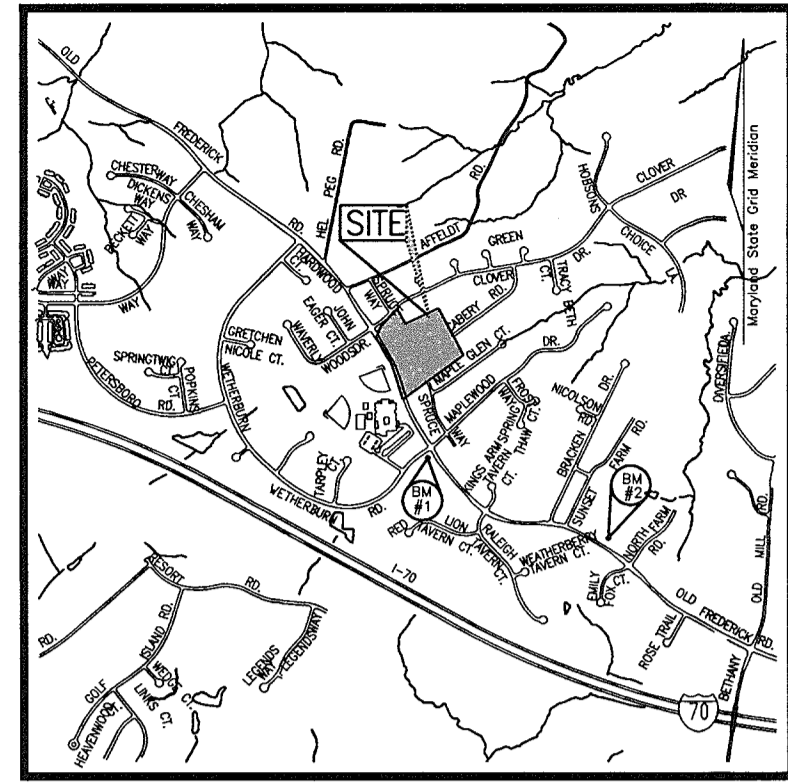


SITE DATA

LOCATION: TAX MAP 17, PARCEL 9 & 685
 SECOND ELECTION DISTRICT
 DPZ REFERENCE NUMBER: S-03-03
 EXISTING ZONING: R-20
 NO FLOODPLAIN ON SITE
 GROSS AREA OF PARCEL: 9.75 ACRES*
 AREA OF STEEPSLOPES (25% OR GREATER STEEP SLOPES): 0.29 AC.
 AREA OF RIGHT OF WAY: 0.64 ACRE
 NUMBER OF PROPOSED RESIDENTIAL LOTS: 18
 AREA OF PROPOSED RESIDENTIAL LOTS: 5.047 ACRES
 AREA OF SMALLEST BUILDABLE LOT PROPOSED: 12000 SQ. FT.
 NUMBER OF PROPOSED OPEN SPACE LOTS: 3 (4.0835 AC.)
 FUTURE DEDICATED SHA ROW: 0.74 AC.(NOT PART OF GROSS ACREAGE)
 TOTAL AREA OF OPEN SPACE PROPOSED: 41.6% (4.0835 ACRES)
 AREA OF OPEN SPACE REQUIRED: 40% OF GROSS AREA OF PARCEL (3.900 AC.)
 CREDITED OPEN SPACE PROVIDED: 3.9235 ACRES
 NON-CREDITED OPEN SPACE PROVIDED: 0.16 ACRES
 * DOES NOT INCLUDE 0.74 AC. OF SHA RESERVATION

BENCHMARKS

BENCHMARK NO. 1:
 HOWARD COUNTY CONTROL STA. 17AB
 N. 598435.266 E. 1348615.278
 ELEV. = 506.66
BENCHMARK NO. 2:
 HOWARD COUNTY CONTROL STA. 17DA
 N. 595410.785 E. 1351641.140
 ELEV. = 482.019



VICINITY MAP
 SCALE: 1"=2000'

FINAL ROAD CONSTRUCTION PLAN

MARGARET'S FANCY

LOTS 1-12, 14, 16-20 AND OPEN SPACE LOTS 13, 15 & 21

HOWARD COUNTY, MARYLAND

GENERAL NOTES

- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- DEED REFERENCES: 3973/539, 1351/569
- PROJECT BACKGROUND:
 LOCATION: TAX MAP 17, PARCEL 9 & 685
 2ND ELECTION DISTRICT
 ZONING: R-20
- THE PROPERTY OUTLINE IS BASED ON A FIELD RUN BOUNDARY SURVEY PERFORMED BY FREDERICK WARD ASSOCIATES, INC. IN APRIL, 2002.
- THE EXISTING FEATURES AND CONTOURS SHOWN HEREON ARE BASED ON A TOPOGRAPHIC SURVEY PERFORMED BY FREDERICK WARD ASSOCIATES, INC. IN APRIL, 2002. FIELD LOCATION OF SPECIMEN TREES AND HOWARD COUNTY PHOTOGRAMMETRIC.
- THE LIMITS OF PUBLIC STORM DRAIN OWNERSHIP AND MAINTENANCE ENDS AT THE PUBLIC RIGHT-OF-WAY.
- WATER AND SEWER FOR THIS PROJECT WILL BE PUBLIC. WATER & SEWER CONTRACT # 24-4239-D.
- COORDINATE DATUM IS BASED ON THE MARYLAND COORDINATE SYSTEM (NAD '83) AS PROJECTED BY THE FOLLOWING HO.CO. GEODETIC CONTROL STATIONS: 17AB, 17DA.
- A MICROPOOL POND IS PROPOSED TO PROVIDE THE REQUIRED WQV AND CPV AND 10 YEAR MANAGEMENT FOR THIS DEVELOPMENT. THE FACILITY IS TO BE PRIVATELY OWNED AND JOINTLY MAINTAINED BY THE HOA. WQV AND REV FOR LOTS 1,2,14,18-20 WILL BE PROVIDED BY RAINGARDENS DESIGNED AT THE SITE DEVELOPMENT PLAN STAGE.
- THERE ARE NO WETLANDS ON SITE BASED ON A FIELD INVESTIGATION PERFORMED BY FREDERICK WARD ASSOCIATES IN APRIL 2002.
- THERE ARE NO WETLANDS ON SITE BASED ON A FIELD INVESTIGATION PERFORMED BY FREDERICK WARD ASSOCIATES IN APRIL 2002.
- THERE ARE NO FLOODPLAINS ON SITE.
- FOREST STAND DELINEATION PLAN PREPARED BY FREDERICK WARD ASSOCIATES, INC. DATED DECEMBER, 2002.

THE FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 18.1200 OF THE HOWARD COUNTY FOREST CONSERVATION ACT. TOTAL FOREST CONSERVATION OBLIGATION IS 0.81 ACRES. AREA OF RETENTION EASEMENTS WILL BE 2.18 ACRES AND 0.43 ACRES WILL BE PLANTED IN REFORESTATION EASEMENT. A FEE-IN-LIEU PAYMENT FOR THE REMAINING 0.39 ACRES HAS BEEN PAID IN THE AMOUNT OF \$ 8,494.20 (16,988.40 SF X .50).
 BOND FOR THE 2.6126 ACRES HAS BEEN PAID IN THE AMOUNT OF \$ 28,396.76 (RETENTION 94,995.65 SF X .20 = 18,999.13) (REFORESTATION 18,809.21 SF X .50 = 9,404.60).

FOREST CONSERVATION PROVIDED		
EASEMENT	AREA OF RETENTION	AREA OF REFORESTATION
EASEMENT 1	1.4077 AC	-
EASEMENT 2	0.3405 AC	-
EASEMENT 3	0.1920 AC	-
EASEMENT 4	0.2406 AC	-
EASEMENT 5	-	0.4318 AC
TOTAL	2.1808 AC	0.4318 AC

- APFO TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP DATED JUNE, 2002.
- STEEP SLOPES HAVE BEEN DELINEATED IN ACCORDANCE WITH THE 5TH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE. ALL LANDSCAPING REQUIREMENTS AS SET FORTH IN THE LANDSCAPE MANUAL SHALL BE COMPILED WITH FOR LOCATION AND TYPES OF LIGHTS SEE 2, 3 OF 8.
- STREET LIGHTING WILL BE PROVIDED. THE LIGHTING SHOWN IS APPROXIMATE AND MAY CHANGE PRIOR TO THIS FINAL PLAN STAGE.
- THIS PROPERTY IS WITHIN THE METROPOLITAN DISTRICT.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL/CEMETERY LOCATIONS ON SITE. BASED ON THE CEMETERY INVENTORY LIST AND AVAILABLE MAPS AT THE DEPARTMENT OF PLANNING AND ZONING THERE ARE NO BURIAL/CEMETERY LOCATED ON SITE.
- OPEN SPACE LOTS 13, 15 & 21 WILL BE OWNED BY THE HOMEOWNERS ASSOCIATIONS. THE OPEN SPACE SHOWN HEREON IS HEREBY DEDICATED TO A PROPERTY OWNERS ASSOCIATION FOR THE RESIDENTS OF THIS SUBDIVISION AND RECORDING REFERENCES OF THE ARTICLES OF INCORPORATION AND THE RESTRICTIONS ARE SHOWN HEREON.
- TRASH COLLECTION AND RECYCLING WILL BE CURBSIDE PICKUP AT COUNTY ROADWAY.
- THERE ARE NO HISTORIC SITES ON THE SUBJECT PARCEL.
- THIS PLAN IS SUBJECT TO COMPLIANCE WITH THE FIFTH EDITION OF THE SUBDIVISION REGULATIONS AND COUNCIL BILL 50-2001 WHICH AMENDS PORTIONS OF THE ZONING REGULATIONS. DEVELOPMENT OR CONSTRUCTION OF THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, OR BUILDING/GRADING PERMIT.
- EXISTING HOUSES LOCATED ON LOTS 8 AND 12 ARE TO REMAIN. NEW BUILDING, EXTENSIONS OR ADDITIONS TO THE EXISTING DWELLINGS ARE TO BE CONSTRUCTED AT A DISTANCE LESS THAN ZONING REGULATIONS REQUIRE.
- THE NOISE STUDY WAS PREPARED BY FREDERICK WARD ASSOCIATES DATED OCTOBER 29, 2002 AND APPROVED UNDER S-03-03.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS A PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$ 13,650.00
- FINANCIAL SURETY FOR THE REQUIRED TOTAL 35 STREET TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN AMOUNT OF \$ 10,500.00
- DUE TO THE EXTENSION OF EXISTING CABERY ROAD A PORTION OF EXISTING SPRUCE WAY WILL HAVE TO BE RENAMED. THE PLAT WILL NOT BE RECORDED UNTIL THE PLANNING BOARD HAS APPROVED THE STREET RENAMING PETITION.
- NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.



LOCATION PLAN
 SCALE 1"=100'

OWNER
 M/M PHILIP E. STACKHOUSE
 AND HELEN M. STACKHOUSE, TRUSTEE
 10228 CABERY ROAD
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 MARGARET'S FANCY, INC.
 C/O LAND DESIGN AND DEVELOPMENT
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21043
 (410) 480-9105

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	FINAL ROAD CONSTRUCTION PLAN & PROFILE
3	GRADING, SEDIMENT & EROSION CONTROL PLAN
4	SEDIMENT AND EROSION CONTROL DETAILS
5	STORM DRAIN - DRAINAGE AREA MAP
6	STORM DRAIN PROFILES
7	PROFILES AND DETAILS - SWM FACILITY
8	LANDSCAPE PLAN
9	FOREST CONSERVATION PLAN
10	FOREST CONSERVATION DETAILS

COORDINATE CHART		
17	Northing = 597485.5895	Eastings = 1349417.3395
18	Northing = 597293.8815	Eastings = 1349540.1738
19	Northing = 596866.1513	Eastings = 1349701.0062
101	Northing = 597588.4721	Eastings = 1349453.7008
102	Northing = 597768.1073	Eastings = 1349623.9578
103	Northing = 597616.9966	Eastings = 1349705.2727
104	Northing = 597779.0910	Eastings = 1350048.4135
105	Northing = 597311.1281	Eastings = 1350306.1873

NO.	REVISION	DATE

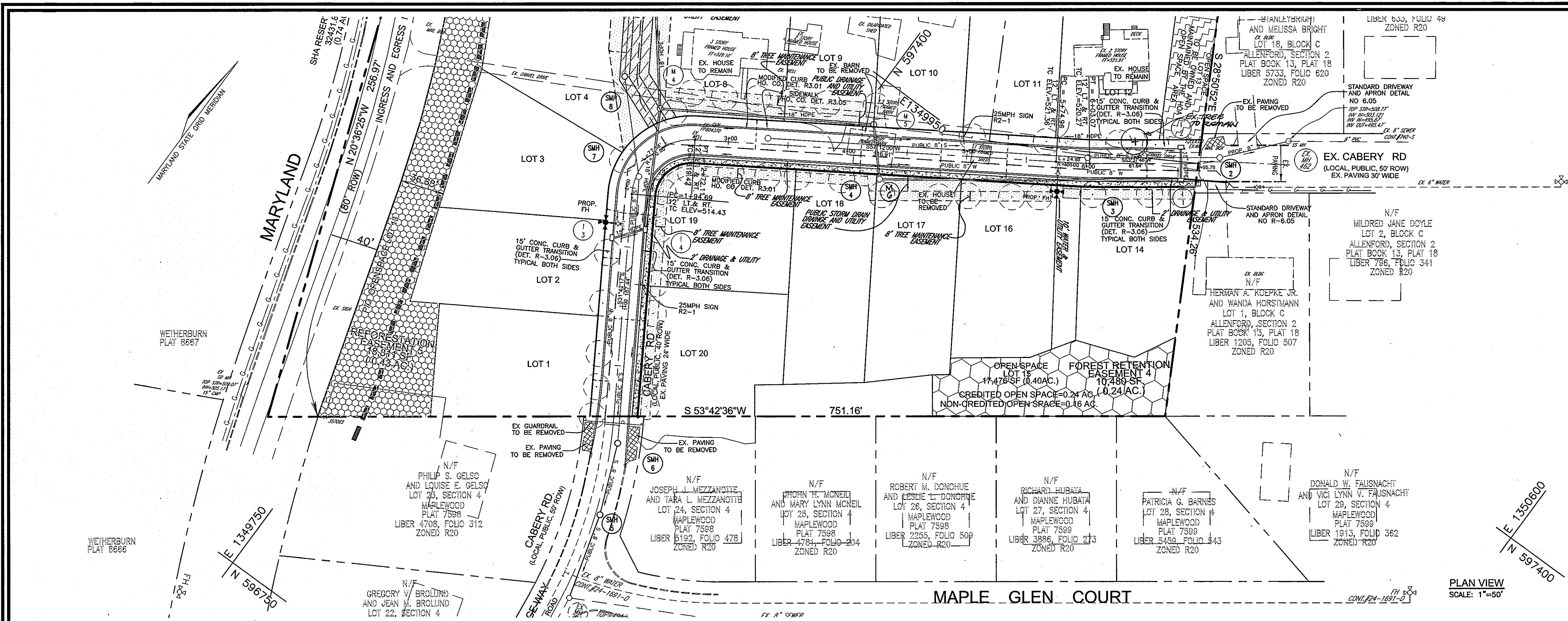
FINAL ROAD CONSTRUCTION PLAN
COVER SHEET
MARGARET'S FANCY
LOTS 1-12, 14, 16-20 AND
OPEN SPACE LOTS 13, 15 & 21
 DPZ REF: S-03-03
 TAX MAP#17 GRID 7
 2ND ELECTION DISTRICT
 PARCEL 9, 685
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. Mohr
 Chief, Bureau of Highways
 Date: 5-2-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton
 Chief, Division of Land Development
 Date: 5/6/05
Cal DeMunn
 Chief, Development Engineering Division
 Date: 5/2/05

DESIGN BY: RJUJO
 DRAWN BY: RJUJO
 CHECKED BY: RHV
 DATE: 03-15-2005
 SCALE: AS SHOWN
 W.O. NO.: 04-54.00
 1 SHEET OF 10



PLAN VIEW
SCALE: 1"=50'

LEGEND

- DIRECTION OF FLOW
- SIGNS/LIGHT POLES
- PROPOSED STREET TREE
- PROP. PUBLIC STREET TREE MAINTENANCE & UTILITY EASEMENT
- PROP. PUBLIC OR PRIVATE ACCESS EASEMENT
- PROP. FOREST CONSERVATION AREA (RETENTION)
- PROP. FOREST CONSERVATION AREA (REFORESTATION)

STREET LIGHT LOCATION CHART

DWG. NO.	STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
2 OF 10	CABERY RD	6+86	19' LT.	100 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE
2 OF 10	CABERY RD	2+27	19' RT.	

NOTE: A MINIMUM OF 20' IS REQUIRED BETWEEN ANY STREET LIGHT AND ANY TREE

PUBLIC ROAD STREET TREE SCHEDULE

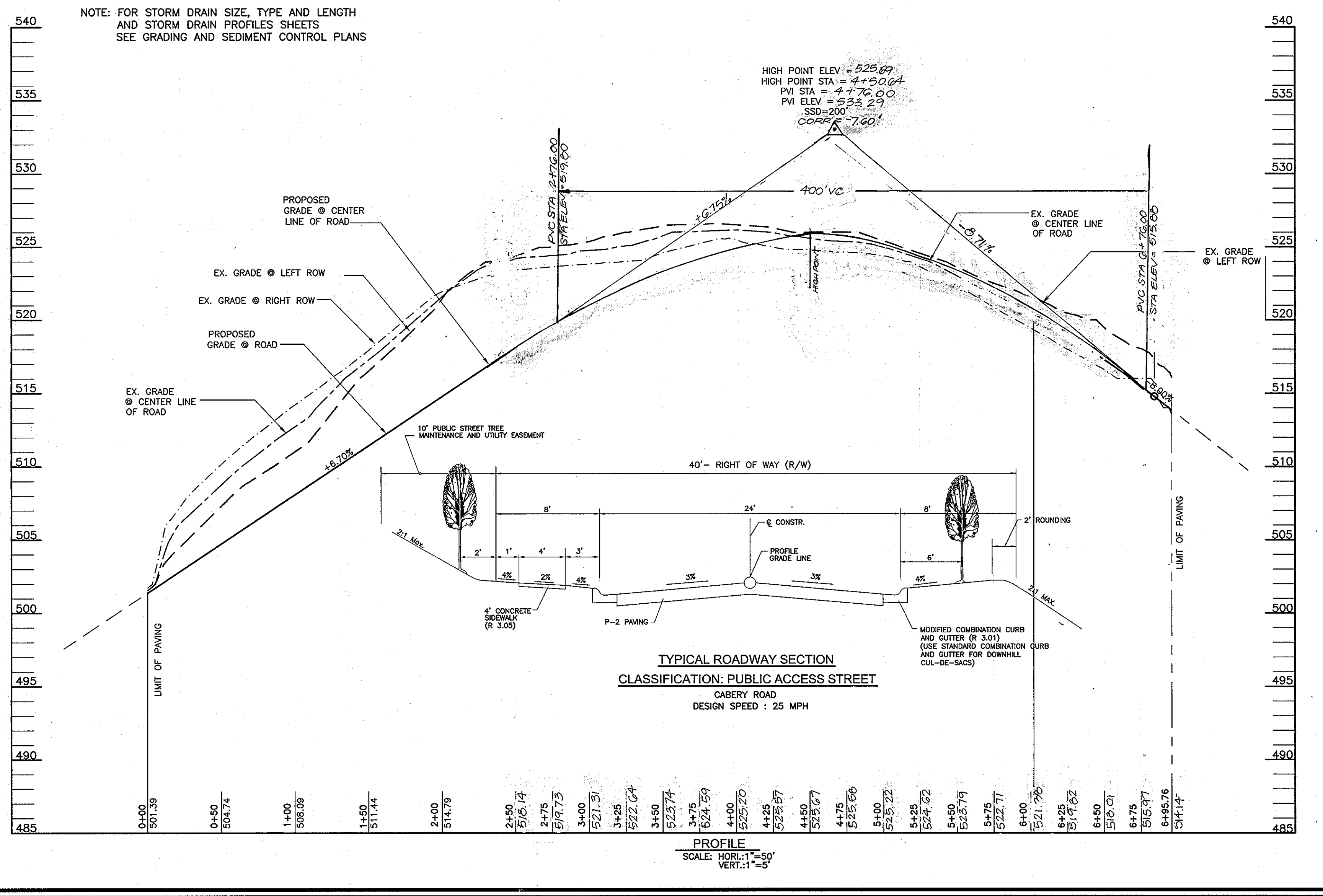
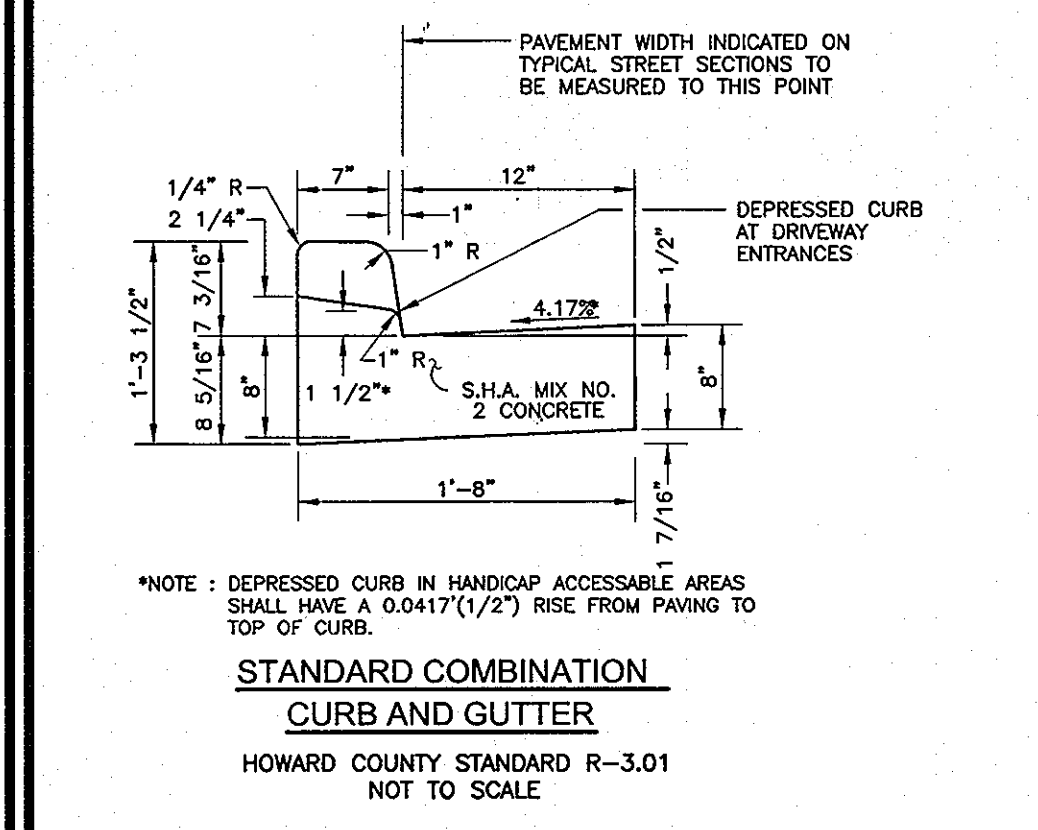
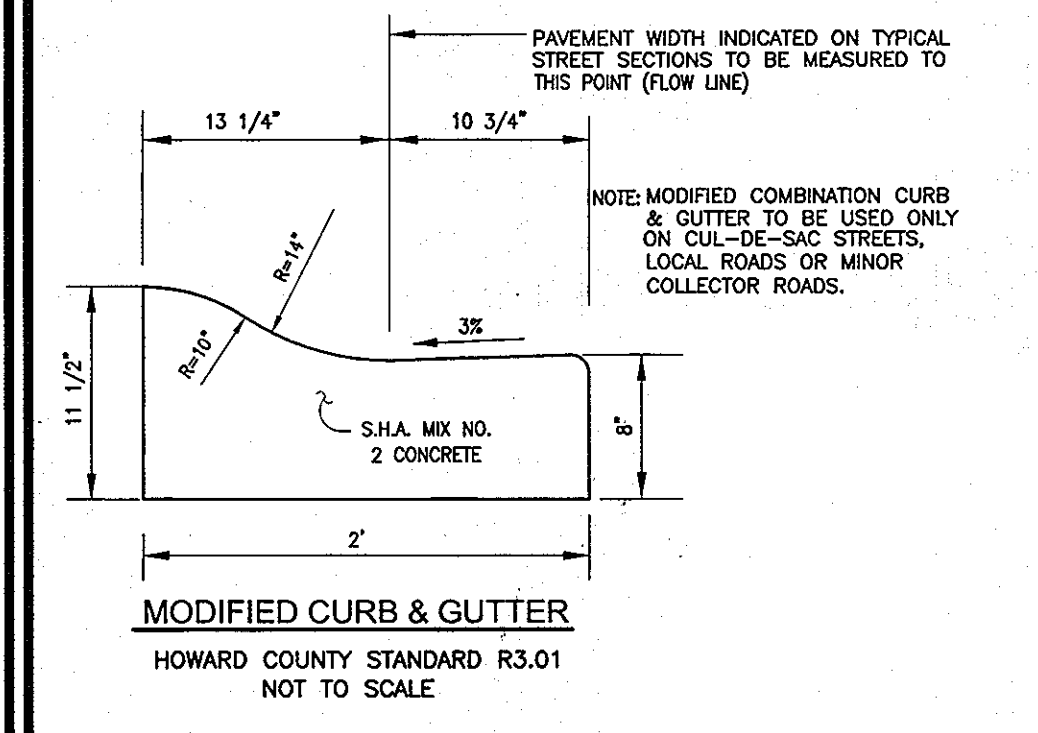
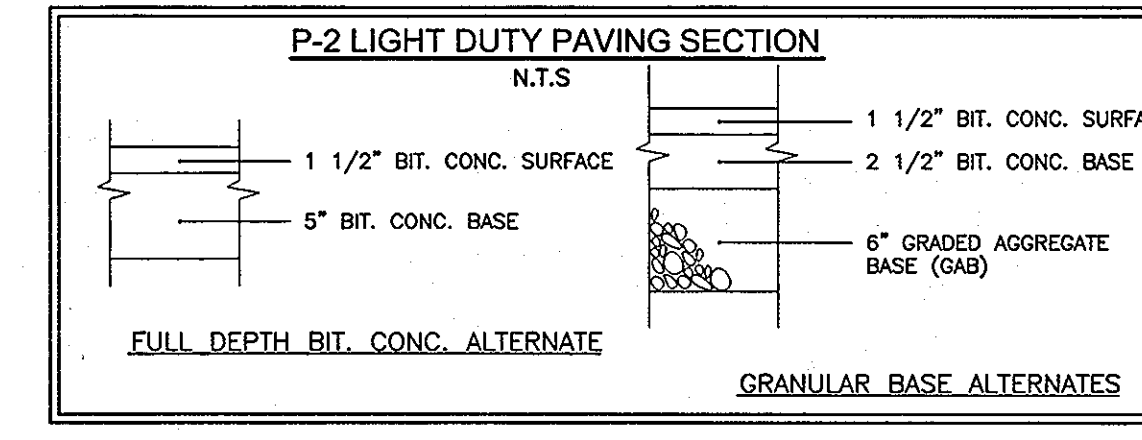
KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
●	35	TILIA CORDATA LITTLELEAF LINDEN	2 1/2"-3" CAL.	B & B

STREET TREE CALCULATIONS

STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED
CABERY RD	1392/40	35	35

SIGNAGE LOCATION CHART

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
CABERY RD	1+16	15' RT.	R2-1 "SPEED LIMIT 25 MPH"
CABERY RD	5+00	15' LT.	R2-1 "SPEED LIMIT 25 MPH"



APPROVED: DEPARTMENT OF PUBLIC WORKS
William Z. ... 5-2-05
Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy ... 5/4/05
Chief, Division of Land Development Date

Chris ... 5/13/05
Chief, Development Engineering Division Date

OWNER
M/M PHILIP E. STACKHOUSE
AND HELEN M. STACKHOUSE, TRUSTEE
10228 CABERY ROAD
ELLCOTT CITY, MARYLAND 21042

DEVELOPER
MARGARET'S FANCY, INC.
C/O LAND DESIGN AND DEVELOPMENT
8000 MAIN STREET
ELLCOTT CITY, MARYLAND 21043
(410) 480-9105

NO.	REVISION	DATE
2	REVISE ROAD PROFILE AND STORM DRAIN PROFILE	1/8/12

FINAL ROAD CONSTRUCTION PLAN & PROFILE
MARGARET'S FANCY
LOTS 1-12, 14, 16-20 AND
OPEN SPACE LOTS 13, 15 & 21

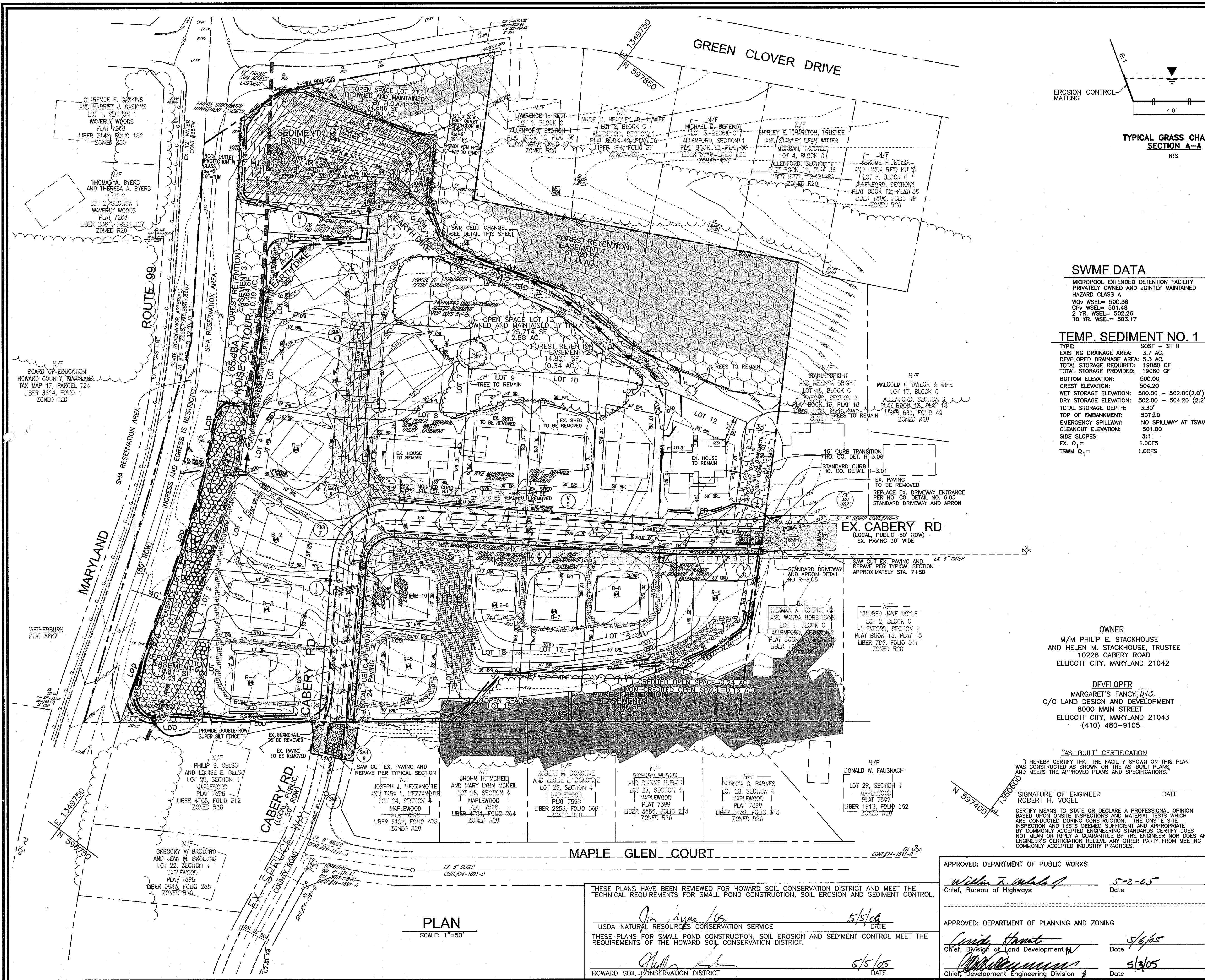
DPZ REF: S-03-03
TAX MAP#17 GRID 7
2ND ELECTION DISTRICT

PARCEL 9, 685
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
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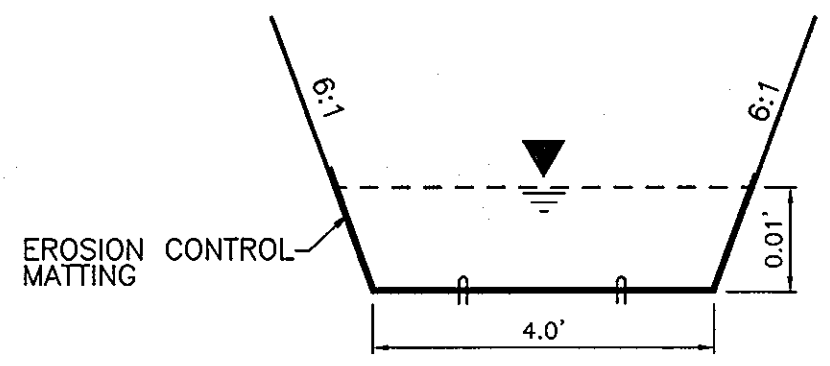
DESIGN BY: RJUCO
DRAWN BY: RJUCO
CHECKED BY: RHV
DATE: 03-15-2005
SCALE: AS SHOWN
W.O. NO.: 04-54.00

2 SHEET OF 10



LEGEND

- 302 — EXISTING CONTOUR
- - - - - PROPOSED CONTOUR
- ☼ EXISTING TREES TO REMAIN
- ⊙ LIGHT POLES
- ▲ SPOT ELEVATION
- DIRECTION OF FLOW
- ▨ 15%-24.99% STEEP SLOPE AREA
- ▩ 25% OR GREATER STEEP SLOPE AREA
- NO WOODY VEGETATION BUFFER
- EARTH DIKE
- ⊙ SOIL BORING
- ▨ EROSION CONTROL MATTING
- ▨ STABILIZED CONSTRUCTION ENTRANCE
- SSF — SUPER SILT FENCE
- LOD — LIMIT OF DISTURBANCE
- ▨ GABION INFLOW PROTECTION
- ⊙ PROPOSED STREET TREE
- ⊙ TREE PROTECTION FENCE
- ▨ AREA OF 15 TO 24.9 PERCENT SLOPES
- ▨ AREA OF 25 PERCENT OR GREATER SLOPES
- ▨ PROP. PUBLIC STREET TREE MAINTENANCE & UTILITY EASEMENT
- ▨ PROP. PUBLIC OR PRIVATE ACCESS EASEMENT
- ▨ 24' USE-IN-COMMON ACCESS EASEMENT
- ▨ PROP. FOREST CONSERVATION AREA (RETENTION)
- ▨ PROP. FOREST CONSERVATION AREA (REFORESTATION)
- ▨ NO WOODY VEGETATION BUFFER



TYPICAL GRASS CHANNEL SECTION A-A
NTS

SWMF DATA

MICROPPOOL EXTENDED DETENTION FACILITY
PRIVATELY OWNED AND JOINTLY MAINTAINED
HAZARD CLASS A
W_{0.2} WSEL= 500.36
CP₁ WSEL= 501.48
2 YR. WSEL= 502.26
10 YR. WSEL= 503.17

TEMP. SEDIMENT NO. 1

TYPE: SOST - ST II
EXISTING DRAINAGE AREA: 3.7 AC.
DEVELOPED DRAINAGE AREA: 5.3 AC.
TOTAL STORAGE REQUIRED: 19080 CF
TOTAL STORAGE PROVIDED: 19080 CF
BOTTOM ELEVATION: 500.00
CREST ELEVATION: 504.20
WET STORAGE ELEVATION: 500.00 - 502.00(2.0')
DRY STORAGE ELEVATION: 502.00 - 504.20 (2.2')
TOTAL STORAGE DEPTH: 3.30'
TOP OF EMBANKMENT: 507.20
EMERGENCY SPILLWAY: NO SPILLWAY AT TSWM
CLEANOUT ELEVATION: 501.00
SIDE SLOPES: 3:1
EX. Q₁ = 1.0CFS
TSWM Q₁ = 1.0CFS

ENGINEERS CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

Signature of Engineer: Robert H. Vogel
DATE: 3/15/05

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

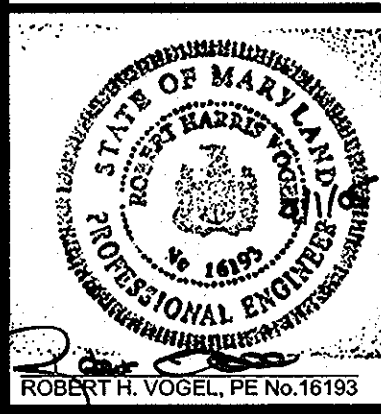
Signature of Developer: Philip E. Stackhouse
DATE: 3/15/05

NO.	REVISION	DATE
2	REVISE ROAD PROFILE AND STORM DRAIN PROFILE	1/3/12
1	REMOVE STOCKPILE AREA AND PROVIDE BERM OPEN SPACE LOT 13	10.5.05

**FINAL ROAD CONSTRUCTION PLAN
GRADING, SEDIMENT &
EROSION CONTROL PLAN
MARGARET'S FANCY
LOTS 1-12, 14, 16-20 AND
OPEN SPACE LOTS 13, 15 & 21**

DPZ REF: S-03-03
TAX MAP#17 GRID 7
2ND ELECTION DISTRICT
PARCEL 9, 685
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
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TEL: 410.461.7666
FAX: 410.461.8961



DESIGN BY: JCO/RJ
DRAWN BY: JCO/RJ
CHECKED BY: RHV
DATE: 03-15-2005
SCALE: AS SHOWN
W.O. NO.: 04-54.00

3 SHEET OF 10

"AS-BUILT" CERTIFICATION

"I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE AS-BUILT PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS."

SIGNATURE OF ENGINEER: Robert H. Vogel
DATE: 5-2-05

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE SITE INSPECTION AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

APPROVED: DEPARTMENT OF PUBLIC WORKS

Signature: William F. Mahoney
Chief, Bureau of Highways
DATE: 5-2-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: Cindy Hammett
Chief, Division of Land Development
DATE: 5/6/05

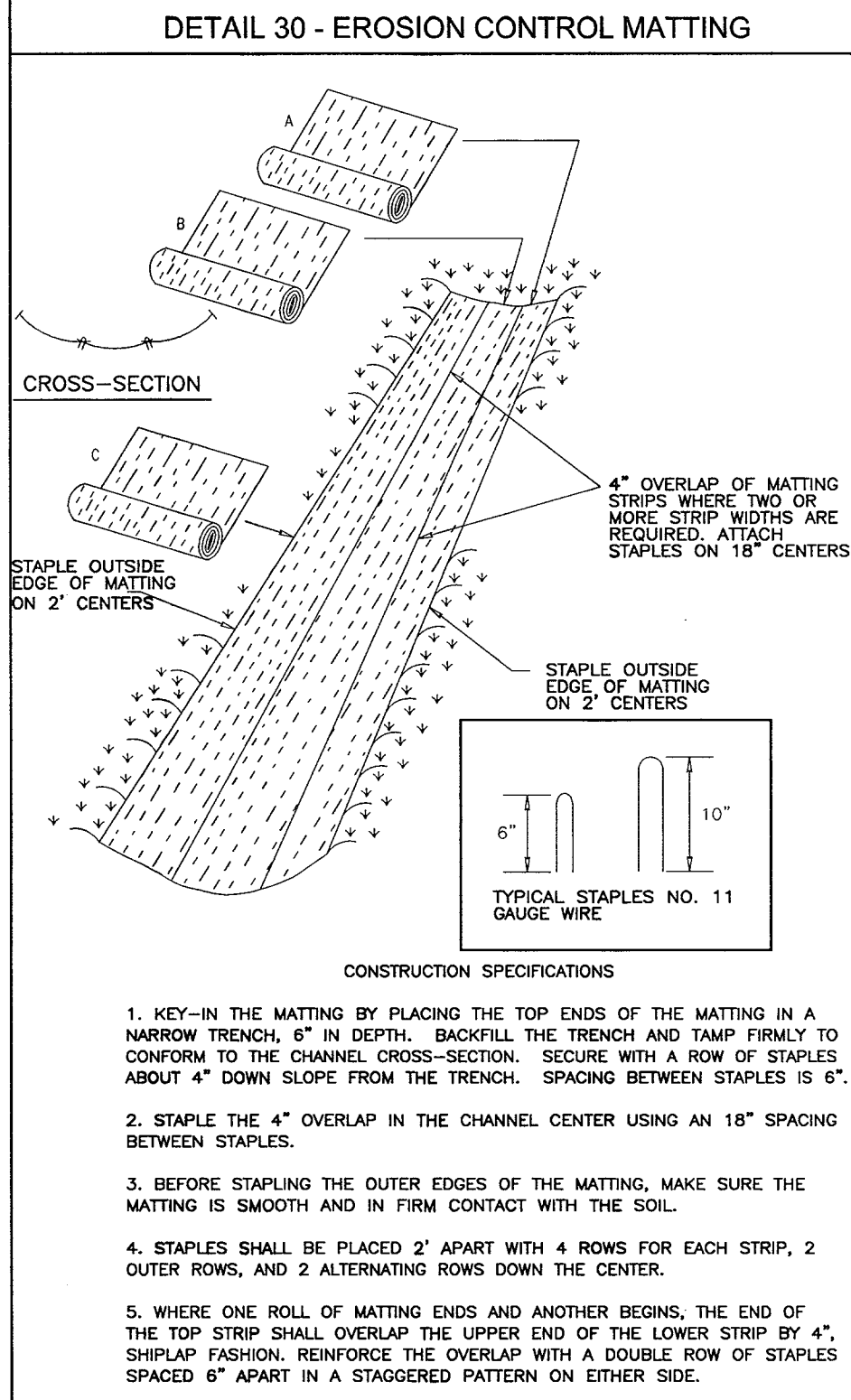
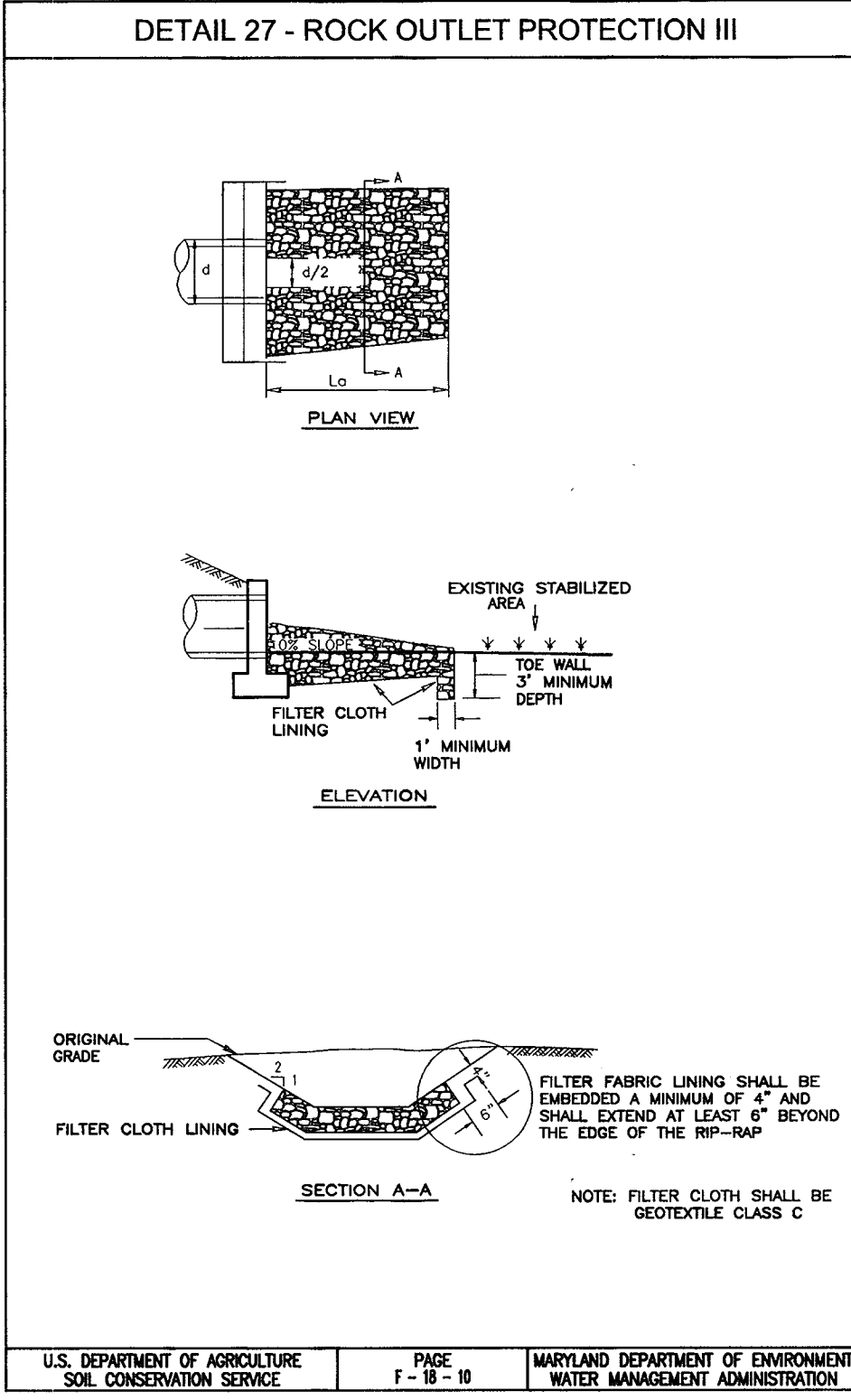
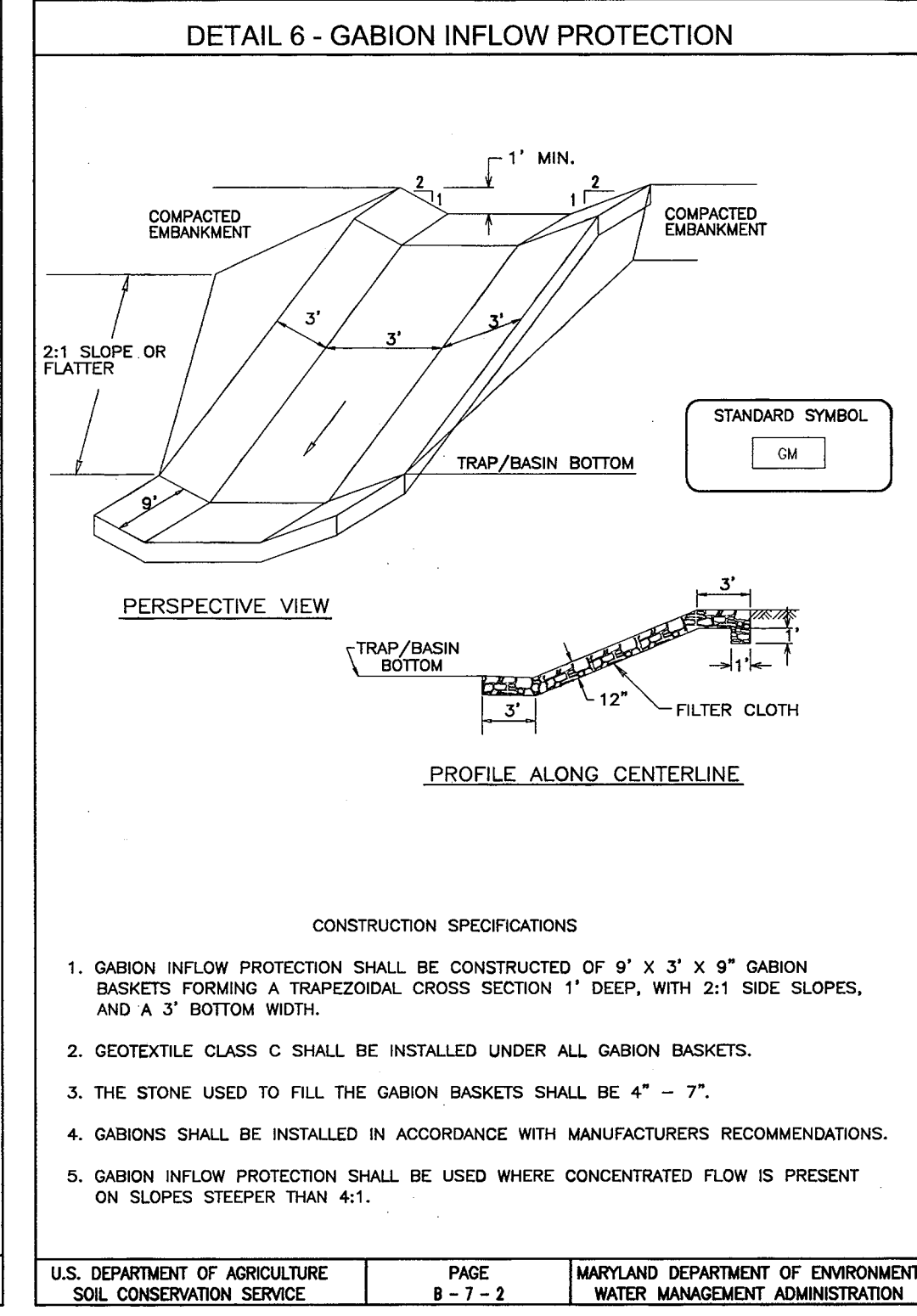
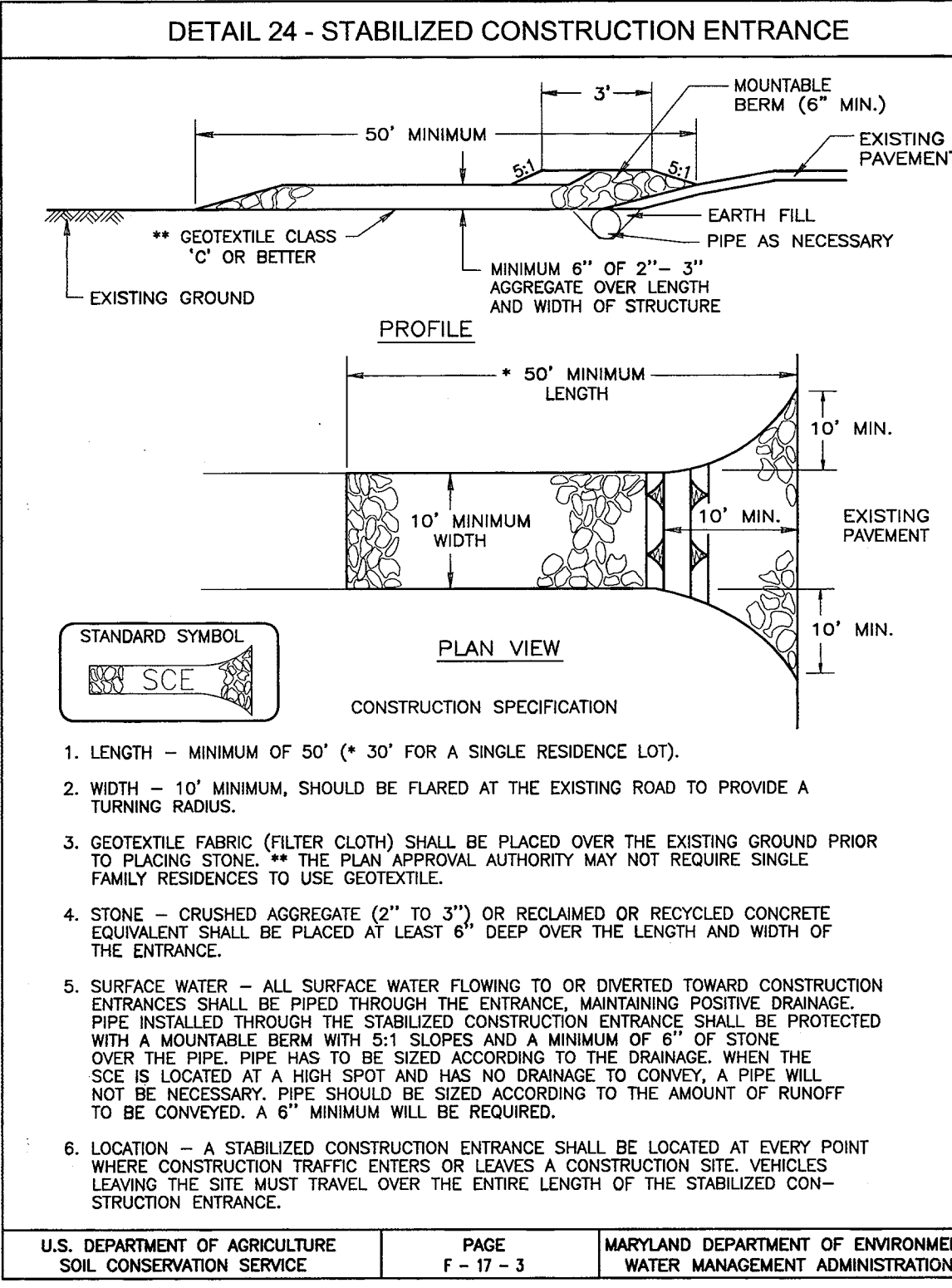
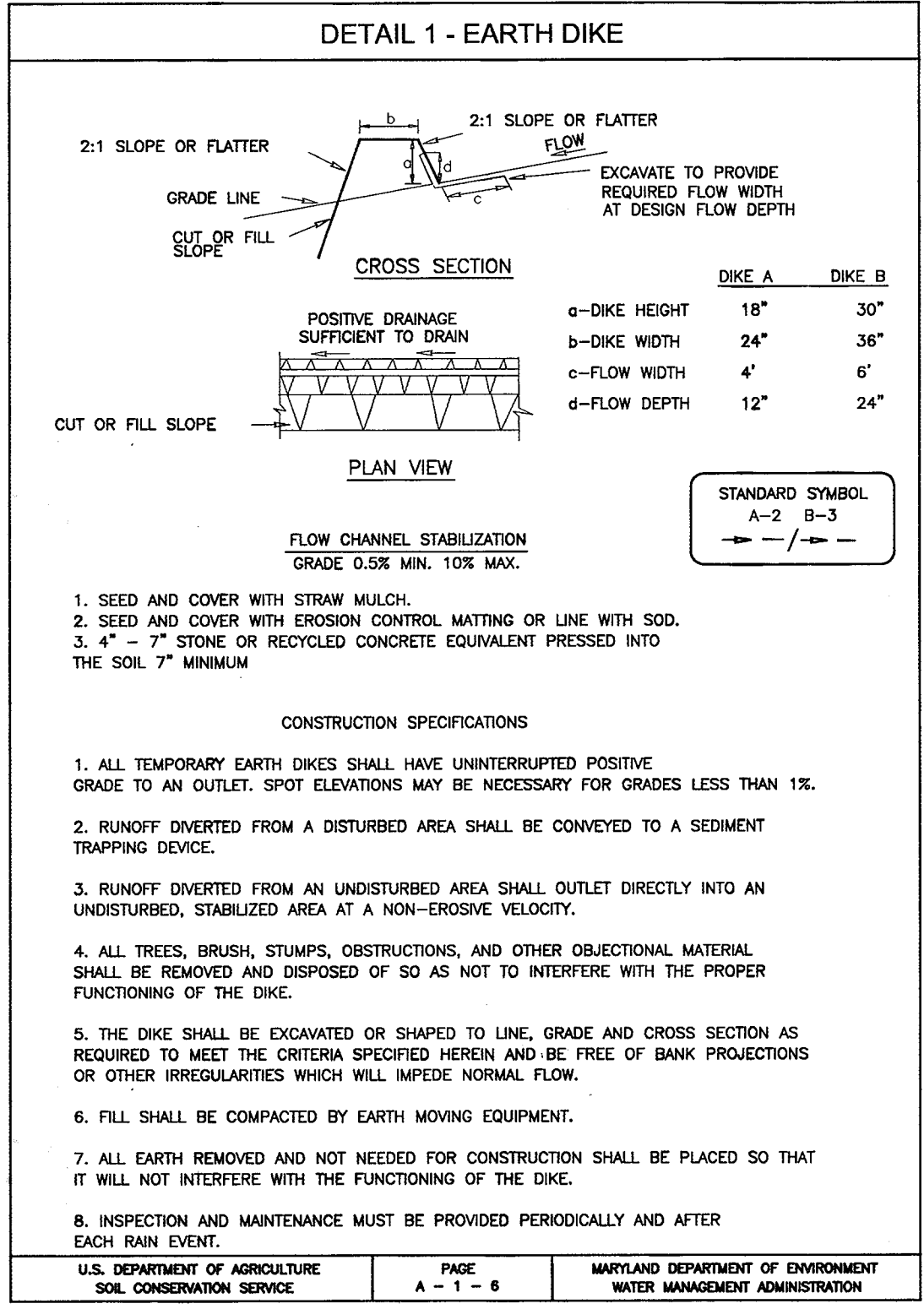
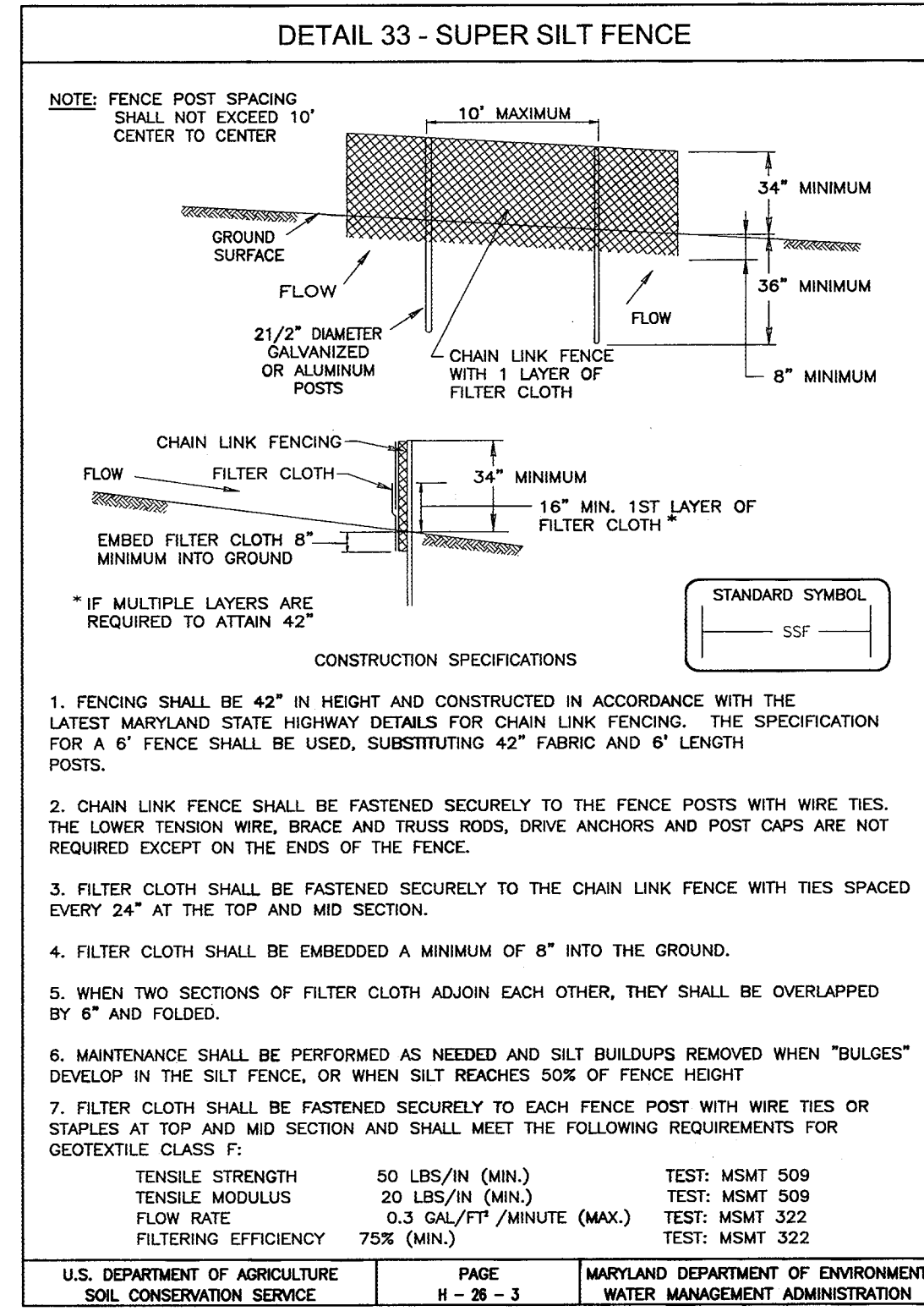
Signature: [Unreadable]
Chief, Development Engineering Division
DATE: 5/3/05

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA-NATURAL RESOURCES CONSERVATION SERVICE
Signature: [Unreadable]
DATE: 5/5/05

HOWARD SOIL CONSERVATION DISTRICT
Signature: [Unreadable]
DATE: 5/5/05

PLAN
SCALE: 1"=50'



21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

DEFINITION
PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETABLE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

CONDITIONS WHERE PRACTICE APPLIES

- THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 - THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO PENETRATE OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
 - THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 - THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

- TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.
- TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 - TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY SILT LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR A SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF SANDS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 AND 1/2" IN DIAMETER.
 - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
 - WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.
 - FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Date: 5/6/05
Date: 5/3/05

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY BAKING, 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:

- PREPARED-APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/100 SQ.FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT THE TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ.FT.)
- ACCEPTABLE-APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ.FT.) AND APPLY 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 PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.5 LBS/1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ.FT.) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 216 GALLONS PER ACRE (6 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 6 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

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

TEMPORARY SEEDING NOTES

SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY BAKING, 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 PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 1 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (0.7 LBS/1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE 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 GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 216 GALLONS PER ACRE (6 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 6 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSE AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
- ALL VEGETATION 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 PERMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERMETER SEEDING, AND MULCHING (SEC. C). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, 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, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. C). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL 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 PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA	9.75 AC.
AREA TO BE ROOFED OR PAVED	6.88 AC.
AREA TO BE VEGETATIVELY STABILIZED	0.82 AC.
TOTAL CUT	13,064 CY
TOTAL FILL	13,000 CY

 OFFSITE WASTE/BORROW AREA LOCATION:
- 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 PERMETER 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 IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR WITH AN APPROVED AND ACTIVE GRADING PERMIT

SEQUENCE OF CONSTRUCTION

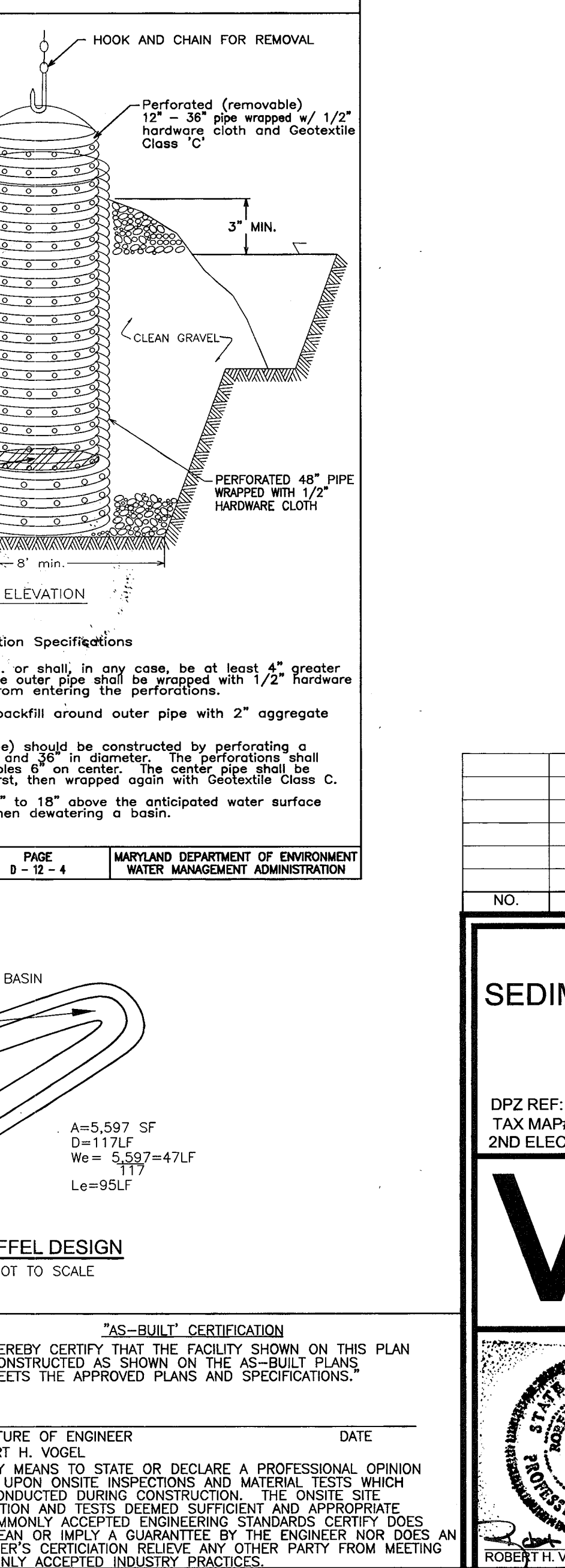
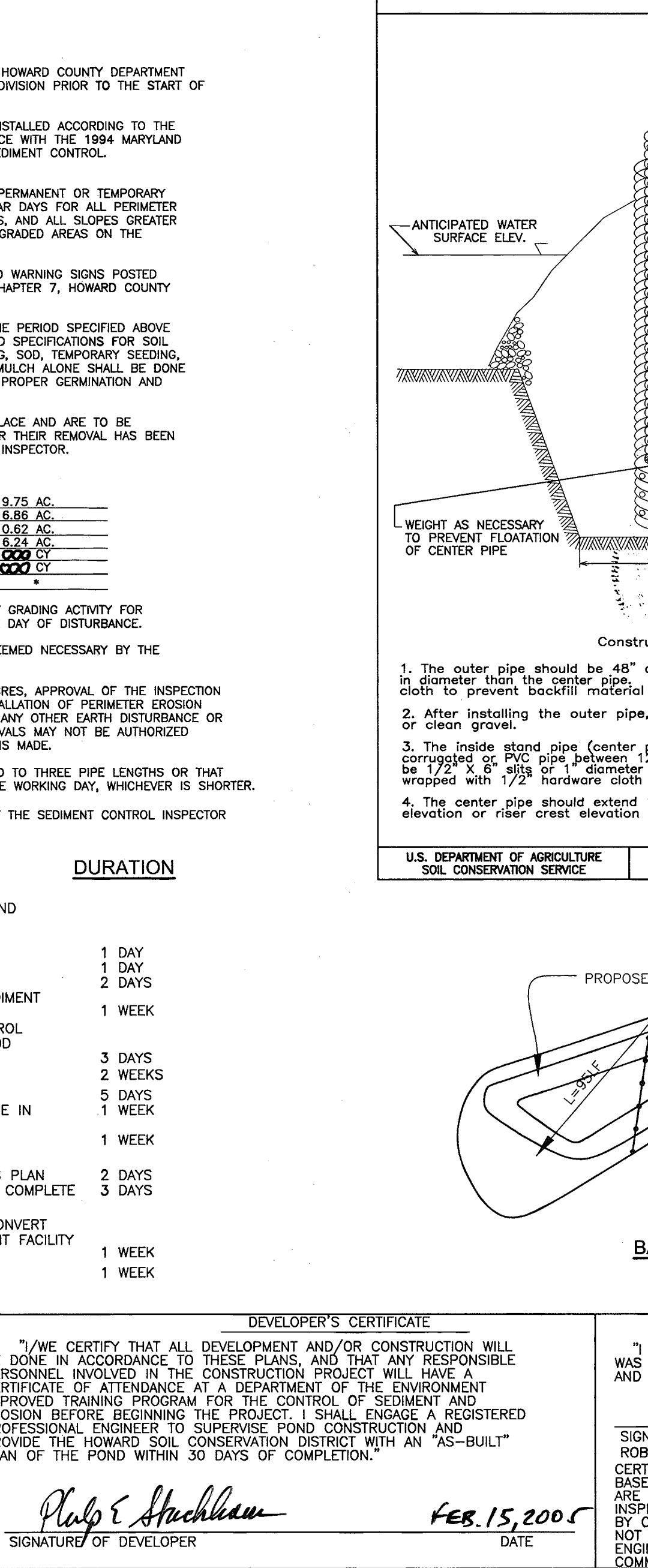
- OBTAIN GRADING PERMIT.
- NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (313-1880) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE 1 DAY
- INSTALL SUPER SILT FENCE 1 DAY
- INSTALL CLEANWATER EARTH DIKES 2 DAYS
- CONSTRUCT STORMWATER MANAGEMENT FACILITY (SEDIMENT BASIN) AND DIVERSION DIKES. 1 WEEK
- AFTER OBTAINING PERMISSION FROM SEDIMENT CONTROL INSPECTOR TO PROCEED, ROUGH GRADE SITE TO LOD AND INSTALL EROSION CONTROL MATTING 3 DAYS
- INSTALL STORM DRAIN SYSTEM, WATER AND SEWER. 2 WEEKS
- GRADE ROAD TO SUB-BASE 5 DAYS
- WITH ROAD GRADED TO SUB-BASE AND INLETS ARE IN PLACE, BEGIN INSTALLATION OF CURB AND GUTTER 1 WEEK
- WITH CURB AND GUTTER IN PLACE PAVE ROAD AND INSTALL SIDEWALK 1 WEEK
- FINALIZE SITE GRADING IN CONFORMANCE WITH THIS PLAN 2 DAYS
- WITH INSPECTOR APPROVAL AND FINAL ROAD PAVING COMPLETE STABILIZE ANY REMAINING DISTURBED AREAS 3 DAYS
- WITH SEDIMENT CONTROL INSPECTORS APPROVAL CONVERT SEDIMENT BASIN TO FINAL STORMWATER MANAGEMENT FACILITY AFTER HOUSE CONSTRUCTION AND SITE STABILIZED. 1 WEEK
- INSTALL STREET TREES AND ALL LANDSCAPING 1 WEEK

ENGINEERS CERTIFICATE
I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY DEPARTMENT OF ENVIRONMENT AND PLANNING. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE BOND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

DEVELOPER'S CERTIFICATE
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

"AS-BUILT" CERTIFICATION
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

BAFFEL DESIGN
NOT TO SCALE



FINAL ROAD CONSTRUCTION PLAN

SEDIMENT AND EROSION CONTROL DETAILS

MARGARET S FANCY

LOTS 1-12, 14, 16-20 AND

OPEN SPACE LOTS 13, 15 & 21

DPZ REF: S-03-03
TAX MAP#17 GRID 7
2ND ELECTION DISTRICT

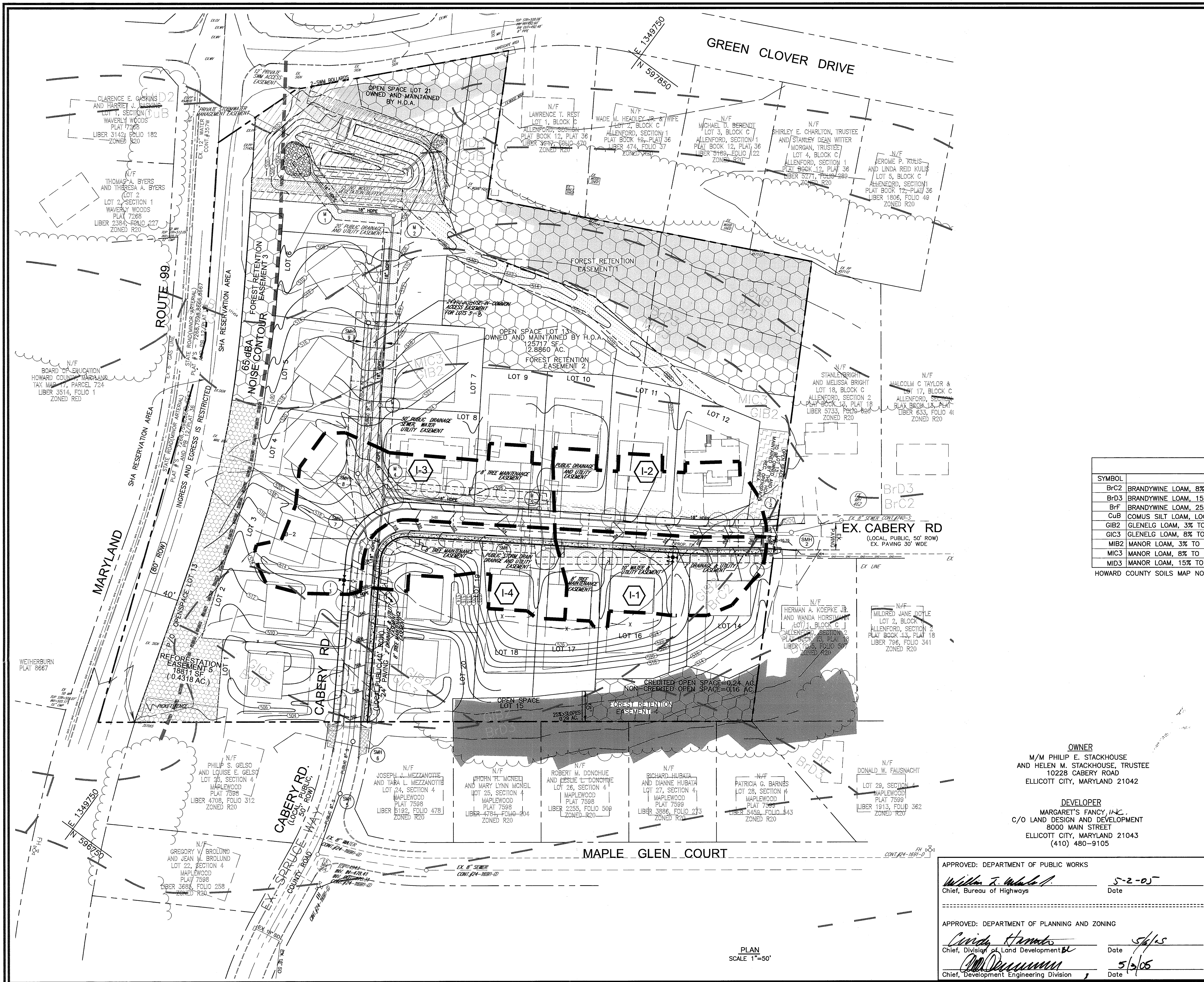
PARCEL 9, 685
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.

ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET, ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

DESIGN BY: RJ
DRAWN BY: RHW
CHECKED BY: RHW
DATE: 02-15-2005
SCALE: AS SHOWN
W.O. NO.: 04-54.00

4 SHEET OF 10



EXISTING CONTOUR
PROPOSED CONTOUR

EXISTING TREES TO REMAIN

LIGHT POLES

15%-24.99% STEEP SLOPE AREA
25% OR GREATER STEEP SLOPE AREA
NO WOODY VEGETATION BUFFER
FOREST RETENTION EASEMENT
FOREST CONSERVATION EASEMENT
SOIL BORING
DRAINAGE DIVIDE

No.	Area	'C'	% Imp.	Soil Types	Zone
I-1	0.47 Ac.	0.49	26	B	R-20
I-2	0.46 Ac.	0.54	34	B	R-20
I-3	0.78 Ac.	0.56	38	B	R-20
I-4	0.41 Ac.	0.53	32	B	R-20

SYMBOL	NAME / DESCRIPTION	K VALUE	WOOD		SOIL	
			SUITA	HABIT	GROUP	GROUP
BrC2	BRANDYWINE LOAM, 8% TO 15% SLOPES, MODERATELY ERODED	.24	40	F	C	C
BrD3	BRANDYWINE LOAM, 15% TO 25% SLOPES, SEVERELY ERODED	.24	40	F	C	C
BfF	BRANDYWINE LOAM, 25% TO 60% SLOPES, SOUTH ASPECT	.24	56	F	C	C
CuB	COMUS SILT LOAM, LOCAL ALLUVIUM, 3% TO 8% SLOPES	.43	4	G	B	B
GIB2	GLENELG LOAM, 3% TO 8% SLOPES, MODERATELY ERODED	.32	30	G	B	B
GIC3	GLENELG LOAM, 8% TO 15% SLOPES, SEVERELY ERODED	.32	30	G	B	B
MIB2	MANOR LOAM, 3% TO 8% SLOPES, MODERATELY ERODED	.37	43	F	B	B
MIC3	MANOR LOAM, 8% TO 15% SLOPES, SEVERELY ERODED	.37	43	F	B	B
MID3	MANOR LOAM, 15% TO 25% SLOPES, SEVERELY ERODED	.37	44	F	B	B

HOWARD COUNTY SOILS MAP NO. 9

OWNER
M/M PHILIP E. STACKHOUSE
AND HELEN M. STACKHOUSE, TRUSTEE
10228 CABERY ROAD
ELLICOTT CITY, MARYLAND 21042

DEVELOPER
MARGARET'S FANCY, INC.
C/O LAND DESIGN AND DEVELOPMENT
8000 MAIN STREET
ELLICOTT CITY, MARYLAND 21043
(410) 480-9105

APPROVED: DEPARTMENT OF PUBLIC WORKS
William F. ... 5-2-05
Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cynthia ... 5/1/05
Chief, Division of Land Development Date

... 5/3/05
Chief, Development Engineering Division Date

NO. REVISION DATE

FINAL ROAD CONSTRUCTION PLAN
STORM DRAIN - DRAINAGE AREA MAP
MARGARET'S FANCY
LOTS 1-12, 14, 16-20 AND
OPEN SPACE LOTS 13, 15 & 21

DPZ REF: S-03-03
TAX MAP#17 GRID 7
2ND ELECTION DISTRICT

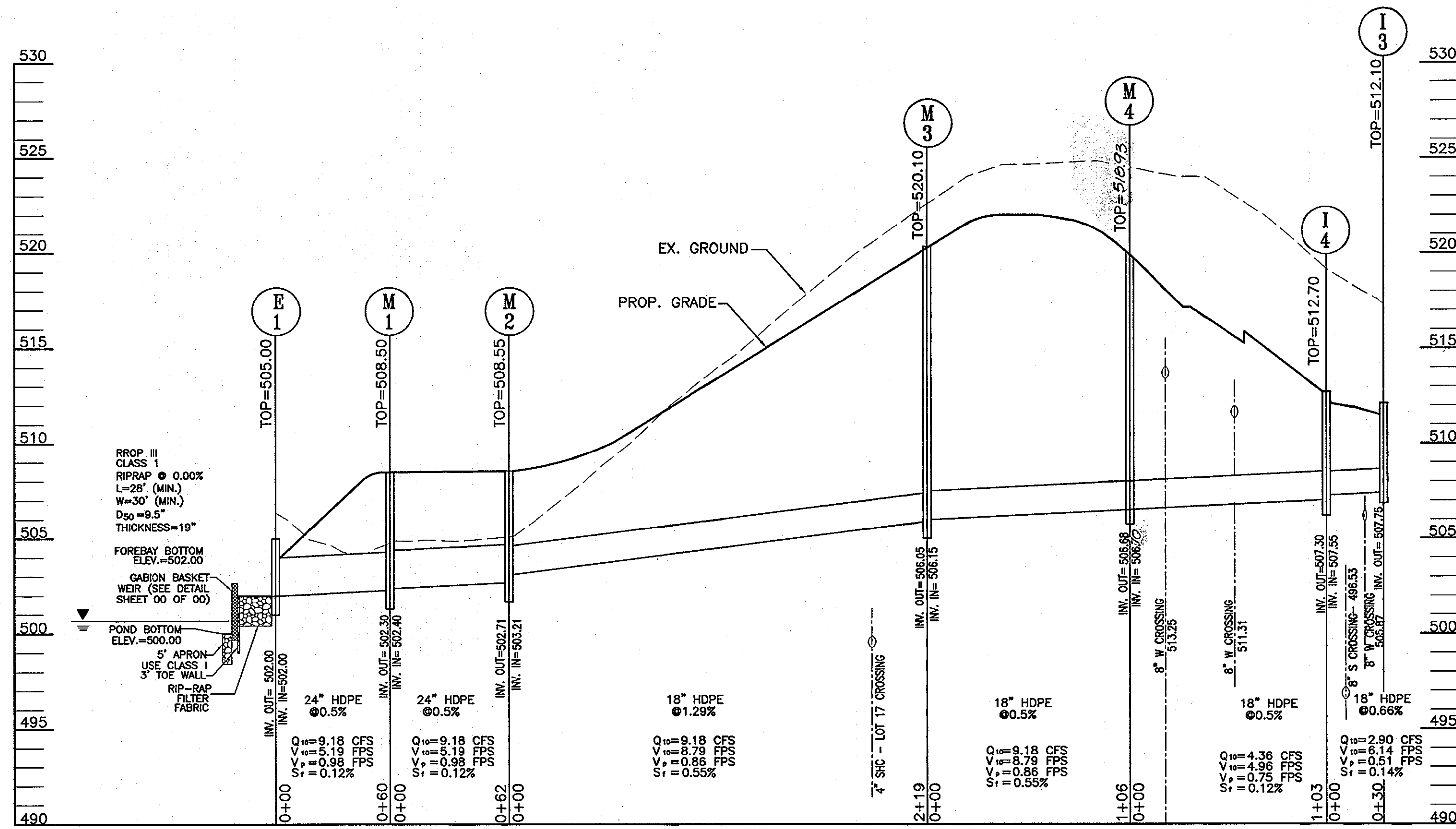
PARCEL 9, 685
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

DESIGN BY: JCO/RJ
DRAWN BY: JCO/RJ
CHECKED BY: RHY
DATE: 03-15-2005
SCALE: AS SHOWN
W.O. NO.: 04-54.00

5 SHEET OF 10

PLAN
SCALE 1"=50'



STORM DRAIN PROFILE
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

SWM-1

ELEV.	SOIL DESCRIPTION COLOR, MOISTURE, CONSIST., SILT PERCENT	STRA. DEPTH	DEPTH SCALE	CON.	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
0.0	SURFACE		0.0					4" TOPSOIL
2.5	BROWN, MOIST, VERY SOFT CLAYEY SILT TRACE FINE SAND (M)			I/D	1-2-1	1	14"	NO GROUNDWATER ENCOUNTERED WHILE DRILLING
				D	2-2-2	2	16"	
				D	6-8-21	3	14"	CAVED IN AT 7.5' AT COMPLETION
8.5	TAKE REFUSAL AT 8.5' BOTTOM OF TEST HOLE AT 8.5'			L	51/0"	4	N/R	CAVED IN AT 7.5' AFTER 24 HOURS

SWM-2

ELEV.	SOIL DESCRIPTION COLOR, MOISTURE, CONSIST., SILT PERCENT	STRA. DEPTH	DEPTH SCALE	CON.	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
0.0	SURFACE		0.0					4" TOPSOIL
2.5	BROWN, MOIST, SOFT CLAYEY SILT TRACE FINE SAND (M)			I	1-2-1	1	13"	NO GROUNDWATER ENCOUNTERED WHILE DRILLING
				D	2-2-3	2	13"	
				D	6-8-11	3	17"	CAVED IN AT 7.5' AT COMPLETION
8.0	TAKE REFUSAL AT 8.0' BOTTOM OF TEST HOLE AT 10.0'			D	5-6-7	4	15"	CAVED IN AT 7.5' AFTER 24 HOURS

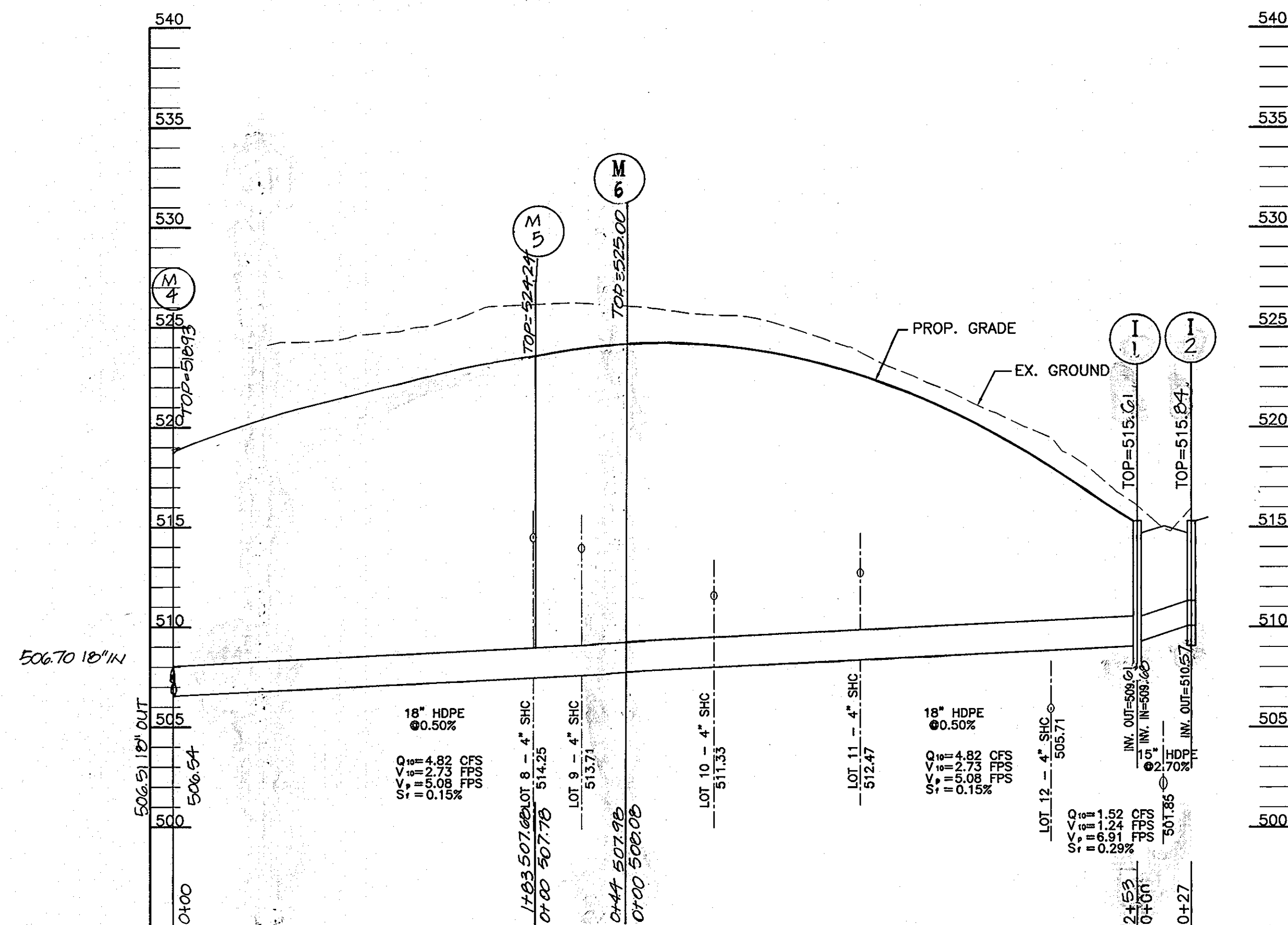
SWM-3

ELEV.	SOIL DESCRIPTION COLOR, MOISTURE, CONSIST., SILT PERCENT	STRA. DEPTH	DEPTH SCALE	CON.	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
0.0	SURFACE		0.0					4" TOPSOIL
2.5	BROWN, MOIST, VERY LOOSE CLAYEY FINE SAND (S)			I	1-1-2	1	15"	NO GROUNDWATER ENCOUNTERED WHILE DRILLING
				D	2-2-4	2	16"	
				D	4-5-4	3	17"	
				D	3-5-8	4	17"	CAVED IN AT 12.0' AT COMPLETION
				D	4-6-7	5	14"	CAVED IN AT 12.0' AFTER 24 HOURS

SWM-4

ELEV.	SOIL DESCRIPTION COLOR, MOISTURE, CONSIST., SILT PERCENT	STRA. DEPTH	DEPTH SCALE	CON.	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
0.0	SURFACE		0.0					4" TOPSOIL
2.5	BROWN, MOIST, SOFT CLAYEY SILT TRACE FINE SAND (M) (POSSIBLE FILL)			D	1-2-2	1	12"	NO GROUNDWATER ENCOUNTERED WHILE DRILLING
				D	2-3-3	2	14"	
				D	4-5-4	3	16"	
				D	2-3-5	4	14"	CAVED IN AT 11.5' AT COMPLETION
				D	28-14-20	5	3"	CAVED IN AT 11.0' AFTER 24 HOURS

STORMWATER MANAGEMENT BORING PROFILES
NOT TO SCALE



STORM DRAIN PROFILE
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS
E-1	24" END SECTION	N 597521.61 E 1349520.48	505.00	24" 502.00	24" 502.00	SEE DETAIL
M-1	STANDARD 4" MANHOLE	N 597537.22 E 1349629.26	508.50	24" 502.40	24" 502.30	0-5.12
M-2	STANDARD 4" MANHOLE	N 597351.91 E 1349746.25	508.55	18" 503.21	24" 502.71	0-5.12
M-3	STANDARD 4" MANHOLE	N 597351.91 E 1349746.25	520.10	18" 508.15	18" 505.05	0-5.12
M-4	STANDARD 4" MANHOLE	CL STA. 2+51, 30' LT.	512.70	18" 506.70	18" 506.51	0-5.12
I-4	TYPE 'A'-5" INLET	CL STA. 1+66, 14' RT.	512.70	18" 507.40	18" 507.15	SD-4.40
I-3	TYPE 'A'-5" INLET	CL STA. 1+57, 14' LT.	512.10	-	18" 507.78	SD-4.40
M-5	STANDARD 4" MANHOLE	CL STA. 4+20, 22' LT.	524.24	18" 507.78	18" 507.68	0-5.12
I-1	TYPE 'A'-5" INLET	CL STA. 6+80, 14' LT.	515.61	18" 509.69	18" 509.61	SD-4.40
I-2	TYPE 'A'-5" INLET	CL STA. 6+80, 14' RT.	515.64	-	18" 510.07	SD-4.40
M-6	STD 4" MANHOLE	CL STA. 4+24, 22' RT	523.00	18" 508.00	18" 507.90	0-5.12

PIPE SCHEDULE

PIPE SIZE	TYPE	TOTAL LENGTH
15"	HDPE	57 LF
18"	HDPE	992 LF
	ASTM C-36	85 LF

APPROVED: DEPARTMENT OF PUBLIC WORKS
William Z. ...
Chief, Bureau of Highways

APPROVED: DEPARTMENT OF PLANNING AND ZONING
...
Chief, Development Engineering Division

OWNER
M/M PHILIP E. STACKHOUSE
AND HELEN M. STACKHOUSE, TRUSTEE
10228 CABERY ROAD
ELLCOTT CITY, MARYLAND 21042

DEVELOPER
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ELLCOTT CITY, MARYLAND 21043
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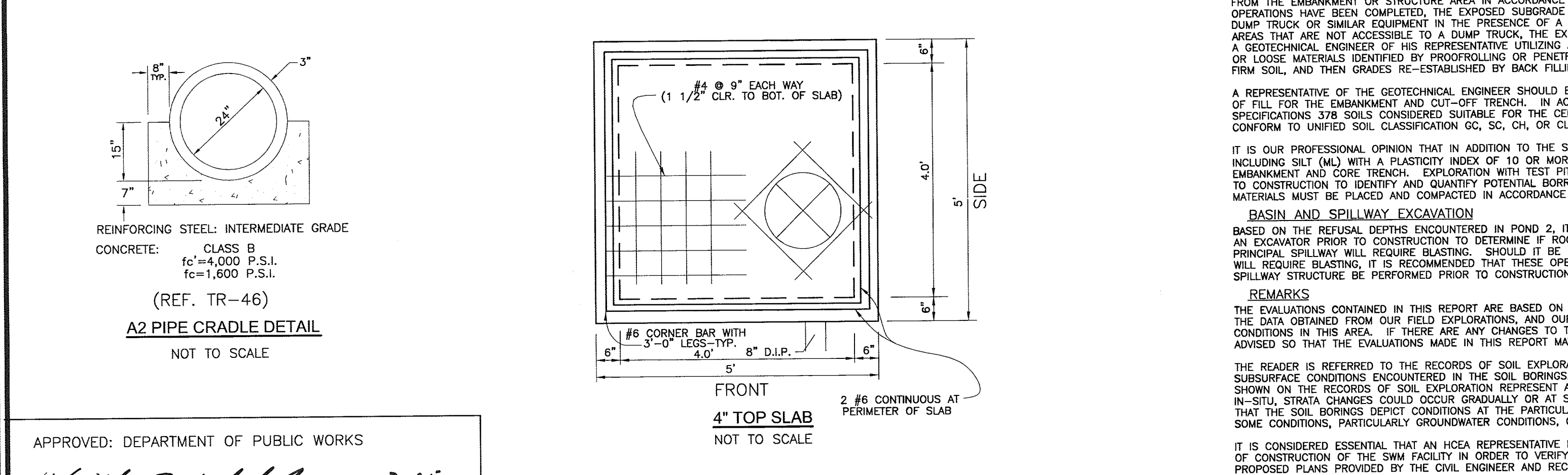
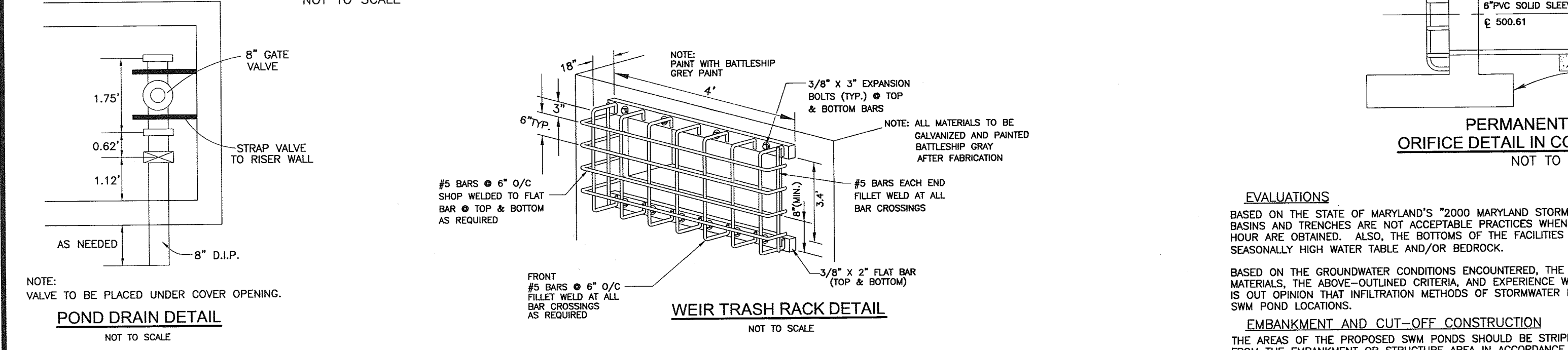
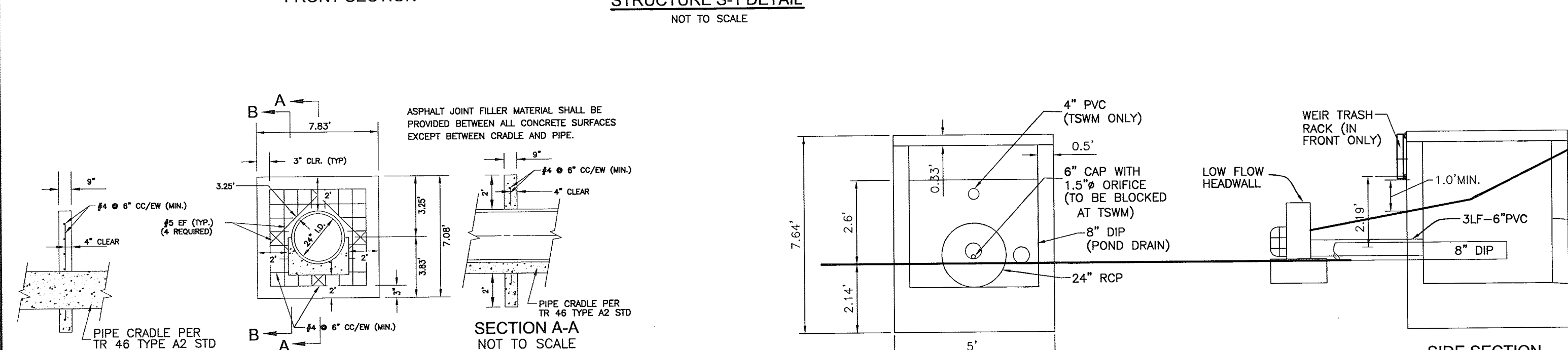
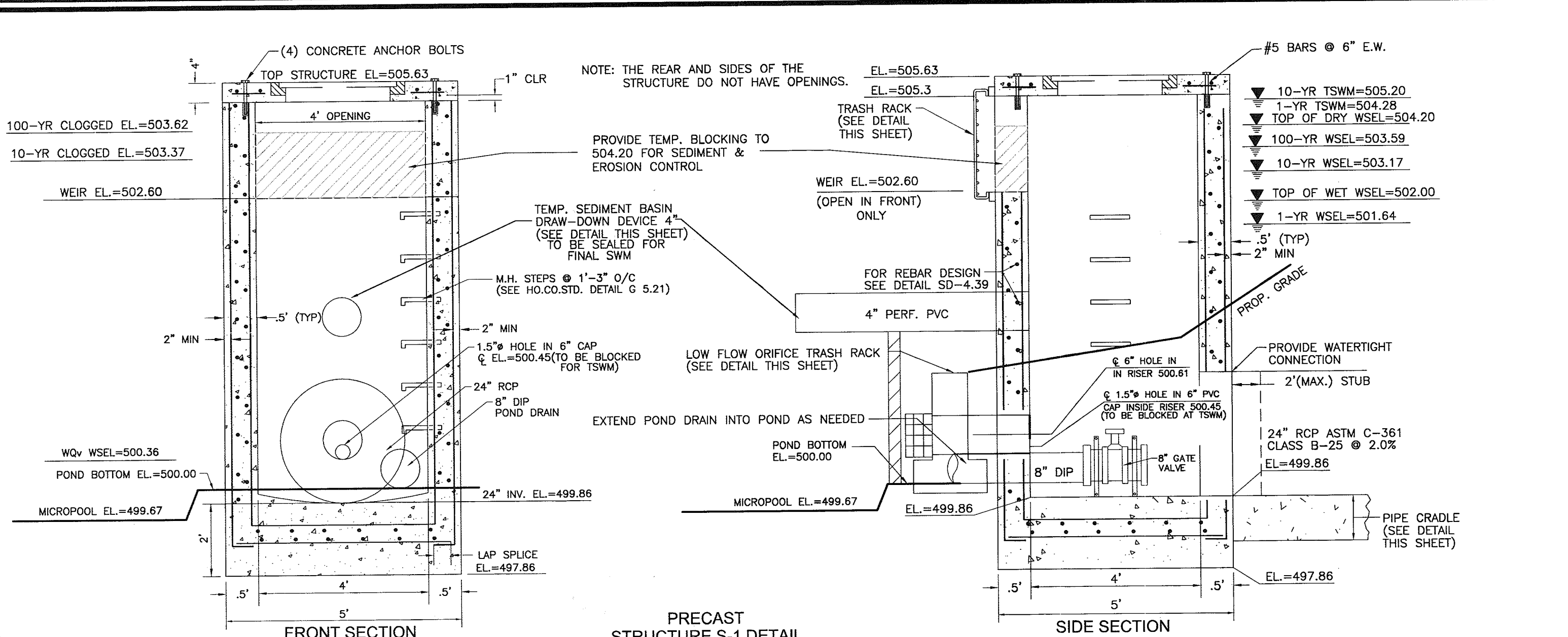
NO.	REVISION	DATE
3	REVISE ROAD PROFILE AND STORM DRAIN PROFILE	11/3/2012

FINAL ROAD CONSTRUCTION PLAN
STORM DRAIN PROFILES
MARGARET'S FANCY
LOTS 1-12, 14, 16-20 AND
OPEN SPACE LOTS 13, 15 & 21

DPZ REF: S-03-03
TAX MAP#17 GRID 7
2ND ELECTION DISTRICT

PARCEL 9, 685
HOWARD COUNTY, MARYLAND
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLCOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

DESIGN BY: _____
DRAWN BY: _____
CHECKED BY: RHW
DATE: 02-15-2005
SCALE: AS SHOWN
W.O. NO.: 04-54.00



APPROVED: DEPARTMENT OF PUBLIC WORKS
William R. ... 5-2-05
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
... 5/6/05
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
... 5/3/05
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA-NATURAL RESOURCE CONSERVATION SERVICE
... 5/5/05
 THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT
... 5/5/05
 DATE

ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTICED THAT THE DEVELOPER HAS ENGAGED A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

4/1/05
 SIGNATURE OF ENGINEER
 ROBERT H. VOGEL

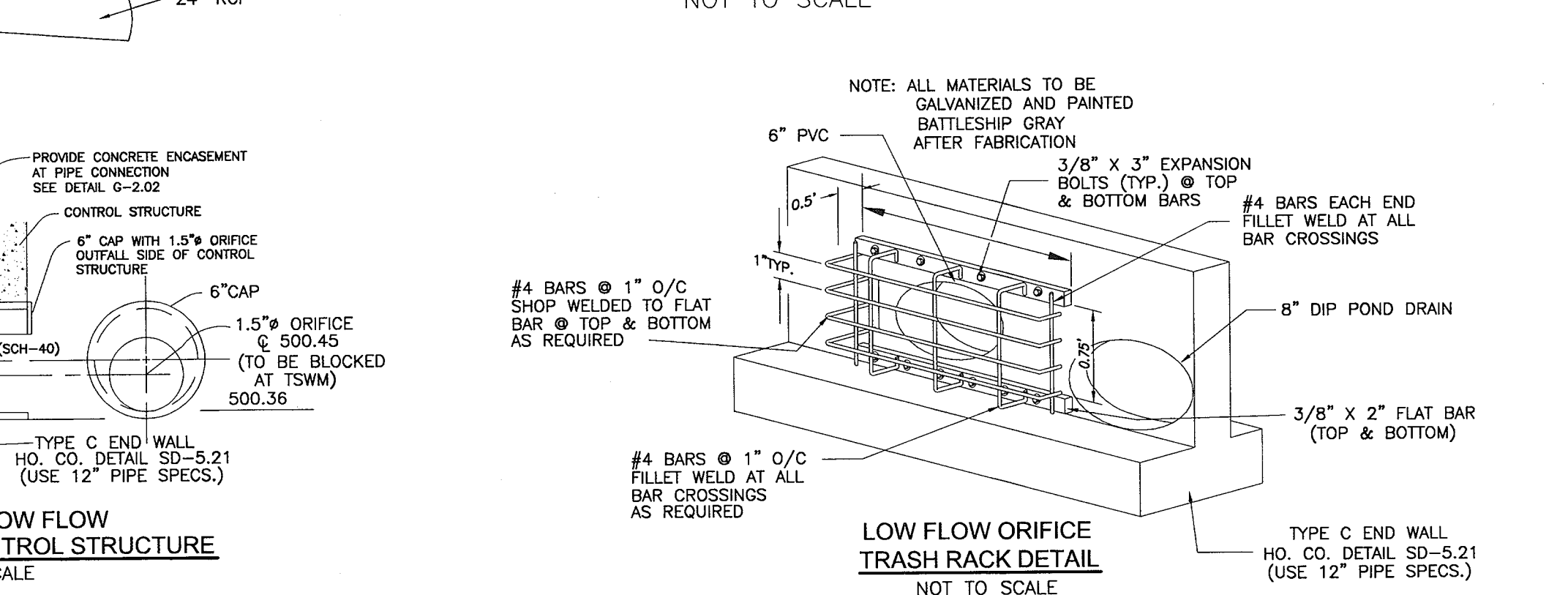
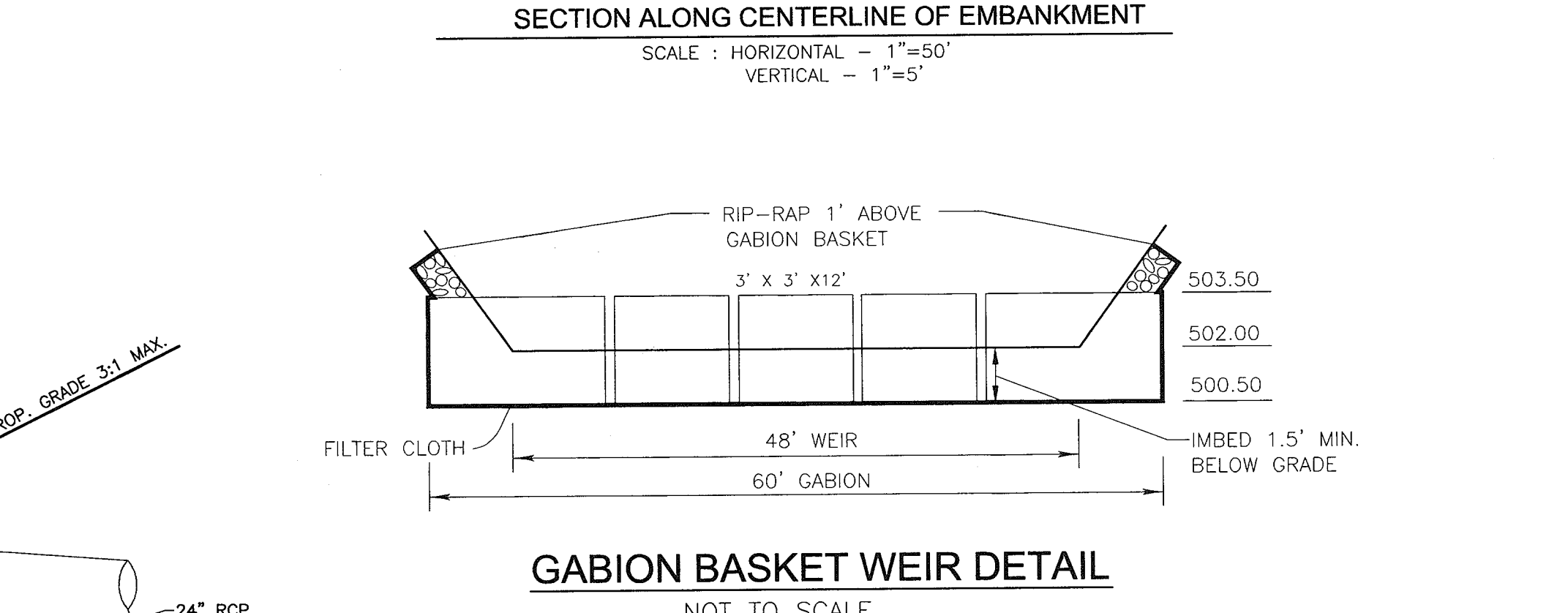
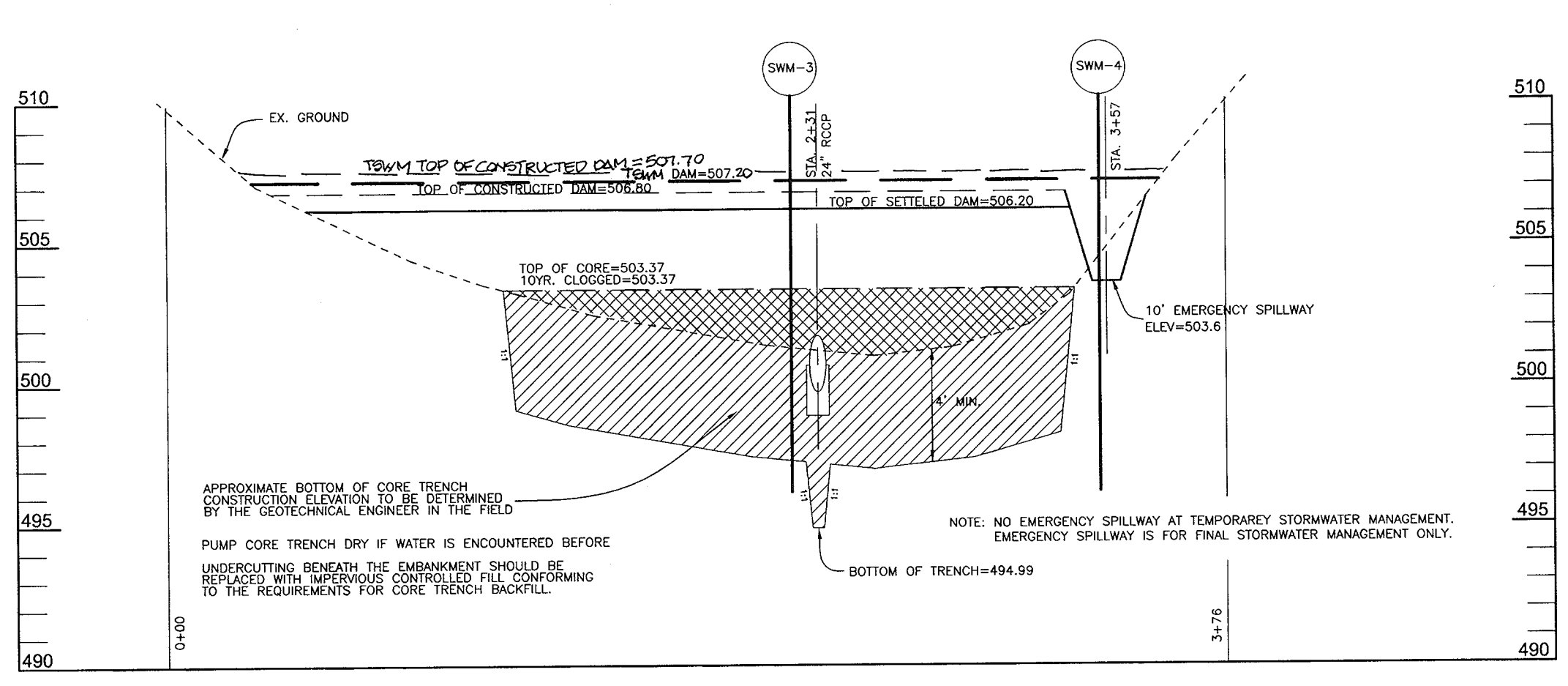
DEVELOPER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

FEB 15 2005
 SIGNATURE OF DEVELOPER
 ...

"AS-BUILT" CERTIFICATION
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE AS-BUILT PLANS, AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE OF ENGINEER
 ROBERT H. VOGEL
 DATE

SIGNATURE OF DEVELOPER
 ...
 DATE



POND SUMMARY

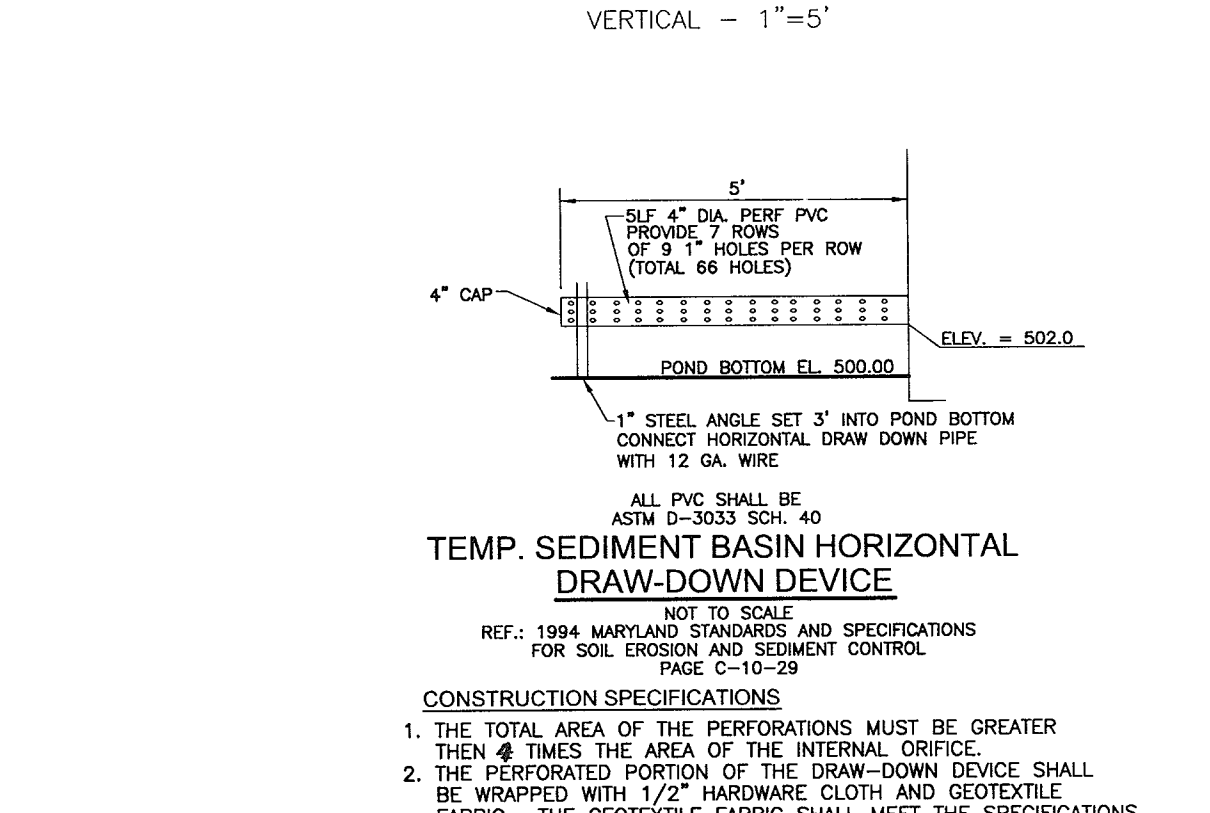
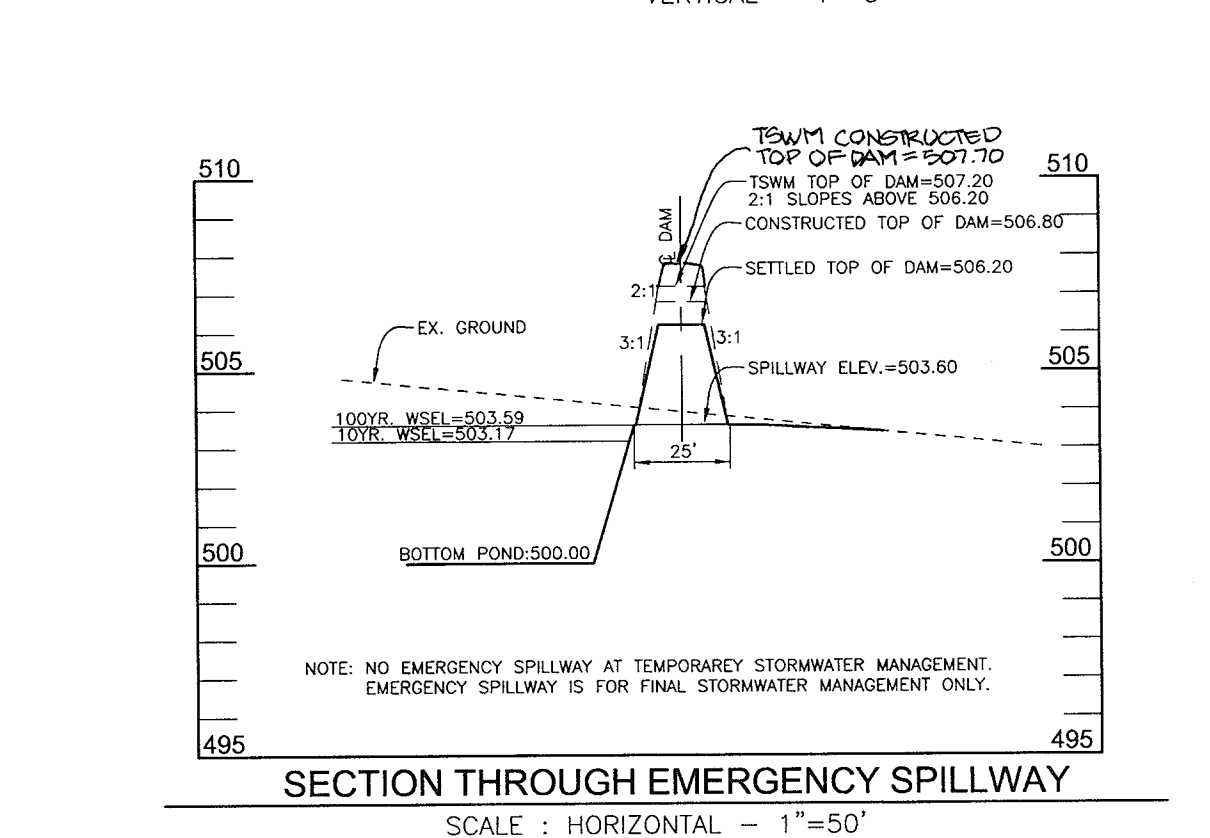
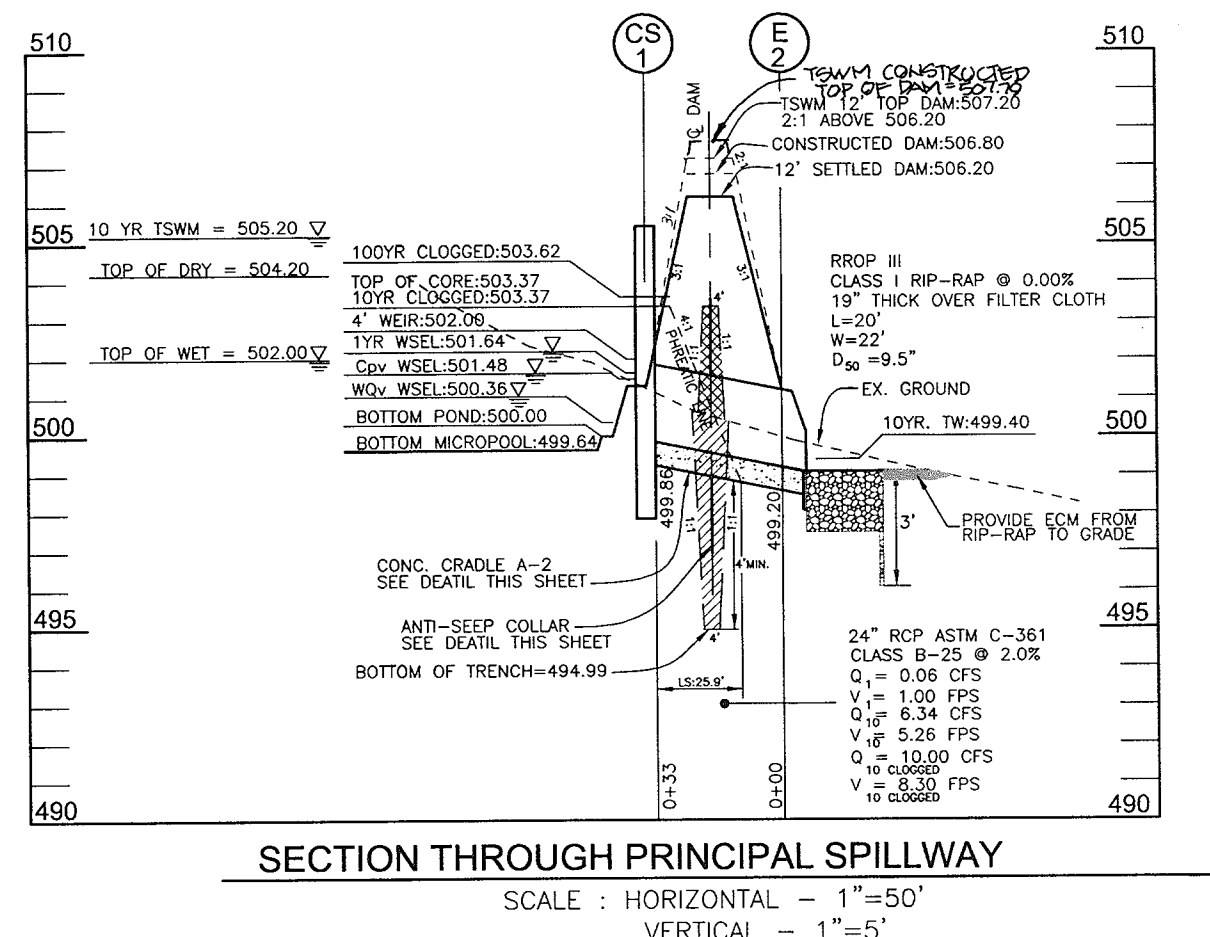
	1 YEAR	10 YEAR	100 YEAR
FLOW INTO POND	3.26 CFS	15.49 CFS	27.67 CFS
FLOW OUT OF POND	0.06 CFS	6.34 CFS	19.56 CFS
W.S. ELEVATION	501.64	503.17	503.59
STORAGE VOLUME	0.15 AC-FT	0.38 AC-FT	0.44 AC-FT

EVALUATIONS
 BASED ON THE STATE OF MARYLAND'S 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I & II, INFILTRATION BASINS AND TRENCHES ARE NOT ACCEPTABLE PRACTICES WHEN INFILTRATION RATES OF LESS THAN 0.52 INCHES PER HOUR ARE OBTAINED. ALSO, THE BOTTOMS OF THE FACILITIES SHOULD BE LOCATED A MINIMUM OF 4 FT. ABOVE THE SEASONALLY HIGH WATER TABLE AND/OR BEDROCK.

EMBANKMENT AND CUT-OFF CONSTRUCTION
 THE AREAS OF THE PROPOSED SWM PONDS SHOULD BE STRIPPED OF TOPSOIL AND ANY OTHER UNSUITABLE MATERIALS FROM THE EMBANKMENT OR STRUCTURE AREA IN ACCORDANCE WITH SOIL CONSERVATION DISTRICT GUIDELINES. AFTER STRIPPING OPERATIONS HAVE BEEN COMPLETED, THE EXPOSED SUBGRADE MATERIALS SHOULD BE PROTECTED WITH A LOADED DUMP TRUCK OR SIMILAR EQUIPMENT IN THE PRESENCE OF A GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE. FOR AREAS THAT ARE NOT ACCESSIBLE TO A DUMP TRUCK, THE EXPOSED MATERIALS SHOULD BE OBSERVED AND TESTED BY A GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE UTILIZING A DYNAMIC CONE PENETROMETER. ANY EXCESSIVELY SOFT OR LOOSE MATERIALS IDENTIFIED BY PROFFERROLLING OR PENETROMETER TESTING SHOULD BE EXCAVATED TO SUITABLE FIRM SOIL, AND THEN GRADES RE-ESTABLISHED BY BACK FILLING WITH SUITABLE SOIL.

OPERATION, MAINTENANCE AND INSPECTION
 INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND ANY HERES, SUCCESSORS OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

OPERATION AND MAINTENANCE SCHEDULE FOR STORMWATER MANAGEMENT DETENTION FACILITY
 STORMWATER MANAGEMENT FACILITY
 ROUTINE MAINTENANCE BY HOA
 1. FACILITY WILL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS.
 INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IF FUNCTIONING PROPERLY.
 2. TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER.
 OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHOULD BE MOWED AS NEEDED.
 3. DEBRIS AND LITTER NEXT TO THE OUTLET STRUCTURE SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
 4. VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS RIPRAP OUTLET AREAS SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
 NON-ROUTINE MAINTENANCE BY HOA
 1. STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON DETECTION OF ANY DAMAGE.
 INSPECTIONS SHOULD BE PERFORMED DURING ROUTINE MAINTENANCE OPERATIONS.
 2. SEDIMENT SHOULD BE REMOVED WHEN ITS ACCUMULATION SIGNIFICANTLY REDUCES THE DESIGN STORAGE CAPACITY. THE ON-SITE SITE INSPECTION AND TESTS DETERMINED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS CERTIFY DOES NOT PROVIDE A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.



CONSTRUCTION SPECIFICATIONS

- THE TOTAL AREA OF THE PERFORATIONS MUST BE GREATER THAN 4 TIMES THE AREA OF THE INTERNAL ORIFICE.
- THE PERFORATION PORTION OF THE DRAW-DOWN DEVICE SHALL BE WROUGHT WITH 1/2" HARDWARE CLOTH AND GEOTEXTILE FABRIC. THE GEOTEXTILE FABRIC SHALL MEET THE SPECIFICATIONS FOR GEOTEXTILE CLASS E.
- PROVIDE SUPPORT OF DRAW-DOWN DEVICE TO PREVENT SAGGING AND FLOATION. AN ACCEPTABLE PREVENTIVE MEASURE IS TO STAKE BOTH SIDES OF DRAW-DOWN DEVICE WITH 1" STEEL ANGLE, OR 1"x4" SQUARE OR 2" ROUND WOODEN POSTS SET 3" MINIMUM INTO THE GROUND THEN JOINING THEM TO THE DEVICE BY WRAPPING WITH 12 GAUGE MINIMUM WIRE.

FINAL ROAD CONSTRUCTION PLAN
STORMWATER MANAGEMENT DETAILS

MARGARET'S FANCY
 LOTS 1-12, 14, 16-20 AND
 OPEN SPACE LOTS 13, 15 & 21

DPZ REF: S-03-03
 TAX MAP#17 GRID 7
 2ND ELECTION DISTRICT

PARCEL 9, 685
 HOWARD COUNTY, MARYLAND

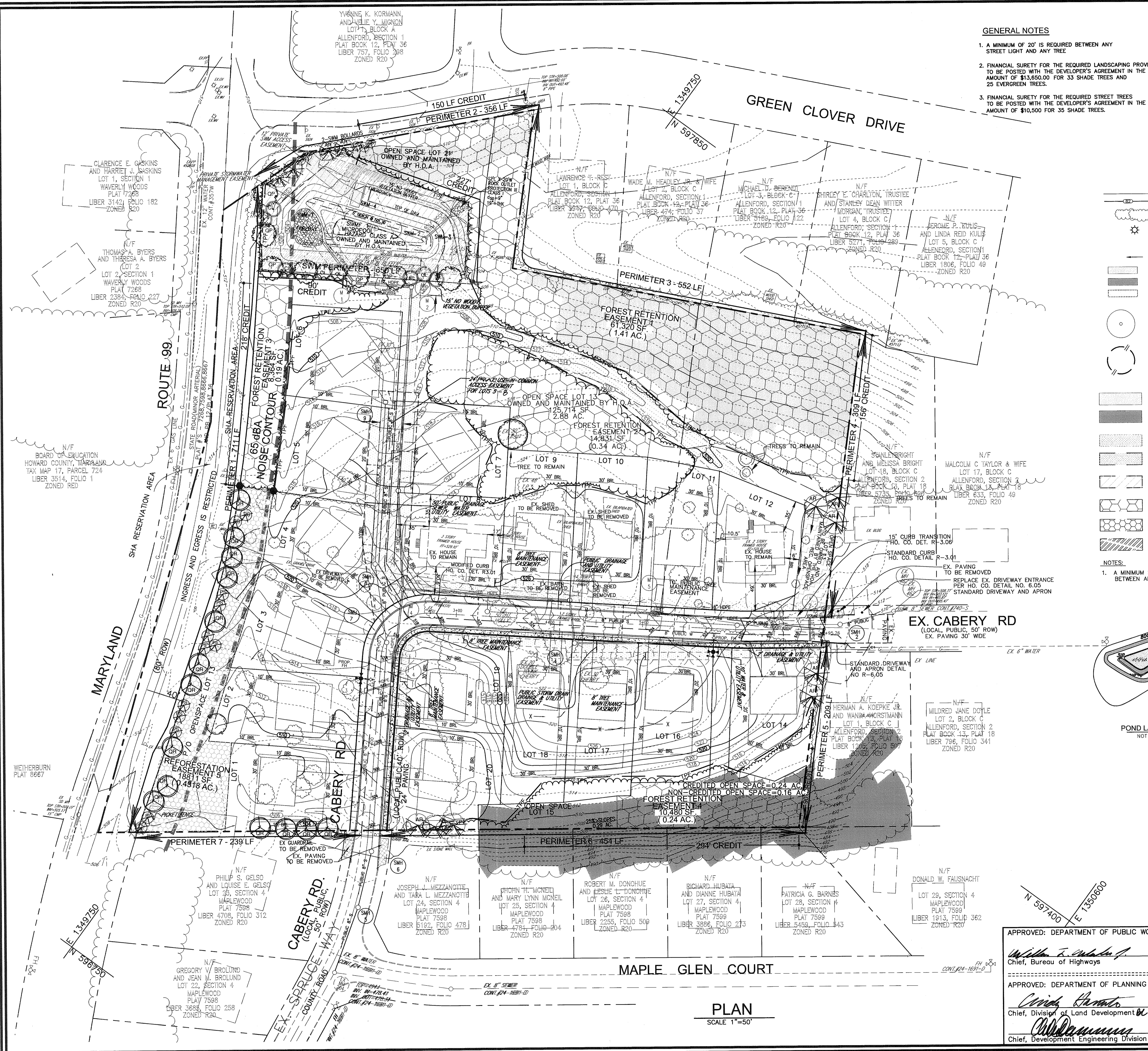
OWNER
 M/M PHILIP E. STACKHOUSE
 AND HELEN M. STACKHOUSE, TRUSTEE
 10228 CABERY ROAD
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 MARGARET'S FANCY, INC.
 C/O LAND DESIGN AND DEVELOPMENT
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21043
 (410) 480-9105

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

DESIGN BY: JCO
 DRAWN BY: JCO
 CHECKED BY: RHV
 DATE: AUGUST, 2004
 SCALE: AS SHOWN
 W.O. NO.: 04-54.00

7 SHEET OF 10



- GENERAL NOTES**
- A MINIMUM OF 20' IS REQUIRED BETWEEN ANY STREET LIGHT AND ANY TREE
 - FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING PROVIDED TO BE POSTED WITH THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$135,000 FOR 33 SHADE TREES AND 25 EVERGREEN TREES.
 - FINANCIAL SURETY FOR THE REQUIRED STREET TREES TO BE POSTED WITH THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$10,500 FOR 35 SHADE TREES.

SCHEDULE A: PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS			ADJACENT TO PERIMETER PROPERTIES			
	1	2	3	4	5	6	7
PERIMETER/FRONTAGE DESIGNATION	B	B	A	A	A	A	A
LANDSCAPE TYPE	711	356	552	309	209	454	239
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	YES*	YES*	YES*	YES*	YES*	YES*	NO
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	218'	150'	552'	156'	90'	294'	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED (L REMAINING)	493'	206'	0	153'	119'	160'	239'
SHADE TREES	1:50 10	1:50 4	1:60 0	1:60 3	1:60 2	1:60 3	1:60 4
EVERGREEN TREES	1:40 12	1:40 5	---	---	---	---	---
NUMBER OF PLANTS PROVIDED	10 **	4	0	3	2	3	4
SHADE TREES	12	5	---	---	---	---	---
EVERGREEN TREES	---	---	---	---	---	---	---
OTHER TREES (2:1 SUBSTITUTION)	---	---	---	---	---	---	---
SHRUBS (10:1 SUBSTITUTION)	---	---	---	---	---	---	---
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED	---	---	---	---	---	---	---

** CREDITS FROM FOREST CONSERVATION PLANTING

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING TREES TO REMAIN
- LIGHT POLES
- DIRECTION OF FLOW
- 15% - 24.99% STEEP SLOPE AREA
- 25% OR GREATER STEEP SLOPE AREA
- NO WOODY VEGETATION BUFFER
- PROPOSED STREET TREE
- TREE PROTECTION FENCE
- AREA OF 15 TO 24.9 PERCENT SLOPES
- AREA OF 25 PERCENT OR GREATER SLOPES
- PROP. PUBLIC STREET TREE MAINTENANCE & UTILITY EASEMENT
- PROP. PUBLIC OR PRIVATE ACCESS EASEMENT
- 24' USE-IN-COMMON ACCESS EASEMENT
- PROP. FOREST CONSERVATION AREA (RETENTION)
- PROP. FOREST CONSERVATION AREA (REFORESTATION)
- NO WOODY VEGETATION BUFFER

SCHEDULE D: STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER (NO, YES AND LINEAR FEET)	POND #1 650 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	317'
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO
NUMBER OF TREES REQUIRED (SHADE TREES, EVERGREEN TREES)	(333) 7 SHADE TREES, 8 EVERGREEN TREES
NUMBER OF TREES PROVIDED (SHADE TREES, EVERGREEN TREES, SHRUBS)	7 SHADE TREES, 8 EVERGREEN TREES
EXISTING WOODS TO REMAIN	

LANDSCAPE PLANT LIST

KEY	QUAN.	BOTANICAL NAME	SIZE	CAT
AR	12	ACER RUBRUM	2 1/2"-3" CAL.	B & B
QR	14	QUERCUS RUBRA	2 1/2"-3" CAL.	B & B
QP	7	QUERCUS PALUSTRIS	2 1/2"-3" CAL.	B & B
PS	17	PNUS STROBUS	6'-8' HT.	B & B
CL	8	CYPRESSOCYPARIS LEYLANDII	5'-6' HT.	B & B

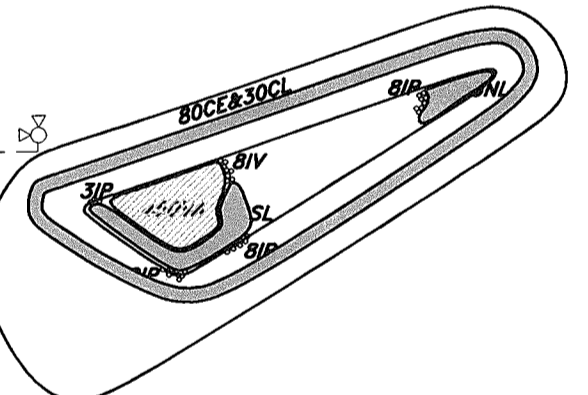
STREET TREE PLANT LIST

KEY	QUAN.	BOTANICAL NAME	SIZE	CAT
TC	35	TILIA CORDATA	2 1/2"-3" CAL.	B & B
		LITTLELEAF LINDEN		

2' DEEP STORMWATER POND HERBACEOUS LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
VA	450	Vallisneria spiralis	plug	2' oc
IP	27	Iris pseudacorus	plug	1.5' oc
IV	8	Iris versicolor	plug	1.5' oc
SL	60	Sagittaria latifolia	plug	4' oc
CE	80	Cyperus esculentus	plug	2' oc
NL	325	Nuphar luteum	plug	1.5' oc
CL	30	Carex lacustris	plug	2' oc

- NOTES:**
- A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.



OWNER
M/M PHILIP E. STACKHOUSE AND HELEN M. STACKHOUSE, TRUSTEE
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MARGARET'S FANCY, INC.
C/O LAND DESIGN AND DEVELOPMENT
8000 MAIN STREET
ELLCOTT CITY, MARYLAND 21043
(410) 480-9105

APPROVED: DEPARTMENT OF PUBLIC WORKS
William F. ...
Chief, Bureau of Highways
Date: 5-2-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chris ...
Chief, Division of Land Development
Date: 5/6/05

William ...
Chief, Development Engineering Division
Date: 5/3/05

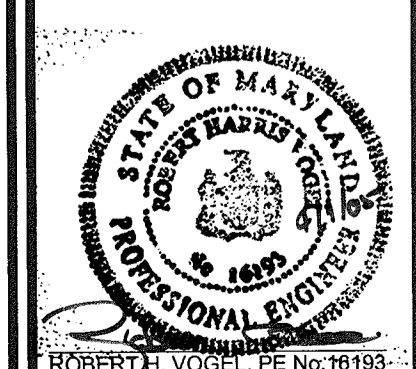
NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
LANDSCAPE PLAN
MARGARET'S FANCY
LOTS 1-12, 14, 16-20 AND
OPEN SPACE LOTS 13, 15 & 21

DPZ REF: S-03-03
TAX MAP#17 GRID 7
2ND ELECTION DISTRICT

PARCEL 9, 685
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLCOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961



DESIGN BY: ELWRJ
DRAWN BY: ELWRJ
CHECKED BY: RHV
DATE: 03-15-2005
SCALE: AS SHOWN
W.O. NO.: 04-54.00

8 SHEET OF 10

PLAN
SCALE 1"=50'



- LEGEND**
- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - SPOT ELEVATION
 - DIRECTION OF FLOW
 - EXISTING TREES TO REMAIN
 - AREA OF 15 TO 24.9 PERCENT SLOPES
 - AREA OF 25 PERCENT OR GREATER SLOPES
 - FOREST PROTECTION/RETENTION AREA SIGN
 - FOREST RETENTION EASEMENT
 - FOREST REFORESTATION EASEMENT
 - TREE PROTECTION FENCE
 - FOREST CONSERVATION EASEMENT ABANDONED

APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. Mahoney 5-2-05
 Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 5/6/05
 Chief, Division of Land Development Date

Chris... 5/3/05
 Chief, Development Engineering Division Date

2	MODIFY FOREST CONSERVATION EASEMENTS	7/6/07
1	REMOVE STOCKPILE AREA AND PROVIDE PERM OPEN SPACE LOT 13	10.5.05
NO.	REVISION	DATE

**FINAL ROAD CONSTRUCTION PLAN
 FOREST CONSERVATION PLAN
 MARGARET'S FANCY
 LOTS 1-12, 14, 16-20 AND
 OPEN SPACE LOTS 13, 15 & 21**

DPZ REF: S-03-03 PARCEL 9, 685
 TAX MAP#17 GRID 7 HOWARD COUNTY, MARYLAND
 2ND ELECTION DISTRICT

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 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666
 FAX: 410.461.8961

DESIGN BY: RJ/LT
 DRAWN BY: RJ
 CHECKED BY: RHV
 DATE: 03-15-2005
 SCALE: AS SHOWN
 W.O. NO.: 04-64.00

9 SHEET OF 10

ROBERT H. VOGEL, PE No. 16183

ZONED R-ED

NET TRACT AREA:

A. TOTAL TRACT AREA	9.75 AC
B. AREA WITHIN 100 YEAR FLOODPLAIN	0.00 AC
C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION	0.00 AC
D. NET TRACT AREA	9.75 AC

LAND USE CATEGORY

INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY. ZONED R-20

ARA	MDR	IDA	HDR	MPD	CIA
0	0	0	1	0	0

E. AFFOREST THRESHOLD	15% X D = 1.46 AC
F. CONSERVATION THRESHOLD	20% X D = 1.95 AC

EXISTING FOREST COVER:

G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN)	= 6.33 AC
H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD	= 4.87 AC
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD	= 4.38 AC

BREAK EVEN POINT:

(2 X I) + F = BREAK EVEN POINT (6.14 AC)

J. FOREST RETENTION WITH NO MITIGATION	= 2.83 AC
K. CLEARING PERMITTED WITHOUT MITIGATION	= 3.50 AC

PROPOSED FOREST CLEARING:

L. TOTAL AREA OF FOREST TO BE CLEARED	= 4.15 AC
M. TOTAL AREA OF FOREST TO BE RETAINED	= 2.18 AC

PLANTING REQUIREMENTS:

N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD (L X 25)	= 1.04 AC
P. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD	= 0.00 AC
Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD (M-F)	= 0.23 AC
R. TOTAL REFORESTATION REQUIRED (N+P-Q)	= 0.81 AC
S. TOTAL AFFORESTATION REQUIRED	= 0.00 AC
T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED	= 0.81 AC

ON-SITE REFORESTATION OF 0.42 AC. (18,992.16 SF) AND FEE-IN-LIEU FOR THE REMAINING 0.39 AC. (16,988.40 SF)

NOTES

- THE PROPERTY OUTLINE IS BASED ON A FIELD RUN BOUNDARY SURVEY PERFORMED BY FREDERICK WARD ASSOCIATES, INC. IN APRIL, 2002.
 - THE EXISTING FEATURES AND CONTOURS SHOWN HEREON ARE BASED ON A TOPOGRAPHIC SURVEY PERFORMED BY FREDERICK WARD ASSOCIATES, INC. IN APRIL, 2002. FIELD LOCATION OF SPECIMEN TREES AND HOWARD COUNTY PHOTOGRAMMETRIC.
 - THE FOREST CONSERVATION EASEMENT ORIGINALLY ESTABLISHED BY MARGARET'S FANCY PLAT NOS. 1710 - 1712 (P-04-168) IS REDUCED BY 0.38 AC IN ORDER TO ACCOMMODATE THE RELOCATED PUBLIC SEWER AND UTILITY EASEMENT. A BUYOUT FEE OF \$16,552.00 HAS BEEN PAID TO THE HOWARD COUNTY FOREST CONSERVATION FUND PER SECTION 16.1210 (C)(2)(D).
- FOREST RETENTION: 1.84 AC
 REFORESTATION: 0.15 AC
 FEE-IN-LIEU: 0.39 AC \$8,494.20
 BUYOUT PENALTY: 0.38 AC \$16,552.00

FOREST RETENTION AREAS AND NOTES

- FORESTED STREAM BUFFERS ARE RETAINED IN OPEN SPACE LOTS.
- NO RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THIS SITE.
- THE WOODED STEEP SLOPES ARE SUBSTANTIALLY RETAINED IN OPEN SPACE LOTS.
- FORESTED AREAS ADJACENT TO FLOODPLAINS AND STREAM BUFFERS ARE SUBSTANTIALLY RETAINED IN OPEN SPACE LOTS.
- THERE ARE NO ISOLATED FOREST STANDS ON THIS SITE.
- CHANGES IN GRADING AND RUNOFF WITHIN CONSTRUCTION/INSTALLATION AREAS WILL NOT ADVERSELY AFFECT THE SOILS WITHIN THE FOREST RETENTION AREA. SEDIMENT CONTROL MEASURES WILL REDIRECT CONCENTRATED FLOW RUNOFF TO STORMWATER MANAGEMENT FACILITIES. RETAIN SEDIMENT WITHIN THE CONSTRUCTION SITE, AND/OR REDIRECT CLEAN WATER AWAY FROM CONSTRUCTION AREAS.
- FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE, DPZ, AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY THE RETENTION OF EXISTING FOREST IN THE AMOUNT OF 2.18 AC, REFORESTATION OF 0.42 AC, AND FEE-IN-LIEU FOR THE REMAINING 0.39 AC.
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

FOREST PROTECTION NOTES

PRE-CONSTRUCTION ACTIVITIES

- FOR RETENTION AREAS, INSTALL BLAZE ORANGE FENCE AND RETENTION SIGNS BEFORE CONSTRUCTION BEGINS.
- FENCING SHALL BE MAINTAINED IN GOOD CONDITION AND PROMPTLY REPAIRED OR RESTORED AS THE SITUATION WARRANTS.
- A QUALIFIED TREE CARE EXPERT SHALL DETERMINE IF ROOT PRUNING IS REQUIRED ALONG THE LIMIT OF DISTURBANCE. ROOT PRUNE TREES AS REQUIRED. WATER ANY ROOT-PRUNED TREES IMMEDIATELY AFTER ROOT-PRUNING AND MONITOR FOR SIGNS OF STRESS DURING CONSTRUCTION.

CONSTRUCTION PHASE

- NO DISTURBANCE OR DUMPING IS ALLOWED INSIDE THE TREE RETENTION AREA.
- NO EQUIPMENT SHALL BE OPERATED INSIDE THE TREE RETENTION AREA INCLUDING TREE CANOPIES.
- IN THE EVENT OF DROUGHT, THE PROTECTED TREES SHALL BE MONITORED FOR SIGNS OF STRESS AND WATERED AS NEEDED.

POST-CONSTRUCTION ACTIVITIES

- AT THE DIRECTION OF A QUALIFIED TREE CARE EXPERT, DAMAGES TO RETAINED TREES SHALL BE REPAIRED BY THE CONTRACTOR.
- FENCE REMOVAL AND STABILIZATION SHALL BE AS PER THE SEDIMENT AND EROSION CONTROL PLAN.
- DO NOT REMOVE SIGNS.

COST ESTIMATE: (For bonding purposes, only)

RETENTION OF 2.18 AC. (94,960.80 SF X 0.20) \$ 18,992.16
 REFORESTATION OF 0.43 AC. (18,811 SF X 0.50) \$ 9,405.50

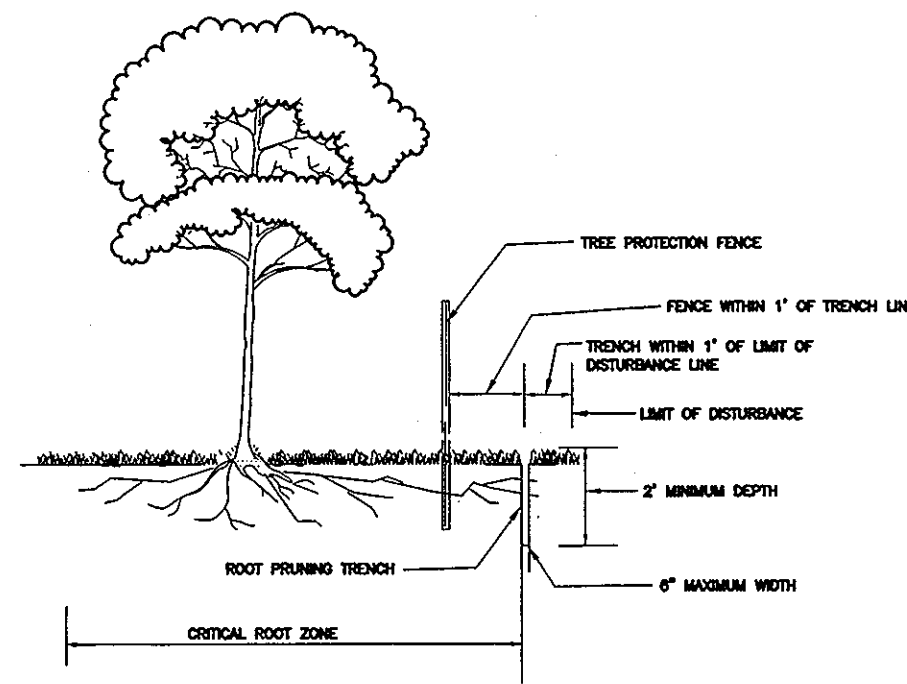
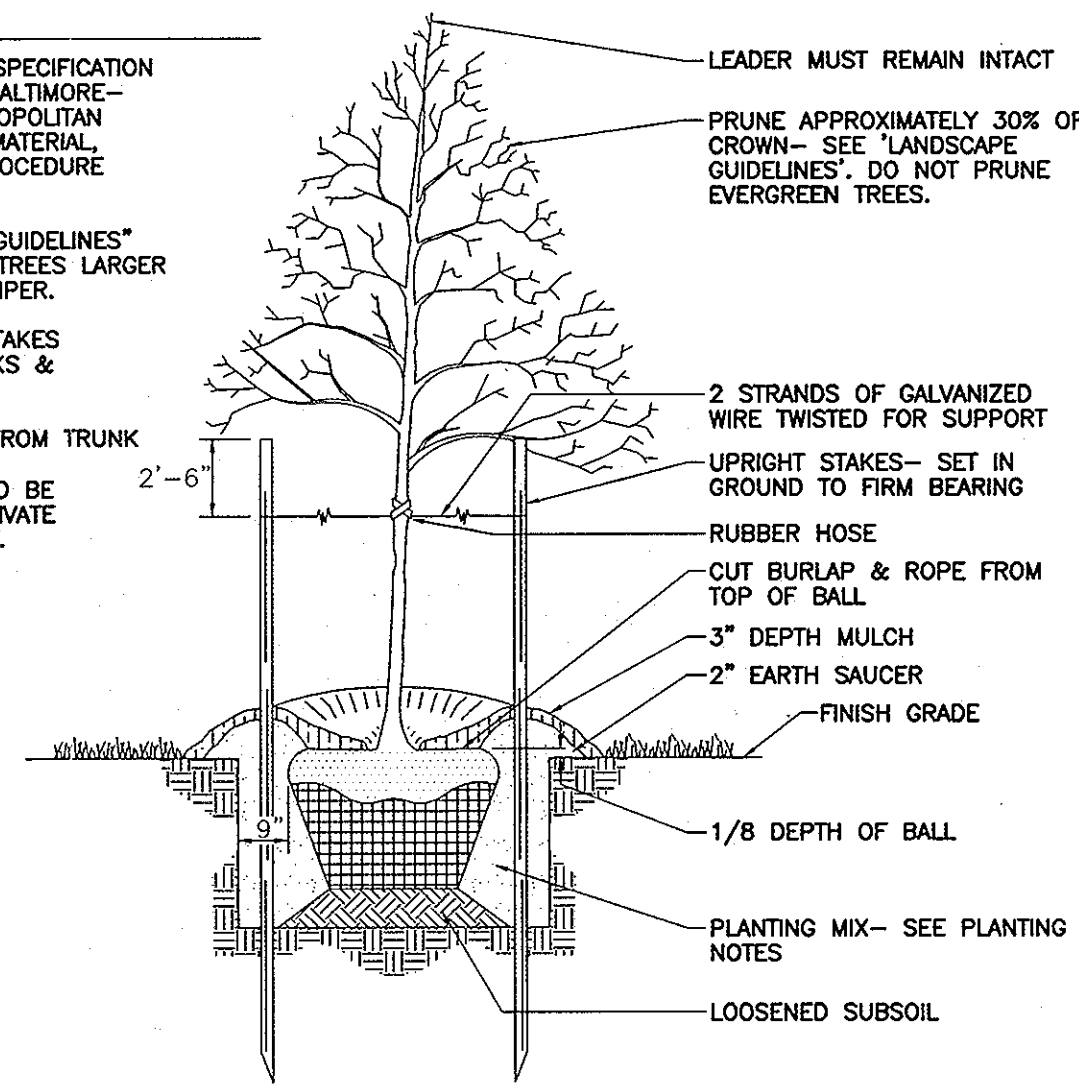
SURETY NOTE:

FINANCIAL SURETY IN THE AMOUNT OF \$28,397.66 WILL BE POSTED WITH THE FC MAINTENANCE AGREEMENT.

COST OF FEE-IN-LIEU FOR THE REMAINING 0.39 AC. WILL BE \$8,494.20 (16,988.40 SF X 0.50)

NOTES

- SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" FOR ALL MATERIAL, PRODUCT, AND PROCEDURE SPECIFICATIONS.
- SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
- PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
- KEEP MULCH 1" FROM TRUNK
- TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWAGE EASEMENT.



- NOTES:
- RETENTION AREAS TO BE ESTABLISHED AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.
 - BOUNDARIES OF RETENTION AREAS TO BE STAKED, FLAGGED AND/OR FENCED PRIOR TRENCHING.
 - EXACT LOCATION OF TRENCH SHOULD BE IDENTIFIED.
 - TRENCH SHOULD BE IMMEDIATELY BACKFILLED WITH SOIL REMOVED OR ORGANIC SOIL.
 - ROOTS SHOULD BE CLEANLY CUT USING VIBRATORY KNIFE OR OTHER ACCEPTABLE EQUIPMENT.

ROOT PRUNING
NTS

REFORESTATION PROVIDED - FCE-Ø

0.15 ACRES OR 6,534 SF
 2 1/2" - 3" CALIPER TREES
 1" CALIPER TREES
 53 (0.15 AC) @ 350 TREES PER ACRE

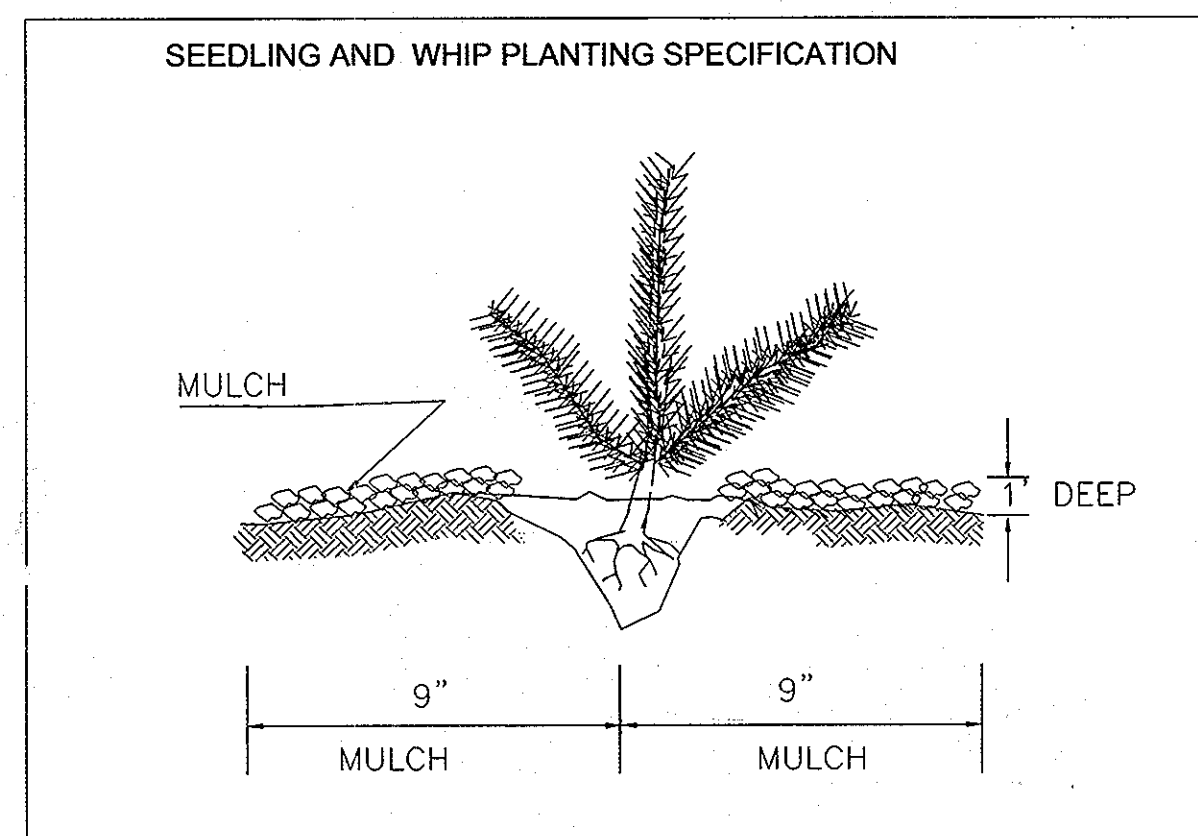
PLANT SCHEDULE - AREA - Ø

QUAN.	BOTANICAL NAME	SIZE	SPACING (FT)
12	ACER RUBRUM RED MAPLE	1" CAL.	15 X 15
12	PLATANUS OCCIDENTALIS SYCAMORE	1" CAL.	15 X 15
12	PRUNUS SEROTINA BLACK CHERRY	1" CAL.	15 X 15
12	LIQUIDAMBAR STRACIFLUA AMERICAN SWEET GUM	1" CAL.	15 X 15
5**	QUERCUS RUBRA RED OAK	2 1/2" - 3" CAL. (OR)	11 X 11

** CREDITS TOWARDS PERIMETER LANDSCAPING

TREE PLANTING AND STAKING

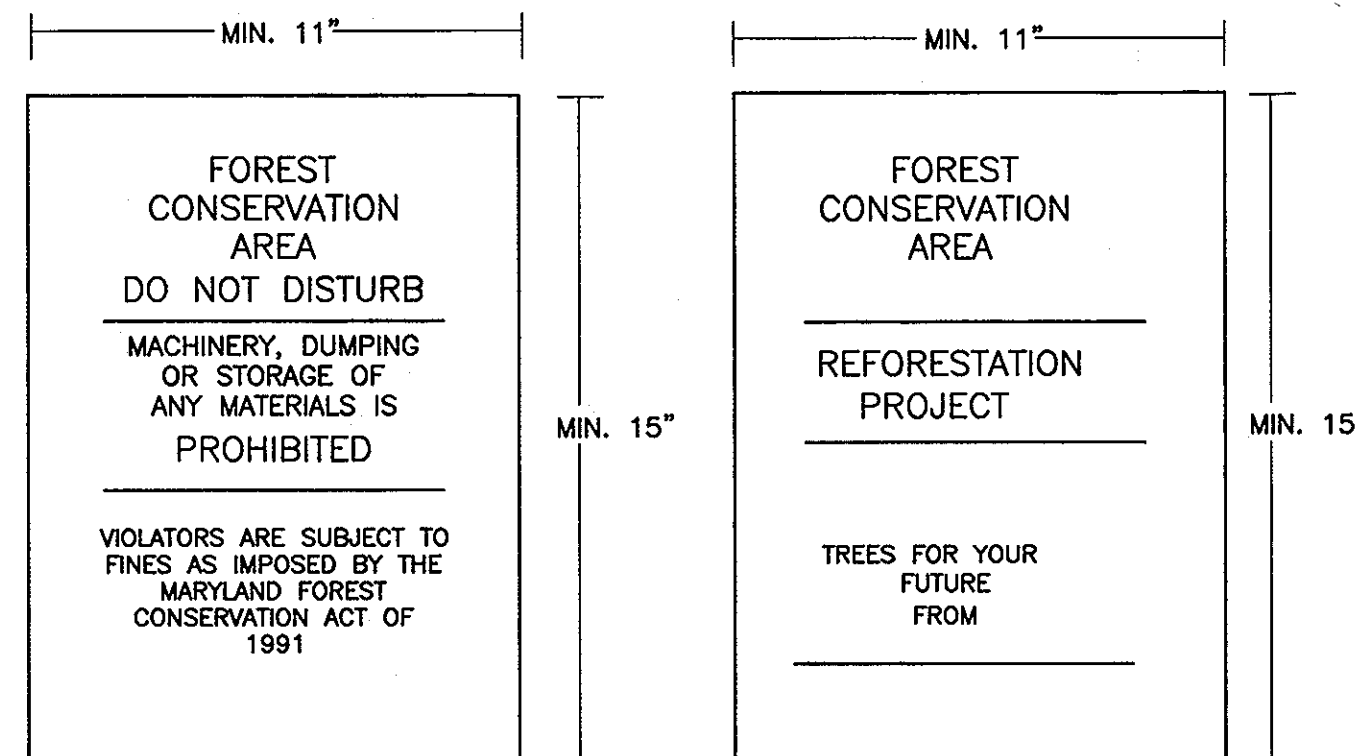
TREES UP TO 2-1/2" CALIPER NOT TO SCALE



- NOTE:
- PLANT MIX TO BE 1/3 PIONEER & 2/3 MID TO LATE SUCCESSIONAL SPECIES
 - PLANT LARGER STOCK AND EVERGREENS AROUND PERIMETER TO PROTECT INTERIOR SMALLER STOCK.
 - WHEN SHRUBS ARE SPECIFIED, PLANT THEM IN CLUSTERS.
 - DO NOT PLANT TREES IN A GRID PATTERN.

DENSITY CHART

SIZE	QTY. PER ACRE	AVERAGE SPACING
2 1/2" - 3" CAL	200	11'x11'
1" CALIPER WHIPS	360	15'x15'



NOTE:

- BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.
- SIGNS TO BE PLACED APPROXIMATELY 100' FEET APART. CONDITIONS ON SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.
- ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.

FOREST CONSERVATION AREA SIGN

NTS

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	K VALUE	WOOD			SOIL GROUP
			SUITA	HABIT	GROUP	
BrC2	BRANDYWINE LOAM, 8% TO 15% SLOPES, MODERATELY ERODED	.24	40	F	C	
BrD3	BRANDYWINE LOAM, 15% TO 25% SLOPES, SEVERELY ERODED	.24	40	F	C	
BrF	BRANDYWINE LOAM, 25% TO 60% SLOPES, SOUTH ASPECT	.24	56	F	C	
CuB	COMUS SILT LOAM, LOCAL ALLUVIUM, 3% TO 8% SLOPES	.43	4	G	B	
GIB2	GLENELG LOAM, 3% TO 8% SLOPES, MODERATELY ERODED	.32	30	G	B	
GIC3	GLENELG LOAM, 8% TO 15% SLOPES, SEVERELY ERODED	.32	30	G	B	
MIB2	MANOR LOAM, 3% TO 8% SLOPES, MODERATELY ERODED	.37	43	F	B	
MIC3	MANOR LOAM, 8% TO 15% SLOPES, SEVERELY ERODED	.37	43	F	B	
MID3	MANOR LOAM, 15% TO 25% SLOPES, SEVERELY ERODED	.37	44	F	B	

HOWARD COUNTY SOILS MAP NO. 9

OWNER
 M/M PHILIP E. STACKHOUSE
 AND HELEN M. STACKHOUSE, TRUSTEE
 10228 CABERY ROAD
 ELLICOTT CITY, MARYLAND 21042

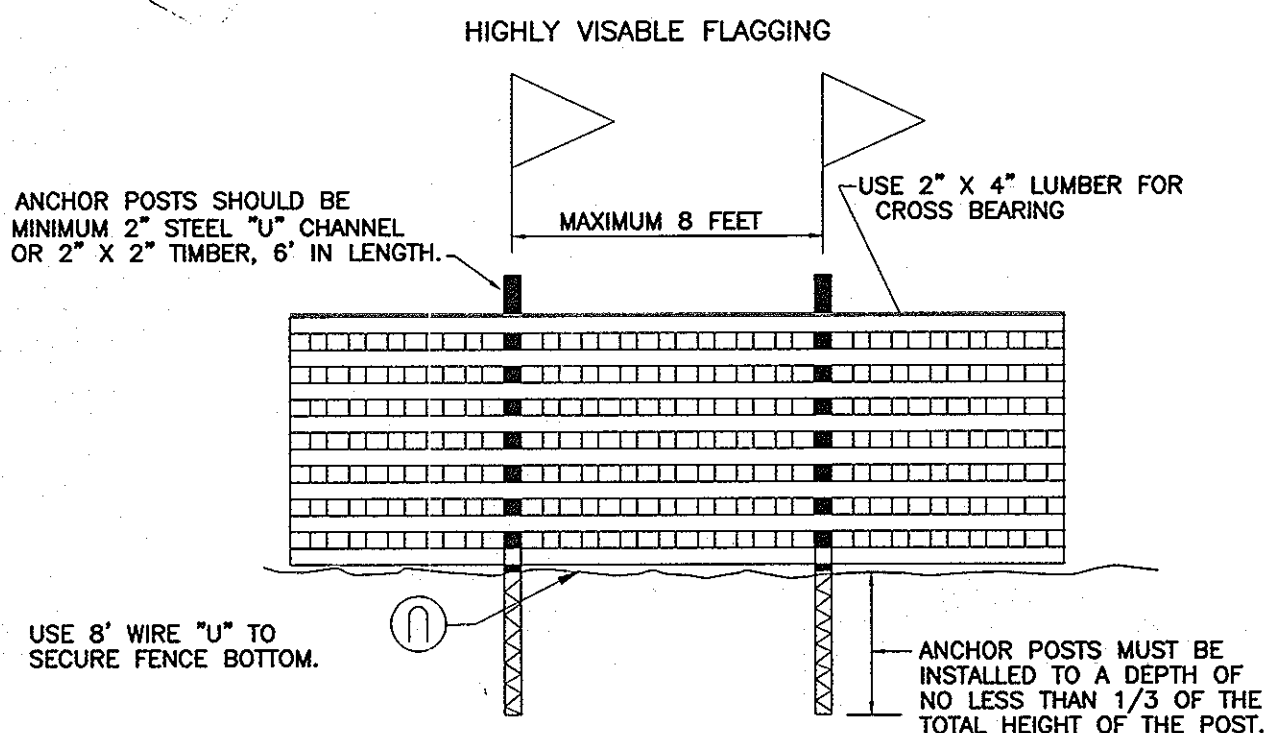
DEVELOPER
 MARGARET'S FANCY, INC.
 C/O LAND DESIGN AND DEVELOPMENT
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21043
 (410) 480-9105

APPROVED: DEPARTMENT OF PUBLIC WORKS

William J. White 5-2-05
 Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cindy Stankovic 5/1/05
 Chief, Division of Land Development Date
Robert H. Vogel 5/3/05
 Chief, Development Engineering Division Date



NOTES:

- FOREST PROTECTION DEVICE ONLY.
- RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
- BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
- ROOF DAMAGE SHOULD BE AVOIDED.
- PROTECTION SIGNAGE SHOULD BE USED.
- DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

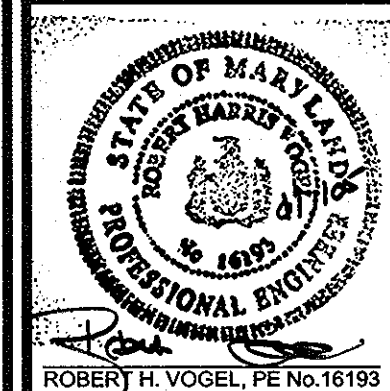
BLAZE ORANGE PLASTIC MESH
 TYPICAL TREE PROTECTION FENCE DETAIL
 NTS

2	REVISE FOREST CONSERVATION EASEMENTS	7/5/07
NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
 FOREST CONSERVATION DETAILS
 MARGARET'S FANCY
 LOTS 1-12, 14, 16-20 AND
 OPEN SPACE LOTS 13, 15 & 21

DPZ REF: S-03-03 PARCEL 9, 685
 TAX MAP#17 GRID 7 HOWARD COUNTY, MARYLAND
 2ND ELECTION DISTRICT

ROBERT H. VOGEL
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961



DESIGN BY: LIT
 DRAWN BY: RJ
 CHECKED BY: RHV
 DATE: 02-15-2005
 SCALE: AS SHOWN
 W.O. NO.: 04-54.00

10 SHEET OF 10