

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 22370, Expiration Date: 6-30-17

**OWNER/DEVELOPER**  
 MANGIONE ENTERPRISES OF TURF VALLEY, LP  
 1205 YORK ROAD, PENTHOUSE  
 LUTHERVILLE, MARYLAND 21083  
 410.825.8400

**ROAD PLAN AND PROFILE - VERDI COURT FAIRWAYS AT TURF VALLEY**  
 PHASE III LOTS 99 - 112, OPEN SPACE LOTS 113 - 115 & GOLF SPACE LOT 116  
 POD 'F' SECTION IV : RESIDENTIAL PHASE IV E  
 A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY, PHASE I, NON-BUILDABLE BULK PARCEL D  
 TAX MAP 17 GRID 13 PART OF PARCELS 8 AND 706  
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**Sill · Adcock & Associates · LLC**  
 Engineers · Surveyors · Planners  
 3300 North Ridge Road, Suite 160  
 Ellicott City, Maryland 21043  
 Phone: 443.325.7682 Fax: 443.325.7685  
 Email: info@silladcock.com

DESIGN BY: PS  
 DRAWN BY: JH  
 CHECKED BY: PS  
 SCALE: AS SHOWN  
 DATE: OCTOBER 29, 2010  
 PROJECT #: 06-025  
 SHEET #: 2 OF 10

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DATE: 11-17-10  
 CHIEF, BUREAU OF HIGHWAYS

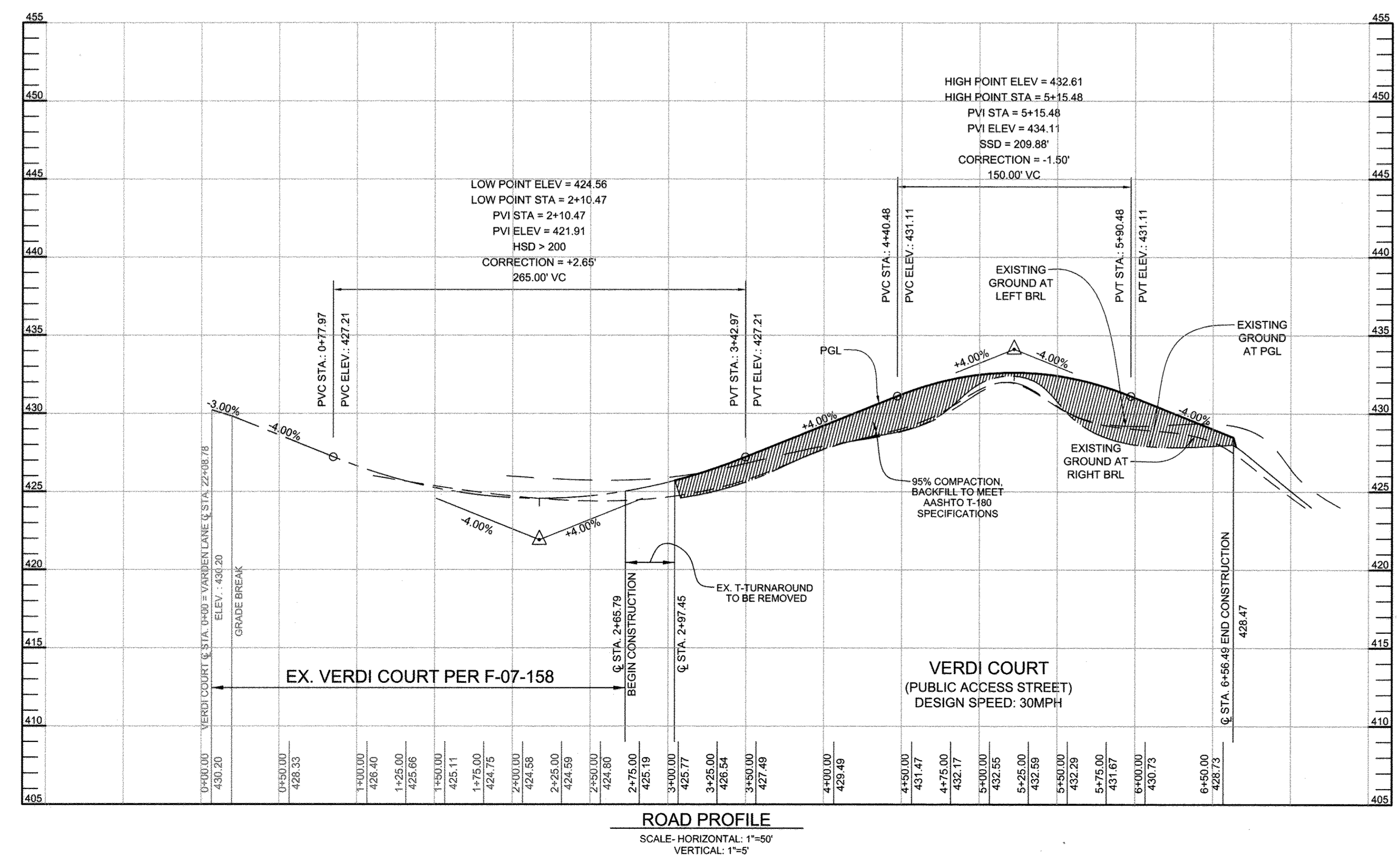
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 DATE: 11/19/10  
 CHIEF, DIVISION OF LAND DEVELOPMENT

DATE: 11/10/10  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

**PLAN VIEW**  
 SCALE: 1"=50'

7-14-10 REVISE STORM DRAIN STRUCTURE NUMBERS, DELETE 3' PUBLIC W/PS ESMT, REVISE LOT NUMBERS, REVISE TYP. SEC. DIMENSIONS

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 32022, EXPIRATION DATE: JUNE 20, 2011



**ROAD PROFILE**  
 SCALE: HORIZONTAL: 1"=50'  
 VERTICAL: 1"=5'

ROAD CLASSIFICATION					
ROAD NAME	CLASSIFICATION	PAVING TYPE	DESIGN SPEED	LIMITS OF CONSTRUCTION	R/W
VERDI COURT	ACCESS STREET	P-2	30	3+09.43 TO 6+56.49	50'

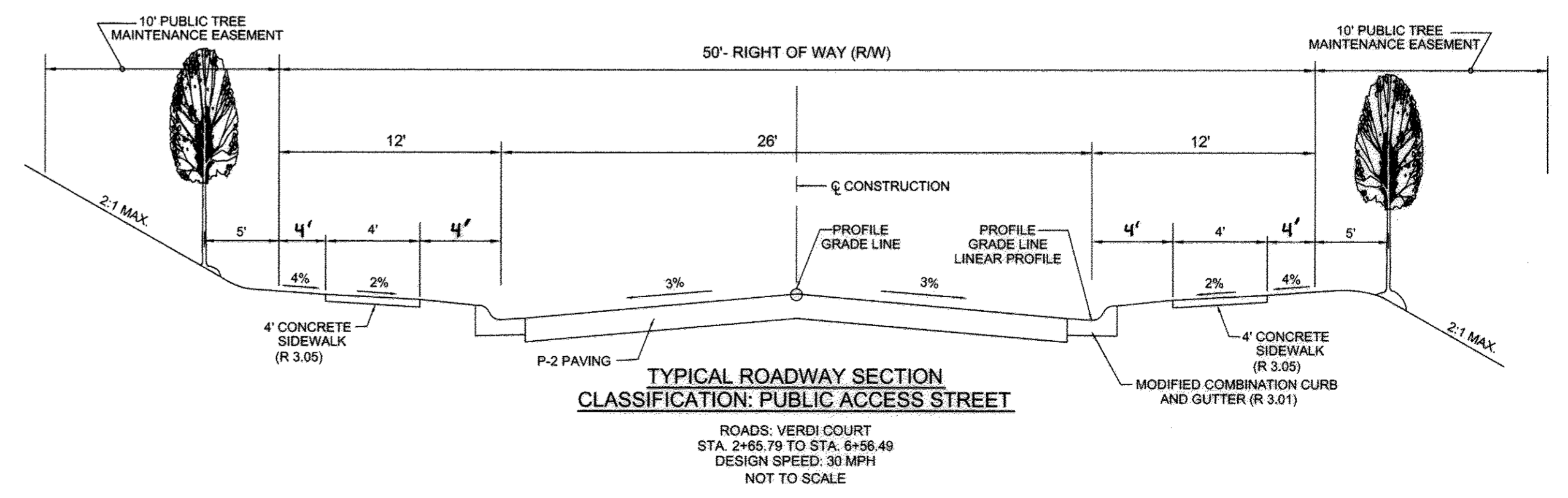
STREET LIGHT CHART				
FIXTURE TYPE	POLE TYPE	LOCATION	STREET	
100 watt HPS vapor Colonial post top mounted	14' black fiberglass	Sta. 3+62.15' left	VERDI COURT	
100 watt HPS vapor Colonial post top mounted	14' black fiberglass	Sta. 6+13.22' right	VERDI COURT	

Note: Light pole location given at center of base

CENTERLINE ROAD CURVE DATA				
CURVE	RADIUS	ARC LENGTH	DELTA	CHORD BEARING
C1	350.00	276.80'	45°18'47"	N82°12'02"E
				269.64'

PAVING SECTIONS						
SEC. NO.	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)	3 TO <S TO <7	3 TO <S TO <7	3 TO <S TO <7	3 TO <S TO <7
P-2	PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROADS: ACCESS PLACES, ACCESS STREET CUL-DE-SACS: RESIDENTIAL	HMA SUPERPAVE FINAL SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5
		HMA SUPERPAVE INTERMEDIATE SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL)	1.0	1.0	1.0	1.0
		HMA SUPERPAVE BASE 19.0 MM, PG 64-22, LEVEL 1 (ESAL)	2.0	2.0	2.0	2.0
		GRADED AGGREGATE BASE (GAB)	8.0	4.0	3.0	4.0

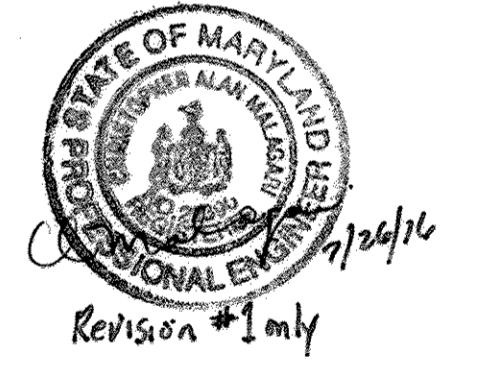
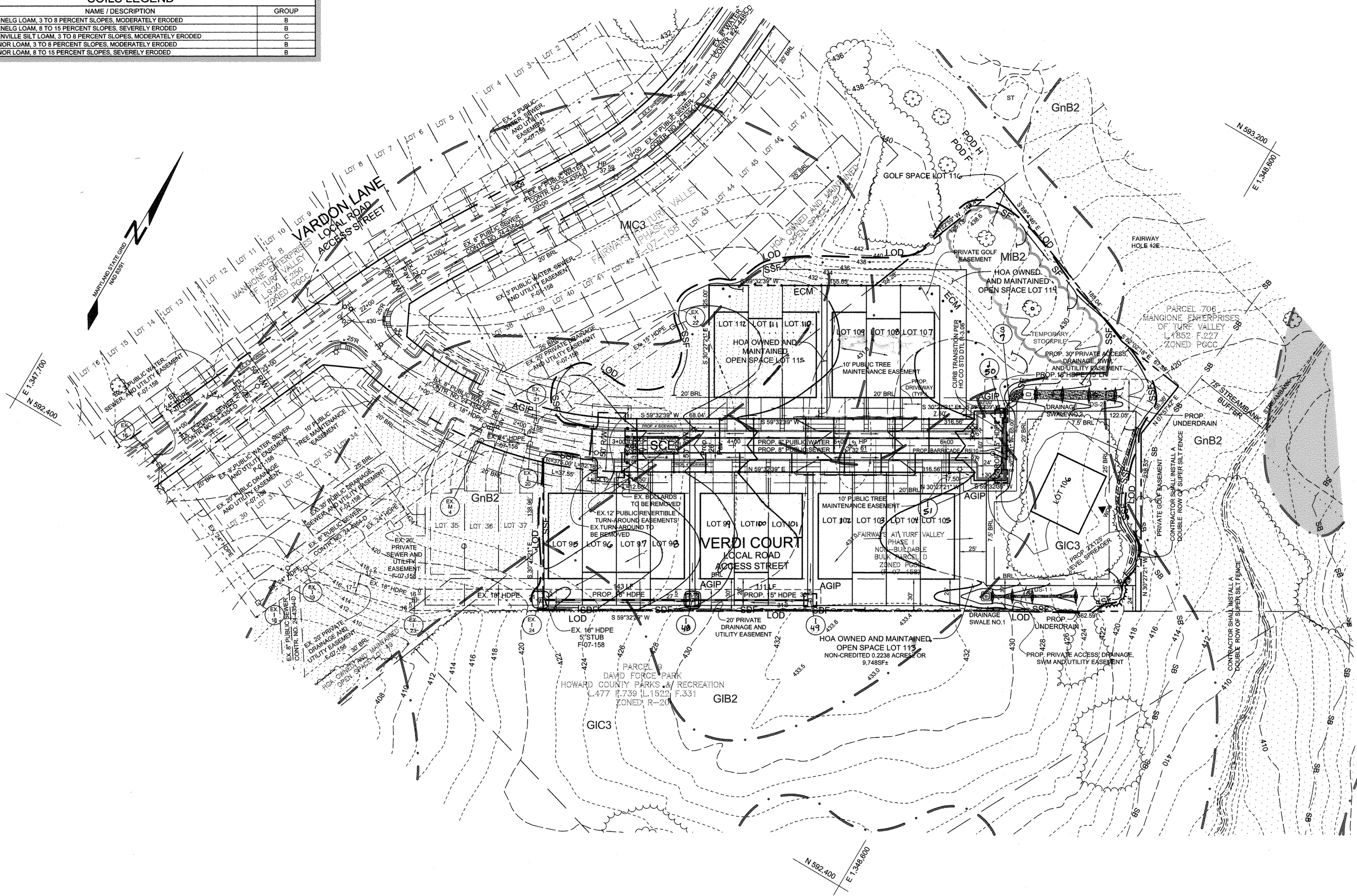
NOTES:  
 1. HEAVY TRUCKS ARE DEFINED AS THOSE WITH SIX (6) WHEELS OR MORE INCLUDING GARBAGE TRUCKS.  
 2. HMA SUPERPAVE LAYERS SHALL BE PLACED IN APPROPRIATE COMPACTED LIFT THICKNESS: 19.0 MM BASE (2.0" MIN TO 4.0" MAX), 12.5 MM SURFACE (1.5" MIN TO 3.0" MAX), AND 9.5 MM SURFACE (1.0" MIN TO 2.0" MAX).  
 3. GRADED AGGREGATE BASE (GAB) TO BE PLACED AND COMPACTED IN 8" MAX COMPACTED THICKNESS LAYERS.  
 4. THE INTERMEDIATE SURFACE COURSE LAYER MUST BE PLACED WITHIN 2 WEEKS OF PLACEMENT OF BASE COURSE, AND IS REQUIRED PRIOR TO SUBSTANTIAL COMPLETION INSPECTION AND BOND REDUCTION.  
 5. IN LIEU OF PLACING THE INTERMEDIATE SURFACE COURSE LAYER FOR COMMERCIAL, INDUSTRIAL ENTRANCE AREAS WITHIN THE COUNTY RIGHT-OF-WAY WHERE AUXILIARY LANES ARE NOT REQUIRED, THE THICKNESS OF THE INTERMEDIATE PAVEMENT LAYER CAN BE ADDED TO THE REQUIRED THICKNESS OF THE BASE ASPHALT LAYER.  
 6. THE CONSTRUCTION DRAWINGS SHALL SHOW THE PAVING SECTION, ROAD CLASSIFICATION AND CBR VALUE FOR EACH ROADWAY.



**TYPICAL ROADWAY SECTION**  
 CLASSIFICATION: PUBLIC ACCESS STREET  
 ROADS: VERDI COURT  
 STA. 2+65.79 TO STA. 6+56.49  
 DESIGN SPEED: 30 MPH  
 NOT TO SCALE

SYMBOL	NAME / DESCRIPTION	GROUP
GnB2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
GIC3	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
GnB2	GLENEVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
MB2	MANOR LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
MC3	MANOR LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B

LEGEND	
EXISTING CONTOUR	---
PROPOSED CONTOUR	---(382)---
EXISTING SPOT ELEVATION	+82.53
PROPOSED SPOT ELEVATION	+82.53
DIRECTION OF FLOW	→
EXISTING TREELINE	~
PROPOSED TREELINE	~
LIGHT POLES	☆ POST TOP
STABILIZED CONSTRUCTION ENTRANCE	■
SILT FENCE	— SF — SF —
SUPER SILT FENCE	— SSF — SSF —
SUPER DIVERSION FENCE	— SDF — SDF —
LIMIT OF DISTURBANCE	— LOD —
EROSION CONTROL MATTING	••••• ECM •••••
SOIL BOUNDARY	—•••••—
RIP-RAP INFLOW PROTECTION	■ RRP ■
AT GRADE INLET PROTECTION	□ AGIP □
B' SOIL GROUP	□
C' SOIL GROUP	▨
D' SOIL GROUP	■



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 License No. 22390, Expiration Date: 6-30-17

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 1205 YORK ROAD, PENTHOUSE  
 LUTHERVILLE, MARYLAND 21093  
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**GRADING, SEDIMENT AND EROSION CONTROL PLAN**  
**FAIRWAYS AT TURF VALLEY**  
 PHASE III LOTS 95-112, OPEN SPACE LOTS 113-115 & GOLF SPACE LOT 116  
 POD 'F' SECTION IV : RESIDENTIAL PHASE IV E  
 A SUBDIVISION OF P/O PARCELS 8 & 706 AND A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY, PHASE I, NON-BUILDABLE BULK PARCEL D  
 TAX MAP 16 GRID 12 & TAX MAP 17 GRID 9 PART OF PARCELS 8 & 706  
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

	<b>Sill · Adcock &amp; Associates · LLC</b> Engineers · Surveyors · Planners 3300 North Ridge Road, Suite 160 Ellicott City, Maryland 21043 Phone: 443.325.7682 Fax: 443.325.7685 Email: info@sasland.com	DESIGN BY: PS DRAWN BY: JH CHECKED BY: PS SCALE: 1" = 50' DATE: OCTOBER 29, 2010 PROJECT #: 06-025 SHEET #: 3 of 10
	PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 32255, EXPIRATION DATE: JUNE 30, 2011.	
	1 7-14-16 REVISE STORM DRAIN STRUCTURE NUMBERS, REVISE LOT NUMBERS (REMOVE LOT AREAS)	
	APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING [Signature] 11/10/10 DATE	
	APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS [Signature] 11-17-10 DATE	

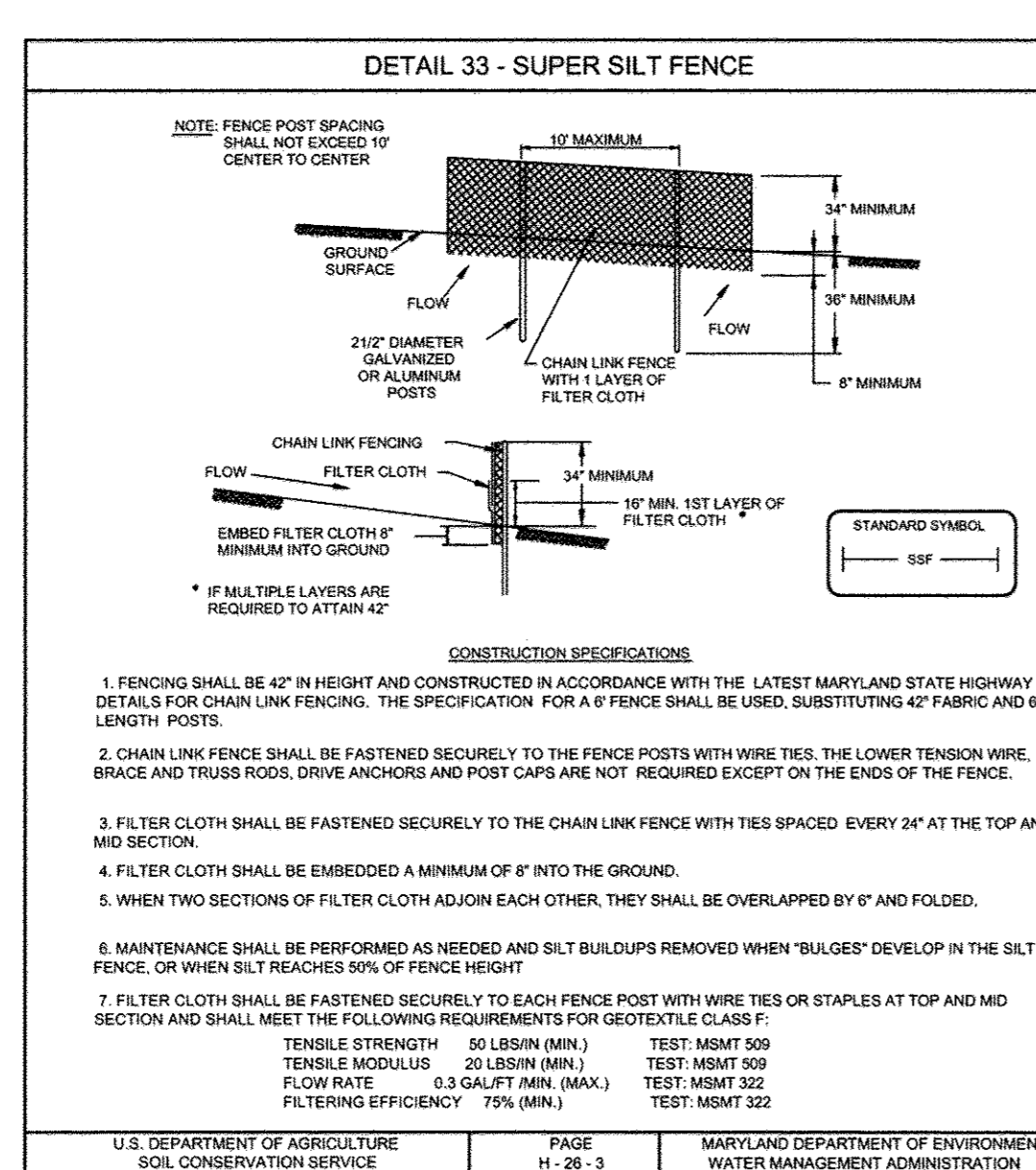
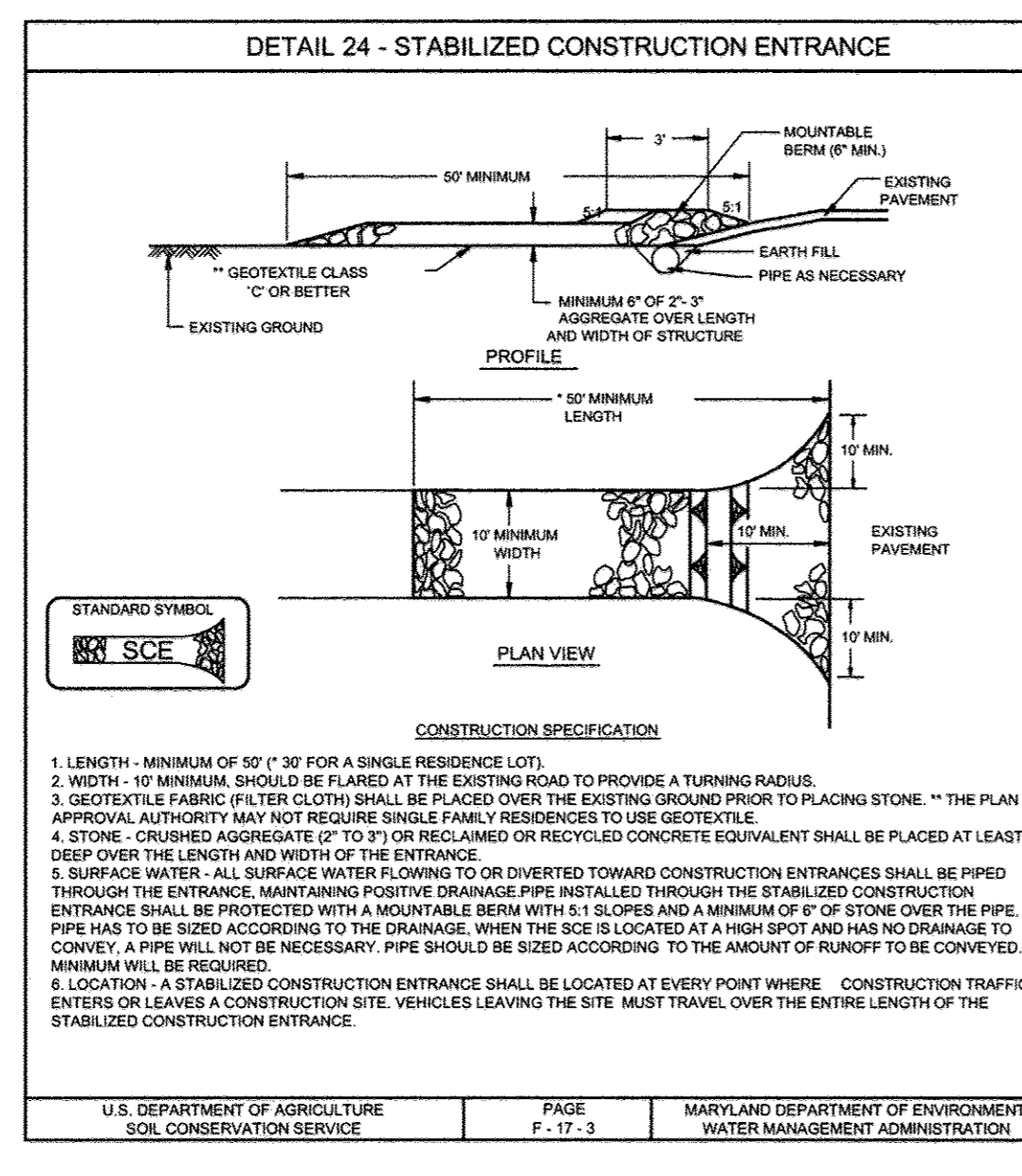
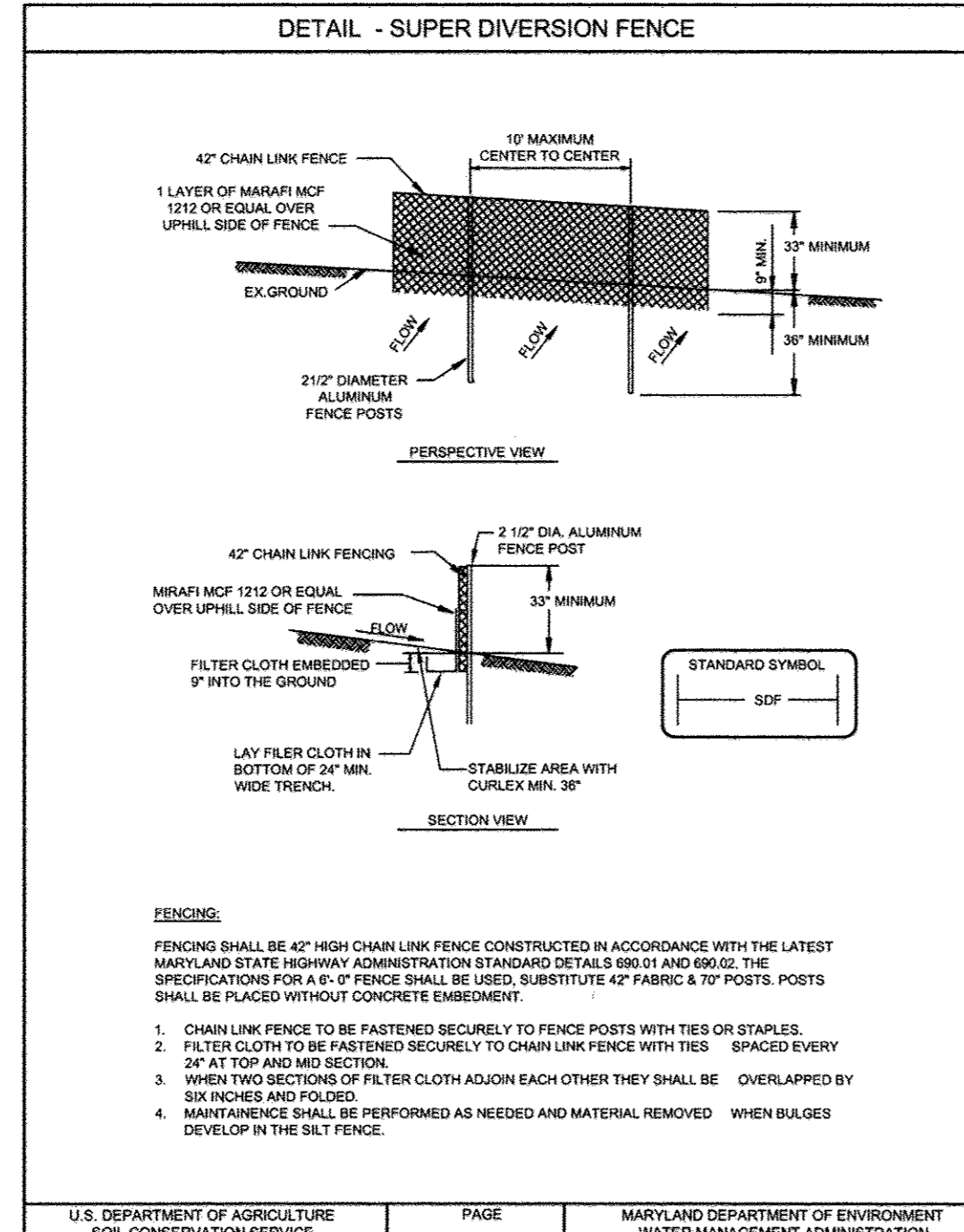
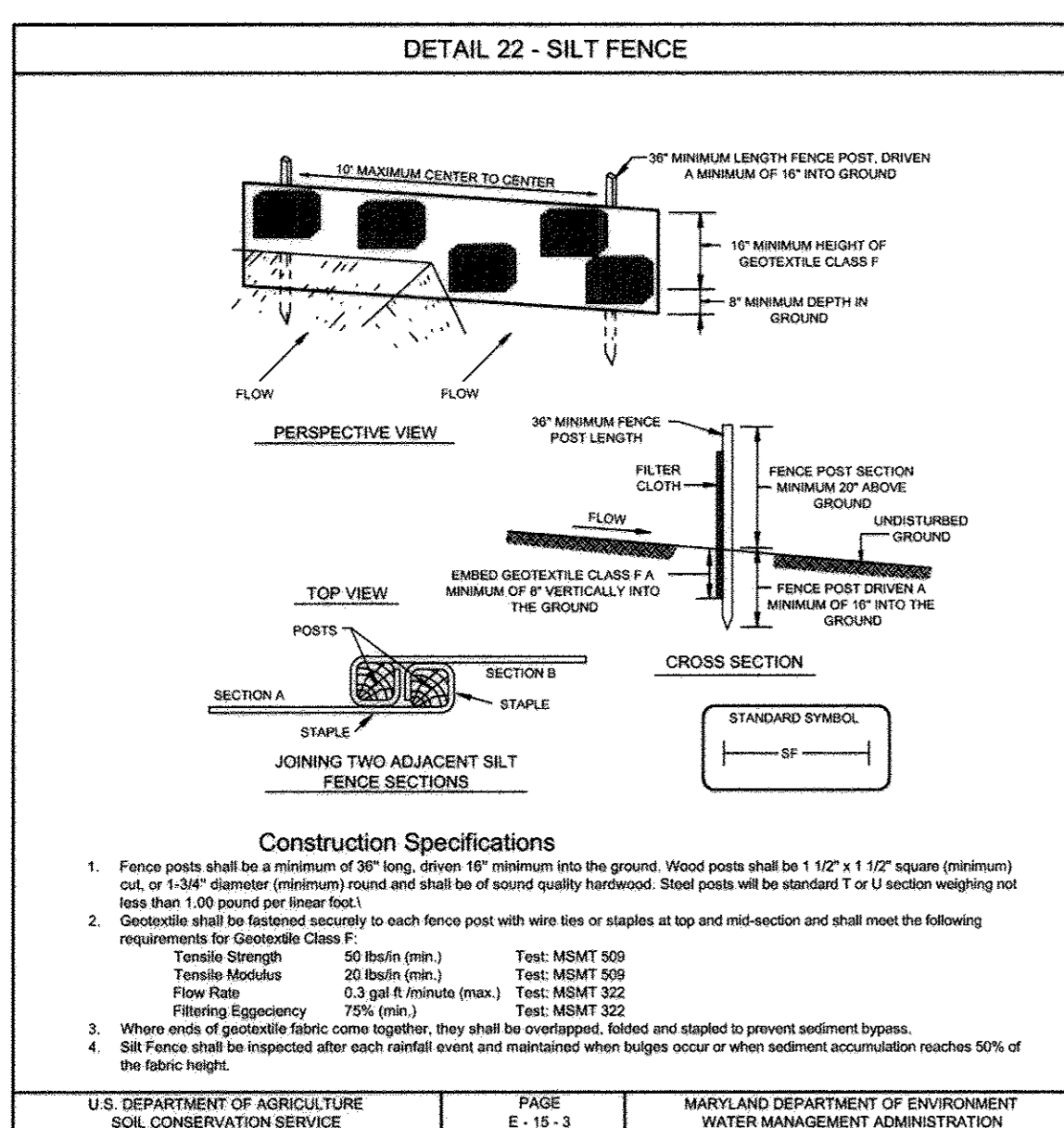
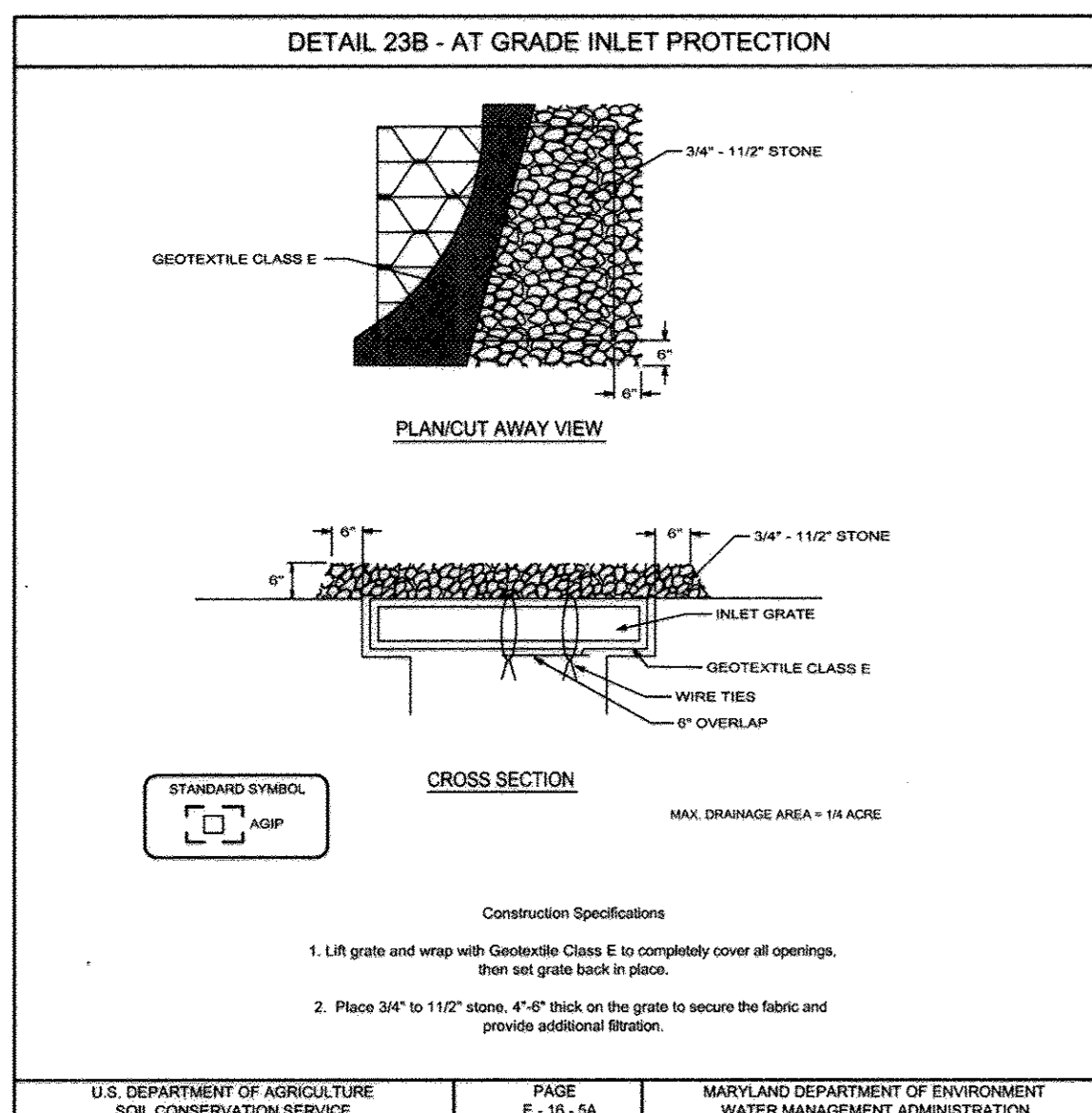
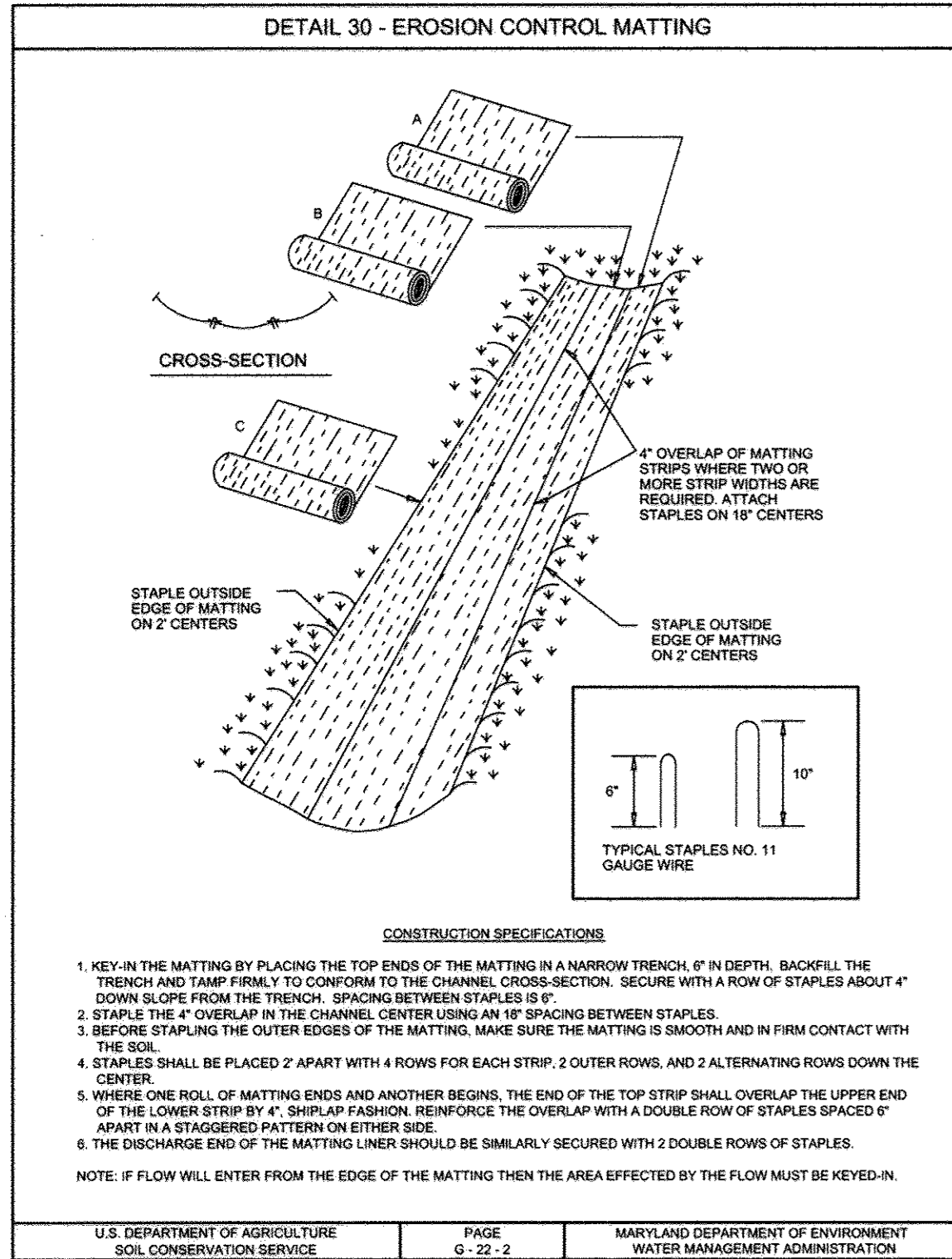
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 11/10/10 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 [Signature] 11-17-10 DATE  
 CHIEF, BUREAU OF HIGHWAYS

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS  
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
 [Signature] 11/2/10 DATE  
 HOWARD SCD

**ENGINEER'S CERTIFICATE**  
 "I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."  
 [Signature] DATE  
 SIGNATURE OF ENGINEER  
 PAUL M. SILL, PE, LEED AP

**DEVELOPER'S CERTIFICATE**  
 "I WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."  
 [Signature] 10/27/10 DATE  
 SIGNATURE OF DEVELOPER



## 21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOILS

**DEFINITION**  
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.

**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**  
I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:  
A. THE TEXTURE OF THE EXPOSED SUBSURFACE MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.  
B. 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.  
C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.  
D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

II. 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**  
I. 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 SHALL BE DETERMINED BY THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.

II. TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:  
1. 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.  
2. TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURES. SUBSOILS SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIAL LARGER THAN 1" AND 1/2" IN DIAMETER.  
3. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4"-8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SOODING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.  
4. TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION. THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDING PREPARATION.

## SEDIMENT CONTROL NOTES

1. 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 (410-313-1880).

2. ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: (A) 7 CALENDAR DAYS FOR ALL PERIMETER STABILIZATION; (B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

4. 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.

5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, FOR PERMANENT SEEDING, SOIL TEMPORARY SEEDING, AND MULCHING (SEC. G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.

6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

7. SITE ANALYSIS:

TOTAL AREA:	3.58 ACRES
AREA DISTURBED:	3.55 ACRES
AREA TO BE ROOFED OR PAVED:	1.59 ACRES
AREA TO BE VEGETATIVELY STABILIZED:	2.29 ACRES
TOTAL CUT:	1.082 CY
TOTAL FILL:	1.920 CY

OFFSITE WASTE/BORROW AREA LOCATION:

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

\* EARTHWORK QUANTITIES ARE SOLELY FOR THE PURPOSE OF CALCULATING FEES. CONTRACTOR TO VERIFY ALL QUANTITIES PRIOR TO THE START OF CONSTRUCTION.  
\*\* TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR WITH AN APPROVED AND ACTIVE GRADING PERMIT.

## SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.  
2. NOTIFY HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSE AND PERMITS AT (410) 313-1880 AT LEAST 24 HOURS BEFORE STARTING ANY WORK.  
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER DIVERSION FENCE, SUPER SILT FENCE AND INLET PROTECTION TO EXISTING INLETS 1-20, 1-21 AND 1-24. (1 WEEK)  
4. ROUGH GRADE SITE AND BEGIN ROAD CONSTRUCTION. (1 MONTH)  
5. CONSTRUCT STORM DRAINAGE SYSTEM, WATER AND SEWER. ADD INLET PROTECTION ON ALL STORM DRAIN INLETS AS CONSTRUCTED. INLETS 1-1 AND EX. 1-24 SHALL BE WRAPPED IN SUPER SILT FENCE (TWO MONTHS)  
6. FINE GRADE SITE AND COMPLETE ROAD CONSTRUCTION. (1 MONTH)  
7. STABILIZE ALL DISTURBED AREAS AND INSTALL DRAINAGE SWALES NO. 1 & 2 (TWO WEEKS)  
8. UPON STABILIZATION OF ALL DISTURBED AREAS AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL MEASURES AND STABILIZE ANY REMAINING DISTURBED AREA. (1 WEEK)

NOTE: FOLLOWING INITIAL SOIL DISTURBANCE OR ANY REDISTURBANCES, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:  
A. 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES AND ALL SLOPES GREATER THAN 3:1.  
B. 14 CALENDAR DAYS FOR ALL OTHER DISTURBED AREAS.  
DURING GRADING AND AFTER EACH RAINFALL, CONTRACTOR WILL INSPECT AND PROVIDE NECESSARY MAINTENANCE TO THE SEDIMENT CONTROL MEASURES ON THIS PLAN.

## 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:

1) PREFERRED - 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.
2) 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 THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (14 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 (0.05 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 SOIL 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 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

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

## TEMPORARY SEEDING NOTES

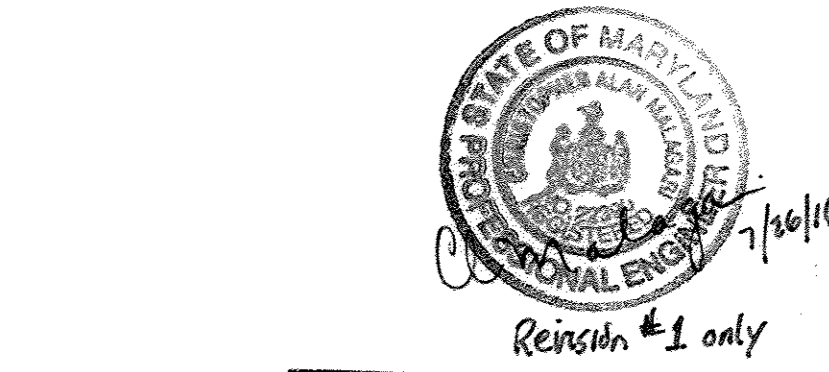
SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

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 1 THRU NOVEMBER 30, SEED WITH 12 BUSHES PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 31, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (0.07 LBS/1000 SQ.FT.). FOR THE PERIOD NOVEMBER 1 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOIL.

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 (8 GAL/1000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 08390 Expiration Date: 6-20-17

**OWNER/DEVELOPER**  
MANGIONE ENTERPRISES OF TURF VALLEY, LP  
1205 YORKE ROAD, PENTHOUSE  
LUTHERVILLE, MARYLAND 21093  
410.825.8400

**SEDIMENT AND EROSION CONTROL NOTES AND DETAILS**  
**FAIRWAYS AT TURF VALLEY**  
PHASE III LOTS 95-112, OPEN SPACE LOTS 113-115 & GOLF SPACE LOT 116  
POD 'F' SECTION IV - RESIDENTIAL PHASE IV E  
A SUBDIVISION OF P/O PARCELS 8 & 706 AND A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY, PHASE I, NON-BUILDABLE BULK PARCEL D  
TAX MAP 16 GRID 12 & TAX MAP 17 GRID 9  
2ND ELECTION DISTRICT

PART OF PARCELS 8 & 706  
HOWARD COUNTY, MARYLAND

**Sill, Adcock & Associates - LLC**  
Engineers - Surveyors - Planners  
3300 North Ridge Road, Suite 160  
Ellicott City, Maryland 21043  
Phone: 443.325.7682 Fax: 443.325.7685  
Email: info@silladcock.com

DESIGN BY: PS  
DRAWN BY: JH  
CHECKED BY: PS  
SCALE: AS SHOWN  
DATE: OCTOBER 29, 2010  
PROJECT #: 06-025  
SHEET #: 4 OF 10

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
Karl Schenck 4/16/10  
CHIEF, DIVISION OF LAND DEVELOPMENT  
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
Walter R. ... 11-17-10  
CHIEF, BUREAU OF HIGHWAYS

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS  
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

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

DATE: 4/16/10

**ENGINEERS CERTIFICATE**  
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

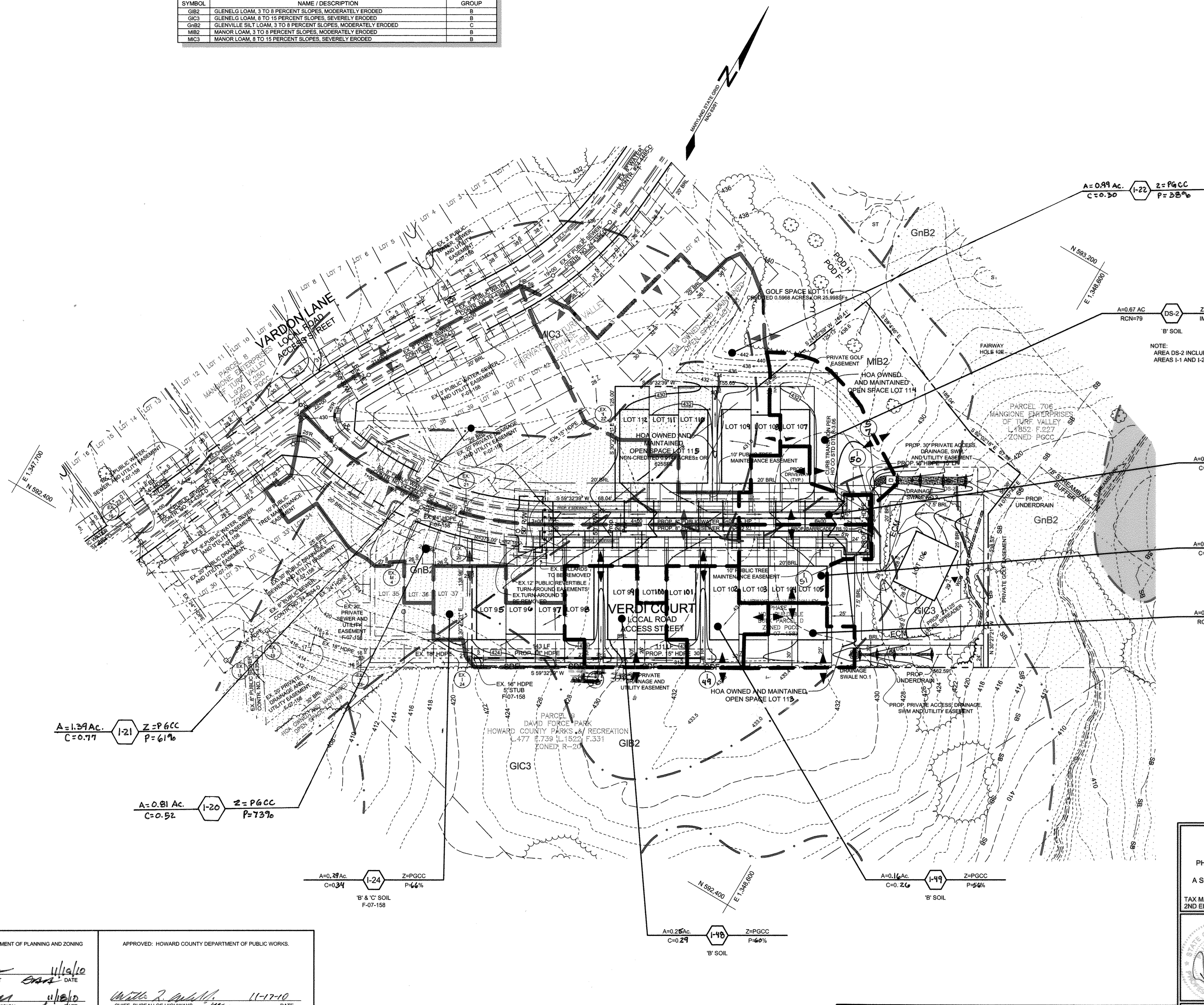
DATE: 10/27/10

**DEVELOPER'S CERTIFICATE**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 08325, EXPIRATION DATE: JUNE 20, 2011.

17-14-16 REVISE LOT NUMBERS IN TITLE BLOCK

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
GIB2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
GIC3	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
GIB2	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
MIB2	MANOR LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
MIC3	MANOR LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B

LEGEND	
EXISTING CONTOUR	
PROPOSED CONTOUR	
EXISTING SPOT ELEVATION	
PROPOSED SPOT ELEVATION	
DIRECTION OF FLOW	
EXISTING TREETLINE	
PROPOSED TREETLINE	
SOIL BOUNDARY	
EXISTING DRAINAGE DIVIDE (UNDER F-07-158)	
PROPOSED DRAINAGE DIVIDE	
'B' SOIL GROUP	
'C' SOIL GROUP	
'D' SOIL GROUP	



A=1.39 AC. Z=P6CC  
C=0.77 P=61%

A=0.81 AC. Z=P6CC  
C=0.52 P=73%

A=0.27 AC. Z=PGCC  
C=0.34 P=46%

A=0.25 AC. Z=PGCC  
C=0.29 P=60%

A=0.16 AC. Z=PGCC  
C=0.26 P=56%

A=0.99 AC. Z=PGCC  
C=0.30 P=38%

A=0.67 AC. Z=PGCC  
RCN=79 IMP=48%

A=0.18 AC. Z=PGCC  
C=0.59 P=81%

A=0.23 AC. Z=PGCC  
C=0.52 P=78%

A=0.16 AC. Z=PGCC  
RCN=80 IMP=51%



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 22390 Expiration Date: 6-30-17

**OWNER/DEVELOPER**

MANGIONE ENTERPRISES OF TURF VALLEY, LP  
1205 YORK ROAD, PENTHOUSE  
LUTHERVILLE, MARYLAND 21093  
410.825.8400

**STORM DRAIN DRAINAGE AREA MAP  
FAIRWAYS AT TURF VALLEY**

PHASE III LOTS 95 - 112, OPEN SPACE LOTS 113 - 115 & GOLF SPACE LOT 116  
POD 'F' SECTION IV : RESIDENTIAL PHASE IV E  
A SUBDIVISION OF P/O PARCELS 8 & 706 AND A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY, PHASE I, NON-BUILDABLE BULK PARCEL D  
TAX MAP 16 GRID 12 & TAX MAP 17 GRID 9 PART OF PARCELS 8 & 706  
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**Sill · Adcock & Associates · LLC**  
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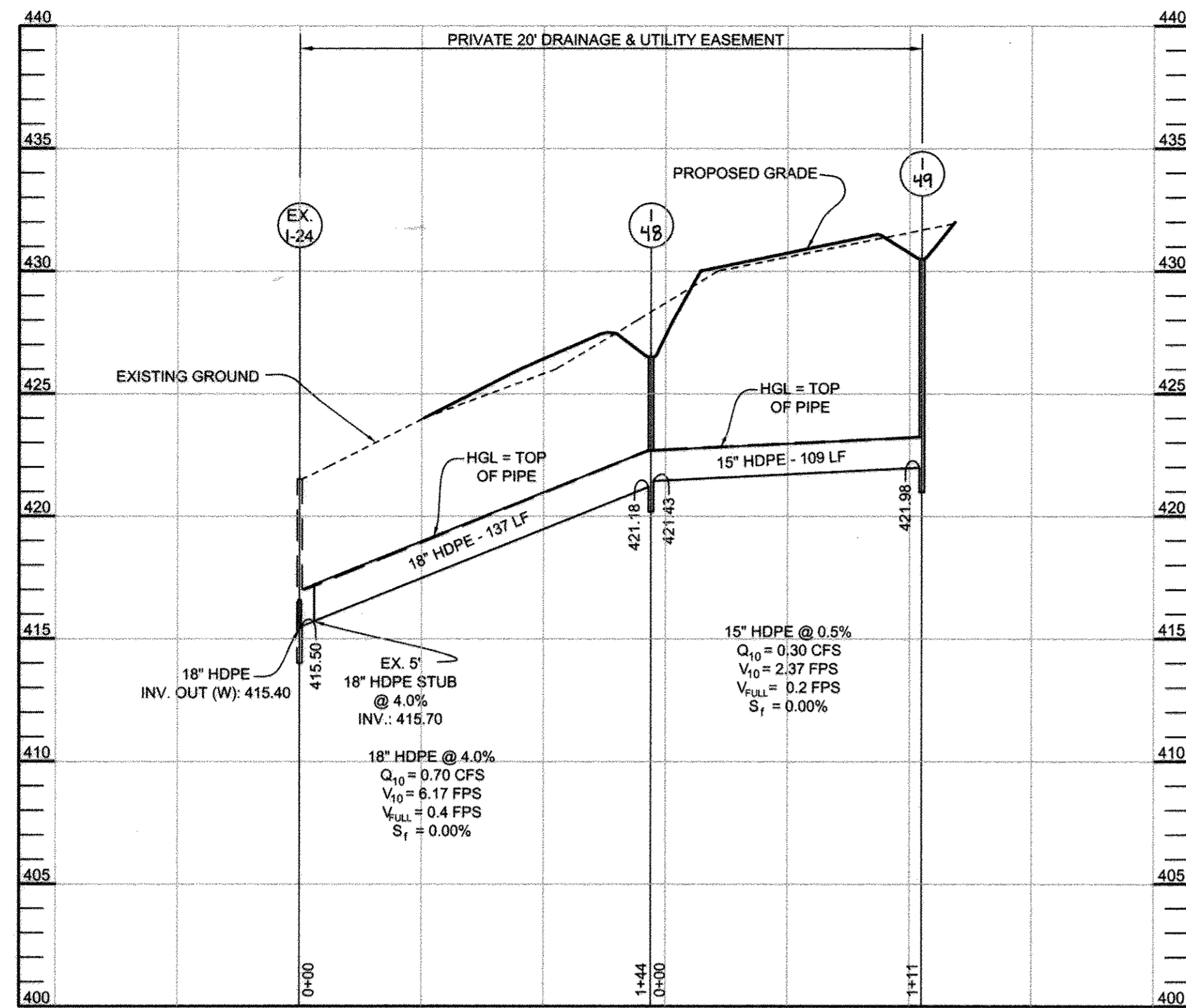
DESIGN BY: PS  
DRAWN BY: JH  
CHECKED BY: PS  
SCALE: 1" = 50'  
DATE: OCTOBER 28, 2010  
PROJECT #: 06-025  
SHEET #: 5 OF 10

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
[Signature] 11/16/10  
CHIEF, DIVISION OF LAND DEVELOPMENT

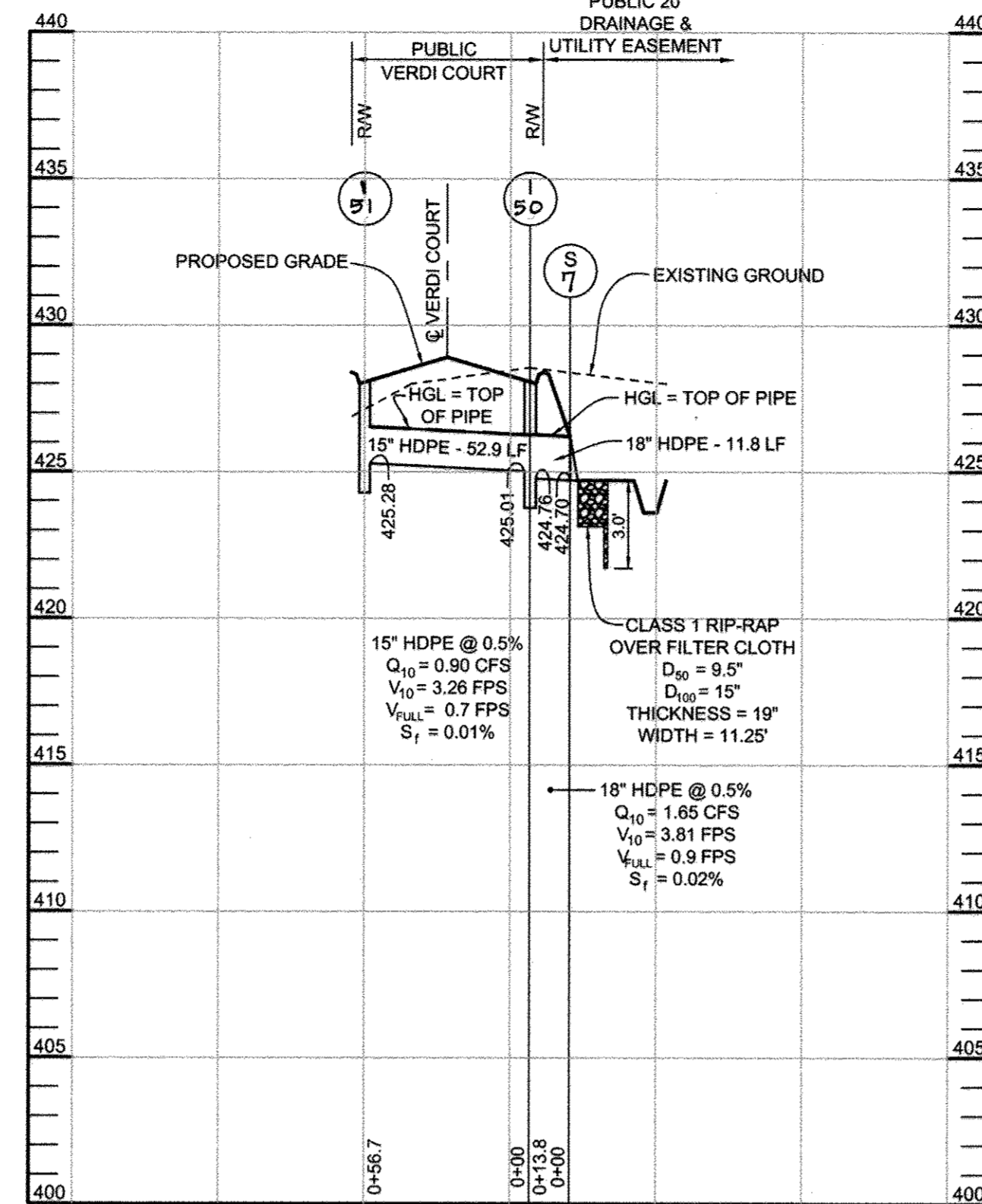
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
[Signature] 11-17-10  
CHIEF, BUREAU OF HIGHWAYS

1 7-14-16 REVISE DATA TO MATCH F-07-158, REVISE LOT NUMBERS, DELETE AREA NUMBERS

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 20, 2011



**STORM DRAIN PROFILE - EX I-24 TO I-49**  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'



**STORM DRAIN PROFILE - I-51 TO S-7**  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'

PIPE SCHEDULE		
SIZE	TYPE	LENGTH
15" PUBLIC	HDPE	57 LF
15" PRIVATE	HDPE	111 LF
18" PRIVATE	HDPE	14 LF
18" PRIVATE	HDPE	139 LF
4" PRIVATE	SOLID PVC	67 LF
4" PRIVATE	PERFORATED PVC	156 LF

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED OPEN CHANNEL SYSTEMS (O-1 AND O-2)**

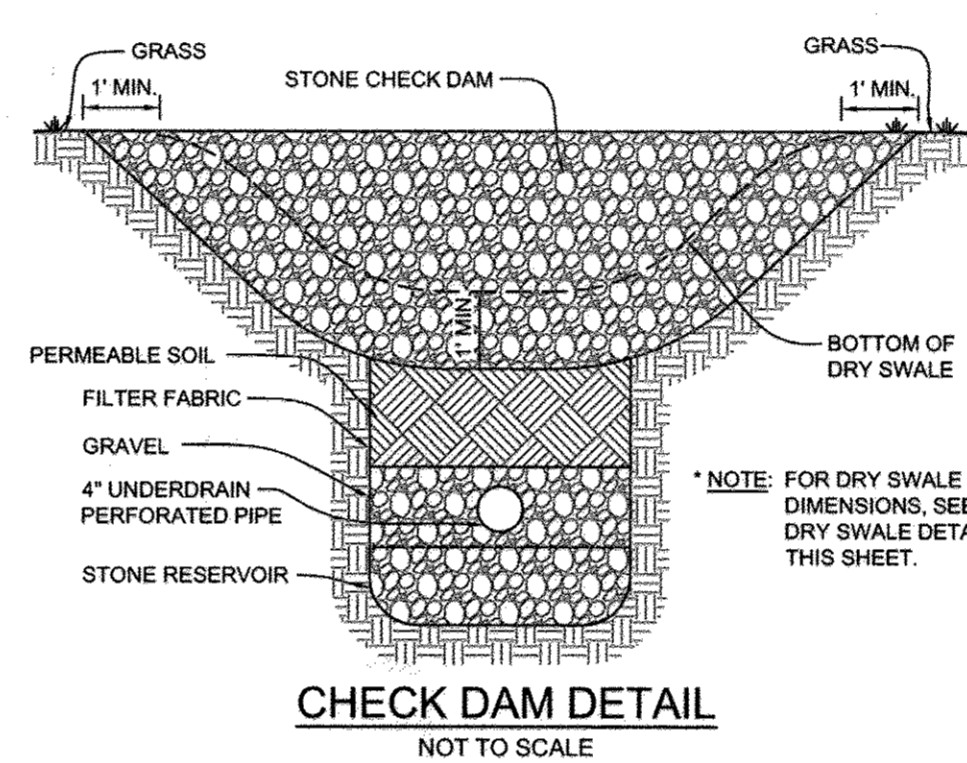
1. THE OPEN CHANNEL SYSTEM SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
2. THE OPEN CHANNEL SHALL BE MOVED A MINIMUM OF ONCE A YEAR OR AS NEEDED DURING THE GROWING SEASON TO MAINTAIN A MAXIMUM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

STRUCTURE SCHEDULE						
NO.	TYPE & OWNERSHIP	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS
I-48	YARD INLET PRIVATE	N 592,560.73 E 1,348,345.16	426.50	421.43	421.18	D-4.14
I-49	YARD INLET PRIVATE	N 592,616.99 E 1,348,440.84	430.50	---	421.98	D-4.14
I-50	TYPE 'S' COMBINATION INLET PUBLIC	VERDI COURT - C STA. 6+54.42 - 28.5' LT	428.57	425.01	424.76	D-4.32
I-51	TYPE 'S' INLET PUBLIC	VERDI COURT - C STA. 6+52.20 - 28.2' RT	428.06	---	425.28	D-4.22
S-7	18" HDPE END SECTION PUBLIC	N 592,871.71 E 1,348,508.21	---	---	424.70	SEE DETAIL

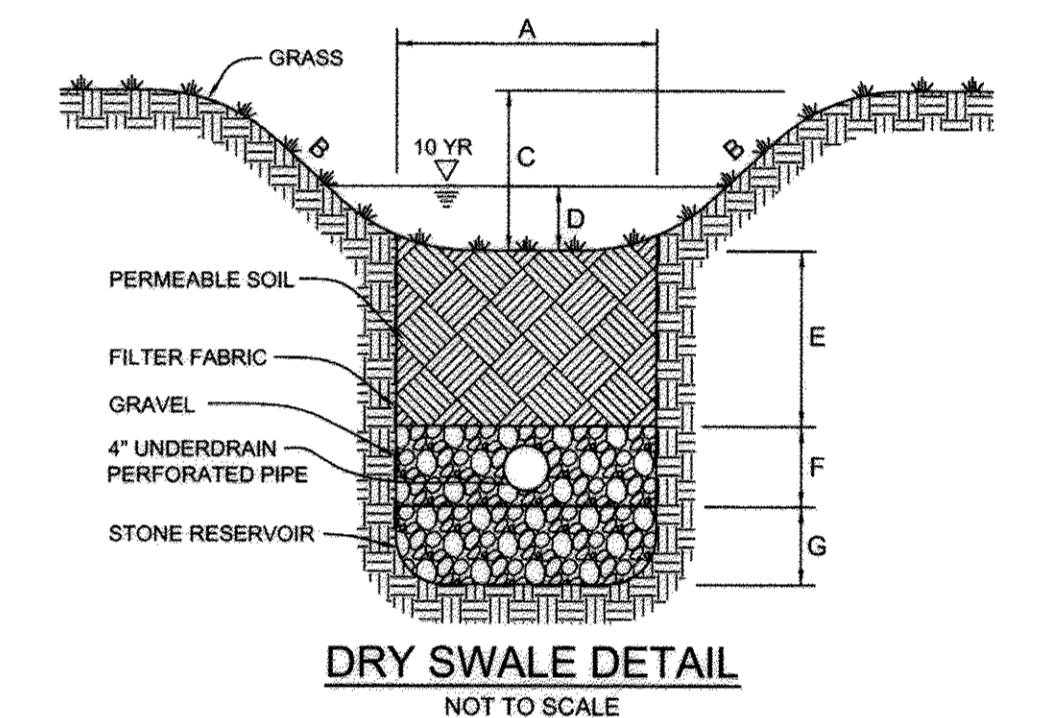
- NOTES:
1. TOP ELEVATIONS FOR TYPE SINGLE 'S' INLETS IN PAVEMENT ALONG FLOW LINE OF CURB ARE TO THE CENTER TOP OF GRADE.
  2. TOP ELEVATIONS FOR TYPE 'S' COMBINATION INLETS ARE AT MIDDLE OF INLET AT FACE OF CURB ON TOP OF CURB.
  3. TOP ELEVATIONS FOR YARD INLETS ARE TO THE CENTER OF INLET.
  4. TOP SLOPE OF STRUCTURES TO CONFORM TO SLOPE OF PAVING.
  5. FOR TYPE 'S' COMBINATION INLET WITHIN THE TRAFFIC LANES, USE A BICYCLE-SAFE GRATE PER HOWARD COUNTY STANDARD DETAIL D-4-96 (WR INLET FRAME, GRATE & SUPPORT)
  6. INVERT AT END OF PIPE.

MATERIALS SPECIFICATION FOR DRY SWALES			
MATERIAL	SPECIFICATION	SIZE	NOTES
DRY SWALE SOIL	SAND 35% - 60% SILT 0% - 25% GROUND COMPOST 40%-50%	N/A	SOIL WITH A HIGHER PERCENT ORGANIC CONTENT IS PREFERRED.
CHECK DAMS (STONE)	AASHTO M-43	0.375" TO 0.75"	
UNDERDRAIN GRAVEL	AASHTO M-43	0.375" TO 0.75"	
UNDERDRAIN PIPING	F 756, TYPE PS 28 OR AASHTO M-278	4" TO 6" RIGID SCHEDULE 40 PVC OR SDR35	3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES. SEE PROFILES FOR DEPTHS OF GRAVEL OVER AND UNDER PIPING
GEOTEXTILE	CLASS "SE" - APPARENT OPENING SIZE (ASTM-D-4751), GRASS TENSILE STRENGTH (ASTM-D-4832), PUNCTURE RESISTANCE (ASTM-D-4833)	N/A	FOR USE AS NECESSARY BENEATH UNDERDRAINS ONLY

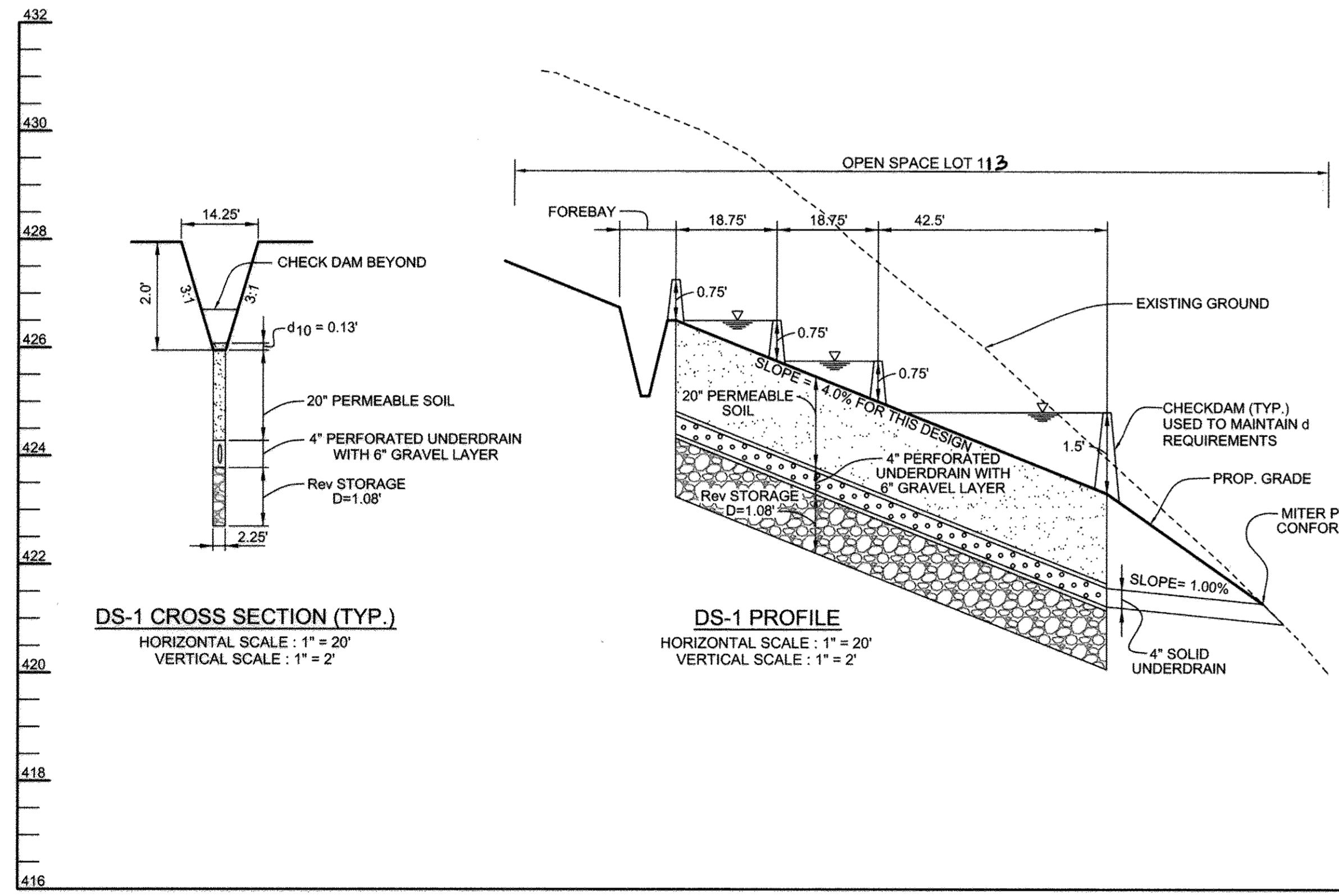
DRY SWALE CHART							
SWALE NO.	A	B	C	D	E	F	PHASE UTILIZED
1	2.25'	3:1	2.00'	0.13'	2.5'	0.5'	1.08' III
2	8.0'	3:1	2.00'	1.69'	2.5'	0.5'	1.25' III



**CHECK DAM DETAIL**  
NOT TO SCALE

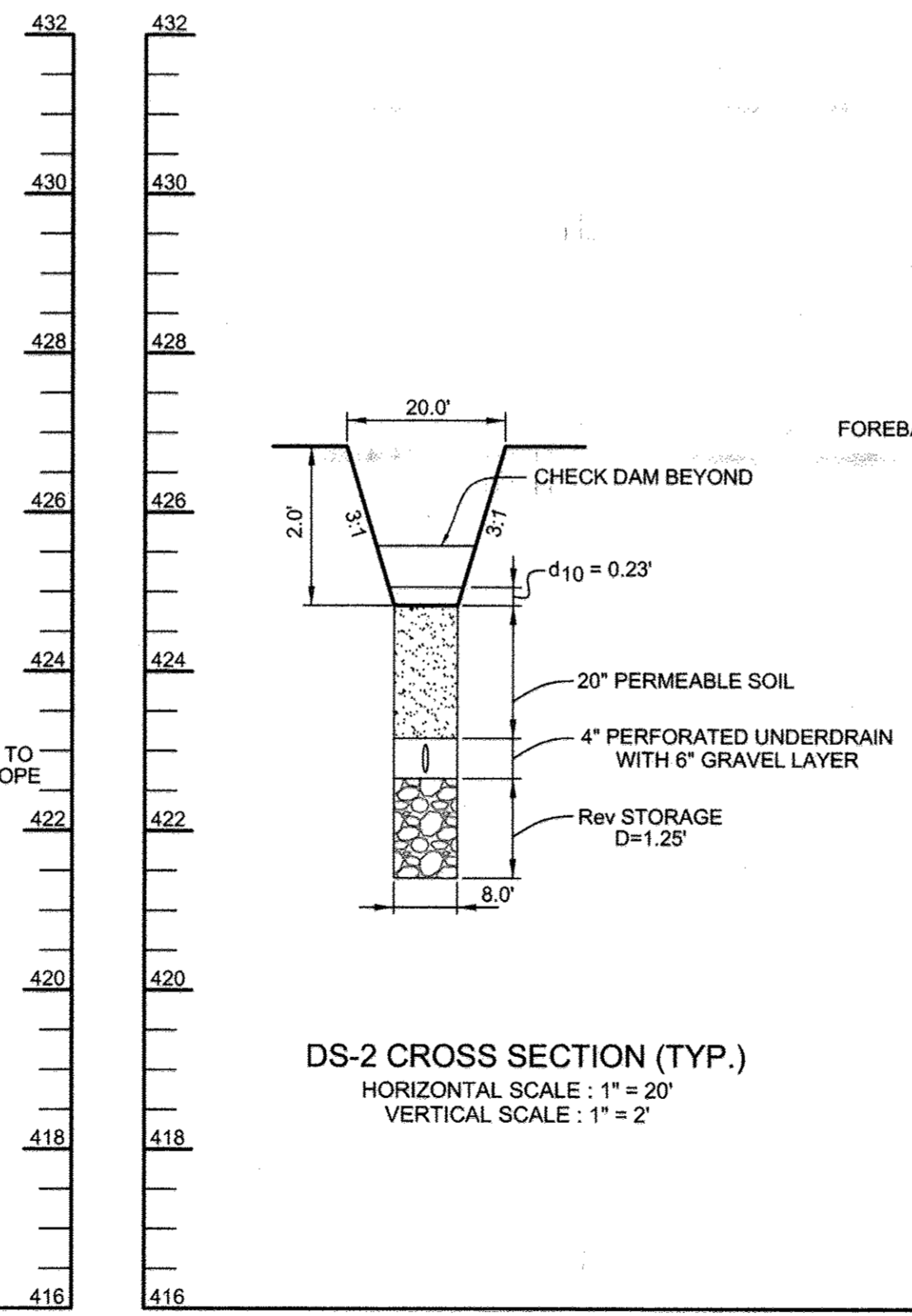


**DRY SWALE DETAIL**  
NOT TO SCALE

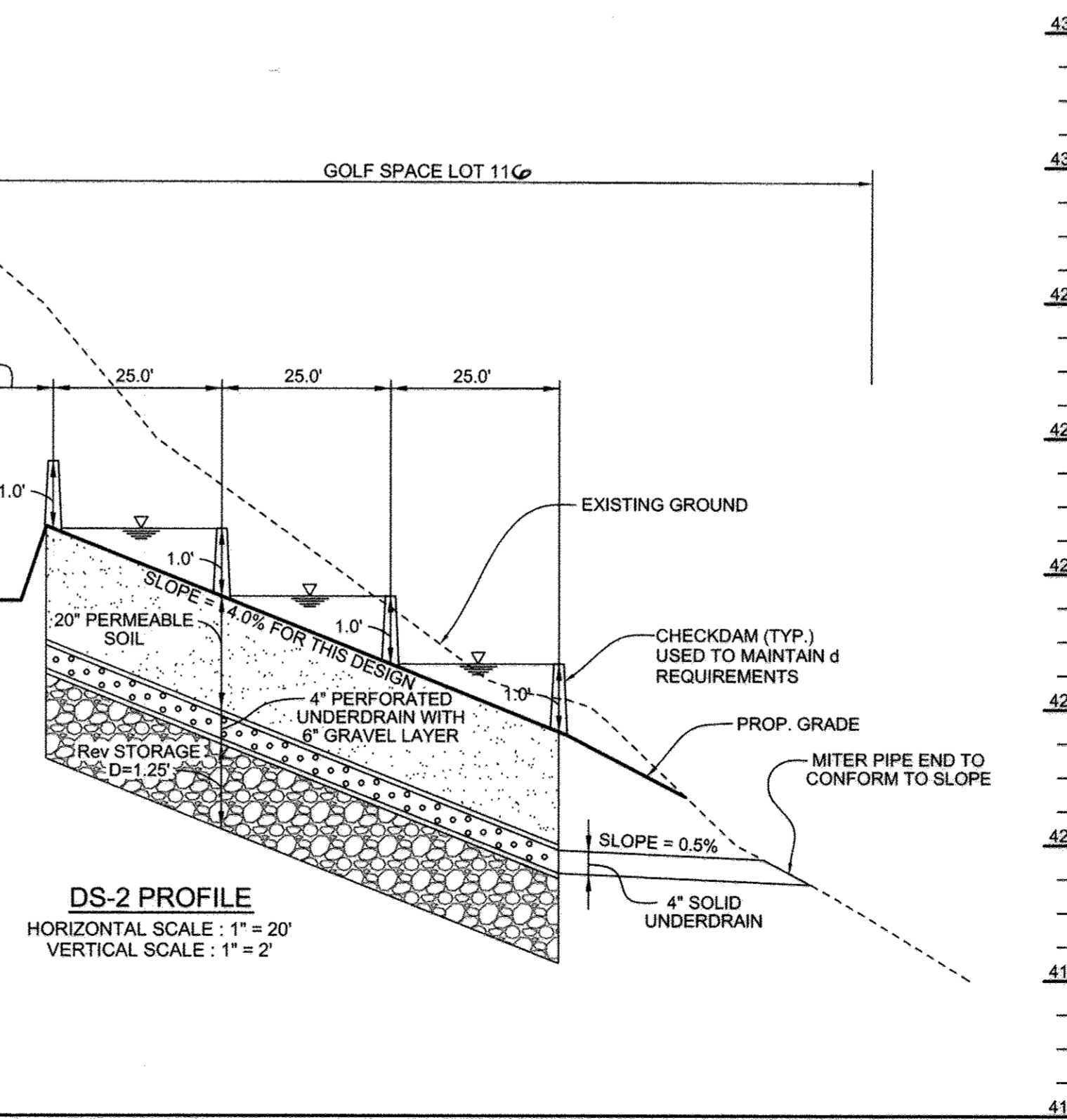


**DS-1 CROSS SECTION (TYP.)**  
HORIZONTAL SCALE: 1" = 20'  
VERTICAL SCALE: 1" = 2'

**DS-1 PROFILE**  
HORIZONTAL SCALE: 1" = 20'  
VERTICAL SCALE: 1" = 2'



**DS-2 CROSS SECTION (TYP.)**  
HORIZONTAL SCALE: 1" = 20'  
VERTICAL SCALE: 1" = 2'



**DS-2 PROFILE**  
HORIZONTAL SCALE: 1" = 20'  
VERTICAL SCALE: 1" = 2'

Diameter in (mm)	PIPE DIAMETER, in (mm)					
	12 (300)	15 (375)	18 (450)	24 (600)	30 (750)	36 (900)
A	6.5 (165)	6.5 (165)	7.5 (191)	7.5 (191)	7.5 (191)	7.5 (191)
B (max)	10.0 (254)	10.0 (254)	15.0 (381)	18.0 (457)	22.0 (559)	25.0 (635)
H	6.5 (165)	6.5 (165)	6.5 (165)	6.5 (165)	6.5 (165)	6.5 (165)
in (mm)	25.0 (635)	25.0 (635)	32.0 (813)	32.0 (813)	38.0 (965)	38.0 (965)
W	29.0 (737)	29.0 (737)	35.0 (886)	45.0 (1143)	63.0 (1600)	63.0 (1600)

**OWNER/DEVELOPER**  
MANGIONE ENTERPRISES OF TURF VALLEY, LP  
1205 YORK ROAD, PENTHOUSE  
LUTHERVILLE, MARYLAND 21093  
410.825.8400

**STORM DRAIN PROFILES, DETAILS AND CHARTS FAIRWAYS AT TURF VALLEY**  
PHASE III LOTS 95-112, OPEN SPACE LOTS 113-115 & GOLF SPACE LOT 11C  
POD "F" SECTION IV: RESIDENTIAL PHASE IV E  
A SUBDIVISION OF P/O PARCELS 8 & 706 AND A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY, PHASE I, NON-BUILDABLE BULK PARCEL D  
TAX MAP 16 GRID 12 & TAX MAP 17 GRID 9 PART OF PARCELS 8 & 706  
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Kurt Scherlock* 11/19/10  
CHIEF, DIVISION OF LAND DEVELOPMENT  
*Sharon Sandells* 11/19/10  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*William R. Smith* 11-17-10  
CHIEF, BUREAU OF HIGHWAYS

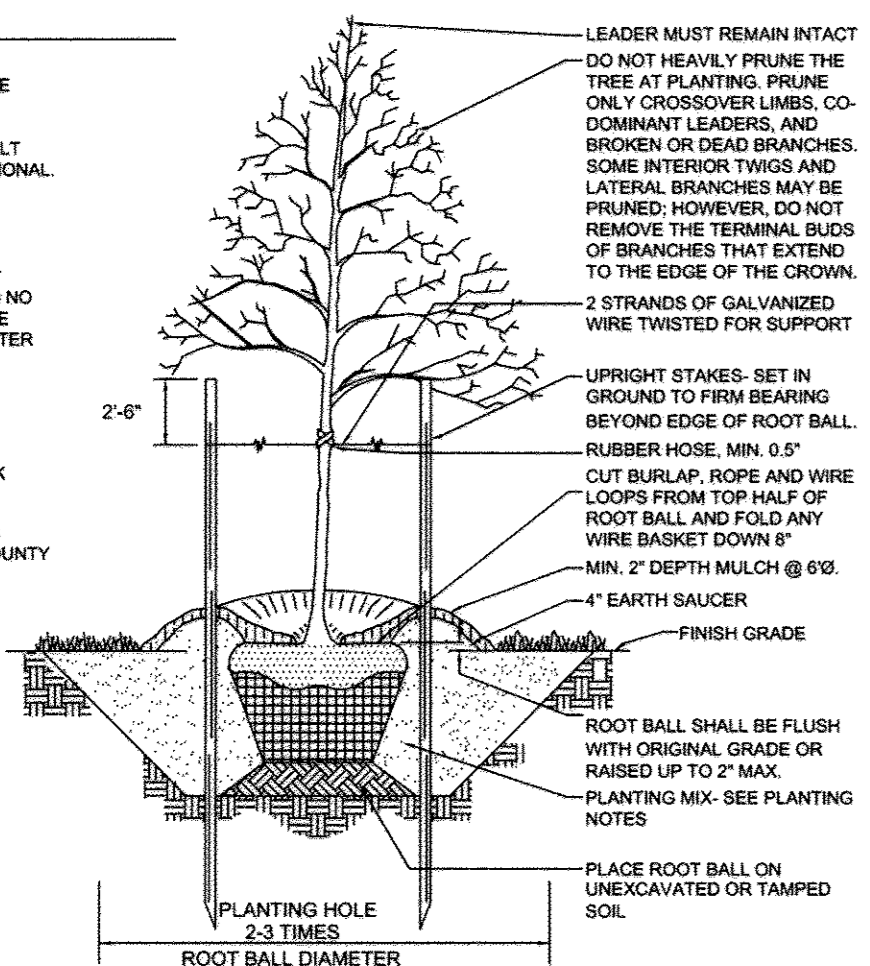
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 22390 Expiration Date: 6-30-17  
*Reinsin #1 only*

1 7-14-16 REVISE LOT NUMBERS & STORM DRAIN STRUCTURE NUMBERS

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 30, 2011

**NOTES**

- CONSULT INTERNATIONAL SOCIETY OF ARBORICULTURE GUIDELINES FOR FURTHER DETAILS OF PLANTING SPECIFICATIONS, OR CONSULT WITH A QUALIFIED PROFESSIONAL.
- EACH TREE SHALL BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL.
- STAKES SHALL BE REMOVED NO LATER THAN THE END OF THE FIRST GROWING SEASON AFTER PLANTING.
- PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
- KEEP MULCH 1" FROM TRUNK.
- SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
- TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWAGE EASEMENT.



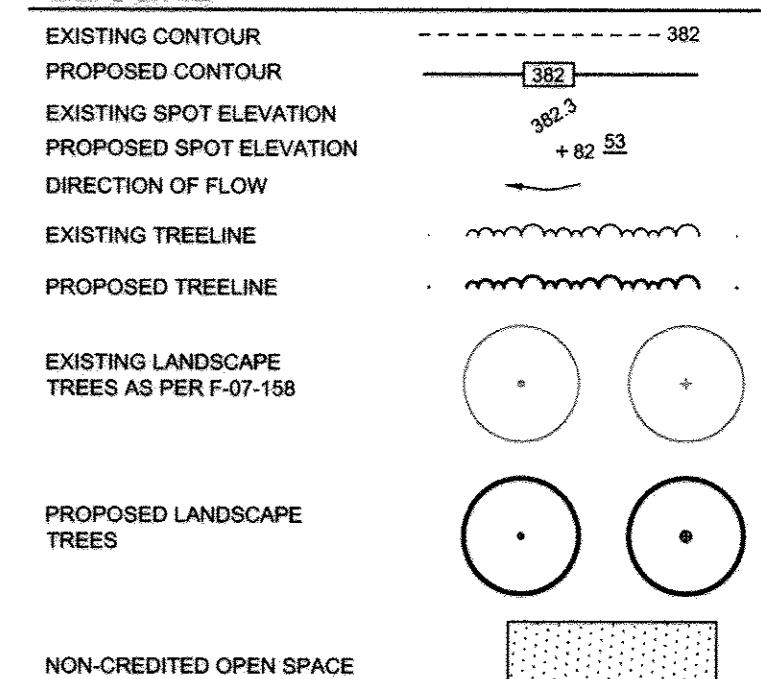
**TYPICAL TREE PLANTING AND STAKING**  
DECIDUOUS TREES UP TO 2-1/2" CALIPER NOT TO SCALE

LANDSCAPE SCHEDULE				
KEY	QUANTITY	BOTANICAL NAME	SIZE	NOTE
(Symbol)	18	ACER RUBRUM (STREET TREES) OCTOBER GLORY RED MAPLE	2 1/2"-3" CAL.	B & B

STREET TREE SCHEDULE			
STREET NAME	LF REQUIRED	TREES REQUIRED	TREES PROVIDED
VERDI COURT	694	18	18

SCHEDULE A PERIMETER LANDSCAPE EDGE			
CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES	
PERIMETER/FRONTAGE DESIGNATION	N/A	1	-
LANDSCAPE TYPE	-	A	-
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	-	563	-
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	-	NO	-
REMAINING PERIMETER LENGTH	-	563	-
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET)	-	NO	-
REMAINING PERIMETER LENGTH	-	-	-
NUMBER OF PLANTS REQUIRED	-	1,809	-
SHADE TREES	-	-	-
EVERGREEN TREES	-	-	-
SHRUBS	-	-	-
NUMBER OF PLANTS PROVIDED	-	9	-
SHADE TREES	-	-	-
EVERGREEN TREES	-	-	-
OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	-	-	-

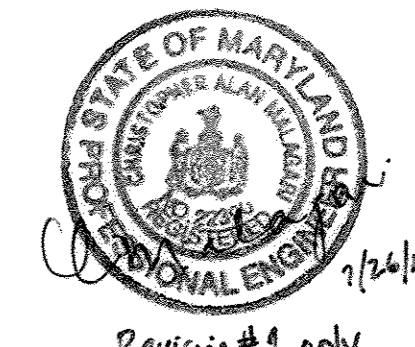
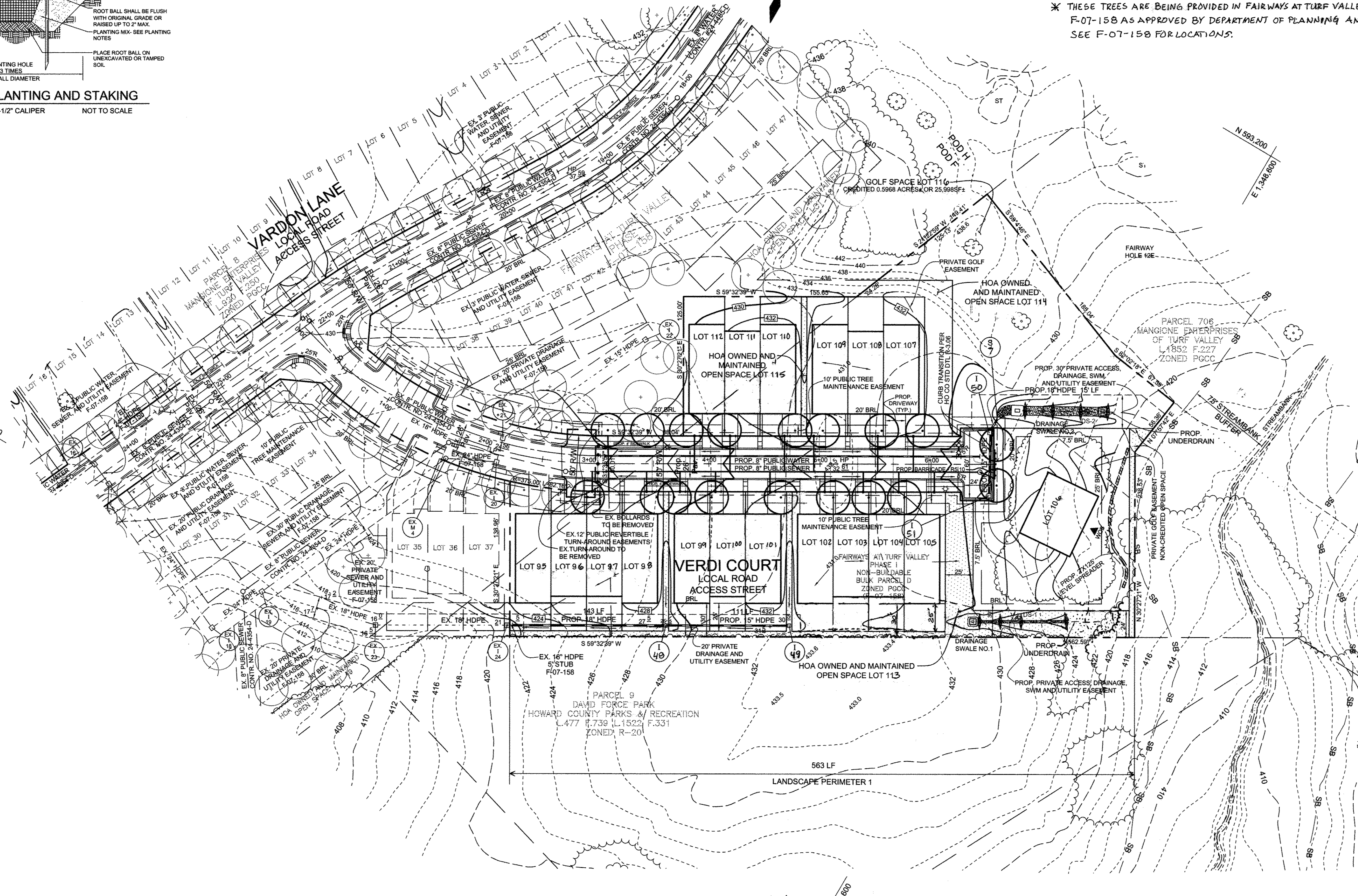
**LEGEND**



\* THESE TREES ARE BEING PROVIDED IN FAIRWAYS AT TURF VALLEY, PHASE I, F-07-158 AS APPROVED BY DEPARTMENT OF PLANNING AND ZONING, SEE F-07-158 FOR LOCATIONS.

**LANDSCAPE NOTES**

- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPING MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.
- THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING WILL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$2,700.00 (9 SHADE TREES @ \$300.00 EACH). STREET TREES AND PERIMETER LANDSCAPE TREES WILL BE PLANTED AT THE SITE DEVELOPMENT PLAN STAGE. LANDSCAPING FOR LOT 5 THROUGH 112 WILL BE PROVIDED FOR AT THE SITE DEVELOPMENT PLAN STAGE IN ACCORDANCE WITH SECTION 16.124 OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL.



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 22390, Expiration Date: 6-30-17

**OWNER/DEVELOPER**  
MANGIONE ENTERPRISES OF TURF VALLEY, LP  
1205 YORK ROAD, PENTHOUSE  
LUTHERVILLE, MARYLAND 21093  
410.825.8400

**LANDSCAPE PLAN**  
**FAIRWAYS AT TURF VALLEY**  
PHASE III LOTS 95-112, OPEN SPACE LOTS 113-115 & GOLF SPACE LOT 116  
POD 'F' SECTION IV: RESIDENTIAL PHASE IV E  
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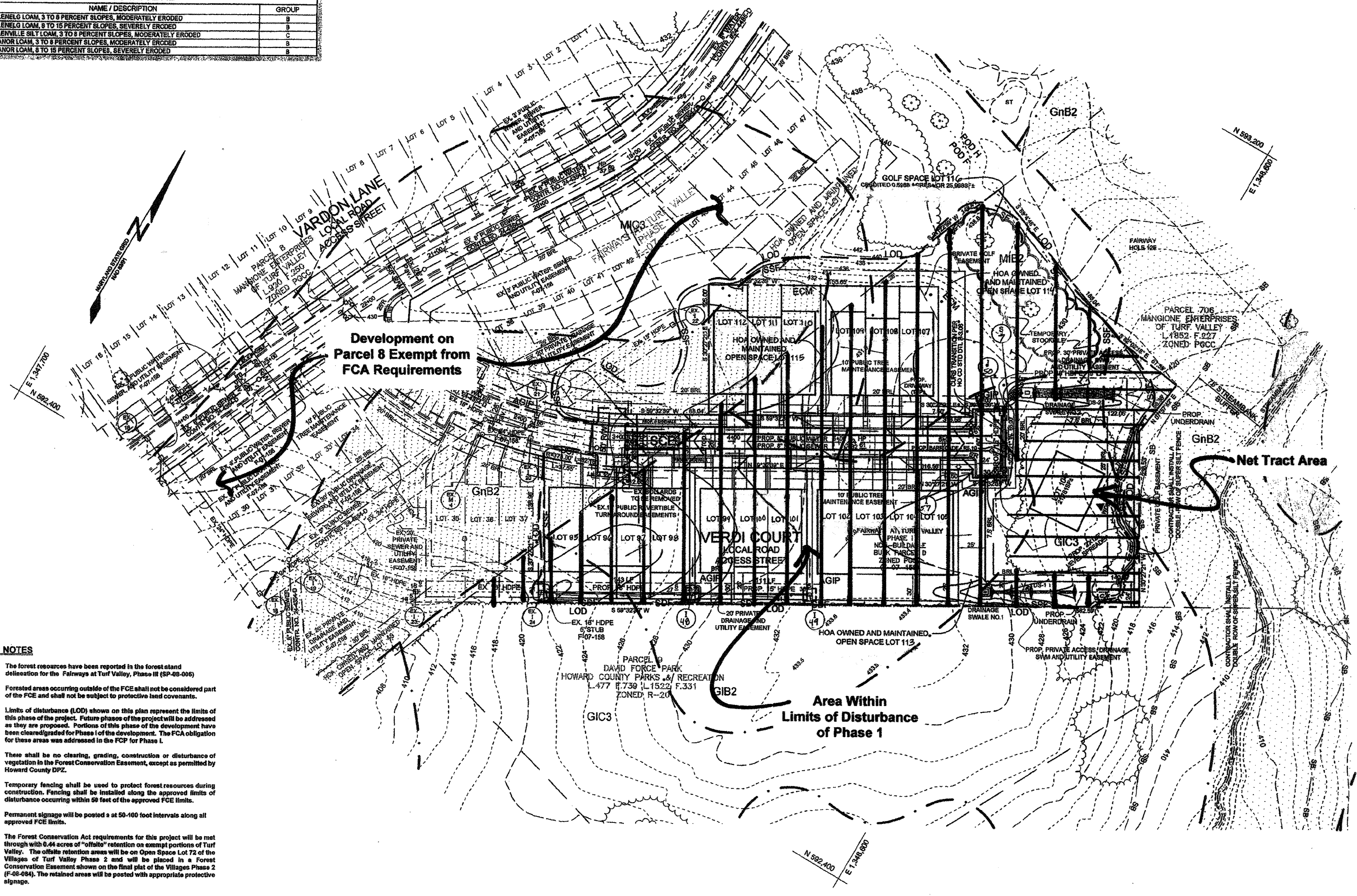
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
[Signature] 11/12/10  
CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
[Signature] 11-12-10  
CHIEF, BUREAU OF HIGHWAYS

**DEVELOPER'S CERTIFICATE**  
I CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
[Signature] 10/27/10  
DEVELOPER

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
GnB2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
GnB3	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
GnB2	GLENELG SILTY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
MIB2	MAJOR LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
MIC3	MAJOR LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B

LEGEND	
EXISTING CONTOUR	
PROPOSED CONTOUR	
EXISTING SPOT ELEVATION	
PROPOSED SPOT ELEVATION	
DIRECTION OF FLOW	
EXISTING TREELINE	
PROPOSED TREELINE	
LIGHT POLES	
STABILIZED CONSTRUCTION ENTRANCE	
SILT FENCE	
SUPER SILT FENCE	
EARTH DIKE	
LIMIT OF DISTURBANCE	
EROSION CONTROL MATTING	
SOIL BOUNDARY	
RIP-RAP INFLOW PROTECTION	
GABION INFLOW PROTECTION	
CURB INLET PROTECTION	
STANDARD INLET PROTECTION	
AT GRADE INLET PROTECTION	
'B' SOIL GROUP	
'C' SOIL GROUP	
'D' SOIL GROUP	



- FCP NOTES**
- The forest resources have been reported in the forest stand delineation for the Fairways at Turf Valley, Phase III (SP-08-005).
  - Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants.
  - Limits of disturbance (LOD) shown on this plan represent the limits of this phase of the project. Future phases of the project will be addressed as they are proposed. Portions of this phase of the development have been cleared/graded for Phase I of the development. The FCA obligation for these areas was addressed in the FCP for Phase I.
  - There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
  - Temporary fencing shall be used to protect forest resources during construction. Fencing shall be installed along the approved limits of disturbance occurring within 50 feet of the approved FCE limits.
  - Permanent signage will be posted at 50-100 foot intervals along all approved FCE limits.
  - The Forest Conservation Act requirements for this project will be met through with 0.44 acres of "offsite" retention on several portions of Turf Valley. The offsite retention areas will be on Open Space Lot 72 of the Villages of Turf Valley Phase 2 and will be placed in a Forest Conservation Easement shown on the final plat of the Villages Phase 2 (F-08-054). The retained areas will be posted with appropriate protective signage.

**FCA Exemption Note**

The proposed development of Fairways of Turf Valley will occur on portions of Parcels 8 and 706 (tax map 16). The development occurring on Parcel 8 is exempt from the Forest Conservation Act regulations. Portions of Parcel 706 that occur outside the limits of disturbances for this phase of the project are not included as part of the project for the purpose of the Forest Conservation Act.

**FOREST CONSERVATION WORKSHEET**  
Version 1.0

Project: Fairways at Turf Valley Phase III  
Date: July 23, 2010

NET TRACT AREA		Acres
A. Total tract area -		83.0
B. Area within 100 Year Floodplain and future development areas		89.72
C. Area within limits of disturbance associated with Phase I		2.72
D. Net Tract Area		0.56

LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)					
ARA	MDR	IDA	HDR	MPD	CIA
X					
E. Afforestation Threshold	(percentage)	0.15			0.08
F. Conservation Threshold	(percentage)	0.15			0.08

EXISTING FOREST COVER:		Acres
G. Existing forest cover (excluding floodplain)		0.33
H. Area of forest above afforestation threshold		0.25
I. Area of forest above conservation threshold		0.25

BREAK EVEN POINT:		Acres
J. Forest retention above threshold with no mitigation	Break-Even Point	0.05
K. Clearing permitted without mitigation		0.2

PROPOSED FOREST CLEARING		Acres
L. Total area of forest to be Cleared or Retained Outside FCE		0.33
M. Total area of forest to be Retained in FCE		0

PLANTING REQUIREMENTS		Acres
N. Reforestation for clearing above Conservation Threshold		0.06
P. Reforestation for clearing below Conservation Threshold		0.16
Q. Credit for retention above conservation threshold		0
R. Total reforestation required		0.22
S. Total afforestation required		0
T. Total reforestation and afforestation required		0.22

**OWNER/DEVELOPER**  
MANGIONE ENTERPRISES OF TURF VALLEY, LP  
1205 YORK ROAD, PENTHOUSE  
LUTHERVILLE, MARYLAND 21093  
410.825.8400

**FOREST CONSERVATION PLAN AND DETAILS**  
**FAIRWAYS AT TURF VALLEY**  
PHASE III LOTS 95-112, OPEN SPACE LOTS 113-115 & GOLF SPACE LOT 116  
POD 'F' SECTION IV - RESIDENTIAL PHASE IV E  
A SUBDIVISION OF P/O PARCELS 8 & 706 AND A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY, PHASE I, NON-BUILDABLE BULK PARCEL D  
TAX MAP 16 GRID 12 & TAX MAP 17 GRID 9  
2ND ELECTION DISTRICT

**Sill · Adcock & Associates · LLC**  
Engineers · Surveyors · Planners  
3300 North Ridge Road, Suite 140  
Ellicott City, Maryland 21043  
Phone: 443.325.7682 Fax: 443.325.7685  
Email: info@silladcock.com

DESIGN BY: JPC  
DRAWN BY: JPC  
CHECKED BY: JPC  
SCALE: AS SHOWN  
DATE: OCTOBER 28, 2010  
PROJECT #: 08-005  
SHEET #: 8 of 10

MD DNR Qualified Professional  
USACOE Wetland Delineator  
Certification # WDCTPS1406610044B2  
John P. Canoles

**Eco-Science Professionals, Inc.**  
Consulting Ecologists  
P.O. Box 5996 Glen Arm, Maryland 21057 Telephone (410) 833-2400 Fax (410) 833-2498

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Chief, Division of Land Development  
Chief, Development Engineering Division

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
Chief, Bureau of Highways

11-17-10

1 | 7-14-16 REVISE LOT NUMBERS IN TITLE BLOCK & LOTS. BEI



**CONSTRUCTION PERIOD PROTECTION PROGRAM**

**A. Forest Protection Techniques**

**1. Soil Protection Area (Critical Root Zone)**

The soil protection area, or critical root zone, of a tree is that portion of the soil column where most of its roots may be found. The majority of roots responsible for water and nutrient uptake are located just below the soil surface. Temporary fencing shall be placed around the critical root zone of the forest in areas where the forest limits occur within 25 feet of the limit of disturbance.

**2. Fencing and Signage**

Existing forest limits occurring within 25 feet of the limits of disturbance shall be protected using temporary protective fencing. Permanent signage shall be placed around the afforestation area prior to plant installation, as shown on the plan.

**B. Pre-Construction Meeting**

Upon staking of limits of disturbance a pre-construction meeting will be held between the developer, contractor and appropriate County inspector. The purpose of the meeting will be to verify that all sediment control is in order, and to notify the contractor of possible penalties for non-compliance with the FCP.

**C. Storage Facilities/Equipment Cleaning**

All equipment storage, parking, sanitary facilities, material stockpiling, etc. associated with construction of the project will be restricted to those areas outside of the proposed Forest Conservation Easement. Cleaning of equipment will be limited to area within the LOD of the proposed homesites. Wastewater resulting from equipment cleaning will be controlled to prevent runoff into environmentally sensitive areas.

**D. Sequence of Construction**

The following timetable represents the proposed timetable for development of the subject property. The items outlined in the Forest Conservation Plan will be enacted within two (2) years of subdivision approval.

Below find a proposed sequence of construction.

1. Install all signage and sediment control devices.
2. Hold pre-construction meeting between developer, contractor and County inspector.
3. Build access roads, install water and sewer, and construct houses. Stabilize all disturbed areas accordingly.
4. Remove sediment control.
5. Hold post-construction meeting with County inspectors to assure compliance with FCP. Submit Certification of Retention.

**E. Construction Monitoring**

Eco-Science Professionals, or another qualified professional designated by the developer, will monitor construction of the project to ensure that all activities are in compliance with the Forest Conservation Plan.

**F. Post-Construction Meeting**

Upon completion of construction, Eco-Science Professionals, or another qualified professional designated by the developer, will notify the County that construction has been completed and arrange for a post-construction meeting to review the project site. The meeting will allow the County inspector to verify that forest retention requirements have been met.

**POST-CONSTRUCTION MANAGEMENT PLAN**

Howard County requires a two year post-construction management plan be prepared as part of the Forest Conservation Plan. The plan goes into effect upon acceptance of the construction certification of completion by the County. Eco-Science Professionals, or another qualified professional designated by the developer, will be responsible for implementation of the post-construction management plan.

The following items will be incorporated into the plan for the subject property:

**A. Fencing and Signage**

Permanent signage indicating the limits of the retention/planting area shall be maintained.

**B. General Site Inspections**

Site inspections will be performed to insure that retention of the forest is met in accordance with this plan and that the forest edge remains healthy and stable.

**C. Education**

The developer will provide appropriate materials to property owners informing them of the location and purpose of the forest conservation easement. Materials may include site plans and information explaining the intent of the forest conservation law.

**D. Final Inspection**

At the end of the two year post-construction management period, Eco-Science Professionals, or another qualified professional, will submit to the administrator of the Howard County Forest Conservation Program certification that all retention/afforestation requirements have been met. Upon acceptance of this certification, the County will release the developer from all future obligations and release the developer's bond.

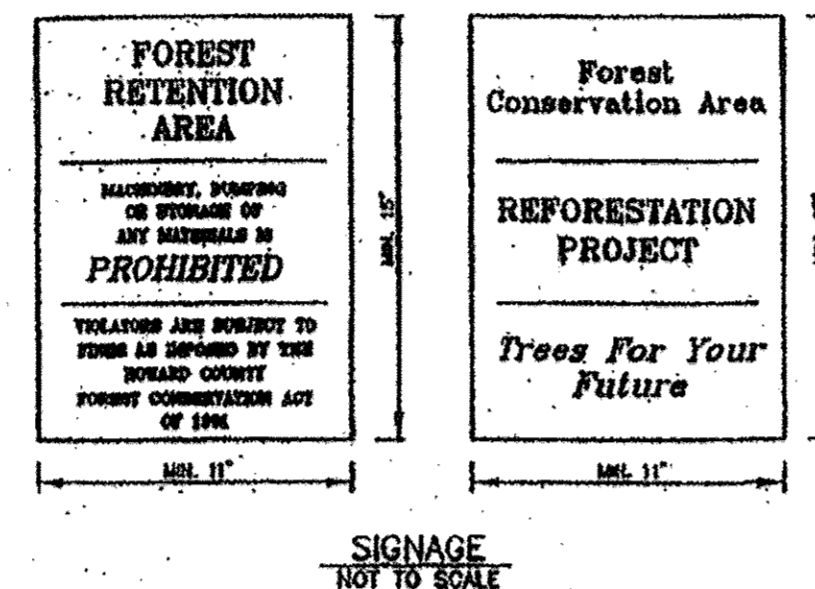
**FOREST CONSERVATION EASEMENTS**

Easements are a legal means of providing permanent protection of forests, farmland and open space. In accordance with the criteria outlined in the Howard County Forest Conservation Manual, a forest conservation easement will be recorded for the retention areas the subject property. Submission of the easements for recordation will occur prior to commencement of construction activities.

**Fairways at Turf Valley  
Forest Conservation Credit Calculations**

Phase	Proposed onsite Retention	Reforestation/ Afforestation Required	Reforestation/ Afforestation Credit Provided Offsite*	FCE Credit Recorded but not Utilized by Phase and location of FCE easement**
Phase 1	0.3 acres	2.8 acres	3.52 acres	0.22 acres reforestation 1.0 acres retained forest Plat of Revision Parcel D - F-08-22
Phase 2	0 acres	1.12 acres	1.12 acres	0 acres
Phase 3	0 acres	0.22 acres	0.22 acres	0.48 acres retained forest Open Space Lot 72, Villages of Turf Valley Phase 2
<b>Total FCE credit not yet utilized for project</b>				<b>0.98 acres FCE credit</b>

\* This credit may be obtained through 1:1 planting or 2:1 offsite retention  
\*\* Retention acreage reflects actual easement area and not 0.8 retention credit



SIGNAGE NOT TO SCALE

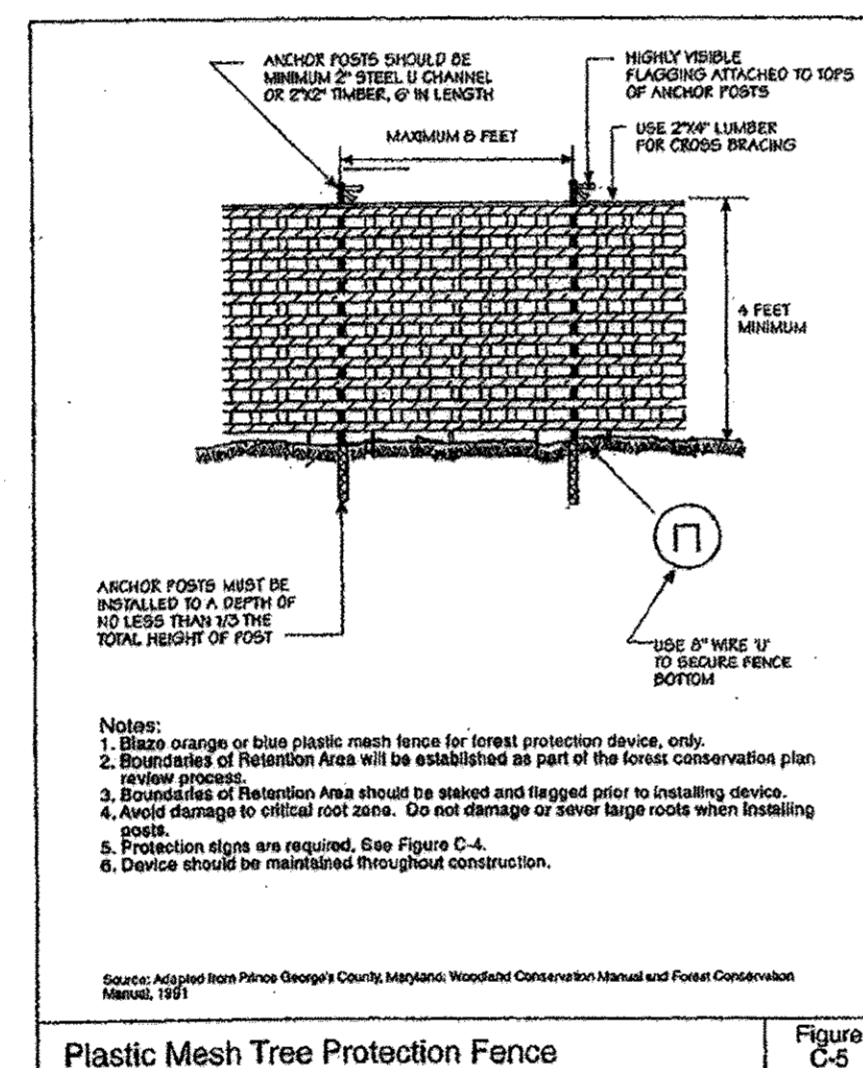


Figure C-5

**Forest Conservation Notes**

1. The 0.22 acres of reforestation obligation required for Fairways at Turf Valley, Phase III will be met by providing 0.44 acres of offsite retention in FCE # 14 which is located on Villages of Turf Valley, Phase 2, Open Space Lot 72 and will be placed in a Forest Conservation Easement shown on the final plat of the Villages Phase 2 (F-08-084).
2. Development on Parcel 8 is exempt from Howard County Forest Conservation requirements under section 16.1202 (b) of the County code since it is a Planned Unit Development under S-86-13.
3. Any Forest Conservation Easement (FCE) area shown hereon is subject to the protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
4. The Forest Conservation Easements shown hereon have been established to fulfill the requirements of section 16.1200 of the Howard County Code, Forest Conservation Area. No clearing, grading, or construction is permitted within the Forest Conservation Easements; however, Forest Management Practices as defined in the Deed of Forest Conservation Easement are allowed.
5. Limits of disturbance shall be restricted to areas outside the limits of temporary fencing or the FCE boundary, whichever is greater.
6. There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
7. No stockpiles, parking areas, equipment cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements.
8. Temporary fencing shall be used to protect forest resources during construction. Fencing shall be installed along the approved limits of disturbance occurring within 50 feet of the approved FCE limits.
9. Permanent signage will be posted at 50-100 foot intervals along the boundaries of all areas included in Forest Conservation Easements.
10. Portions of the site occurring within the 100 year floodplain are not included as part of the net tract area of the site. Areas of floodplain forest occurring within the limits of a Forest Conservation Easement may be protected by the easement restrictions but have not/will not be credited toward the project's FCA obligation.
11. The site is located in the Little Patuxent River (upper) #1131105A watershed.
12. There are no rare, threatened, or endangered species located on this site. There are not specimen or champion trees located on this site. To the best of our knowledge there are no historic structures located on the site.
13. The protective signage shall stay on-site in perpetuity.

**OFFSITE FCE NOTES:**

All or a portion of the FCA obligations for Phases II and III of the Fairways at Turf Valley developments will be met within Forest Conservation Easement #14. FCE # 14 is located on Open Space Lot 72 of the Villages of Turf Valley Phase 2 and will be placed in a Forest Conservation Easement shown on the final plat of the Villages Phase 2 (F-08-084).

FCE #14 has 0.48 acres of retention (0.24 acres of offsite retention credit) that is not being utilized by Fairways at Turf Valley II and III

The FCA obligations for each phase will be met as follows:

**Fairways at Turf Valley, Phase II**

Note the 1.12 acre reforestation obligation for Fairways at Turf Valley, Phase II will be met in FCE #14. This obligation will be met by 0.71 acres of reforestation and 0.82 acres of offsite retention.

**Fairways at Turf Valley, Phase III**

The 0.22 acre reforestation obligation for Fairways at Turf Valley, Phase III will be met by retaining 0.44 acres of offsite retention in FCE #14.

**OWNER/DEVELOPER**  
MANGIONE ENTERPRISES OF TURF VALLEY, LP  
1208 YORK ROAD, PENTHOUSE  
LUTHERVILLE, MARYLAND 21088  
410.826.0400

**FOREST CONSERVATION PLAN - NOTES AND DETAILS**  
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SCALE: AS SHOWN  
DATE: OCTOBER 28, 2010  
PROJECT #: 08-086  
SHEET #: 8 of 10

MD DNR Qualified Professional  
USACOE Wetland Delineator  
Certification # WDC-03MD0610044B2  
John P. Canoles

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P.O. Box 8886 Glen Arm, Maryland 21037 Telephone (410) 833-3450 Fax (410) 833-3488

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
Kest... 11/19/10  
CHIEF, DIVISION OF LAND DEVELOPMENT  
11/19/10  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
11-17-10  
CHIEF, BUREAU OF HIGHWAYS

1 7-14-16 REVISE LOT NUMBERS IN TITLE BLOCK

BEL

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32286, EXPIRATION DATE: JUNE 28, 2011

**CONSTRUCTION PERIOD PROTECTION PROGRAM**

**A. Forest Protection Techniques**

**1. Soil Protection Area (Critical Root Zone)**

The soil protection area, or critical root zone, of a tree is that portion of the soil column where most of its roots may be found. The majority of roots responsible for water and nutrient uptake are located just below the soil surface. Temporary fencing shall be placed around the critical root zone of the forest in areas where the forest limits occur within 25 feet of the limit of disturbance.

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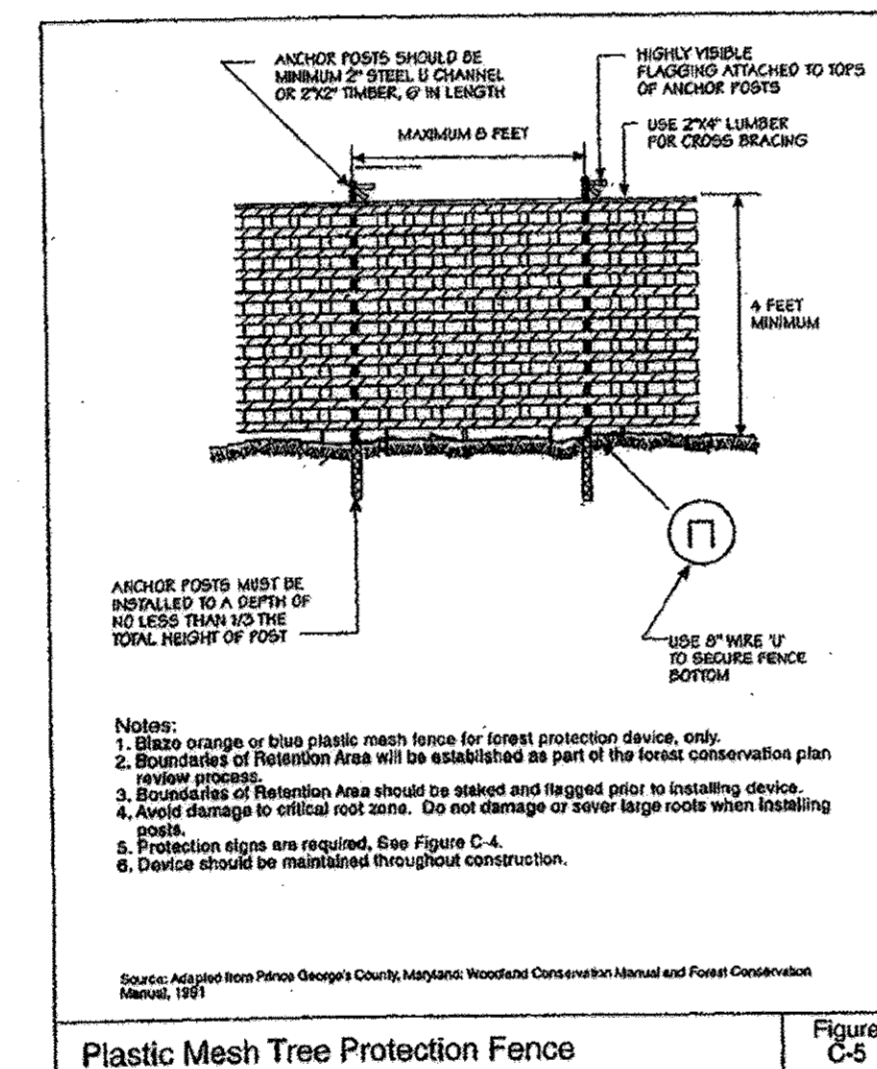
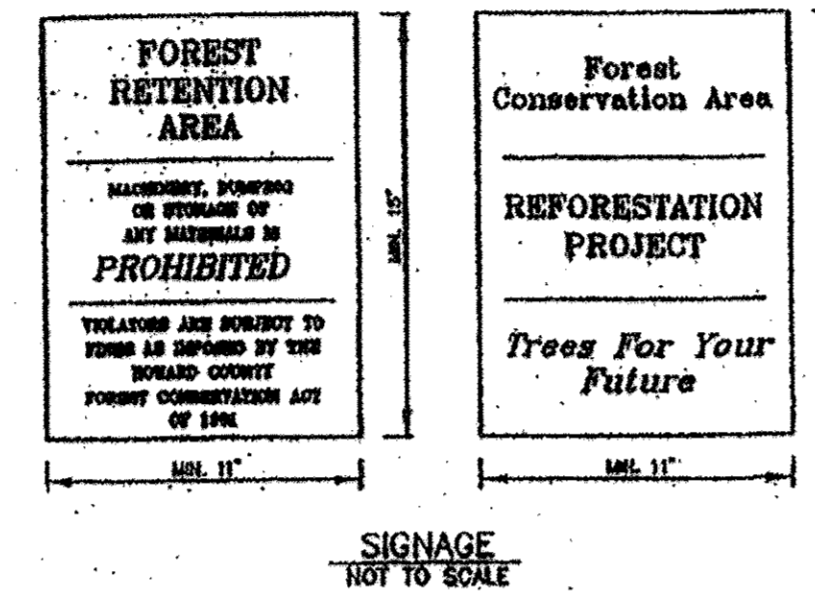
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**Fairways at Turf Valley  
Forest Conservation Credit Calculations**

Phase	Proposed onsite Retention	Reforestation/Afforestation Required	Reforestation/Afforestation Credit Provided Offsite*	FCE Credit Recorded but not Utilized by Phase and location of FCE easement**
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Phase 2	0 acres	1.12 acres	1.12 acres	0 acres
Phase 3	0 acres	0.22 acres	0.22 acres	0.48 acres retained forest Open Space Lot 72, Villages of Turf Valley Phase 2
<b>Total FCE credit not yet utilized for project</b>				<b>0.96 acres FCE credit</b>

\*This credit may be obtained through 1:1 planting or 2:1 offset retention  
\*\*Retention acreage reflects actual easement area and not 0.8 retention credit



**Forest Conservation Notes**

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11. The site is located in the Little Patuxent River (upper) #1131105A watershed.
12. There are no rare, threatened, or endangered species located on this site. There are not specimen or champion trees located on this site. To the best of our knowledge there are no historic structures located on the site.
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FCE #14 has 0.48 acres of retention (0.24 acres of offsite retention credit) that is not being utilized by Fairways at Turf Valley II and III

The FCA obligations for each phase will be met as follows:

**Fairways at Turf Valley, Phase II**

Note the 1.12 acre reforestation obligation for Fairways at Turf Valley, Phase II will be met in FCE #14. This obligation will be met by 0.71 acres of reforestation and 0.82 acres of offsite retention.

**Fairways at Turf Valley, Phase III**

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**OWNER/DEVELOPER**

MANGIONE ENTERPRISES OF TURF VALLEY, LP  
1200 YORK ROAD, PARKHOUSE  
LUTHERVILLE, MARYLAND 21088  
410.225.9449

**FOREST CONSERVATION PLAN - NOTES AND DETAILS**  
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Email: info@silladcock.com

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DRAWN BY: JPC  
CHECKED BY: JPC  
SCALE: AS SHOWN  
DATE: OCTOBER 29, 2010  
PROJECT #: 08-028  
SHEET #: 9 of 10

MD DNR Qualified Professional  
USACOE Wetland Delineator  
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John P. Canoles

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W. J. ... 11/10/10  
CHIEF, DIVISION OF LAND DEVELOPMENT  
11/10/10  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

W. J. ... 11-17-10  
CHIEF, BUREAU OF HIGHWAYS

1 7-14-16 REVISE LOT NUMBERS IN TITLE BLOCK

BEI

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
GIB2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
GIC3	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
GnB2	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
MIB2	MANOR LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
MIC3	MANOR LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B

LEGEND	
EXISTING CONTOUR	---
PROPOSED CONTOUR	---
EXISTING SPOT ELEVATION	± 2.52
PROPOSED SPOT ELEVATION	± 2.52
DIRECTION OF FLOW	→
EXISTING TREELINE	---
PROPOSED TREELINE	---
LIGHT POLES	⊙ POST TOP
STABILIZED CONSTRUCTION ENTRANCE	---
SILT FENCE	---
SUPER SILT FENCE	---
EARTH DIRT	---
LIMIT OF DISTURBANCE	---
EROSION CONTROL MATTING	---
SOIL BOUNDARY	---
RIP-RAP RETENTION PROTECTION	---
ORBON INFLOW PROTECTION	---
CURB INLET PROTECTION	---
STANDARD INLET PROTECTION	---
AT GRADE INLET PROTECTION	---
'B' SOIL GROUP	---
'C' SOIL GROUP	---
'D' SOIL GROUP	---

**FOREST CONSERVATION WORKSHEET**  
Version 1.0

Project: Fairways at Turf Valley Phase III  
Date: July 23, 2010

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J. Forest retention above threshold with no mitigation		0.05
K. Clearing permitted without mitigation	Break-Even Point	0.13

PROPOSED FOREST CLEARING		Acres
L. Total area of forest to be Cleared or Retained Outside FCE		0.33
M. Total area of forest to be Retained in FCE		0

PLANTING REQUIREMENTS		Acres
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P. Reforestation for clearing below Conservation Threshold		0.16
Q. Credit for retention above conservation threshold		0
R. Total reforestation required		0.22
S. Total afforestation required		0
T. Total reforestation and afforestation required		0.22

**OWNER/DEVELOPER**

MANGIONE ENTERPRISES OF TURF VALLEY, LP  
1205 YORK ROAD, PENTHOUSE  
LUTHERVILLE, MARYLAND 21093  
410.625.9400

**FOREST CONSERVATION PLAN AND DETAILS**

**FAIRWAYS AT TURF VALLEY**

PHASE III LOTS 95-112, OPEN SPACE LOTS 113-115 & GOLF SPACE LOT 116  
POD 'F' SECTION IV: RESIDENTIAL PHASE IV E  
A SUBDIVISION OF P/O PARCELS 8 & 706 AND A RESUBDIVISION OF FAIRWAYS  
AT TURF VALLEY, PHASE I. NON-BUILDABLE BULK PARCEL D  
TAX MAP 16 GRID 12 & TAX MAP 17 GRID 9  
PART OF PARCELS 8 & 706  
2ND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**Sill · Adcock & Associates · LLC**

Engineers · Surveyors · Planners

3300 North Ridge Road, Suite 160  
Ellicott City, Maryland 21043  
Phone: 443.325.7682 Fax: 443.325.7685  
Email: info@silladcock.com

DESIGN BY:	JPC
DRAWN BY:	JPC
CHECKED BY:	JPC
SCALE:	AS SHOWN
DATE:	OCTOBER 28, 2010
PROJECT #:	06-026
SHEET #:	11 of 13

MD DNR Qualified Professional  
USACOE Wetland Delineator  
Certification # WDCP234D0610044B2

*J.P. Caines*  
John P. Caines

**Eco-Science Professionals, Inc.**  
Consulting Ecologists

P.O. Box 5005 Glen Arm, Maryland 21057 Telephone (410) 831-2480 Fax (410) 832-2488

**PLAN**

SCALE: 1" = 50'

Development on Parcel 8 Exempt from FCA Requirements

Net Tract Area

Area Within Limits of Disturbance of Phase 1

**FCP NOTES**

- The forest resources have been reported in the forest stand delineation for the Fairways at Turf Valley, Phase III (SP-06-006)
- Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants.
- Limits of disturbance (LOD) shown on this plan represent the limits of this phase of the project. Future phases of the project will be addressed as they are proposed. Portions of this phase of the development have been cleared/designed for Phase I of the development. The FCA obligation for these areas was addressed in the FCP for Phase I.
- There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
- Temporary fencing shall be used to protect forest resources during construction. Fencing shall be installed along the approved limits of disturbance occurring within 99 feet of the approved FCE limits.
- Permanent signage will be posted at a 50-100 foot intervals along all approved FCE limits.
- The Forest Conservation Act requirements for this project will be met through with 0.44 acres of "offset" retention on exempt portions of Turf Valley. The offset retention areas will be on Open Space Lot 72 of the Villages of Turf Valley Phase 2 and will be placed in a Forest Conservation Easement shown on the final plat of the Villages Phase 2 (F-08-084). The retained areas will be posted with appropriate protective signage.

**FCA Exemption Note**

The proposed development of Fairways of Turf Valley will occur on portions of Parcels 8 and 706 (tax map 16). The development occurring on Parcel 8 is exempt from the Forest Conservation Act regulations. Portions of Parcel 706 that occur outside the limits of disturbance for this phase of the project are not included as part of the project for the purpose of the Forest Conservation Act.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Ret. Shalish*  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 11/19/10

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

*Walter R. ...*  
CHIEF, BUREAU OF HIGHWAYS  
DATE: 11-17-10

2	5-17-2017	REVISE SHEET NUMBER	BE1
1	7-14-16	REVISE LOT NUMBERS IN TITLE BLOCK & LOTS.	BE1

**CONSTRUCTION PERIOD PROTECTION PROGRAM**

**A. Forest Protection Techniques**

**1. Soil Protection Area (Critical Root Zone)**

The soil protection area, or critical root zone, of a tree is that portion of the soil column where most of its roots may be found. The majority of roots responsible for water and nutrient uptake are located just below the soil surface. Temporary fencing shall be placed around the critical root zone of the forest in areas where the forest limits occur within 25 feet of the limit of disturbance.

**2. Fencing and Signage**

Existing forest limits occurring within 25 feet of the limits of disturbance shall be protected using temporary protective fencing. Permanent signage shall be placed around the afforestation area prior to plant installation, as shown on the plan.

**B. Pre-Construction Meeting**

Upon staking of limits of disturbance a pre-construction meeting will be held between the developer, contractor and appropriate County inspector. The purpose of the meeting will be to verify that all sediment control is in order, and to notify the contractor of possible penalties for non-compliance with the FCP.

**C. Storage Facilities/Equipment Cleaning**

All equipment storage, parking, sanitary facilities, material stockpiling, etc. associated with construction of the project will be restricted to those areas outside of the proposed Forest Conservation Easement. Cleaning of equipment will be limited to area within the LOD of the proposed homesites. Wastewater resulting from equipment cleaning will be controlled to prevent runoff into environmentally sensitive areas.

**D. Sequence of Construction**

The following timetable represents the proposed timetable for development of the subject property. The items outlined in the Forest Conservation Plan will be enacted within two (2) years of subdivision approval.

Below find a proposed sequence of construction.

1. Install all signage and sediment control devices.
2. Hold pre-construction meeting between developer, contractor and County inspector.
3. Build access roads, install water and sewer, and construct houses. Stabilize all disturbed areas accordingly.
4. Remove sediment control.
5. Hold post-construction meeting with County inspectors to assure compliance with FCP. Submit Certification of Retention.

**E. Construction Monitoring**

Eco-Science Professionals, or another qualified professional designated by the developer, will monitor construction of the project to ensure that all activities are in compliance with the Forest Conservation Plan.

**F. Post-Construction Meeting**

Upon completion of construction, Eco-Science Professionals, or another qualified professional designated by the developer, will notify the County that construction has been completed and arrange for a post-construction meeting to review the project site. The meeting will allow the County inspector to verify that forest retention requirements have been met.

**POST-CONSTRUCTION MANAGEMENT PLAN**

Howard County requires a two year post-construction management plan be prepared as part of the Forest Conservation Plan. The plan goes into effect upon acceptance of the construction certification of completion by the County. Eco-Science Professionals, or another qualified professional designated by the developer, will be responsible for implementation of the post-construction management plan.

The following items will be incorporated into the plan for the subject property.

**A. Fencing and Signage**

Permanent signage indicating the limits of the retention/planting area shall be maintained.

**B. General Site Inspections**

Site inspections will be performed to insure that retention of the forest is met in accordance with this plan and that the forest edge remains healthy and stable.

**C. Education**

The developer will provide appropriate materials to property owners informing them of the location and purpose of the forest conservation easement. Materials may include site plans and information explaining the intent of the forest conservation law.

**D. Final Inspection**

At the end of the two year post-construction management period, Eco-Science Professionals, or another qualified professional, will submit to the administrator of the Howard County Forest Conservation Program certification that all retention/afforestation requirements have been met. Upon acceptance of this certification, the County will release the developer from all future obligations and release the developer's bond.

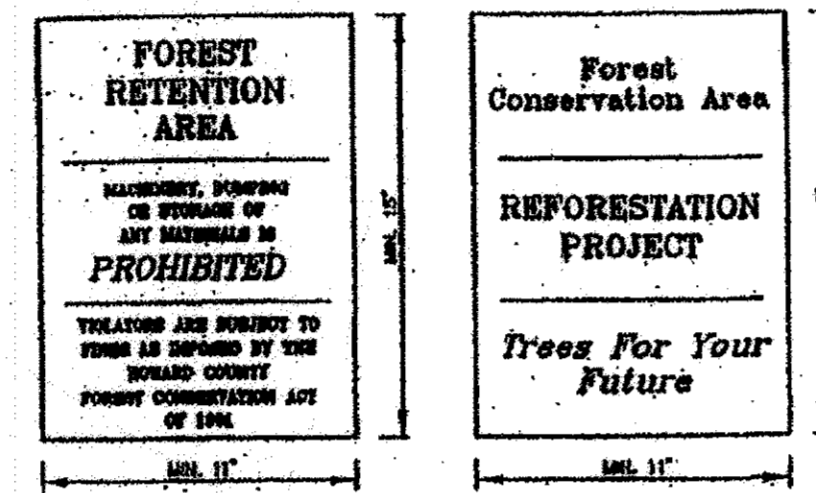
**FOREST CONSERVATION EASEMENTS**

Easements are a legal means of providing permanent protection of forests, farmland and open space. In accordance with the criteria outlined in the Howard County Forest Conservation Manual, a forest conservation easement will be recorded for the retention areas the subject property. Submission of the easements for recordation will occur prior to commencement of construction activities.

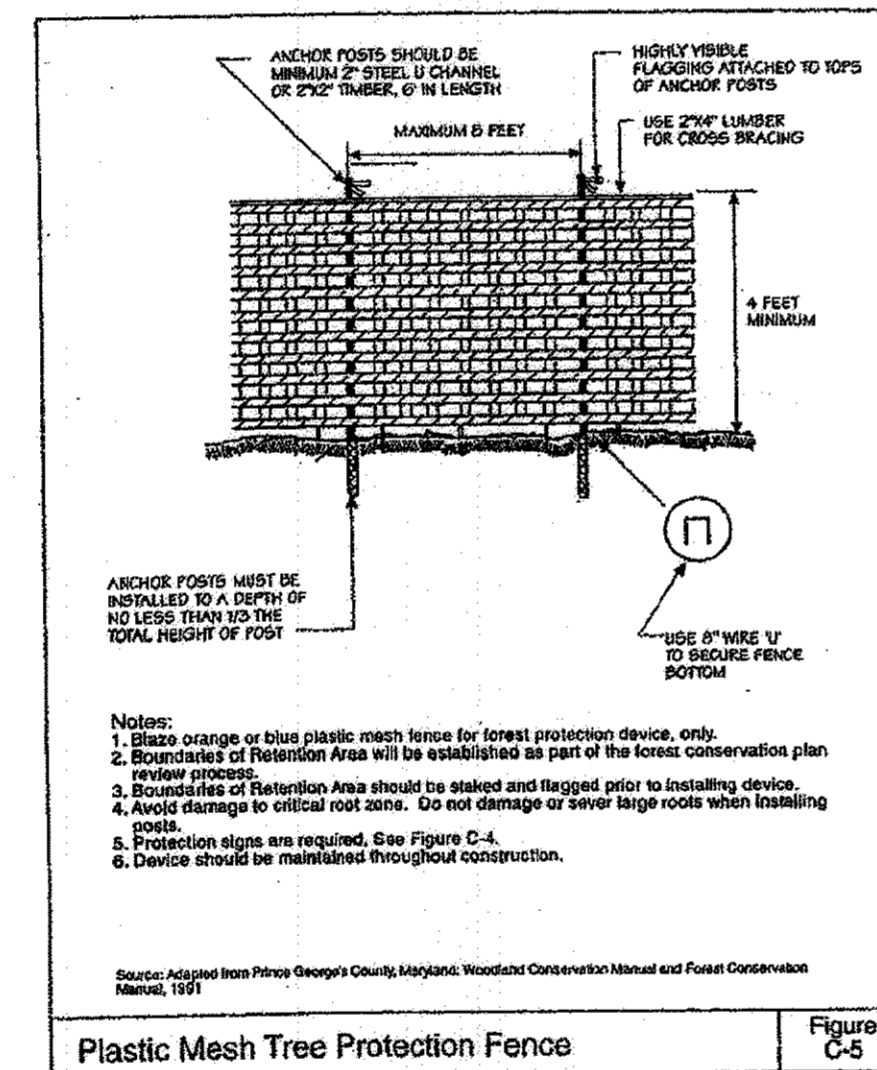
**Fairways at Turf Valley  
Forest Conservation Credit Calculations**

Phase	Proposed onsite Retention	Reforestation/Afforestation Required	Reforestation/Afforestation Credit Provided Offsite*	FCE Credit Recorded but not Utilized by Phase and location of FCE easement**
Phase 1	0.3 acres	2.8 acres	3.52 acres	0.22 acres reforestation 1.0 acres retained forest Plat of Revision Parcel D - F-08-22
Phase 2	0 acres	1.12 acres	1.12 acres	0 acres
Phase 3	0 acres	0.22 acres	0.22 acres	0.48 acres retained forest Open Space Lot 72, Villages of Turf Valley Phase 2
<b>Total FCE credit not yet utilized for project</b>				<b>0.98 acres FCE credit</b>

\* This credit may be obtained through 1:1 planting or 2:1 offsite retention  
\*\* Retention acreage reflects actual easement area and not 0.5 retention credit



**SIGNAGE**  
NOT TO SCALE



Plastic Mesh Tree Protection Fence Figure C-5

**Forest Conservation Notes**

1. The 0.22 acres of reforestation obligation required for Fairways at Turf Valley, Phase III will be met by providing 0.44 acres of offsite retention in FCE # 14 which is located on Villages of Turf Valley, Phase 2, Open Space Lot 72 and will be placed in a Forest Conservation Easement shown on the final plat of the Villages Phase 2 (F-08-084).
2. Development on Parcel 8 is exempt from Howard County Forest Conservation requirements under section 16.1202 (b) of the County code since it is a Planned Unit Development under S-88-13.
3. Any Forest Conservation Easement (FCE) area shown hereon is subject to the protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
4. The Forest Conservation Easements shown hereon have been established to fulfill the requirements of section 16.1200 of the Howard County Code, Forest Conservation Area. No clearing, grading, or construction is permitted within the Forest Conservation Easements; however, Forest Management Practices as defined in the Deed of Forest Conservation Easement are allowed.
5. Limits of disturbance shall be restricted to areas outside the limits of temporary fencing or the FCE boundary, whichever is greater.
6. There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
7. No stockpiles, parking areas, equipment cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements.
8. Temporary fencing shall be used to protect forest resources during construction. Fencing shall be installed along the approved limits of disturbance occurring within 50 feet of the approved FCE limits.
9. Permanent signage will be posted at 50-100 foot intervals along the boundaries of all areas included in Forest Conservation Easements.
10. Portions of the site occurring within the 100 year floodplain are not included as part of the net tract area of the site. Areas of floodplain forest occurring within the limits of a Forest Conservation Easement may be protected by the easement restrictions but have not/will not be credited toward the project's FCA obligation.
11. The site is located in the Little Patuxent River (upper) #1131105A watershed.
12. There are no rare, threatened, or endangered species located on this site. There are not specimen or champion trees located on this site. To the best of our knowledge there are no historic structures located on the site.
13. The protective signage shall stay on-site in perpetuity.

**OFFSITE FCE NOTES:**

All or a portion of the FCA obligations for Phases II and III of the Fairways at Turf Valley developments will be met within Forest Conservation Easement #14. FCE # 14 is located on Open Space Lot 72 of the Villages of Turf Valley Phase 2 and will be placed in a Forest Conservation Easement shown on the final plat of the Villages Phase 2 (F-08-084).

FCE #14 has 0.48 acres of retention (0.24 acres of offsite retention credit) that is not being utilized by Fairways at Turf Valley II and III

The FCA obligations for each phase will be met as follows:

**Fairways at Turf Valley, Phase II**

Note the 1.12 acre reforestation obligation for Fairways at Turf Valley, Phase II will be met in FCE #14. This obligation will be met by 0.71 acres of reforestation and 0.82 acres of offsite retention.

**Fairways at Turf Valley, Phase III**

The 0.22 acre reforestation obligation for Fairways at Turf Valley, Phase III will be met by retaining 0.44 acres of offsite retention in FCE #14.

**OWNER/DEVELOPER**

MANGIONE ENTERPRISES OF TURF VALLEY, LP  
1200 YORK ROAD, FIFTH FLOOR  
LUTHERVILLE, MARYLAND 21088  
410.428.8400

**FOREST CONSERVATION PLAN - NOTES AND DETAILS**  
**FAIRWAYS AT TURF VALLEY**  
PHASE III LOTS 85-112, OPEN SPACE LOTS 113-115 & GOLF SPACE LOT 116  
POD F SECTION IV - RESIDENTIAL PHASE IV E  
A SUBDIVISION OF P/O PARCELS 8 & 708 AND A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY, PHASE I, NON-BUILDABLE BULK PARCEL D  
TAX MAP 16 GRID 12 & TAX MAP 17 GRID 9 PART OF PARCELS 8 & 708  
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**Sill · Adcock & Associates · LLC**  
Engineers · Surveyors · Planners  
3300 North Ridge Road, Suite 160  
Ellicott City, Maryland 21042  
Phone: 443.325.7682 Fax: 443.325.7665  
Email: info@silladcock.com

DESIGN BY: JPC  
DRAWN BY: JPC  
CHECKED BY: JPC  
SCALE: AS SHOWN  
DATE: OCTOBER 29, 2010  
PROJECT #: 08-026  
SHEET # 12 OF 13

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 2006, EXPIRATION DATE: JUNE 30, 2011.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

*Kurt Shee* 11/9/10  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

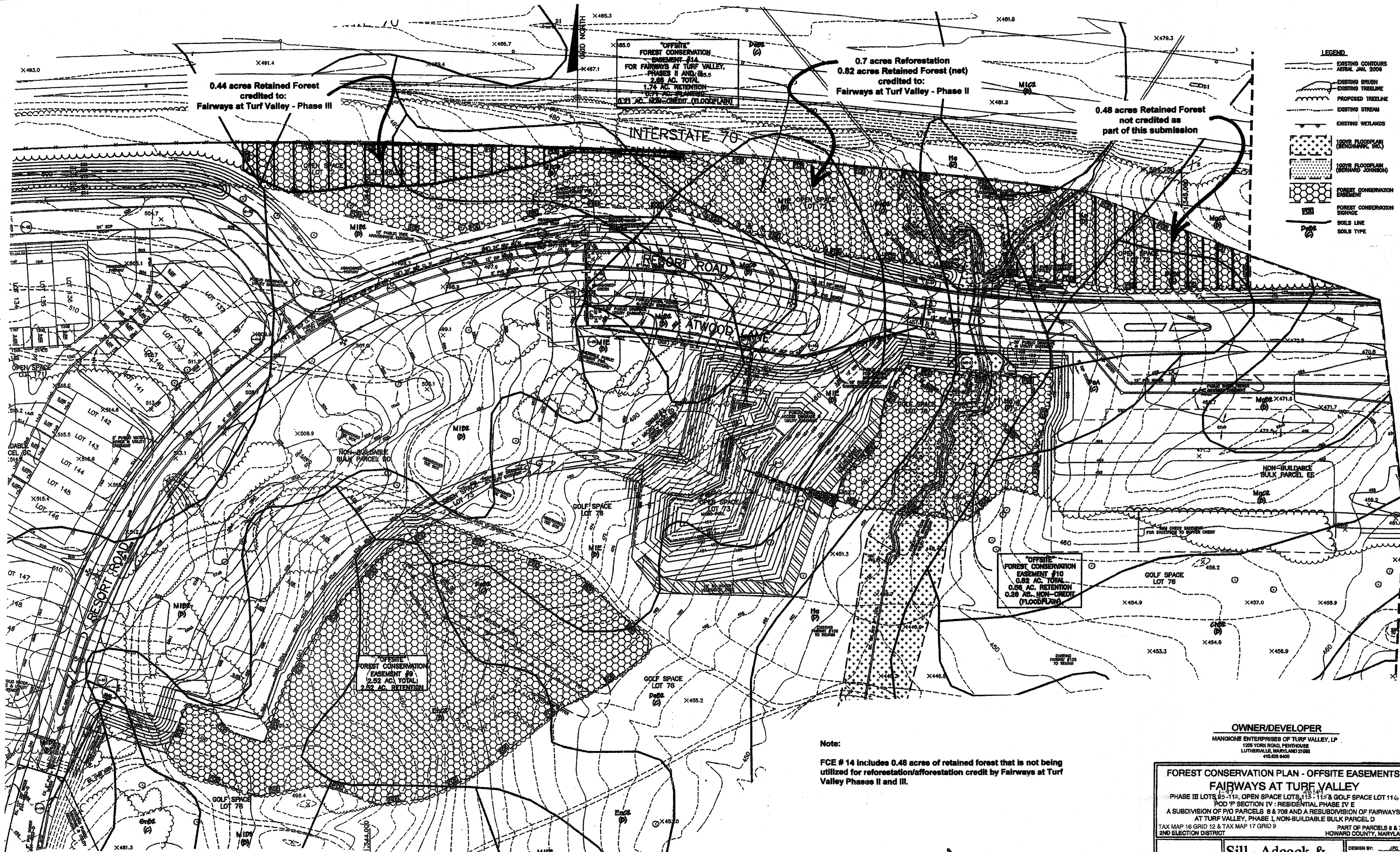
*Chris* 11/10/10  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Michael* 11-17-10  
CHIEF, BUREAU OF HIGHWAYS DATE

2	5-17-2017	REVISE SHEET NUMBER	BE1
1	7-14-16	REVISE LOT NUMBERS IN TITLE BLOCK	BE1

**Eco-Science Professionals, Inc.**  
Consulting Ecologists  
P.O. Box 8066 Glen Arden, Maryland 21047 Telephone (410) 532-2400 Fax (410) 532-2408

*John P. Canoles*  
John P. Canoles



- LEGEND**
- EXISTING CONTOURS AERIAL JAN. 2006
  - EXISTING BRUSH
  - EXISTING TREELINE
  - PROPOSED TREELINE
  - EXISTING STREAM
  - EXISTING WETLANDS
  - [Pattern] 100YR FLOODPLAIN (BENCHMARK INC.)
  - [Pattern] 100YR FLOODPLAIN (BERNARD JOHNSON)
  - [Pattern] FOREST CONSERVATION BASEMENT
  - [Pattern] FOREST CONSERVATION SHORAGE
  - SOILS LINE
  - SOILS TYPE

0.44 acres Retained Forest credited to: Fairways at Turf Valley - Phase III

0.7 acres Reforestation  
0.82 acres Retained Forest (net) credited to: Fairways at Turf Valley - Phase II

0.48 acres Retained Forest not credited as part of this submission

INTERSTATE 70

RESORT ROAD

ATWOOD LANE

"OFFSITE" FOREST CONSERVATION EASEMENT #9  
2.52 AC. TOTAL  
2.52 AC. RETENTION

"OFFSITE" FOREST CONSERVATION EASEMENT #10  
0.82 AC. TOTAL  
0.58 AC. RETENTION  
0.26 AC. NON-CREDIT (FLOODPLAIN)

**Note:**  
FCE # 14 includes 0.48 acres of retained forest that is not being utilized for reforestation/afforestation credit by Fairways at Turf Valley Phases II and III.

**OWNER/DEVELOPER**  
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**FOREST CONSERVATION PLAN - OFFSITE EASEMENTS  
FAIRWAYS AT TURF VALLEY**  
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DESIGN BY: JRC  
DRAWN BY: JJC  
CHECKED BY: JJC  
SCALE: AS SHOWN  
DATE: OCTOBER 28, 2010  
PROJECT #: 08-028  
SHEET #: 13 of 13

APPROVED, HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
Ketchel  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 11/16/10

APPROVED, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
W. R. Smith  
CHIEF, BUREAU OF HIGHWAYS  
DATE: 11-17-10

PLAN VIEW  
SCALE: 1" = 50'

**Eco-Science Professionals, Inc.**  
CONSULTING ECOLOGISTS  
P.O. Box 5066 Glen Arm, Maryland 21087 (410) 832-2480

MD DNR Qualified Professional  
USACOE Wetland Designer  
Certification # WDCP00001004482  
John P. Canoles

2	5-17-2017	REVISE SHEET NUMBERS	BEI
1	7-14-16	REVISE LOT NUMBERS IN TITLE BLOCK	BEI