Program

Cc: File

8/7/01  
Lay out 2:00  
4:00

8-17-01  
Follow-up  
10 AM

ISSUE DATE: 7/10/2001

# PERMIT

P 515329

APPROVAL DATE: \_\_\_\_\_

A 58225-MM

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

Catonsville Professional Services

IS PERMITTED TO INSTALL ☒ ALTER ☐

ADDRESS: 112 Wyndcrest Avenue, 21228

PHONE NUMBER: 4107190734

SUBDIVISION: Vineyards at Cattail Creek

LOT NUMBER: 6

ADDRESS: 3563 Cattail Creek Drive

PROPERTY OWNER: Rachuba Home Builder

SEPTIC TANK CAPACITY (GALLONS): 1250

PUMP CHAMBER CAPACITY (GALLONS): 1250

NUMBER OF BEDROOMS: 4

SQUARE FEET PER BEDROOM: 210

LINEAR FEET OF TRENCH REQUIRED: 280

Need 1500 2-Compartment  
Tank  
1500 Installed - May Have to  
Move

TRENCHES:	Trench to be 3.0 feet wide. Inlet 3.5 feet below original grade. Bottom maximum depth 5.0 feet below original grade. Effective area begins at 4.5 feet below original grade. 1.5 feet of stone below distribution pipe.
LOCATION:	Place distribution box at highest point of designated sewage disposal easement, approximately 135 feet down the right (338") lot line and 75 feet off that lot line. Trenches to follow contour within the designated easement.
NOTES:	System to be installed prior to building permit approval; installation to be pre-scheduled so that sanitarian is on-site during trench excavation.

PLANS APPROVED: Ronald Pinkley

DATE: 7/10/01

NOTE: PERMIT VOID AFTER 2 YEARS

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

NOTE: WATERTIGHT SEPTIC TANKS REQUIRED

NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE 100 FEET FROM ANY WATER WELL

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

**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**



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 Yes

### SEPTIC TANK DATA

SEPTIC TANK \_\_\_\_\_ GALLONS

MANHOLE RISER \_\_\_\_\_

6 INCH INSPECTION PORT \_\_\_\_\_

### PUMP CHAMBER DATA

PUMP CHAMBER GALLONS Mayer Bros.  
1500 TS

MANHOLE RISER \_\_\_\_\_

ALARM \_\_\_\_\_

PUMP PERFORMANCE TEST \_\_\_\_\_

HO-94-3094

To Cattail Creek Drive →

8/7/01 SRA STAKED, BUT VEGETATION/FENCES PREVENT LAYOUT WSP (MR)  
PRE-CONSTRUCTION INSPECTION: \_\_\_\_\_

INSPECTION COMMENTS: 8/17/01 Installer encountered excessive rock  
while digging top trench. Further testing resulted in two  
good perc holes near bottom of lot. Rest of perc holes were  
borderline line to failure. Further testing required - may  
have to use sand mounds. See notes on perc. cert. plat. (BB)

INSPECTOR \_\_\_\_\_ DATE SYSTEM APPROVED \_\_\_\_\_



# CONSTRUCTION PROCEDURES

## 5.1 GENERAL

Proper construction is extremely important if the sand mound is to function as designed. Installation of a sand mound system is prohibited when soils are frozen. Construction of the mound should not occur if the soil is too wet. Compaction and puddling of the soil in the location of the mound and downslope should be avoided. Soil is too wet for construction of the mound if a sample, taken anywhere within the upper eight inches, when rolled between the hands forms a wire. If the sample crumbles, the soil is dry enough for construction to proceed.

## 5.2 EQUIPMENT

The following special equipment is recommended:

1. A small track-type tractor with blade for placing and spreading the sand fill.
2. A cordless drill for drilling holes in the pipe on-site.
3. A moldboard or chisel plow for plowing the soil within the perimeter of the mound.
4. A rototiller may be used on structureless soils with USDA sand textures.
5. A rod and level for determining bed elevations, slopes on pipes, outlet elevation of septic tank, slope of site, etc.

## 5.3 MATERIALS

The following specifications are required:

1. Sand fill material must be approved by the local Approving Authority prior to hauling to the site. Submit a sample to the local Authority for analysis at least three weeks in advance of construction or select a sand fill from the list of potential sand suppliers. If a sample is submitted for analysis a fee will be charged. Sand fill shall have an effective size between 0.25 mm and 0.5 mm with a uniformity coefficient of 3.5 or less. A copy of the receipt from the sand supplier showing the company name, address, phone number, date and product name will be required.
2. Aggregate shall be clean aggregate free of fines and between 2 to 2 inches in diameter.
3. Geotextile fabric shall be of a type approved by the Approving Authority.
4. Cap material shall be soil relatively free of coarse fragments and preferably a clay loam or silt loam texture.

## 5.4 TANK INSTALLATION AND SITE PREPARATION

- 5.4.1. Locate and rope off the entire sewage disposal area to prevent damage to the area during other construction activity on the site. Vehicular traffic over the disposal area should be prohibited to avoid soil compaction.
- 5.4.2. Install septic tank(s) and pumping chamber(s) and pump as shown on the drawings. Call for inspection.
- 5.4.3. Stake out the initial and recovery mound perimeters in their proper orientation as shown in the drawings. Reference stakes offsets from the mound corner stakes are recommended. Locate the upslope edge of the absorption bed within the mound and determine the ground elevation at the highest location. Reference this elevation to a benchmark for future use. This is necessary to determine the bottom elevation of the absorption bed.
- 5.4.4. Excess vegetation should be cut and removed. Trees should be cut at ground level and stumps left in place.
- 5.4.5. Determine the location where the force main from the pumping chamber will connect to the distribution network manifold within the mound.
- 5.4.6. Install the force main from the pumping chamber to the proper location within the mound. Pipe should be laid with uniform slope back to the chamber so that it drains after dosing. Cut and stub off pipe one foot below existing grade within the proposed perimeter of the initial mound. Backfill trench and compact to prevent seepage along the trench.
- 5.4.7. Plow the soil within the perimeter of the mound to a depth of about eight inches. If the soil is not too wet. Moldboard or chisel plow may be used. Plowing should be done along the contour, throwing soil upslope. Use a two bottom or larger moldboard plow, in wooded areas with stumps, roughening the surface to a depth of four to six inches with backhoe teeth may be satisfactory. However, all work should be done from the upslope or sides of the mound if at all possible. Rototilling may be used on soils with USDA textures of sand. After plowing, all foot and vehicular traffic shall be kept off the plowed area.

## 5.5 FILL PLACEMENT

- 5.5.1. Relocate and extend the force main several feet above the ground surface.
- 5.5.2. Place the approved sand fill material on the upslope edge(s) of the plowed area. Keep delivery trucks off the plowed area. Minimize traffic on the downslope side. Fill should be placed and spread immediately after plowing. Move the fill material into place using a small track-type tractor with a blade. Work from the end and upslope side. Always keep a minimum of six inches of material beneath the tracks of the tractor to minimize compaction of the natural soil. The fill material should be worked in this manner until the height of the fill reaches the elevation of the top of the absorption bed.
- 5.5.3. With the blade of the tractor, from the absorption bed. Hand level the bottom of the bed and check it for proper elevation. The bed should be level for proper functioning of the mound. Call for inspection.
- 5.5.4. Shape the sides of the sand fill to design slope (ie. 3:1 or flatter).

## 5.6 BED AND DISTRIBUTION NETWORK

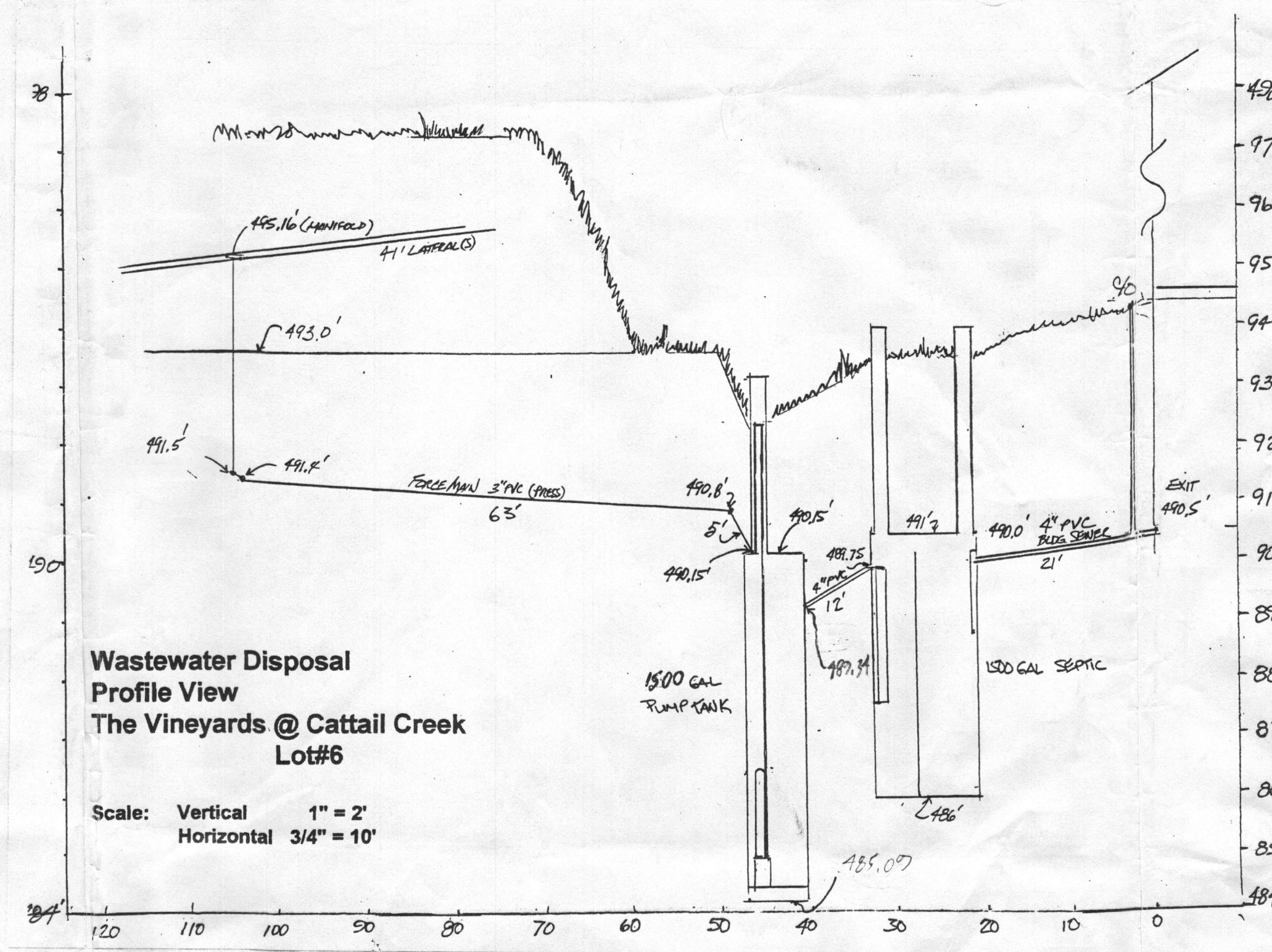
- 5.6.1. Carefully place the coarse aggregate in the bed. Do not create ruts in the bottom of the bed. Level the aggregate to a minimum depth of six inches.
- 5.6.2. The distribution network is assembled in place setting the manifold to ensure draining the laterals between doses. The laterals should be laid level with the holes directed downward. Call for inspection. Test the pumping chamber and distribution network with clean water.
- 5.6.3. Place additional aggregate to a depth of at least two inches over the crown of the pipe.
- 5.6.4. Place the approved geotextile fabric over the aggregate bed. The fabric may extend beyond the bed over the sand fill.

## 5.7 COVER MATERIAL

- 5.7.1. Place a finer textured soil material such as sandy clay loam, clay loam, or silt loam on top of the fabric over the bed. The minimum depth of this cap shall be six inches at the outer edges of the bed and 12 inches along the center.
- 5.7.2. Place a minimum six inches of good quality topsoil over the entire mound surface including the sideslopes. Call for final inspection.

## 5.8 VEGETATION

- 5.8.1. Fertilize, lime, seed and mulch the entire surface of the mound. Grass mixtures adapted to the area should be used.
- 5.8.2. Consult the county extension agent or Soil Conservation Service for recommendations.



**Wastewater Disposal  
Profile View  
The Vineyards @ Cattail Creek  
Lot#6**

Scale: Vertical 1" = 2'  
Horizontal 3/4" = 10'

LOT #6, VINEYARDS @ CATTAIL CREEK  
HOWARD COUNTY, MD

Replacement Field #2 (deep trench tile field)

Also recognized by the Health Department (HCHD) as site area #3. The field is located on a slope of approximately 18%. The area soils are reasonably deep, Test Location #15, HCHD soil profile demonstrates sandy loams to a depth of 10' (where some mottling was identified). Water was encountered at a depth of 17.5 feet. HCHD, Soil Profile/Observation Pit, TP'D' located 70' across contour and 40' upslope from Test Location #15 confirmed the same basic soil structure, with 15-25% rock at 15.5' base depth.

Testing, loc #15, at 4' provided a 13 mpi rate. Mottling a 10' depth suggests that the lower limit of a trench would be placed at a depth of 6'.

Soil Profile/Observation Pit TP'D' was tested, in the field notes (9/14/01), but only depth and rate was indicated. Testing at 38" failed (over 30 min.), but testing at 4' and 5' indicated a faster rate (12 minutes and 4 minutes respectively).

Based on the above, a replacement field (#2) with 2' sidewall depth (4'-6') can be fitted on this divergent backslope area near the 480' contour.

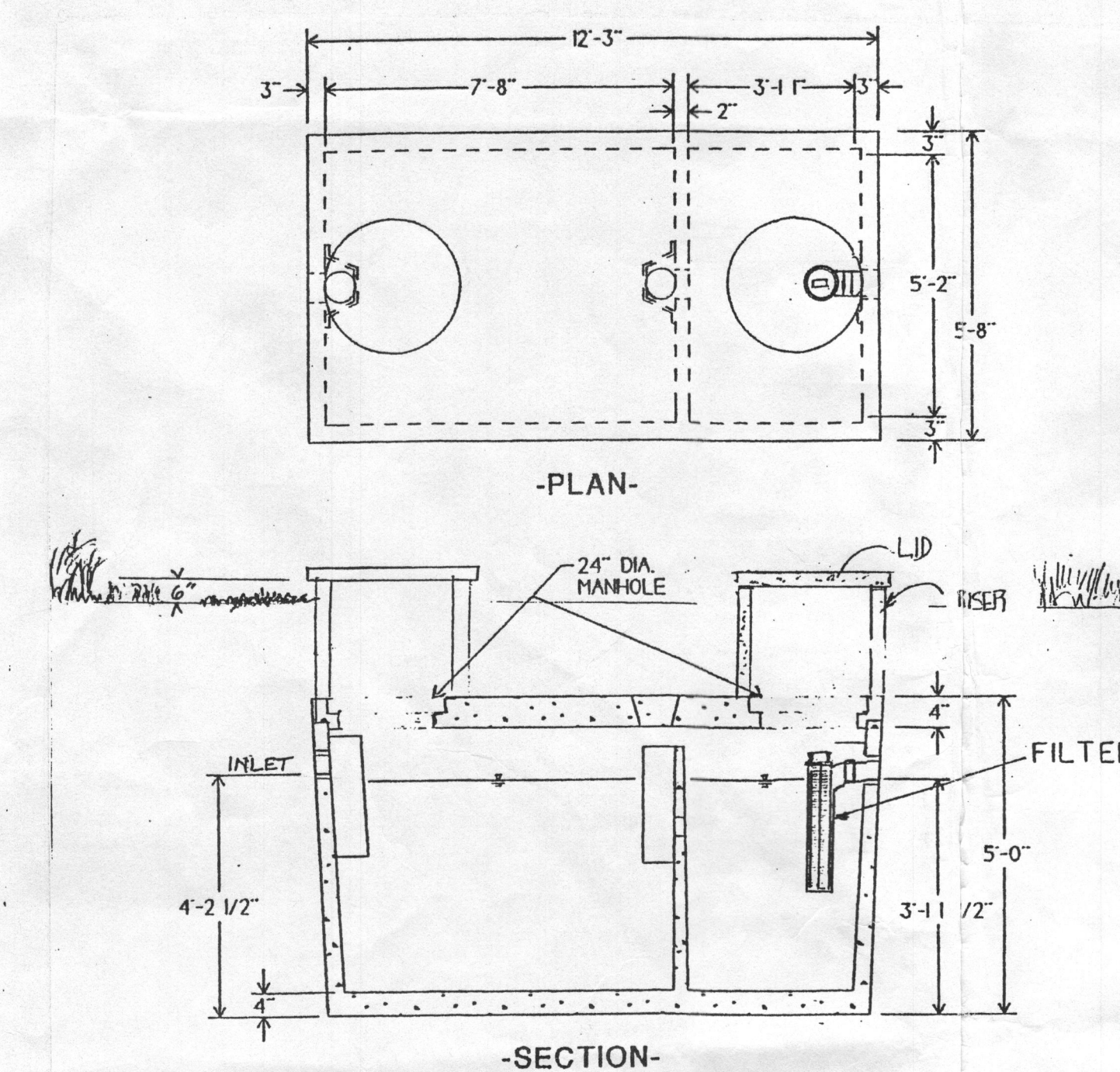
At a rate of 13 mpi: the 600 gpd design flow, loaded at .8 gpd/ft<sup>2</sup> requires a 750 ft<sup>2</sup> trench disposal area. Using a 2' width this produces a length of 375'

Deep Trench Determination:  $\frac{W+2}{W+1+2Xd} \times 100 = \% \text{ of conventional trench}$

$\frac{2+2}{2+1+4} \times 100 = 57.1\% \text{ say } 57\%$

3.5' conventional length X 57% = 214' length of deep trench, or 4 - 53.5' lengths

Effort was made to maximize use in the area of the 480' contour where the local slope is 15-16% and to extend as far as possible on the contour to reduce the linear loading of the area.



**PRECAST 2 COMPARTMENT SEPTIC TANK  
1500 GALLON CAPACITY 3 ZABEL A1800- FILTER**

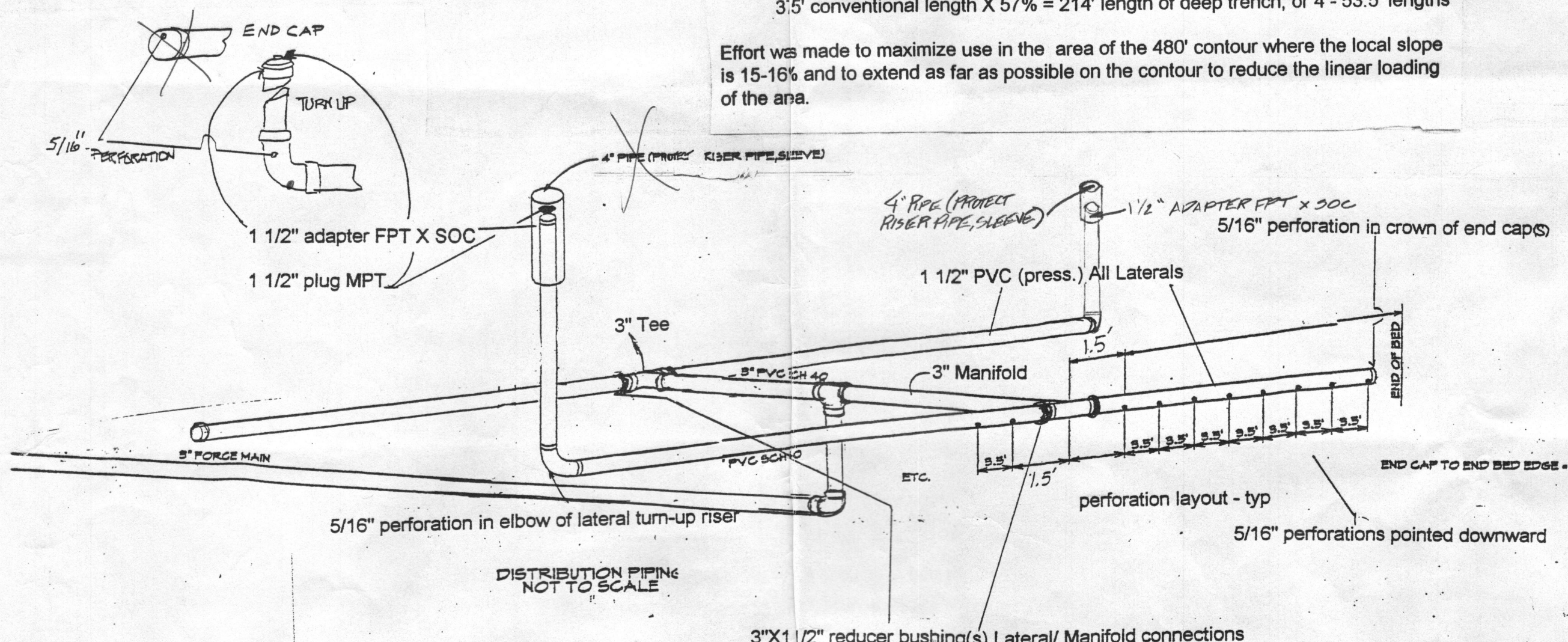
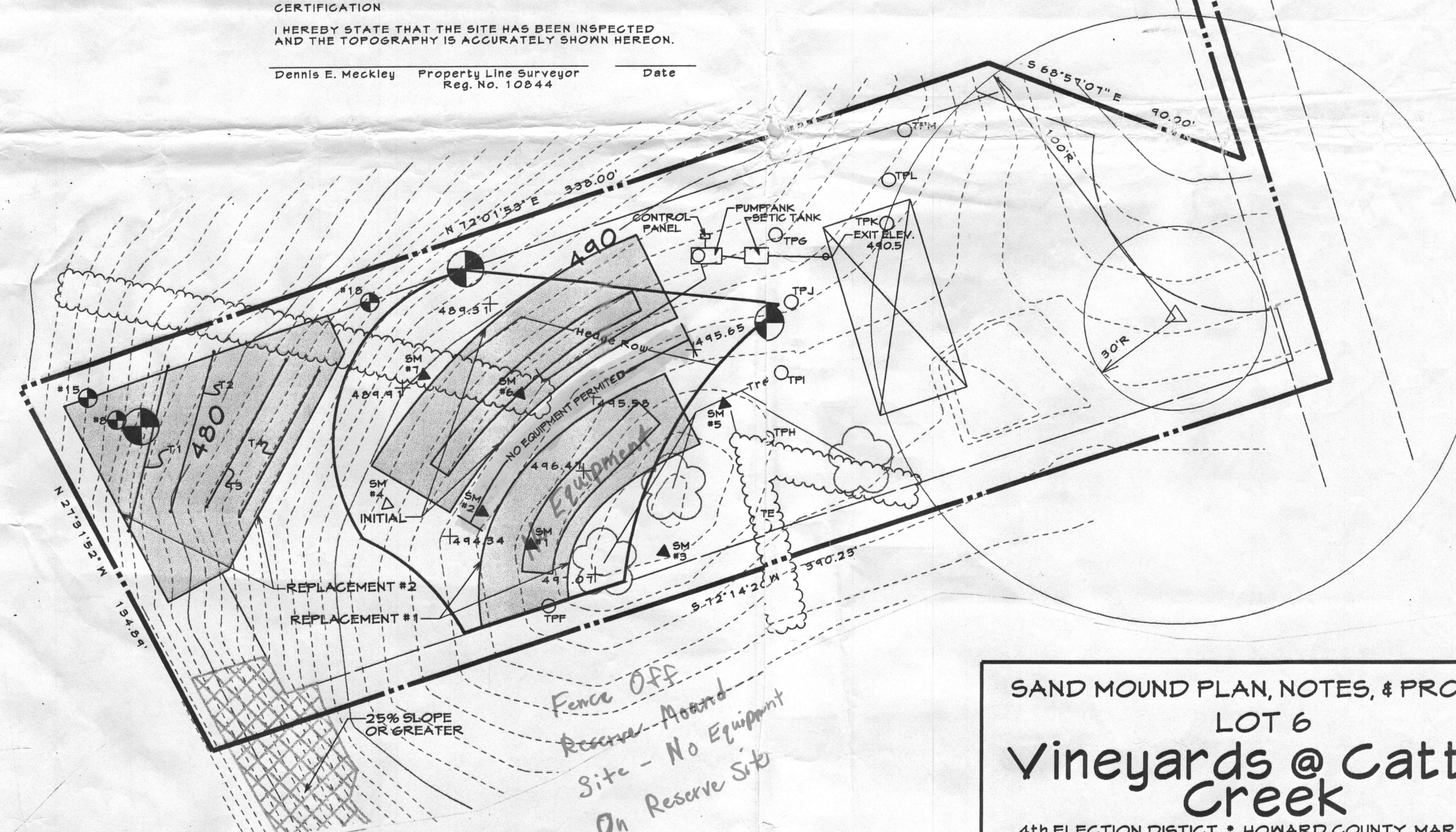
DWG. ST-15-2

## CERTIFICATION

I HEREBY STATE THAT THE SITE HAS BEEN INSPECTED  
AND THE TOPOGRAPHY IS ACCURATELY SHOWN HEREON.

Dennis E. Heckley Property Line Surveyor  
Reg. No. 10244

**PLAN  
SCALE: 1"=30'**



**Wastewater Disposal  
LPP Distribution piping plan & perforation drilling menu  
The Vineyards @ Cattail Creek  
Lot#6**

Note: riser turn-up required for most distant (from pump) lateral. All laterals may be similarly equipped (optional). When endcaps installed 5/16" perforation required in crown

**SAND MOUND PLAN, NOTES, & PROFILES  
LOT 6  
Vineyards @ Cattail  
Creek**  
4th ELECTION DISTRICT • HOWARD COUNTY, MARYLAND

**CLSI**  
Carroll Land Services  
Incorporated  
Engineers • Surveyors • Land Development Consultants  
Landscape Architects • Environmental Specialists  
439 East Main Street Westminster, MD 21157-3539  
(410) 876-2017 FAX (410) 876-0009

Date	Revisions	Drawn By: DN
10/4	REVISIONS PER THE COUNTY COMMENTS	Designed By: ALH
		Reviewed By: ALH
		Date: 6/24/2002
		Scale: AS SHOWN
		Job No: 2001225
		Sheet: 1 OF 3

County File No.







