

		PAVING SECTIONS					
SEC. NO.	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)		3 TO <5>		5 TO <7>	
		PAVEMENT MATERIAL (INCHES)	MIN	HMA WITH GAB	27	HMA WITH CONSTANT GAB	27
P-2	PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROADS: ACCESS PLACE, 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	1.5
		HMA SUPERPAVE INTERMEDIATE SURFACE 8.5 MM, PG 64-22, LEVEL 1 (ESAL)	1.0	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	3.5	2.0
		GRADED AGGREGATE BASE (GAB)	0.0	4.0	3.0	4.0	4.0

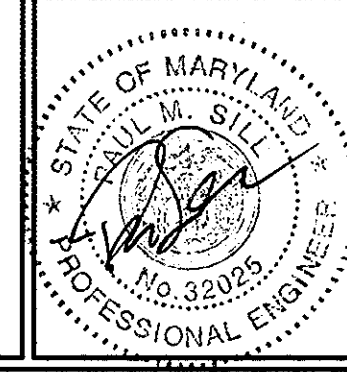
NOTES:

- HEAVY TRUCKS ARE DEFINED AS THOSE WITH SIX (6) WHEELS OR MORE INCLUDING GARBAGE TRUCKS.
- 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 8.5 MM SURFACE (1.0" MIN TO 2.0" MAX).
- GRADED AGGREGATE BASE (GAB) TO BE PLACED AND COMPACTED IN 6" MAX COMPACTED THICKNESS LAYERS.
- 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.
- IN LIEU OF PLACING THE INTERMEDIATE SURFACE COURSE LAYER FOR COMMERCIAL / INDUSTRIAL ENTRANCE APRONS 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.
- THE CONSTRUCTION DRAWINGS SHALL SHOW THE PAVING SECTION, ROAD CLASSIFICATION AND CBR VALUE FOR EACH ROADWAY.

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

PRELIMINARY ROAD PROFILE: PUCCINI LANE
FAIRWAYS AT TURF VALLEY
PHASE II LOTS 48-80, OPEN SPACE LOTS 81-84, BULK PARCELS E
POD 'E-1' SECTION IV: RESIDENTIAL PHASE IV E
A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY PHASE I
NON-BUILDABLE BULK PARCELS A, B, & C

TAX MAP 16 GRID 16 PART OF PARCEL 706
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

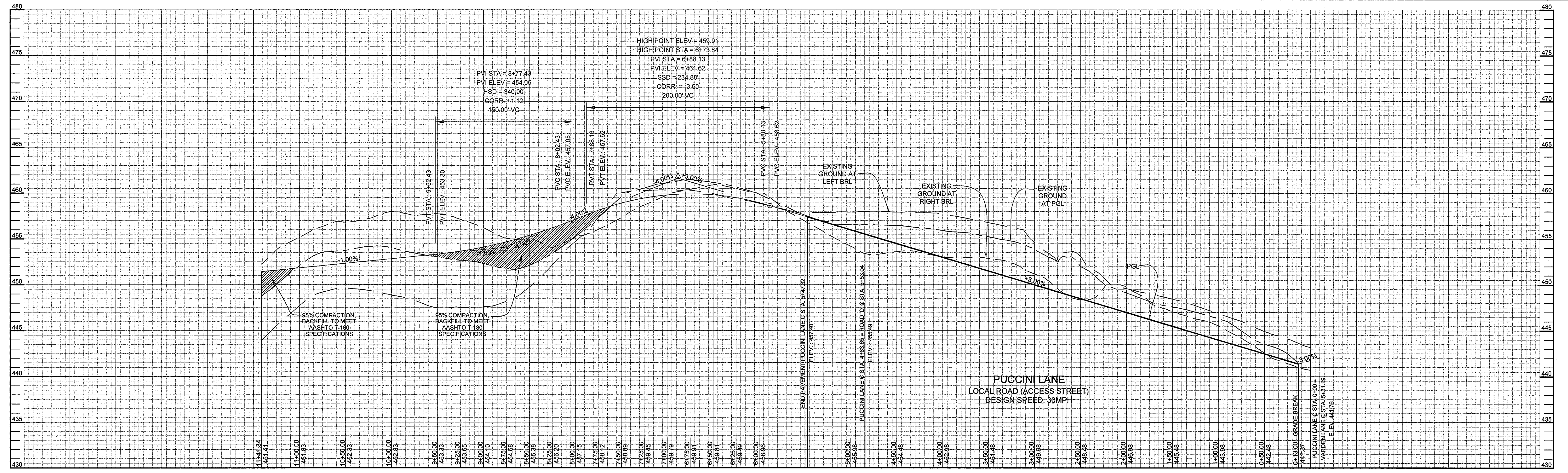


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DESIGN BY: PS
DRAWN BY: MRM
CHECKED BY: PS
SCALE: AS SHOWN
DATE: JANUARY 31, 2009
PROJECT #: 06-025
SHEET #: 2 OF 9

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

Paul J. Coyle 2/12/09
PLANNING DIRECTOR DATE



LEGEND

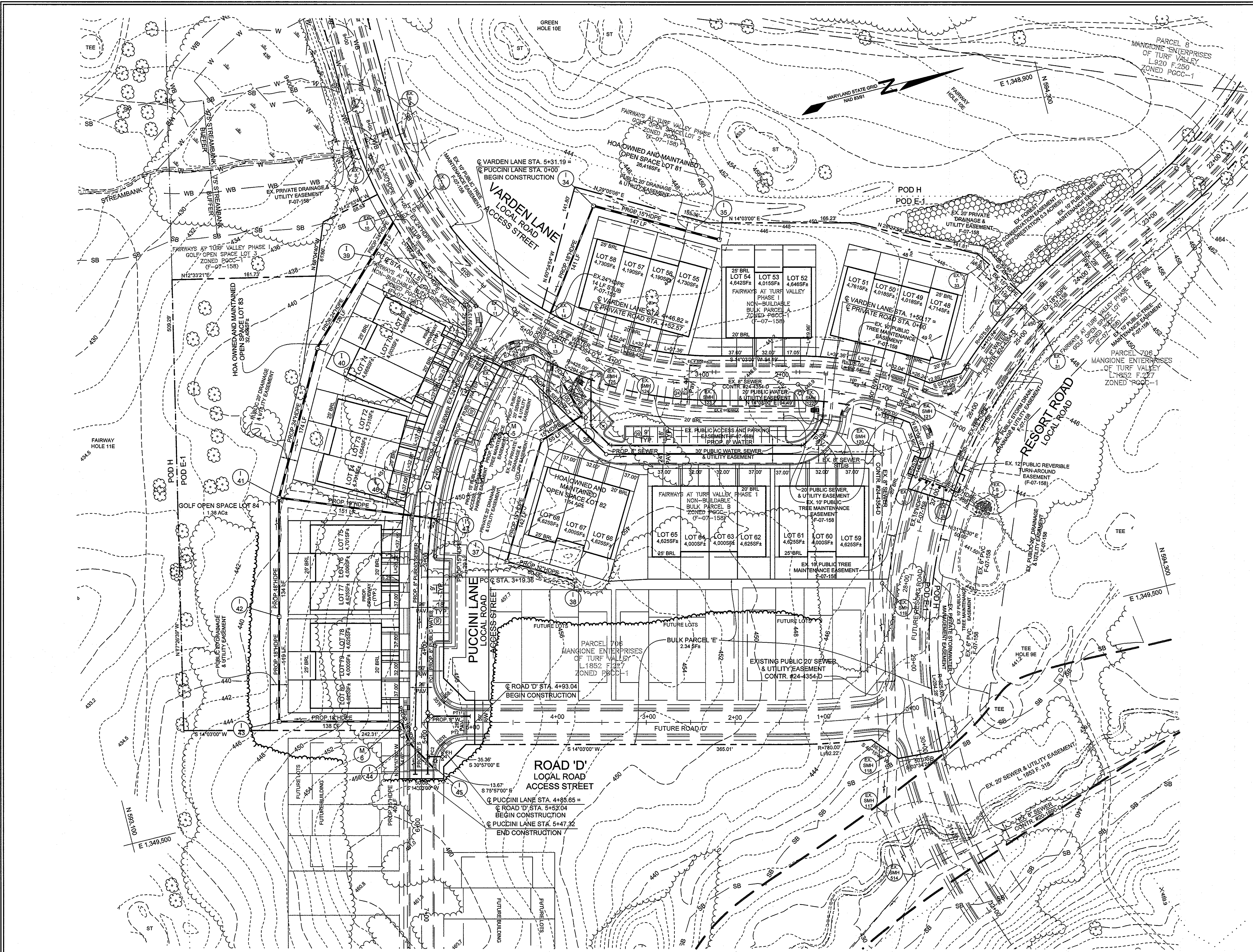
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- DIRECTION OF FLOW
- EXISTING TREELINE
- PROPOSED TREELINE
- LIGHT POLES

CENTERLINE ROAD CURVE DATA

CURVE	RADIUS	ARC LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C1	500.00	303.01'	35°16'37"	S58°18'42"E	307.85'

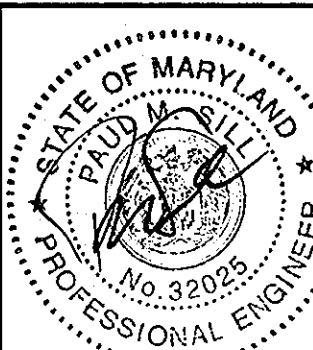
FILLET DATA

CURVE	ROAD NAME	Q STA.	OFFSET
PC1	PUCCINI LANE	4+35.65	13' Left
PT1	PUCCINI LANE	4+70.65	48' Left
PC2	PUCCINI LANE	5+31.65	13' Left
PT2	PUCCINI LANE	4+96.65	48' Left



OWNER/DEVELOPER
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 1205 YORK ROAD, PENTHOUSE
 LUTHERVILLE, MARYLAND 21093
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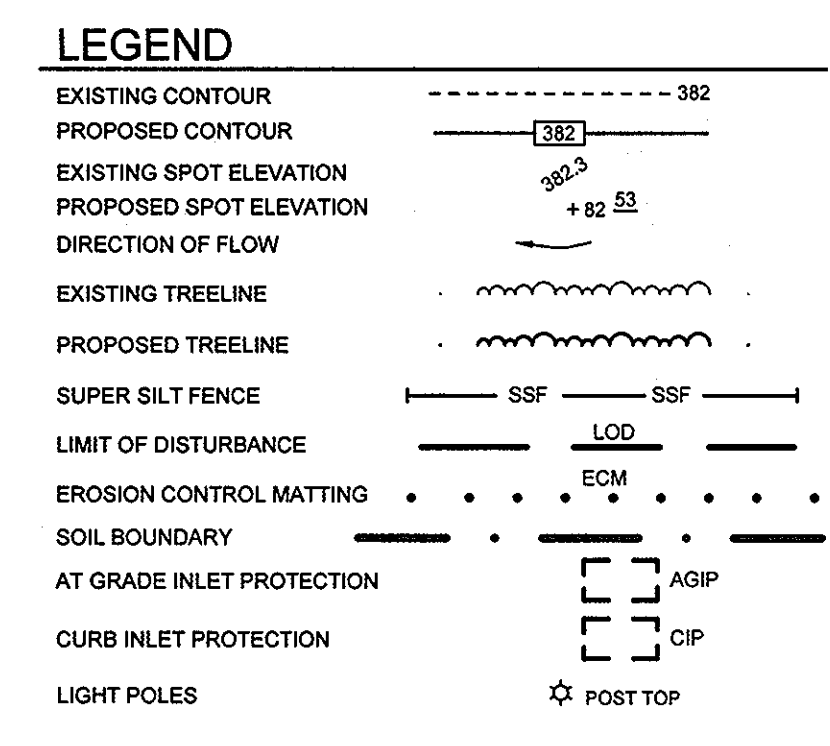
PRELIMINARY EQUIVALENT SKETCH PLAN
FAIRWAYS AT TURF VALLEY
 PHASE II LOTS 48-80, OPEN SPACE LOTS 81-84, BULK PARCEL E
 POD 'E-1' SECTION IV : RESIDENTIAL PHASE IV E
 A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY PHASE I
 NON-BUILDABLE BULK PARCELS A, B, & C
 TAX MAP 16 GRID 16 PART OF PARCEL 706
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND



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 CHECKED BY: PS
 SCALE: 1" = 50'
 DATE: JANUARY 31, 2009
 PROJECT #: 06-025
 SHEET #: 3 of 9

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 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY
 [Signature] 2/10/09
 PLANNING DIRECTOR DATE

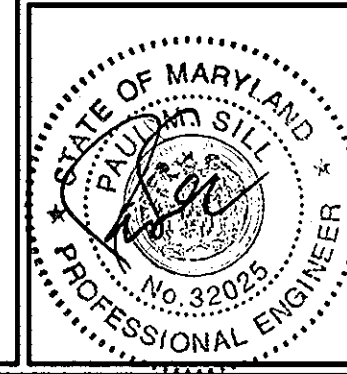


SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP
Co	CODORUS SILT LOAM	C
CuB	COMUS SILT LOAM, LOCAL ALLUVIUM, 3 TO 8 PERCENT SLOPES	B
EKB2	ELIOAK SILTY CLAY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
EIC3	ELIOAK SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
GIB2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
GnB2	GLENVILLE SILT LOAM, 3 TO 5 PERCENT SLOPES, MODERATELY ERODED	C
MgB2	MANOR GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
MgC3	MANOR GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
MIA	MANOR LOAM, 0 TO 3 PERCENT SLOPES	B

OWNER/DEVELOPER
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 1205 YORK ROAD, PENTHOUSE
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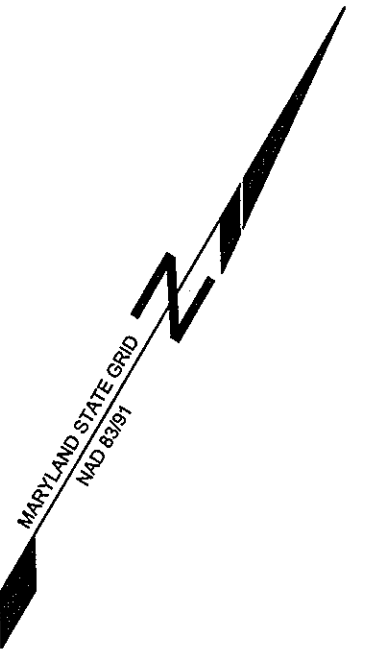
PRELIMINARY GRADING, SEDIMENT AND EROSION CONTROL PLAN
FAIRWAYS AT TURF VALLEY
 PHASE II LOTS 48-80, OPEN SPACE LOTS 81-84, BULK PARCEL E
 POD 'E-1' SECTION IV : RESIDENTIAL PHASE IV E
 A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY PHASE I
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TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY
David L. Goyler 2/10/09
 PLANNING DIRECTOR DATE



SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
Ba	BAILE SILT LOAM	D
BrB2	BRANDYWINE LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
BrC3	BRANDYWINE LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	C
Ca	CODORUS SILT LOAM	C
CaB	COMUS SILT LOAM, LOCAL ALLUVIUM, 3 TO 8 PERCENT SLOPES	B
EkB2	ELOAK SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
EkC3	ELOAK SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
GlB2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
GlC3	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
GnB2	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
MgB2	MANOR GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
MgC3	MANOR GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
MIA	MANOR LOAM, 0 TO 3 PERCENT SLOPES	B
MIb2	MANOR LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
MIc2	MANOR LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
MIC3	MANOR LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
MID2	MANOR LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	B
MID3	MANOR LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	B



E 13490.000
N 592.900

N 594.100
E 13500.000

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

David M. Lyle 2/10/05
PLANNING DIRECTOR DATE

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 II LOTS 48-80, OPEN SPACE LOTS 81-84, BULK PARCEL E
POD 'E-1' SECTION IV - RESIDENTIAL PHASE IV E
A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY PHASE I
NON-BUILDABLE BULK PARCELS A, B, & C

TAX MAP 16 GRID 16 PART OF PARCEL 706
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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DESIGN BY: PS
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SCALE: 1" = 100'
DATE: JANUARY 31, 2009
PROJECT #: 05-025
SHEET #: 5 of 9



LEGEND

EXISTING CONTOUR	---
PROPOSED CONTOUR	---
EXISTING SPOT ELEVATION	82.53
PROPOSED SPOT ELEVATION	82.53
DIRECTION OF FLOW	---
EXISTING TREELINE	---
PROPOSED TREELINE	---
EXISTING STREET TREES PER F-07-158	---
PROPOSED LANDSCAPING	---

- 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 \$18,000 (92 SHADE TREES @ \$300.00 EACH). STREET TREES AND INTERNAL LANDSCAPE TREES WILL BE PLANTED AT THE SITE DEVELOPMENT PLAN STAGE. LANDSCAPING FOR LOTS 48 THRU 80 WILL BE PROVIDED FOR AT THE SITE DEVELOPMENT PLAN STAGE IN ACCORDANCE WITH SECTION 16.124 OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL.

LANDSCAPE SCHEDULE

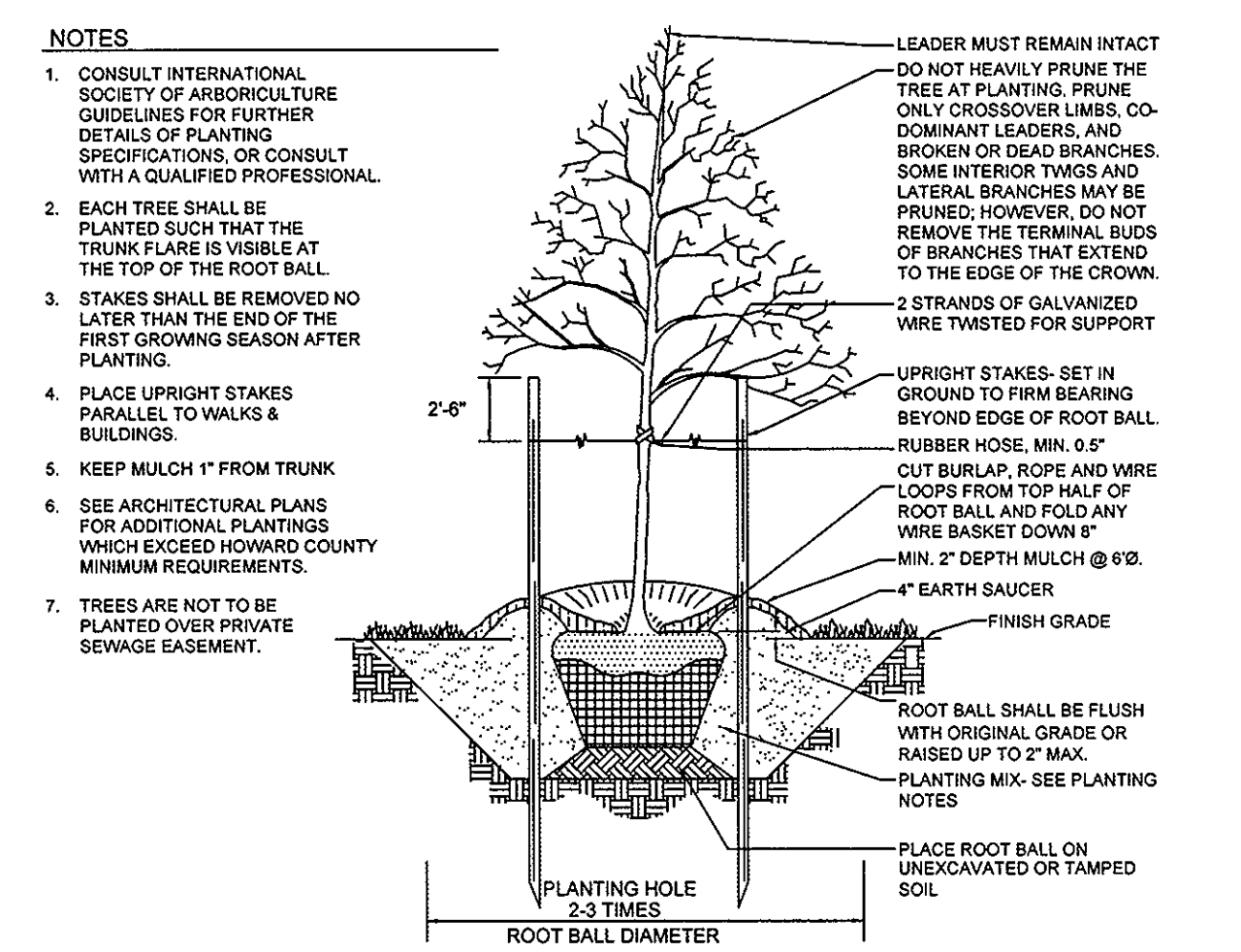
KEY	QUANTITY	BOTANICAL NAME	SIZE	NOTE
⊙	29	ACER RUBRUM (SHADE TREES) OCTOBER GLORY RED MAPLE	2 1/2"-3" CAL.	B & B
⊙	27	QUERCUS RUBRA (INTERNAL) RED OAK	2 1/2"-3" CAL.	B & B
⊙	12	CUPRESSOCYPARIS LEYLANDI LEYLAND CYPRESS	5'-6" HL.	B & B

STREET TREE SCHEDULE

STREET NAME	LF REQUIRED	TREES REQUIRED	TREES PROVIDED
PUCCINI LANE	1,154	29	29

RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

Number of Dwelling Units	33
Number of Trees Required (1:1 DU SFA: 1:3 DU Apts.)	33
Number of Trees Provided	33
Other Trees (2:1 Substitution)	-



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

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

PRELIMINARY LANDSCAPE PLAN
FAIRWAYS AT TURF VALLEY
PHASE II LOTS 48-80, OPEN SPACE LOTS 81-84, BULK PARCEL E
POD 'E-1' SECTION IV : RESIDENTIAL PHASE IV E
A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY PHASE I
NON-BUILDABLE BULK PARCELS A, B, & C

TAX MAP 16 GRID 16
2ND ELECTION DISTRICT

PART OF PARCEL 708
HOWARD COUNTY, MARYLAND

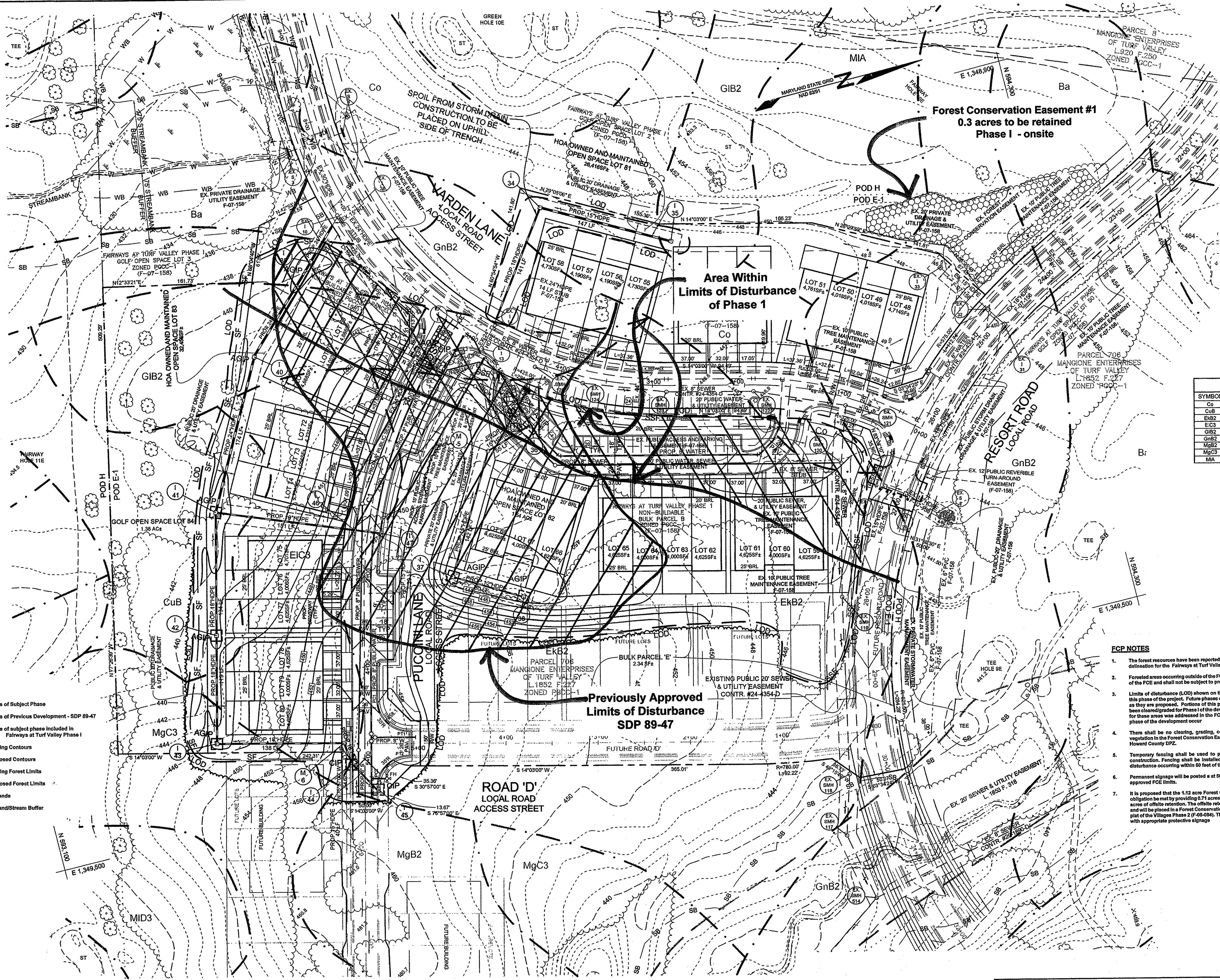
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DESIGN BY: PS
DRAWN BY: MRM
CHECKED BY: PS
SCALE: 1" = 50'
DATE: JANUARY 31, 2009
PROJECT #: 06-025
SHEET #: 5 OF 9

STATE OF MARYLAND
PROFESSIONAL ENGINEER
No. 32925

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

Marsha L. Coughlin 2/10/09
PLANNING DIRECTOR DATE



LEGEND

EXISTING CONTOUR	---
PROPOSED CONTOUR	---
EXISTING SPOT ELEVATION	+
PROPOSED SPOT ELEVATION	+
DIRECTION OF FLOW	→
EXISTING TREELINE	~
PROPOSED TREELINE	~
SUPER SILT FENCE	SSF
LIMIT OF DISTURBANCE	LOD
EROSION CONTROL MATTING	ECM
SOIL BOUNDARY	---
AT GRADE INLET PROTECTION	AGIP
CURB INLET PROTECTION	CIP
LIGHT POLES	☆
POST TOP	☆

FCA Exemption Note

The proposed development of Fairways at 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.

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP
Cc	COCORUS SILT LOAM	C
CuB	COMUS SILT LOAM, LOCAL ALLUVIUM, 3 TO 8 PERCENT SLOPES	B
ENB2	ELONK SILT LOAM, 3 TO 6 PERCENT SLOPES, MODERATELY ERODED	B
EC3	ELONK SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
GIB2	GLENLEIG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
GnB2	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
MgB2	MAJOR GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
MgC3	MAJOR GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
MIA	MAJOR LOAM, 0 TO 3 PERCENT SLOPES	B

FOREST CONSERVATION WORKSHEET
Version 1.0

Project: Fairways at Turf Valley Phase II
Date: September 15, 2008

NET TRACT AREA

Symbol	Acres
A. Total tract area	93.0
B. Area within 100 Year Floodplain and future development areas	87.1
C. Area within limits of disturbance associated with Phase I & SDP 89-47	3.2
D. Net Tract Area - LOD not previously associated with FCA	2.7

LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)

ARA	MDR	IDA	HDR	MPD	CIA

EXISTING FOREST COVER:

Category	Percentage	Acres
G. Existing forest cover (excluding floodplain)	1.7	1.7
H. Area of forest above afforestation threshold	1.3	1.3
I. Area of forest above conservation threshold	1.3	1.3

BREAK EVEN POINT:

Category	Break-Even Point
J. Forest retention above threshold with no mitigation	0.26
K. Clearing permitted without mitigation	1.04

PROPOSED FOREST CLEARING

Category	Acres
L. Total area of forest to be Cleared or Retained Outside FCE	1.7
M. Total area of forest to be Retained in FCE	0

PLANTING REQUIREMENTS

Category	Acres
N. Reforestation for clearing above Conservation Threshold	0.325
P. Reforestation for clearing below Conservation Threshold	0.8
Q. Credit for retention above conservation threshold	0
R. Total reforestation required	1.12
S. Total afforestation required	0
T. Total reforestation and afforestation required	1.12

OWNER/DEVELOPER
MANGIONE ENTERPRISES OF TURF VALLEY, LP
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FOREST CONSERVATION PLAN
FAIRWAYS AT TURF VALLEY
PHASE II LOTS 48-80, OPEN SPACE LOTS 81-84, BULK PARCELS A, B, & C
POD 'E-1' SECTION IV - RESIDENTIAL PHASE IV E
A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY PHASE I
NON-BUILDABLE BULK PARCELS A, B, & C

TAX MAP 16 GRID 16
2ND ELECTION DISTRICT

PART OF PARCEL 706
HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners

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DRAWN BY: MPM
CHECKED BY: PS
SCALE: 1" = 50'
DATE: February 2, 2009
PROJECT #: 08-025
SHEET #: 7 of 9

FCA NOTES

- The forest resources have been reported in the forest stand delineation for the Fairways at Turf Valley, Phase II (SP-08-006).
- 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/graded for Phase I of the development. The FCA obligation for these areas was addressed in the FCP for Phase I. Portions of this phase of the development occur.
- 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 a 50-100 foot intervals along all approved FCE limits.
- It is proposed that the 1.12 acre Forest Conservation Act reforestation obligation be met by providing 0.71 acres of offsite reforestation and 0.82 acres of offsite retention. The offsite retention area will be on parcel D and will be placed in a Forest Conservation Easement shown on the final plat of the Villages Phase 2 (P-08-004). The retained area will be posted with appropriate protective signage.

Legend

- Limits of Subject Phase
- Limits of Previous Development - SDP 89-47
- Limits of subject phase included in Fairways at Turf Valley Phase I
- Existing Contours
- Proposed Contours
- Existing Forest Limits
- Proposed Forest Limits
- Wetlands
- Wetland/Stream Buffer

Previously Approved Limits of Disturbance SDP 89-47

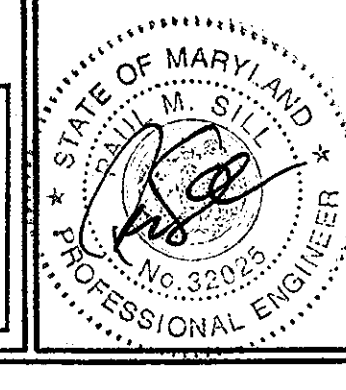
TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

Mark L. Ogilvie 2/10/09
PLANNING DIRECTOR DATE

Eco-Science Professionals, Inc.
Consulting Ecologists

MD DNR Qualified Professional
USACE Wetland Delimitator
Certification # WDC00004094

P.O. Box 5006 Glen Arm, Maryland 21057 Telephone (410) 832-2480 Fax (410) 832-2458



PLANTING NOTES:

- MULTIFLORA ROSE CONTROL MAY BE REQUIRED AS PART OF THIS PLANTING PLAN.
- BARENUT PLANT MATERIAL MAY BE USED TO OFFSET THE COST OF MULTIFLORA ROSE REMOVAL AND MAINTENANCE. IF BARENUT MATERIAL IS USED IT MUST BE PLANTED IN MARCH - APRIL AND AN ANTI-DESICCANT GEL SHOULD BE UTILIZED TO PROTECT ROOT SYSTEMS. CONTAINER GROWN STOCK IS RECOMMENDED.
- PLANTS SHOULD BE FLAGGED TO AID ON LOCATION DURING MAINTENANCE. PLANTINGS SHOULD ALSO BE PLANTED IN A GRID PATTERN TO FACILITATE MAINTENANCE AND REMOVAL OF INVASIVE AND EXOTIC SPECIES.

MULTIFLORA ROSE CONTROL NOTE

MULTIFLORA ROSE IS PREVALENT IN CERTAIN AREAS TO BE AFFORESTED. PRIOR TO PLANTING ALL MULTIFLORA ROSE SHOULD BE REMOVED. REMOVAL OF THE ROSE MAY BE PERFORMED WITH MOWING AND HERBICIDE TREATMENTS. PHYSICAL REMOVAL OF ALL TOP GROWTH FOLLOWED BY A PERIODIC HERBICIDE TREATMENT OF STUMP SPROUTS IS RECOMMENDED. NATIVE TREE AND SHRUB SPECIES OCCURRING WITHIN THE ROSE THICKETS SHOULD BE RETAINED WHEREVER POSSIBLE. HERBICIDE TREATMENTS SHALL OCCUR ON 2 MONTH INTERVALS DURING THE FIRST GROWING SEASON AND ONCE EACH IN THE SPRING AND FALL FOR SUBSEQUENT YEARS. HERBICIDE USED SHALL BE MADE SPECIFICALLY TO ADDRESS WOODY PLANT MATERIAL AND SHALL BE APPLIED AS PER MANUFACTURERS SPECIFICATIONS. CARE SHOULD BE TAKEN NOT TO SPRAY PLANTED TREES OR NATURALLY OCCURRING NATIVE TREE/SHRUB SEEDLINGS. IT IS RECOMMENDED THAT INITIATION OF ROSE REMOVAL BEGIN AT LEAST SIX MONTHS PRIOR TO PLANTING.

PLANTING/SOIL SPECIFICATIONS

- PLANTING OF BARENUT STOCK SHALL TAKE PLACE BETWEEN MARCH 15TH AND APRIL 30TH. CONTAINER STOCK MAY BE PLANTED BETWEEN SEPTEMBER 1ST AND OCTOBER 31ST.
- A THREE (3) INCH LAYER OF TOPSOIL SHALL BE SPREAD OVER ALL REFORESTATION AREAS INDICATED ON THE FOREST CONSERVATION PLAN. CONTAINER AREAS SHALL BE SEED AND STABILIZED AS PER GENERAL CONSTRUCTION PLAN FOR PROJECT. PLANTING AREAS NOT SPECIFIED BY THE GENERAL SHALL HAVE AN ADDITIONAL TOPSOIL TREATMENT.
- ALL BARENUT PLANTING STOCK SHALL HAVE THEIR ROOT SYSTEMS DIPPED INTO AN ANTI-DESICCANT GEL PRIOR TO PLANTING.
- PLANTS SHALL BE INSTALLED TO THE TOP OF ROOT MASS IS LEVEL WITH THE TOP OF EXISTING GRADE. BACKFILL IN THE PLANTING PIT SHALL CONSIST OF 3 PARTS EXISTING SOIL TO 1 PART FERTILIZER.
- FERTILIZER SHALL CONSIST OF AGROFORM 22-8-2, OR EQUIVALENT, APPLIED AS PER MANUFACTURERS SPECIFICATIONS.
- A TWO (2) INCH LAYER OF HARDWOOD MULCH SHALL BE PLACED OVER THE ROOT AREA OF ALL PLANTINGS.
- PLANT MATERIAL SHALL BE TRANSPORTED TO THE SITE IN A TARPED OR COVERED TRUCK. PLANTS SHALL BE KEPT MOIST FROM PLANTING.
- ALL NON-ORGANIC DEBRIS ASSOCIATED WITH THE PLANTING OPERATION SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.

SEQUENCE OF CONSTRUCTION

- PLANTS SHALL BE INSTALLED AS PER PLANT SCHEDULE AND PLANTING/SOIL SPECIFICATIONS FOR THE PROJECT.
- UPON COMPLETION OF THE PLANTING, SIGNAGE SHALL BE INSTALLED AS PER THE FOREST RETENTION AREA PROTECTION DEVICES SHOWN ON THE FOREST CONSERVATION PLAN.
- PLANTINGS SHALL BE MAINTAINED AND GUARANTEED IN ACCORDANCE WITH THE MAINTENANCE AND GUARANTEE REQUIREMENTS FOR PROJECT.

MAINTENANCE OF PLANTINGS

- MAINTENANCE OF ALL PLANTINGS SHALL LAST FOR A PERIOD OF 24 MONTHS.
- ALL PLANT MATERIAL SHALL BE WATERED TWICE A MONTH DURING THE 1ST GROWING SEASON. WATERING MAY BE MORE OR LESS FREQUENT DEPENDING ON WEATHER CONDITIONS. DURING SECOND GROWING SEASON, WATERING SHALL BE LIMITED TO DROUGHT PERIODS.
- NUDGING AND BRUSH REMOVAL SHALL BE PERFORMED FROM REFORESTATION AREAS. OLD FIELD SUCCESSIONAL SPECIES WILL BE REMOVED.
- PLANTS WILL BE STAKED A MINIMUM OF TWO TIMES DURING THE GROWING SEASON FOR PROCTOR PLANT PESTS AND DISEASES. SERIOUS PROBLEMS WILL BE TREATED WITH THE APPROPRIATE PESTICIDES.
- DEAD BRANCHES WILL BE PRUNED FROM PLANTINGS.

GUARANTEE REQUIREMENTS

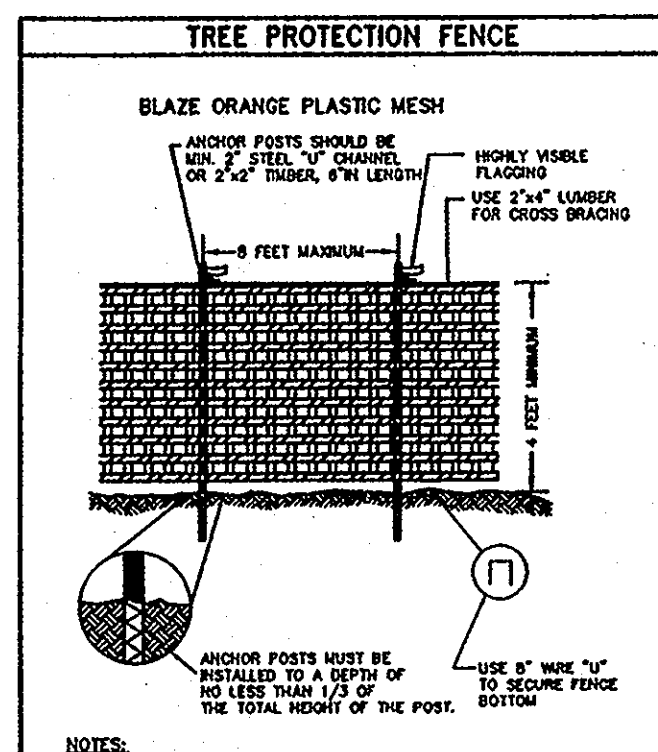
- AFTER ONE GROWING SEASON, PLANT MATERIAL SHALL BE MAINTAINED AT ONE SURVIVAL THRESHOLD. A 10% SURVIVAL RATE OF REFORESTATION PLANTINGS SHALL BE REQUIRED AT THE END OF THE 24 MONTH MAINTENANCE PERIOD. PLANTINGS THAT DO NOT MEET THIS THRESHOLD WILL BE REPLACED AT THE BEGINNING OF THE NEXT GROWING SEASON.
- THE CONTRACTOR WILL BE LIABLE FOR PLANT LOSS DUE TO THEFT OR VANDALISM. HOWEVER, DEVELOPER SHALL BE RESPONSIBLE UNTIL RELEASE FROM THE FOREST SURETY OBLIGATION.

SURETY FOR REFORESTATION

- THE DEVELOPER SHALL POST A SURETY BOND, LETTER OF CREDIT TO ENSURE THAT REFORESTATION PLANTINGS ARE COMPLETED. UPON ACCEPTANCE OF THE PLANTING BY THE COUNTY, THE BOND SHALL BE RELEASED.

- 2" CALIPER TREES = 7 PLANTING UNITS
- 1" CALIPER TREES = 3.5 PLANTING UNITS
- WHIPS W/SHELTERS = 2 PLANTING UNITS
- SEEDLINGS = 1 PLANTING UNIT

PLANTING SHALL BE INSTALLED IN A CURVILINEAR FASHION ALONG A CONTOUR TO AVOID A GRID APPEARANCE BUT SHOULD BE SPACED TO FACILITATE MAINTENANCE. LARGER STOCK TREES (1" AND 2" CALIPER) SHOULD BE STAGGERED ALONG THE OUTER PERIMETER OF THE PLANTING AREAS TO SERVE AS A DEMARCATION OF THE FCE.



- 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 DEVICES.
 - WOOD FOOT SHIELDS MUST BE PLACED ON ANCHOR POSTS.
 - DEVICES SHOULD BE PROPERLY MAINTAINED DURING CONSTRUCTION AND PROTECTIVE SIGNAGE IS ALSO REQUIRED.

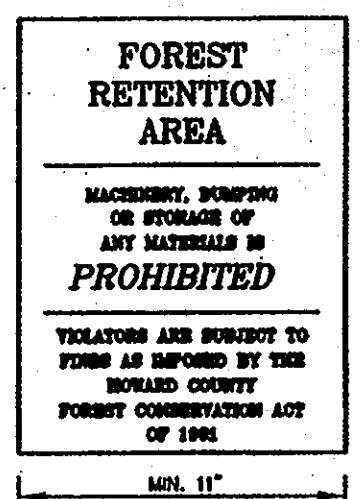
PLANTING SCHEDULE

FCE #9 - 0.71 acres
Planting Units Required: 497
Planting Units Provided: 500

Qty	Species	Size	Spacing	Total FCA Units
50	Acer rubrum - Red maple	2-3' whip	11' o.c.	
15	Diospyros virginiana - Persimmon **	2-3' whip	11' o.c.	
50	Liriodendron tulipifera - Tulip poplar **	2-3' whip	11' o.c.	
15	Nyssa sylvatica - Black gum	2-3' whip	11' o.c.	
25	Platanus occidentalis - Sycamore	2-3' whip	11' o.c.	
50	Prunus serotina - Black cherry **	2-3' whip	11' o.c.	
20	Quercus alba - White oak	2-3' whip	11' o.c.	
10	Ulmus rubra - Slippery Elm	2-3' whip	11' o.c.	
15	Viburnum prunifolium - Blackhaw **	2-3' whip	11' o.c.	
250	Total whip plantings x 2 units Area = FCA unit credit			500
	Total Unit Credit			500

Planting Notes:

- Planting density based on 700 planting units per acre. 2" caliper trees = 7 planting units, 1" caliper trees = 3.5 planting units, whips with shelter = 2 planting units.
- ** - These species should not be planted within the wetland limits.
- 1" caliper trees should be staggered along the outer perimeter of the planting area to serve as demarcation of the boundary. The trees should be no closer than 15 foot spacing.
- Planting shall be made in a curvilinear fashion along contour. The planting should avoid a grid appearance but should be spaced to facilitate maintenance.
- Multiflora rose/heavy brush removal/control may be required prior to installation of planting.
- All whips are required to be installed with tree shelters per Howard County FCA requirements.



SIGNAGE
NOT TO SCALE

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

PLANNING DIRECTOR: *[Signature]* DATE: *4/10/09*

**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	3.62 acres	0.22 acres reforestation 1.0 acres retained forest Plat of Revision Parcel D - F-09-22
Phase 2	0 acres	1.12 acres	1.12 acres	0 acres
Total FCE credit not yet utilized for project				0.72 acres

* FCE credit may be obtained through 1:1 planting or 3:1 offsite retention
** Retention average reflects actual easement area and not 0.5 retention credit

FOREST CONSERVATION NOTES:

- PARCEL 401: THE TOTAL FOREST CONSERVATION OBLIGATION AMOUNT OF 4.48 ACRES SHALL BE MET BY THE RETENTION OF 2.03 AC. OF NET TRACT AREA FORES. WITHIN A FOREST CONSERVATION EASEMENT ON PARCEL 401 AND BY THE OFFSITE RETENTION OF 4.00 AC. OF FORES. WITHIN A FOREST CONSERVATION EASEMENT OF WHICH ONLY 2.45 ACRES CREDITED (SINCE THIS RETENTION IS OFFSITE IT IS CREDITED AT 1:1 RATIO). FINANCIAL SURETY FOR THE REQUIRED FOREST CONSERVATION HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$42,688.00 (\$0.20 PER SQUARE FOOT).
- PARCEL 8 & 9: THIS PORTION OF THE PROJECT IS EXEMPT FROM HOWARD COUNTY FOREST CONSERVATION REQUIREMENTS UNDER SECTION 16.1200 OF THE COUNTY CODE SINCE IT IS A PLANNED UNIT DEVELOPMENT UNDER S-88-13.
- ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS SUBJECT TO PROTECTIVE COVENANTS WHICH MAY BE FOUND IN THE LAND RECORDS OF HOWARD COUNTY WHICH RESTRICT THE DISTURBANCE AND USE OF THESE AREAS.
- THE FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT. 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.
- LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO AREAS OUTSIDE THE LIMIT OF TEMPORARY FENCING OR THE FCE BOUNDARY, WHICHEVER IS GREATER.
- THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS PERMITTED BY HOWARD COUNTY DPZ.
- NO STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION EASEMENTS.
- TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION. THE FENCING SHALL BE PLACED ALONG ALL FCE RETENTION BOUNDARIES WHICH OCCUR WITHIN 15 FEET OF THE PROPOSED LIMITS OF DISTURBANCE.
- PERMANENT SIGNAGE SHALL BE PLACED 50-100' APART ALONG THE BOUNDARIES OF ALL AREAS INCLUDED IN FOREST CONSERVATION EASEMENTS.
- 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 WILL BE PROTECTED BY THE EASEMENT RESTRICTIONS BUT HAVE NOT BEEN CREDITED TOWARD THE PROJECTS FCA OBLIGATIONS.
- THE FOREST CONSERVATION WATERSHED FOR THIS PROJECT IS THE LITTLE PATUXENT RIVER (UPPER) #2131105A.
- THERE ARE NO RARE, THREATENED OR ENDANGERED SPECIES LOCATED ON THIS SITE. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO HISTORIC STRUCTURES LOCATED ON THIS SITE.
- THE PROTECTIVE SIGNAGE SHALL STAY ON-SITE IN PERPETUITY.

Forest Conservation Summary Table

Parcel 401, Villages at Turf Valley, Phase 2

Easement #	Retention	Retention credited toward obligation	Non-credited retention	Planting	Priority Areas	Total Easement Area
1	0.23	0.23	0	0	0.10	0.23
2	1.54	1.54	0.08	0	0	1.62
3	0.26	0.26	0	0	0.24	0.26
4	2.52	1.26	0	0	0.42	2.52
5	0.66	0.28	0.26	0	0.76	0.82
6	0.60	0.40	0	0	0.71	0.80
7	0.23	0.115	0	0	0	0.23
8	0.79	0.395	0	0	0.12	0.79
TOTALS	6.93	4.48	0.34	0	2.35	7.27

*All areas are in acres

Forest Conservation Summary Table

Fairways at Turf Valley, Phases 2 and 3

Easement #	Retention	Retention credited toward obligation	Non-credited retention	Planting	Priority Areas	Total Easement Area
9	1.74	0.87	0.21	0.71	0.84	2.66

*All areas are in acres

OFFSITE FCE NOTES:

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 #9. 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 #9.

FCE #9 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.

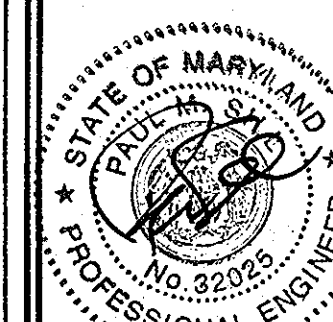
OWNER/DEVELOPER

MANGIONE ENTERPRISES OF TURF VALLEY, LP
1265 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21053
410.625.8400

**FOREST CONSERVATION PLAN - OFFSITE FCE
FAIRWAYS AT TURF VALLEY**
PHASE II LOTS 48-80, OPEN SPACE LOTS 81-84, BULK PARCEL E
POD 'E-1' SECTION IV : RESIDENTIAL PHASE IV E
A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY PHASE I
NON-BUILDABLE BULK PARCELS A, B, & C

TAX MAP 16 GRID 16
2ND ELECTION DISTRICT

PART OF PARCEL 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@sandal.com

DESIGN BY: PS
DRAWN BY: MRM
CHECKED BY: PS
SCALE: 1" = 50'
DATE: February 2, 2009
PROJECT #: 08-025
SHEET #: 8 of 9

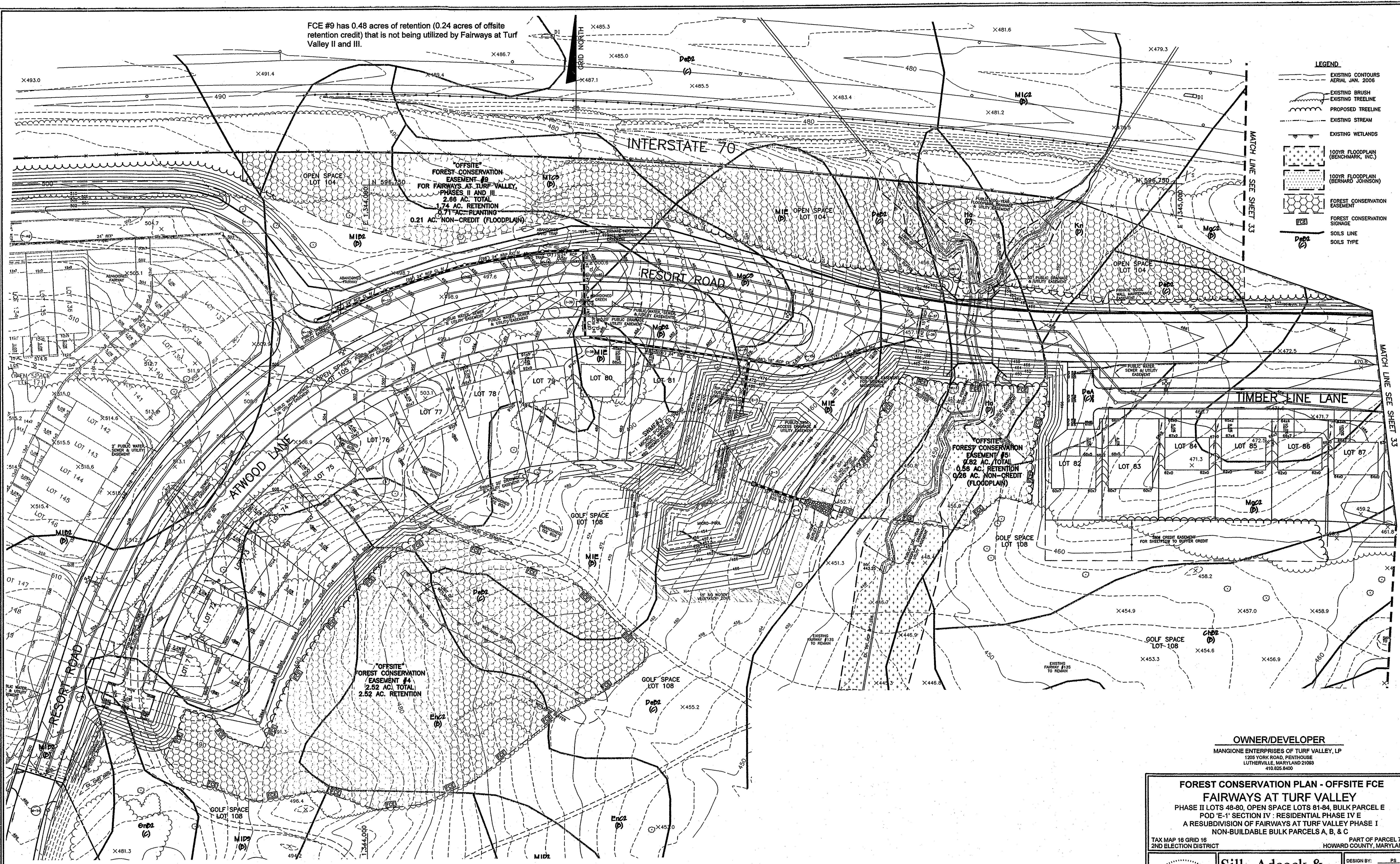
**Eco-Science
Professionals, Inc.**
CONSULTING ECOLOGISTS

MD DNR Qualified Professional
USACOE Virginia Delineator
Certification #VDC-00MD061004013

[Signature]
John T. Canalis

P.O. Box 5006 Glen Arm, MD 21057 (410) 592-6752

FCE #9 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.



- 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 EASEMENT
 - [Pattern] FOREST CONSERVATION SIGNAGE
 - [Pattern] SOILS LINE
 - [Pattern] SOILS TYPE

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

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 A RESUBDIVISION OF FAIRWAYS AT TURF VALLEY PHASE I
 NON-BUILDABLE BULK PARCELS A, B, & C

TAX MAP 16 GRID 16 2ND ELECTION DISTRICT PART OF PARCEL 705 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@sadland.com

DESIGN BY: PS
 DRAWN BY: MRM
 CHECKED BY: PS
 SCALE: 1" = 50'
 DATE: February 2, 2009
 PROJECT #: 08-026
 SHEET #: 9 of 9

PLAN VIEW
 SCALE: 1" = 50'

TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY

Mark K. ... 4/10/09
 PLANNING DIRECTOR DATE

Eco-Science Professionals, Inc.
 Consulting Ecologists
 P.O. Box 5066 Glen Arm, Maryland 21057
 Telephone (410) 832-2489 Fax (410) 832-2488