SHEET No.	DESCRIPTION
1	TITLE SHEET
2	SOFIA COURT PLAN AND PROFILE
3	STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
4	STORM DRAIN PROFILES
5	DRAINAGE AREA MAP & LANDSCAPE PLAN
6	SEDIMENT CONTROL NOTES AND DETAILS
7	LOT 38 PLAN
8	LOT 38 DETAILS

SHEET INDEX

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — DATE 4-24-00

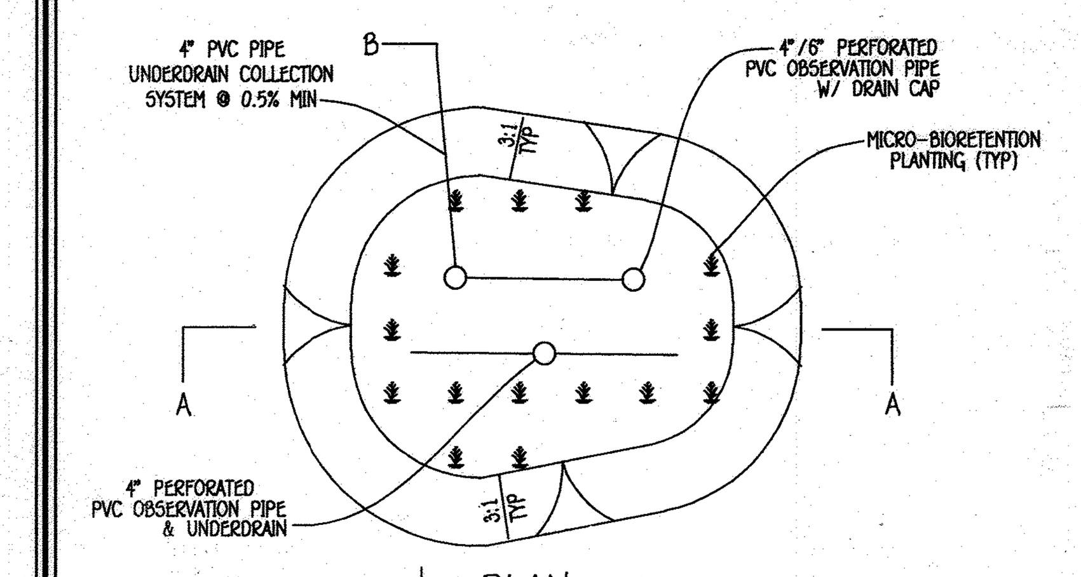
APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 5/16/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 5/11/00

FINAL ROAD CONSTRUCTION, GRADING AND SEDIMENT CONTROL PLANS

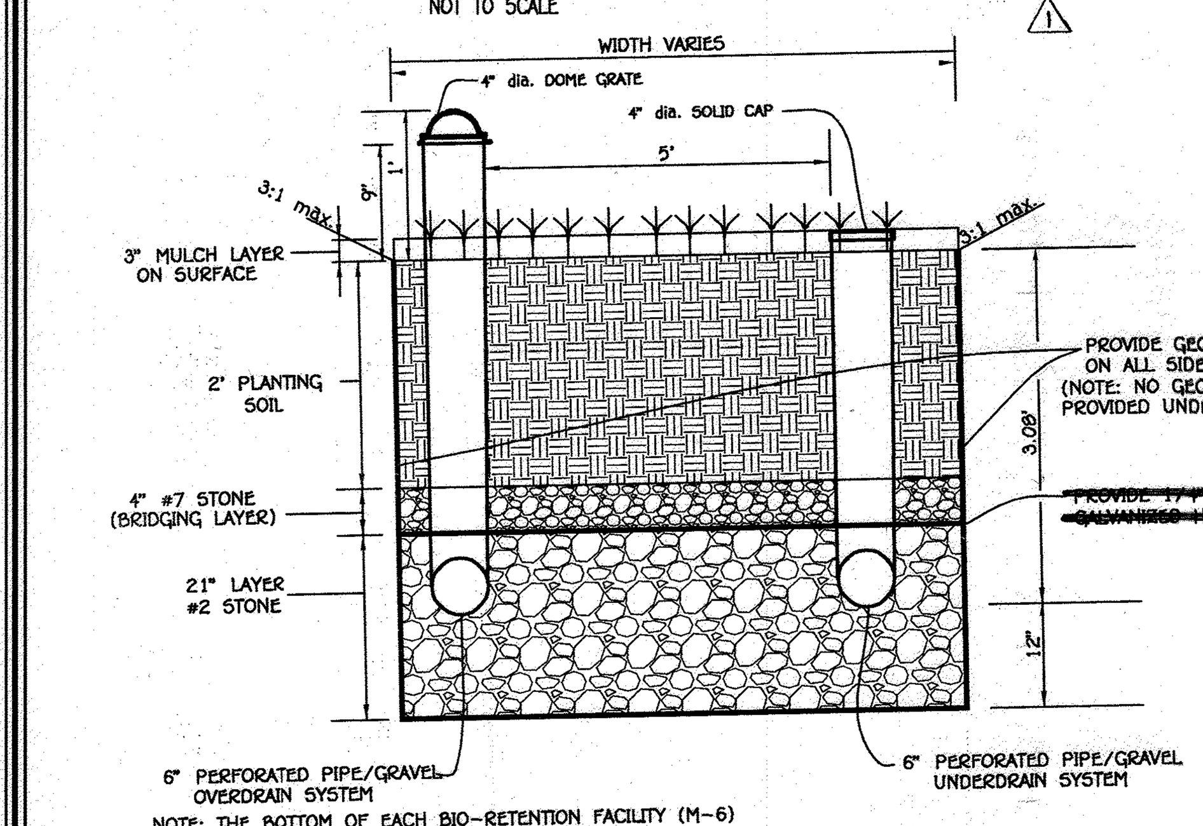
VINEYARDS AT CATTAIL CREEK

LOTS 31 THRU 35, 38 & 39

(A RESUBDIVISION OF BULK PARCEL 'D', "VINEYARDS AT CATTAIL CREEK", PLAT NO. F-00-68 AND A RESUBDIVISION OF LOTS 29 & 30, "VINEYARDS AT CATTAIL CREEK", PLAT NO. 14851)

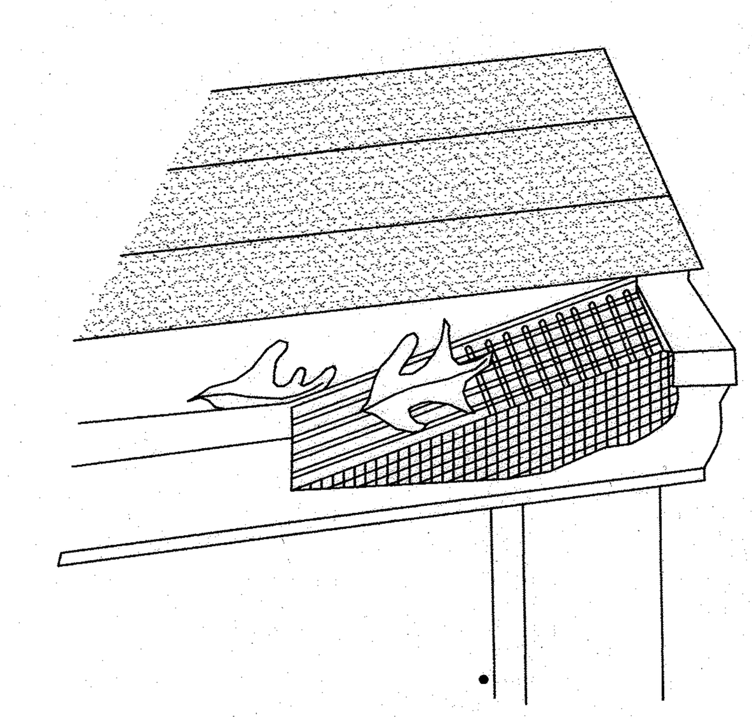


PLAN
NOT TO SCALE



NOTE: THE BOTTOM OF EACH BIO-RETENTION FACILITY (M-6) SHALL BE ROTOTILLED PRIOR TO STONE INSTALLATION.

TYPICAL SECTION - BIO-RETENTION FACILITY (F-6/M-6) (Lot 38)
NOT TO SCALE



GUTTER DRAIN FILTER DETAIL
NOT TO SCALE

OPERATION & MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (F-6/M-6)

A. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.

B. THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS AND REPLACE ALL DEFICIENT STAKES AND WIRES.

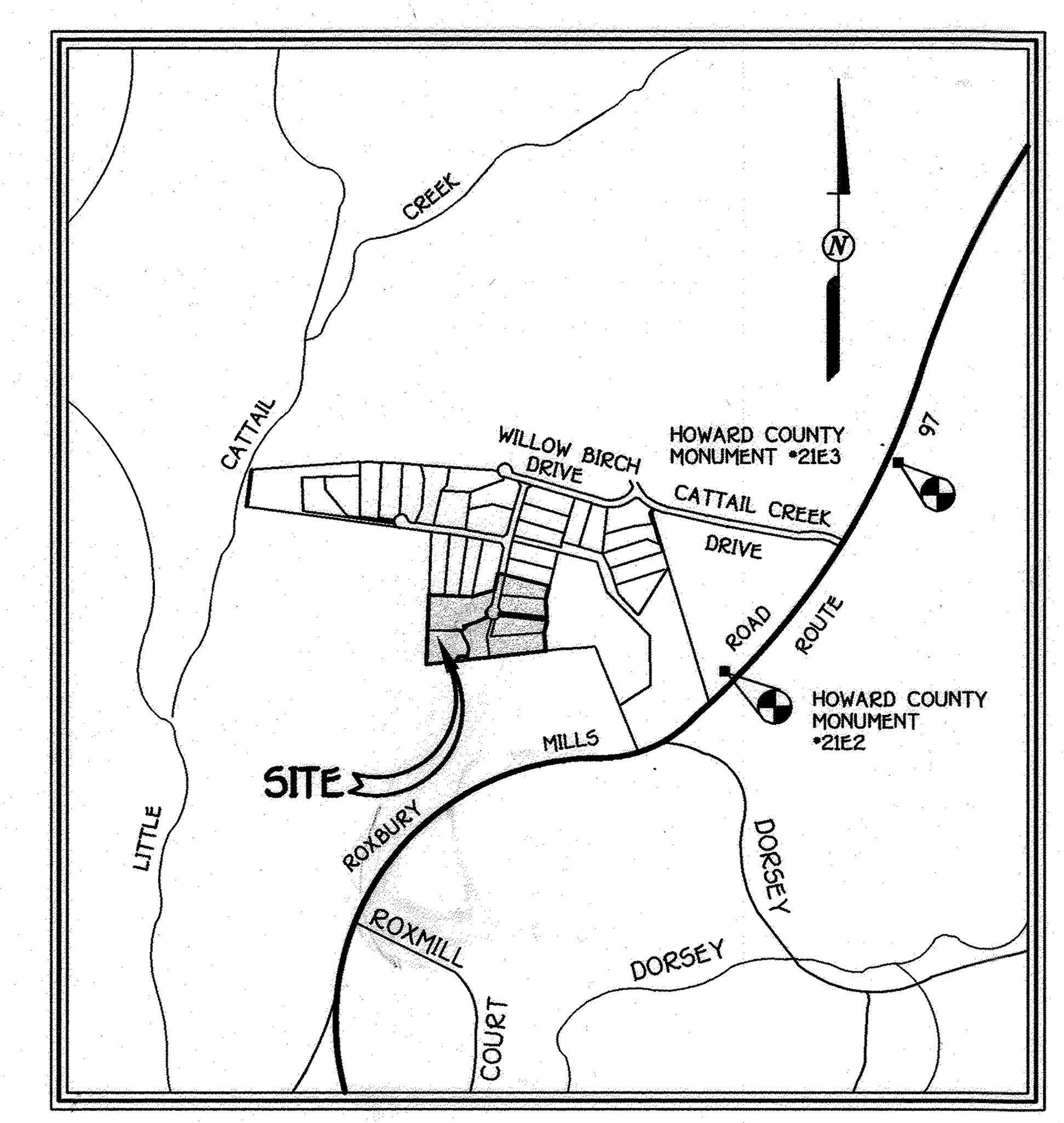
C. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.

D. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

ROAD CLASSIFICATION

ROAD NAME	CLASSIFICATION	R/W
SOFIA COURT	LOCAL ROAD	50'

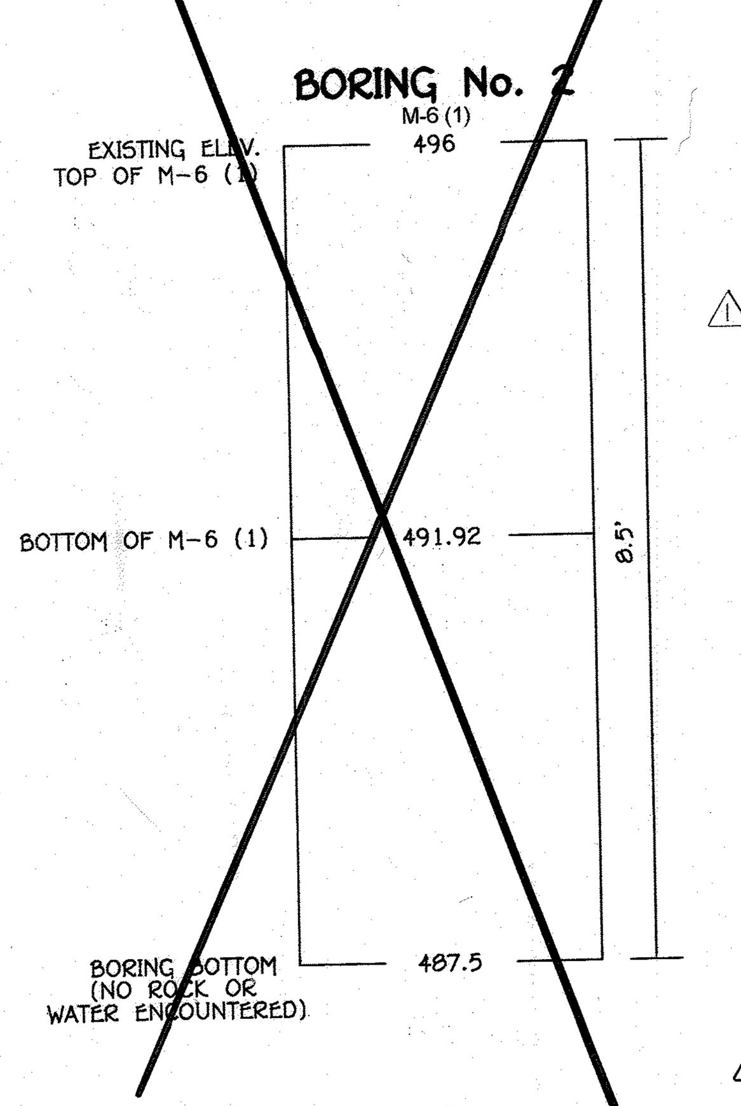
ZONED: RC-DEO



VICINITY MAP
SCALE: 1" = 1200'

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
5. 2 FOOT CONTOUR TOPOGRAPHY AND EXISTING CONDITIONS BASED ON AERIAL TOPOGRAPHIC SURVEY PREPARED BY AERIAL MAPPING CO., INC. , FLOWN IN 1996.
6. THE COORDINATES SHOWN HEREON ARE BASED UPON HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT Nos. 21E2 AND 21E3 WERE USED FOR THIS PROJECT.
   21E2 N 583,065.3000 E 1,300,868.4336 — 21E3 N 584,559.4765 E 1,302,074.5340
7. WATER IS PRIVATE.
8. SEWER IS PRIVATE.
9. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, INC. (APPROVED UNDER SP 96-11).
10. BACKGROUND INFORMATION:
    A. SUBDIVISION NAME: VINEYARDS AT CATTAIL CREEK
    B. TAX MAP NO.: 21
    C. PARCEL NO.: 220 & PART OF 2
    D. ZONING: RC-DEO
    E. ELECTION DISTRICT: FOURTH
    F. TOTAL TRACT AREA: 8.757 AC. ±
    G. NO. OF BUILDABLE LOTS: 7
    H. NO. OF PRESERVATION PARCELS: 0
    I. NO. OF OPEN SPACE LOTS: 0
    J. PRELIMINARY EQUIVALENT SKETCH PLAN APPROVAL DATE: 4/10/1996
    K. PREVIOUS FILE Nos. : SP 96-11, S 94-43, F 95-139, F 91-171, WP 95-96 & F 00-68
    L. TOTAL AREA OF OPEN SPACE REQUIRED: (OPEN SPACE PROVIDED UNDER F 00-68)
    M. TOTAL AREA OF OPEN SPACE PROVIDED: (OPEN SPACE PROVIDED UNDER F 00-68)
11. REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE TO BE PROVIDED AT THE JUNCTION OF THE PIPE / FLAG STEM AND THE ROAD R/W AND NOT ONTO THE PIPE / FLAG STEM DRIVEWAY.
12. NO CEMETERIES EXIST ON THE PROPERTY.
13. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF ASTM T-180.
14. THE WETLAND AND FOREST STAND DELINEATION WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. AND APPROVED UNDER SP 96-11 DATED 4/10/96.
15. THE FOREST CONSERVATION REQUIREMENTS PROVIDED UNDER F 00-68.
16. STORMWATER MANAGEMENT FACILITY: (STORMWATER MANAGEMENT PROVIDED UNDER F 00-68)
17. THE ROAD IS DESIGNED IN ACCORDANCE WITH DESIGN MANUAL STANDARDS WHICH WERE IN EFFECT AT THE TIME THE PRELIMINARY EQUIVALENT SKETCH PLAN WAS SIGNED ON 4/10/96.
18. LANDSCAPE SURETY IS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $8,700.00.
19. THE FOREST CONSERVATION OBLIGATION FOR "VINEYARDS AT CATTAIL CREEK", LOTS 29 THRU 35 (F 00-67) IS MET BY AFFORESTATION ON F 00-68, "VINEYARDS AT CATTAIL CREEK", LOTS 11 THRU 38, NON-BUILDABLE PRESERVATION PARCEL 'C' AND BUILDABLE PRESERVATION PARCEL 'E' (F 00-68). SURETY FOR $148,975.00 IS INCLUDED WITH DEVELOPER'S AGREEMENT FOR THAT SITE.

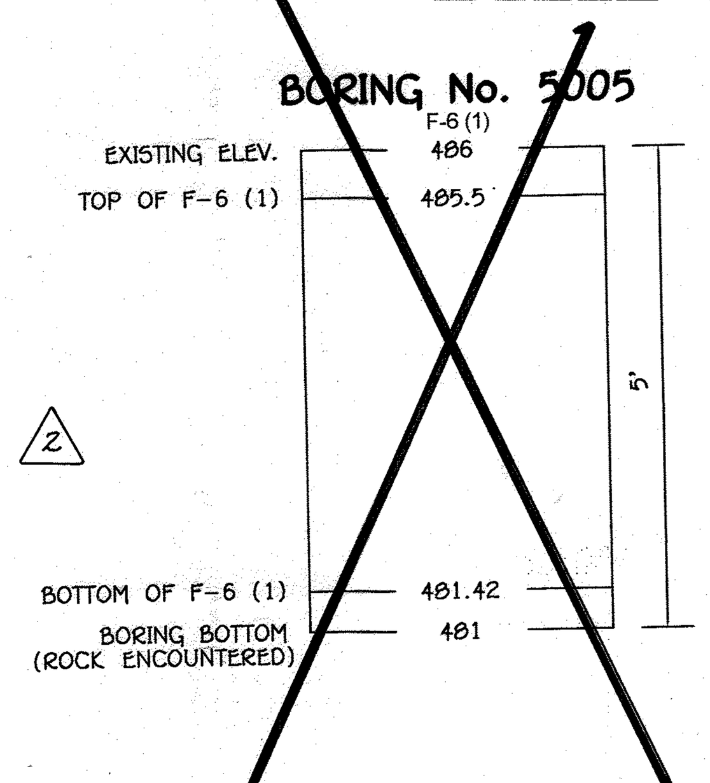


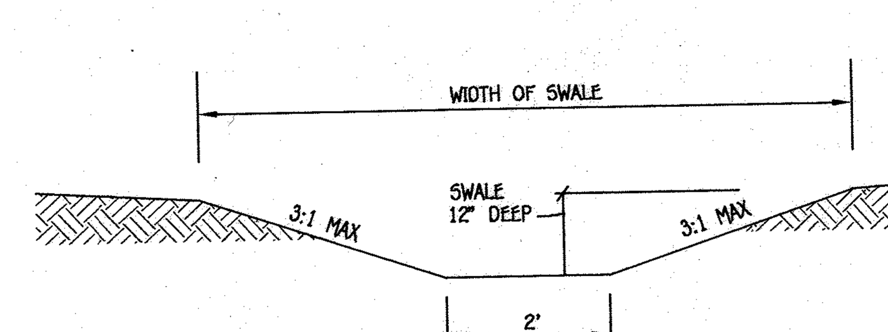
Lot 38

TAX MAP NO. 21 PARCEL NO. 220 & PART OF PARCEL NO. 2 GRID NO. 8

FOURTH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND





GRASS SWALE DETAIL
NOT TO SCALE
(Lot 38)

6-12-24
FOR REVISION 3 ONLY
9-20-22
2/4/2000

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

F.C.C. #30321/FINALS/SECTION2/TITLESHEET.DWG

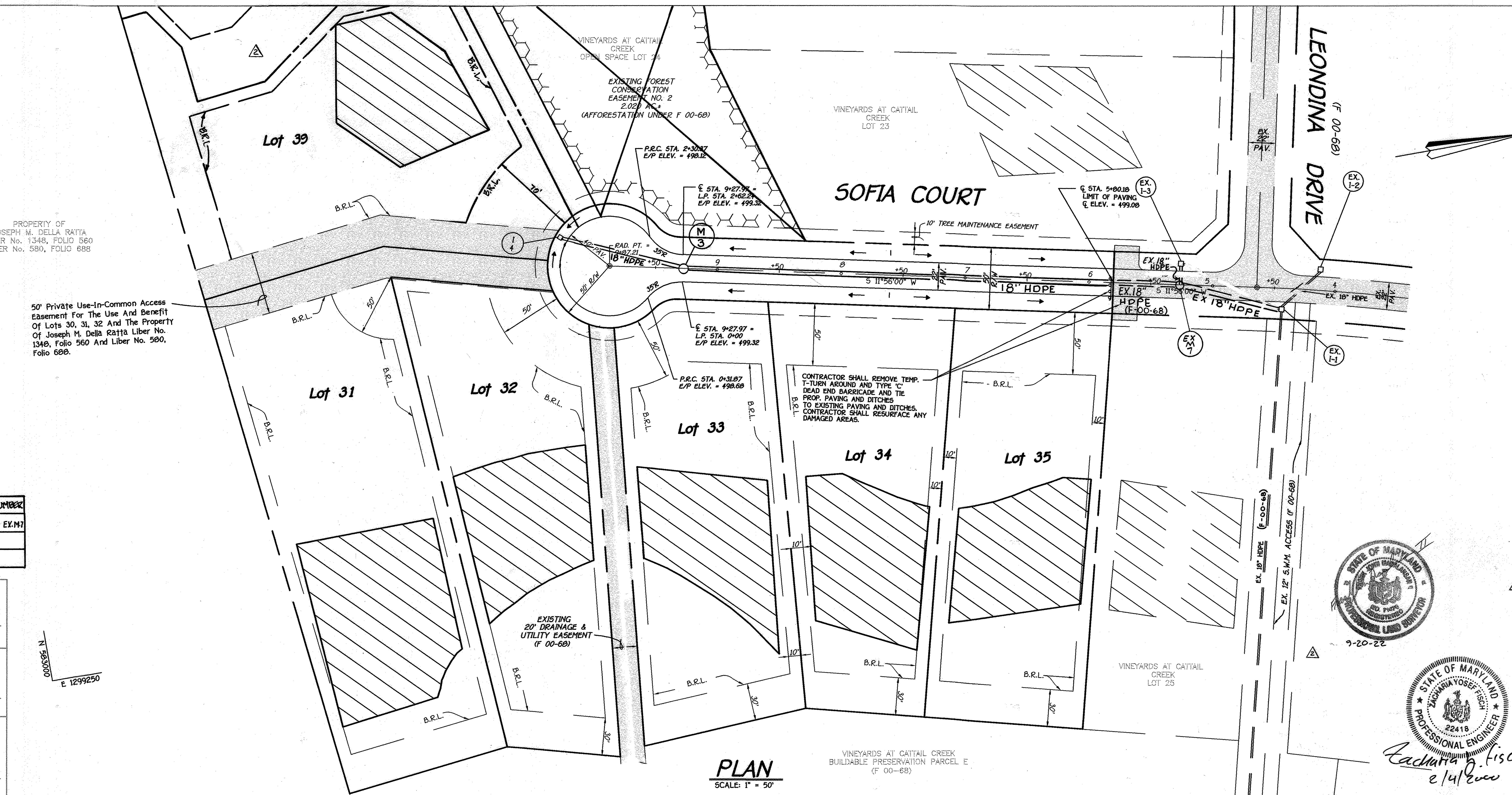
OWNER & DEVELOPER
MARIO F. MANNARELLI, SR.
MARIO F. MANNARELLI, JR.
2929 SUMMIT CIRCLE
ELLICOTT CITY, MARYLAND 21043

BY	NO.	REVISION	DATE
FCC	3	Revise House & Grading On Lot 38	5-20-24
FCC	1	REVISED TITLE & LOT LINES AND ADD DETAILS, REV. SHEET INDEX	8/15/22

VINEYARDS AT CATTAIL CREEK
LOTS 31 THRU 35, 38 & 39
(A RESUBDIVISION OF BULK PARCEL 'D' "VINEYARDS AT CATTAIL CREEK", PLAT NO. 26154
A RESUBDIVISION OF LOTS 29 & 30, "VINEYARDS AT CATTAIL CREEK", PLAT NO. 14851)
ZONED RC-DEO
TAX MAP NO. 21 PARCEL NO. 220 & PART OF PARCEL NO. 2 GRID NO. 8
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 2, 2000
SHEET 1 OF 8

F 00-67

K:\Drawings 3\30321 Mannarelli\FINALS\SECTION 2\30321TITLESHEET.dwg Mon Mar 27 10:45:32 2000 \\SURVEYS\4.0



2	8/15/22	REVISED TITLE, LOTLINES, SEPTIC AREA & LOT NUMBER
1	11/26/02	REVISE STORM DRAIN ALIGNMENT I-4 TO EX.M-7
NO.	DATE	DESCRIPTION
	REVISIONS	

APPROVED
DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT JA — 5/16/00 DATE

APPROVED
DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 5/11/00 DATE

APPROVED
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS HS — 4-24-00 DATE

VINEYARDS AT CATTAIL CREEK

LOTS 31 THRU 35, 38 & 39
(A RESUBDIVISION OF BULK PARCEL 'D' "VINEYARDS AT CATTAIL CREEK", PLAT NO. 26154 AND A RESUBDIVISION OF LOTS 29 & 30, "VINEYARDS AT CATTAIL CREEK", PLAT NO. 14851)
ZONED RC-DEO

FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

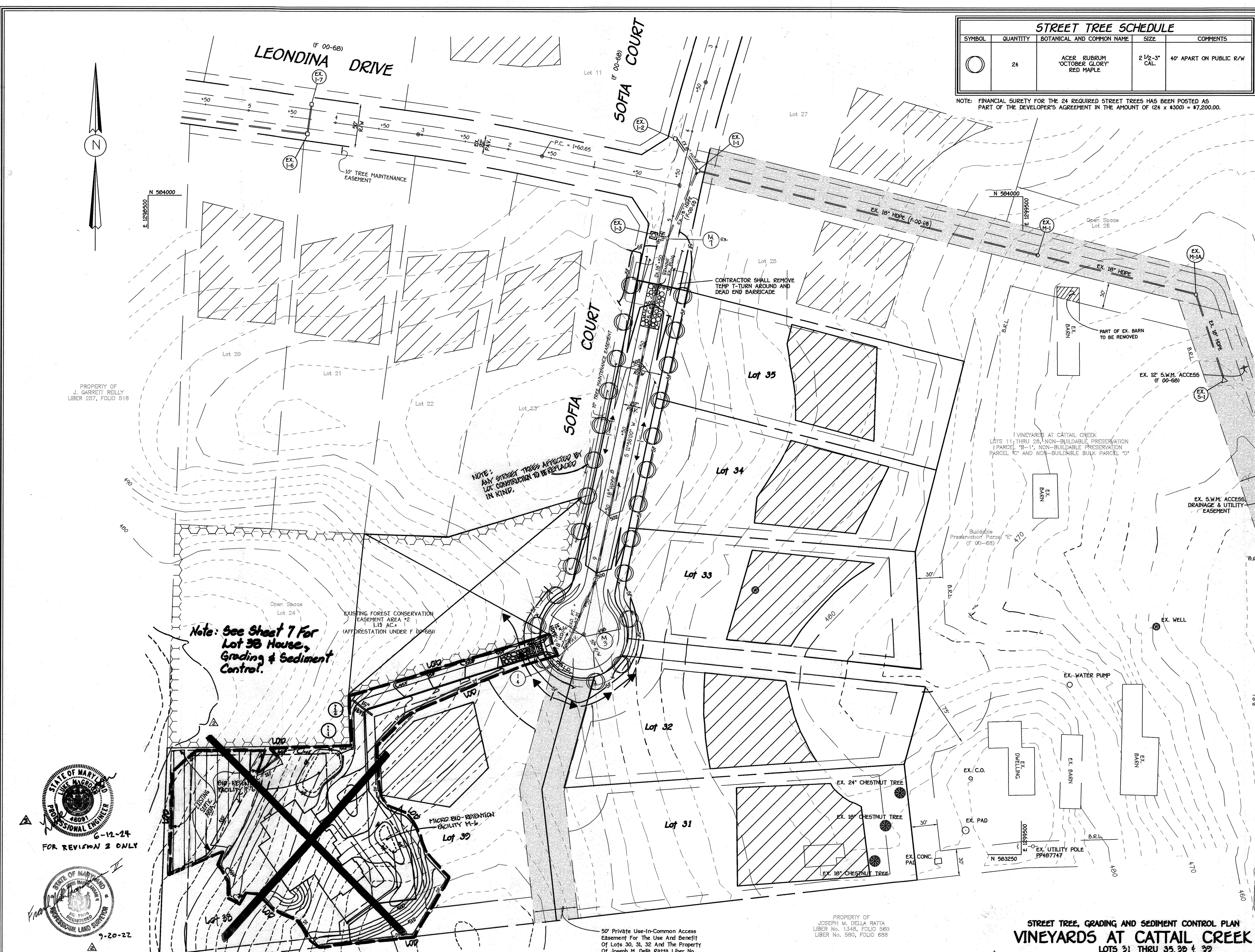
SOFIA COURT

PLAN AND PROFILE

OWNER & DEVELOPER
MARIO F. MANNARELLI, SR.
MARIO F. MANNARELLI, JR.
2929 SUMMIT CIRCLE
ELLICOTT CITY, MARYLAND 21043

SCALE: AS SHOWN	DATE: FEB. 2, 2000	DWG. NO. 2 OF 8
DES. Z.Y.F.	DRN. J.C.L.	CHK. Z.Y.F.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS



LEONDINA DRIVE
(F 00-68)
SOFIA COURT
(F 00-68)
Lot 11
Lot 27
Lot 25
Open Space Lot 26
Lot 20
Lot 21
Lot 22
Lot 23
Open Space Lot 24
Lot 35
Lot 34
Lot 33
Lot 32
Lot 31
Lot 39
Lot 38
10' TREE MAINTENANCE EASEMENT
P.C. = 1+60.65
N 584000
E 1298500
EX. 18" HDPE (F 00-68)
EX. 18" HDPE
CONTRACTOR SHALL REMOVE TEMP T-TURN AROUND AND DEAD END BARRICADE
PART OF EX. BARN TO BE REMOVED
EX. BARN
EX. 12" S.W.M. ACCESS (F 00-68)
PROPERTY OF J. GARRETT REILLY LIBER 257, FOLIO 518
VINEYARDS AT CATTAIL CREEK LOTS 11 THRU 28, NON-BUILDABLE PRESERVATION PARCEL "B-1", NON-BUILDABLE PRESERVATION PARCEL "C" AND NON-BUILDABLE BULK PARCEL "D"
NOTE: ANY STREET TREES AFFECTED BY LOT CONSTRUCTION TO BE REPLACED IN KIND.
EX. S.W.M. ACCESS, DRAINAGE & UTILITY EASEMENT
Buildable Preservation Parcel 'E' (F 00-68)
EXISTING FOREST CONSERVATION EASEMENT AREA #2 1.13 AC.± (AFFORESTATION UNDER F 00-68)
Note: See Sheet 7 For Lot 38 House, Grading & Sediment Control.
EX. FOREBAY
EX. GABION FILTER (F 00-68)
EX. WELL
EX. WATER PUMP
EX. DWELLING
EX. BARN
EX. C.O.
EX. PAD
EX. CONC. PAD
EX. UTILITY POLE PP487747
N 583250
EX. 24" CHESTNUT TREE
EX. 18" CHESTNUT TREE
EX. 18" CHESTNUT TREE
EX. S.W.M. POND (F 00-68)
Public Drainage, Storm Water Management & Utility Easement (F 00-68)
MICRO BIO-RETENTION FACILITY M-6
EXISTING SEPTIC AREA
LOD
B.R.L.
EX. 36" ASTM C-361 (F 00-68)
50' Private Use-In-Common Access Easement For The Use And Benefit Of Lots 30, 31, 32 And The Property Of Joseph M. Della Ratta Liber No. 1348, Folio 560 And Liber No. 580, Folio 688.
PROPERTY OF JOSEPH M. DELLA RATTA LIBER No. 1348, FOLIO 560 LIBER No. 580, FOLIO 688

STREET TREE SCHEDULE

SYMBOL	QUANTITY	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
◯	24	ACER RUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2-3" CAL.	40' APART ON PUBLIC R/W

NOTE: FINANCIAL SURETY FOR THE 24 REQUIRED STREET TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF (24 x $300) = $7,200.00.

ENGINEER'S CERTIFICATE

I Hereby Certify That This Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.

Zacharia Y. Fisch — Signature Of Engineer — 2/4/2000 Date

DEVELOPER'S CERTIFICATE

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

Signature Of Developer — 3/31/00 Date

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.

U.S.D.A. - Natural Resources Conservation Service — 4/14/00 Date

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

District Howard Soil Conservation Dist. — 4/17/00 Date

Approved: Department Of Planning And Zoning

Chief, Division Of Land Development — 5/16/00 Date

Chief, Development Engineering Division — 5/11/00 Date

Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways — 4-24-00 Date

LEGEND

—SF—SF—SF—	SILT FENCE
S.C.E.	STABILIZED CONSTRUCTION ENTRANCE
A-2 → A-2 →	EARTH DIKE
	LIMIT OF DISTURBANCE
I.P.	INLET PROTECTION
—SSF—SSF—	SUPER SILT FENCE

NOTE: EROSION CONTROL MATTING TO BE INSTALLED IN ALL ROADSIDE DITCHES AND CHANNEL FROM S-2 TO S.W.M. POND, SEE DETAIL, SHEET 6.

(Seal: State of Maryland, Luke Hichcock?, 46091, Professional Engineer) 6-12-24 FOR REVISION 3 ONLY

(Seal: State of Maryland, Registered Professional Land Surveyor) 9-20-22

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

F.C.C.#30321/FINALS/SECTION2/GRADING PLAN.DWG

NO.	DATE	DESCRIPTION
2	8/15/22	[illegible]
1	11/26/02	REVISE STORM DRAIN ALIGNMENT I-4 TO EX. M-7
REVISIONS		

PLAN
SCALE: 1" = 50'

No.	Description	Date
3	Revise House & Grading On Lot 38	5.20.24
Revisions		

OWNER & DEVELOPER
MARIO F. MANNARELLI, SR.
MARIO F. MANNARELLI, JR.
2929 SUMMIT CIRCLE
ELLICOTT CITY, MARYLAND 21043

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN

VINEYARDS AT CATTAIL CREEK

LOTS 31 THRU 35, 38 & 39
(A RESUBDIVISION OF BULK PARCEL 'D' "VINEYARDS AT CATTAIL CREEK", PLAT NO. 26154
A RESUBDIVISION OF LOTS 29 & 30, "VINEYARDS AT CATTAIL CREEK", PLAT NO. 14851)
ZONED RC-DEO
TAX MAP NO. 21 PARCEL NO. 220 & PART OF PARCEL NO. 2 GRID NO. 8
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 2, 2000
SHEET 3 OF 8

F00-67

STRUCTURE SCHEDULE

STRUCTURE NO.	TOP ELEVATION	INV.IN	INV.OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	REMARKS
I-4	495.15	-----	491.50	SOFIA DRIVE	L.P. STA. 1+49.92	5' FROM E/P	OPEN END GRATE	S.D. 4.36 W/ S.D. 4.13
M-3	499.65	490.66	490.61	SOFIA COURT	9+27.97	@ ℄	STD. MANHOLE	G - 5.01

* A.D.S. - ADVANCED DRAINAGE SYSTEMS, INC.
CORPORATE OFFICE
3300 RIVERSIDE DRIVE
COLUMBUS, OHIO 43221
PHONE: 1-800-733-7473

ADVANCED DRAINAGE SYSTEMS, INC.
LOCAL SALES REPRESENTATIVE:
MR. EDWARD C. MAULDIN
8103 HARRIS AVENUE
BALTIMORE, MD. 21234
PHONE: (410) 665-3658
1-800-733-9554

PIPE SCHEDULE

SIZE	MATERIAL	LENGTH
18"	H.D.P.E.	452'

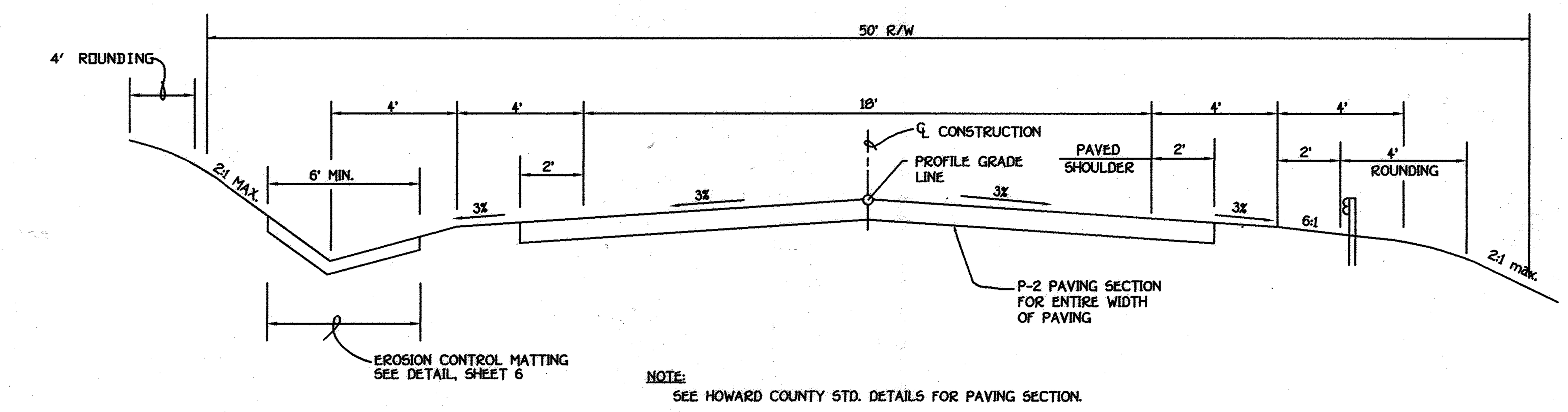
Approved: Department Of Planning And Zoning

Chief, Division Of Land Development JA — Date 5/16/00

Chief, Development Engineering Division MK — Date 5/11/00

Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways HS — Date 4-24-00



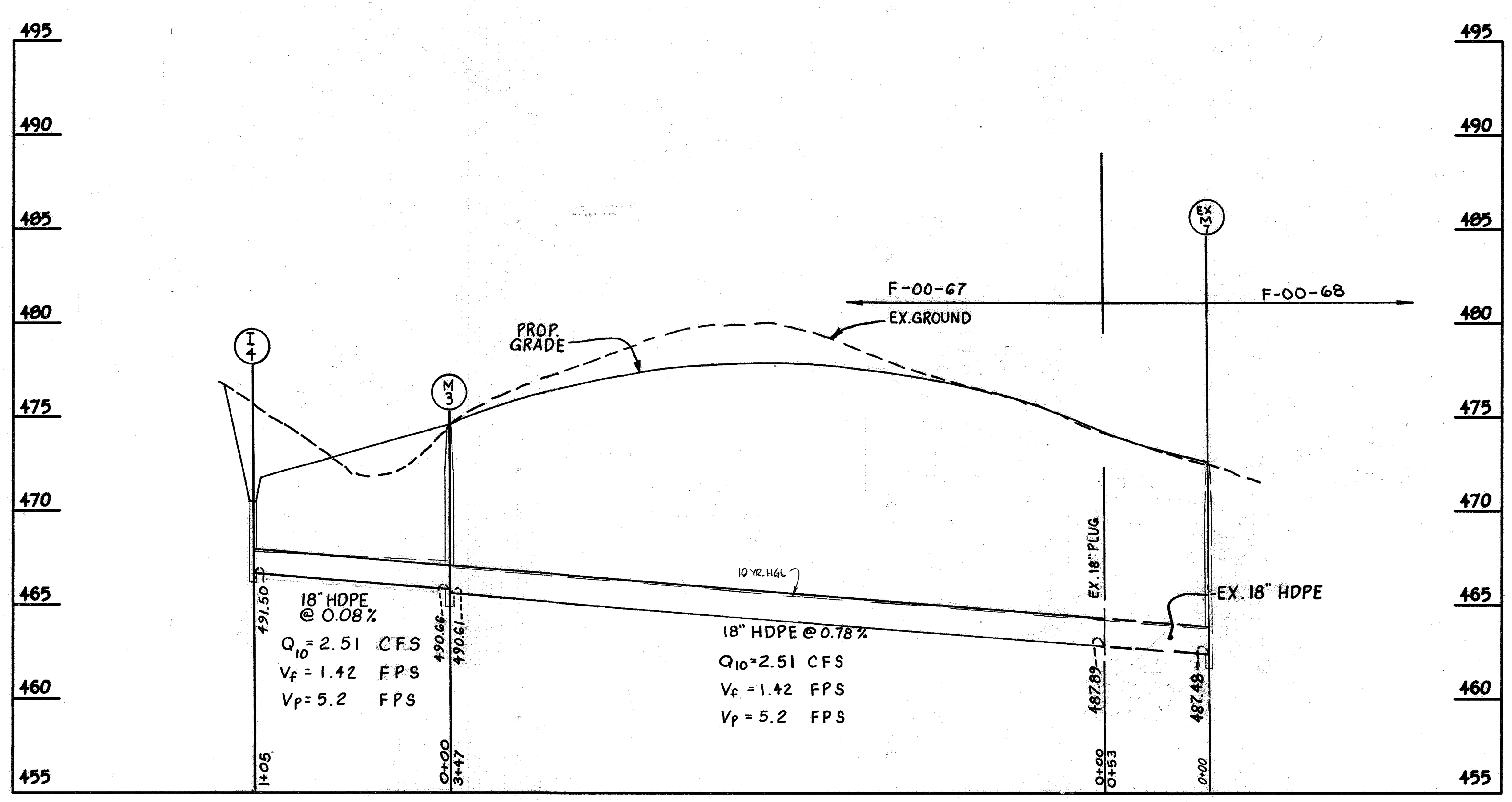
NOTE:
SEE HOWARD COUNTY STD. DETAILS FOR PAVING SECTION.

TYPICAL ROADWAY SECTION

NO SCALE

ROADWAY INFORMATION CHART

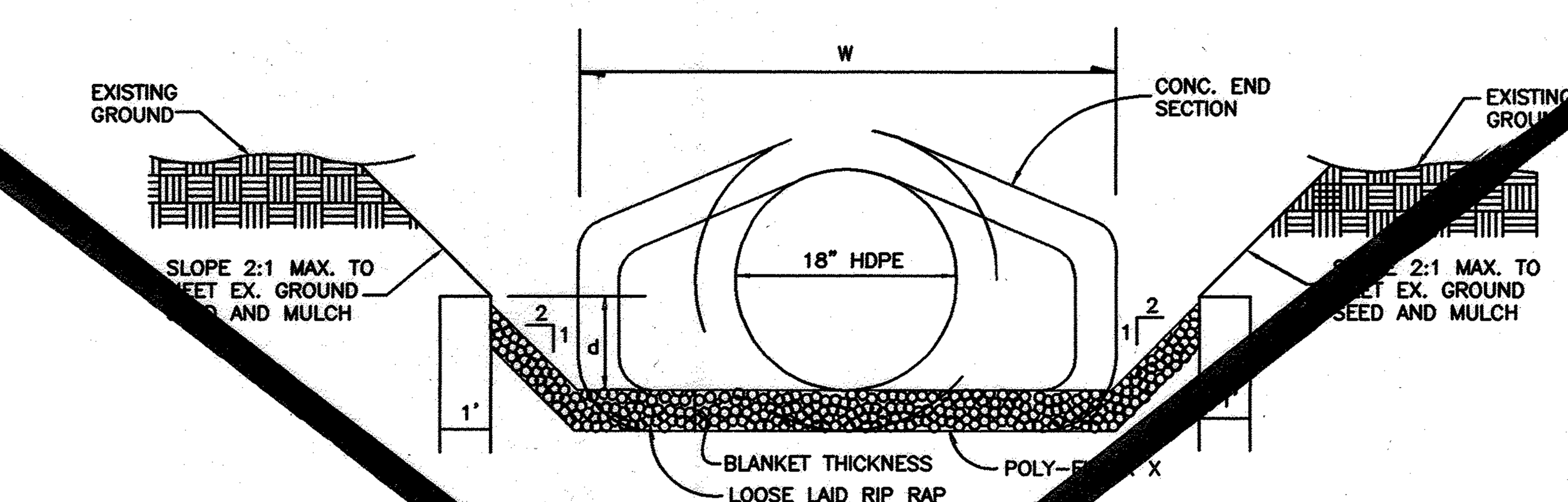
ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	℄ STATION LIMITS	PAVING SECTION
SOFIA COURT	LOCAL ROAD	30 M.P.H.	RC-DEO	5+80.18 TO 9+87.21	P-2



PROFILE

SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'

N.I.C.



RIP RAP CHANNEL DETAIL

NO SCALE

RIP-RAP CHANNEL DESIGN DATA																
STRUCTURE	AREA	WETTED PERIMETER	R	$R^{2/3}$	S	$S^{1/2}$	[illegible]	d	N	V (F.P.S.)	Q (C.F.S.)	RIP-RAP SIZE d_{50}	RIP-RAP SIZE d_{MAX}	BLANKET THICKNESS	Q_{10}	DIA.
S-2	2.5 S.F.	6.24'	0.4	0.54	0.005	0.07	4.	0.5'	0.035	1.62	4.05	9.5"	15"	19"	2.51	18"

CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS

1. The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
2. The rock or gravel shall conform to the specified grading limits when installed respectively in the riprap or filter.
3. Filter cloth shall be protected from punching, cutting or tearing. Any damage other than an occasional shall hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.
4. Stone for the riprap or gabion outlets may be placed by equipment. Both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for riprap or gabion outlets shall be delivered and placed in a manner that will insure that it is reasonably homogenous with the smaller stones and spalls filling the voids between the larger stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent works.

2	8/15/22	REVISED TITLE
1	11/26/02	REVISE STORM DRAIN ALIGNMENT I-4 TO EX.M-7
NO.	DATE	DESCRIPTION
	REVISIONS	

STATE OF MARYLAND — REGISTERED PROFESSIONAL LAND SURVEYOR — 9-20-22

STATE OF MARYLAND — ZACHARIA YOSEF FISCH — 22418 — PROFESSIONAL ENGINEER
Zacharia Y. Fisch 2/4/2000

OWNER & DEVELOPER
MARIO F. MANNARELLI, SR.
MARIO F. MANNARELLI, JR.
2929 SUMMIT CIRCLE
ELLICOTT CITY, MARYLAND 21043

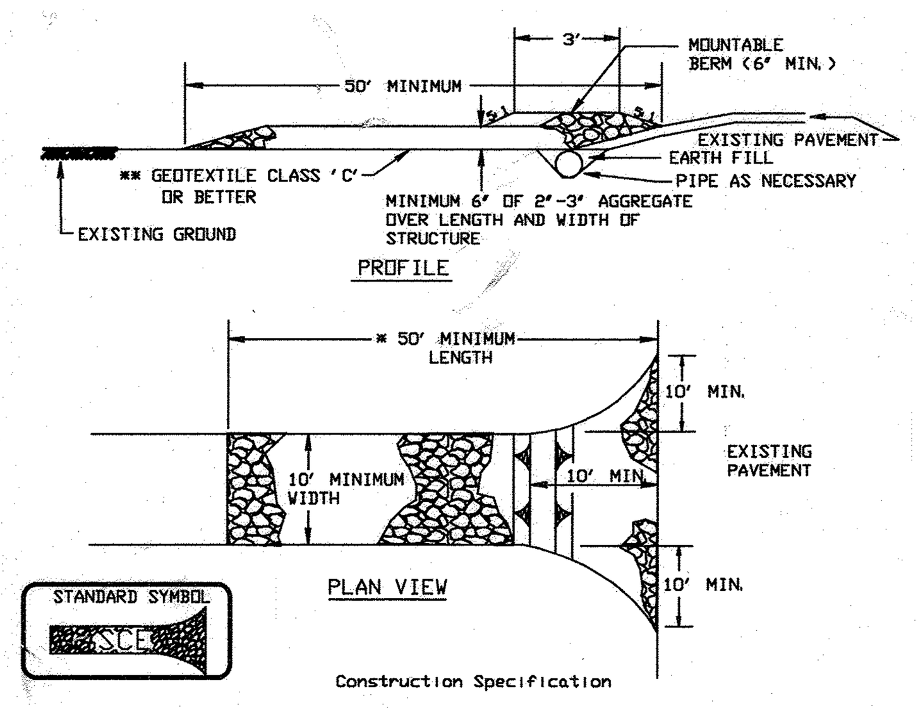
STORM DRAIN PROFILES

VINEYARDS AT CATTAIL CREEK

LOTS 31 thru 35, 38 & 39
(A RESUBDIVISION OF BULK PARCEL 'D' "VINEYARDS AT CATTAIL CREEK", PLAT NO. 26154
A RESUBDIVISION OF LOTS 29 & 30, "VINEYARDS AT CATTAIL CREEK", PLAT NO. 14851)
ZONED RC-DEO
TAX MAP NO. 21 PARCEL NO. 220 & PART OF PARCEL NO. 2 GRID NO. 8
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 2, 2000
SHEET 4 OF 8

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

F.C.C.# 30321/FINALS/SECTION2/STORMDRAINS 1.DWG



Construction Specification

1. Length - minimum of 50' (*30' for single residence lot).

2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.

3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.

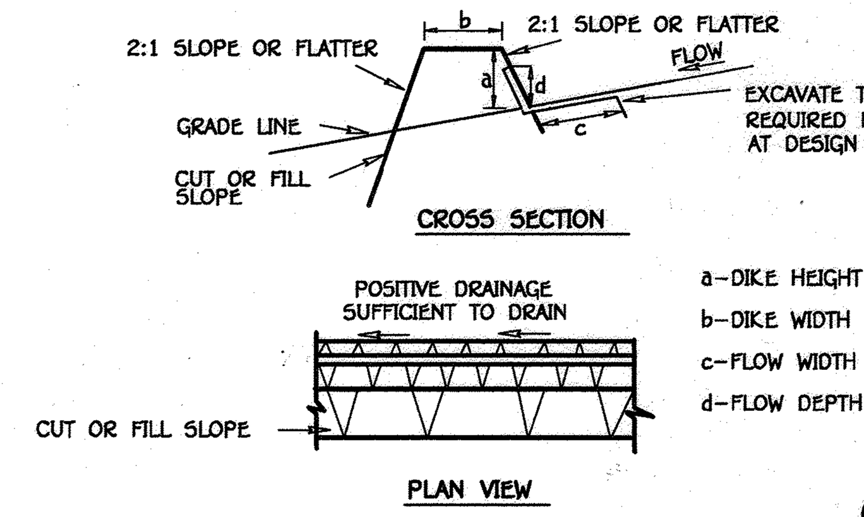
4. Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

5. Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.

6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

STABILIZED CONSTRUCTION ENTRANCE - 2

NOT TO SCALE



	DIKE A	DIKE B
a-DIKE HEIGHT	18"	30"
b-DIKE WIDTH	24"	36"
c-FLOW WIDTH	4'	6'
d-FLOW DEPTH	12"	24"

STANDARD SYMBOL
A-2 B-3

FLOW CHANNEL STABILIZATION
GRADE 0.5% MIN. 10% MAX.

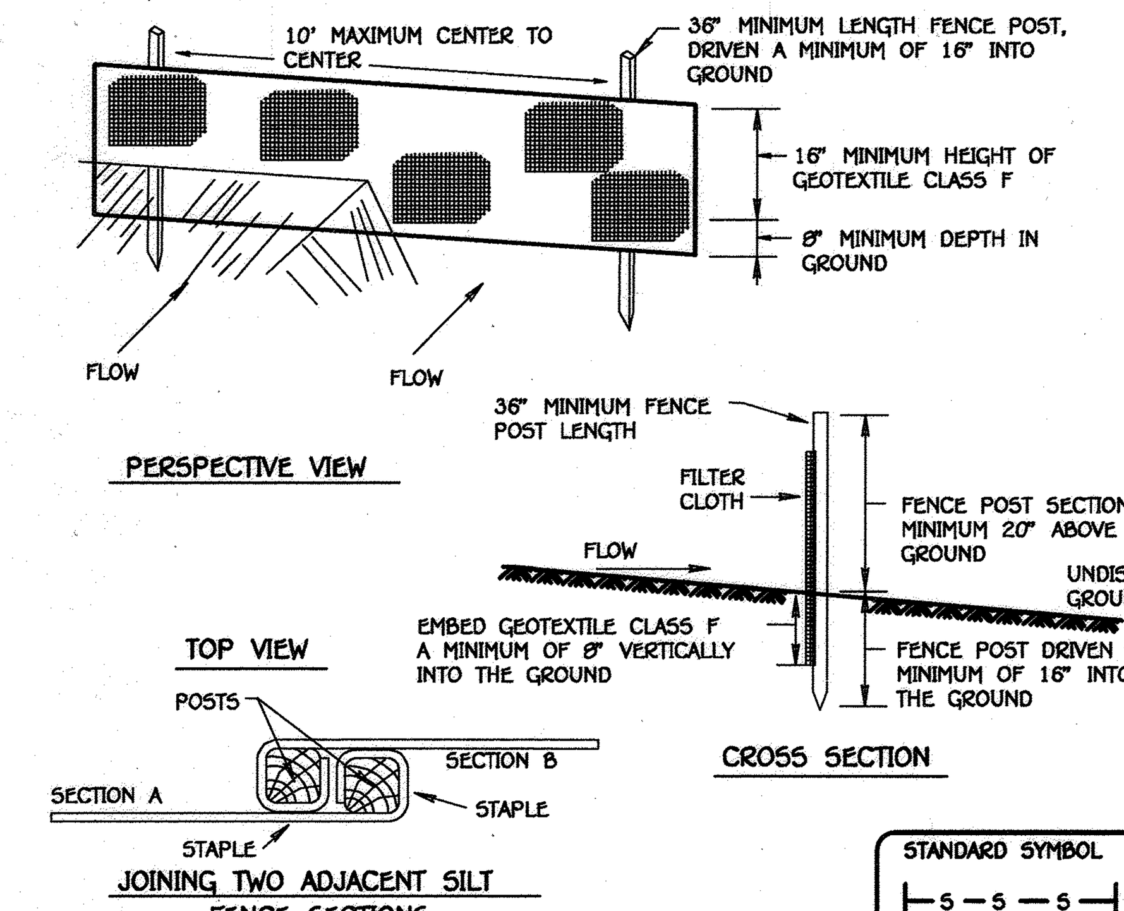
1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum

Construction Specifications

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than%1
2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.
4. All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
6. Fill shall be compacted by earth moving equipment.
7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
8. Inspection and maintenance must be provided periodically and after each rain event.

EARTH DIKE

NOT TO SCALE



STANDARD SYMBOL
⊢S—S—S⊣

Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

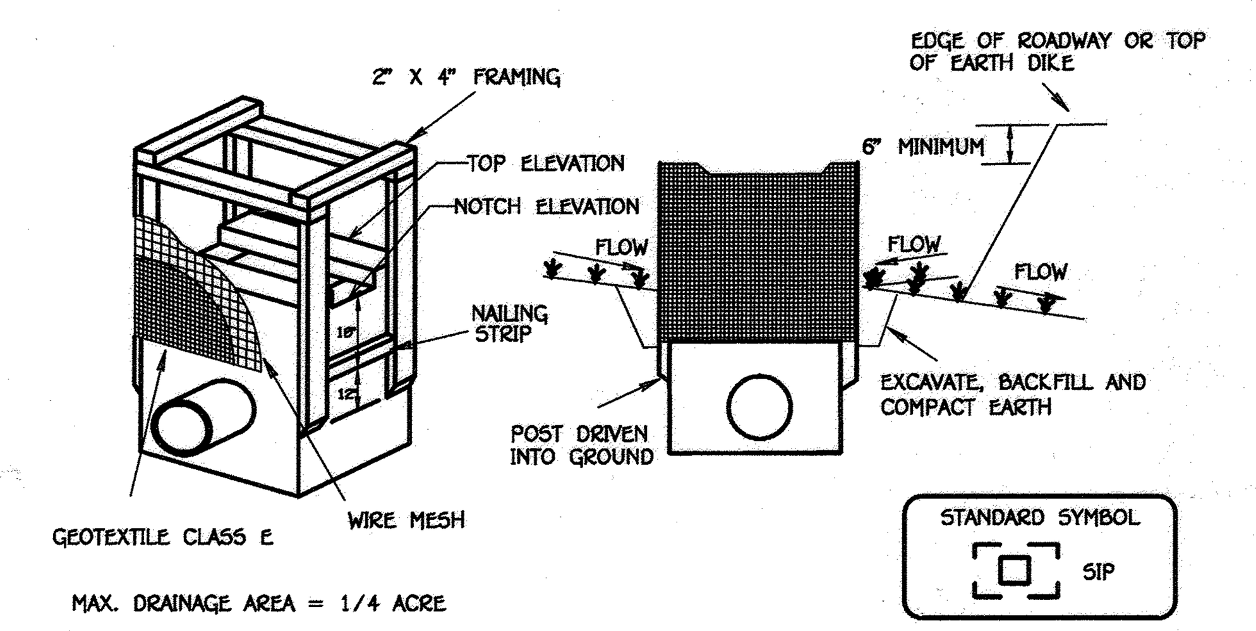
Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft / minute (max.^{2})	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

DETAIL 22 - SILT FENCE

NOT TO SCALE



STANDARD SYMBOL
SIP

MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

1. Excavate completely around the inlet to a depth of 18" below the notch elevation.

2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.

3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.

4. Stretch the Geotextile Class E tightly over the wire mesh with the geotixtile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.

5. Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.

6. If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.

7. The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

STANDARD INLET PROTECTION

NOT TO SCALE

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND THAT ANY RESPONSIBLE PERSONNEL IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY".

[signature] 3/31/00
SIGNATURE OF DEVELOPER — DATE

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[signature] 2/4/2000
SIGNATURE OF ENGINEER — DATE

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

[signature] 4/14/00
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE — DATE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED:

[signature] 4/14/00
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[signature] 5/16/00
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[signature] 5/11/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[signature] 4-24-00
CHIEF, BUREAU OF HIGHWAYS HS — DATE

SEDIMENT CONTROL NOTES

1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LISCENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. GRADING NECESSARY TO INSTALL STORM DRAINS, SEDIMENT TRAP AND EARTH DIKES TO BE PERFORMED FIRST. REMAINDER OF THE GRADING TO BE PERFORMED AFTER STORM DRAINS, SEDIMENT TRAP AND EARTH DIKES ARE INSTALLED.
4) 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.
5) 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.
6) 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.
7) SITE ANALYSIS:

TOTAL AREA OF SITE	8.76	ACRES
AREA DISTURBED	1.80	ACRES
AREA TO BE ROOFED OR PAVED	0.33	ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.47	ACRES
TOTAL CUT	2,000	CU.YDS.
TOTAL FILL	2,000	CU.YDS.
OFFSITE WASTE/BORROW AREA LOCATION	N/A	CU.YDS.

8) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10) 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.
11) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGHTS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION

Using vegetation as cover for barren soil to protect it from forces that cause erosion.

PURPOSE

Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat and visual resources.

CONDITIONS WHERE PRACTICE APPLIES

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration O(up to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary Soil Stockpiles, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dams, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc.

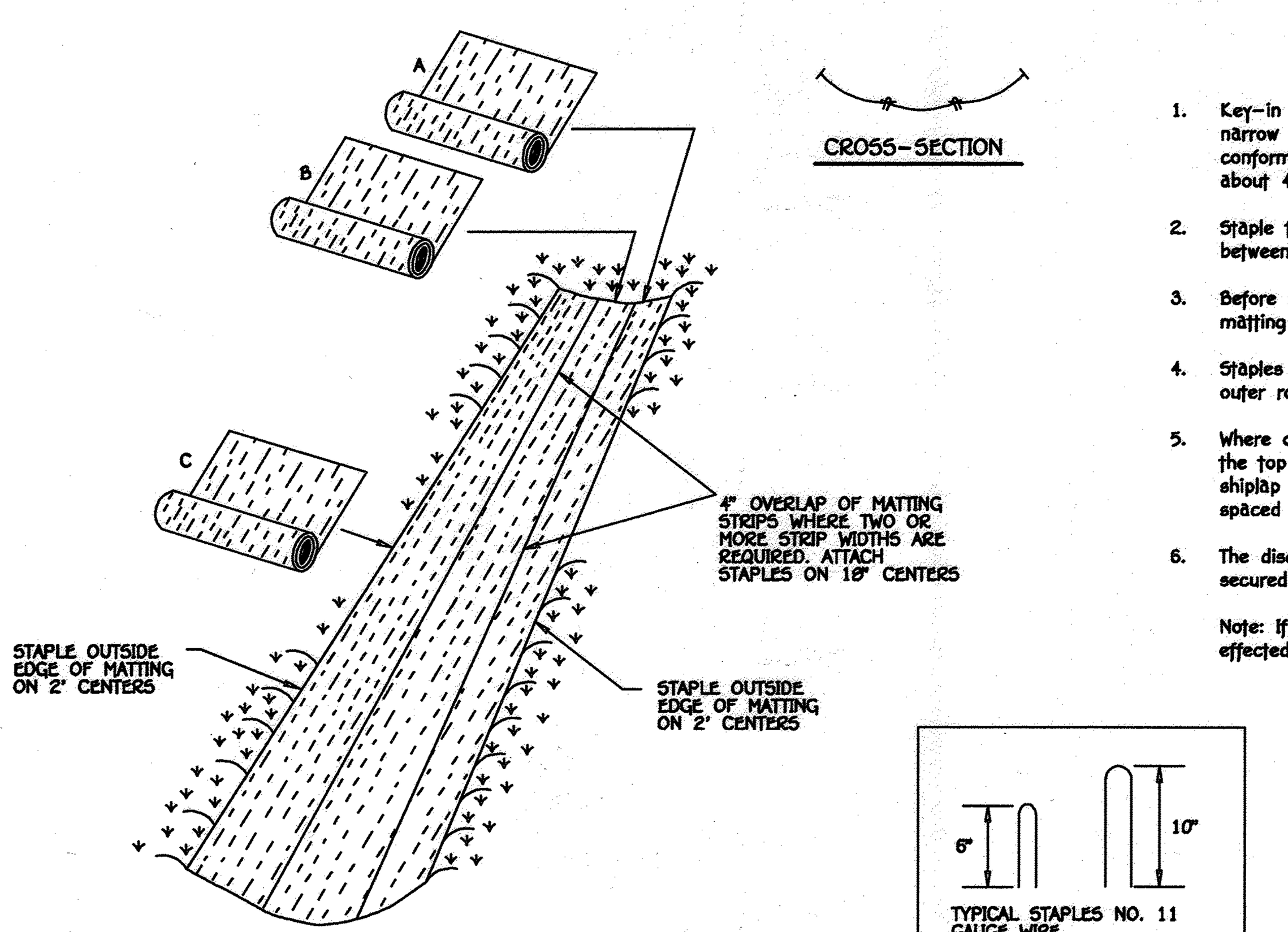
EFFECTS ON WATER QUALITY AND QUANTITY

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.
Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.
Sediment control devices must remain in place during grading, seedbed preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

A. Site Preparation
   i. Install erosion and sediment control structures (either temporary of permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
   ii. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
   iii. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.
B. Soil Amendments (Fertilizer and Lime Specifications)
   i. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
   ii. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee of the producer.
   iii. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a •100 mesh sieve and 98-100% will pass through a •20 mesh sieve.
   iv. Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.
C. Seedbed Preparation
   i. Temporary Seeding
      a. Seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
      b. Apply fertilizer and lime as prescribed on the plans.
      c. In corporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.
   ii. Permanent Seeding
      a. Minimum soil conditions required for permanent vegetative establishment:
         1. Soil pH shall be between 6.0 and 7.0.
         2. Soluble salts shall be less than 500 parts per million (ppm).
         3. The soil shall contain less than 40% clay, but enough fine grained material (>30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or serecia lespedezas is to be planted, then a sandy soil (<30% silt plus clay) would be acceptable.
         4. Soil shall contain 1.5% minimum organic matter by weight.
         5. Soil must contain sufficient pore space to permit adequate root penetration.
         6. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.
      b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
      c. Apply soil amendments as per soil test or as included on the plans.
      d. Mix soil amendments into the top 3-5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.

D. Seed Specifications
   i. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.
   Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.
   ii. Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75°-80° F. can weaken bacteria and make the inoculant less effective.
E. Methods of Seeding
   i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a cultipacker seeder.
      a. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen; maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorous): 200 lbs/ac; K20 (potassium): 200 lbs/ac.
      b. Lime - use only ground agricultural limestone, (Up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
      c. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
   ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
      a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 265 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.
      b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
   iii. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
      a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
      b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
F. Mulch Specifications (In order of preference)
   i. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
   ii. Wood Cellulose Fiber Mulch (WCFM)
      a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
      b. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
      c. WCFM, including dye, shall contain no germination or growth inhibiting factors.
      d. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
      e. WCFM material shall contain no elements or compounds at concentration levels that will be phytol-toxic.
      f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm. , diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.
   Note: Only sterile straw mulch should be used in areas where one species of grass is desired.
G. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.
   i. If grading is completed outside of the seeding season, mulch along shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
   ii. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.
   iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.
H. Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard:
   i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.
   ii. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
   iii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and crest of banks. The remainder of area should be appear uniform after binder application. Synthetic binders - such as Acrylic DLR (Agro-Tack), DCA-70 Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
   iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.
I Incremental Stabilization - Cut Slopes
   i. All cuts slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'.
   ii. Construction sequence (Refer to Figure 3 below):
      a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.
      b. Perform Phase 1 excavation, dress, and stabilize.
      c. Perform Phase 2 excavation, dress and stabilize. Overseed Phase 1 areas as necessary.
      d. Perform final phase excavation, dress and stabilize. Overseed previously seeded areas as necessary.
Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions int he operation of completing the operation out of the seeding season will necessitate the application of temporary stabilization.
J. Incremental Stabilization of Embankments - Fill Slopes
   i. Embankments shall be constructed in lifts as prescribed on the plans.
   ii. Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches 15", or when the grading operation ceases as prescribed in the plans.
   iii. At the end of each day, temporary berms and pipe slope drains should be constructed along the top edge of the embankment to intercept surface runoff and convey it down the slope in a non-erosive manner to a sediment trapping device.
   iv. Construction sequence: Refer to Figure 4 (below).
      a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct slope silt fence on low side of fill as shown in Figure 5, unless other methods shown on the plans address this area.
      b. Place Phase 1 embankment, dress and stabilize.
      c. Place Phase 2 embankment, dress and stabilize.
      d. Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.
Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.



Construction Specifications

1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
2. Staple the 4" overlap in the channel center using an 18" spacing between staples.
3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

EROSION CONTROL MATTING

NOT TO SCALE

SEQUENCE OF CONSTRUCTION

1. OBTAIN A GRADING PERMIT.
2. NOTIFY "MISS UTILITY" AT LEATS 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1880 24 HOURS BEFORE STRATING WORK.
3. CLEAR AND GRUB FOR SEDIMENT CONTROL MEASURES. REMOVE DEAD END BARRICADE AND INSTALL STABILIZED CONSTRUCTION ENTRANCE. (1 day)
4. INSTALL SILT FENCE AND EARTH DIKES. (1 day)
5. OBTAIN PERMISSION OF THE SEDIMENT CONTROL INSPECTOR PRIOR TO PROCEED.
6. GRADE ROADS TO PROPOSED SUBGRADE AND INSTALL STORM DRAIN SYSTEM AND INLET PROTECTION.(2 weeks)
7. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS.
8. INSTALL BASE COURSE FOR THE PROPOSED ROAD. (3 days)
9. STABILZE ALL DISTURBED AREAS AND OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTORS TO PROCEED.
10. APPLY TACK COAT TO SUB-BASE AND LAY SURFACE COURSE. (1 week)
11. CONTRACTOR SHALL REMOVE THE EXISTING T-TURN AROUND AND TIE THE PROPOSED PAVING TO THE EXISTING PAVING. SIDE DITCHES SHALL ALSO BE GRADED TO TIE TO THE EXISTING SIDE DITCHES. AND THE REMAINING AREAS BROUGHT TO FINAL GRADE.
12. WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE DEVICES MAY BE REMOVED AND THE REMAINING AREAS BROUGHT TO FINAL GRADE. STABILIZE ALL REMAINING AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (1 day)
13. NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR A FINAL INSPECTION OF THE COMPLETED PROJECT.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

9-20-22

BY	NO.	REVISION	DATE
FCC	1	REVISED TITLE	8/15/22

OWNER & DEVELOPER
MARIO F. MANNARELLI, SR.
MARIO F. MANNARELLI, JR.
2929 SUMMIT CIRCLE
ELLICOTT CITY, MARYLAND 21043

SEDIMENT CONTROL NOTES AND DETAILS
VINEYARDS AT CATTAIL CREEK
LOTS 31 thru 35, 38 & 39
(A RESUBDIVISION OF BULK PARCEL 'D' "VINEYARDS AT CATTAIL CREEK", PLAT NO. 26154, A RESUBDIVISION OF LOTS 29 & 30, "VINEYARDS AT CATTAIL CREEK", PLAT NO. 14851)
ZONED RC-DEO
TAX MAP NO. 21 PARCEL NO. 220 & PART OF PARCEL NO. 2 GRID NO. 8
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 2, 2000
SHEET 6 OF 8

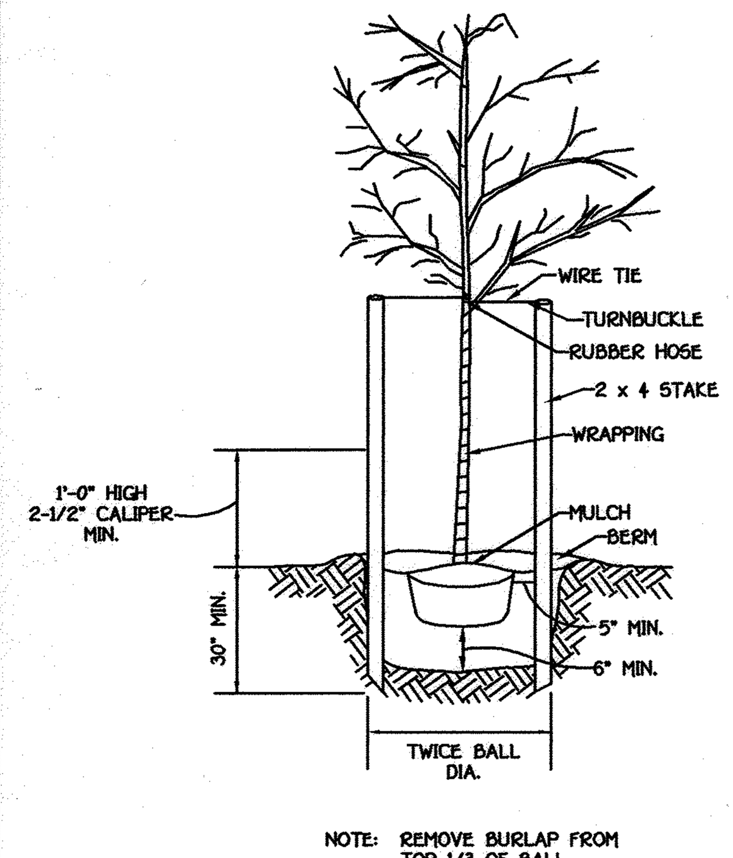
F00-67

LANDSCAPE SCHEDULE

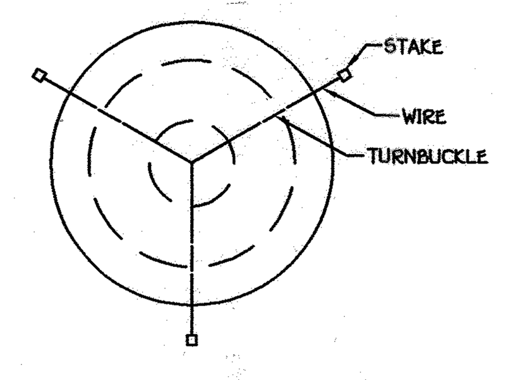
QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
29	◎	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2"-3"

NOTE: THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 29 LANDSCAPING TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $8,700.00.

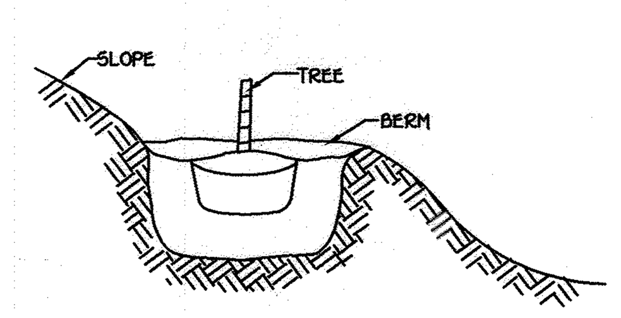
NOTE: PLANT MATERIAL MAY BE SUBSTITUTED WITH SPECIES LISTED IN THE HOWARD COUNTY LANDSCAPING MANUAL.



TREE PLANTING
NOT TO SCALE



STAKING DETAIL
NOT TO SCALE



GRADING FOR PLANTING ON SLOPES
NOT TO SCALE

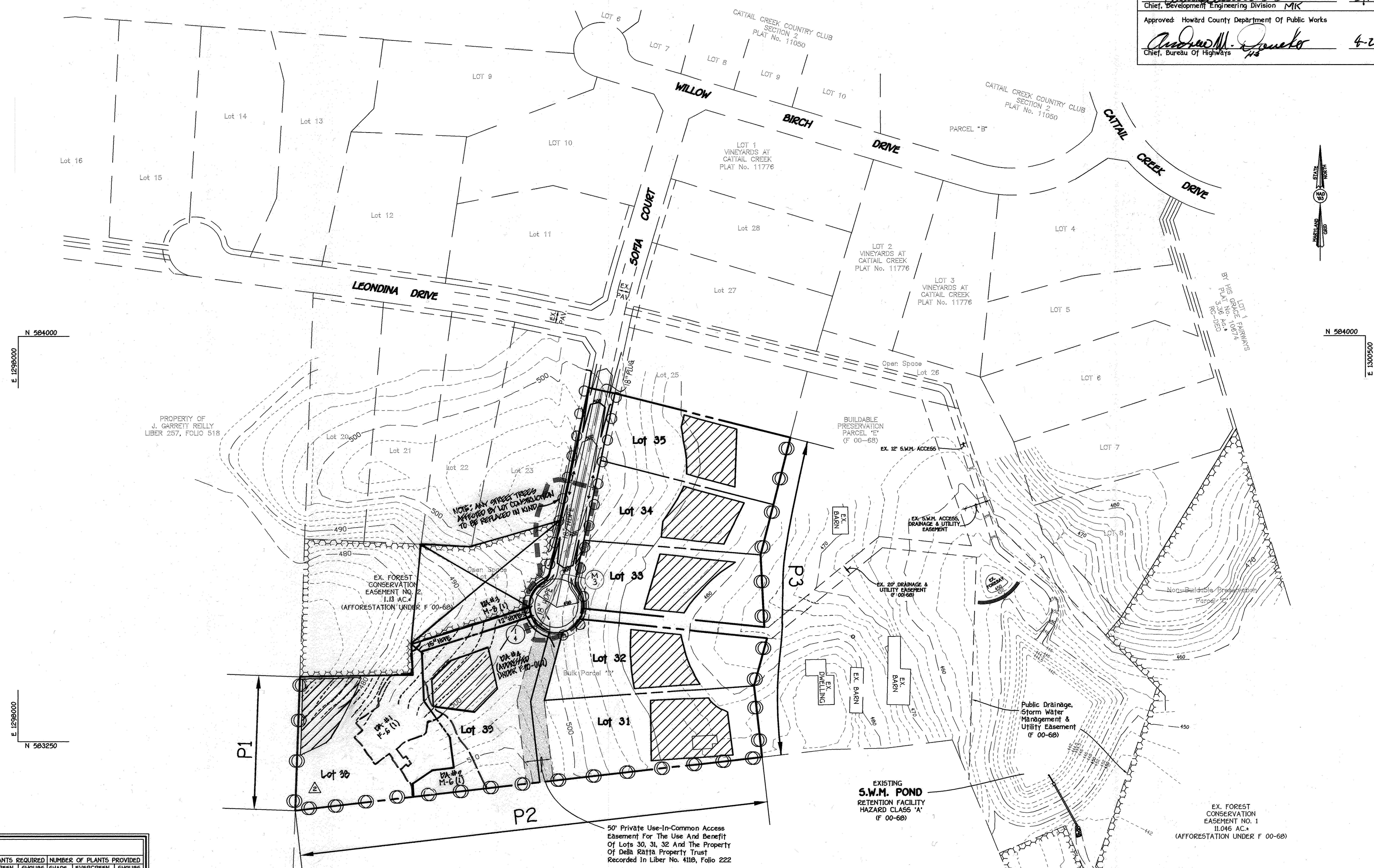
Approved: Department Of Planning And Zoning

Chief, Division Of Land Development — 5/16/00 Date

Chief, Development Engineering Division — 5/11/00 Date

Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways — 4-24-00 Date



SCHEDULE A PERIMETER LANDSCAPE EDGE											
PERIMETER	CATEGORY (PROPERTIES/ ROADWAYS)	LANDSCAPE TYPE	LINEAR FEET OF OF ROADWAY FRONTAGE PERIMETER	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NUMBER OF PLANTS REQUIRED			NUMBER OF PLANTS PROVIDED		
						SHADE TREES	EVERGREEN TREES	SHRUBS	SHADE TREES	EVERGREEN TREES	SHRUBS
P-1	ADJACENT TO PERIMETER	A	248'	NO	NO	4	-	-	4	-	-
P-2	ADJACENT TO PERIMETER	A	872'	NO	NO	15	-	-	15	-	-
P-3	ADJACENT TO PERIMETER	A	603'	NO	NO	10	-	-	10	-	-

Note: Any Ex. Perimeter Landscaping That Is Impacted During Lot 38 Construction Shall Be Replaced In Accordance With This Approved Landscape Plan. △3

NOTE:
SEE SHEET 3 FOR STREET TREE QUANTITY AND SURETY NOTE.

PLAN

SCALE: 1" = 100'

DRAINAGE AREA DATA					
STRUCTURE NO.	DRAINAGE AREA	AREA	'C'	ZONED	% IMP.
I-4	A	0.64 AC.	0.51	RC-DEO	33%

NO.	DATE	DESCRIPTION
3	5·20·24	Added Lot 38 Construction Note
2	8/15/22	REVISED TITLE, LOT LINES, SEPTIC AREA, LOT NUMBERS AND ADDED CULVERT & DRAINAGE AREAS
1	11/26/02	REVISE STORM DRAIN ALIGNMENT I-4 TO EX. M-7
	REVISIONS	

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

F.C.C.•30321 LANDSCAPE PLAN.DWG

OWNER & DEVELOPER
MARIO F. MANNARELLI, SR.
MARIO F. MANNARELLI, JR.
2929 SUMMIT CIRCLE
ELLICOTT CITY, MARYLAND 21043

STATE OF MARYLAND — LUKE A. GROGAN — PROFESSIONAL ENGINEER
6-12-24
FOR REVISION 3 ONLY

STATE OF MARYLAND — REGISTERED PROFESSIONAL LAND SURVEYOR
9-28-22

STATE OF MARYLAND — ZACHARIA YOSEF FISCH — 22418 — PROFESSIONAL ENGINEER
Zacharia Y. Fisch
2/4/2000

DRAINAGE AREA MAP & LANDSCAPE PLAN
VINEYARDS AT CATTAIL CREEK

LOTS 31 THRU 35, 38 & 39

(A RESUBDIVISION OF BULK PARCEL 'D' "VINEYARDS AT CATTAIL CREEK", PLAT NO. 26154
A RESUBDIVISION OF LOTS 29 & 30, "VINEYARDS AT CATTAIL CREEK", PLAT NO. 14851)

ZONED RC-DEO
TAX MAP NO. 21 PARCEL NO. 220 & PART OF PARCEL NO. 2 GRID NO. 8
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 2, 2000
SHEET 5 OF 8

F00-67

SOILS LEGEND

SOIL	NAME	CLASS	"K" VALUE
GgB	Glenelg Loam, 3% to 8% slopes	B	.24
GgC	Glenelg Loam, 8% to 15% slopes	B	.24
GnB	Glenville-Baile silt loams, 0% to 8% slopes	C	.43
MaD	Manor loam, 15% to 25% slopes	B	.28

LOT 38 STORMWATER MANAGEMENT PRACTICES

LOT	ADDRESS	DRYWELLS (M-5) Y/N, NUMBER	ROOFTOP DISCONNECTION (N-1) Y/N, NUMBER	NON-ROOFTOP DISCONNECTION (N-2) Y/N, NUMBER	RAINWATER HARVESTING (M-1) Y/N, NUMBER	MICRO BIO (M-6, F-6) Y/N, NUMBER	GRASS CHANNEL (M-8) Y/N, NUMBER
38	3730 E SOFIA COURT	N	N	N	N	Y, (3)	Y, (1)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development	Date 8/8/24
Chief, Development Engineering Division	Date 8.1.24

NO.	DESCRIPTION	DATE
1	REVISED HOUSE AND GRADING ON LOT 38	5/20/24

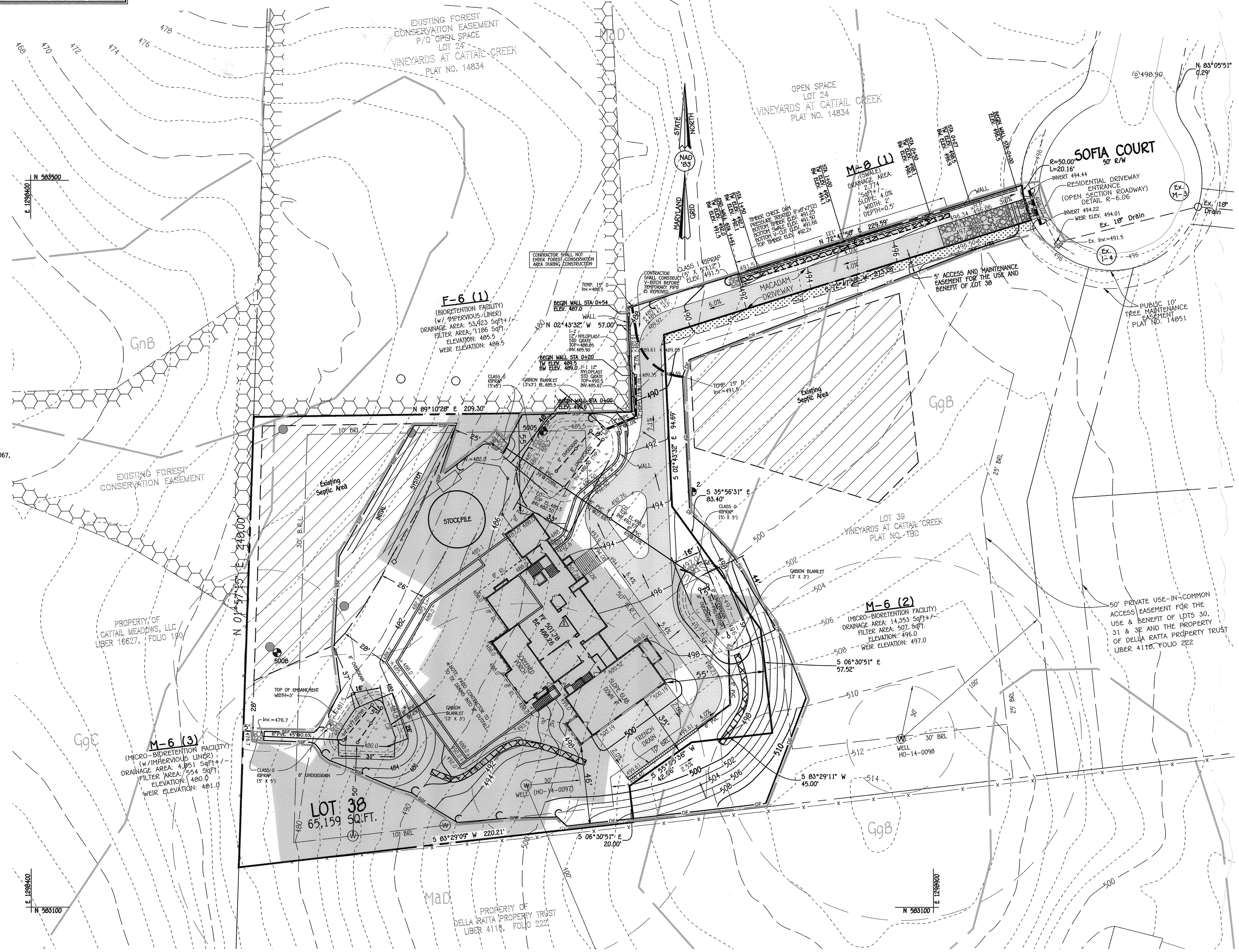
REVISIONS

LEGEND

SYMBOL	DESCRIPTION
	EXISTING CONTOUR 2' INTERVAL
	EXISTING CONTOUR 10' INTERVAL
	PROPOSED CONTOUR 10' INTERVAL
	PROPOSED CONTOUR 2' INTERVAL
×362.2	SPOT ELEVATION
18" SD	EXISTING STORM DRAIN
LOD	LIMIT OF DISTURBANCE
DF	CLEAN WATER DIVERSION FENCE
SF	SILT FENCE
SSF	SUPER SILT FENCE
	EXISTING TREE LINE
GmC / LrD	SOIL LINES AND TYPES
	PROPOSED ROOF LEADER
	DENOTES 15%-24.9% SLOPES
	DENOTES 25% AND GREATER SLOPE
	LOWER FREQUENCY STORM OVERFLOW PATH
	PERMANENT SOIL STABILIZATION MATTING

SITE ANALYSIS DATA CHART (LOT 38)

A. TOTAL AREA OF PROPERTY = 65,158.66 SQ.FT. OR 1.496 AC.±.
B. LIMIT OF DISTURBED AREA (SITE) = 60,069 SQ.FT. OR 1.38 Ac.±
C. PRESENT ZONING DESIGNATION = RC-DEO
D. PROPOSED USE: RESIDENTIAL
E. PREVIOUS HOWARD COUNTY FILES: SP-96-11, F-00-068, F-00-067, F-22-059
F. TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0.00 AC
G. TOTAL AREA OF SLOPES IN EXCESS OF 15% = 0.74 AC
H. TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 AC.
I. TOTAL AREA OF STREAM (INCLUDING BUFFER) = 0.00 AC.
J. TOTAL AREA OF EXISTING FOREST = 0.00 AC
K. TOTAL GREEN OPEN AREA = 0.94 AC± (WITHIN L.O.D.)
L. TOTAL IMPERVIOUS AREA = 0.44 AC± (WITHIN L.O.D.)
M. TOTAL AREA TO BE STABILIZED = 0.94 AC.
N. TOTAL AREA OF ERODIBLE SOILS = 0.74 AC.



PLAN VIEW
SCALE : 1" = 30'

LOT 38 GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
5. TOPOGRAPHY SHOWN IN THE AREA OF THE LOT BEING DISTURBED IS BASED ON TOPOGRAPHIC SURVEYS BY FISHER, COLLINS & CARTER, INC. IN APRIL, 2019 AND APRIL, 2024 WITH OFFSITE INFORMATION SUPPLEMENTED WITH HOWARD COUNTY GIS.
6. ORIGINAL BOUNDARY OF LOT BASED ON FIELD RUN BY FISHER, COLLINS & CARTER, INC. IN JULY, 1989 IN CONJUNCTION WITH RECORD PLAT ENTITLED "VINEYARDS OF CATTAIL CREEK LOTS 29 thru 35 (RESUBDIVISION OF NON-BUILDABLE BULK PARCEL 'D' ", RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND IN PLAT M.D.R. NO. 14851.
7. THIS PROPERTY IS NOT LOCATED WITHIN THE METROPOLITAN DISTRICT. PRIVATE WELL AND SEPTIC WILL BE UTILIZED.
8. STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. WE ARE PROVIDING STORM WATER MANAGEMENT BY THE USE OF ONE (1) (M-8) GRASS SWALE AND TWO (2) (M-6) MICRO-BIORETENTION FACILITIES, AND ONE (1) (F-6) BIORETENTION FACILITY TO BE MAINTAINED BY THE HOMEOWNER OF THE LOT ON WHICH THIS DEVICE IS LOCATED.
9. THERE ARE NO FLOODPLAIN, WETLANDS, STREAMS AND/OR ITS BUFFERS ON THIS SITE.
10. SUBJECT PROPERTY ZONED: RC-DEO
11. FOREST CONSERVATION REQUIREMENTS HAVE BEEN ADDRESSED UNDER F-00-068.
12. LANDSCAPING REQUIREMENTS HAVE BEEN ADDRESSED UNDER F-00-068.
13. SOILS SHOWN HEREON ARE BASED ON NRCS WEB SOIL SURVEY.
14. SOIL BORING INFORMATION IS PROVIDED ON THIS SUPPLEMENTAL PLAN.
15. THIS PROJECT IS SUBJECT TO RESUBDIVISION PLAT NUMBER 26154 RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND.

PIPE COMPUTATIONS

PIPE	DRAINAGE AREA	'C'	ZONED	I (IN/HR)	Q (CFS)	V (FPS)
TEMP. PIPE SLOPE DRAIN	0.53 AC.	0.33	RC-DEO	8.5	1.49	1.21
R/W DRIVEWAY CULVERT	0.38 AC.	0.33	RC-DEO	8.5	1.07	1.36

NOTE: FRICTION SLOPE FOR 12" DRIVEWAY CULVERT = 0.06%
NOTE: I, Q, AND V SHOWN ARE FOR 10-YEAR STORM.

Minimum Lot Size Tabulation

Lot No.	Gross Area	Pipestem Area	Minimum Lot Size
38	65,159 Sq. Ft.±	5,400 Sq. Ft.±	59,759 Sq. Ft.±
39	56,198 Sq. Ft.±	0 Sq. Ft.±	56,198 Sq. Ft.±

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
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OWNER/DEVELOPER
JESUDOSS JEYACHANDRAN
3730 SOFIA COURT
GLENWOOD, MARYLAND 21738
(443) 370-2383

STATE OF MARYLAND FRANK JOHN MANALANSAN II No. 21476 PROFESSIONAL LAND SURVEYOR

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 07/14/25.

FRANK J. MANALANSAN II — DATE 7/31/24

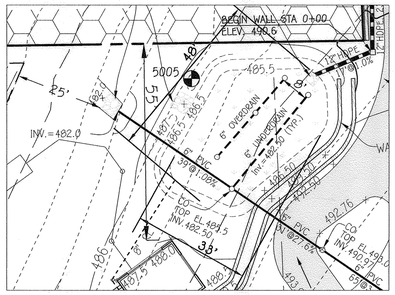
PURPOSE NOTE: THIS SHEET WAS ADDED TO REFLECT LOT CHANGES PER REVISION 2.

MAY 2024 PURPOSE NOTE: THIS SHEET WAS REPLACED TO REFLECT HOUSE CHANGES ON LOT 38.

LOT 38 PLAN
REVISED FINAL ROAD CONSTRUCTION PLAN
VINEYARDS AT CATTAIL CREEK

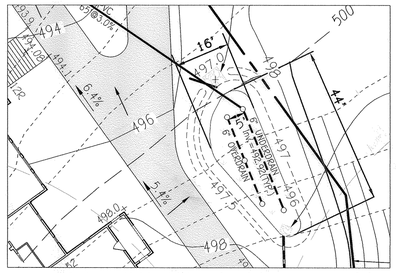
A RESUBDIVISION OF BULK PARCEL 'D' "VINEYARDS AT CATTAIL CREEK", PLAT NO. 26154 AND A RESUBDIVISION OF LOTS 29 & 30, "VINEYARDS AT CATTAIL CREEK", PLAT NO. 14851)
ZONED RC-DEO
TAX MAP No. 21 GRID No. 08 PARCEL No. 225
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY, 2024

F-00-067



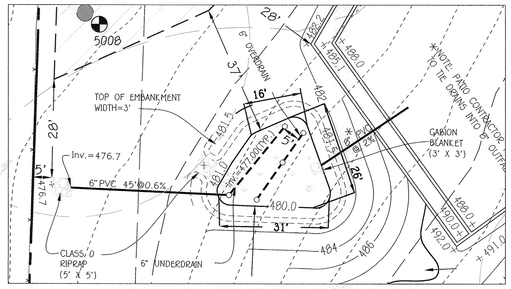
DETAIL BIORETENTION FACILITY F-6 (1)

SCALE: 1"=20'



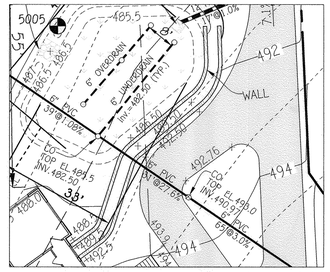
DETAIL MICRO-BIORETENTION FACILITY M-6 (2)

SCALE: 1"=20'



DETAIL MICRO-BIORETENTION FACILITY M-6 (3)

SCALE: 1"=20'



DETAIL RETAINING WALL AT BIORETENTION F-6 (1)

SCALE: 1"=20'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

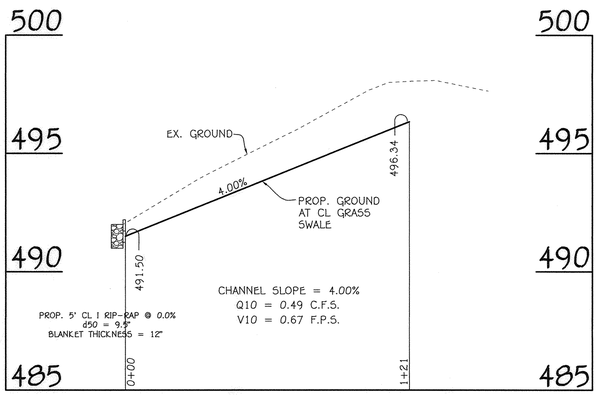
Chief, Division of Land Development — Date 8/8/24

Chief, Development Engineering Division — Date 8.1.24

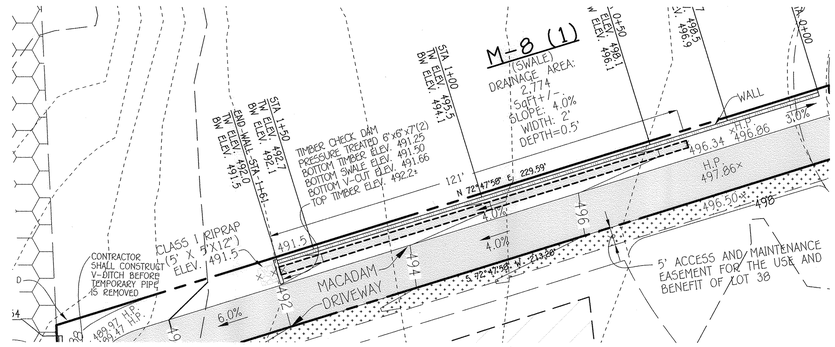
NO.	DESCRIPTION	DATE
1	REVISED HOUSE AND GRADING ON LOT 38	5/20/24
	REVISIONS	

LOT 38 STORMWATER MANAGEMENT SUMMARY TABLE (PRIVATELY OWNED AND MAINTAINED)

FACILITY NAME AND NUMBER	DRAINAGE AREA	TYPE	% IMPERVIOUS	Pe=1.8" ESDV REQUIRED CuFt.	Pe=1.8" ESDV PROVIDED CuFt.	Rev REQUIRED CuFt.	Rev PROVIDED CuFt.	OWNERSHIP AND MAINTENANCE
F-6 (1)	53,923	BIO-RETENTION	14%	3,070 CuFt.	3,072 CuFt.	140	----	PRIVATE
M-6 (2)	14,353	MICRO BIO-RETENTION	25%				203	PRIVATE
M-6 (3)	4,051	MICRO BIO-RETENTION	100%				----	PRIVATE
M-8 (1)	2,774	GRASS SWALE	62%				----	PRIVATE

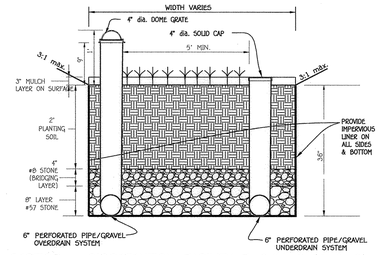


GRASS SWALE ALONG DRIVEWAY
PROFILE
SCALE HORZ. 1"=30'
VERT. 1"=3'



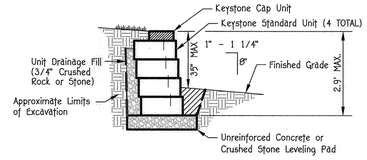
DETAIL GRASS SWALE FACILITY F-8 (1)

SCALE: 1"=20'



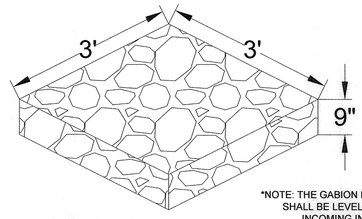
SECTION - BIORETENTION FACILITY F-6/M-6 (1 & 3)

NOT TO SCALE



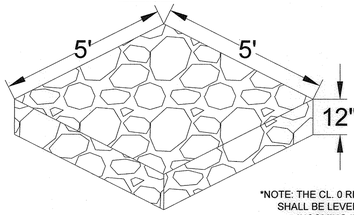
Typical Gravity Wall Section

Standard Unit - 1" Setback



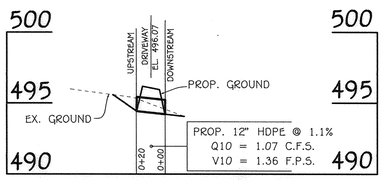
*NOTE: THE GABION BLANKETS TOP SHALL BE LEVEL WITH THE INCOMING INVERT.

GABION BLANKETS (TYP.)
N.T.S.



*NOTE: THE CL. 0 RIPRAP APRONS SHALL BE LEVEL WITH THE INCOMING INVERT.

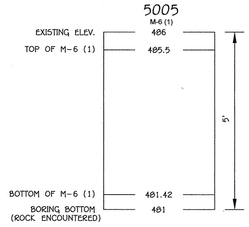
RIPRAP APRON (TYP.)
N.T.S.

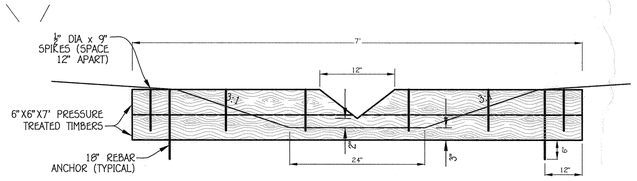


R/W DRIVEWAY CULVERT PROFILE

SCALE HORZ. 1"=50'

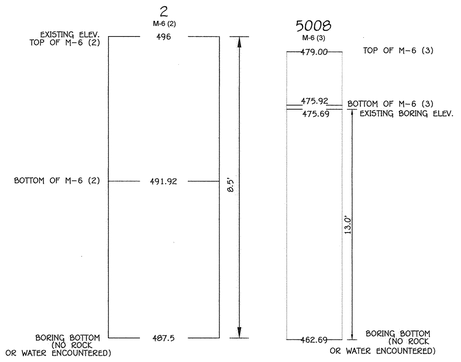
VERT. 1"=5'

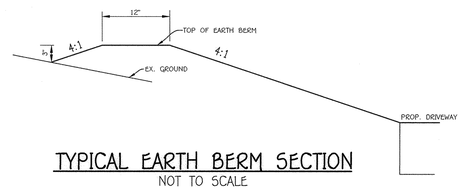




GRASS SWALE & TIMBER CHECK DAM DETAIL

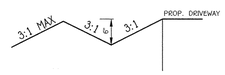
NOT TO SCALE





TYPICAL EARTH BERM SECTION

NOT TO SCALE



I-2 V-DITCH SECTION

NOT TO SCALE

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED OPEN CHANNEL SYSTEMS GRASS SWALES AND WET SWALES, (M-8)

1. THE OPEN CHANNEL SYSTEM SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
2. THE OPEN CHANNEL SHALL BE MOWED A MINIMUM OF AS NEEDED DURING THE GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 6 INCHES.
3. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AS NEEDED.
4. VISIBLE SIGNS OF EROSION IN THE OPEN CHANNEL SYSTEM SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
5. REMOVE SILT IN THE CHANNEL SYSTEM WHEN IT EXCEEDS 25% OF THE ORIGINAL WQv.
6. INSPECT CHECK DAMS TWICE A YEAR FOR STRUCTURAL INTEGRITY. RESTORE CHECK DAMS TO ORIGINAL CONDITION AS APPLICABLE.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

LOT 38 STORMWATER MANAGEMENT NOTES

1. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010.
2. STORMWATER MANAGEMENT WILL BE PROVIDED BY THE USE OF TWO (2) MICRO-BIORETENTION (M-6) FACILITIES, ONE (1) BIORETENTION (F-6) FACILITY, AND ONE (1) GRASS SWALE (M-8).

OWNER/DEVELOPER

JESUDOSS JEYACHANDRAN
3730 SOFIA COURT
GLENWOOD, MARYLAND 21738
(443) 370-2383

STATE OF MARYLAND — FRANK JOHN MANALANSAN II — No. 21476 — PROFESSIONAL LAND SURVEYOR

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 07/14/25.

FRANK J. MANALANSAN II — DATE 7/31/24

PURPOSE NOTE:
THIS SHEET WAS ADDED TO REFLECT LOT CHANGES PER REVISION 2.

MAY 2024 PURPOSE NOTE:
THIS SHEET WAS REPLACED TO REFLECT HOUSE CHANGES ON LOT 38.

LOT 38 DETAILS
REVISED FINAL ROAD CONSTRUCTION PLAN
VINEYARDS AT CATTAIL CREEK

A RESUBDIVISION OF BULK PARCEL 'D' "VINEYARDS AT CATTAIL CREEK", PLAT NO. 26154 AND A RESUBDIVISION OF LOTS 29 & 30, "VINEYARDS AT CATTAIL CREEK", PLAT NO. 14051)

ZONED RC-DEO

TAX MAP No. 21 GRID No. 08 PARCEL No. 225

FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: JULY, 2024

SHEET 8 OF 8

F-00-067