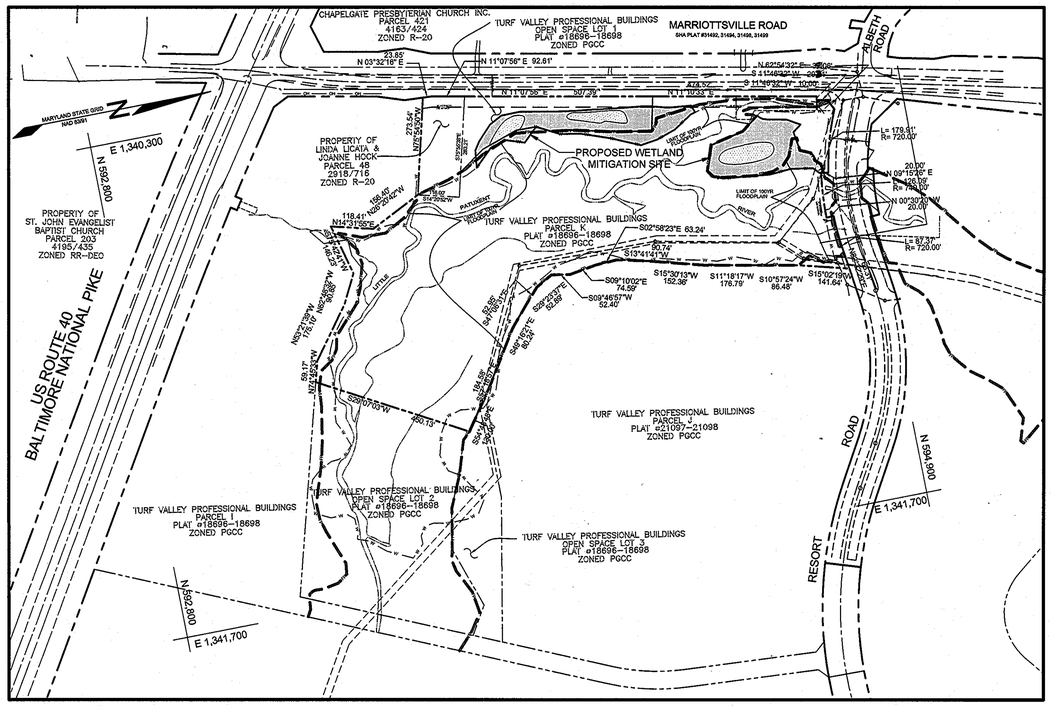
SITE DEVELOPMENT PLAN
TURF VALLEY RESORT
WETLAND MITIGATION SITE
PARCEL 48, PARCEL K & OPEN SPACE LOT 1
TAX MAP 16
HOWARD COUNTY, MARYLAND

GENERAL NOTES

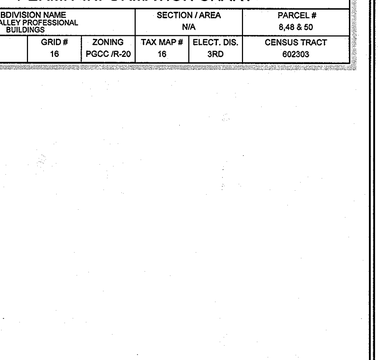
1. SUBJECT PROPERTY IS ZONED R-20 & "PGCC" PER THE 2/02/04 COMPREHENSIVE ZONING PLAN AND THE "COMP. LITE" ZONING AMENDMENTS EFFECTIVE 7/28/06.
2. THIS PROPERTY IS WITHIN THE METROPOLITAN DISTRICT.
3. THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND TO THE ZONING REGULATIONS EFFECTIVE APRIL 13, 2004. PER SECTION 126.H.1.A, PLANNING BOARD APPROVAL WAS GRANTED ON APRIL 15, 2010 FOR THE SITE DEVELOPMENT PLAN FOR THIS PROJECT AND FOR FDP AMENDMENT SUBSEQUENT TO SIGNATURE APPROVAL OF S-86-013 (PB-368).
4. HOWARD COUNTY SOILS MAP 16
5. TOPOGRAPHY WITHIN THE PROJECT SITE IS BASED ON WINGS AERIAL MAPPING CO., INC. ON OR ABOUT JANUARY, 2006. TOPOGRAPHY SHOWN WITHIN RESORT ROAD RIGHT OF WAY IS BASED ON APPROVED F02-74 AND IS FOR INFORMATIONAL PURPOSES ONLY
6. THE BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT MARCH 2006 BY MILDENBERG, BOENDER & ASSOC. INC. ALL LOT AREAS ARE MORE OR LESS(+/-).
7. THERE ARE NO HISTORIC STRUCTURES OR CEMETERIES ON-SITE.
8. MARYLAND DEPARTMENT OF THE ENVIRONMENT NONTIDAL WETLANDS AND WATERWAYS PERMIT 02-NT-0009/200261454. U.S. ARMY CORPS OF ENGINEERS PERMIT 02-61454-16.
9. WETLANDS ARE BASED ON A STUDY CONDUCTED BY EXPLORATION RESEARCH, INC. WETLANDS INDICATED ARE BASED ON APPROVED STUDIES AS SHOWN ON THE FOURTH AMENDED COMPREHENSIVE SKETCH PLAN OF TURF VALLEY, (S-86-013, PB 368). EXISTING WETLAND BOUNDARIES ARE BASED ON THOSE FOUND ON SUBDIVISION PLATS 18696-18698, TURF VALLEY PROFESSIONAL BUILDINGS."
10. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

STATE HIGHWAY ADMINISTRATION	410.531.5533
BGE(CONTRACTOR SERVICES)	410.850.4620
BGE(UNDERGROUND DAMAGE CONTROL)	410.787.9068
MISS UTILITY	1.800.257.7777
COLONIAL PIPELINE COMPANY	410.795.1390
HOWARD COUNTY, DEPT. OF PUBLIC WORKS, BUREAU OF UTILITIES	410.313.4900
HOWARD COUNTY HEALTH DEPARTMENT	410.313.2640
AT&T	1.800.252.1133
VERIZON	1.800.743.0033/410.224.9210

11. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
12. ANY DAMAGE TO PUBLIC RIGHT-OF WAYS, PAVING OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
13. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
14. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY IN ADDITION TO MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
15. THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
16. EXISTING UTILITIES ARE LOCATED BY THE USE OF ANY OR ALL OF THE FOLLOWING: ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER PLANS AND OTHER AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF THE EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTORS INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
17. SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER. DRIVEWAY PAVING TO BE HOWARD COUNTY STANDARD P-1 PAVING SECTION. GEOTECHNICAL ENGINEER TO CONFIRM ACCEPTABILITY OF PROPOSED PAVING SECTION, BASED ON SOIL TEST, PRIOR TO CONSTRUCTION.
18. ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES.
19. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENTS NUMBERS 16IB AND 16E1 WERE USED FOR THIS PROJECT.
20. THE FLOODPLAIN DELINEATION FROM HEC-RAS SECTIONS 1 TO 17 BASED ON STUDY CONDUCTED BY MILDENBURG, BOENDER AND ASSOCIATES AND DATED JANUARY 2005. FLOODPLAIN DOWNSTREAM OF SECTION 1 BASED ON PREVIOUSLY APPROVED STUDY FOR TURF VALLEY WEST GOLF COURSE (REF.SDP-93-106) PERFORMED BY MILDENBURG, MOCHI AND ASSOCIATES AND DATED JUNE 18, 1993.
21. CLEARING, GRADING AND CONSTRUCTION OF CARTPATH AND PLANTINGS OCCUR WITHIN THE DESIGNATED WETLAND AND STREAM BUFFERS PER 02-NT-0009/200261454 APPROVAL FROM MDE
22. IN ACCORDANCE WITH SECTION 16.116(c) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING AND THE SOIL CONSERVATION DISTRICT HAVE DETERMINED THAT WETLAND AND BUFFER DISTURBANCES ARE NECESSARY TO CREATE THE WETLAND MITIGATION AREAS.
23. THE PURPOSE OF THIS SITE DEVELOPMENT PLAN IS TO DETAIL THE CREATION OF EMERGENT AND FORESTED WETLANDS TO OFFSET THE AUTHORIZED RESOURCE IMPACTS ACROSS THE TURF VALLEY RESORT MIXED-USE DEVELOPMENT SITE (02-NT-0009/200261454) WETLAND CREATION IS A CONDITION OF APPROVAL BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AND THE U.S. ARMY CORPS OF ENGINEERS PERMIT 02-61454-16.
24. TOPSOIL SHOULD BE SALVAGED AND REPLACED WHENEVER POSSIBLE TO A DEPTH OF 6 INCHES. SITE SHOULD BE GRADED TO BELOW 6 INCHES OF FINAL GRADE, THEN 6 INCHES TOPSOIL SPREAD OVER THE SITE. SOIL AND SUBSTRATE AMENDMENTS NEED TO MEET HYDRIC SOIL CHARACTERISTICS AND MAINTAIN THE SPECIFIED PLANT SPECIES. * A MINIMUM OF 60 CUBIC YARDS OF ORGANIC MATTER PER ACRE IS REQUIRED. THE ADDITION OF SUPPLEMENTAL LARGE WOODY DEBRIS IS ALSO RECOMMENDED. THE SURFACE OF THE SOIL MUST NOT BE COMPACTED TO THE EXTENT THAT IT LIMITS PLANT ESTABLISHMENT AND MICROBIAL ACTIVITY. UPON COMPLETION OF GRADING, THE SOIL MUST BE DISKED OR CHISEL PLOWED TO A DEPTH OF AT LEAST 8 INCHES
25. A SURETY BOND IN THE AMOUNT OF $33,859.00 SHALL BE FILED WITH MDE WITHIN 60 DAYS OF THE APPROVAL OF THE PHASE II MITIGATION PLAN. PRIOR TO ISSUANCE OF THE GRADING PERMIT, A COPY OF THE WETLAND MITIGATION SURETY POSTED WITH MDE WILL BE PROVIDED TO THE DEPARTMENT OF PLANNING AND ZONING, DIVISION OF LAND DEVELOPEMENT".
26. REFER TO DPZ FILE #'S S-86-13, PB368, PLATS 18696-18698, S-88-19, S-99-02, S-00-18, P-00-06, P-00-02, F-02-74, WP-02-96,WP-10-159, WP-11-168, F10-104, PLATS 21097-21098
27. THE DEPARTMENT OF PLANNING AND ZONING APPROVES THIS PLAN AS AN ALTERNATIVE TO THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE PLAN MEETS THE INTENT OF THE REGULATIONS AND MEETS OR EXCEEDS THE STANDARD REQUIREMENTS.
28. THE PORTION OF THIS PROJECT LOCATED WITHIN THE PGCC DISTRICT IS EXEMPT FROM THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION SINCE IT IS A PLANNED UNIT DEVELOPMENT WHICH HAD PRELIMINARY DEVELOPMENT PLAN APPROVAL AND 50% OR MORE OF THE LAND WAS RECORDED AND SUBSTANTIALLY DEVELOPED BEFORE DECEMBER 31, 1992 [SUBSECTION 16.1202(B)(VI)]. THE PORTION OF THIS PROJECT LOCATED WITHIN THE R-20 DISTRICT IS EXEMPT FROM THE REQUIREMENTS OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION SINCE THE TOTAL CUTTING, CLEARING OR GRADING OF FOREST RESOURCES ON PARCEL 48 IS LESS THAN 20,000 SQUARE FEET. A DECLARATION OF INTENT HAS BEEN SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING VERIFYING THAT THE ACTIVITY IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS.
29. NO REGULATED STEEP SLOPES EXIST WITHIN THE PROJECT BOUNDARIES.
30. THE WIDTH OF THE REGULATED STREAM BUFFER IS BASED ON SUBSECTION 16.116(A)(2)(II) OF THE HOWARD COUNTY CODE USING AN OPEN SPACE LAND USE IN THE PGCC ZONING DISTRICT.
31. PRIOR TO GRADING PERMIT APPLICATION A LETTER OF PERMISSION SHALL BE OBTAINED FROM THE OWNERS OF LOT 48 AUTHORIZING THE DEVELOPER TO CONDUCT ACTIVITIES ON THEIR PROPERTY

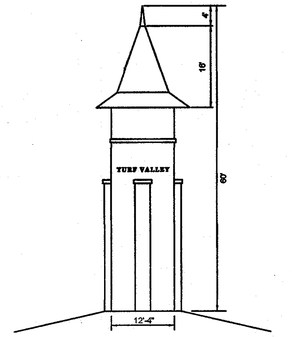


LOCATION MAP
SCALE: 1"=200'



HOWARD COUNTY, MARYLAND ADC MAP 4814 GRID F3,G3

VICINITY MAP
SCALE:1"=2000'



PROPOSED ENTRANCE MONUMENT
NOT TO SCALE

SHEET INDEX

BENCHMARKS

NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
16IB	590,475.2538	1,344,753.9350	469.892	11.5' SOUTHWEST OF WBL RT. 40, 20.8' WEST OF PK NAIL IN SHOULDER, 66.4' SOUTH OF LAST POST IN GUARDRAIL
16E1	593,250.9638	1,340,192.7010	463.893	ISLE AT COR. RTE 40 - MARRIOTTSVILLE RD 84.3 ' FROM TRAFFIC SIGNAL POST WBL 67.3 ' FROM TRAFFIC SIGNAL POST EBL

SITE ANALYSIS DATA CHART

TOTAL PROJECT AREA 17.74 AC+/-	AREA OF SUBMISSION 17.74 AC+/-	DISTURBED AREA 3.1475	PRESENT ZONING PGCC, R-20
PROPOSED USE OPEN SPACE	FLOOR SPACE PER USE NA	TOTAL UNITS ALLOWED NA	TOTAL UNITS PROPOSED NA
MAX. # EMPLY/TENANTS NA	PARKING SPACES REQ. NA	PARKING SPACES PROV. NA	HC SPACES PROVIDED NA
OPEN SPACE REQUIRED NA	OPEN SPACE PROVIDED NA	REC. O.S. REQUIRED NA	REC. O.S. PROVIDED NA
BUILDING COVERAGE NA	FLOOR AREA RATIO NA	DPZ FILE REFERENCES SEE GENERAL NOTE #26	

PERMIT INFORMATION CHART

SUBDIVISION NAME TURF VALLEY PROFESSIONAL BUILDINGS			SECTION / AREA N/A		PARCEL # 8,48 & 50
PLAT 18697-18698	GRID # 16	ZONING PGCC /R-20	TAX MAP # 16	ELECT. DIS. 3RD	CENSUS TRACT 602303

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/30/12
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 5/01/12
DIRECTOR — DATE 5/1/12

NO.	DESCRIPTION	DATE
1	ADD MONUMENT ELEVATION TO PLAN	2-21-2012

REVISIONS

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 4/15/10

COVER SHEET
TURF VALLEY RESORT
WETLAND MITIGATION SITE
PARCEL 48, TURF VALLEY PROFESSIONAL BUILDINGS, PARCEL K AND OPEN SPACE LOT 1
TAX MAP 16 GRID 16 — P/O PARCEL 8, 48 & 50
3RD 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@saaland.com

STATE OF MARYLAND — PAUL M. SILL — No. 32025 — PROFESSIONAL ENGINEER

DESIGN BY: JH
DRAWN BY: JH
CHECKED BY: PS
SCALE: AS SHOWN
DATE: APRIL 4, 2012
PROJECT #: 06-025
SHEET #: 1 of 3

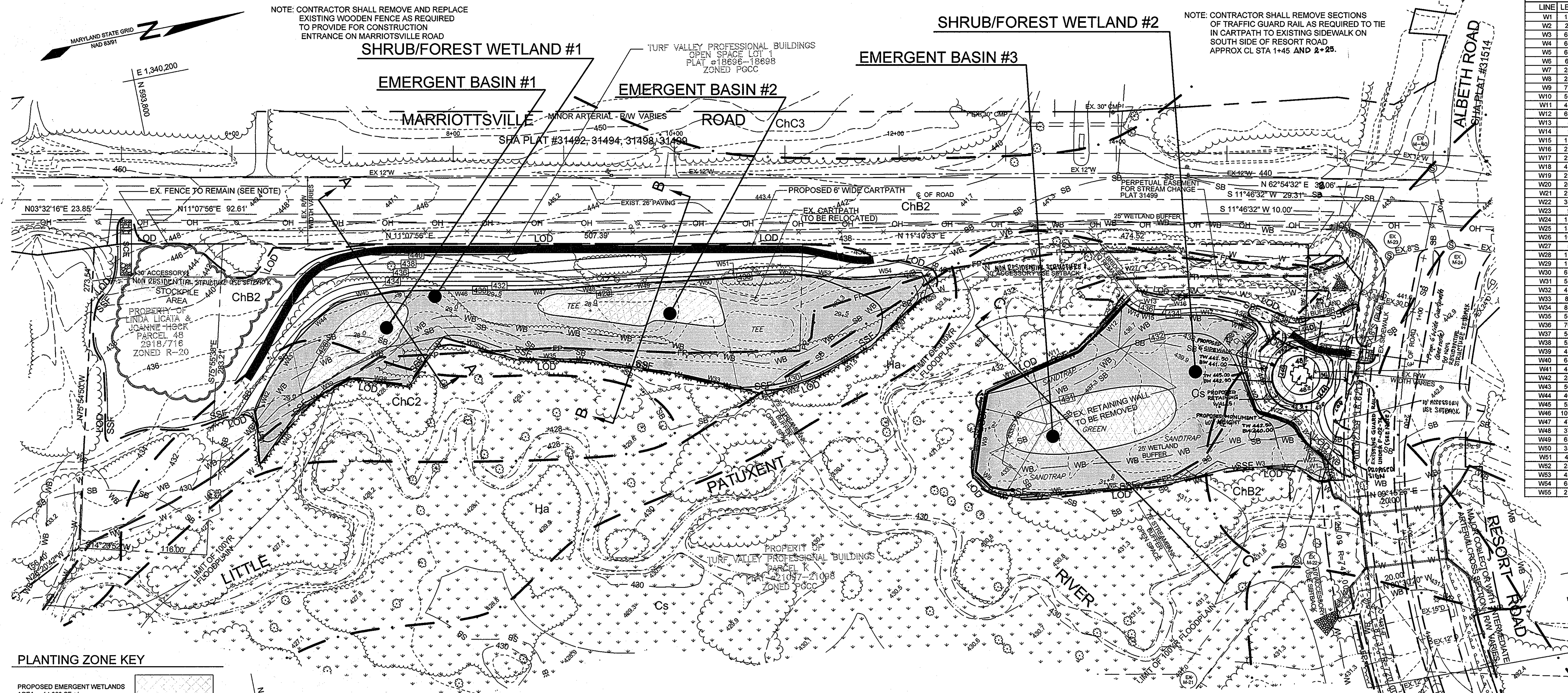
PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME , AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 20, 2013

P:\Land Projects\TV 06-025\dwg\Wetlands\06-025_C1_Cover.dwg, 4/5/2012 8:30:16 AM, Johnh, 1:1

SDP-10-056

NOTE: CONTRACTOR SHALL REMOVE AND REPLACE EXISTING WOODEN FENCE AS REQUIRED TO PROVIDE FOR CONSTRUCTION ENTRANCE ON MARRIOTSVILLE ROAD

NOTE: CONTRACTOR SHALL REMOVE SECTIONS OF TRAFFIC GUARD RAIL AS REQUIRED TO TIE IN CARTPATH TO EXISTING SIDEWALK ON SOUTH SIDE OF RESORT ROAD APPROX CL STA 1+45 AND 2+25.



PLAN VIEW
SCALE: 1"=50'

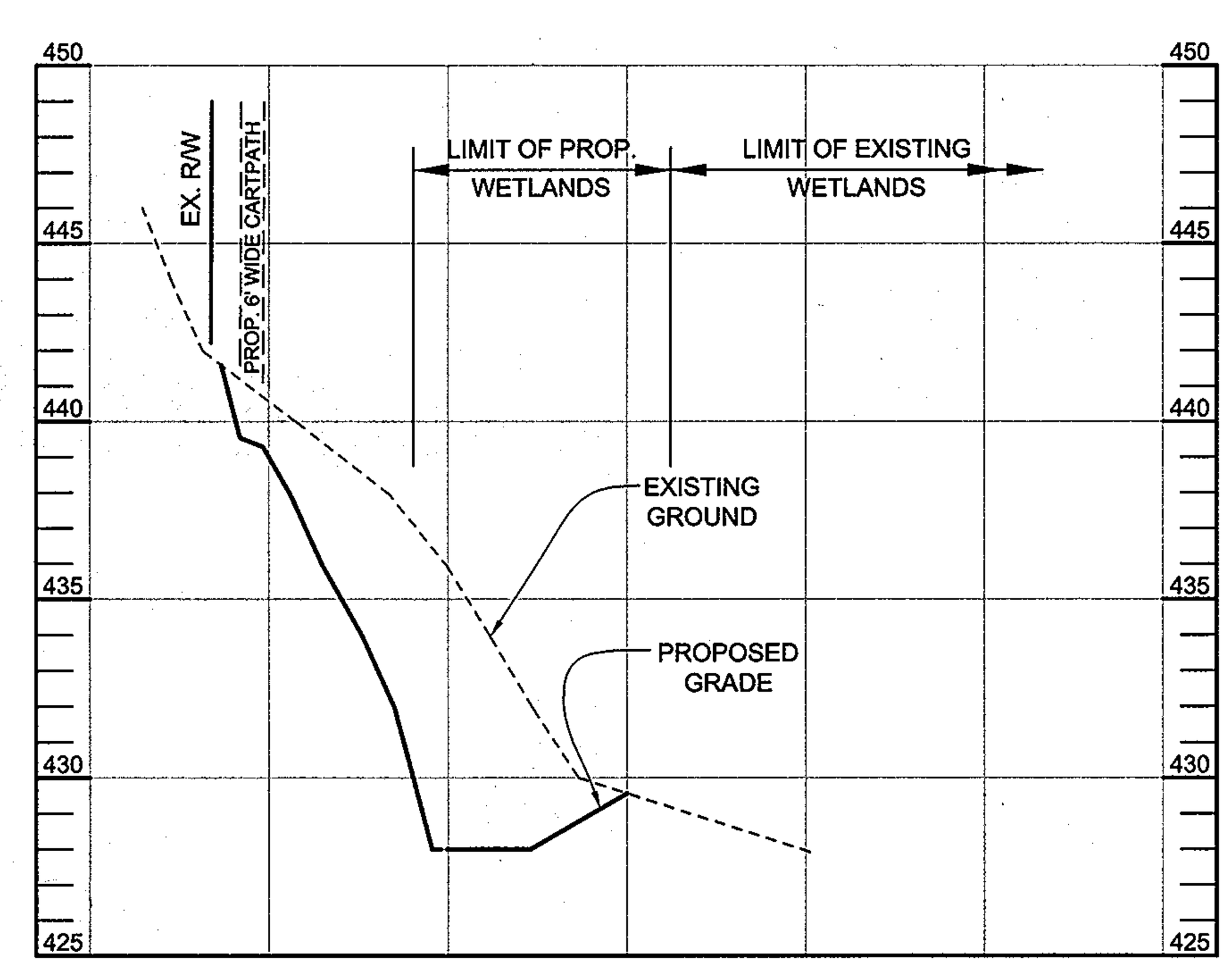
PLANTING ZONE KEY

- PROPOSED EMERGENT WETLANDS AREA = 14,860 SF +/-
- PROP. FOREST/SHRUB WETLANDS AREA = 64,623 SF +/-

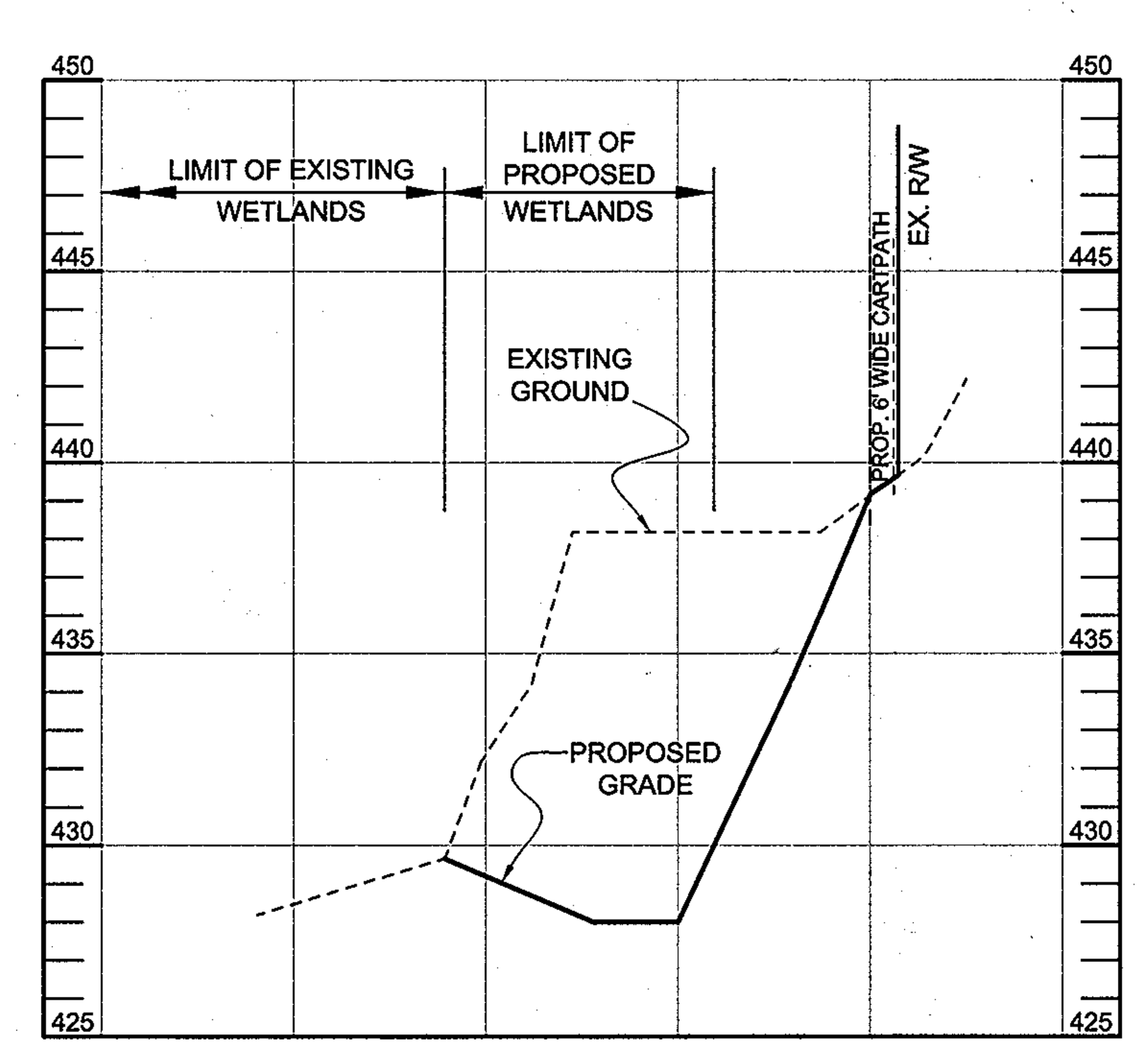
LEGEND

- EXISTING CONTOUR — 382
- PROPOSED CONTOUR — 382
- EXISTING SPOT ELEVATION — 382.3
- PROPOSED SPOT ELEVATION — + 82.53
- DIRECTION OF FLOW
- EXISTING TREELINE
- PROPOSED TREELINE
- LIMIT OF 100YR FLOODPLAIN — FP
- EXISTING STREAM/STREAMBANK
- EXISTING STREAMBANK BUFFER — SB
- EXISTING WETLANDS — W
- EXISTING WETLAND BUFFER — WB
- LIMIT OF EXISTING WETLANDS
- STABILIZED CONSTRUCTION ENTRANCE
- SUPER SILT FENCE — SSF — SSF
- LIMIT OF DISTURBANCE — LOD
- SOIL BOUNDARY — ChB2

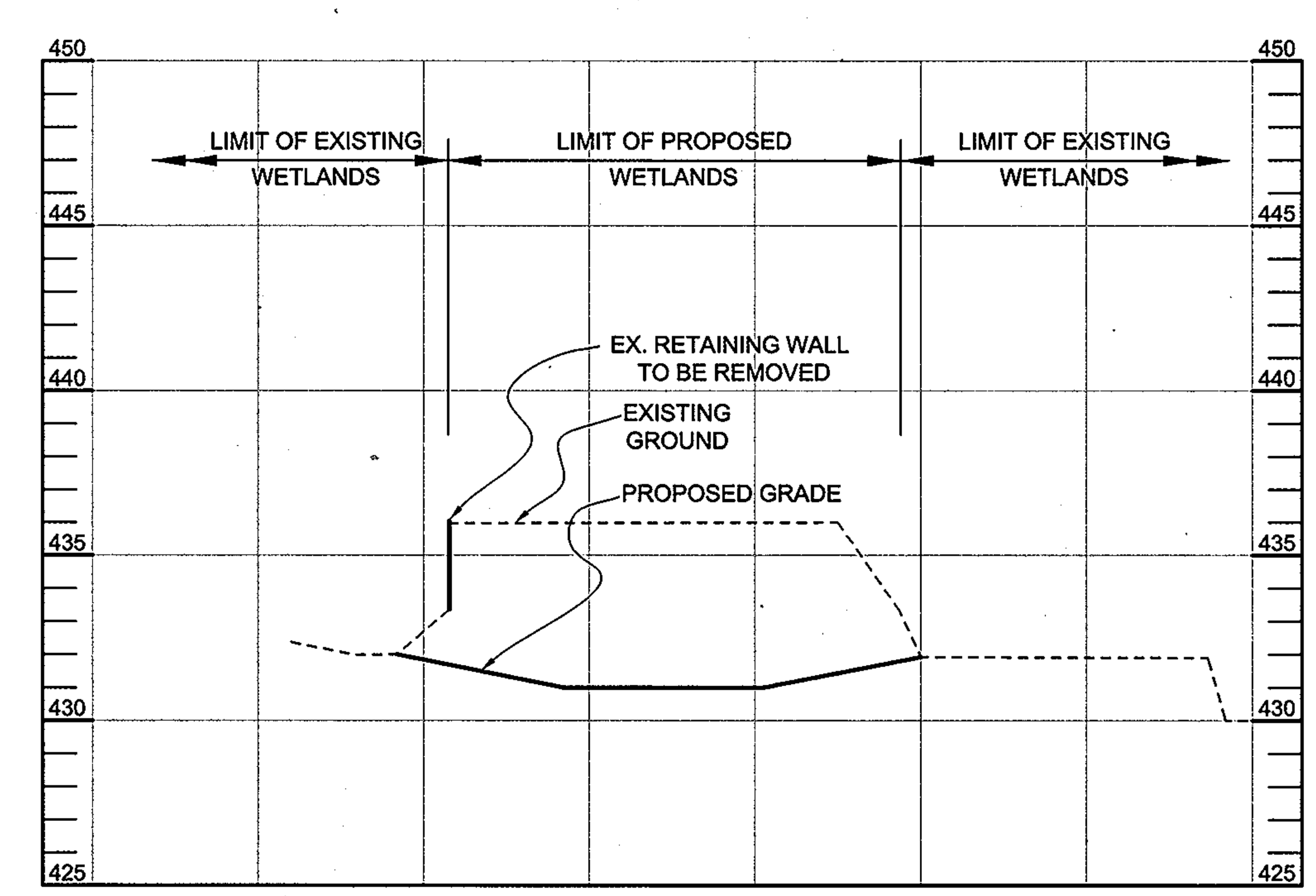
NOTE: PERMANENT PROTECTIVE SIGNAGE NON-DISTURBANCE SIGNAGE WILL BE POSTED AT 100' INTERVALS ALONG UPLAND EDGE OF WETLAND BUFFER.



SECTION 'A - A'



SECTION 'B - B'



SECTION 'C - C'

GRADING PROFILES
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

PROPOSED WETLANDS

LINE	LENGTH	BEARING
W1	12.97	S09°15'26"W
W2	21.81	S47°50'50"W
W3	62.18	S09°46'56"W
W4	61.59	S04°22'12"E
W5	62.90	S06°51'56"W
W6	66.81	S05°51'56"W
W7	24.53	S23°51'32"W
W8	24.85	S52°20'33"W
W9	73.82	N70°03'10"W
W10	50.06	N13°18'19"W
W11	41.74	N11°43'06"W
W12	62.20	N36°14'47"W
W13	8.60	N52°15'13"E
W14	9.62	N35°09'10"E
W15	15.33	N17°08'31"E
W16	21.95	N10°51'27"E
W17	29.49	N12°23'50"E
W18	41.04	N30°24'34"E
W19	29.38	S36°24'07"E
W20	26.10	N81°47'40"E
W21	29.97	N80°00'06"E
W22	30.45	N23°12'14"E
W23	9.27	N57°30'50"E
W24	18.92	N72°24'32"E
W25	13.08	N52°20'19"E
W26	10.90	N50°06'28"E
W27	5.02	S82°14'30"E
W28	11.79	S89°32'27"E
W29	13.40	S14°10'37"E
W30	61.80	S32°44'56"E
W31	55.58	S18°55'48"E
W32	48.95	S08°16'05"E
W33	87.61	S24°09'59"W
W34	83.02	S19°56'03"W
W35	58.10	S10°15'56"W
W36	70.44	S27°55'15"W
W37	54.19	S43°43'44"E
W38	52.23	S18°21'32"W
W39	48.09	S15°45'53"E
W40	68.39	S43°35'55"E
W41	48.34	N83°32'56"W
W42	28.20	N56°24'07"W
W43	56.57	N46°22'47"W
W44	40.45	N27°35'38"W
W45	52.55	N00°33'24"W
W46	109.65	N10°41'08"E
W47	47.26	N09°02'57"E
W48	37.89	N06°27'18"E
W49	63.27	N08°11'25"E
W50	35.88	N07°20'15"E
W51	48.21	N06°31'18"E
W52	25.76	N11°24'36"E
W53	45.64	N15°44'53"E
W54	65.19	N06°18'27"E
W55	21.73	N70°22'52"E

PLANTING SCHEDULE

EMERGENT BASIN #1- ELEVATION 428+/-: 3,487 SF

QTY.	SPECIES	SIZE	SPACING
200	Carex lurids - Lurid Sedge	2" PLUG	2' OC
125	Juncus effusus - Soft Rush	2" PLUG	2' OC
100	Mimulus ringens - Monkey Flower	2" PLUG	2' OC
225	Scirpus cyperinus - Woolgrass	2" PLUG	2' OC
125	Scirpus valldus - Soft Stemmed Bulrush	2" PLUG	2' OC
100	Vernonia noveboracenis	2" PLUG	2' OC
4 LB	Lolium Multiflorum - Annual Rye	SEED	BROADCAST

EMERGENT BASIN #2- ELEVATION 428+/-: 4,542 SF

QTY.	SPECIES	SIZE	SPACING
220	Carex lurids - Lurid Sedge	2" PLUG	2' OC
170	Juncus effusus - Soft Rush	2" PLUG	2' OC
210	Mimulus ringens - Monkey Flower	2" PLUG	2' OC
250	Scirpus cyperinus - Woolgrass	2" PLUG	2' OC
200	Scirpus valldus - Soft Stemmed Bulrush	2" PLUG	2' OC
225	Vernonia noveboracenis	2" PLUG	2' OC
4 LB	Lolium Multiflorum - Annual Rye	SEED	BROADCAST

EMERGENT BASIN #3 - ELEVATION 431 6,831 SF

QTY.	SPECIES	SIZE	SPACING
320	Carex lurids - Lurid Sedge	2" PLUG	2' OC
260	Juncus effusus - Soft Rush	2" PLUG	2' OC
270	Mimulus ringens - Monkey Flower	2" PLUG	2' OC
320	Scirpus cyperinus - Woolgrass	2" PLUG	2' OC
260	Scirpus valldus - Soft Stemmed Bulrush	2" PLUG	2' OC
280	Vernonia noveboracenis	2" PLUG	2' OC
6 LB	Lolium Multiflorum - Annual Rye	SEED	BROADCAST

SHRUB/FOREST WETLAND #1 - ELEVATION 430: 36,201 SF

QTY.	SPECIES	SIZE	SPACING
70	Acer Rubrum- Red Maple	2-3'	9' OC
70	Alnus Serrulata_ Smooth Alder	2-3'	9' OC
50	Cephalanthus Occident - Buttonbush	2-3'	9' OC
60	Cornus Amomum - Silky Dogwood	2-3'	9' OC
60	Sambucus Canadensis - Elderberry	2-3'	9' OC
70	Sallix Nigra - Black Willow	2-3'	9' OC
70	Quercus Palustris - Pin Oak	2-3'	9' OC
80	Carex lurids - Lurid Sedge	2" PLUG	2' OC*
80	Juncus effusus - Soft Rush	2" PLUG	2' OC*
80	Scirpus cyperinus - Woolgrass	2" PLUG	2' OC*
8 LB	Lolium Multiflorum - Annual Rye	SEED	BROADCAST

SHRUB/FOREST WETLAND #2 - ELEVATION 432: 28,406 SF

QTY.	SPECIES	SIZE	SPACING
60	Acer Rubrum- Red Maple	2-3'	9' OC
60	Alnus Serrulata_ Smooth Alder	2-3'	9' OC
50	Cephalanthus Occident - Buttonbush	2-3'	9' OC
50	Cornus Amomum - Silky Dogwood	2-3'	9' OC
40	Sambucus Canadensis - Elderberry	2-3'	9' OC
50	Sallix Nigra - Black Willow	2-3'	9' OC
40	Quercus Palustris - Pin Oak	2-3'	9' OC
75	Carex lurids - Lurid Sedge	2" PLUG	2' OC*
75	Juncus effusus - Soft Rush	2" PLUG	2' OC*
75	Scirpus cyperinus - Woolgrass	2" PLUG	2' OC*
8 LB	Lolium Multiflorum - Annual Rye	SEED	BROADCAST

SIDE SLOPES - ELEVATION 430+ **

QTY**	SPECIES	SIZE	SPACING
10 %	Dactylis Glomerata - Orchard Grass	SEED	BROADCAST
30 %	Lolium Multiflorum- Annual Rye	SEED	BROADCAST
15 %	Loljum Perenne - Perennial Rye	SEED	BROADCAST
15 %	Panicum Clandestinum - Tioga Deertongue	SEED	BROADCAST
10 %	Pheleum Pratense - Timothy	SEED	BROADCAST
20 %	Trifolium Repens - White Clover	SEED	BROADCAST

* EMERGENTS SHALL BE PLANTED IN CONSPECIFIC GROUPS OF 5-10 PLANTS SCATTERED IN THE PLANTING ZONE.

** ALL OPEN SOIL AREAS OCCURING WITHIN THE LIMITS OF THE FACILITY SHALL BE STABILIZED USING THIS SEED MIX, INSTALLED AT A RATE OF 80 POUNDS PER ACRE

SIDE SLOPES SHALL BE SEEDED AND STABILIZED ACCORDING TO STANDARD COUNTY REQUIREMENTS USING THE LISTED SEED MIIX.

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP
CgB2	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
ChB2	CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
ChC2	CHESTER SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
Co	CODORUS SILT LOAM	C
Cs	COMUS SILT LOAM	B
GID2	GLENELG LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	B
GID3	GLENELG LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	B
GnA	GLENVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES	C
Ha	HATBORO SILT LOAM	D

OWNER/DEVELOPER

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

WETLAND MITIGATION, GRADING, SEDIMENT & EROSION CONTROL, PLANTING PLAN AND X-SECTIONS
TURF VALLEY RESORT
WETLAND MITIGATION SITE
PARCEL 48, TURF VALLEY PROFESSIONAL BUILDINGS, PARCEL K AND OPEN SPACE LOT 1

TAX MAP 16 GRID 16 — P/O PARCEL 8, 48 & 50
3RD ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/30/12
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 5/01/12
DIRECTOR — DATE 5/1/12

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

HOWARD SCD — DATE 4/24/12

ENGINEERS 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 OF ENGINEER — DATE 09APR12
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 OF DEVELOPER — DATE 4/11/12

REVISIONS

NO.	DESCRIPTION	DATE
2	REVISE MONUMENT HEIGHT & SIGN LOCATION	2/21/2013
1	REVISE SIDEWALK & ADD MONUMENT	8/30/2012

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 4/15/10

STATE OF MARYLAND — PAUL M. SILL — No. 32025 — PROFESSIONAL ENGINEER

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@saaland.com

DESIGN BY: JH
DRAWN BY: JH
CHECKED BY: PS
SCALE: AS SHOWN
DATE: APRIL 4, 2012
PROJECT #: 06-025
SHEET #: 2 of 3

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, 2013

P:\Land Projects\TV 06-025\dwg\Wetlands\06-025_C2_Grading.dwg, 4/5/2012 4:28:57 PM, Johnh, 1:1

MITIGATION NOTES AND PROPOSAL

TURF VALLEY EAST/WEST AND MARRIOTTSVILLE ROAD ROAD WIDENING

THE MITIGATION OBLIGATION FOR THE SUBJECT PROJECT HAS BEEN DETERMINED TO BE 73, 785 SQ.FT. THIS MITIGATION OBLIGATION IS BASED ON A CALCULATION OF ALL MDE REGULATED WETLANDS IMPACTS REQUIRED FOR THE DEVELOPMENT OF THE TURF VALLEY COMMUNITY AND THE WIDENING OF MARRIOTTSVILLE ROAD. THIS INCLUDES THOSE AREAS DETERMINED TO BE NON-JURISTDICTIONAL BY THE CORPS OF ENGINEERS.

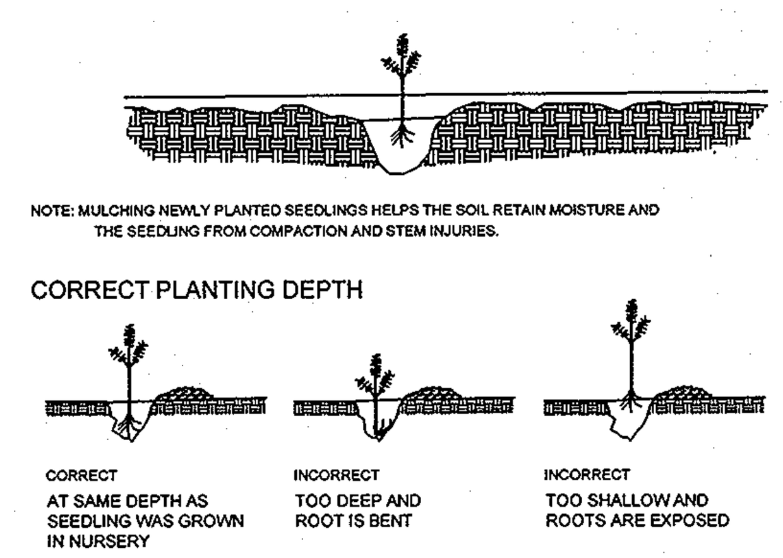
IMPACT COVER TYPE	IMPACT SQ.FT.	MITIGATION OBLIGATION	MITIGATION PROVIDED
FOREST	29,540	59,080	64,623
HERBACEOUS	14,705*	14,705	14,860
TOTALS	44,245	73,785	79,483

*INCLUDES 1,800 SQ.FT. OF HERBACEOUS WETLANDS THAT WILL BE UNDER THE PROPOSED BRIDGE AND MAY BE AFFECTED BY SHADING BUT WILL NOT BE PHYSICALLY DISTURBED

THE IN-KIND MITIGATION WILL BE COMPLETED THROUGH THE CONSTRUCTION OF 84,521 SQ.FT. OF NON-TIDAL WETLANDS. THIS WETLAND CREATION WILL BE COMPLETED BY THE REMOVALOF FILL ASSOCIATED WITH THE EXISTING GOLF HOLES ALONG MARRIOTTSVILLE ROAD. A TWO HOLE TEE-GREEN COMPLEX IS PRESENT IN THIS AREA. THESE FACILITIES WERE CONSTRUCTED BY HISTORIC PLACEMENT OF FILL ADJACENT TO THE WETLAND/FLOODPLAIN COMPLEX. THE WETLAND CONSTRUCTION WILL INCLUDE THE REMOVAL OF OF THE FILL TO AN ELEVATION COMPARABLE TO THE ADJACENT WETLAND/FLOODPLAIN SYSTEM. THE AREA WILL THEN BE PLANTED WITH SHRUB AND FOREST PLANTINGS THAT WILL COMPLIMENT THE NATIVE WETLAND COMMUNITY.

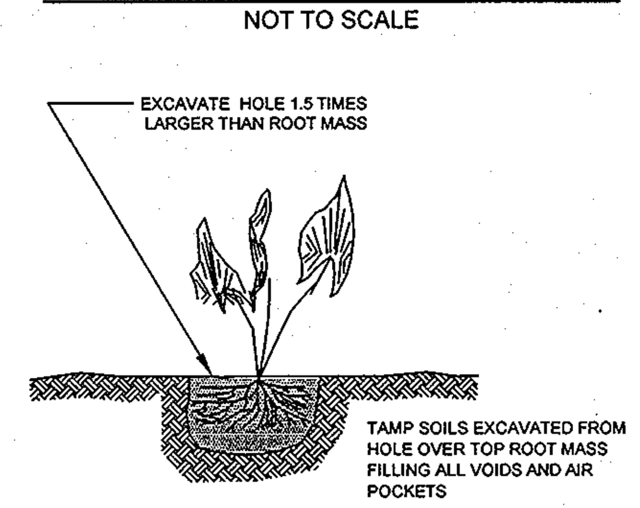
WHERE POSSIBLE THE EXISTING CART PATH WILL BE RETAINED ALONG THE OUTER EDGE OF THE MITIGATION AREA TO PROVIDE RECREATIONAL/EDUCATIONAL OPPORTUNITIES FOR THE FUTURE RESIDENTS. WHERE THE PROPOSED GRADING CONFLICTS WITH THE EXISTING TRAIL, A CONNECTION TRAIL WILL BE DESIGNED WITHIN THE MITIGATION AREA.

AN UPLAND BUFFER WILL BE RETAINED BETWEEN THE PROPOSED MITIGATION AREA SITES AND MARRIOTTSVILLE ROAD. THIS AREA WILL BUFFER THE WETLANDS FROM ROAD RUNOFF,, NOISE AND DISTURBANCE. THE WETLAND MITIGATION AREA WILL BE PROTECTED FROM FUTURE DISTURBANCE BY A CONSERVATION EASEMENT.



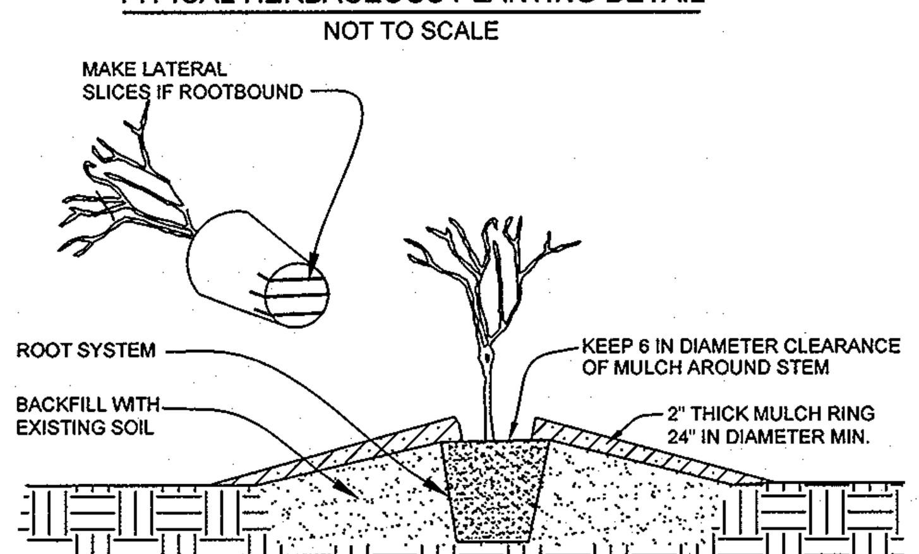
SEEDLING AND WHIP PLANTING DETAIL

NOT TO SCALE



TYPICAL HERBACEOUS PLANTING DETAIL

NOT TO SCALE

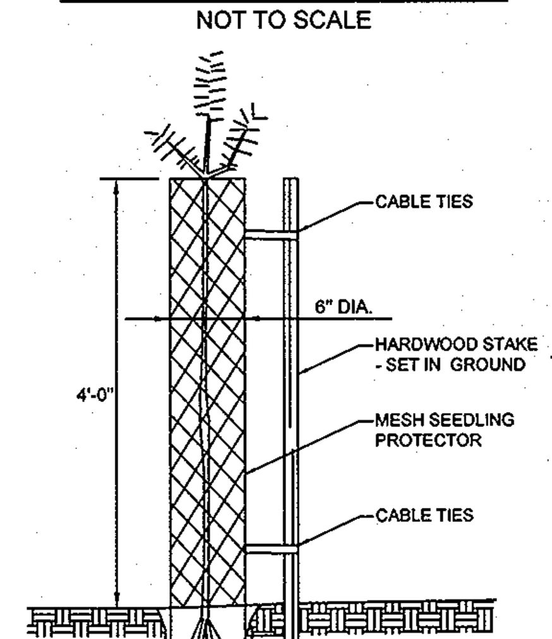


PLANTING PROCEDURE FOR CONTAINER GROWN PLANTS

1. REMOVE THE PLANT EITHER BY CUTTING OR INVERTING THE CONTAINER
2. USE A KNIFE TO CUT THROUGH BOTTOM HALF OF THE ROOT BALL.
3. PLANT SHRUBS ON FORMED UP MOUNDS 4" ABOVE THE EXISTING GRADE WHEN HIGH WATER TABLE CONDITIONS EXIST, OTHERWISE PLANT FLUSH WITH EXISTING GRADE.
4. PLANTING HOLE TO BE 2-3 TIMES THE DIAMETER OF THE CONTAINER.
5. INSERT FERTILIZER TABLET, BACKFILL 2/3 OF THE ROOT BALL AND WATER.
6. AFTER WATER PERCOLATES, BACKFILL HOLE TO TOP OF ROOT BALL AND GENTLY TAMP SOIL TO FIRM CONTACT WITH PLANT.
7. APPLY MULCH RING AROUND PLANT KEEPING A 6 IN CLEARANCE FROM STEM.

CONTAINER PLANTING DETAIL

NOT TO SCALE

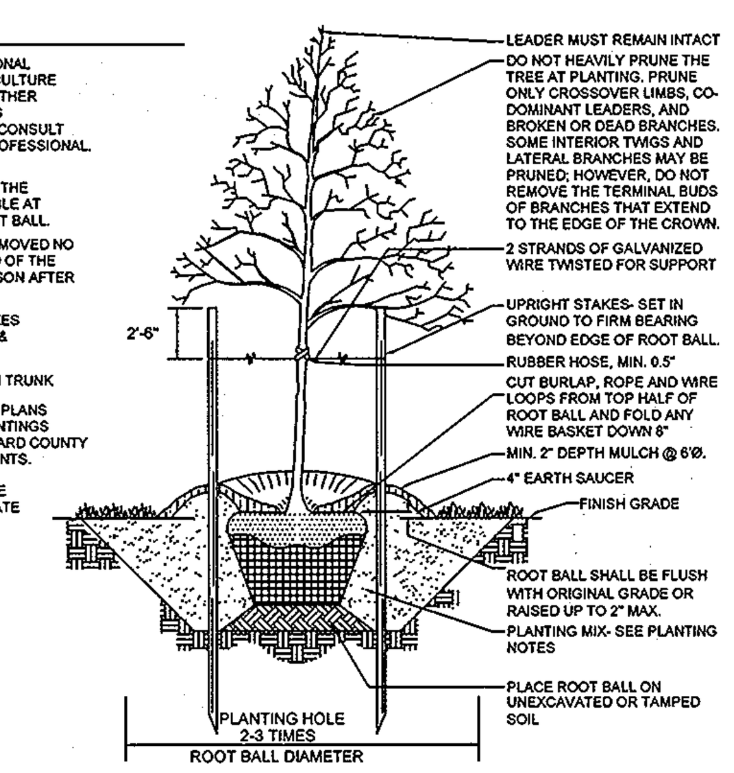


TYPICAL TREE SHELTER

NOT TO SCALE

NOTES

1. CONSULT INTERNATIONAL SOCIETY OF ARBORICULTURE GUIDELINES FOR FURTHER DETAILS OF PLANTING SPECIFICATIONS, OR CONSULT WITH A QUALIFIED PROFESSIONAL.
2. EACH TREE SHALL BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL.
3. STAKES SHALL BE REMOVED NO LATER THAN THE END OF THE FIRST GROWING SEASON AFTER PLANTING.
4. PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
5. KEEP MULCH 1" FROM TRUNK
6. SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
7. 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

TURF VALLEY EAST/WEST AND MARRIOTTSVILLE ROAD WIDENING

TOTAL MITIGATION CALCULATIONS - APRIL 24, 2006

NO.	IMPACT ID	COE "WATERS ONLY" STREAM IMPACTS	WETLAND IMPACT FOREST/SHRUB (SF)	WETLAND IMPACT EMERGENT (SF)
1	RESORT ROAD CROSSING AT LITTLE PATUXENT	0	23,500	5,373 1,800 *CONVERSION
2	RESORT ROAD BETWEEN MANHOLES 113 - 114	0	0	
3	RESORT ROAD BETWEEN MANHOLES 144 -145 - BOTTOMLESS ARCH X-ING	0	0	
4	UTILITY CROSSING BETWEEN MANHOLES 105 - 106	0	0	
5	UTILITY CROSSING BETWEEN MANHOLES 140 -149	0 - BORE AND JACK PROPOSED	0	
6	RESORT ROAD -EAST END NEAR INTERSECTION WITH TURF VALLEY ROAD	270	4,994	531
7	UTILITY CROSSING BETWEEN MANHOLES 101 AND EX. SEWER MAIN ALONG TURF VALLEY RD.	0	0	
8	FUTURE ROAD (BRIDGE) CROSSING OF LITTLE PATUXENT RIVER FOR POD J	0		700
9	FUTURE ROAD AND UTILITY CROSSING FOR POD J EXTENSION	60		250
10	FUTURE ROAD, BOTTOMLESS ARCH AND UTILITY CROSSING AT MANHOLES 111 AND 112	0 - BORE AND JACK PROPOSED	0	
12	MARRIOTTSVILLE ROAD WIDENING AT ALBETH ROAD	100 SF		5,743
13	MARRIOTTSVILLE ROAD WIDENING	0		268
14	UTILITY EXTENSION	0	0	
15	UTILITY EXTENSION	0	0	
	EAST A- UTILITY CROSSING BETWEEN MANHOLES 162 AND 163	0 - BORE AND JACK PROPOSED		40 - (TEMPORARY)
	EAST B - FUTURE ROAD ALIGNMENT	0	271	
	EAST C - FUTURE ROAD ALIGNMENT	250	775	
	TOTAL IMPACTS	680	29,540	14,705

BEST MANAGEMENT PRACTICES

FOR WORKING IN NON-TIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS

1. NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILES OR STORED IN NON-TIDAL WETLANDS, NON-TIDAL WETLAND BUFFERS, WATERWAYS, OR 100 YEAR FLOODPLAIN.
2. PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF NON-TIDAL WETLANDS, NON-TIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOOD PLAIN.
3. DO NOT USE THE EXCAVATED MATERIAL AS BACKFILL IF IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE. IF ADDITIONAL BACKFILL IS REQUIRED, USE CLEAN MATERIAL FREE OF WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE.
4. PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO NON-TIDAL WETLANDS, NON-TIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
5. REPAIR AND MAINTAIN ANY SERVICEABLE STRUCTURE OR FILL SO THERE IS NO PERMANENT LOSS OF NON-TIDAL WETLANDS, NON-TIDAL WETLAND BUFFERS, OR WATERWAYS, OR PERMANENT MODIFICATION OF THE 100-YEAR FLOODPLAIN IN EXCESS OF THAT LOST UNDER THE ORIGINALLY AUTHORIZED STRUCTURE OR FILL.
6. RECTIFY ANY NON-TIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS OR 100-YEAR FLOODPLAIN TEMPORARILY IMPACTED BY ANY CONSTRUCTION.
7. ALL STABILIZATION IN THE NON-TIDAL WETLAND AND NON-TIDAL WETLAND BUFFER SHALL CONSIST OF THE FOLLOWING SPECIES:
   ANNUAL RYE GRASS (%%ULolium multiflorum%%U)
   MILLET (%%USetaria italica%%U)
   BARLEY (%%UHordeum%%U sp.)
   OATS (%%UUniola%%U sp.)
   RYE (%%USecale cereale%%U)
THESE SPECIES WILL ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF NATURAL WETLAND SPECIES. OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE NONTIDAL WETLANDS AND WATERWAYS DIVISION. KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN WETLAND OR BUFFER AREAS. THE AREA SHOULD BE SEEDED AND MULCHED TO REDUCE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
8. AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST-CONSTRUCTION GRADES AND ELEVATIONS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS IN TEMPORARILY IMPACTED AREAS.
9. TO PROTECT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM USE I WATERS: IN STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE, DURING ANY YEAR.
10. STORMWATER RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE WATERWAY.
11. CULVERTS SHALL BE CONSTRUCTED AND ANY RIPRAP PLACED SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES, UNLESS THE PURPOSE OF THE ACTIVITY IS TO IMPOUND WATER.

PLANTING/SOIL SPECIFICATIONS

1. INSTALLATION OF B&B/CONTAINER STOCK MARCH 15- MAY 30 OR SEPTEMBER 15- NOVEMBER 15. FALL PLANTING OF B&B STOCK IS NOT RECOMMENDED

2. DISTURBED AREAS SHALL BE SEEDED AND STABILIZED AS PER FOREST BUFFER PROTECTION PLAN

3. BACKFILL IN THE PLANTING PITS SHALL CONSIST OF 3 PARTS EXISTING SOIL TO 1 PART PINE FINES OR EQUIVALENT

4. FERTILIZER SHALL CONSIST OF AGRIFORM 22-8-2 OR EQUIVALENT, APPLIED AS PER MANUFACTURERS SPECIFICATIONS, FOR WOODY PLANTS. HERBACEOUS PLANTS SHALL BE FERTILIZED WITH OSMOCOTE 8-6-12

5. PLANT MATERIAL SHALL BE TRANSPORTED TO THE SITE IN A TARPED OR COVERED TRUCK. PLANTS SHALL BE KEPT MOIST PRIOR TO PLANTING.

6. ALL NON-ORGANIC DEBRIS ASSOCIATED WITH THE PLANTING OPERATION SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR

SEQUENCE OF CONSTRUCTION - PLANTINGS

1. SEDIMENT CONTROL SHALL BE INSTALLED IN ACCORDANCE WITH WETLAND MITIGATION GRADING AND PLANTING PLAN FOR SITE

2. REMOVE DUMPED SOIL, MULCH, NON-NATIVE PLANT SPECIES FROM WITHIN THE FOREST BUFFER ENHANCEMENT AREA. STABILIZE DISTURBED AREA WITH SEED MIX.

3. PLANTS SHALL BE INSTALLED AS PER THE PLANT SCHEDULE AND THE PLANTING/SOIL SPECIFICATIONS FOR THE PROJECT.

4. UPON COMPLETION OF THE PLANTING, SIGNAGE SHALL BE INSTALLED AS SHOWN

5. PLANTINGS SHALL BE MAINTAINED AND GUARANTEED IN ACCORDANCE WITH THE MAINTENANCE AND GUARANTEE REQUIREMENTS OF THE PROJECT

MAINTENANCE OF PLANTINGS

1. MAINTENANCE OF PLANTINGS SHALL LAST FOR A PERIOD OF (3) YEARS

2. PLANTINGS MUST RECEIVE 2 GALLONS OF WATER, EITHER THROUGH PRECIPITATION OR WATERING, WEEKLY DURING THE 1ST GROWING SEASON AS NEEDED. DURING SECOND GROWING SEASON, ONCE A MONTH DURING MAY-SEPTEMBER, IF NEEDED

3. INVASIVE EXOTICS AND NOXIOUS WEEDS WILL BE REMOVED, AS REQUIRED, FROM PLANTING AREAS MECHANICALLY AND/OR WITH LIMITED HERBICIDE APPLICATION (SEE GROUND COVER NOTE WHERE APPROPRIATE). OLD FIELD SUCCESSIONAL SPECIES WILL BE RETAINED

4. PLANTS WILL BE EXAMINED A MINIMUM TWO TIMES DURING THE GROWING SEASON FOR SERIOUS PLANT PESTS AND DISEASES. SERIOUS PROBLEMS WILL BE TREATED WITH THE APPROPRIATE AGENT

5. DEAD BRANCHES WILL BE PRUNED FROM PLANTINGS

GUARANTEE REQUIREMENTS

1. A 85 PERCENT SURVIVAL RATE OF FORESTATION PLANTINGS WILL BE REQUIRED AT THE END OF 3 GROWING SEASONS. ALL PLANT MATERIAL BELOW THE 75 PERCENT THRESHOLD WILL BE REPLACED AT THE BEGINNING OF THE NEXT GROWING SEASON. WILD TREES ARISING FROM NATURAL REGENERATION MAY BE COUNTED UP TO 50 PERCENT TOWARD THE TOTAL SURVIVAL NUMBER IF THEY ARE HEALTHY, NATIVE SPECIES AT LEAST 12 INCHES TALL

TURF VALLEY EAST/WEST AND MARRIOTTSVILLE ROAD WIDENING

TOTAL OVERALL IMPACT CALCULATIONS

NO.	IMPACT ID	COE WETLAND IMPACT (SF)	COE 'WATERS ONLY' IMPACT & 100 YR FLOODPLAIN-FP (SF)	MDE BUFFER	EXPECTED CONSTRUCTION START***
1	RESORT ROAD CROSSING AT LITTLE PATUXENT	28,873 *	0 42,600 FP	8,450	2005
2	RESORT ROAD BETWEEN MANHOLES 113 - 114	0	0 0 FP	5,110	2008
3	RESORT ROAD BETWEEN MANHOLES 144 -145 - BOTTOMLESS ARCH X-ING	0	0 7,100 FP	300 - TEMPORARY FOR UTILITY CROSSING	2007
4	UTILITY CROSSING BETWEEN MANHOLES 105 - 106	0	0 0 FP	8,450	2007
5	UTILITY CROSSING BETWEEN MANHOLES 140 -149	0	0 - BORE AND JACK PROPOSED 42,600 FP	0	2007
6	RESORT ROAD -EAST END NEAR INTERSECTION WITH TURF VALLEY ROAD	5,525	270 32,000 FP	17,900	2007
7	UTILITY CROSSING BETWEEN MANHOLES 101 AND EX. SEWER MAIN ALONG TURF VALLEY RD.	0	0** 8,000 FP	0	2007
8	FUTURE ROAD (BRIDGE) CROSSING OF LITTLE PATUXENT RIVER FOR POD J	700	0** 26,000 FP	3,800	2010
9	FUTURE ROAD AND UTILITY CROSSING FOR POD J EXTENSION	250	60 0 FP	1,500	2012
10	FUTURE ROAD, BOTTOMLESS ARCH AND UTILITY CROSSING AT MANHOLES 111 AND 112	0	0 - BORE AND JACK PROPOSED 0 FP	0	2007
12	MARRIOTTSVILLE ROAD WIDENING AT ALBETH ROAD	5,743	100 SF 5,600 FP	8,112	N/A
13	MARRIOTTSVILLE ROAD WIDENING	268	0 0 FP	2,242	N/A
14	UTILITY EXTENSION	0	0** 1,480 FP	0	2011
15	UTILITY EXTENSION	0	0** 1,200 FP	0	2011
	EAST A- UTILITY CROSSING BETWEEN MANHOLES 162 AND 163	40	0 - BORE AND JACK PROPOSED 1,200 FP	1,000	2009
	EAST B - FUTURE ROAD ALIGNMENT	271	0 0 FP	4,505	2010
	EAST C - FUTURE ROAD ALIGNMENT	775	250 11,400 FP	5,114	2010
	TOTAL IMPACTS	42,445	680 136,580 FP	58,333	

* AN ADDITIONAL 1,800 SF OF VEGETATION CONVERSION IS REQUIRED, THIS IMPACT REGULATED BY MDE BUT NOT COE
** LIMIT OF DISTURBANCE OCCURING WITHIN 100 YEAR FLOODPLAIN
*** CONSTRUCTION DRAWINGS WOULD BE AVAILABLE FOR MDE/COE REVIEW 1-2 YEARS PRIOR TO THIS DATE

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOILS

DEFINITION

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

PURPOSE

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

CONDITIONS WHERE PRACTICE APPLIES

I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
   A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT 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 CAN BE FOUND IN 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:

   i. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR A SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIAL LARGER THAT 1 AND 1/2" IN DIAMETER.

   ii. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

   iii. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

II. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:

   i. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

III. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:

   I. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:

      A. PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.

      B. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.

      C. TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.

      D. NO SOD OR SEED SHALL BE PLACED ON SOIL SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

ii. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS A SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

V. TOPSOIL APPLICATION

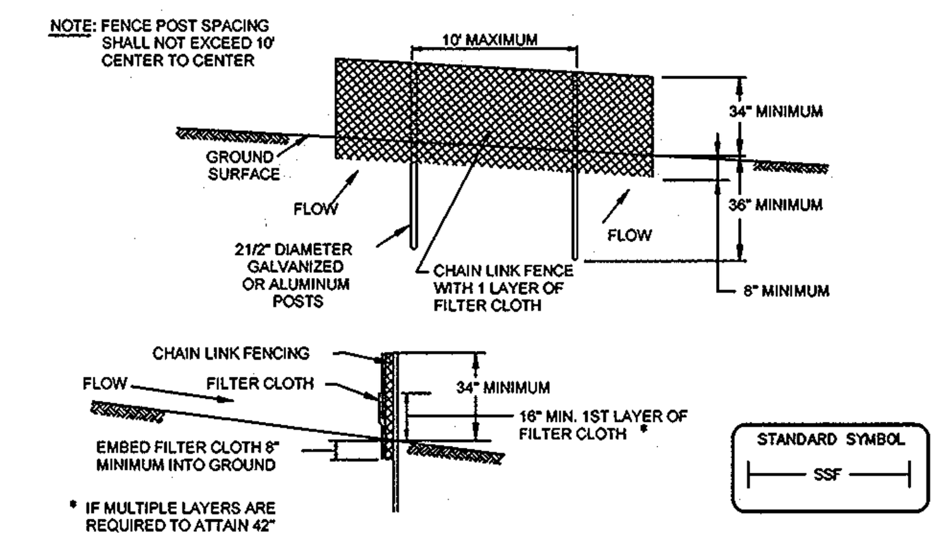
i. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.

ii. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4"-8" HIGHER IN ELEVATION.

iii. 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 SODDING 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.

iv. TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

DETAIL 33 - SUPER SILT FENCE



CONSTRUCTION SPECIFICATIONS

1. FENCING SHALL BE 42" IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY DETAILS FOR CHAIN LINK FENCING. THE SPECIFICATION FOR A 6' FENCE SHALL BE USED, SUBSTITUTING 42" FABRIC AND 6' LENGTH POSTS.

2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE.

3. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.

4. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE GROUND.

5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.

6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT

7. FILTER CLOTH SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

TENSILE STRENGTH	50 LBS/IN (MIN.)	TEST: MSMT 509
TENSILE MODULUS	20 LBS/IN (MIN.)	TEST: MSMT 509
FLOW RATE	0.3 GAL/FT /MIN. (MAX.)	TEST: MSMT 322
FILTERING EFFICIENCY	75% (MIN.)	TEST: MSMT 322

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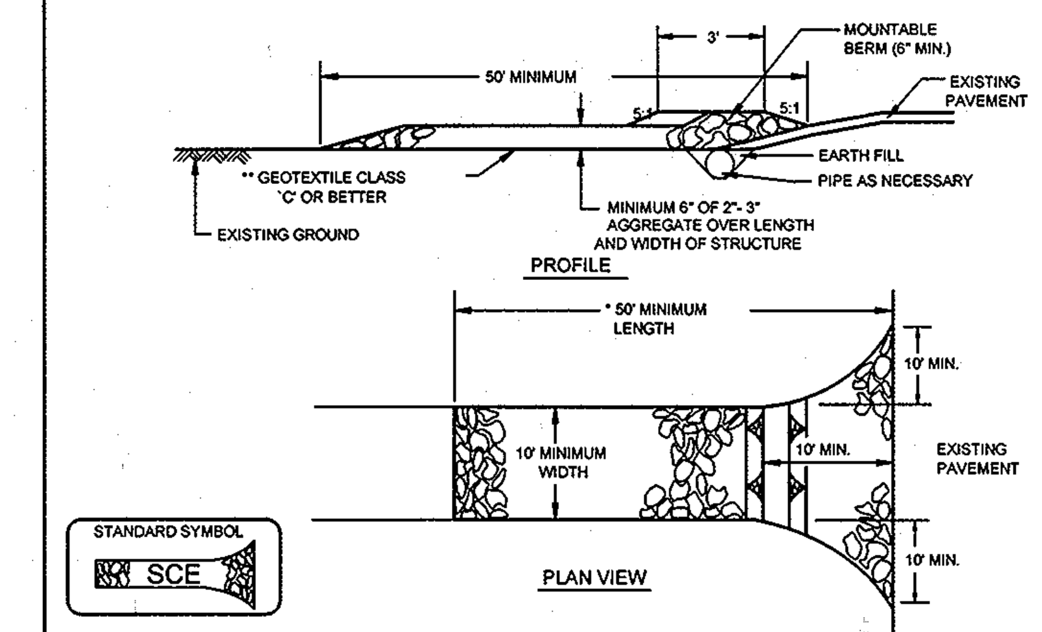
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



CONSTRUCTION SPECIFICATION

1. LENGTH - MINIMUM OF 50' (* 30' FOR A SINGLE RESIDENCE LOT).
2. WIDTH - 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
3. GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. ** THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE.
4. STONE - CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
5. SURFACE WATER - ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE.PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 6" OF STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6" MINIMUM WILL BE REQUIRED.
6. LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

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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/100 SQ.FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT THE TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ.FT.)

2) ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMATIC 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 (1.4 LBS/1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.05 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 SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ.FT.) OF UNROTTED SMALL GRAIN 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 SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES

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

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

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (0.07 LBS/1000 SQ.FT.). FOR THE PERIOD NOVEMBER 1 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ.FT.) OF UNROTTED SMALL GRAIN 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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

PLANTING/SOIL SPECIFICATIONS

1. INSTALLATION OF BAREROOT PLANT STOCK SHALL TAKE PLACE BETWEEN MARCH 15 - APRIL 20; B&B/CONTAINER STOCK MARCH 15 -MAY 30 OR SEPTEMBER 15 - NOVEMBER 15.
2. TOPSOIL SHOULD BE SALVAGED AND REPLACED WHENEVER POSSIBLE TO A DEPTH OF 6 INCHES. SITE SHOULD BE GRADED TO BELOW 6 INCHES OF FINAL GRADE, THEN 6 INCHES TOPSOIL, RECLAIMED OR IMPORTED, SHALL BE SPREAD OVER THE SITE. SOIL AND SUBSTRATE AMENDMENTS NEED TO MEET HYDRIC SOIL CHARACTERISTICS AND MAINTAIN THE SPECIFIED PLANT SPECIES. * A MINIMUM OF 60 CUBIC YARDS OF ORGANIC MATTER PER ACRE IS REQUIRED. THE ADDITION OF SUPPLEMENTAL LARGE WOODY DEBRIS IS ALSO RECOMMENDED. THE SURFACE OF THE SOIL MUST NOT BE COMPACTED TO THE EXTENT THAT IT LIMITS PLANT ESTABLISHMENT AND MICROBIAL ACTIVITY. UPON COMPLETION OF GRADING, THE SOIL MUST BE DISKED OR CHISEL PLOWED TO A DEPTH OF AT LEAST 8 INCHES.
3. DISTURBED AREAS SHALL BE SEEDED AND STABILIZED AS PER GENERAL CONSTRUCTION PLAN FOR PROJECT.
4. BAREROOT PLANTS SHALL BE INSTALLED SO THAT THE TOP OF ROOT MASS IS LEVEL WITH THE TOP OF EXISTING GRADE.
5. FERTILIZER SHALL CONSIST OF AGRIFORM 22-8-2, OR EQUIVALENT, APPLIED AS PER MANUFACTURER'S SPECIFICATIONS, FOR WOODY PLANTS. HERBACEOUS PLANTS SHALL BE FERTILIZED WITH OSMOCOTE 18-6-12.
6. PLANT MATERIAL SHALL BE TRANSPORTED TO THE SITE IN A TARPED OR COVERED TRUCK. PLANTS SHALL BE KEPT MOIST PRIOR TO PLANTING.
7. ALL NON-ORGANIC DEBRIS ASSOCIATED WITH THE PLANTING OPERATION SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.

NOTES:
1. A SURETY BOND IN THE AMOUNT OF $33,859.00 SHALL BE FILED WITH MDE WITHIN 60 DAYS OF THE APPROVAL OF THE PHASE II MITIGATION PLAN.
2. THE ESTIMATED INITIATION OF CONSTRICTION FOR THE MITIGATION IS SPRING 2010. THE MITIGATION WILL BE IMPLEMENTED POST INSTALLATION FOR THE MAJORITY OF THE APPROVED IMPACTS. SOME APPROVED IMPACTS HAVE YET TO BE COMPLETED. APPROXIMATELY 29,000 SQ.FT. OF IMPACTS WILL HAVE BEEN COMPLETED PRIOR TO INSTALLATION OF THE MITIGATION.
3. THE CONSTRUCTION OF THE WETLAND MITIGATION AREA SHALL BE COMPLETED WITHIN ONE GROWING SEASON.

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 (410-313-1855).
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 1994 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 SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3:1, (B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, 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:	17.74 ACRES
AREA DISTURBED:	3.06 ACRES
AREA TO BE ROOFED OR PAVED:	0.01 ACRES
AREA TO BE VEGETATIVELY STABILIZED:	3.05 ACRES
TOTAL CUT:	*14,100 CY
TOTAL FILL:	*122 CY
OFFSITE WASTE/BORROW AREA LOCATION:	ON-SITE WITH AN ACTIVE GRADING PERMIT

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.

* EARTHWORK QUANTITIES ARE SOLELY FOR THE PURPOSE OF CALCULATING FEES. CONTRACTOR TO VERIFY ALL QUANTITIES PRIOR TO THE START OF CONSTRUCTION.

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 SUPER SILT FENCE. (2 DAY)
4. FOR SHRUB/FOREST WETLAND AREA #1 ROUGH GRADE AREA STARTING WITH EMERGENT BASIN #2 GRADING TOWARD EMERGENT BASIN #1
5. FOR SHRUB/FOREST WETLAND AREA #2, REMOVE EXISTING RETAINING WALL AND ROUGH GRADE AREA STARTING WITH EMERGENT AREA #3 . (1 WEEK)
6. FINISH GRADE SHRUB/FOREST WETLAND AREAS #1 & #2 AND STABILIZE. (1 WEEK)
7. REFER TO PLANTING SCHEDULE AND PLANT/SOIL SPECIFICATIONS FOR PLANTING SEQUENCE
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 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.

OWNER/DEVELOPER

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

WETLAND MITIGATION SCHEDULES, NOTES AND DETAILS
TURF VALLEY RESORT
WETLAND MITIGATION SITE
PARCEL 48, TURF VALLEY PROFESSIONAL BUILDINGS, PARCEL K AND OPEN SPACE LOT 1

TAX MAP 16 GRID 16 — P/O PARCEL 8, 48 & 50
3RD ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/30/12
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 5/01/12
DIRECTOR — DATE 5/1/12

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

HOWARD SCD — DATE 4/24/12

ENGINEERS 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.

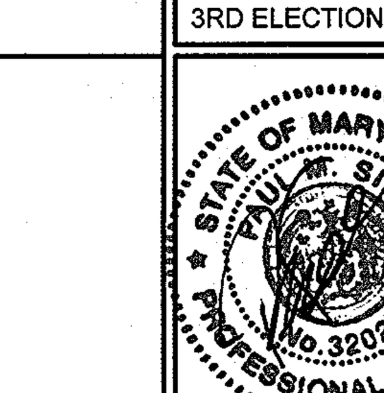
SIGNATURE OF ENGINEER — DATE 09APR12
PAUL M. SILL, PE, LEED AP

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 OF DEVELOPER — DATE 4/11/12

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 4/15/10



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@saaland.com

DESIGN BY:	JH
DRAWN BY:	JH
CHECKED BY:	PS
SCALE:	AS SHOWN
DATE:	APRIL 4, 2012
PROJECT #:	06-025
SHEET #:	3 of 3

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, 2013