

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

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 16.1200 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 0.49 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 \$ 28,396.74 (RETENTION 94,995.65 SF X .20 = 18,999.13). (REFORESTATION 18,809.21 SF X .50 = 9,404.60).

FOREST CONSERVATION PROVIDED		
FOREST CONSERVATION EASEMENT	AREA OF RETENTION	AREA OF REFORESTATION
EASEMENT 1	1.4077 AC	-
EASEMENT 2	0.3403 AC	-
EASEMENT 3	0.1920 AC	-
EASEMENT 4	0.2406 AC	-
EASEMENT 5	-	0.4318 AC
TOTAL	2.1808 AC	0.4318 AC

FINAL ROAD CONSTRICTION PLAN

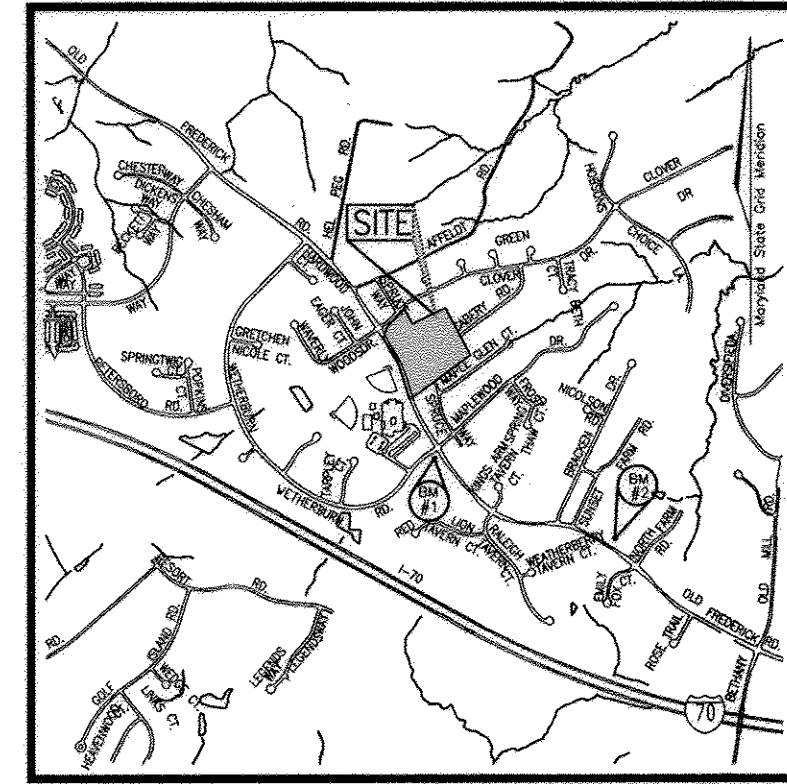
MARGARET'S FANCY

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

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



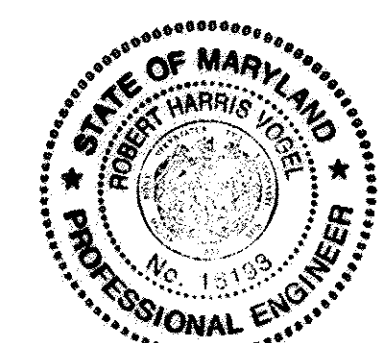
VICINITY MAP
 SCALE: 1"=2000'

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



LOCATION PLAN
 SCALE 1"=100'



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"
 Robert H. Vogel, PE No. 16193 DATE 9/7/12

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

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 PARCEL 9, 685
 TAX MAP#17 GRID 7 HOWARD COUNTY, MARYLAND
 2ND ELECTION DISTRICT

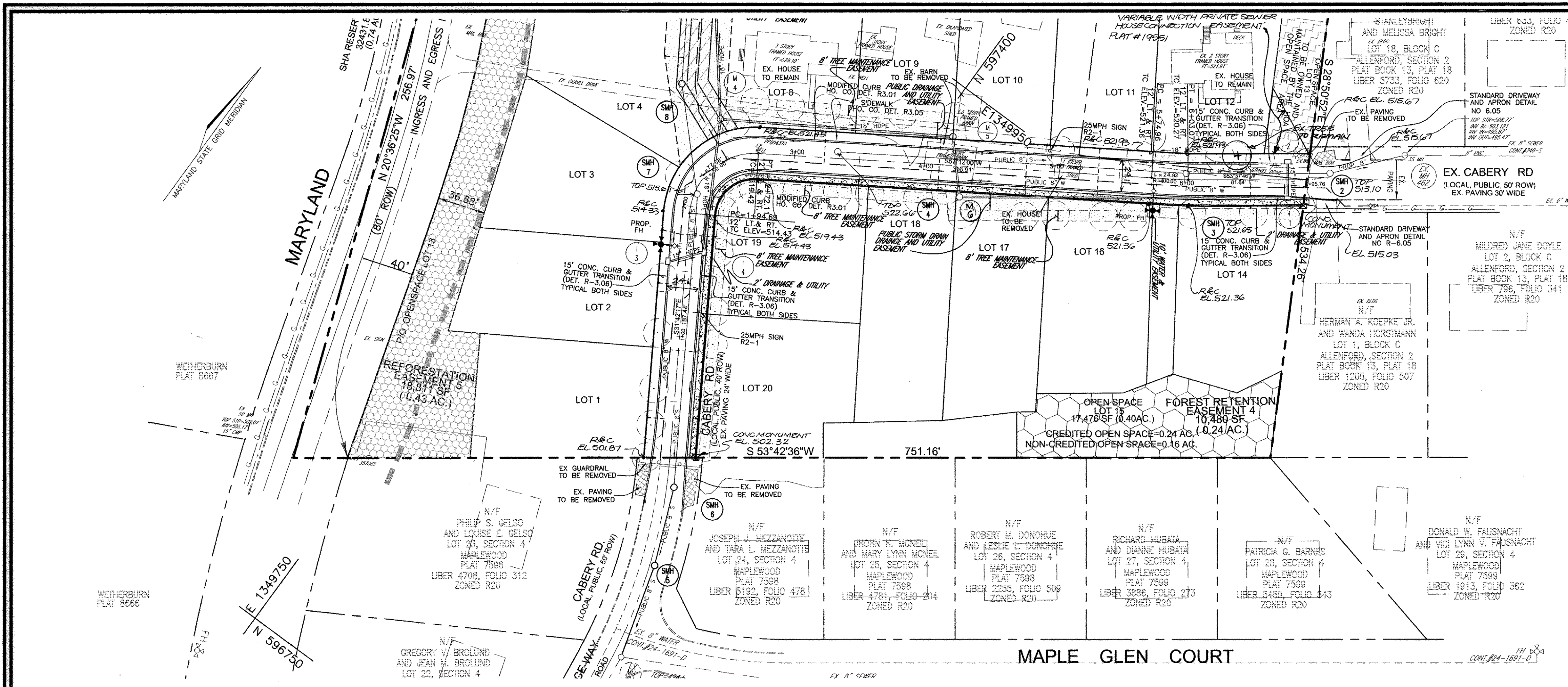
ROBERT H. VOGEL, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

APPROVED: DEPARTMENT OF PUBLIC WORKS
 W. John Z. ... S-2-05
 Chief, Bureau of Highways Date

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

... 5/2/05
 Chief, Development Engineering Division Date

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



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.	

CONCRETE MONUMENT RECOVERY SKETCH (N.T.S.)

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

SIGNAGE LOCATION CHART

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

P-2 LIGHT DUTY PAVING SECTION

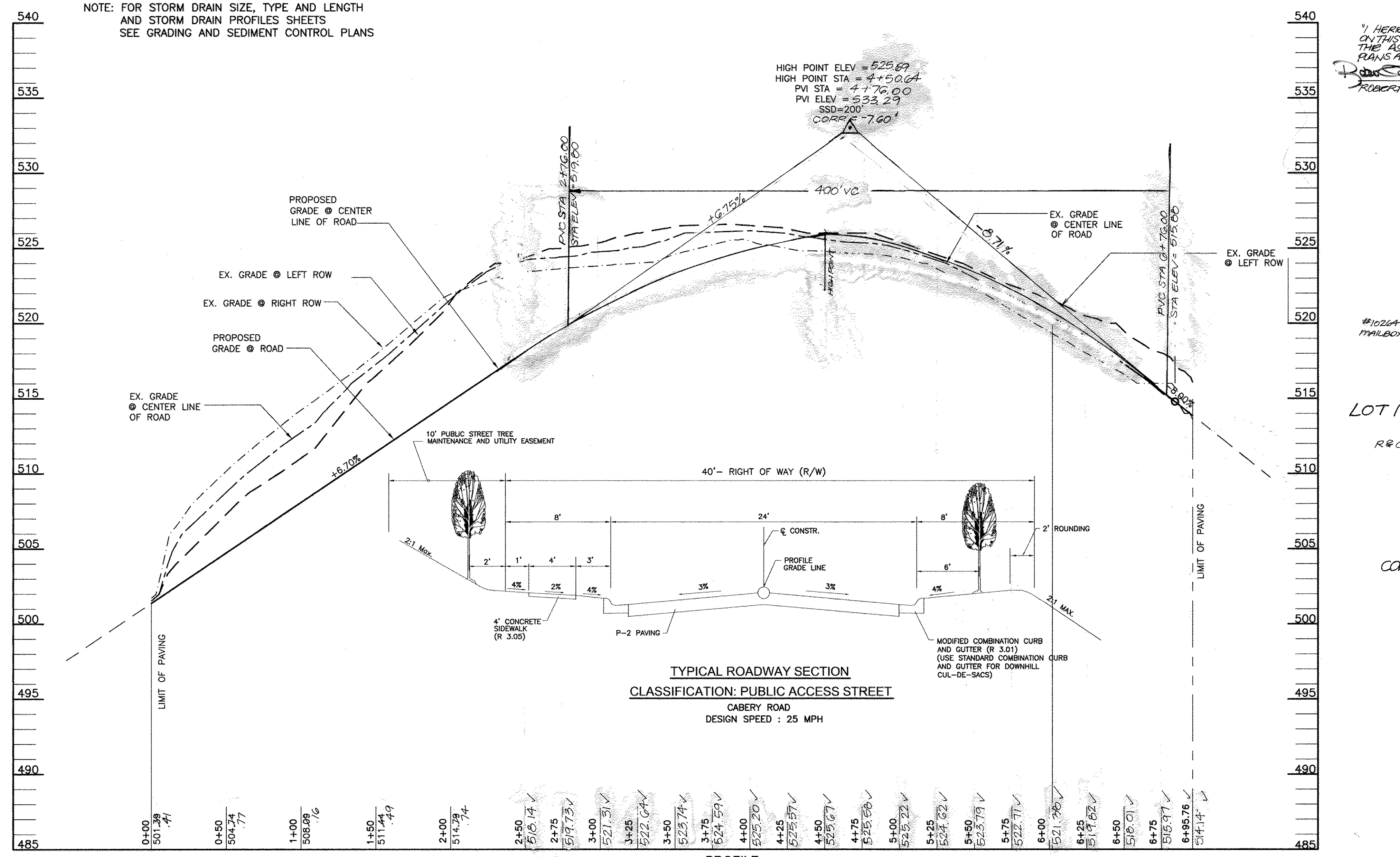
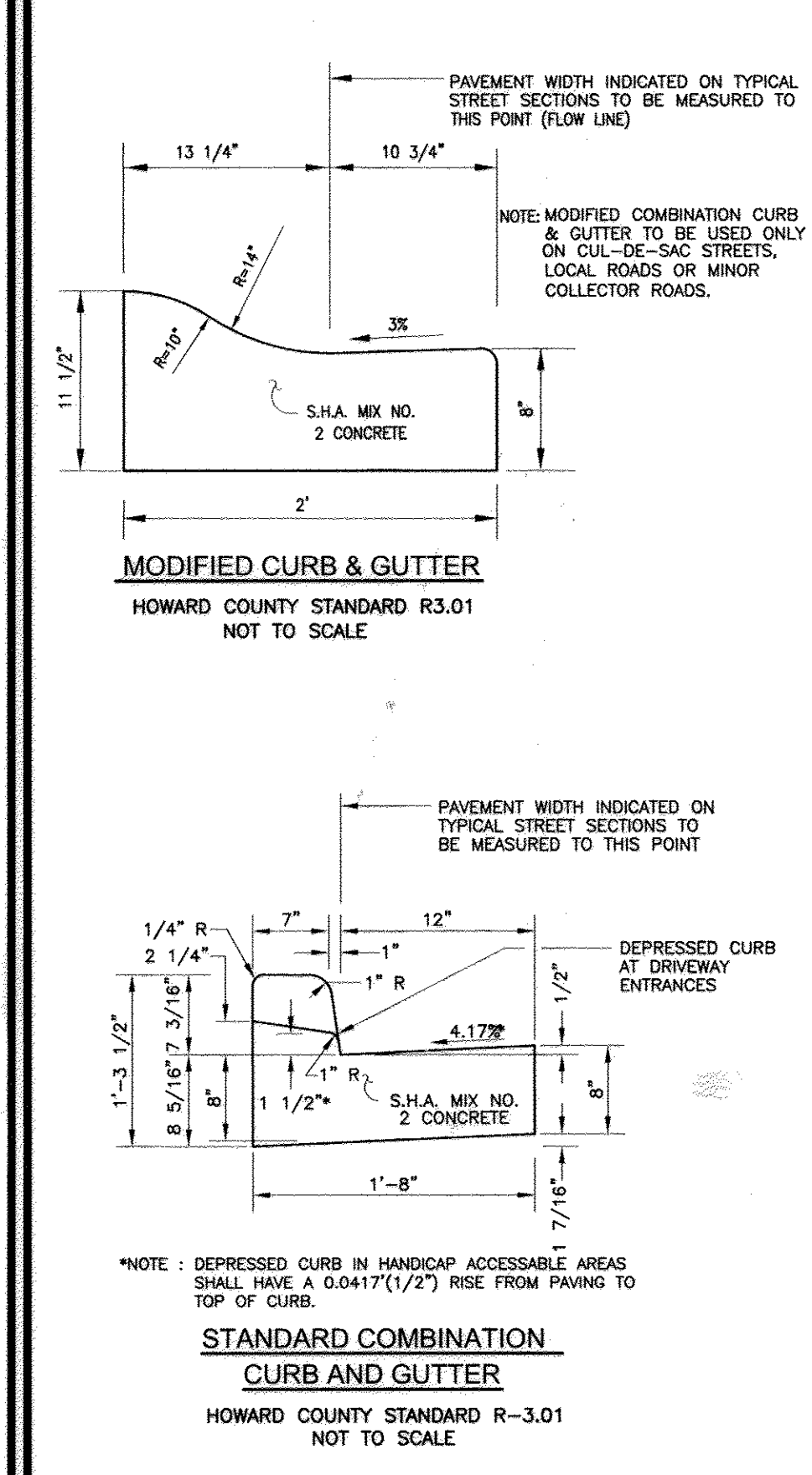
N.T.S.

1 1/2" BIT. CONC. SURFACE
2 1/2" BIT. CONC. BASE
5" BIT. CONC. BASE
6" GRADED AGGREGATE BASE (GAB)
GRANULAR BASE ALTERNATES

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THE AS-BUILT PLANS AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

ROBERT H. VOGEL P.E. No. 16193 DATE 9/7/12



APPROVED: DEPARTMENT OF PUBLIC WORKS

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

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cindy Hammett 5/6/05
Chief, Division of Land Development Date

Chris Dammann 5/1/05
Chief, Development Engineering Division Date

STATE OF MARYLAND

ROBERT H. VOGEL

PROFESSIONAL ENGINEER

NO. 16193

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

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

FINAL ROAD CONSTRUCTION PLAN & PROFILE

MARGARET'S FANCY

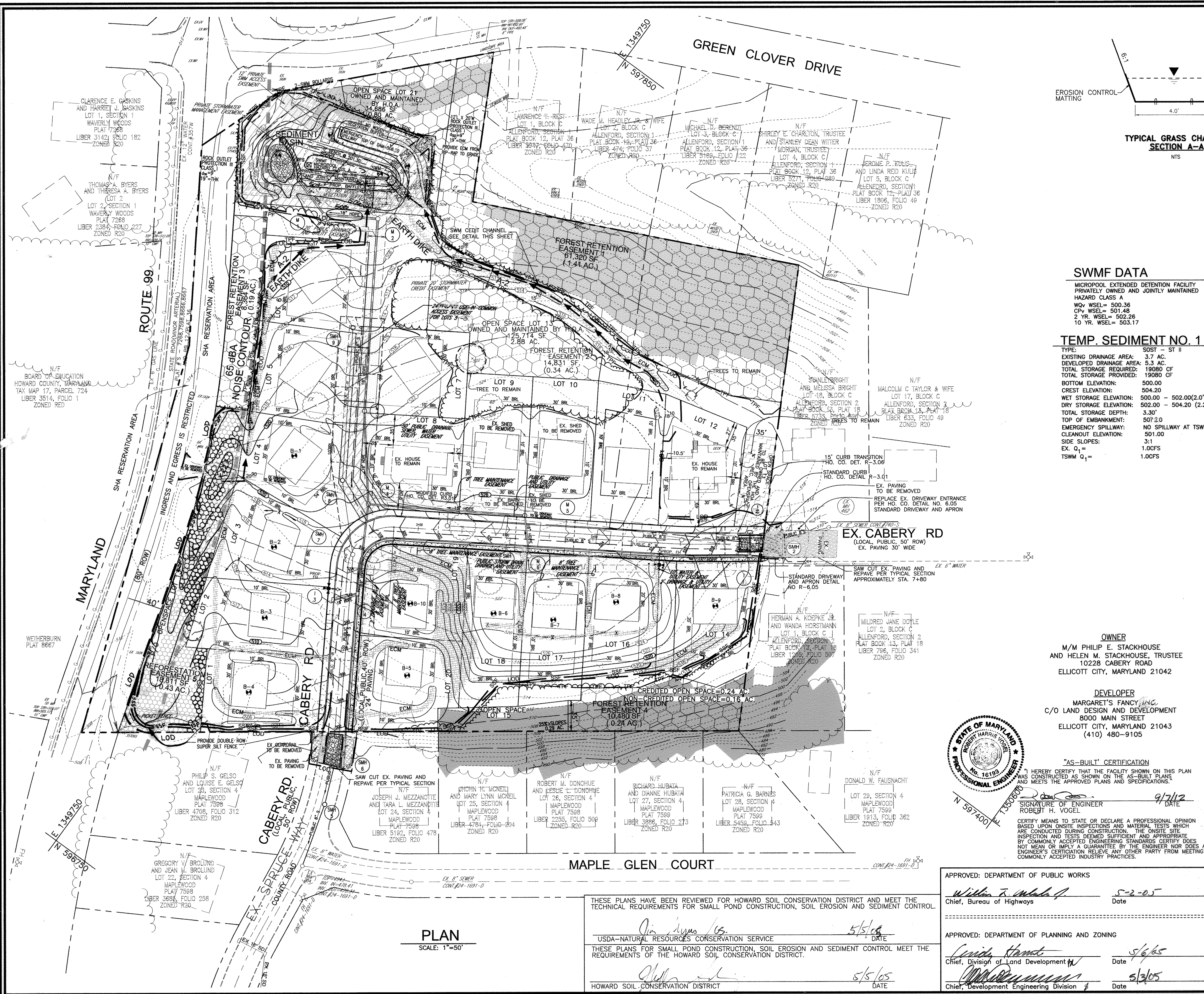
LOTS 1-12, 14, 16-20 AND OPEN SPACE LOTS 13, 15 & 21

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

REVISION

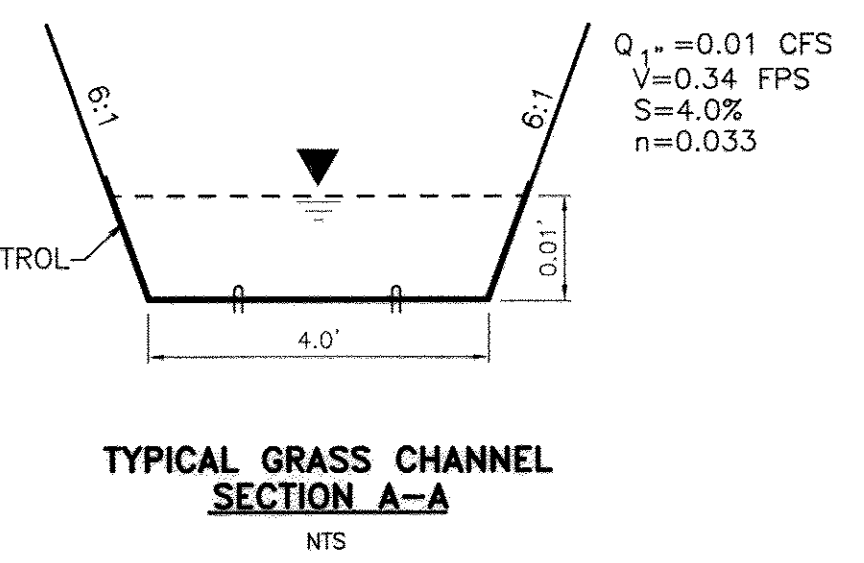
NO.	REVISION	DATE
2	REVISE ROAD PROFILE AND STORM DRAIN PROFILE	11/3/12

2 SHEET OF 10



LEGEND

- 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
- SUPER SILT FENCE
- 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



SWMF DATA

MICROPOOL EXTENDED DETENTION FACILITY
PRIVATELY OWNED AND JOINTLY MAINTAINED
HAZARD CLASS A

WQV WSEL= 500.36
CPV 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 TSMW
CLEANOUT ELEVATION: 501.00
SIDE SLOPES: 3:1
EX. Q₁ = 1.0CFS
TSMW 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 NOTICED 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.

DATE: 8/11/05
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.

DATE: 3/11/05
SIGNATURE OF DEVELOPER: Philip E. Stackhouse

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

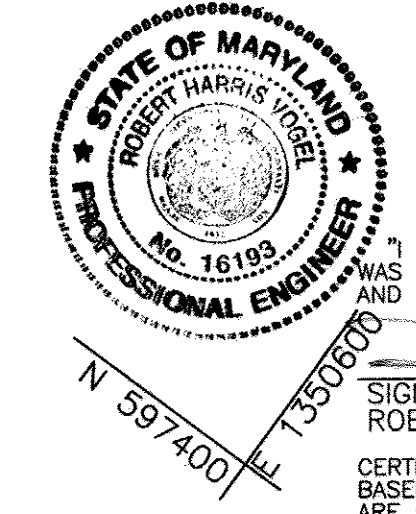
FINAL ROAD CONSTRUCTION PLAN

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

DESIGN BY: JCOIRJ	
DRAWN BY: JCOIRJ	
CHECKED BY: RHV	
DATE: 03-15-2005	
SCALE: AS SHOWN	
W.O. NO.: 04-54-00	



"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.

DATE: 9/7/12
SIGNATURE OF ENGINEER: ROBERT H. VOGEL

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 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	
Chief, Bureau of Highways	5-2-05
APPROVED: DEPARTMENT OF PLANNING AND ZONING	
Chief, Division of Land Development	5/6/05
Chief, Development Engineering Division	5/3/05

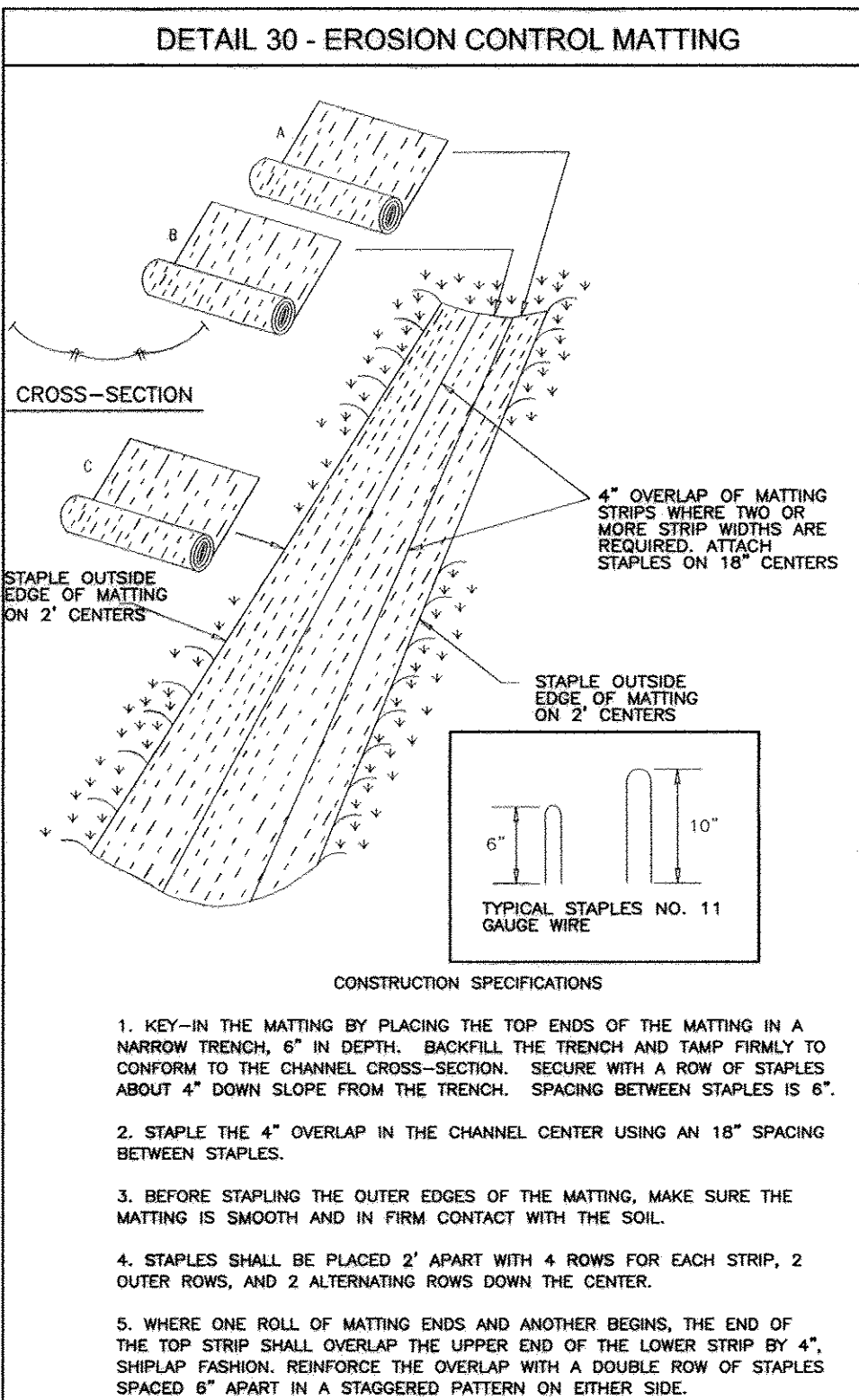
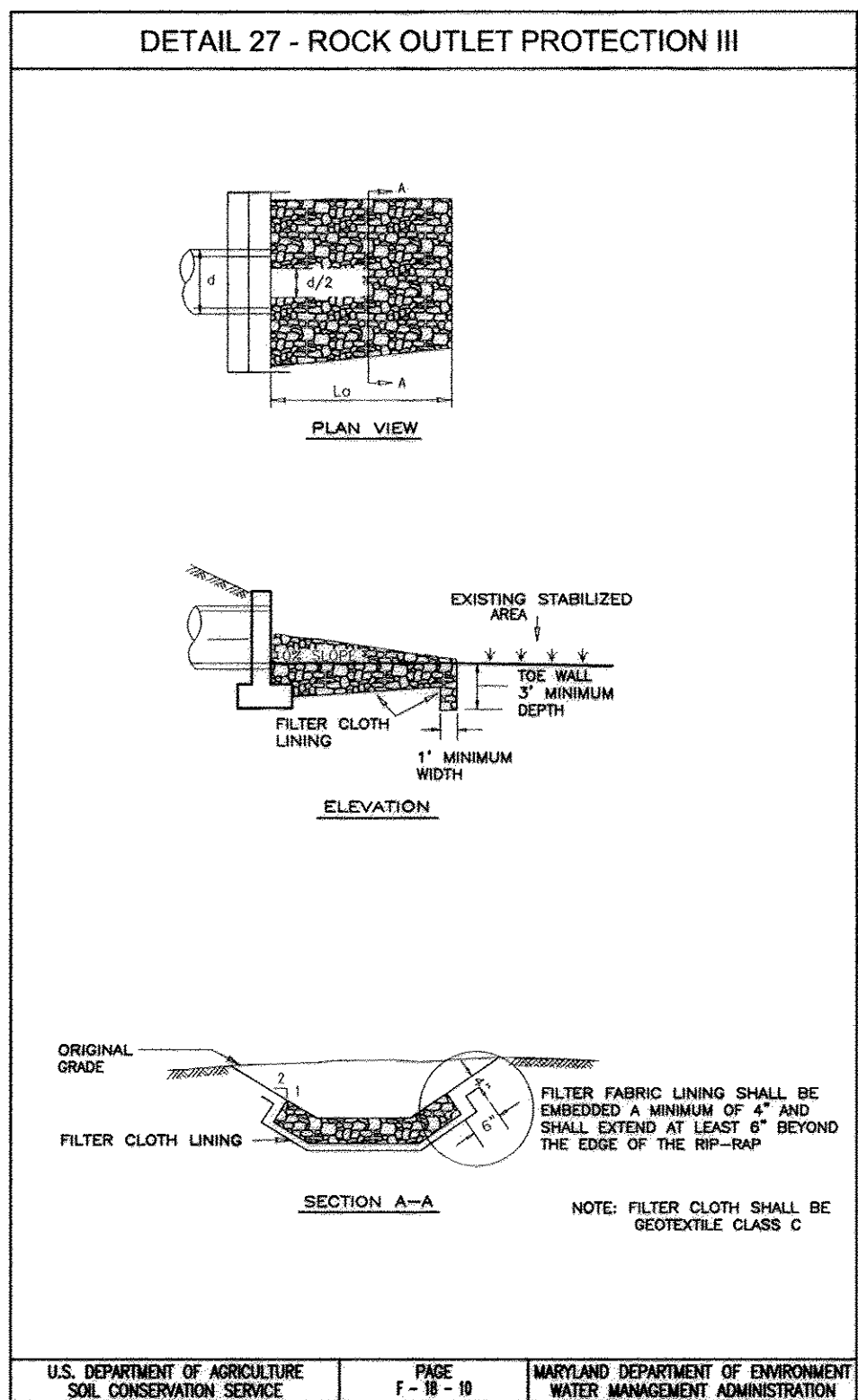
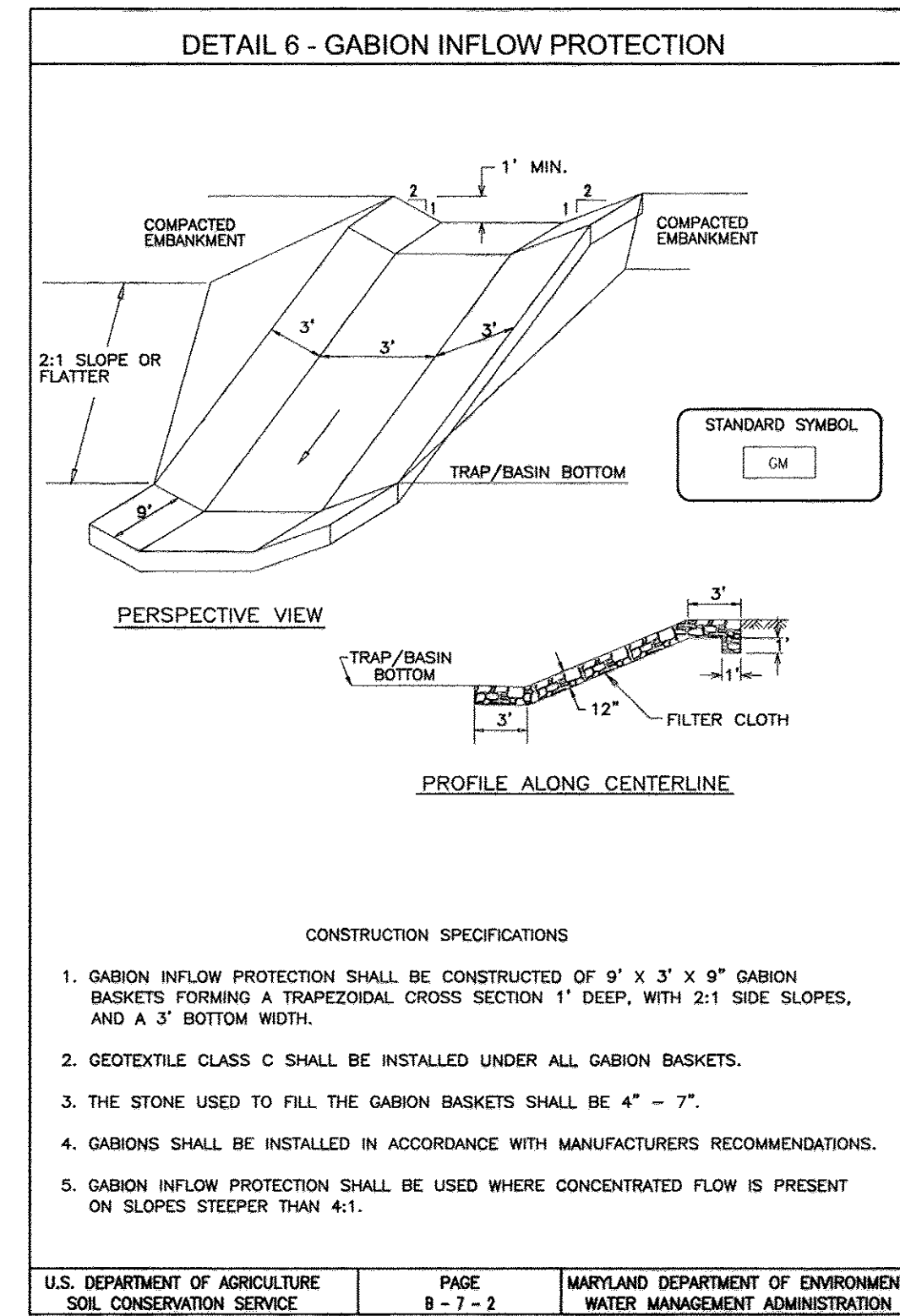
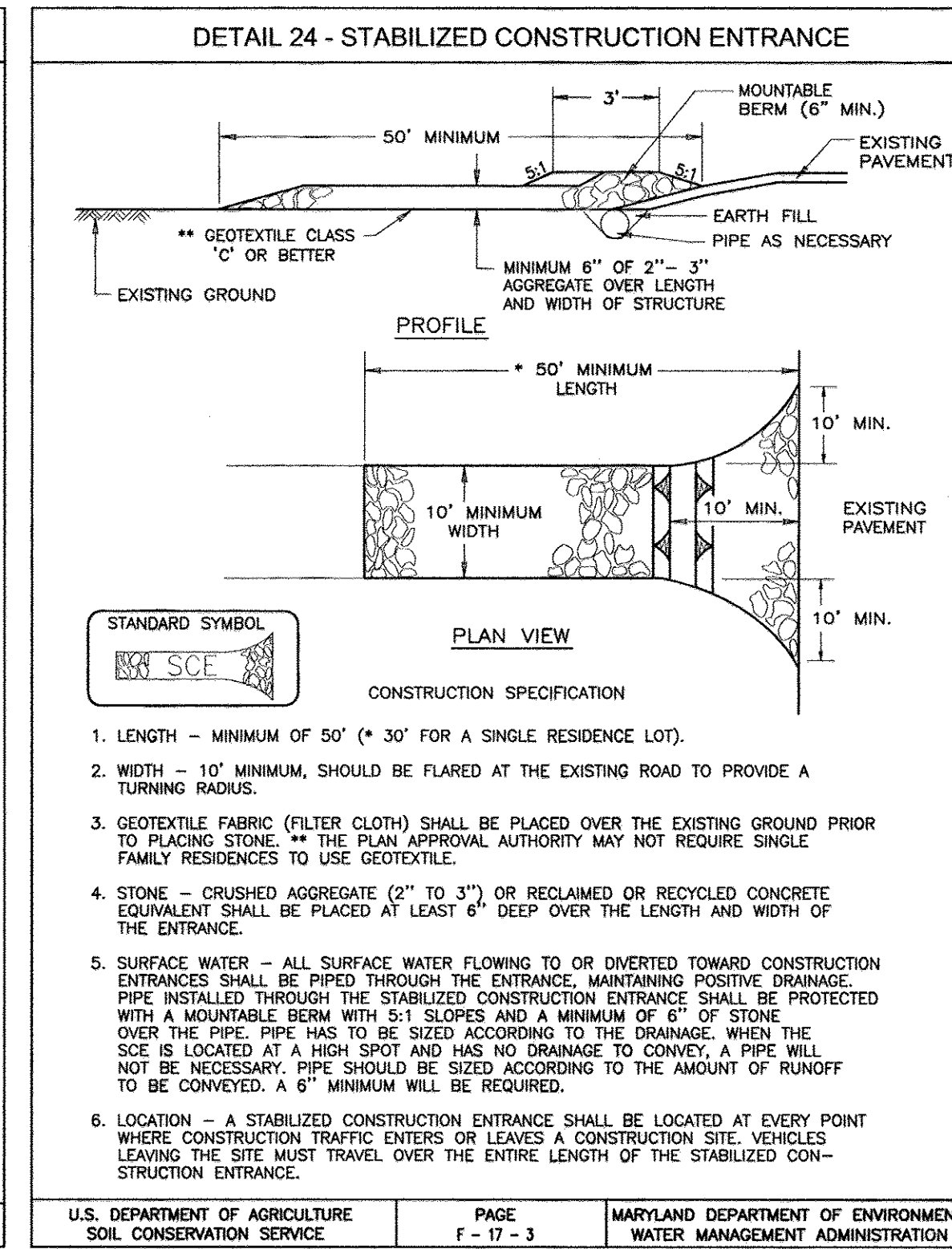
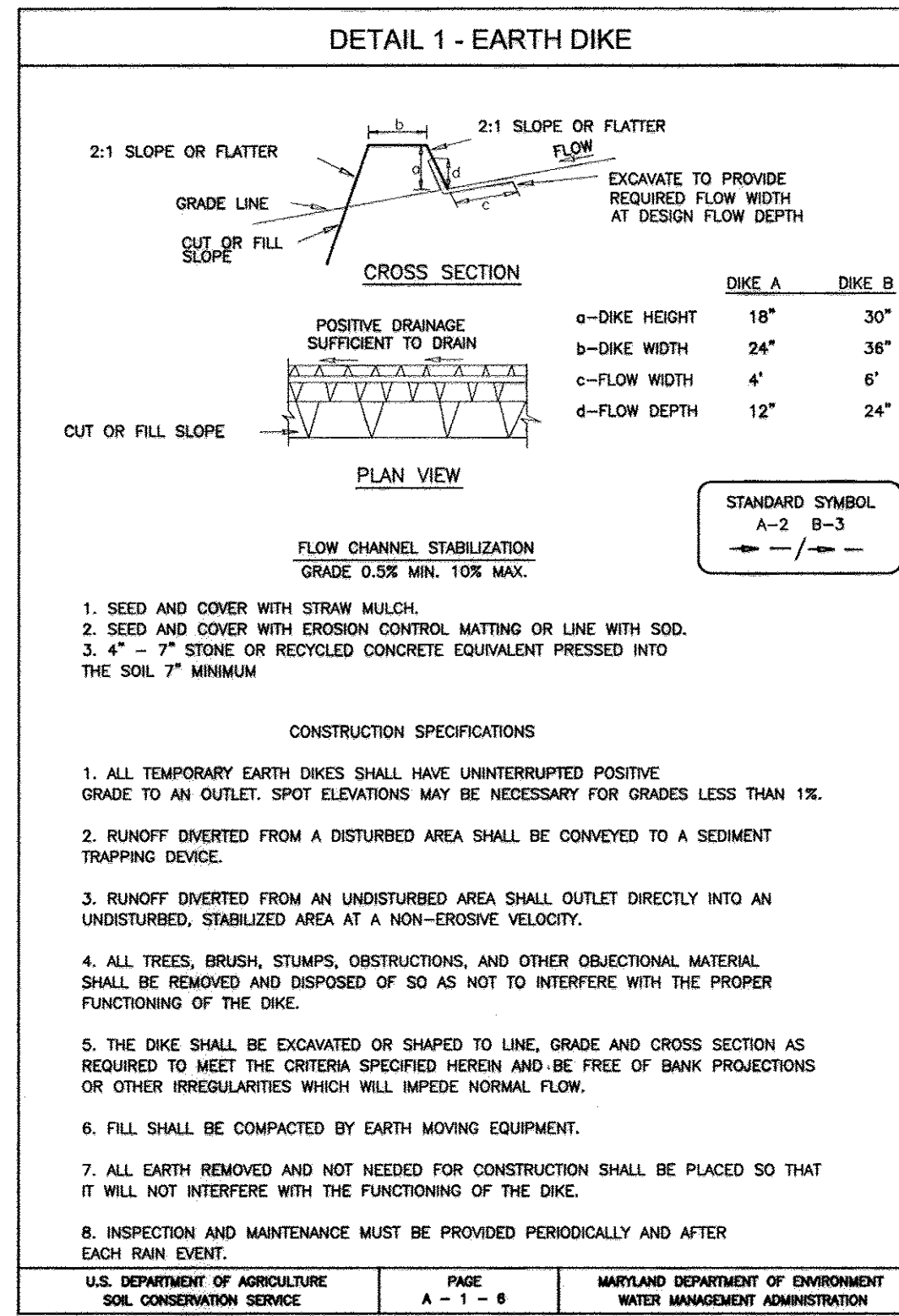
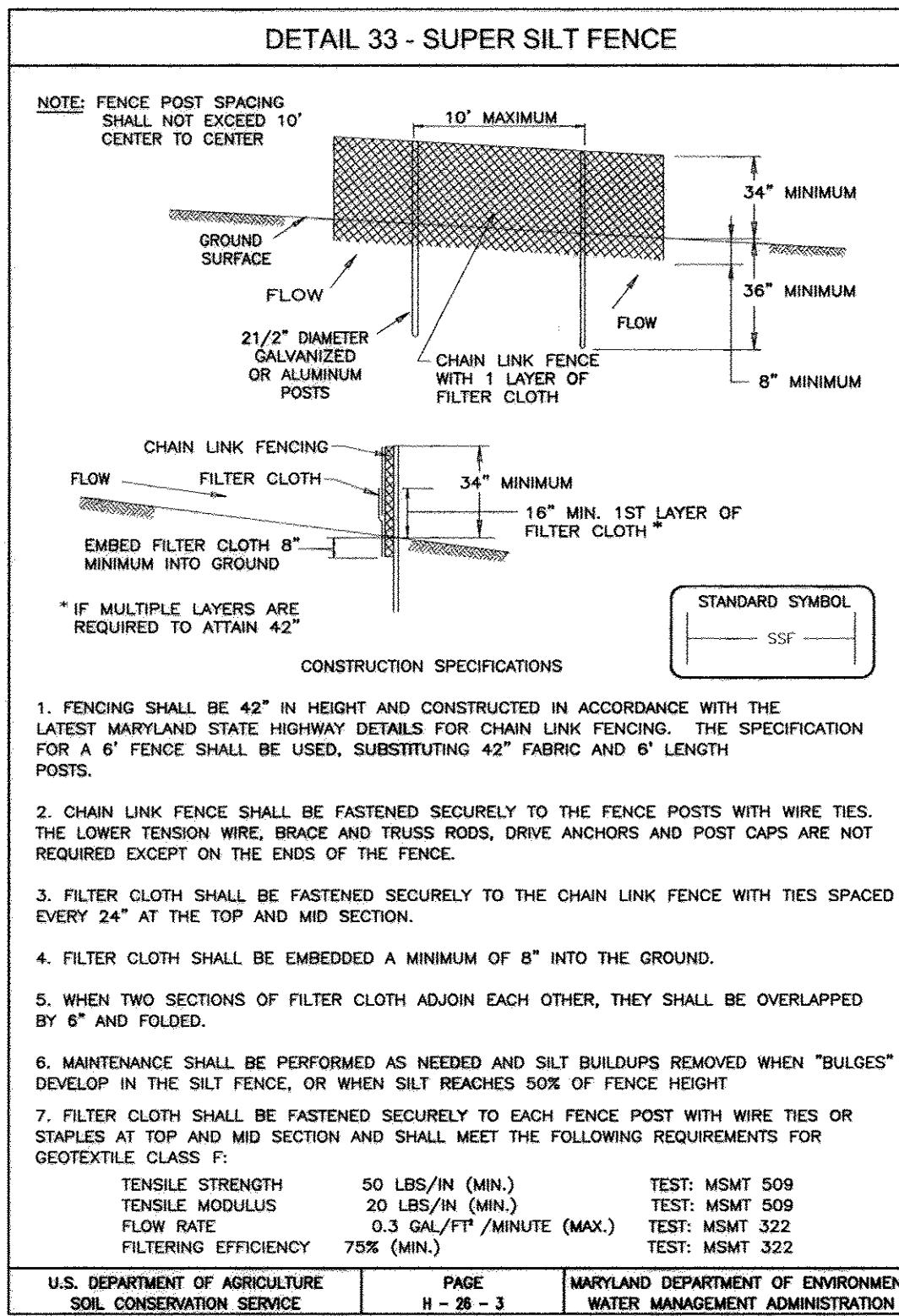
THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA-NATURAL RESOURCES CONSERVATION SERVICE
DATE: 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
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 SUPPORT PLANTS 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-SGS 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 CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR A SOIL 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 COBLES, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 AND 1/2" IN DIAMETER.
 - TOPSOIL SHALL BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERNIUDA 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 (800-400 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 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

PERMANENT SEEDING NOTES

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

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

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

- PREFERRED-APPLY 2 TONS PER ACRE DOLOMITE 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.
- ACCEPTABLE-APPLY 2 TONS PER ACRE DOLOMITE 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 80 LBS PER ACRE (2.0 LBS/1000 SQ.FT.) OF KY 31. FOR THE PERIOD 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 SOG. OPTION (3) SEED WITH 80 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 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (6 GAL/1000 SQ.FT.) FOR ANCHORING.

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

TEMPORARY SEEDING NOTES

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

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

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEDING LOVEGRASS (0.5 LBS/1000 SQ.FT.) FOR THE PERIOD NOVEMBER 1 THRU FEBRUARY 28. PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOG.

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 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (6 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 THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN (A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3:1, (B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 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, SOG, TEMPORARY SEEDING, AND MULCHING (SEC. 3). 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 PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA	9.75 AC.
AREA DISTURBED	6.88 AC.
AREA TO BE ROOFED OR PAVED	0.82 AC.
AREA TO BE VEGETATIVELY STABILIZED	6.24 AC.
TOTAL CUT	19,000 CY
TOTAL FILL	15,000 CY
- 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. BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING, OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THE 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 (313-1850) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE
- INSTALL SUPER SILT FENCE
- INSTALL CLEANWATER EARTH DIKES
- CONSTRUCT STORMWATER MANAGEMENT FACILITY (SEDIMENT BASIN) AND DIVERSION DIKES.
- AFTER OBTAINING PERMISSION FROM SEDIMENT CONTROL INSPECTOR TO PROCEED, ROUGH GRADE SITE TO LOD AND INSTALL EROSION CONTROL MATTING.
- INSTALL STORM DRAIN SYSTEM, WATER AND SEWER.
- GRADE ROAD TO SUB-BASE
- WITH ROAD GRADED TO SUB-BASE AND INLETS ARE IN PLACE, BEGIN INSTALLATION OF CURBS AND GUTTER
- WITH CURB AND GUTTER IN PLACE PAVE ROAD AND INSTALL SIDEWALK
- FINALIZE SITE GRADING IN CONFORMANCE WITH THIS PLAN
- WITH INSPECTOR APPROVAL AND FINAL ROAD PAVING COMPLETE STABILIZE ANY REMAINING DISTURBED AREAS
- WITH SEDIMENT CONTROL INSPECTORS APPROVAL CONVERT SEDIMENT BASIN TO FINAL STORMWATER MANAGEMENT FACILITY AFTER HOUSE CONSTRUCTION AND SITE STABILIZED.
- INSTALL STREET TREES AND ALL LANDSCAPING

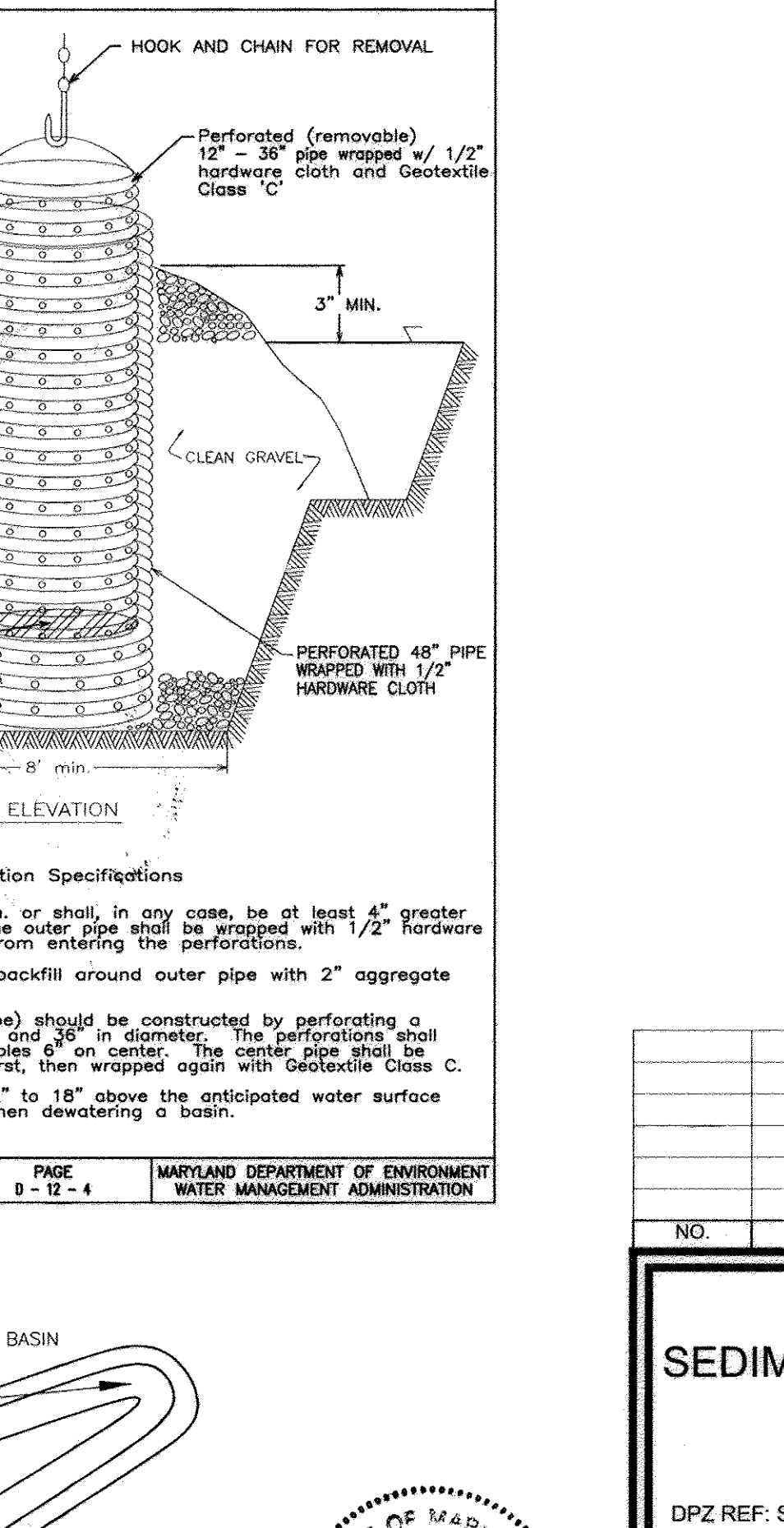
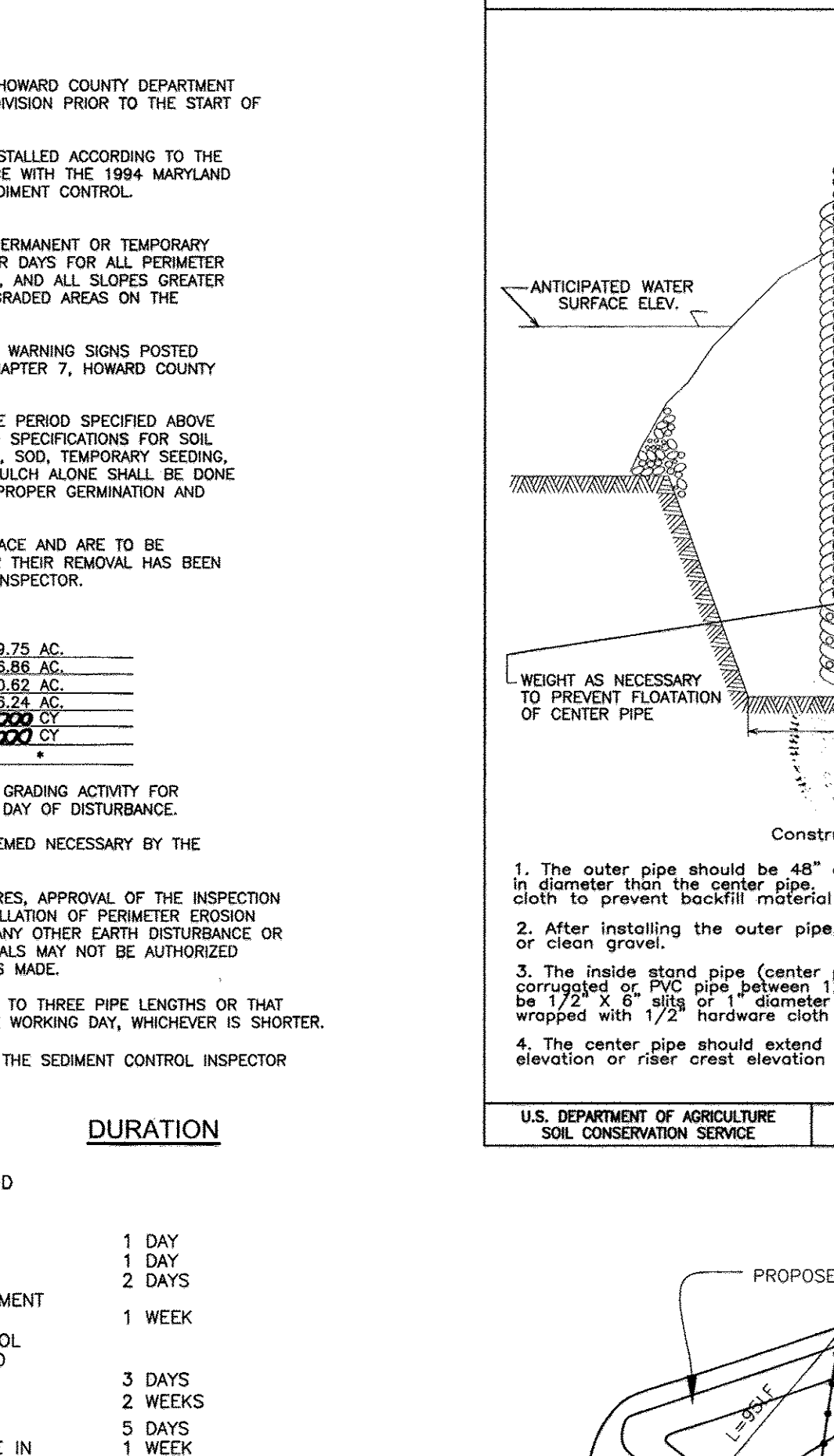
DURATION

1 DAY	1 DAY
2 DAYS	2 DAYS
1 WEEK	1 WEEK
3 DAYS	3 DAYS
2 WEEKS	2 WEEKS
5 DAYS	5 DAYS
1 WEEK	1 WEEK
2 DAYS	2 DAYS
3 DAYS	3 DAYS
1 WEEK	1 WEEK
1 WEEK	1 WEEK

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

PAGE
D - 12 - 4

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION



APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT 5/6/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION 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

DATE 5/5/05

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

DATE 5/5/05

HOWARD SOIL CONSERVATION DISTRICT

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.

DATE 4/11/05

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.

DATE FEB. 15, 2005

SIGNATURE OF DEVELOPER
Paul E. Hochbaum

"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.

DATE 9/7/12

SIGNATURE OF ENGINEER
ROBERT H. VOGEL

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. AN ENGINEER WHO DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

PROFESSIONAL ENGINEER

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 PARCEL 9, 685
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

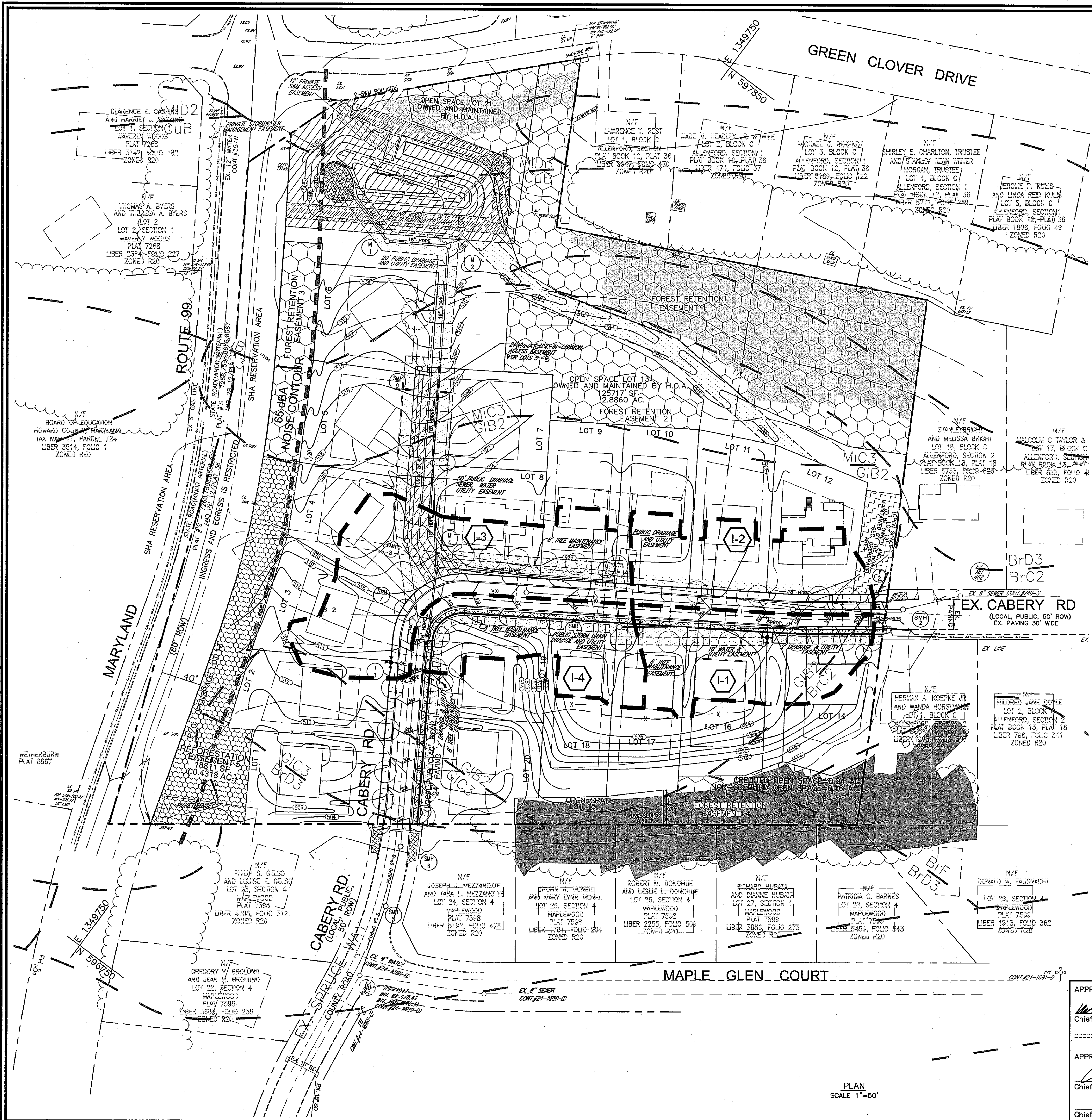
ROBERT H. VOGEL ENGINEERS, INC.

ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET TEL: 410.461.7666
ELLICOTT CITY, MD 21104 FAX: 410.461.8561

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

4 SHEETS 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
- 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 GROUP
			SUITA	HABIT	
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 T. ... 5-2-05
 Chief, Bureau of Highways Date

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

... 5/2/05
 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

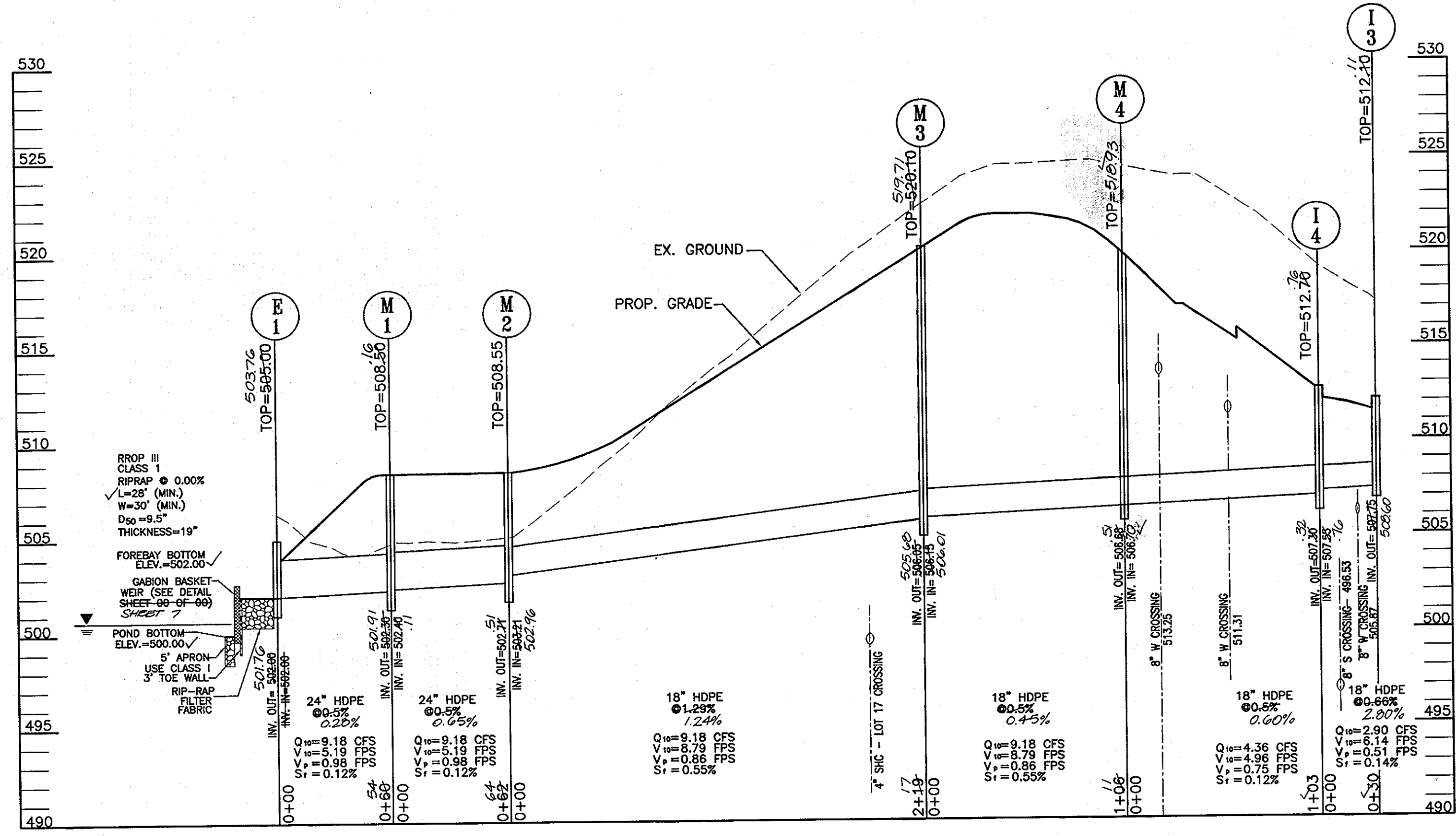
PARCEL 9, 685
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL
ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
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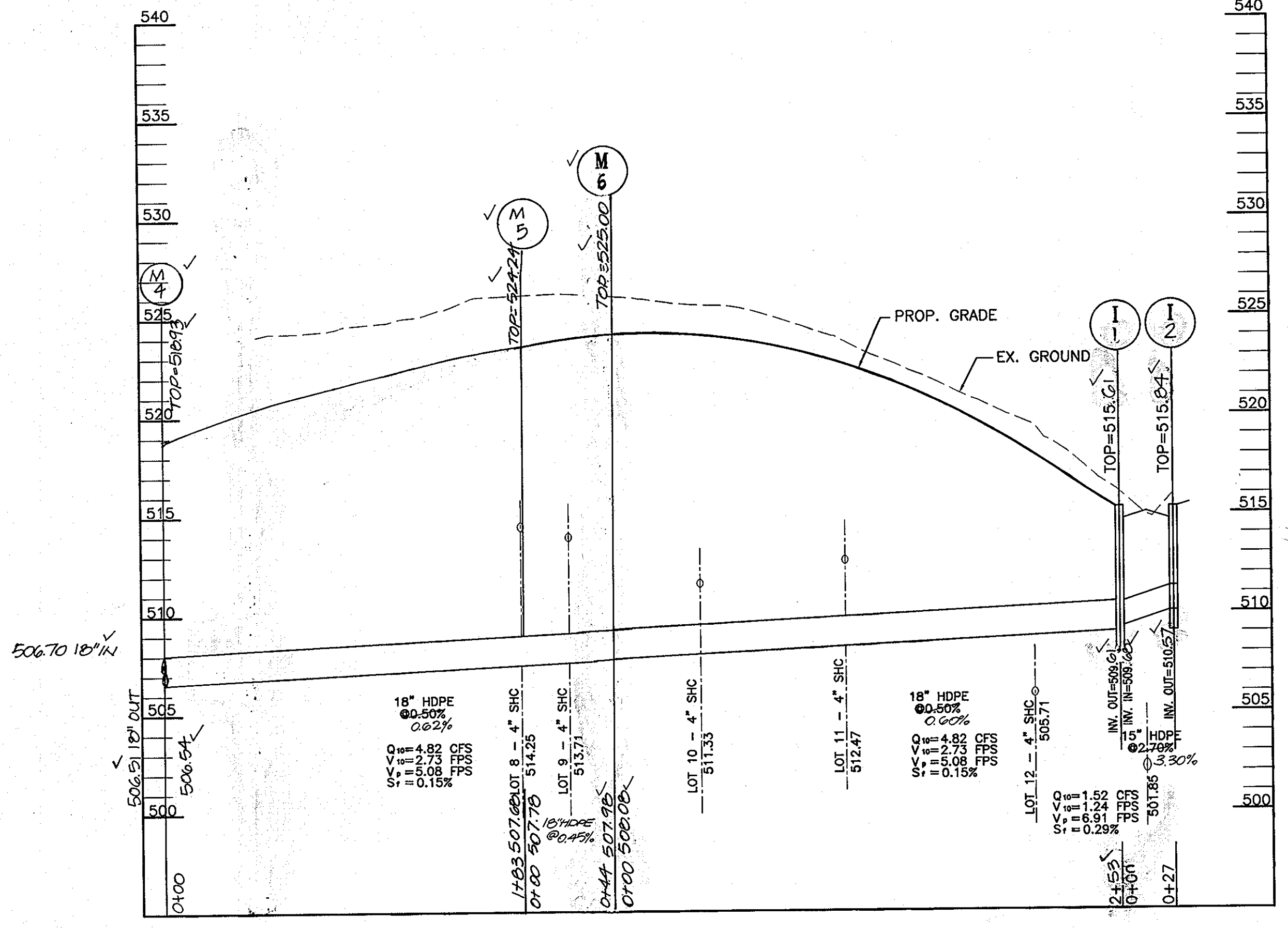
DESIGN BY: JCORJ
 DRAWN BY: JCORJ
 CHECKED BY: RHV
 DATE: 03-15-2005
 SCALE: AS SHOWN
 W.O. NO.: 04-54.00

5 SHEET OF 10

PLAN
 SCALE 1"=50'



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



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

SWM-1

ELEV.	SOIL DESCRIPTION	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 TRACE ROOTS (M)			V/D	1-2-1	1	14"	NO GROUNDWATER ENCOUNTERED WHILE DRILLING
5.0	TAN AND BROWN MOIST MEDIUM TO HEAVY LOOSE SILTY CLAY TRACE FINE SAND MACKROSCOPIC (M)			D	2-2-2	2	16"	
8.5				D	6-8-21	3	14"	CAVED IN AT 7.5' AT COMPLETION
10.0				L	51/0"	4	N/R	CAVED IN AT 7.5' AFTER 24 HOURS
15.0								
20.0								
25.0								
30.0								

SWM-2

ELEV.	SOIL DESCRIPTION	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 TRACE ROOTS (M)			I	1-2-1	1	13"	NO GROUNDWATER ENCOUNTERED WHILE DRILLING
5.0	BROWN MOIST, SOFT SILTY CLAY TRACE FINE SAND (M)			D	2-2-3	2	13"	
8.0	BROWN MOIST, VERY STIFF MACKROSCOPIC SILTY TRACE FINE SAND (M)			D	6-8-11	3	17"	CAVED IN AT 7.5' AT COMPLETION
10.0	TAN, DRY, MEDIUM DENSE MEDIUM SAND TRACE SILT TRACE ROCK FRAGMENTS (SP-M)			D	5-6-7	4	15"	CAVED IN AT 7.5' AFTER 24 HOURS
15.0								
20.0								
25.0								
30.0								

SWM-3

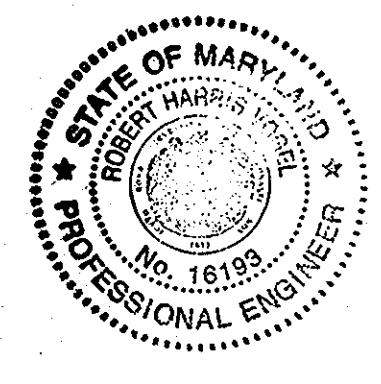
ELEV.	SOIL DESCRIPTION	STRA. DEPTH	DEPTH SCALE	CON.	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
0.0	SURFACE		0.0					4" TOPSOIL
2.5	BROWN MOIST, VERY LOOSE CLAYEY FINE SAND (M)			I	1-1-2	1	15"	NO GROUNDWATER ENCOUNTERED WHILE DRILLING
5.0	BROWN MOIST, MEDIUM STIFF SILTY CLAY TRACE FINE SAND (M)			D	2-2-4	2	16"	
10.0	TAN AND GRAY MOIST, MEDIUM STIFF TO STIFF MACKROSCOPIC FINE SAND (M)			D	4-5-4	3	17"	
15.0				D	3-5-8	4	17"	CAVED IN AT 12.0' AT COMPLETION
20.0				D	4-6-7	5	14"	CAVED IN AT 12.0' AFTER 24 HOURS
25.0								
30.0								

SWM-4

ELEV.	SOIL DESCRIPTION	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 TRACE ROOTS (M)			D	1-2-2	1	12"	NO GROUNDWATER ENCOUNTERED WHILE DRILLING
5.0	BROWN MOIST, LOOSE MACKROSCOPIC SILTY FINE SAND (M)			D	2-3-3	2	14"	
8.0	TAN, DRY, LOOSE FINE SAND (SP)			D	4-5-4	3	16"	
11.0	BROWN MOIST, MEDIUM STIFF MACKROSCOPIC SILT TRACE ROOTS (M)			D	2-3-5	4	14"	CAVED IN AT 11.5' AT COMPLETION
15.0	GRAY, STIFF, LOOSE SAND TRACE ROCK FRAGMENTS (SP)			D	28-14-20	5	3"	CAVED IN AT 11.0' AFTER 24 HOURS
20.0								
25.0								
30.0								

STORMWATER MANAGEMENT BORING PROFILES
NOT TO SCALE

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"
9/7/12
ROBERT H. VOGEL, P.E. No. 14173 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

STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	TOP ELEV.	INV IN	INV OUT	REMARKS
E-1	24" END SECTION	N 597521.61 E 1349520.48	508.00	1/4" 502.00	24" 502.00	SEE DETAIL
M-1	STANDARD 4" MANHOLE	N 597537.22 E 1349629.26	508.50	24" 502.49	24" 502.49	0-5.12
M-2	STANDARD 4" MANHOLE	N 597351.91 E 1349746.25	508.50	18" 502.70	24" 502.71	0-5.12
M-3	STANDARD 4" MANHOLE	N 597351.91 E 1349746.25	508.50	18" 502.70	18" 506.51	0-5.12
M-4	STANDARD 4" MANHOLE	CL STA. 2+51, 30' LT.	510.93	18" 506.70	18" 506.51	0-5.12
I-4	TYPE 'A-5' INLET	CL STA. 1+66, 14' RT.	512.39	18" 507.29	18" 507.29	SD-4.40
I-3	TYPE 'A-5' INLET	CL STA. 1+57, 14' LT.	512.39	18" 507.29	18" 507.29	SD-4.40
M-5	STANDARD 4" MANHOLE	CL STA. 4+20, 22' LT.	524.24	18" 507.78	18" 507.89	0-5.12
I-1	TYPE 'A-5' INLET	CL STA. 6+80, 14' LT.	515.61	18" 509.61	18" 509.61	SD-4.40
I-2	TYPE 'A-5' INLET	CL STA. 6+80, 14' RT.	515.61	18" 510.57	18" 510.57	SD-4.40
M-G	STD 4" MANHOLE	CL STA. 4+26, 22' RT	525.00	18" 507.98	18" 507.98	0-5.12

PIPE SCHEDULE

PIPE SIZE	TYPE	TOTAL LENGTH
18"	HDPE	57 LF
18"	HDPE	922 LF
	ASTM C-36	65 LF

APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature] 5-2-05
Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 5/6/05
Chief, Division of Land Development & Planning Date

[Signature] 5/8/05
Chief, Development Engineering Division Date

3	REVISE ROAD PROFILE AND STORM DRAIN PROFILE	11/3/2012
NO.	REVISION	DATE

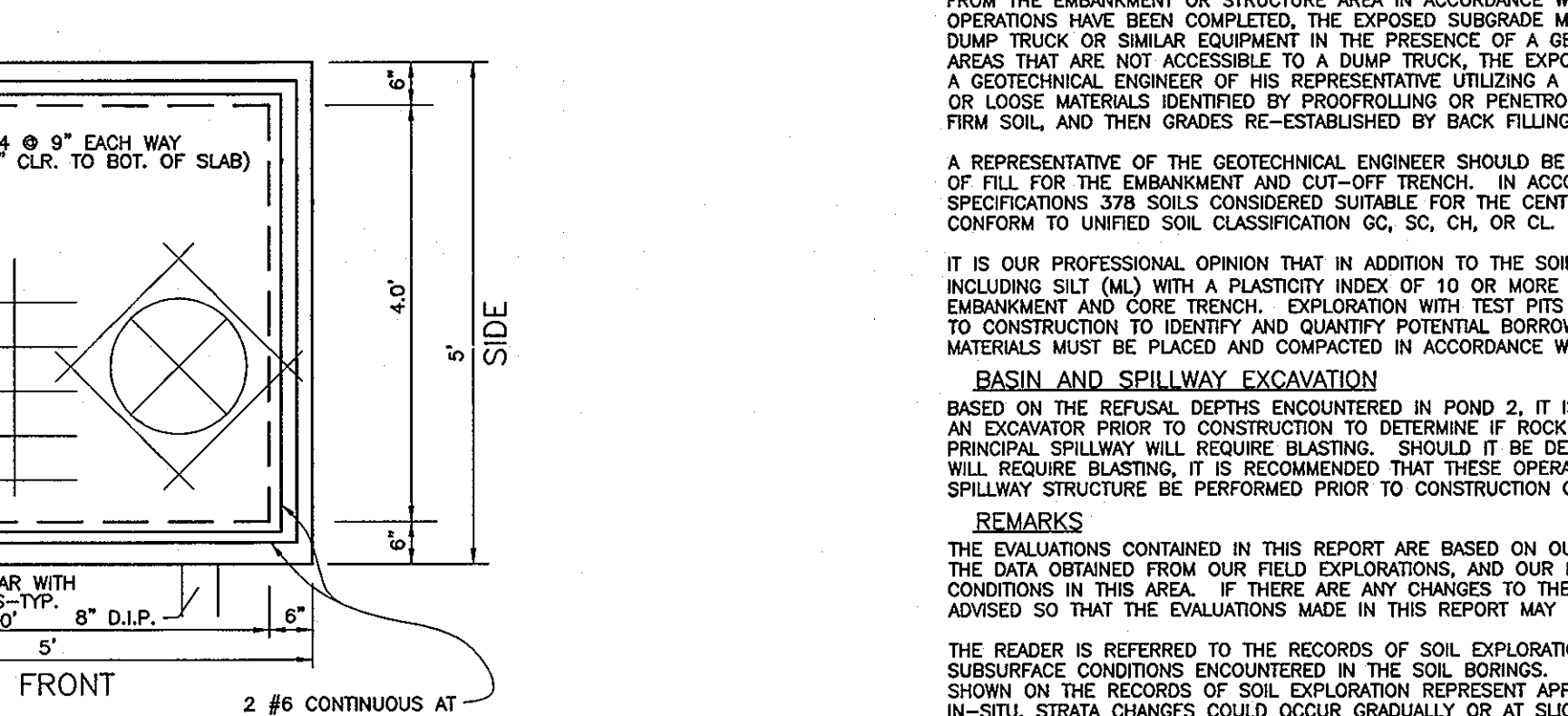
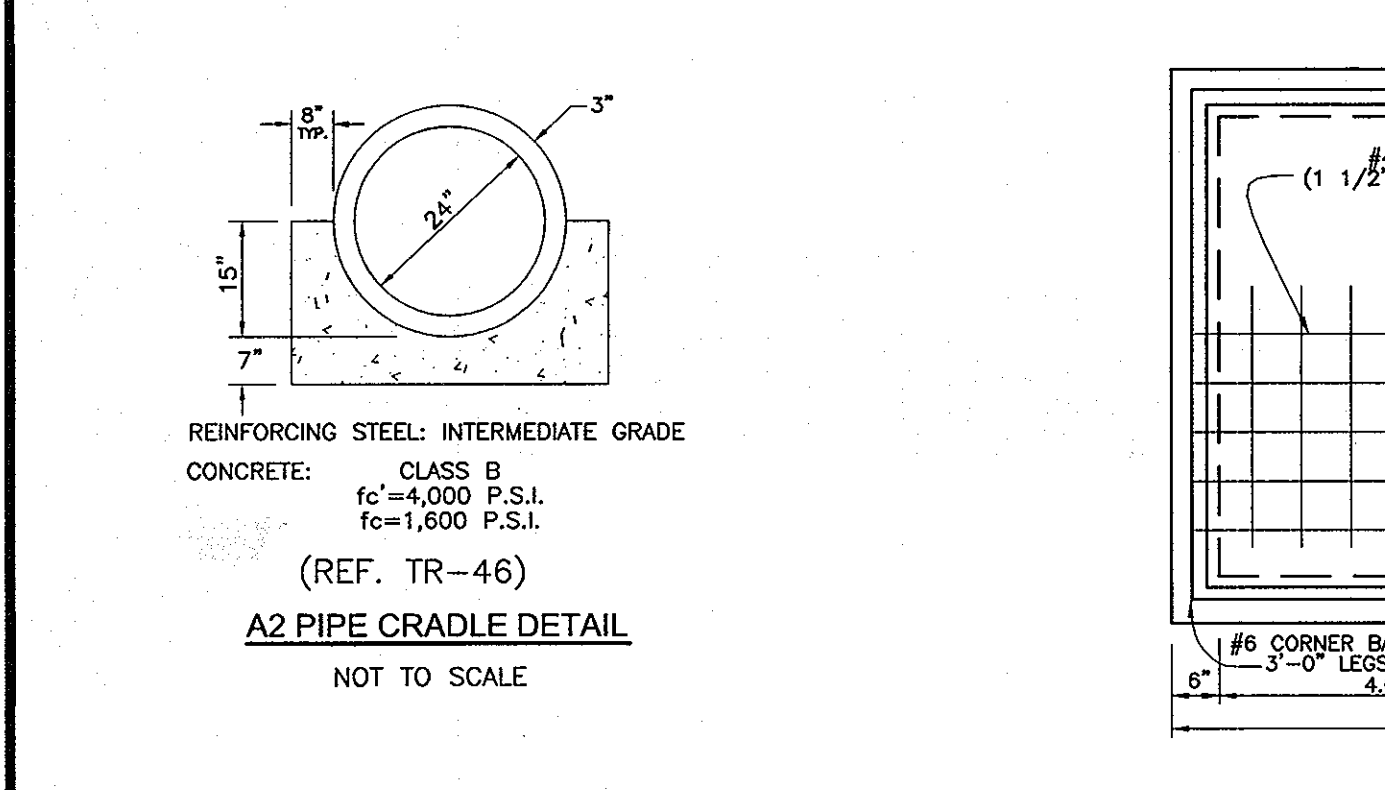
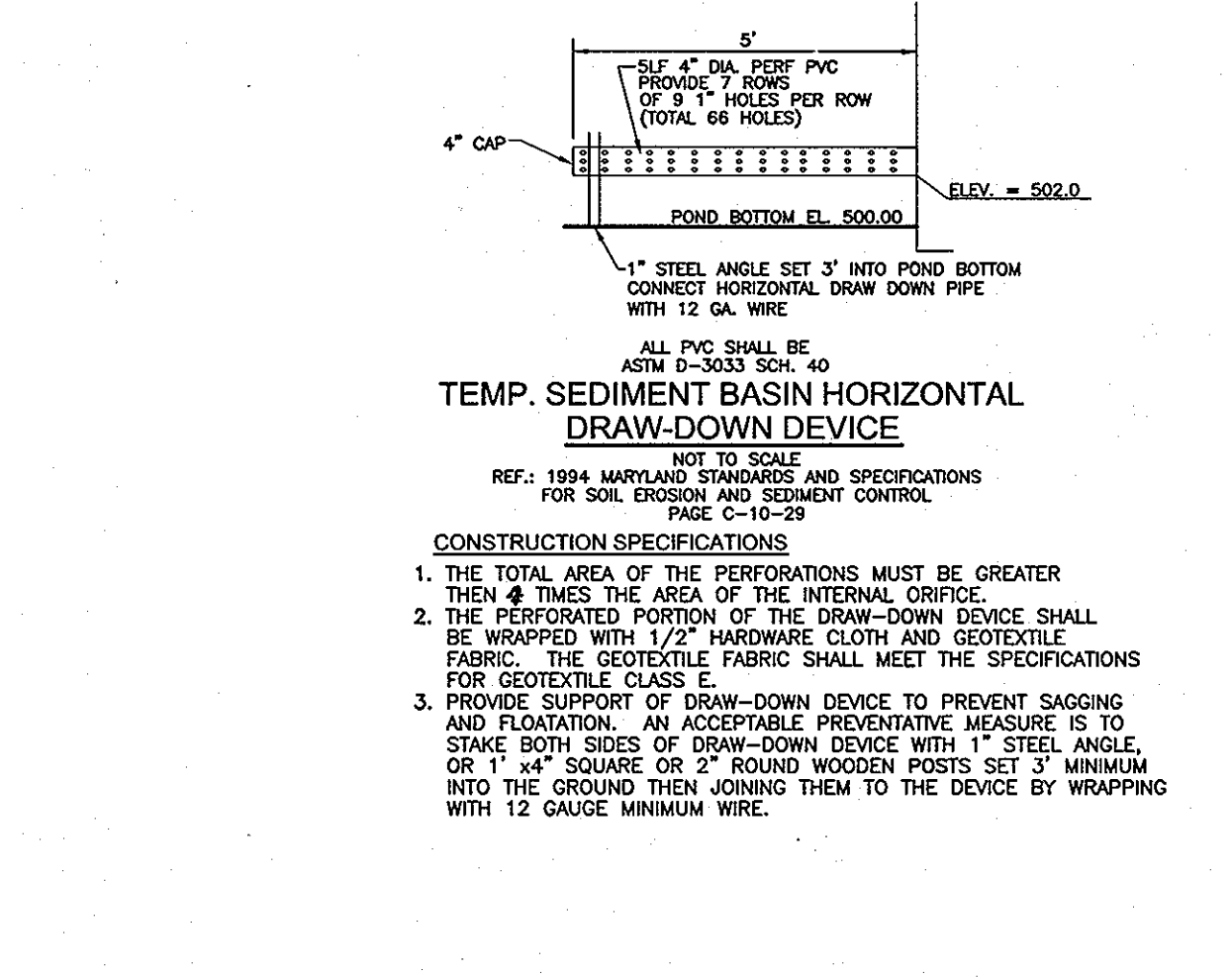
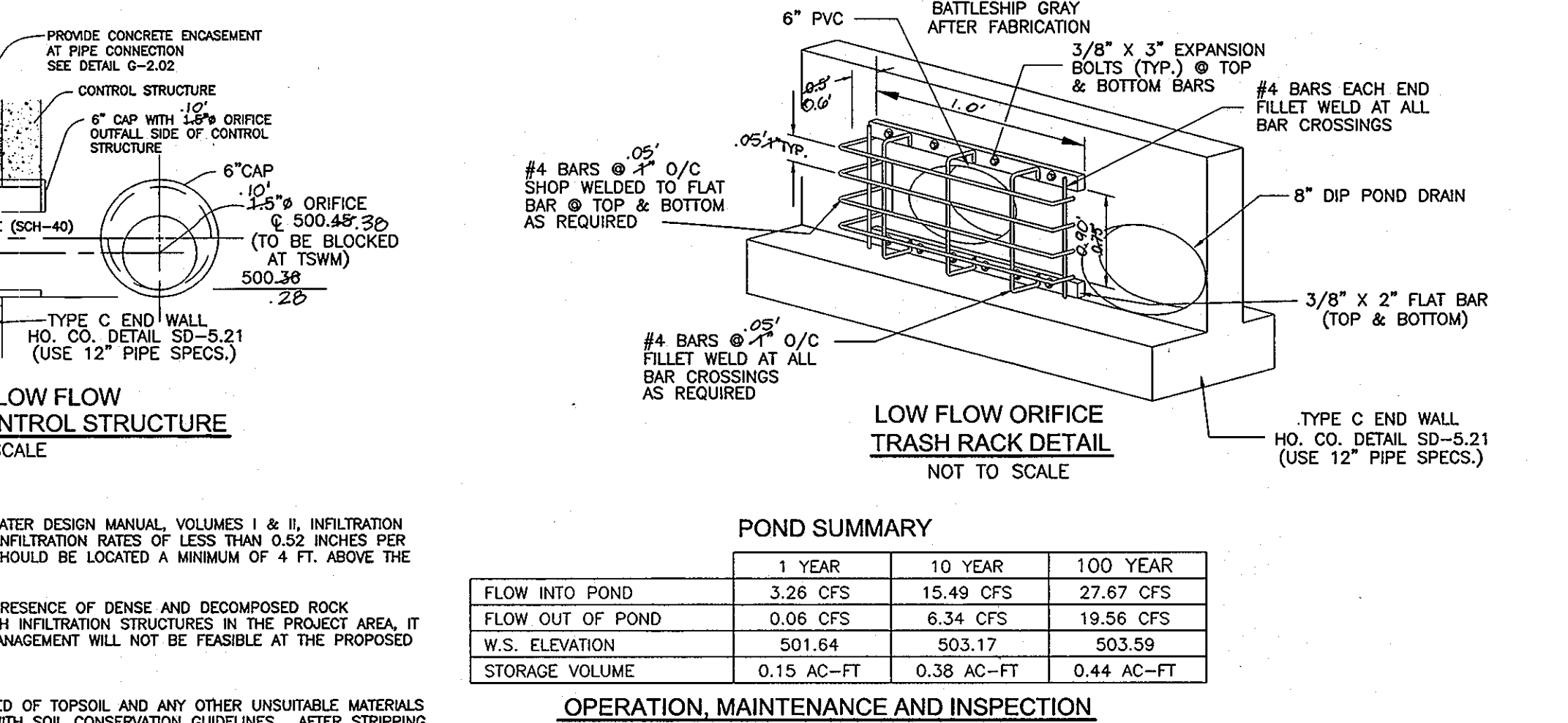
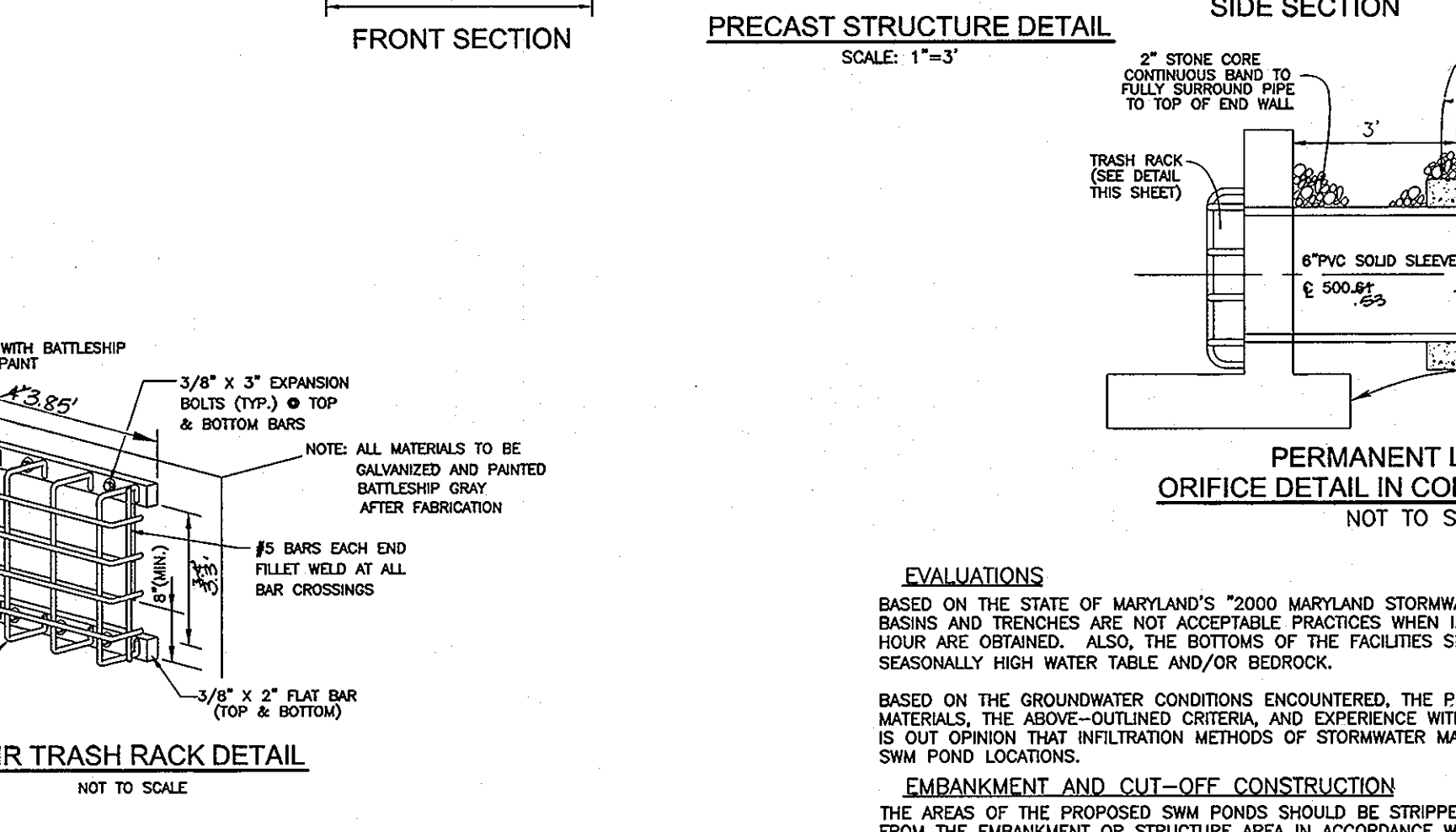
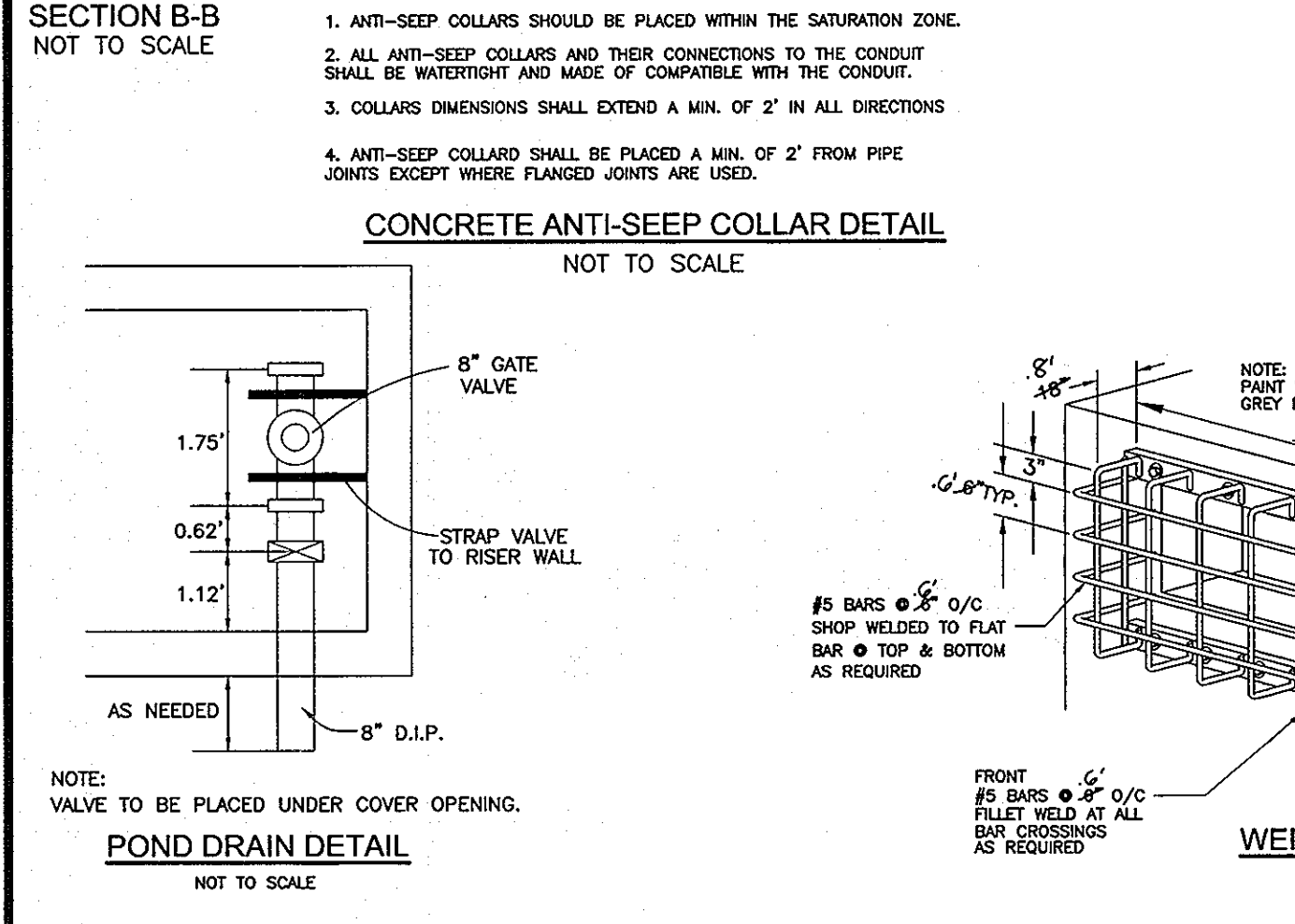
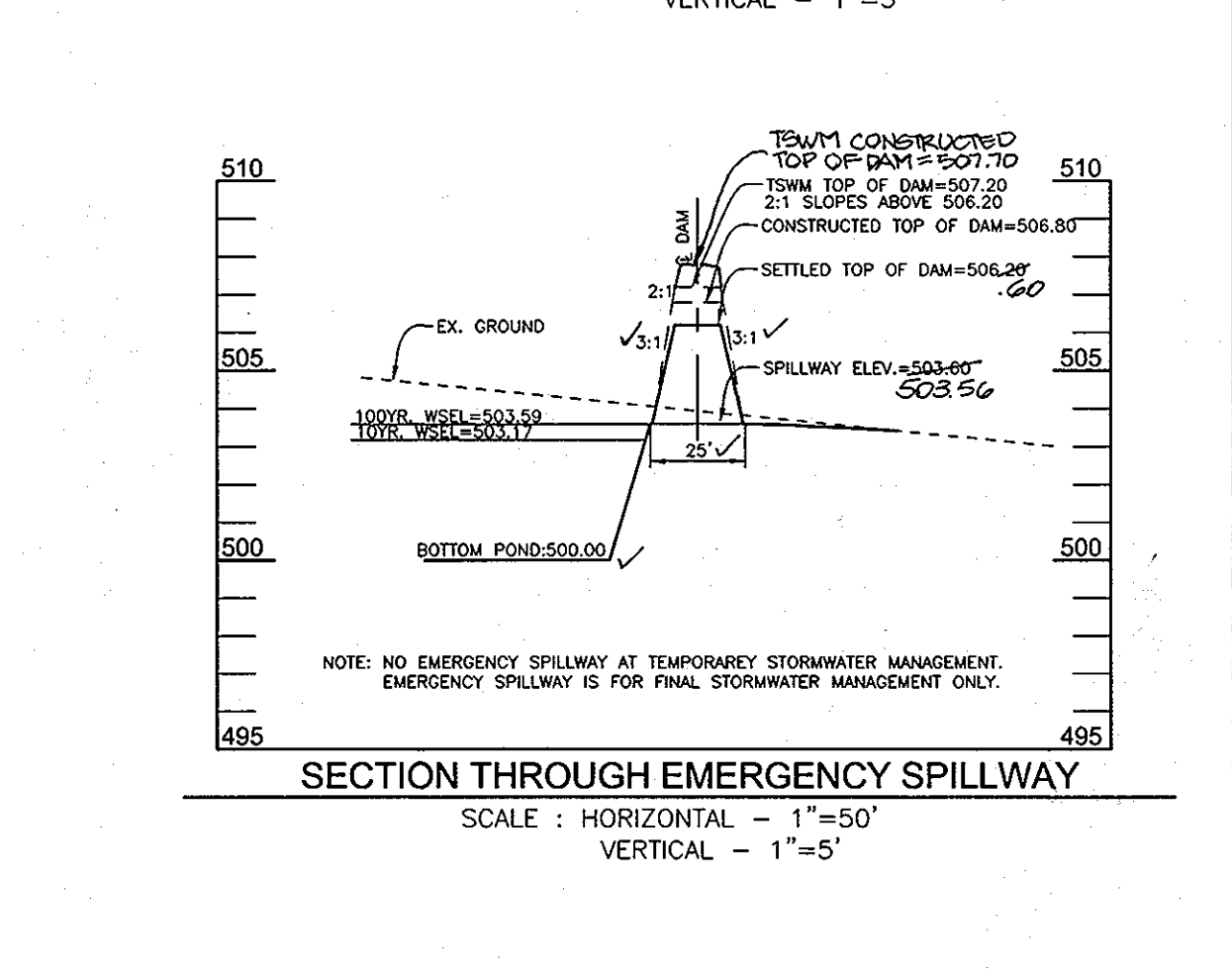
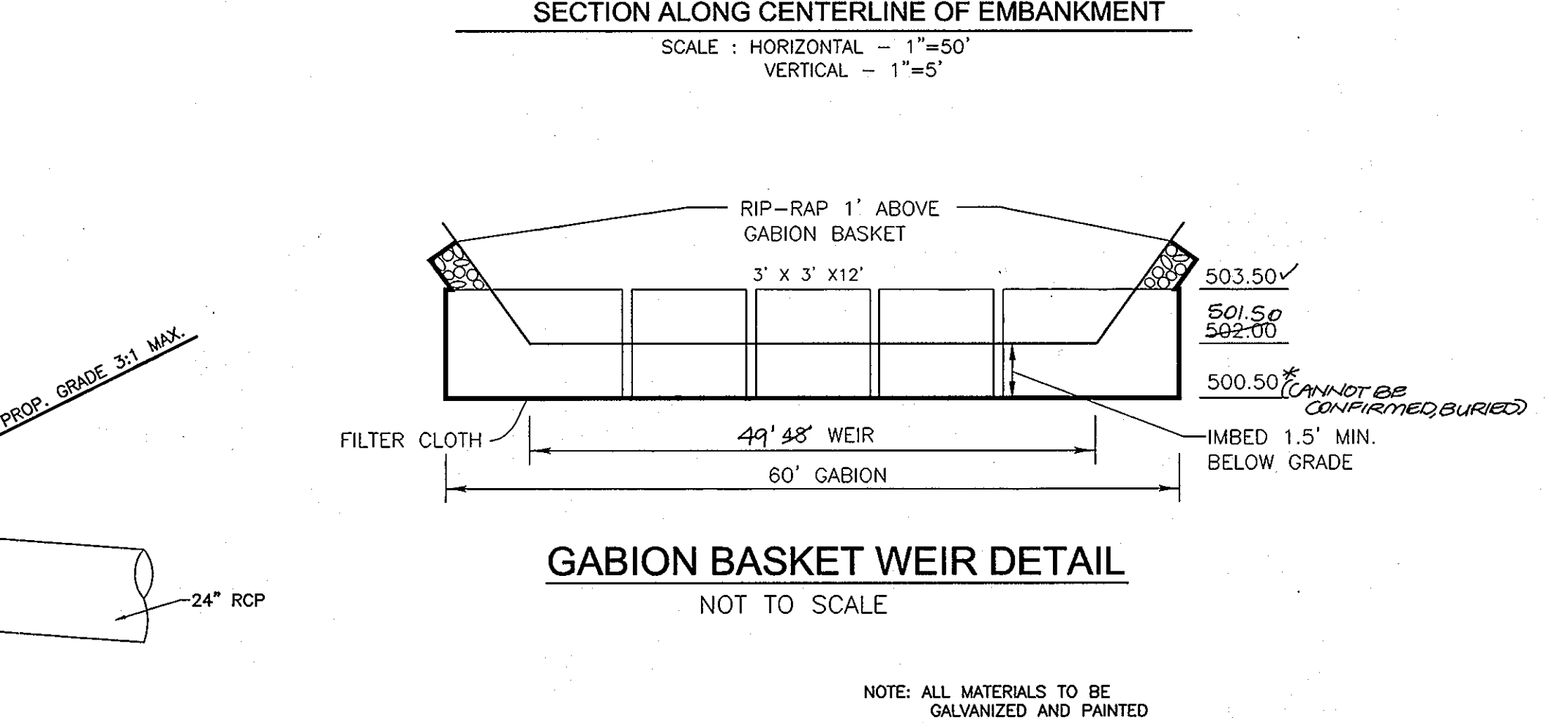
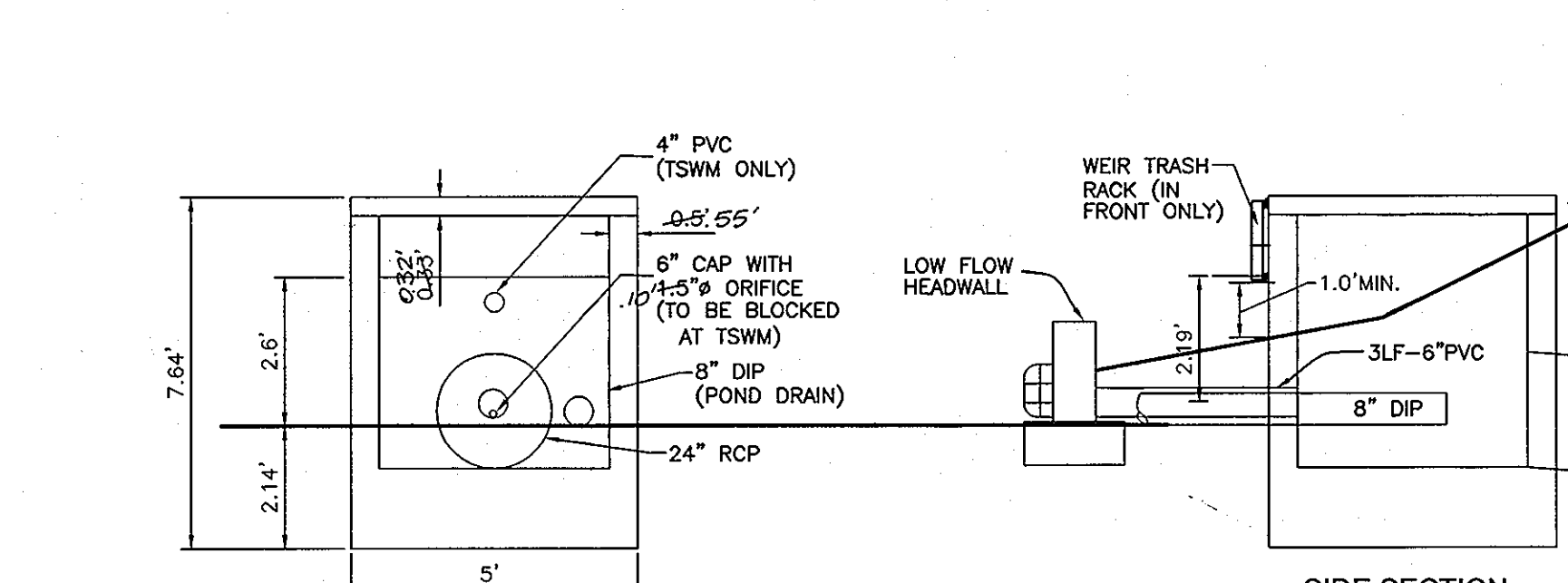
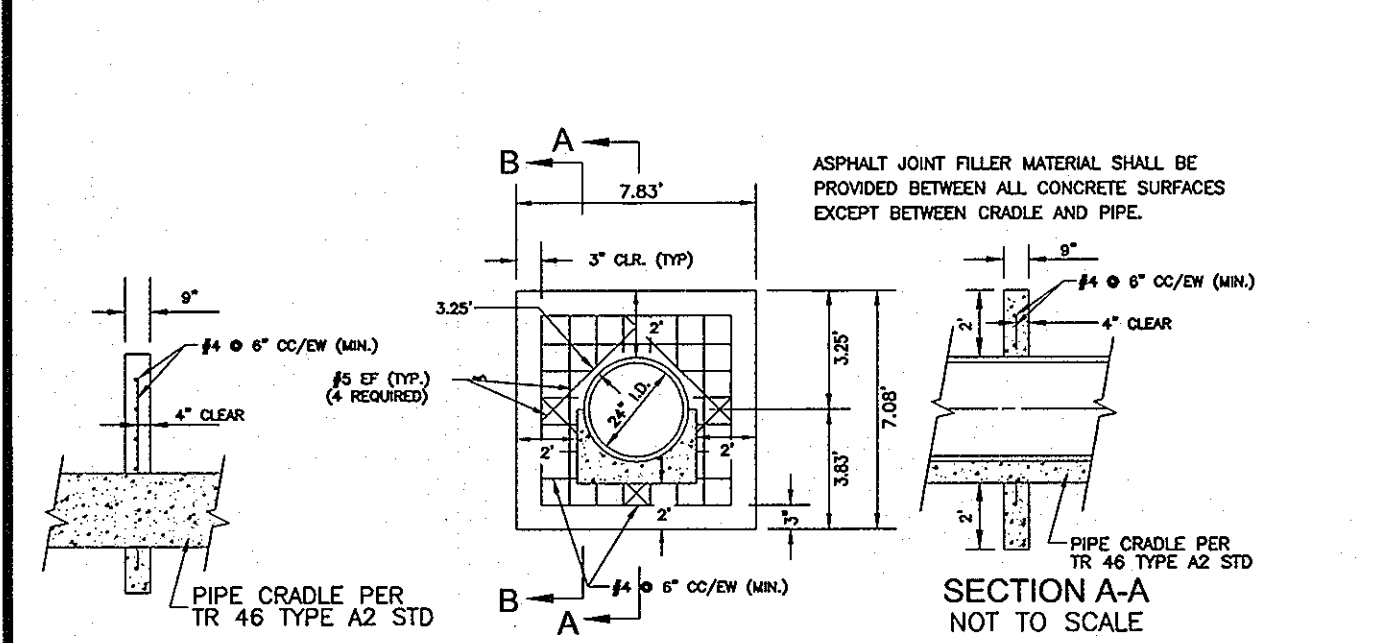
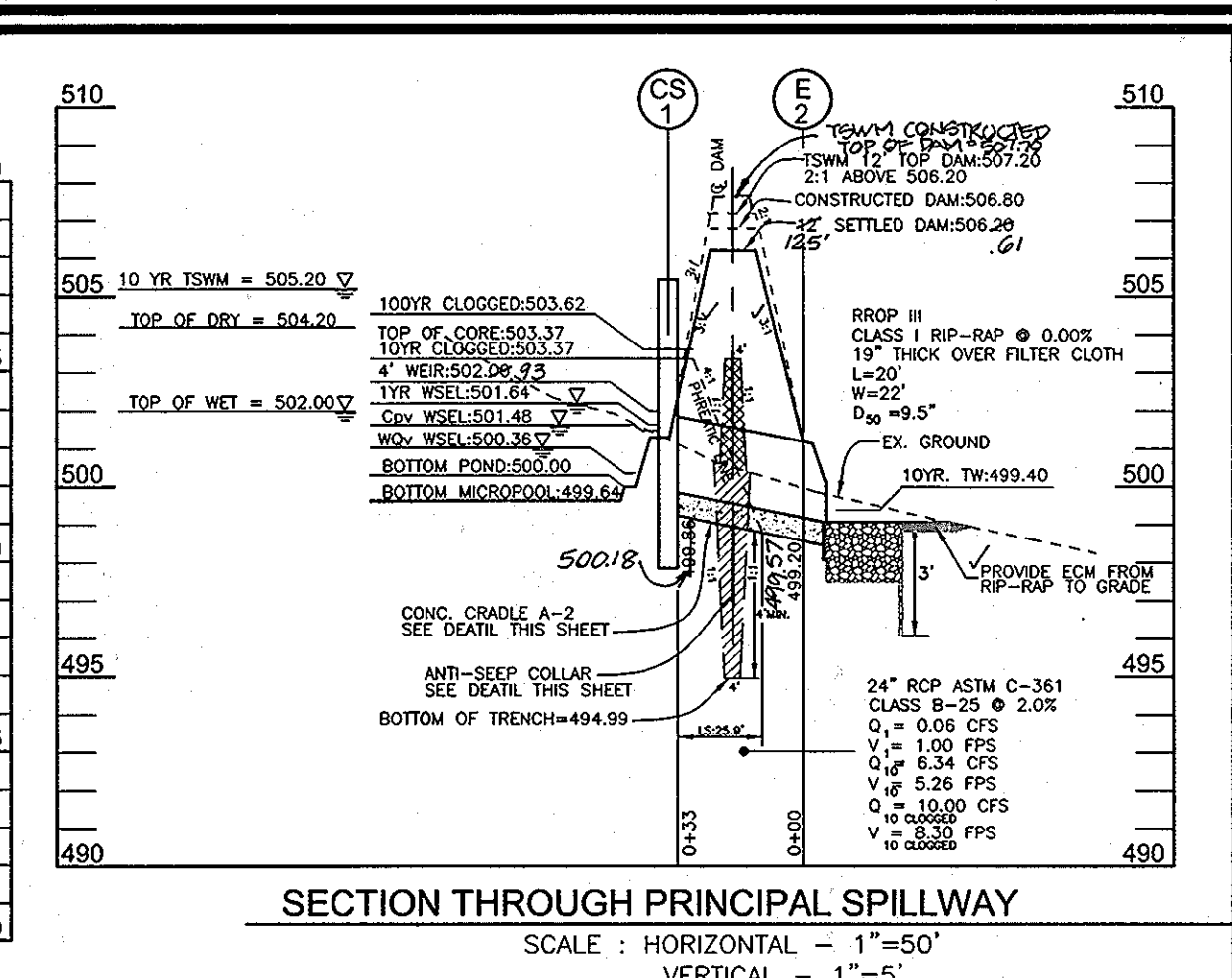
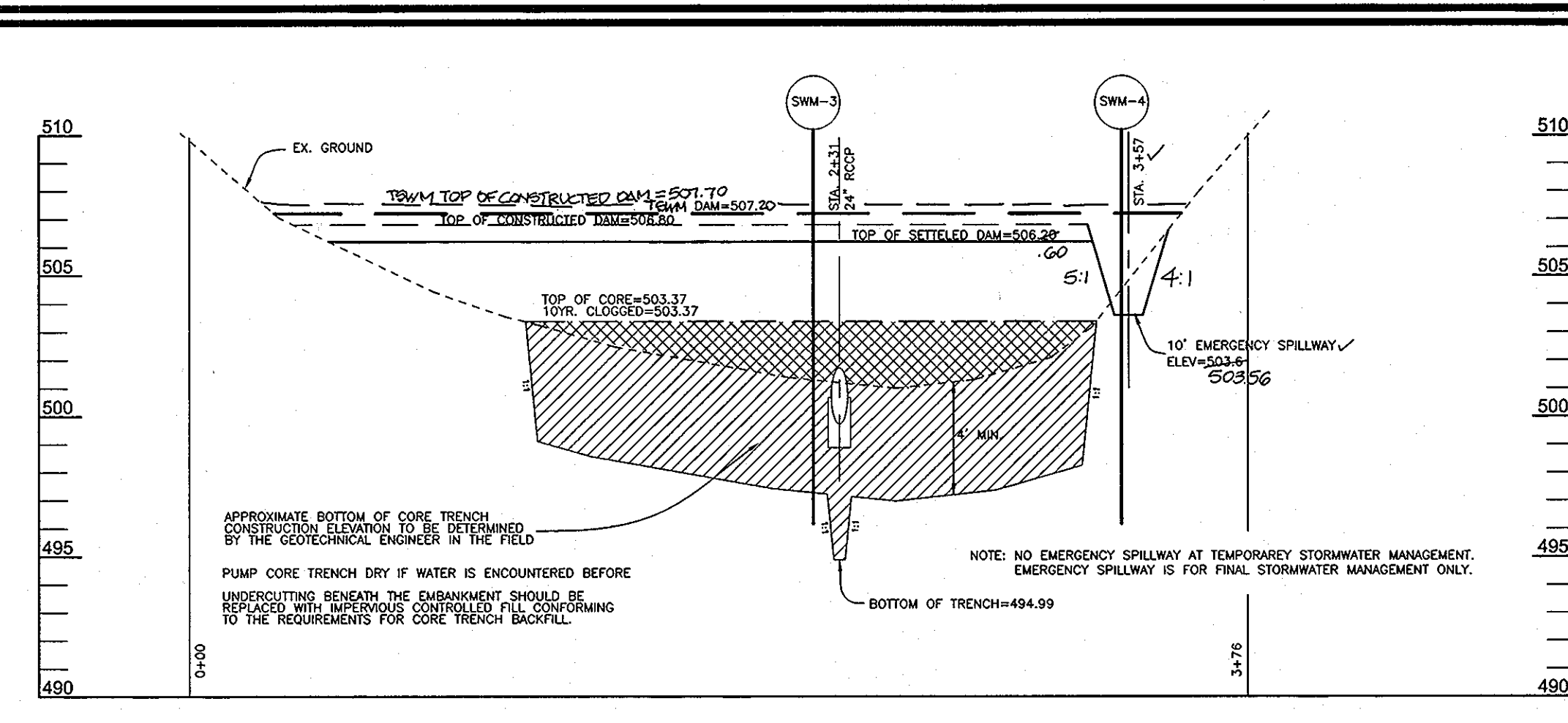
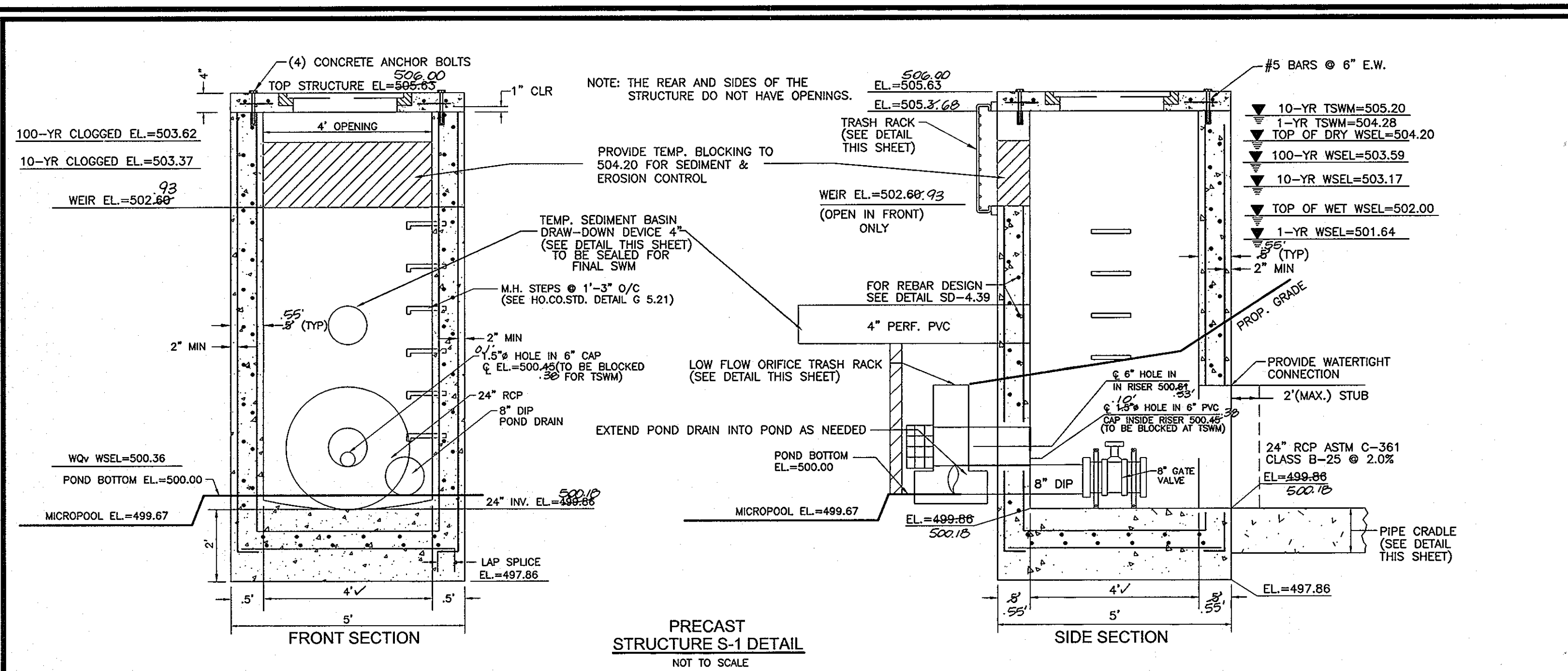
FINAL ROAD CONSTRUCTION PLAN
STORM DRAIN PROFILES
MARGARET'S FANCY
LOTS 1-12, 14, 16-20 AND
OPEN SPACE LOTS 13, 15 & 21

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

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

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

9 OF 10



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.

BASED ON THE GROUNDWATER CONDITIONS ENCOUNTERED, THE PRESENCE OF DENSE AND DECOMPOSED ROCK MATERIALS, THE ABOVE-OUTLINED CRITERIA, AND EXPERIENCE WITH INFILTRATION STRUCTURES IN THE PROJECT AREA, IT IS OUR OPINION THAT INFILTRATION METHODS OF STORMWATER MANAGEMENT WILL NOT BE FEASIBLE AT THE PROPOSED SWM POND LOCATIONS.

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 GUIDELINES. AFTER STRIPPING OPERATIONS HAVE BEEN COMPLETED, THE EXPOSED SURFACE 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 OF HIS REPRESENTATIVE UTILIZING A DYNAMIC CONE PENETROMETER. ANY EXCESSIVELY SOFT OR LOOSE MATERIALS IDENTIFIED BY PROFILING OR PENETROMETER TESTING SHOULD BE EXCAVATED TO SUITABLE FIRM SOIL, AND THEN GRADES RE-ESTABLISHED BY BACK FILLING WITH SUITABLE SOIL.

A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHOULD BE PRESENT TO MONITOR PLACEMENT AND COMPACTION OF FILL FOR THE EMBANKMENT AND CUT-OFF TRENCH. IN ACCORDANCE WITH THE MARYLAND SOIL CONSERVATION SPECIFICATIONS 378 SOLS CONSIDERED SUITABLE FOR THE CENTER OF EMBANKMENT AND CUT-OFF TRENCH SHALL CONFORM TO UNITED SOIL CLASSIFICATION CC, SC, CH, OR CL.

IT IS OUR PROFESSIONAL OPINION THAT IN ADDITION TO THE SOIL MATERIALS DESCRIBED ABOVE A FINE-GRAINED SOIL INCLUDING SILT (ML) WITH A PLASTICITY INDEX OF 10 OR MORE CAN BE UTILIZED FOR THE CENTER OF THE EMBANKMENT AND CORE TRENCH. EXPLORATION WITH TEST PITS AND LABORATORY TESTING CAN BE CONDUCTED PRIOR TO CONSTRUCTION TO IDENTIFY AND QUANTIFY POTENTIAL BORROW AREAS FOR CORE TRENCH MATERIAL. ALL FILL MATERIALS MUST BE PLACED AND COMPACTED IN ACCORDANCE WITH MD SCS 378 SPECIFICATIONS.

BASEIN AND SPILLWAY EXCAVATION

BASED ON THE REFUSAL DEPTHS ENCOUNTERED IN POND 2, IT IS RECOMMENDED THAT TEST PITS BE PERFORMED WITH AN EXCAVATOR PRIOR TO CONSTRUCTION TO DETERMINE IF ROCK WITHIN THE BASIN AREA AS WELL AS ALONG THE PRINCIPAL SPILLWAY WILL REQUIRE BLASTING. SHOULD IT BE DETERMINED THAT THE ROCK WITHIN THE BASIN AREAS WILL REQUIRE BLASTING, IT IS RECOMMENDED THAT THESE OPERATIONS WITHIN 75 FT. OF THE RISER AND PRINCIPAL SPILLWAY STRUCTURE BE PERFORMED PRIOR TO CONSTRUCTION OF THE PRINCIPAL SPILLWAY AND RISER STRUCTURE.

REMARKS

THE EVALUATIONS CONTAINED IN THIS REPORT ARE BASED ON OUR UNDERSTANDING OF THE PROPOSED CONSTRUCTION, THE DATA OBTAINED FROM OUR FIELD OPERATIONS WITH THE SOILS AND SUBSURFACE CONDITIONS IN THIS AREA. IF THERE ARE ANY CHANGES TO THE PROJECT CHARACTERISTICS, THIS OFFICE SHOULD BE ADVISED SO THAT THE EVALUATIONS MADE IN THIS REPORT MAY BE RE-EVALUATED.

THE READER IS REFERRED TO THE RECORDS OF SOIL EXPLORATION IN THE APPENDIX FOR DETAILS RELATED TO THE SUBSURFACE CONDITIONS ENCOUNTERED IN THE SOIL BORINGS. IT SHOULD BE NOTED THAT STRATIFICATION LINES SHOWN ON THE RECORDS OF SOIL EXPLORATION REPRESENT APPROXIMATE TRANSITIONS BETWEEN MATERIAL TYPES. IN-SITU, STRATA CHANGES COULD OCCUR GRADUALLY OR AT SUDDENLY DIFFERENT LEVELS. ALSO, IT SHOULD BE NOTED THAT THE SOIL BORINGS DEPICT CONDITIONS AT THE PARTICULAR LOCATIONS AND AT THE PARTICULAR TIMES INDICATED. SOME CONDITIONS, PARTICULARLY GROUNDWATER CONDITIONS, COULD CHANGE WITH TIME.

IT IS CONSIDERED ESSENTIAL THAT AN HCEA REPRESENTATIVE BE ON-SITE TO MONITOR, INSPECT, AND TEST ALL FACETS OF CONSTRUCTION OF THE SWM FACILITY IN ORDER TO VERIFY THAT OPERATIONS ARE PERFORMED CONSISTENT TO THE PROPOSED PLANS PROVIDED BY THE CIVIL ENGINEER AND RECOMMENDATIONS MADE BY HCEA.

	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

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" (NO-378), THE POND OWNERS) AND ANY HEIRS, 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 INDICATIONS 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.
2. TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOVED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHOULD BE MOVED 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. THE COMPONENTS SHOULD BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
2. SEDIMENT SHOULD BE REMOVED UPON DETECTION OF ANY SIGNIFICANT ACCUMULATION. SEDIMENT REMOVAL SHOULD BE CONDUCTED WITH THE CAUTION OF THE RISER, WHEN DEEMED NECESSARY FOR OPERATIONAL REASONS, OR WHEN DEEMED NECESSARY BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

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

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

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

Michael ... 5/3/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION

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
Jim ... 5/5/05
DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Kevin ... 5/5/05
DATE

HOWARD SOIL CONSERVATION DISTRICT

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 PROVIDE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH A BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Robert H. Vogel 4/1/05
SIGNATURE OF ENGINEER
ROBERT H. VOGEL
DATE

DEVELOPER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESTRICTIONS 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.

Philip E. Stackhouse Feb 15 2005
SIGNATURE OF DEVELOPER
DATE

"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.

Robert H. Vogel 9/7/12
SIGNATURE OF ENGINEER
ROBERT H. VOGEL
DATE

I 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 AN MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

NO.	REVISION	DATE

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

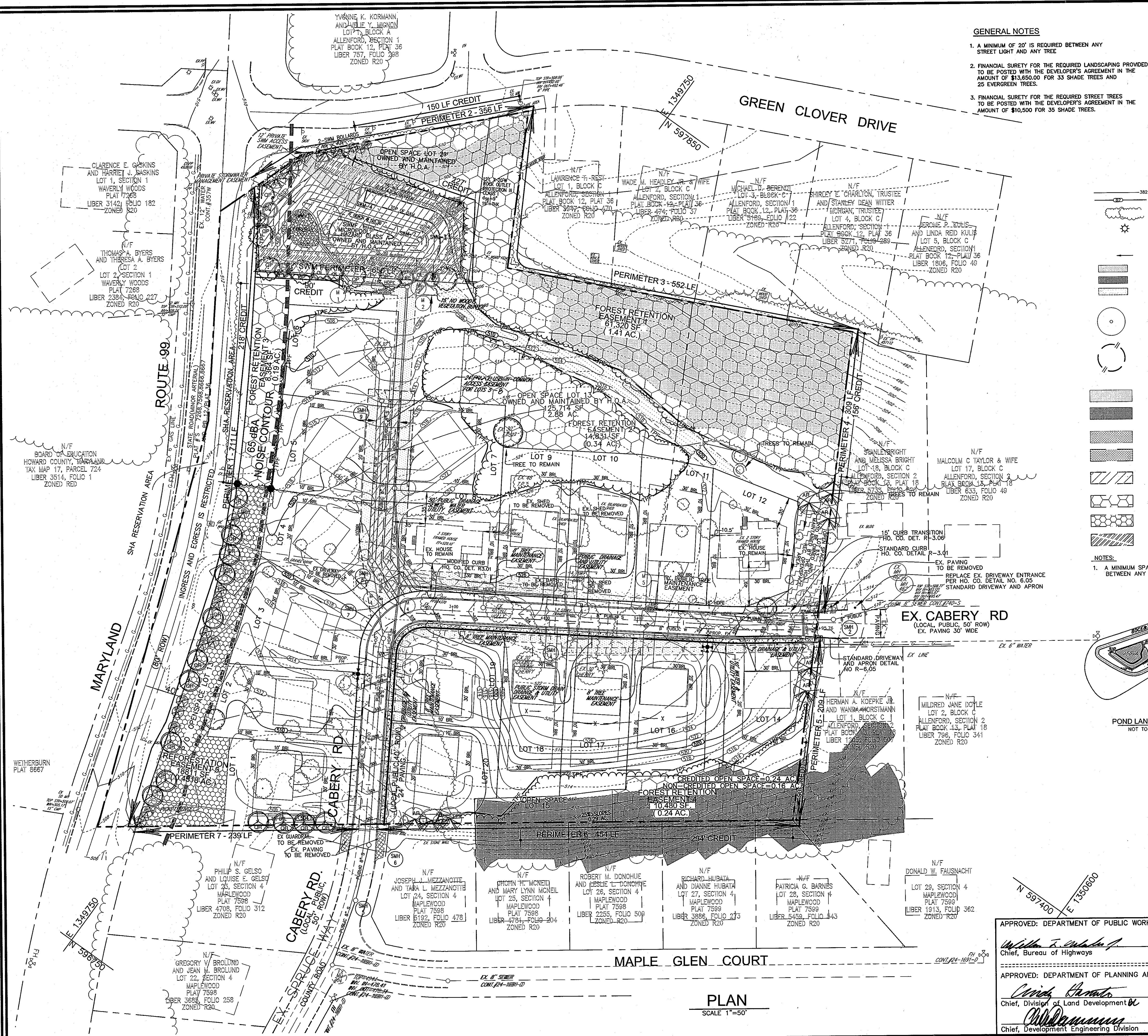
PARCEL 9, 685
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
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8407 MAIN STREET
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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

AS-BUILT 9/7/12



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 \$13,650.00 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	A	A	A	A	A	A
LANDSCAPE TYPE	711	356	552	309	209	454	239
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	218'	150'	552'	156'	90'	294'	NO
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	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 (IF 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	-	-	-	-	-	-	-

* EXISTING WOODS TO REMAIN
** CREDITS FROM FOREST CONSERVATION PLANTING

LEGEND

- 382 EXISTING CONTOUR PROPOSED CONTOUR
- EXISTING TREES TO REMAIN
- LIGHT POLES
- DIRECTION OF FLOW
- 15%-24.9% 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)	YES* 317'
CREDIT FOR OTHER LANDSCAPING (NO, YES AND 2)	NO
NUMBER OF TREES REQUIRED (333) SHADE TREES EVERGREEN TREES	7 SHADE TREES 8 EVERGREEN TREES
NUMBER OF TREES PROVIDED SHADE TREES EVERGREEN TREES	7 SHADE TREES 8 EVERGREEN TREES

* EXISTING WOODS TO REMAIN

LANDSCAPE PLANT LIST

KEY	QUAN.	BOTANICAL NAME	SIZE	CAT
AR	12	ACER RUBRUM OCTOBER GLORY RED MAPLE	2 1/2"-3" CAL.	B & B
QR	14	QUERCUS RUBRA RED OAK	2 1/2"-3" CAL.	B & B
QP	7	QUERCUS PALUSTRIS PIN OAK	2 1/2"-3" CAL.	B & B
PS	17	PINUS STROBUS EASTERN WHITE PINE	6'-8" HT.	B & B
CL	8	CUPRESSOCYPRIS LETYLANDII LETYLAND CYPRESS	5'-6" HT.	B & B

STREET TREE PLANT LIST

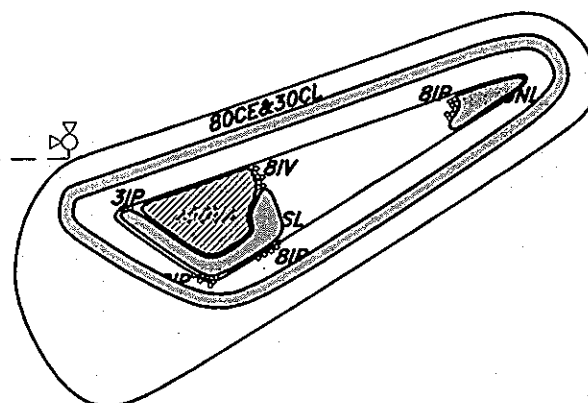
KEY	QUAN.	BOTANICAL NAME	SIZE	CAT
TC	35	TILIA CORDATA LITTLELEAF LINDEN	2 1/2"-3" CAL.	B & B

2' DEEP STORMWATER POND HERBACEOUS LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
VA	450	Vallisneria americana Wild Celery	plug	2' oc
IP	27	Iris pseudacorus Yellow Water Iris	plug	1.5' oc
IV	8	Iris versicolor Blue Flag (wear gloves)	plug	1.5' oc
SL	60	Sagittaria latifolia Duck Potato (do not plant tubers)	plug	4' oc
CE	80	Cyperus esculentus Yellow Nut Sedge	plug	2' oc
NL	325	Nuphor luteum Spatterdock	plug	1.5' oc
CL	30	Carex lasiocarpa Lake Sedge	plug	2' oc

NOTES:

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



REMOVE BATTLE BOARDS PRIOR TO INSTALLATION OF PLANT MATERIALS. ADD THREE INCHES OF TOPSOIL TO STABILIZE WITH 40 POUNDS PER ACRE OF A HYDROSEED MIX (WET MIX AND MEADOW MIX) FROM SYLVA NATIVE NURSERY OR EQUAL. ALL PLANT MATERIALS TO CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LCMW SPECIFICATIONS.

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

OWNER
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: 5/3/05

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

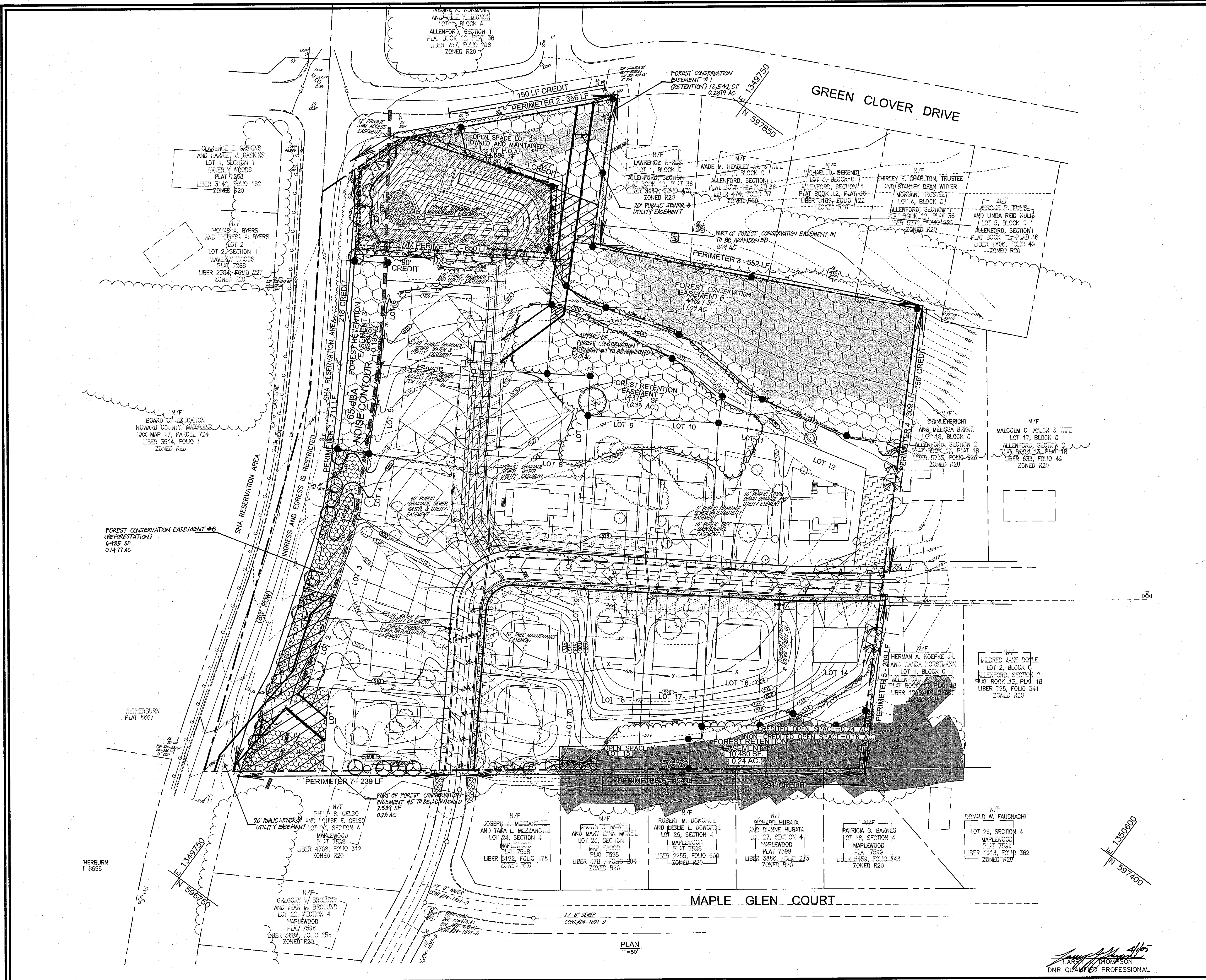
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DESIGN BY: ELWRJ
DRAWN BY: ELWRJ
CHECKED BY: RHV
DATE: 03-15-2005
SCALE: AS SHOWN
W.O. NO.: 04-54.00

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 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

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

2	MODIFY FOREST CONSERVATION EASEMENTS	7/5/07
1	REMOVE STOCKPILE AREA AND PROVIDE BERM OPEN SPACE LOT 13	10.5.05

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
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DESIGN BY: R/LJT
 DRAWN BY: RJ
 CHECKED BY: RHV
 DATE: 03-15-2005
 SCALE: AS SHOWN
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9 SHEET OF 10

ZONED R-ED

NET TRACT AREA:	9.75 AC
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, INC. (PLAT NOS. 17670 - 17672 (P-04-100)) IS REDUCED BY 0.39 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)(3)(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)

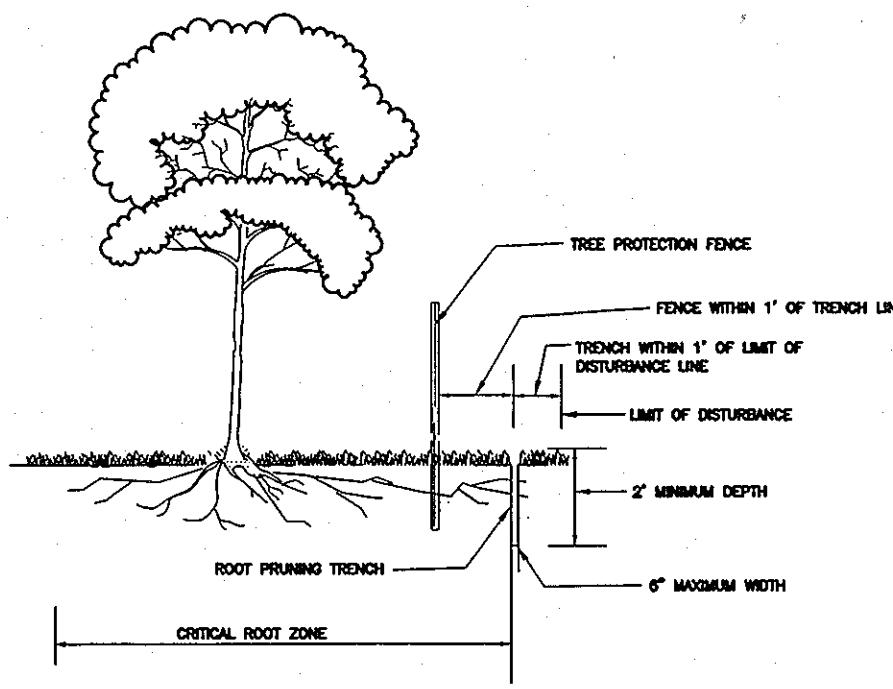
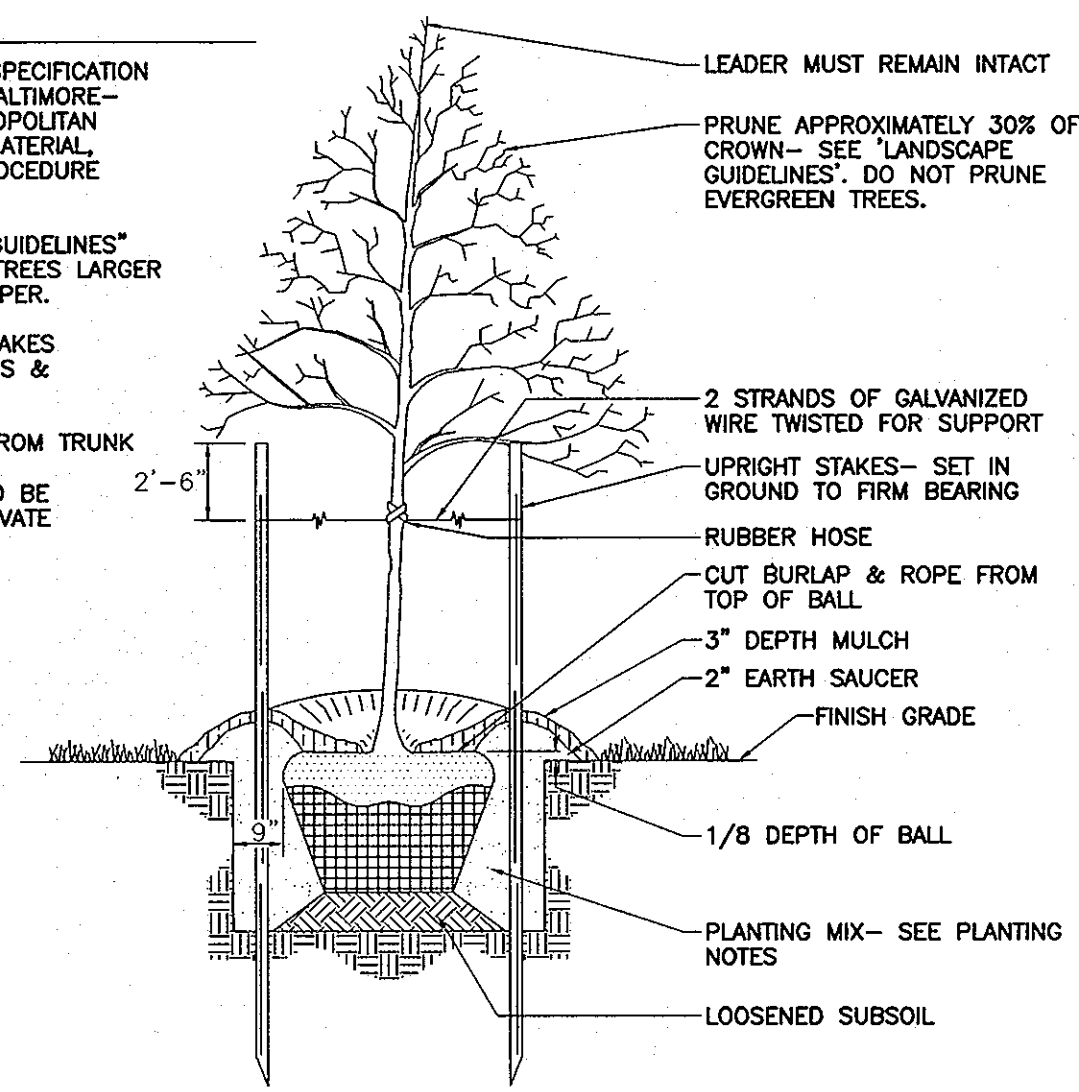
RETENTION OF 2.18 AC. (94,980.80 SF X 0.20) \$ 18,992.16
REFORESTATION OF 0.43 AC. (18,811 SF X 0.50) \$ 9,405.50

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

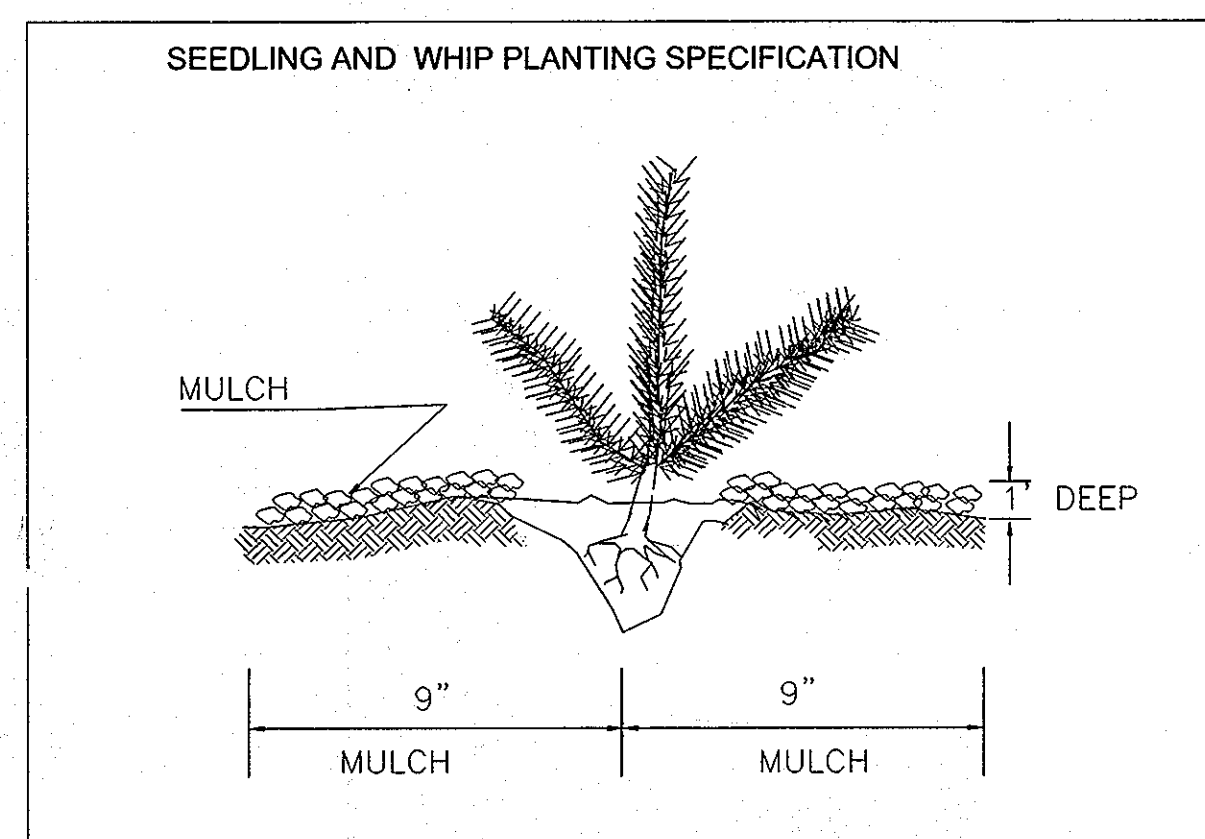
0.15 ACRES OR 6,534 SF
2 1/2" - 3" CALIPER TREES
1" CALIPER TREES
53 (0.15 AC) @ 350 TREES PER ACRE

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 (OR)	2 1/2" - 3" CAL.	11 X 11

** CREDITS TOWARDS PERIMETER LANDSCAPING

TREE PLANTING AND STAKING

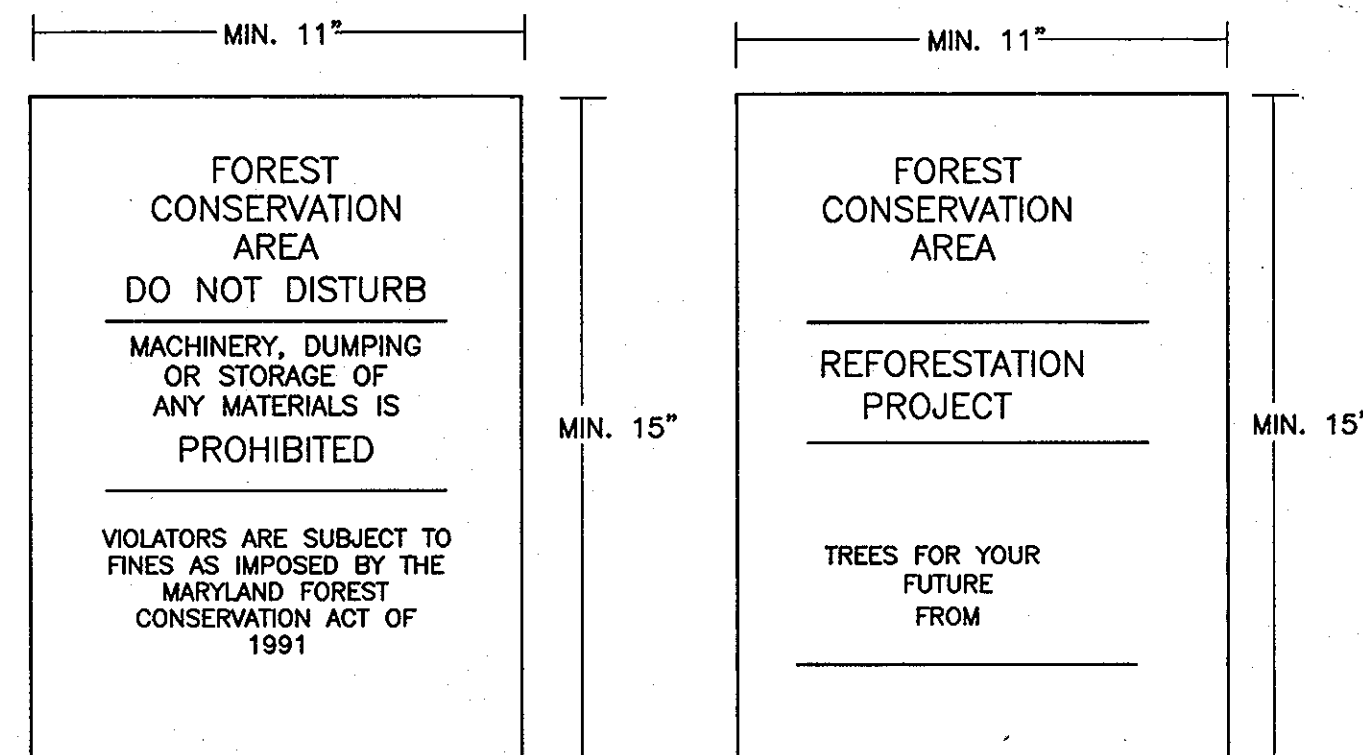
TREES UP TO 2-1/2" CALIPER NOT TO SCALE



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

DENSITY CHART

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



NOTE:

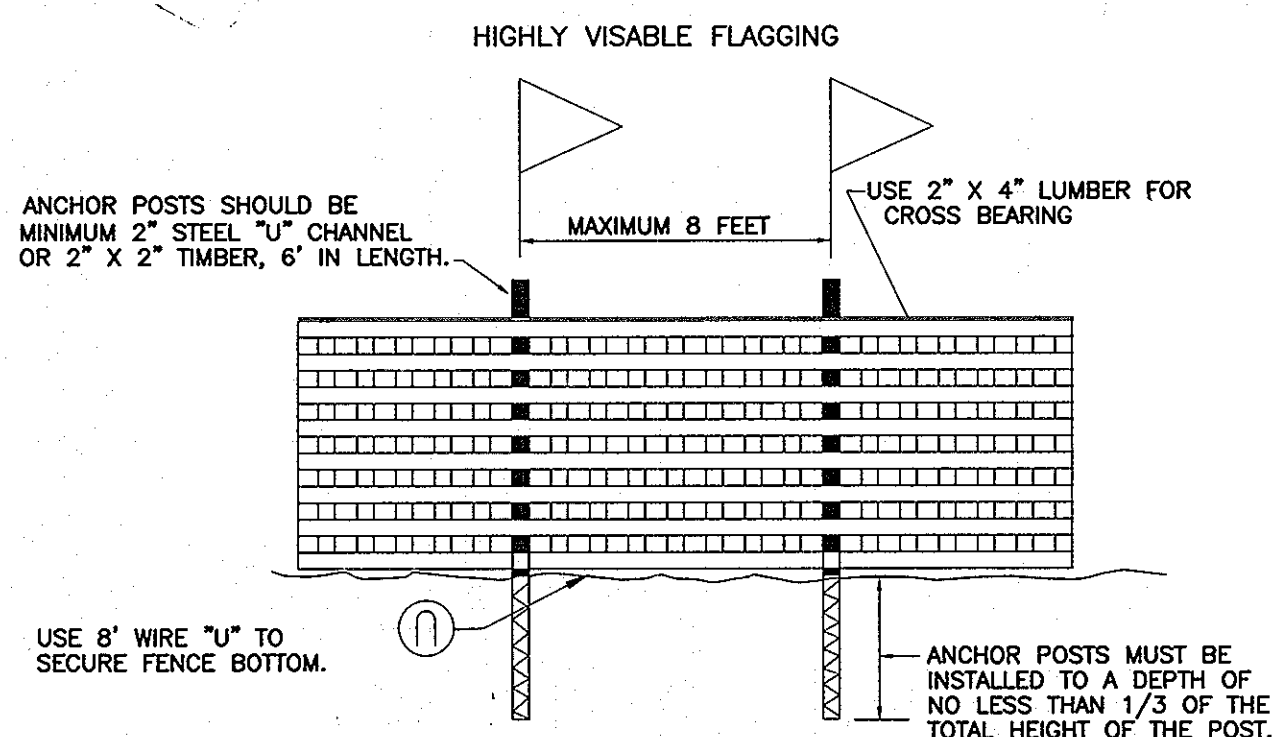
- BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.
- SIGNS TO BE PLACED APPROXIMATELY 100' FEET APART. CONDITIONS ON SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.
- ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.

FOREST CONSERVATION AREA SIGN

NTS

SOILS LEGEND		WOOD		SOIL	
SYMBOL	NAME / DESCRIPTION	K VALUE	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
GlB2	GLENELG LOAM, 3% TO 8% SLOPES, MODERATELY ERODED	.32	30	G	B
GlC3	GLENELG LOAM, 8% TO 15% SLOPES, SEVERELY ERODED	.32	30	G	B
MlB2	MANOR LOAM, 3% TO 8% SLOPES, MODERATELY ERODED	.37	43	F	B
MlC3	MANOR LOAM, 8% TO 15% SLOPES, SEVERELY ERODED	.37	43	F	B
MlD3	MANOR LOAM, 15% TO 25% SLOPES, SEVERELY ERODED	.37	44	F	B

HOWARD COUNTY SOILS MAP NO. 9



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.
- ROOT 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

APPROVED: DEPARTMENT OF PUBLIC WORKS

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

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chris ...
Chief, Division of Land Development Date 5/6/05
...
Chief, Development Engineering Division Date 5/3/05

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

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

DESIGN BY: LJT
DRAWN BY: RJ
CHECKED BY: RHV
DATE: 02-15-2005
SCALE: AS SHOWN
W.O. NO.: 04-54-00
10 SHEET OF 10