

4-28-97
OPEN TRENCH
2 PM
4/30/97
ASAP

PERMIT

SEWAGE DISPOSAL SYSTEM

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

INDEXED

P 58104A

A 49645-E

DISTRICT 4th

DATE 4/23/97

DATE SYSTEM APPROVED 4-30-97

INSPECTOR KM

HOWARD COUNTY HEALTH DEPARTMENT

BUREAU OF ENVIRONMENTAL HEALTH

~~XXXXXXXX~~ 313-2640

04-359275

Fogle's Septic Clean, Inc. IS PERMITTED TO INSTALL X ALTER

ADDRESS 558 Obrecht Road, Sykesville, Maryland 21784 PHONE 795-5674

SUBDIVISION Cattail Woods, Sec. II LOT 24 ROAD 1700 Cattail Woods Drive

PROPERTY OWNER Pulte Home Corp.

ADDRESS _____

SEPTIC TANK CAPACITY 1250 GALLONS

NUMBER OF BEDROOMS 4

210 SQUARE FEET PER BEDROOM

LINEAR FEET OF TRENCH REQUIRED 210

TRENCHES - Trench to be 2 feet wide. Inlet 2 feet below original grade. Bottom maximum depth 6 feet below original grade. Effective area begins at 2 feet below original grade. 4 feet of stone below distribution pipe.

LOCATION - Place distribution box 175 feet up the left (346.42') lot line and 135 feet off that same lot line as seen when facing the lot from Cattail Woods Lane. Run trenches on contour toward the left lot line.

NOTES - No trench to exceed 100 feet in length. Provide 6" - 8" diameter cleanout and cap to grade or above on septic tank. OK 3/11/97 DKS

PLANS APPROVED BY Amy McMillen/Donna K. Soe REVISED _____ DATE 03/07/97

COVER NO WORK UNTIL INSPECTED AND APPROVED

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM

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

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

NOTE: IF DEEP TRENCH(ES) ARE USED CALL FOR INSPECTION BEFORE AND AFTER PLACING GRAVEL IN TRENCH(ES)

NOTE: NO DRY WELL SHALL EXCEED 15 FOOT IN DIAMETER NO ABSORPTION TRENCH TO EXCEED 100 FEET IN LENGTH

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

PERMIT VOID AFTER TWO YEARS

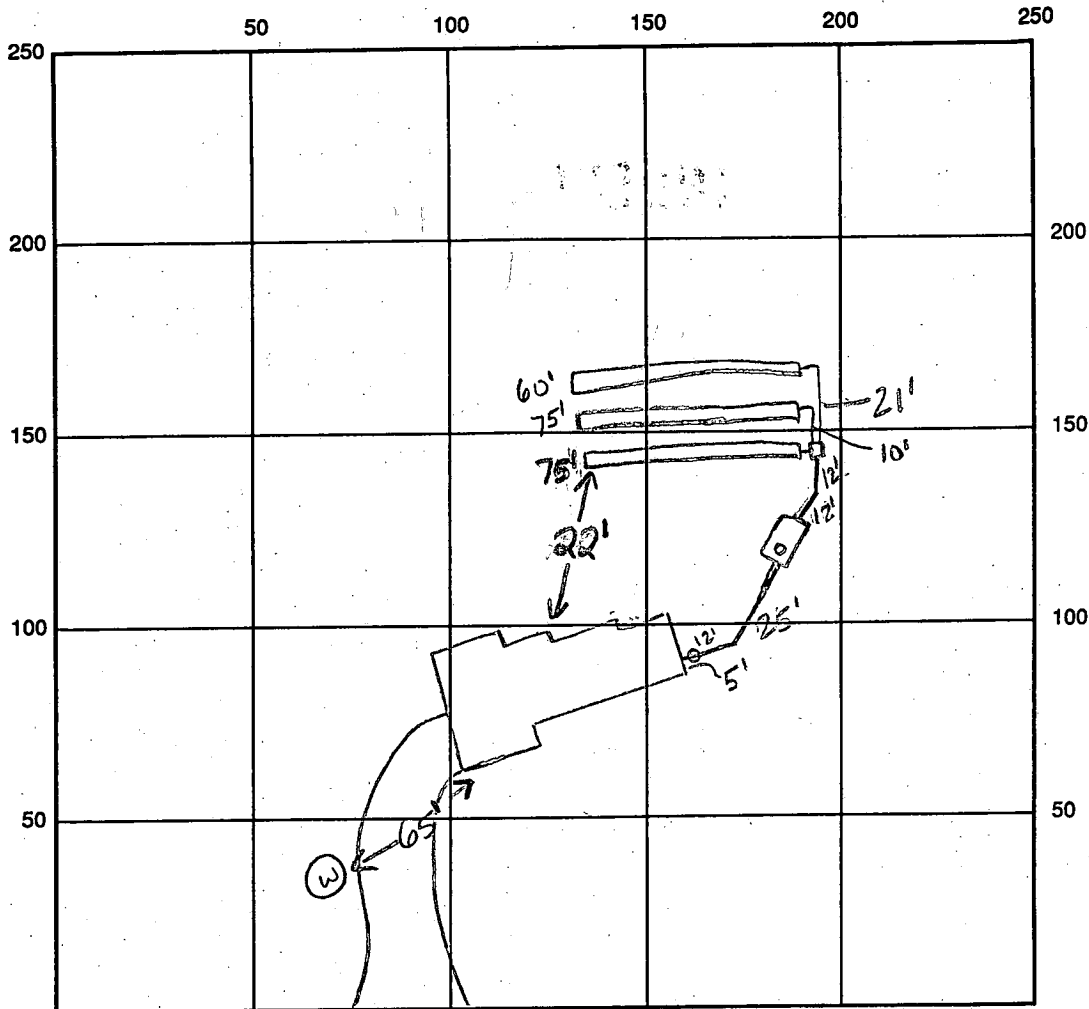
NOTE: INSTALL STAND PIPE ON SEPTIC TANK AND DRY WELL STAND PIPES MUST BE 6 INCHES IN DIAMETER CAST IRON. CONCRETE OR TERRA COTTA OR PVA OR ABS ACCEPTED. IF TOP OF SEPTIC TANK IS DEEPER THAN 3 FEET. MANHOLE TO GRADE REQUIRED.

NOTE: DISTRIBUTION BOXES MUST HAVE BAFFLES

PERMIT SIGNED
RETURNED 5/29/97
Serial # 67105912 decl

***INSTALLER IS RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT**

A 49645E



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE Cattail Woods Lane

SEPTIC TANK LEVEL ok, 1250 gallons CLEANOUTS 1 on tank, 1 at house

DISTRIBUTION BOX LEVEL ok, baffle in

DRAIN FIELD/TITLE DEPTH 6 FT. TRENCH WIDTH 2 FT. INLET DEPTH 2 FT.

EFFECTIVE GRAVEL DEPTH 4 FT. TOTAL LENGTH $\frac{2 \times 75}{1 \times 60}$ FT. \rightarrow 210

NUMBER OF TRENCHES 3 ONE SIDEWALL BOTTOM AREA 840 SQ. FT.

DRYWALL INSIDE DIAMETER - FT. EFFECTIVE DEPTH BELOW INLET - FT.

ABSORBENT AREA - SQ. FT.

REMARKS: 4-28-97 ok to cover up to tank, leave ends of trenches open, 11 house conn made KM

4-30-97 ok to cover all work KM

4-30-97

P.A. 4.5' below grade, casing 1.5 above grade, has 2 piece watertight cap WP's ok to cover, needs tag reversed and reattached. KM

DATE SYSTEM APPROVED 4-30-97 INSPECTOR Kimberly Maisto

APPLICATION

PERCOLATION TESTING

A 49645 E

P _____

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

DISTRICT 4th

DATE 9/30/93

TO: THE COUNTY HEALTH OFFICER
ELLICOTT CITY, MARYLAND

I HEREBY APPLY FOR THE NECESSARY TEST PRIOR TO APPLICATION FOR PERMIT TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE DISPOSAL SYSTEM.

PROPERTY OWNER Parcel 137, Inc. Pulte Home Corp.
15298 Union Chapel Road
ADDRESS Woodbine, MD 21797 PHONE (410) 442-2101

AGENT OR PROSPECTIVE BUYER Engineer: TSA Group, Inc.
8480 Baltimore National Pike, Ste. 418
ADDRESS Ellicott City, MD 21043 PHONE (410) 465-6105

PROPERTY LOCATION:

SUBDIVISION Cattail Woods - Section 2 LOT NO. 24

ROAD AND DESCRIPTION End of Brittle Branch Way (17th Cattail Woods Drive)

TAX MAP 7 PARCEL # 137

**BLDG. PERMIT SIGNED
AND RETURNED 3/7/97
Serial # B00104128**

SIZE OF LOT 1 Ac +/- TYPE BLDG. Single Family Dwelling - 4 Bed
(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. Parcel 137, Inc. Bruce B. Benda President
(SIGNATURE OF APPLICANT)

APPROVED BY _____ FOR _____ DATE _____

DISAPPROVED BY _____ FOR _____ DATE _____

HOLD PENDING FURTHER TESTS _____

REASONS FOR REJECTION OR HOLDING _____

PERCOLATION TEST PLAT/PRELIMINARY PLAT - TITLE OR I.D. # _____ DATE _____

SITE DEVELOPMENT PLAN/FINAL PLAT - TITLE OR I.D. # _____ DATE _____

THIS IS NOT A PERMIT

COUNTY # _____

SOIL PROFILE

0'

SOIL PROFILE

0'

INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME
			START	STOP	START	STOP	

REMARKS _____

TYPE OF SOIL _____

TESTED BY _____ ALSO PRESENT _____

TRENCH DESIGN DATA: AVERAGE PERCOLATION TIME _____ TRENCH WIDTH _____

INLET DEPTH _____ MAXIMUM BOTTOM DEPTH _____ SQ. FT./BEDROOM _____

APPLICATION

PERCOLATION TESTING

A 49645E

P _____

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

DISTRICT _____

DATE 9-27-93

TO: THE COUNTY HEALTH OFFICER
ELLICOTT CITY, MARYLAND

I HEREBY APPLY FOR THE NECESSARY TEST PRIOR TO APPLICATION FOR PERMIT TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE DISPOSAL SYSTEM.

PROPERTY OWNER Bruce Brendle

ADDRESS 15298 Union Chapel Rd PHONE _____

AGENT OR PROSPECTIVE BUYER Joint Venture

ADDRESS 1555 Union Chapel Rd PHONE 24

PROPERTY LOCATION:

SUBDIVISION CatHaul Woods Sec II LOT NO. _____

ROAD AND DESCRIPTION Rt 97 sld

TAX MAP 7 PARCEL # 137

SIZE OF LOT 1 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 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 _____

DISAPPROVED BY _____ FOR _____ DATE _____

HOLD PENDING FURTHER TESTS _____

REASONS FOR REJECTION OR HOLDING _____

PERCOLATION TEST PLAT/PRELIMINARY PLAT - TITLE OR I.D. # _____ DATE _____

SITE DEVELOPMENT PLAN/FINAL PLAT - TITLE OR I.D. # _____ DATE _____

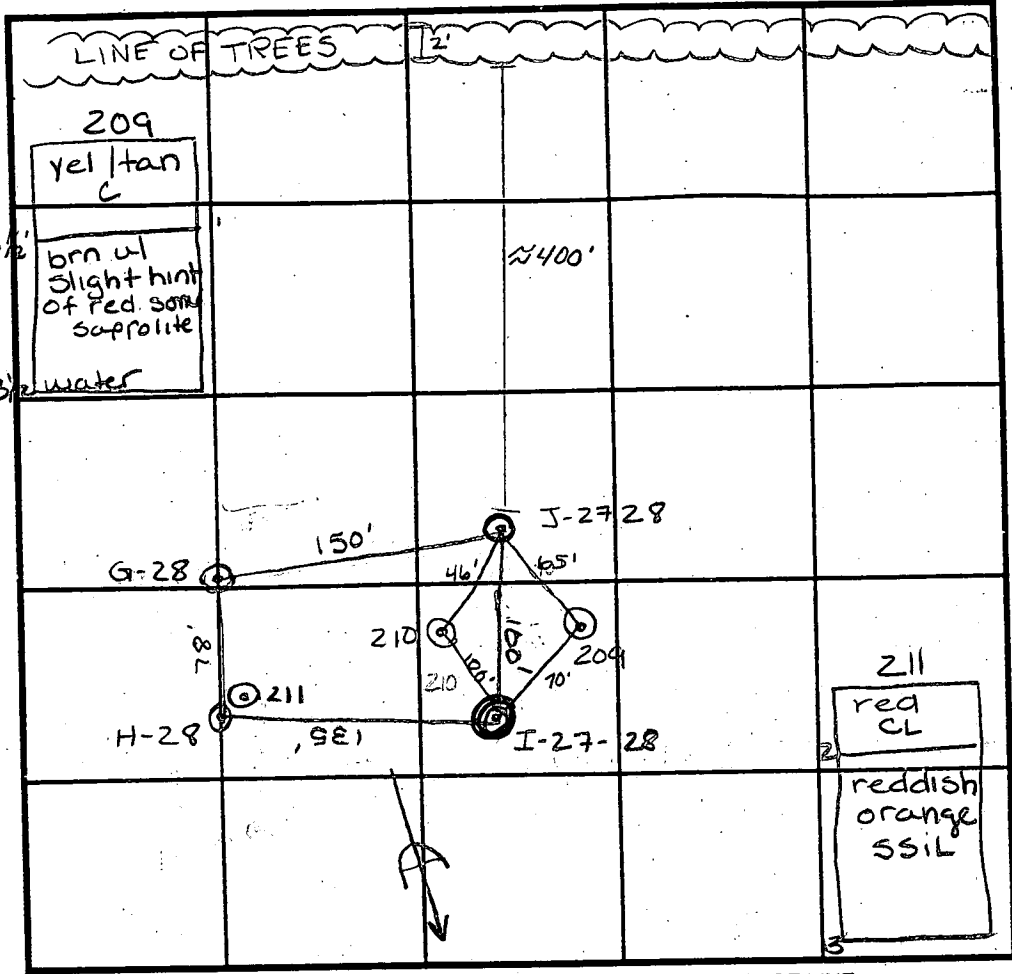
THIS IS NOT A PERMIT

A49645E
COUNTY #

SOIL PROFILE
28G
1' 0" lgt brn c
2 1/2' red CL
4' brn sil w/ tint of red
7' decayed shale

28H
6" topsoil
red orange w/ orange brn c
3' brn sil w/ yel and red streaks
7' decayed shale

27-28I
12' topsoil
4' orange brn c
3' orange brn SSIL
7' - pockets of >50% shale



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

SOIL PROFILE
27-28-J
0' orange brn c
3' red CL
4 1/2' SSIL brn
pockets of >50% shale
12' 211 red CL
2' 210 yellow tan c
red sil some saprolite

DATE	TEST NO.	DEPTH	PRE-WET		TEST - 1" DROP		TIME
			START	STOP	START	STOP	
11/18/93	(28G)	3' VII 1/2'	11:35 ¹⁵	11:43	11:43	11:53 ³⁰	10 1/2 min
	(28H)	3' VI 1/2'	11:46	11:48	11:48	11:52	4 min
	27-28I	6 1/2' VI 1/2'	12:57 ⁵⁰	1:00 ³⁰	1:00 ³⁰	1:05 ³⁰	5 min F
		3' VI 1/2'	12:02	12:04	12:04	12:06 ⁵	2 1/4 min
	27-28J	3' VI 1/2'	12:47	12:53	12:53	1:05	12 min F
3/15/94	209	Visual	to 13 1/2'				F/OK
3/15/94	(210)	Visual	to 13'				OK
3/15/94	(211)	2 1/2' VI 3'	1:14 ¹⁵	1:17 ¹⁵	1:17 ¹⁵	1:20	23/4 min

REMARKS max bottom depth 6'
TYPE OF SOIL Glendg Loam
TESTED BY CRAB WILLIAMS & AMY McMILLEN ALSO PRESENT B. SANDERS
TRENCH DESIGN DATA: AVERAGE PERCOLATION TIME 9 min TRENCH WIDTH 2
INLET DEPTH 2 MAXIMUM BOTTOM DEPTH 6' SQ. FT./BEDROOM 210

F depend on surmount holes

C1 78

SEQUENCE NO. (DENV USE ONLY)

STATE OF MARYLAND WELL COMPLETION REPORT

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

(THE NUMBER IS TO BE PUNCHED IN COLUMNS ON ALL CARDS)

COUNTY NUMBER

ST/CO USE ONLY DATE RECEIVED

DATE WELL COMPLETED

Depth of Well (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL"

OWNER: 206 JOINT VENTURE last name: CATTAIL WOODS WAY first name: T.T. SON TOWN: T.T. SON SUBDIVISION: CATTAIL WOODS SECTION: LOT: 24

WELL LOG table with columns: DESCRIPTION (Use additional sheets if needed), FEET (FROM, TO), Check if water bearing. Rows include Dirt, Clay & Shale, Soft Br. Shale, Blue & Br. Shale, Hard Blue Shale, Br. Shale, Hard Blue Shale, Br. Shale, Hard Blue Shale.

GROUTING RECORD: WELL HAS BEEN GROUTED (Y), TYPE OF GROUTING MATERIAL: CEMENT (CM), BENTONITE CLAY (BC), NO. OF BAGS: 28, NO. OF POUNDS: 2632, GALLONS OF WATER: 168, DEPTH OF GROUT SEAL: from 0 to 73 ft.

CASING RECORD: casing types insert appropriate code below: ST (STEEL), CO (CONCRETE), PL (PLASTIC), OT (OTHER). MAIN CASING TYPE: S, T, 6, 75, 75.

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

SCREEN RECORD: screen type or open hole: ST (STEEL), BR (BRASS), HO (OPEN HOLE), PL (PLASTIC), OT (OTHER).

PUMPING TEST: HOURS PUMPED: 3, PUMPING RATE: 7.5, METHOD USED TO MEASURE PUMPING RATE: submersible, WATER LEVEL: BEFORE PUMPING: 27, WHEN PUMPING: 40, TYPE OF PUMP USED: S (submersible).

PUMP INSTALLED: DRILLER WILL INSTALL PUMP: YES (NO), TYPE OF PUMP INSTALLED: S, CAPACITY: GALLONS PER MINUTE, PUMP HORSE POWER, PUMP COLUMN LENGTH, CASING HEIGHT: + above, - below, LAND SURFACE: 2 (nearest foot).

IN HARD ROCK AREAS, IDENTIFY SPECIFICALLY WHERE SATURATED FRACTURES WERE OBSERVED. WELL HYDROFRACTURED: Y (no).

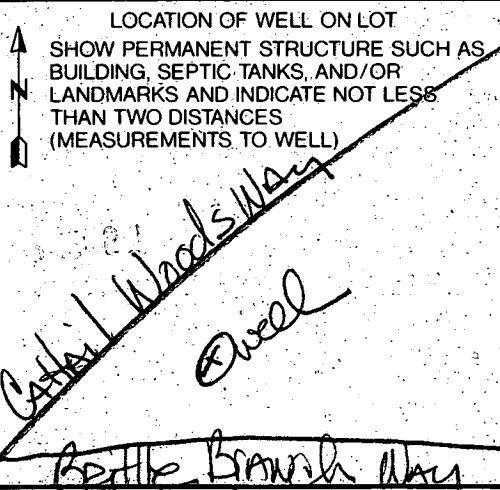
CIRCLE APPROPRIATE LETTER: A (WELL WAS ABANDONED AND SEALED), E (ELECTRIC LOG OBTAINED), P (TEST WELL CONVERTED TO PRODUCTION WELL).

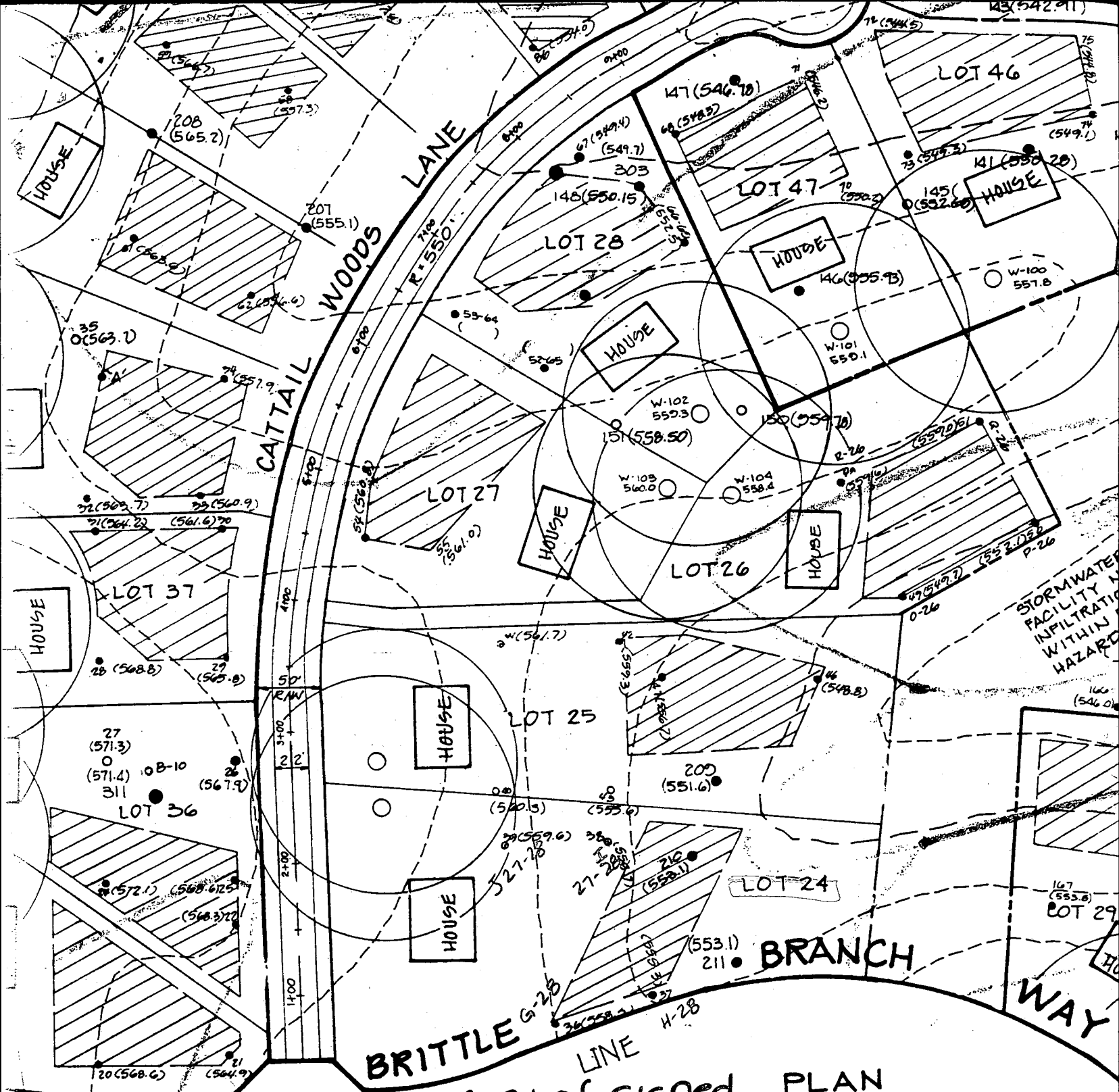
I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT...

DRILLERS IDENT. NO. MWD256 Dana Kyker Jr II DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION) SITE SUPERVISOR (sign of driller or journeyman responsible for sitework if different from permittee)

DEPTH (nearest ft.) table with columns 1-51 and rows 1-3. SLOT SIZE 1, 2, 3. DIAMETER OF SCREEN (NEAREST INCH).

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





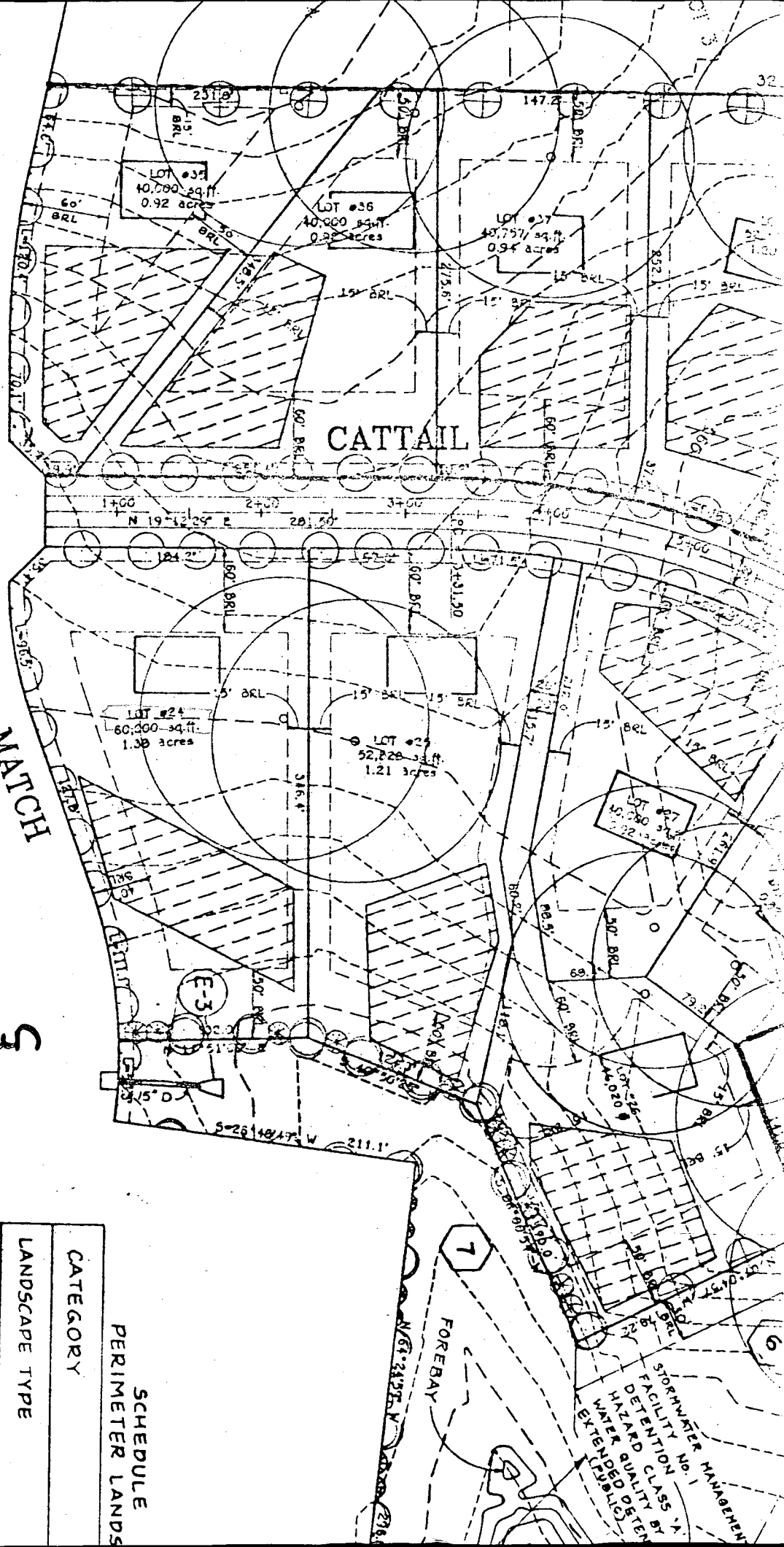
**copy of signed
Perc. Cert. Plat**

PLAN
SCALE: 1"=100'

- TO 8 PERCENT SLOPES, MODERATELY ERODED.
- ALLUVIUM, 3 TO 8 PERCENT SLOPES.
- 8 PERCENT SLOPES, MODERATELY ERODED.
- PERCENT SLOPES, MODERATELY ERODED.
- PERCENT SLOPES, MODERATELY ERODED.
- PERCENT SLOPES, SEVERELY ERODED.
- PERCENT SLOPES, MODERATELY ERODED.
- PERCENT SLOPES, SEVERELY ERODED.
- TO 3 PERCENT SLOPES.
- 3 TO 8 PERCENT SLOPES, MODERATELY ERODED.
- PERCENT SLOPES, SEVERELY ERODED.
- PERCENT SLOPES.
- 15 TO 25 PERCENT SLOPES, MODERATELY ERODED.
- 3 TO 8 PERCENT SLOPES, MODERATELY ERODED.

GENERAL NOTES

1. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
2. THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF 10,000 AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR SEWERAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED TO PRIVATE SEWERAGE DISPOSAL. IF A PUBLIC SEWERAGE SYSTEM AND PUBLIC SEWER IS AVAILABLE, THESE EASEMENTS SHALL BECOME NULL AND VOID. THE COUNTY HEALTH OFFICER HAS THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENT INTO THE PRIVATE SEWERAGE EASEMENT AREA. RECORDATION OF A MODIFIED SEWERAGE EASEMENT PLAT SHALL NOT BE NECESSARY.
3. UNLESS OTHERWISE SHOWN, NO WELLS OR SEWERAGE EASEMENTS ARE LOCATED WITHIN THE PROPERTY.



SCHEDULE D
STORMWATER MANAGEMENT AREA LANDSCAPING

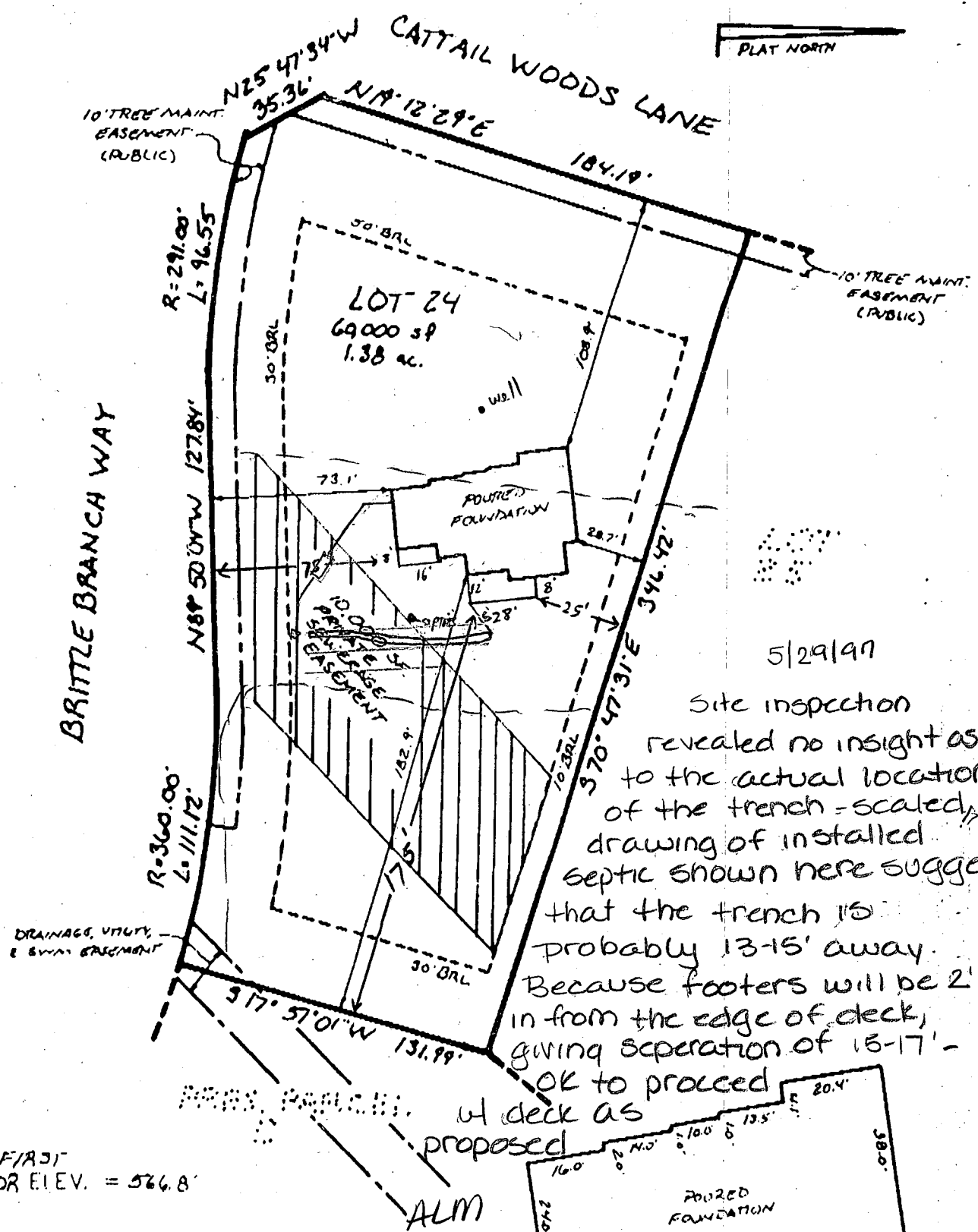
LINEAR FEET OF PERIMETER	5	385	7	1,260
NUMBER OF TREES REQUIRED SHADE EVERGREEN	8 10	25 32	8 10	25 32
CREDIT FOR EX. VEGETATION	NO	NO	NO	NO
CREDIT FOR OTHER LANDSCAPING	NO	NO	NO	NO
NUMBER OF TREES PROVIDED SHADE EVERGREEN	8 10	25 32	8 10	25 32

Copy of signed
Preliminary Plan

CATEGORY	7
LANDSCAPE TYPE	
LINEAR FEET OF PERIMETER	
CREDIT FOR EX. VEGETATION	
CREDIT FOR WALL, FENCE OR BE	
NO. SHADE TREES REQUIRED	
NO. SHADE TREES PROVIDED	

SCHEDULE
PERIMETER LANDS

THIS LOCATION DRAWING IS OF BENEFIT TO A CONSUMER ONLY INsofar AS IT IS REQUIRED BY A LENDER OR TITLE INSURANCE COMPANY, OR ITS AGENTS, IN CONNECTION WITH FINANCING THE PROPERTY SHOWN HEREON. THIS DRAWING IS NOT TO BE RELIED UPON FOR THE ESTABLISHMENT OF PROPERTY LINES OR THE CONSTRUCTION OF IMPROVEMENTS SUCH AS FENCES, GARAGES, OR BUILDING ADDITIONS. THIS DRAWING SHOWS THE LOT CONFIGURATION AS CURRENTLY RECORDED, BEING SUFFICIENT FOR SETTLEMENT PURPOSES, BUT BEING INSUFFICIENT FOR THE SETTING OF PROPERTY CORNER PINS ON THE GROUND.



SURVEYOR'S CERTIFICATE

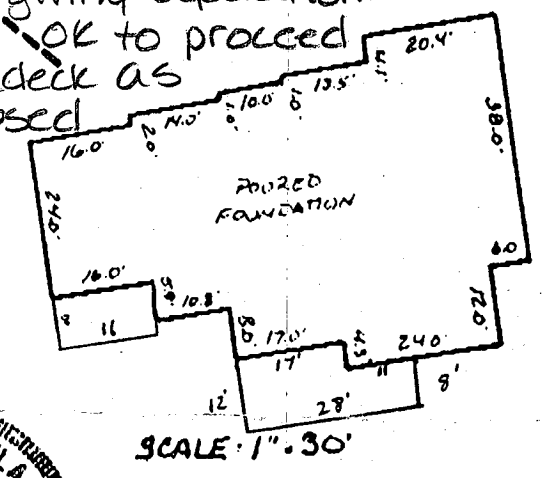
I HEREBY CERTIFY THAT THE LOCATION DRAWING SHOWN HEREON IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF; THAT THE IMPROVEMENTS HAVE BEEN LOCATED AS THE RESULT OF A FIELD SURVEY, AND THAT THERE ARE NO VISIBLE ENCROACHMENTS UNLESS SHOWN. THE PROPERTY DOES NOT LIE WITHIN A FLOOD HAZARD AREA ON THE FEMA F.I.R.M. IDENTIFIED BELOW. AT THE WRITTEN REQUEST OF THE PURCHASER, NO PROPERTY CORNER MARKERS HAVE BEEN SET.

Peter J. Dare
PETER J. DARE
MD. PROPERTY LINE SURVEYOR #224



RECORD PLAT No. 12501
FEMA FIRM No. 240044 0007 B
DATED 12/14/86

TSA GROUP, INC.
planning • architecture • engineering • surveying
8480 BALTIMORE NATIONAL PIKE SUITE 418
ELLCOTT CITY, MARYLAND 21043
(410) 465-6105



LOCATION DRAWING
CATTAIL WOODS
SECTION 2
LOT 24

1700 CATTAIL WOODS LA.

6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE: 1" = 60' DATE: 5/12/97

TEMPORARY SEEDBED PREPARATION

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT).

SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (0.7 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT. OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

PERMANENT SEEDBED PREPARATION

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 800 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ FT).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 80 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SQ FT) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 80 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERE TO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE	1.38	ACRES
AREA DISTURBED	0.61	ACRES
AREA TO BE ROOFED OR PAVED	0.10	ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.51	ACRES
TOTAL CUT	545	SQ. YDS.
TOTAL FILL	545	CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION	N/A	
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

GP-97-102

NOTE: ALL SEDIMENT CONTROL FEATURES SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS SHOWN IN THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

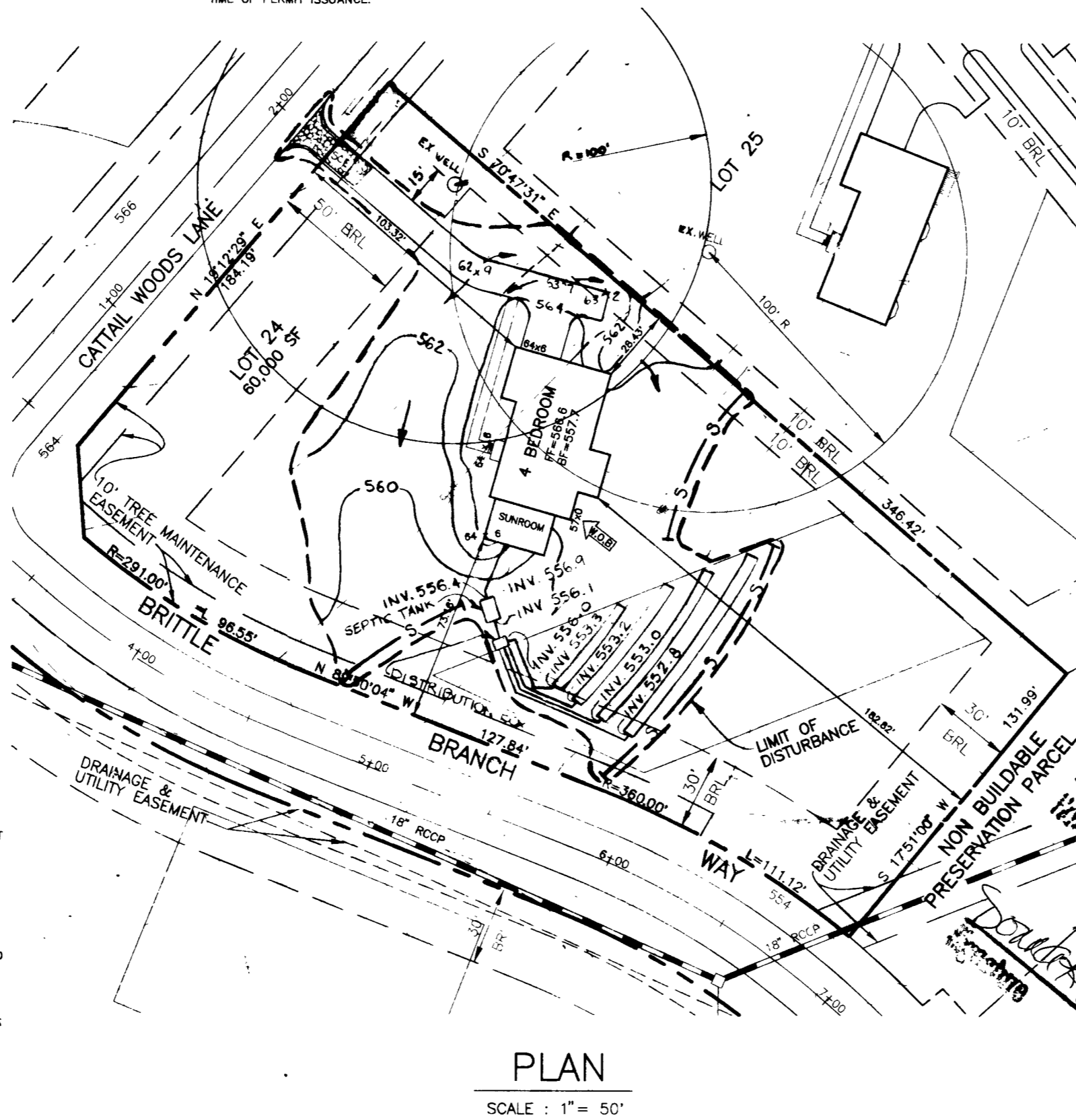
T.S.A. GROUP INC.
8480 BALTIMORE NATIONAL PIKE, SUITE 418
ELLICOTT CITY, MARYLAND 21043
(410) 465-6105

NOTES:

- THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREAS AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
- THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF 10,000 SQUARE FEET AS REQUIRED BY THE STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWER 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 ENCROACHMENT INTO THE PRIVATE SEWERAGE EASEMENT. RECORDATION OF A MODIFIED SEWERAGE EASEMENT PLAT SHALL NOT BE NECESSARY.
- UNLESS OTHERWISE SHOWN, NO WELLS OR SEWERAGE EASEMENTS ARE LOCATED WITHIN 100 FEET OF THE PROPERTY.
- TOPOGRAPHY SHOWN HEREON IS TAKEN FROM F-95-108 WHICH WAS PREPARED BY TSA GROUP, INC.
- EXACT LENGTH OF SEPTIC TRENCHES TO BE DETERMINED BY THE HEALTH DEPARTMENT AT THE TIME OF PERMIT ISSUANCE.

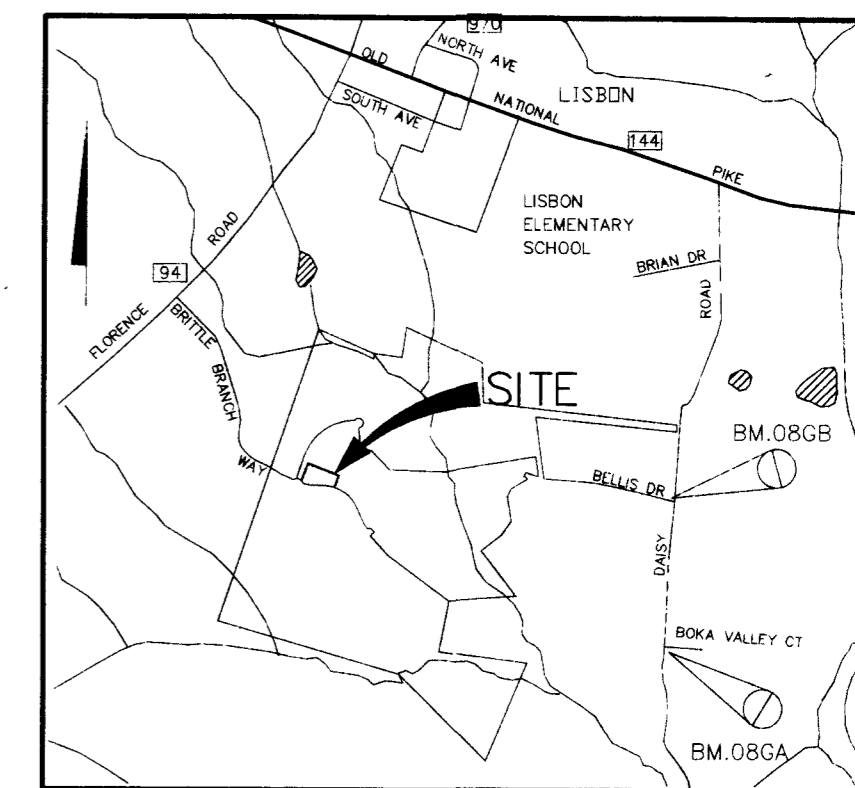
SEQUENCE OF CONSTRUCTION

- | | |
|-----------|---|
| DAY 1 | OBTAIN A GRADING PERMIT |
| DAY 2-2 | INSTALL SILT FENCE AND STABILIZE CONSTRUCTION ENTRANCE |
| DAY 5-10 | GRADE SITE AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDBED NOTES |
| DAY 11-31 | CONSTRUCT HOUSE, INSTALL DRIVEWAY AND UTILITIES |
| DAY 32 | STABILIZE ANY REMAINING DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDBED NOTES |
| DAY 33-36 | UPON APPROVAL OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS SEDIMENT CONTROL INSPECTOR REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDBED NOTES |



PLAN

SCALE: 1" = 50'



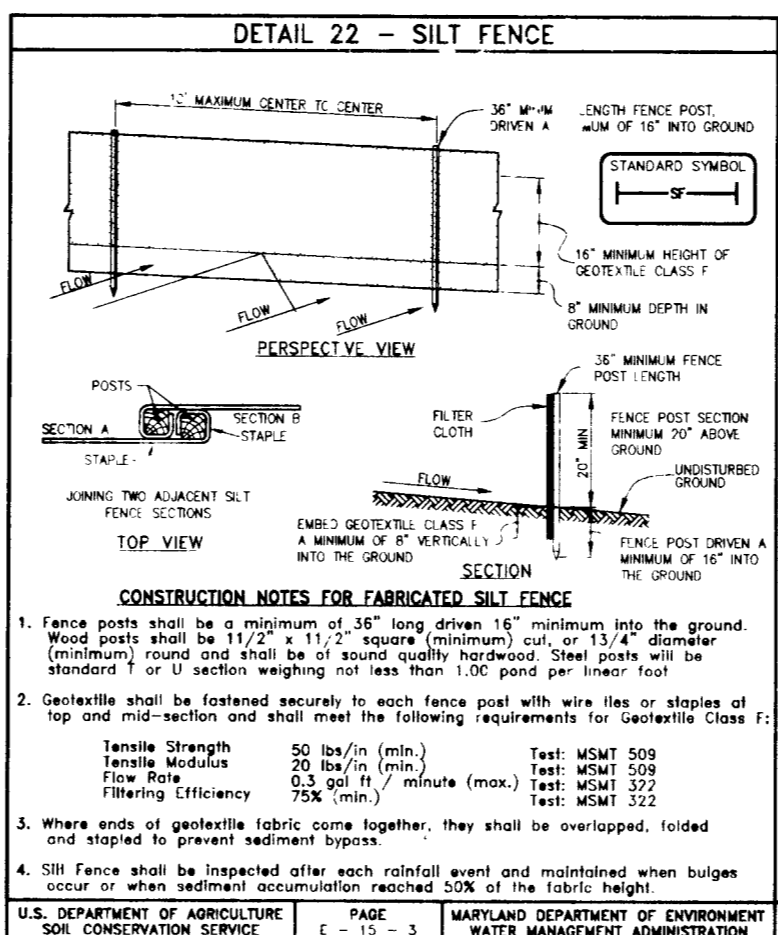
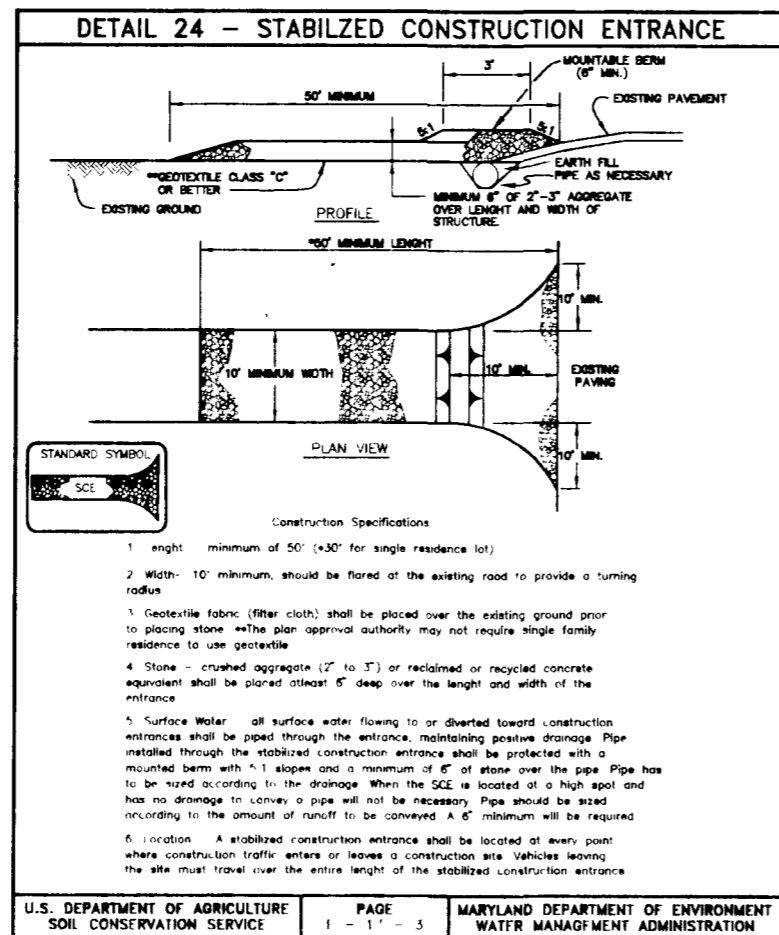
VICINITY MAP
SCALE: 1" = 2000'

LEGEND

- LIMIT OF DISTURBANCE
- SILT FENCE
- WALK OUT BASEMENT
- STABILIZED CONSTRUCTION ENTRANCE

BY THE DEVELOPER:
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL PROVIDE CERTIFICATES OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

BY THE ENGINEER:
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
Donald Mason 1/31/97
ENGINEER: DONALD MASON
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Cheri Simmons 2/13/97
NATURAL RESOURCE CONSERVATION SERVICE
REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT MEETS TECHNICAL REQUIREMENTS.
John R. Roberts 2/13/97
HOWARD SOIL CONSERVATION DISTRICT



SILT FENCE

SILT FENCE DESIGN CRITERIA

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE:

- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard I or U section weighing not less than 1.00 pound per linear foot.
- Geotextile shall be fastened securely to each fence post with wire ties or staples of top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in. (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in. (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft / minute (max.)	Test: MSMT 522
Filtering Efficiency	75% (min.)	Test: MSMT 522
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric height.

Donald Mason

GRADING PLAN / PLOT PLAN
CATTAIL WOODS
LOT 24
SECTION TWO, PARCEL 5

TAX MAP NO. 7 PARCEL 137
PLAT NOS. 12500-12502
4TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND
SCALE: 1" = 50' DATE: JANUARY 30, 1997