

SITE DATA

LOCATION: TAX MAP 31 PARCEL 501
 DEED REFERENCE : 909/664
 2ND ELECTION DISTRICT
 EXISTING ZONING: R-20
 GROSS AREA OF PARCEL: 176,687 SF (4.06 AC)
 AREA OF RIGHT OF WAY: 5,817 SF (0.13 AC) TO BE DEDICATED TO MARYLAND STATE HIGHWAY ADMINISTRATION
 AREA OF FLOODPLAIN: 0.00 AC
 AREA OF STEEP SLOPES: 0.00 AC
 NET AREA OF PROJECT: 4.06 AC
 NUMBER OF RESIDENTIAL LOTS ALLOWED: 2 UNITS PER ACRE = 8 LOTS
 NUMBER OF RESIDENTIAL LOTS PROPOSED: 8 LOTS
 AREA OF PROPOSED RESIDENTIAL LOTS: 133,888 SF (3.07 AC)
 AREA OF SMALLEST BUILDABLE LOT PROPOSED: 16,022 SF
 NUMBER OF PROPOSED OPEN SPACE LOTS: 1 LOT (LOT 9)
 CREDITED OPEN SPACE (EXCLUDING PIPESTEM): 35,372 SF
 NON-CREDITED OPEN SPACE: 1,106 SF (PIPESTEM)
 AREA OF OPEN SPACE REQUIRED: 35,337 SF (20% x 176,687 SF)
 TOTAL AREA OF OPEN SPACE PROPOSED: 36,478 SF
 PREVIOUS COUNTY FILE NUMBERS: S-02-06, WP-02-52, P-04-10

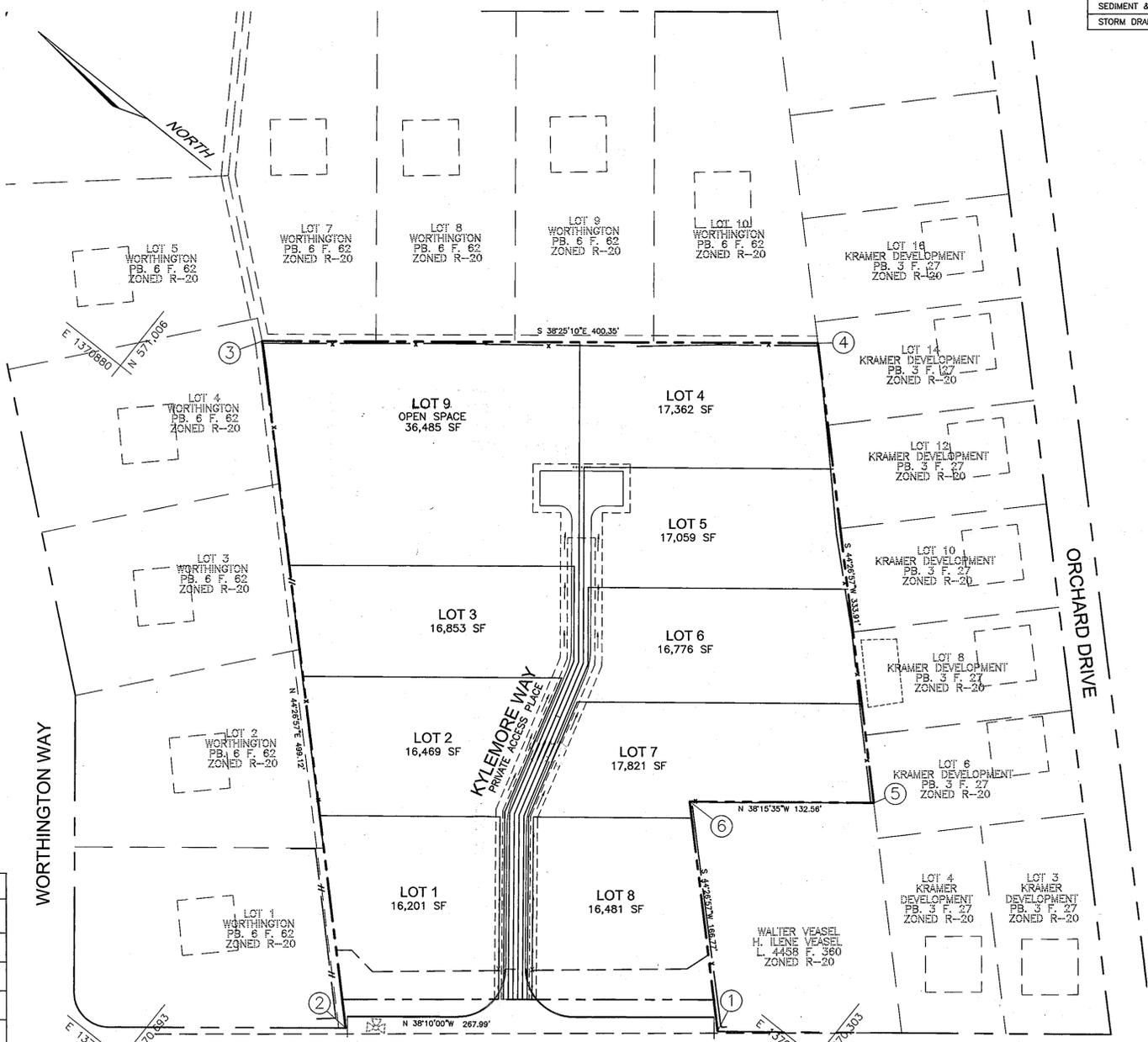
GENERAL NOTES

1. THIS SUBDIVISION COMPLIES WITH THE 4TH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AS AMENDED BY COUNCIL BILL 45-2003 AND THE ZONING REGULATIONS, AS AMENDED BY COUNCIL BILL 50-2001.
2. THE PROJECT BOUNDARY IS BASED ON A BOUNDARY SURVEY PERFORMED BY FREDERICK WARD ASSOCIATES, INC DATED JANUARY 7, 2002.
3. THE TOPOGRAPHY SHOWN HEREON IS BASED ON A FIELD RUN TOPOGRAPHIC SURVEY PERFORMED BY FREDERICK WARD ASSOCIATES, INC DATED JANUARY 7, 2002.
4. FOREST STAND DELINEATION PLAN PREPARED BY EXPLORATION RESEARCH, INC. DATED AUGUST, 2001.
5. APPO TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP DATED AUGUST, 2001.
6. A NOISE STUDY WAS PERFORMED BY FREDERICK WARD ASSOCIATES, INC. DATED AUGUST, 2001.
7. THERE ARE NO FLOODPLAINS ON SITE.
8. THERE ARE NO WETLANDS LOCATED ON SITE AS PER S-02-06.
9. THERE ARE NO STEEP SLOPES ON SITE WITH A CONTIGUOUS AREA OF 20,000 SF OR GREATER.
10. THIS SITE IS NOT LOCATED IN A HISTORIC DISTRICT.
11. TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL/CEMETARY LOCATIONS ON SITE.
12. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
13. STORMWATER MANAGEMENT IS PROVIDED BY EXTENDED DETENTION OF THE 1 YEAR STORM (WQ) AND 10 YEAR MANAGEMENT. CPV IS NOT REQUIRED SINCE THE 1 YEAR STORM RUNOFF IS LESS THAN 2 CFS. THE STORM WATER MANAGEMENT FACILITY IS A (P-5) POCKET POND AND WILL BE PRIVATELY OWNED AND MAINTAINED BY THE HOA. THE REMAINING WQV AND REV WILL BE PROVIDED BY RAINGARDENS AND GRASS SWALES ALONG THE PROPOSED DRIVE. HAZARD CLASS A. PROVIDE A CLAY LINER FROM BOTTOM OF FACILITY TO ELEVATION 491.10.
14. SEDIMENT AND EROSION CONTROL WILL BE PROVIDED FOR THIS SITE.
15. WATER FOR THIS PROJECT WILL BE PUBLIC AND IS CONNECTED BY CONTRACT NO. 64-W.
16. SEWER FOR THIS PROJECT WILL BE PUBLIC AND IS CONNECTED BY CONTRACT NO. 865-S.
17. STREET TREES WILL BE PROVIDED FOR THIS SUBDIVISION IN ACCORDANCE WITH SECTION 16.124(e)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL.
18. STREET LIGHTING WILL BE PROVIDED FOR THIS SITE.
19. TRASH COLLECTION AND RECYCLING WILL BE CURBSIDE PICKUP AT THE INTERSECTION OF KYLEMORE WAY AND MONTGOMERY ROAD.
20. ALL LANDSCAPING REQUIREMENTS AS SET FORTH IN SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL SHALL BE COMPLIED WITH. FINANCIAL SURETY FOR THE REQUIRED 65 SHADE TREES, 26 EVERGREEN TREES AND 5 SHRUBS IN THE AMOUNT OF \$23,550.00 WILL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT.
21. THE TOTAL FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION IS 0.61 AC OF AFFORESTATION AND WILL BE FULFILLED BY THE AFFORESTATION OF 0.28 AC. LOCATED IN OPEN SPACE LOT 9 AND A FEE-IN-LIEU OF 0.33 AC IN THE AMOUNT OF \$7,188.00.
22. WAIVER TO SECTION 16.121(e)(1) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS APPROVED 1/18/02 TO ALLOW OPEN SPACE ACCESS FRONTAGE ON A PUBLIC ROAD TO BE LESS THAN 40'. (WP-02-52)
23. WAIVER TO SECTION 16.1202(g)(1) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS APPROVED 1/18/02 TO ALLOW DIRECT ACCESS TO A MINOR ARTERIAL ROADWAY (MD ROUTE 103). (WP-02-52)
24. FOR FLAG OR PIPE STEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE TO BE PROVIDED AT THE JUNCTION OF FLAG OR PIPE STEM AND THE ROAD R/W AND NOT ONTO THE FLAG OR PIPE STEM DRIVEWAY.
25. FINANCIAL SURETY FOR THE 0.28 AC OF AFFORESTATION IN THE AMOUNT OF \$6,099.00 WILL BE PAID WITH THE DEVELOPER'S AGREEMENT.
26. SHOULD ANY EXISTING WELL OR SEPTIC SYSTEMS BE ENCOUNTERED DURING GRADING OF SITE, THE CONTRACTOR IS TO NOTIFY THE HEALTH DEPARTMENT IMMEDIATELY FOR PROPER ABANDONMENT.
27. THE ACCESS ROAD TO THE STORMWATER MANAGEMENT FACILITY AND THE STORM DRAIN SYSTEM ARE TO BE PRIVATELY OWNED AND MAINTAINED.
28. ALTERNATIVE COMPLIANCE WAS APPROVED ON 2-22-06 TO ALLOW NO GRAVITY DRAIN FOR STORMWATER MANAGEMENT MICROPOOL.
29. RAINGARDENS TO BE BUILT UNDER SDP FOR LOTS 7 AND 8.

FINAL ROAD CONSTRUCTION PLANS

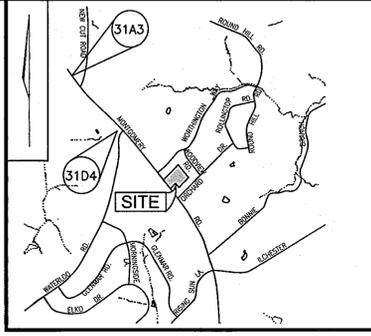
WORTHINGTON WEST

LOTS 1-8 AND OPEN SPACE LOT 9



BENCHMARKS				
NO.	NORTHING	EASTING	ELEVATION	TYPE
31D4	571700.659	1369606.281	495.179	CONC. MON.
31A3	573217.877	1368237.662	487.641	CONC. MON.

SHEET INDEX	
DESCRIPTION	SHEET NO.
COVER SHEET	1
ROAD PLAN AND PROFILE	2
GRADING AND SEDIMENT CONTROL PLAN	3
FOREST CONSERVATION AND LANDSCAPING PLAN	4
STORM DRAIN DRAINAGE AREA MAP	5
SEDIMENT & EROSION DETAILS	6
STORM DRAIN PROFILES AND SWM PROFILES & DETAILS	7



VICINITY MAP
SCALE: 1"=2000'

LEGEND	
---	EXISTING 2 FT CONTOUR
---	EXISTING 10 FT CONTOUR
---	PROPOSED 2 FT CONTOUR
---	PROPOSED 10 FT CONTOUR
---	SUPER SILT FENCE
---	LIMIT OF DISTURBANCE
---	EXISTING TREELINE
---	PROPOSED TREELINE
---	EX. WOOD FENCE
---	EX. METAL FENCE
---	EARTH DIKE
---	PROPOSED STREET LIGHT
---	PROPOSED STREET TREE
---	NO WOODY VEGETATION BUFFER
---	PUBLIC WATER, SEWER, AND UTILITY EASEMENT
---	PRIVATE OPEN SPACE ACCESS EASEMENT
---	FOREST CONSERVATION EASEMENT (RETENTION)
---	STABILIZED CONSTRUCTION ENTRANCE

COORDINATE TABLE		
NO.	NORTHING	EASTING
1	570370.54	1370773.38
2	570581.24	1370607.78
3	570937.54	1370957.30
4	570623.88	1371206.08
5	570385.51	1370972.25
6	570489.59	1370890.17

MINIMUM LOT SIZE CHART			
LOT NO.	MINIMUM LOT SIZE	PIPESTEM	GROSS AREA
2	16,010 SF	459 SF	16,469 SF
3	16,022 SF	831 SF	16,853 SF
4	16,006 SF	1,356 SF	17,362 SF
5	16,000 SF	1,059 SF	17,059 SF
6	16,007 SF	769 SF	16,776 SF
7	17,362 SF	459 SF	17,821 SF
9	35,374 SF	1,111 SF	36,485 SF

STORMWATER MANAGEMENT REQUIREMENTS - AREA 'A'					
AREA	REQUIREMENT	VOLUME REQUIREMENT WITHOUT CREDITS	CREDITS	VOLUME REQUIREMENT WITH CREDITS	NOTES
1	WATER QUALITY VOLUME (WQv)	0.0843 AC. FT.	0.76 AC. TO GRASS CHANNEL	0.0643 AC. FT.	1 YEAR EXTENDED DETENTION POCKET POND(P-5)
2	RECHARGE VOLUME (REV)	0.0211 AC. FT. 0.24 AC.	0.57 AC. SEE NOTES	0	0.57AC. IMPERVIOUS TO GRASS CHANNELS IN AREA A
3	CHANNEL PROTECTION VOLUME (CPV)	N/A	N/A	N/A	1 YEAR RUNOFF LESS THAN 2 CFS
4	OVERHEAD FLOOD PROTECTION (O ₁₀ P)	0.10 AC. FT.	N/A	0.10 AC. FT.	PROVIDED IN MICROPOOL(P-5)
5	EXTREME FLOOD VOLUME (O ₁₀₀ P)	N/A	N/A	N/A	

STORMWATER MANAGEMENT REQUIREMENTS - AREA 'B'					
AREA	REQUIREMENT	VOLUME REQUIREMENT WITHOUT CREDITS	CREDITS	VOLUME REQUIREMENT WITH CREDITS	NOTES
1	WATER QUALITY VOLUME	0.024 AC. FT.	-	0.024 AC. FT.	PROVIDED BY 4 RAINGARDENS
2	RECHARGE VOLUME (REV)	0.0062 AC. FT. 0.07 AC.	0.57 AC. SEE NOTES	0	0.57AC. IMPERVIOUS TO GRASS CHANNELS IN AREA A
3	CHANNEL PROTECTION VOLUME (CPV)	N/A	N/A	N/A	1 YEAR RUNOFF LESS THAN 2 CFS
4	OVERHEAD FLOOD PROTECTION (O ₁₀ P)	N/A	N/A	N/A	
5	EXTREME FLOOD VOLUME (O ₁₀₀ P)	N/A	N/A	N/A	

MONTGOMERY ROAD
 MD RTE. 103
 MINOR ARTERIAL
 EX. 40' R/W
 PROP. 40' 1/2 R/W

PLAN
 SCALE: 1"=50'

AS-BUILT CERTIFICATION
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED SPECIFICATIONS.
 SIGNATURE
 P.E. No 16193



OWNER/DEVELOPER
 FORTY WEST GROUP, INC.
 3230 BETHANY LANE
 ELLICOTT CITY, MARYLAND 21042
 (410) 418-8900

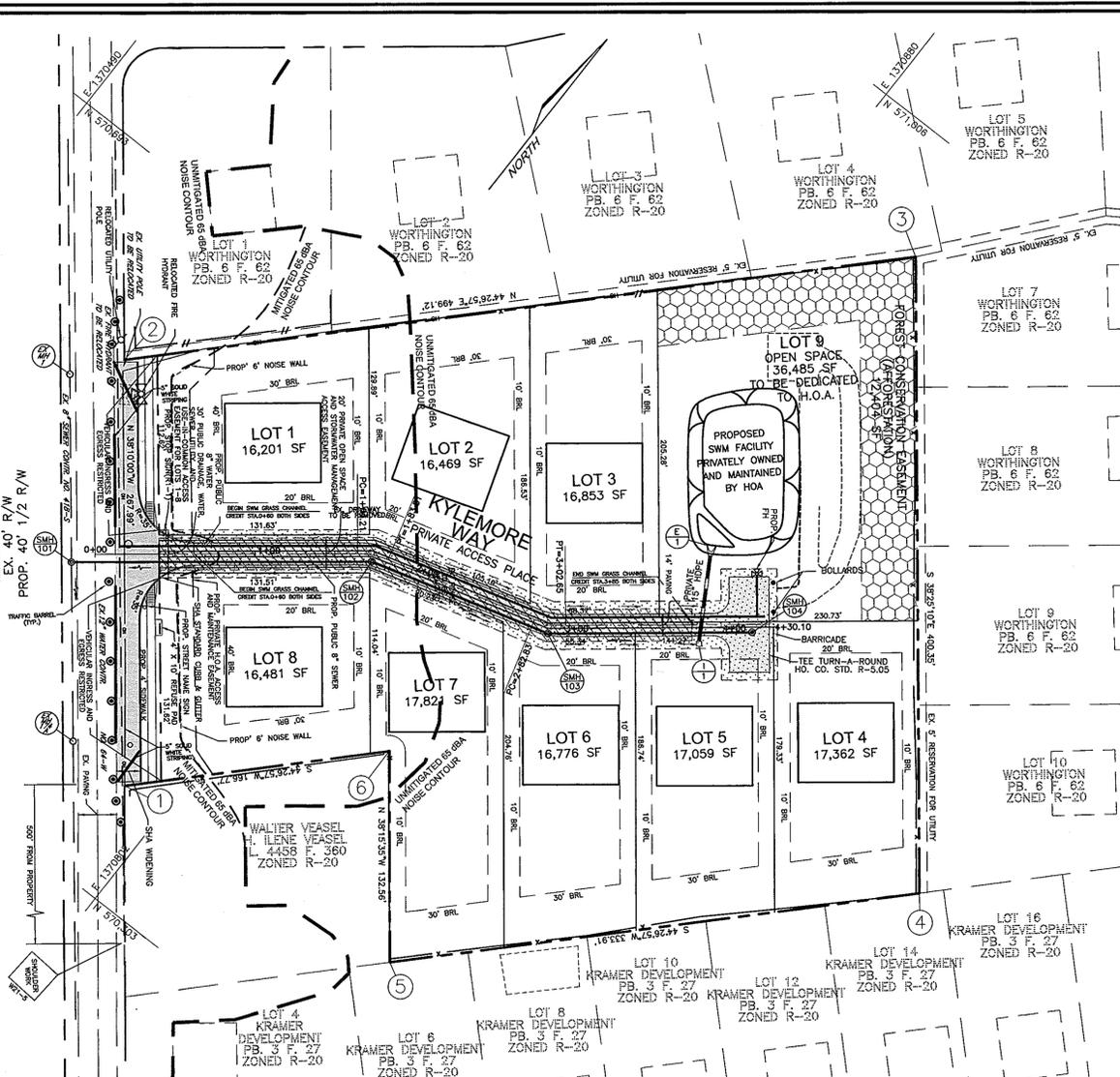
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development



DESIGN BY: LJTIJCO
 DRAWN BY: LJTIJCO
 CHECKED BY: RHW
 DATE: NOVEMBER, 2005
 SCALE: AS NOTED
 W.O. NO.: 00-158.00

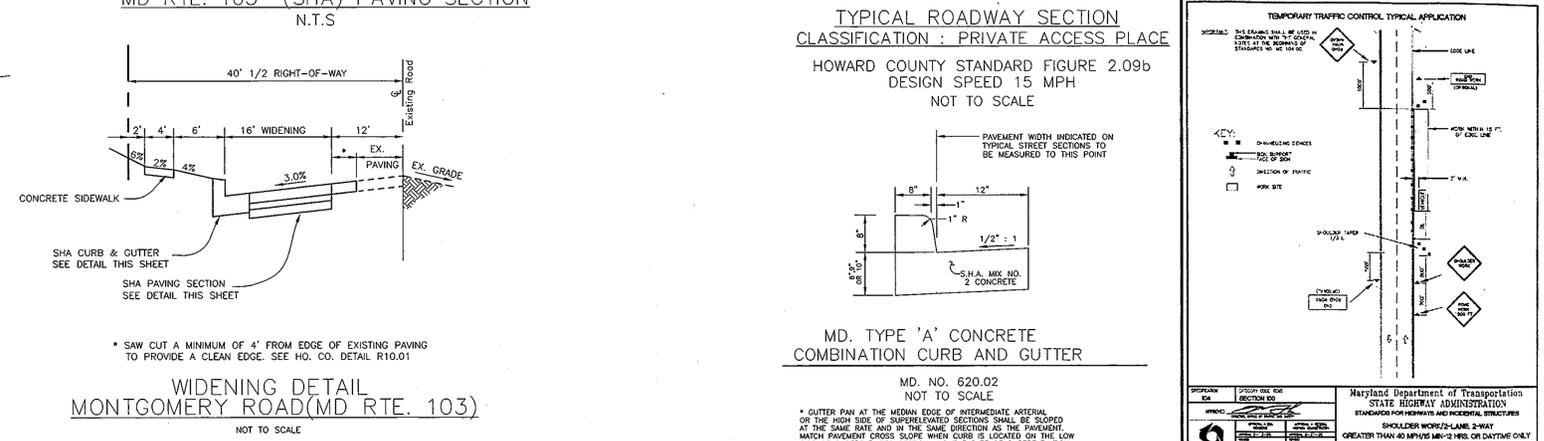
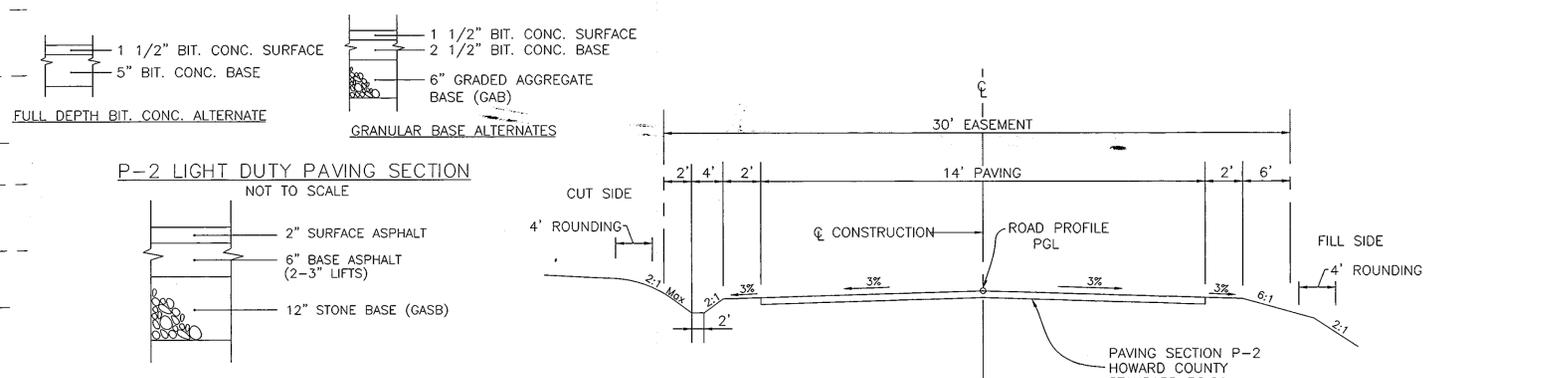
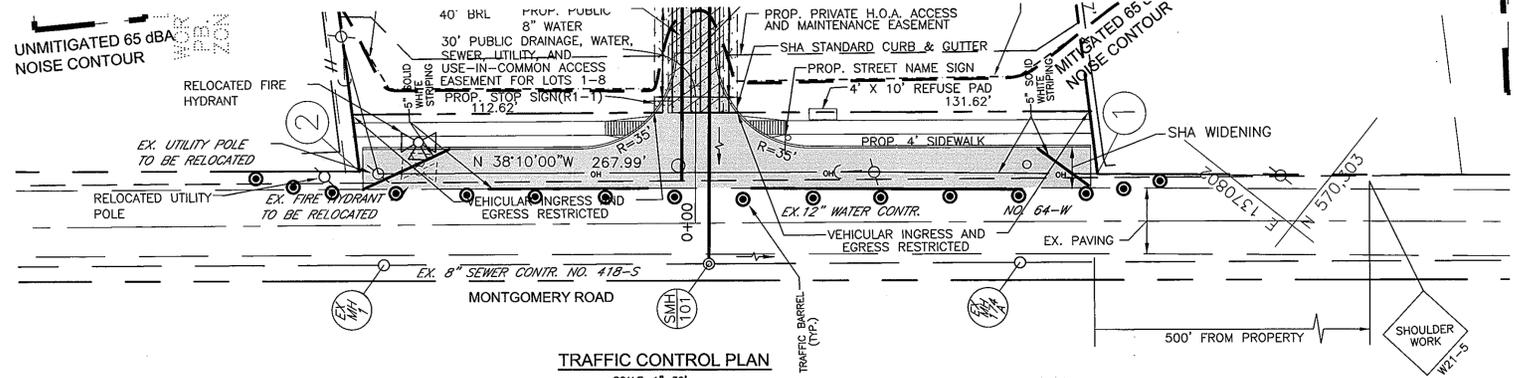
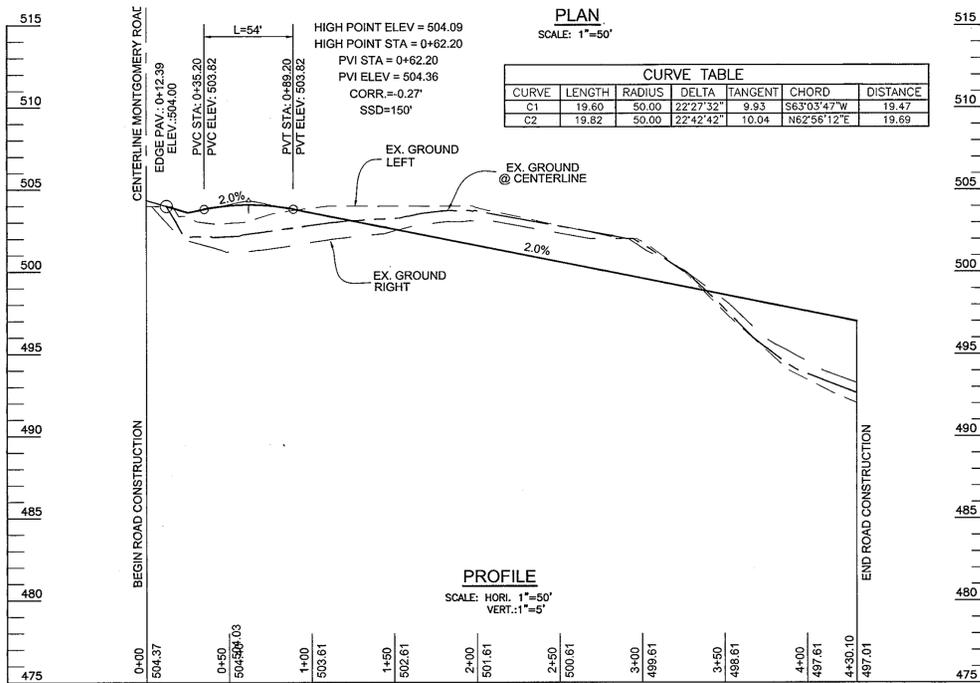
1 SHEET OF 7

MONTGOMERY ROAD



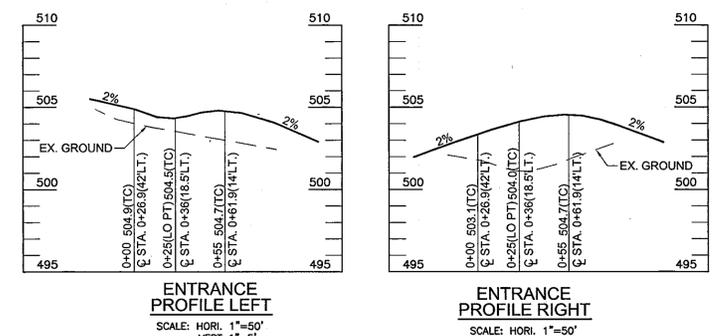
PLAN
SCALE: 1"=50'

CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	DISTANCE
C1	19.60	50.00	22°27'32"	9.93	56°3'03"47"W	19.47
C2	19.82	50.00	22°42'42"	10.04	N62°56'12"E	19.69



LEGEND

- 202--- EXISTING 2 FT CONTOUR
- 200--- EXISTING 10 FT CONTOUR
- 202--- PROPOSED 2 FT CONTOUR
- 200--- PROPOSED 10 FT CONTOUR
- LOD--- LIMIT OF DISTURBANCE
- TREELINE--- EXISTING TREELINE
- TREELINE--- PROPOSED TREELINE
- W--- EX. WOOD FENCE
- M--- EX. METAL FENCE
- N--- UNMITIGATED NOISE CONTOUR
- M--- MITIGATED NOISE CONTOUR
- W--- PROPOSED 6' NOISE WALL
- S--- NOISE WALL
- L--- PROPOSED STREET LIGHT
- T--- PROPOSED STREET TREE
- B--- NO WOODY VEGETATION BUFFER
- P--- PUBLIC WATER, SEWER, AND UTILITY EASEMENT
- O--- PRIVATE OPEN SPACE ACCESS EASEMENT
- F--- FOREST CONSERVATION EASEMENT (RETENTION)



APPROVED: DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division
Cindy Hamer
4/27/06

ROAD CONSTRUCTION PLAN AND PROFILE
WORTHINGTON WEST
LOTS 1 - 8 AND OPEN SPACE LOT 9

TAX MAP 31 BLOCK 14
2ND ELECTION DISTRICT

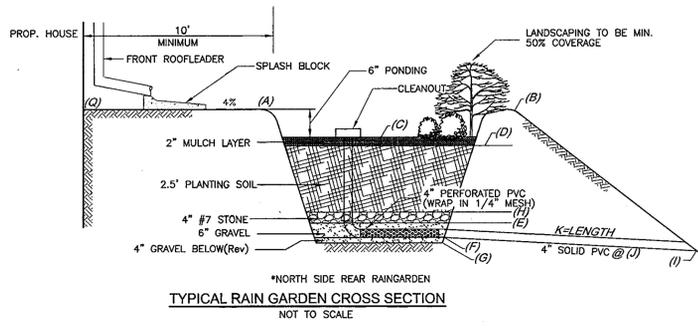
DPZ REF: S-02-06, WP-02-52 & P-04-10

PARCEL 501
HOWARD COUNTY, MARYLAND

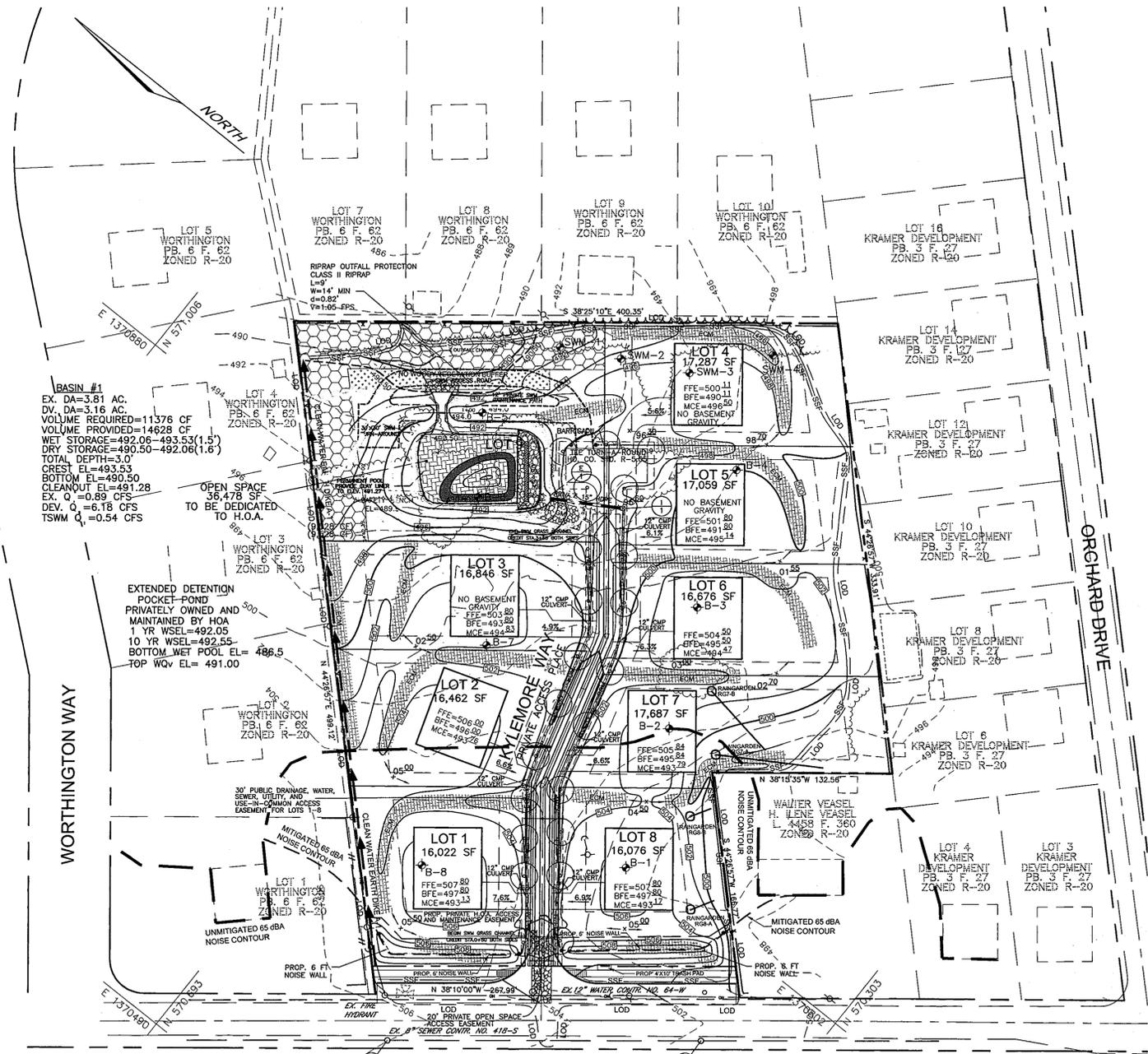
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

DESIGN BY: LJ/UCO
DRAWN BY: LJ/UCO
CHECKED BY: RHW
DATE: NOVEMBER, 2005
SCALE: AS NOTED
W.O. NO.: 00-198.00

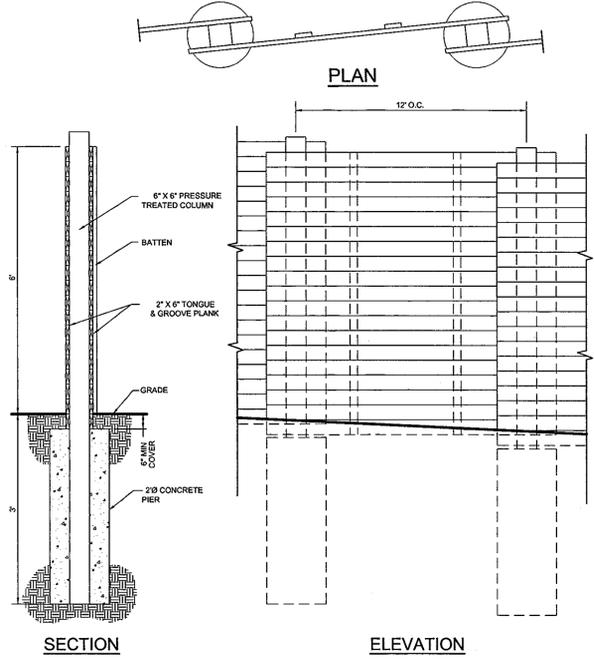
2 SHEET OF 7



LOT No.	RAIN GARDEN	Q	A	B	C	D	E	F	G	H	I	J	K	SIZE RAIN GARDENS
8	RG8-A	504.0	503.6	503.6	503.1	502.9	500.0	499.3	499.0	500.4	499.0	1.9%	16'	5' X 5'
	RG8-B	504.0	503.6	503.6	503.1	502.9	500.0	499.3	499.0	500.4	499.0	2.3%	13'	5' X 5'
7	RG7-A	500.0	499.6	499.6	499.1	498.9	496.0	495.3	495.0	496.4	494.9	0.5%	75'	5' X 5'
	RG7-B	402.5	502.1	502.1	501.6	501.4	498.6	497.9	497.6	498.9	497.3	1.0%	55'	5' X 5'



---202---	EXISTING 2 FT CONTOUR
---200---	EXISTING 10 FT CONTOUR
---200---	PROPOSED 2 FT CONTOUR
---200---	PROPOSED 10 FT CONTOUR
---SSF---	SUPER SILT FENCE
---LOD---	LIMIT OF DISTURBANCE
--- ---	EXISTING TREELINE
---X---X---	EX. WOOD FENCE
---X---X---	EX. METAL FENCE
--- ---	PROPOSED TREELINE
--- ---	UNMITIGATED NOISE CONTOUR
--- ---	MITIGATED NOISE CONTOUR
--- ---	NOISE WALL
--- ---	PROPOSED 6' NOISE WALL
--- ---	EARTH DIKE
--- ---	PROPOSED STREET LIGHT
--- ---	PROPOSED STREET TREE
--- ---	NO WOODY VEGETATION BUFFER
--- ---	PUBLIC WATER, SEWER, AND UTILITY EASEMENT
--- ---	PRIVATE OPEN SPACE ACCESS EASEMENT
--- ---	FOREST CONSERVATION EASEMENT (RETENTION)
--- ---	STABILIZED CONSTRUCTION ENTRANCE



NOISE WALL DETAIL
NOT TO SCALE

MONTGOMERY ROAD
MD RTE 103
MINOR ARTERIAL
EX. 40' R/W
PROP. 40' 1/2 R/W

PLAN
SCALE: 1"=50'

AS-BUILT CERTIFICATION

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



GRADING, SEDIMENT & EROSION CONTROL PLAN
WORTHINGTON WEST
LOTS 1 - 8 AND OPEN SPACE LOT 9

TAX MAP 31 BLOCK 14 PARCEL 501
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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

DESIGN BY:	LITJICO
DRAWN BY:	LITJICO
CHECKED BY:	RHV
DATE:	NOVEMBER, 2005
SCALE:	1"=50'
W.D. NO.:	00-158.00
3 SHEET OF 7	

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

Signature of Engineer: Robert H. Vogel, P.E.
DATE: 3/17/06

DEVELOPER'S CERTIFICATE
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

Signature of Developer: S. Patrick Costello
DATE: 3/17/06

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

Signature: Jim Mueser
DATE: 4/14/06

Signature: John R. Robertson
DATE: 4/14/06

APPROVED: DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature: [Signature]
DATE: 4/27/06

Signature: Cindy Harman
DATE: 4/27/06

FOREST CONSERVATION WORKSHEET

NET TRACT AREA:

A. TOTAL TRACT AREA	4.06 AC
B. AREA WITHIN 100 YEAR FLOODPLAIN	0.00 AC
C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION	0.00 AC
D. NET TRACT AREA	4.06 AC

LAND USE CATEGORY (FROM TABLE 3.2.1, PAGE 40, MANUAL)

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

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

E. AFFOREST THRESHOLD 15% X D = 0.61 AC
F. CONSERVATION THRESHOLD 20% X D = 0.81 AC

EXISTING FOREST COVER:

G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) =	0.00 AC
H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD =	0.00 AC
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD =	0.00 AC

BREAK EVEN POINT:

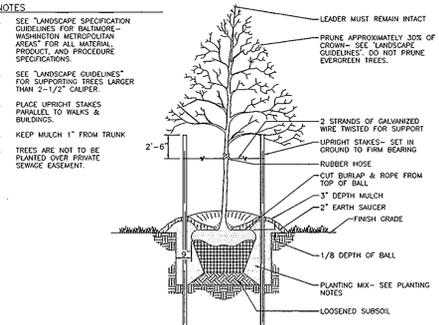
J. FOREST RETENTION WITH NO MITIGATION REQUIRED =	0.00 AC
K. CLEARING PERMITTED WITHOUT MITIGATION =	0.00 AC

PROPOSED FOREST CLEARING:

L. TOTAL AREA OF FOREST TO BE CLEARED =	0.00 AC
M. TOTAL AREA OF FOREST TO BE RETAINED =	0.00 AC

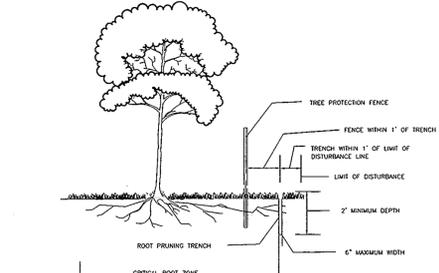
PLANTING REQUIREMENTS:

N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD =	0.00 AC
P. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD =	0.00 AC
Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD =	0.00 AC
R. TOTAL REFORESTATION REQUIRED =	0.00 AC
S. TOTAL AFFORESTATION REQUIRED =	0.81 AC
T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED =	0.81 AC



TREE PLANTING AND STAKING

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

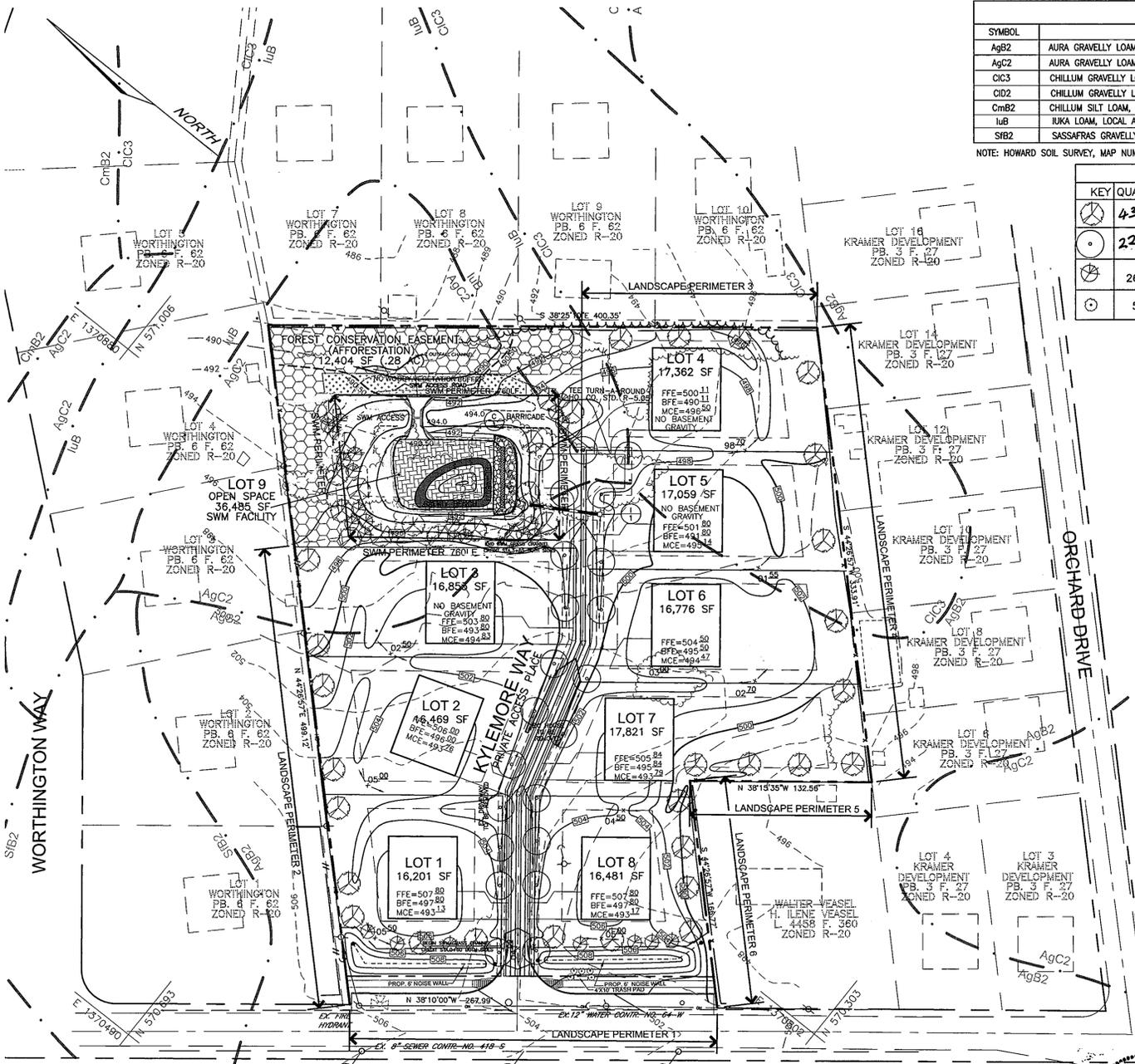


- NOTES:
1. RETENTION AREAS TO BE ESTABLISHED AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.
 2. BOUNDARIES OF RETENTION AREAS TO BE STAKED, FLAGGED AND/OR FENCED PRIOR TRENCHING.
 3. EXACT LOCATION OF TRENCH SHOULD BE IDENTIFIED.
 4. TRENCH SHOULD BE IMMEDIATELY BACKFILLED WITH SOIL REMOVED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

ROOT PRUNING NTS

- NOTES:
1. RANDOMLY SPACE SEEDLINGS / WHIPS SO THAT NO MORE THAN 5 OF ANY PARTICULAR SPECIES ARE PLANTED IN SUCCESSION. PLANT 1" CAL TREES AROUND PERIMETER OF REFORESTATION AREA.
 2. ALL PROPOSED PLANT MATERIAL TO BE NATIVE PLANT SPECIES. NO ORNAMENTAL CULTIVARS TO BE USED.
 3. REFORESTATION MANAGEMENT RECORDS SHOULD BE KEPT FOR HOWARD COUNTY REVIEW.
 4. YEAR 1: INSPECT TREES FOR HEALTH AND VIGOR AT: A. BEGINNING OF GROWING SEASON, B. MIDSUMMER AND C. FALL. ADJUST WATERING, PEST CONTROL, WEEDING AND FEEDING AS NEEDED. AFTER ONE-YEAR REPLACE ANY TREES THAT DID NOT SURVIVE DURING THE NEXT PLANTING SEASON.
 5. YEAR 2: INSPECT TREES FOR HEALTH AND VIGOR IN APRIL & OCTOBER. ADJUST WATERING, PEST CONTROL, WEEDING AND FEEDING AS NEEDED. REPLACE ANY TREES THAT DID NOT SURVIVE YEAR 2 DURING THE NEXT PLANTING SEASON UP TO 50% OF ORIGINAL INSTALLATION.
 6. CONTRACTOR TO FOLLOW ALL STATE AND COUNTY GUIDELINES FOR AFFORESTATION & REFORESTATION.
 7. THE TOTAL FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION IS 0.61 AC OF AFFORESTATION AND WILL BE FULFILLED BY THE AFFORESTATION OF 0.28 AC. LOCATED IN OPEN SPACE LOT 9 AND A FEE-IN-LIEU OF 0.33 AC IN THE AMOUNT OF \$7,188.
 8. FINANCIAL SURETY FOR THE 0.28 AC OF AFFORESTATION IN THE AMOUNT OF \$6,099.00 WILL BE PAID AT THE DEVELOPER'S AGREEMENT.

APPROVED: DEPARTMENT OF PUBLIC WORKS
Chief Bureau of Highways Date



SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	TYPE
AgB2	AURA GRAVELLY LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
AgC2	AURA GRAVELLY LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B
CiC3	CHILLUM GRAVELLY LOAM, 5 TO 10 PERCENT SLOPES, SEVERELY ERODED	B
CiD2	CHILLUM GRAVELLY LOAM, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
CmB2	CHILLUM SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
luB	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES	C
SIB2	SASSAFRAS GRAVELLY SANDY LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B

NOTE: HOWARD SOIL SURVEY, MAP NUMBER 20

LANDSCAPE SCHEDULE THIS SHEET

KEY	QUAN	BOTANICAL NAME	SIZE	REM.
43	ACER RUBRUM 'OCTOBER GLORY' / OCTOBER GLORY RED MAPLE	2 1/2"-3" Cal.	B & B	
22	PIN OAK / QUERCUS PALUSTRIS	2 1/2"-3" Cal.	B & B	
26	PINUS STROBUS / EASTERN WHITE PINE (EVERGREEN TREES)	6'-8" Ht.	B & B	
5	ROUNDLEAF JAPANESE HOLLY	24" X 36" HT / 24" X 36" SPD	B & B	

LEGEND

---202---	EXISTING 2 FT CONTOUR SURVEY
---200---	EXISTING 10 FT CONTOUR SURVEY
---200---	PROPOSED 2 FT CONTOUR
---200---	PROPOSED 10 FT CONTOUR
---SBF---	SUPER SILT FENCE
---LOD---	LIMIT OF DISTURBANCE
---	EXISTING TRENCHLINE
---	PROPOSED TRENCHLINE
---	EX. WOOD FENCE
---	EX. METAL FENCE
---	PROPOSED 6" NOISE WALL
---	PROPOSED STREET LIGHT
---	PROPOSED STREET TREE
---	NO WOODY VEGETATION
---	PUBLIC WATER, SEWER, AND UTILITY EASEMENT
---	PRIVATE OPEN SPACE ACCESS EASEMENT
---	FOREST CONSERVATION EASEMENT (RETENTION)
---	PROPOSED SHADE TREE
---	PROPOSED EVERGREEN TREE

SCHEDULE A PERIMETER LANDSCAPE EASEMENT

CATEGORY	ADJACENT TO ROADWAYS						ADJACENT TO PERIMETER PROPERTIES					
	1	2	3	4	5	6	1	2	3	4	5	6
Perimeter/Frontage Designation	B	A	A	A	A	A	A	A	A	A	A	A
Linear Feet of Roadway Frontage/Perimeter	268'	337'	172'	334'	133'	167'						
Credit for Existing Vegetation (Yes, No, Linear Feet Describe below if needed)	No	No	No	No	No	No						
Credit for Wall, Fence or Berm (Yes, No, Linear Feet Describe below if needed)	YES* 268'	No	No	No	No	No						
Number of Plants Provided	0	6	3	6	3	3						
Shade Trees	0	-	-	-	-	-						
Evergreen Trees	0	-	-	-	-	-						
Number of Plants Provided	6	6	3	6	3	3						
Shade Trees	7	-	-	-	-	-						
Evergreen Trees	-	-	-	-	-	-						
Other Trees (2:1 Substitution)	-	-	-	-	-	-						
Shrubs (10:1 Substitution)	-	-	-	-	-	-						
Describe Plant Substitution Credits Below if needed												

GENERAL NOTES

1. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$23,550.00 FOR 65 SHADE TREES, 26 EVERGREEN TREES AND 5 SHRUBS.

SCHEDULE D : STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	760 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	N/A
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	N/A
NUMBER OF TREES REQUIRED	(760 LF) 16 SHADE TREES 19 EVERGREEN TREES
NUMBER OF TREES PROVIDED	16 SHADE TREES 19 EVERGREEN TREES 0 TREES (0 SUBSTITUTION TREES)

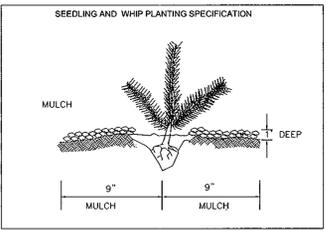
STREET TREES

NUMBER OF STREET TREES REQUIRED	22
NUMBER OF STREET TREES PROVIDED	22

DENSITY CHART

SIZE	QTY. PER ACRE	AVERAGE SPACING	PLAN SCALE: 1"=50'
1" CALIPER WHIPS	200	15'x15'	
	360	11'x11'	

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



STORMWATER POND HERBACEOUS LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
VA	G30	Vallisneria americana / Wild Celery	plug	2' oc
SL	101	Sagittaria latifolia / Duck Potato (do not plant tubers)	plug	4' oc
NL	425	Nuphar luteum / Spatterdock	plug	1.5' oc
IP	46	Iris pseudacoris / Yellow Water Iris	plug	1.5' oc

REMOVE Baffle Boards PRIOR TO INSTALLATION OF PLANT MATERIALS. ADD THREE INCHES OF TOPSOIL TO PLANTING AREA. STABILIZE WITH 40 POUNDS PER ACRE OF A HYDROSEED MIX (WET MIX AND MEADOW MIX) FROM SYLVIA NURSERY OR EQUAL. ALL PLANT MATERIALS TO CONFORM TO THE MOST CURRENT AMN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LCMW SPECIFICATIONS.

AS-BUILT CERTIFICATION

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

SIGNATURE: S. PATRICK COSTELLO
FE. No. 16193

DEVELOPER'S/OWNER'S LANDSCAPE CERTIFICATE

I/WE CERTIFY THAT LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION OF THE PROJECT, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE-YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

SIGNATURE: S. PATRICK COSTELLO
DEVELOPER'S/OWNER'S NAME: S. PATRICK COSTELLO

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE: 4/21/06

DESIGN BY: LUTICO
DRAWN BY: LUTICO
CHECKED BY: RHV
DATE: NOVEMBER, 2005
SCALE: AS NOTED
W.O. NO.: 00-158.00

NOTE:

1. SIGNS TO BE PLACED APPROXIMATELY 50-100 FEET APART. CONDITIONS ON SITE AFFECTING VISIBILITY BY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.
2. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.

FOREST CONSERVATION AND LANDSCAPING PLAN WORTHINGTON WEST

LOTS 1 - 8 AND OPEN SPACE LOT 9

DPZ REF: S-02-06, WP-02-52 & P-04-10

TAX MAP 31 BLOCK 14 2ND ELECTION DISTRICT PARCEL 501 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.

ENGINEERS • SURVEYORS • PLANNERS

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

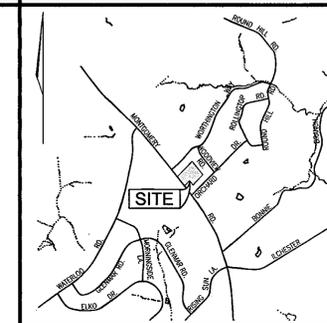
DESIGN BY: LUTICO
DRAWN BY: LUTICO
CHECKED BY: RHV
DATE: NOVEMBER, 2005
SCALE: AS NOTED
W.O. NO.: 00-158.00

4 SHEET OF 7

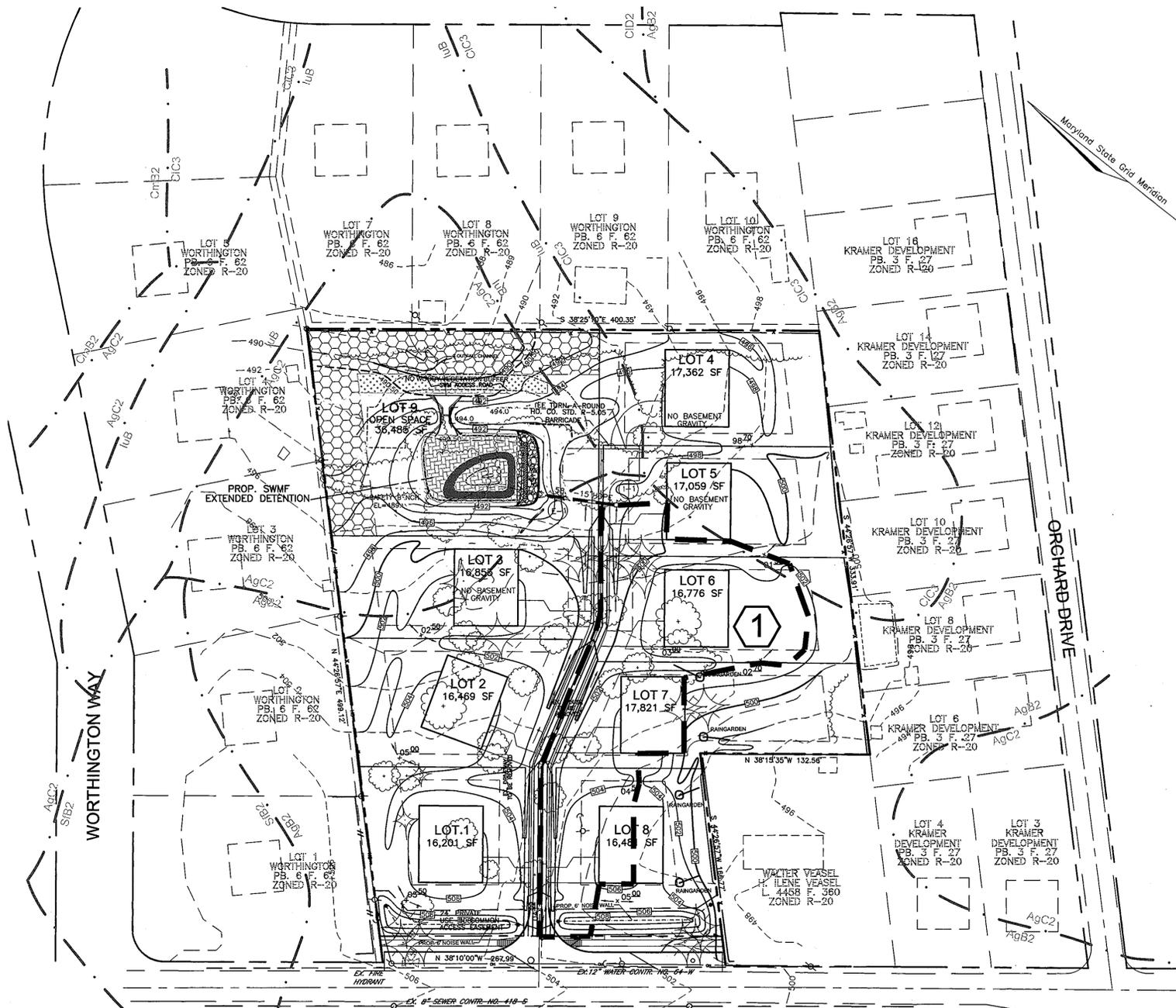
SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	TYPE
AgB2	AURA GRAVELLY LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
AgC2	AURA GRAVELLY LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B
CiC3	CHILLUM GRAVELLY LOAM, 5 TO 10 PERCENT SLOPES, SEVERELY ERODED	B
CiD2	CHILLUM GRAVELLY LOAM, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
CmB2	CHILLUM SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
IuB	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES	C
SiB2	SASSAFRAS GRAVELLY SANDY LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B

NOTE: HOWARD SOIL SURVEY, MAP NUMBER 20

DRAINAGE AREA TABULATIONS					
No.	Area	'C'	% Imp.	Soil Types	Zone
1-1	0.75 Ac.	0.28	25	B	R-20



VICINITY MAP
SCALE: 1"=2000'

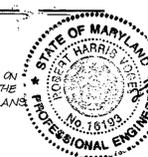


LEGEND	
---202---	EXISTING 2 FT CONTOUR
---200---	EXISTING 10 FT CONTOUR
---200---	PROPOSED 2 FT CONTOUR
---200---	PROPOSED 10 FT CONTOUR
---SSF---	SUPER SILT FENCE
---	LIMIT OF DISTURBANCE
---	EXISTING TREELINE
---	PROPOSED TREELINE
---	UNMITIGATED NOISE CONTOUR
---	MITIGATED NOISE CONTOUR
---	PROPOSED 6' NOISE WALL
☆	PROPOSED STREET LIGHT
○	PROPOSED STREET TREE
[Pattern]	NO WOODY VEGETATION BUFFER
[Pattern]	PUBLIC WATER, SEWER, AND UTILITY EASEMENT
[Pattern]	FOREST CONSERVATION EASEMENT (RETENTION)

MONTGOMERY ROAD
MD RTE. 103
MINOR ARTERIAL
EX. 40' R/W
PROP. 40' 1/2 R/W

PLAN
SCALE: 1"=50'

AS-BUILT CERTIFICATION
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.
SIGNATURE: [Signature]
P.E. No. 16193



2	STORMWATER MANAGEMENT FACILITY AS-BUILT	2/3/09
NO.	REVISION	DATE

STORM DRAIN
DRAINAGE AREA MAP
WORTHINGTON WEST
LOTS 1 - 8 AND OPEN SPACE LOT 9
DPZ REF: S-02-06, WP-02-52 & P-04-10

TAX MAP 31 BLOCK 14 PARCEL 501
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 4/27/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 4/27/06
CHIEF, DIVISION OF LAND DEVELOPMENT

DESIGN BY: LJ/JCO
DRAWN BY: LJ/JCO
CHECKED BY: RHV
DATE: NOVEMBER, 2005
SCALE: AS NOTED
W.D. NO.: 00-158.00
5 SHEET OF 7
ROBERT H. VOGEL, P.E. #16193

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

PERMANENT SEEDING NOTES

SEDIMENT CONTROL NOTES

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-SSS IN CONJUNCTION 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 MATERIALS LARGER THAN 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.

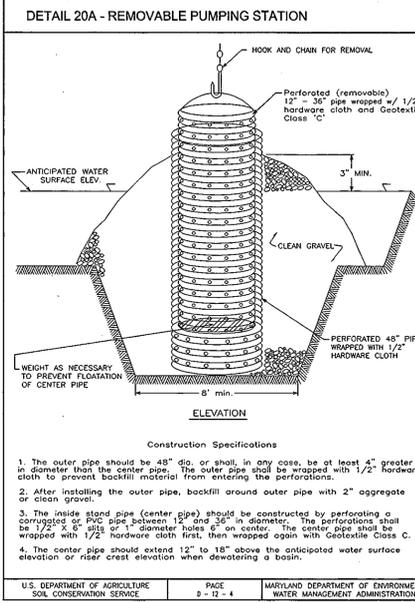
III. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
I. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS INDICATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
A. PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A 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 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 SPECIFIED IN 20.0 VEGETATIVE STABILIZATION-SECTION I-VEGETATIVE STABILIZATION METHODS AND MATERIALS.

IV. 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 HARD CONDITION. WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

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 DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND APPLY 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.
SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (1.4 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.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 SEEDING 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 (.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.

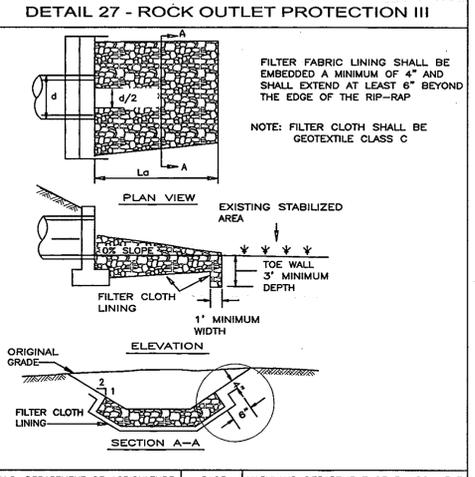
1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSE AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
2. ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.
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. 5). 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 DISTURBED 4.06 AC
AREA TO BE ROOFED OR PAVED 3.85 AC
AREA TO BE VEGETATIVELY STABILIZED 0.82 AC
TOTAL CUT 3.03 AC
TOTAL FILL 0.00 AC
OFFSITE WASTE/BORROW AREA LOCATION NA
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.
12. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE CURLED UPHILL AT LEAST 2 FEET WHEN RETURNING PERPENDICULAR TO SLOPE.
* TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR WITH AN APPROVED AND ACTIVE GRADING PERMIT



Construction Specifications

- The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.
- After installing the outer pipe, backfill around outer pipe with 2" aggregate.
- The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" x 6" or 1" diameter holes @ 6" center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class C.
- The center pipe should extend 12" to 18" above the anticipated water surface elevation or rise crest elevation when dewatering a basin.

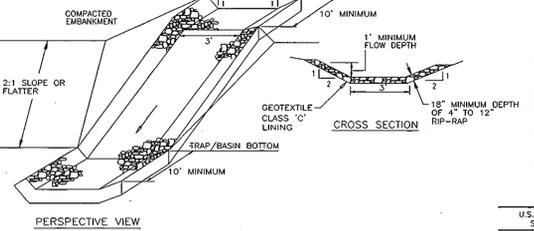
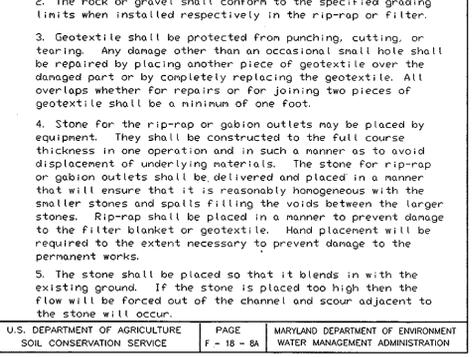
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 10 - 4	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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Construction Specifications

- The subgrade for the filter, rip-rap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
- The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.
- Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.
- Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.
- The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.

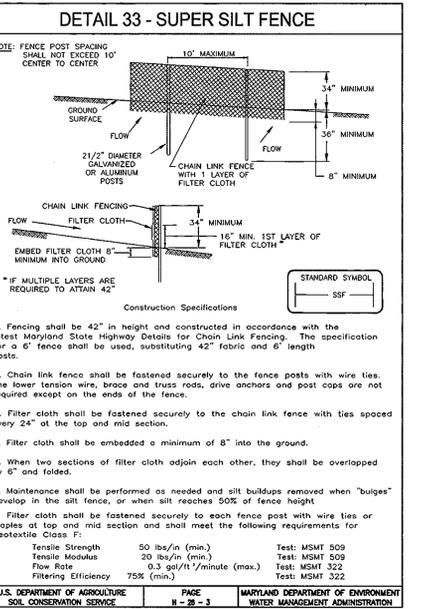
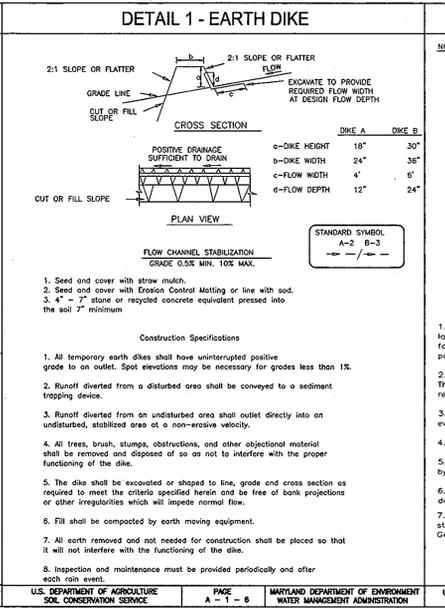
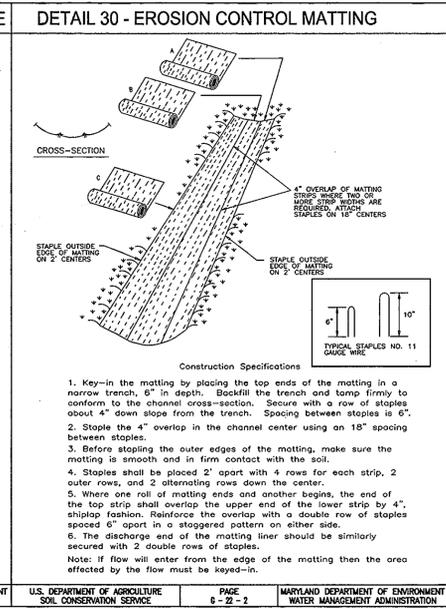
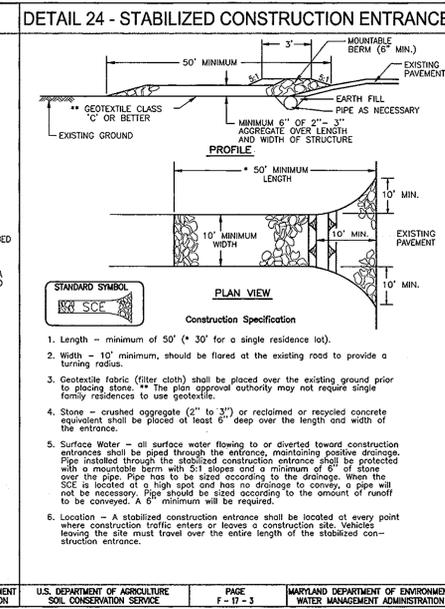
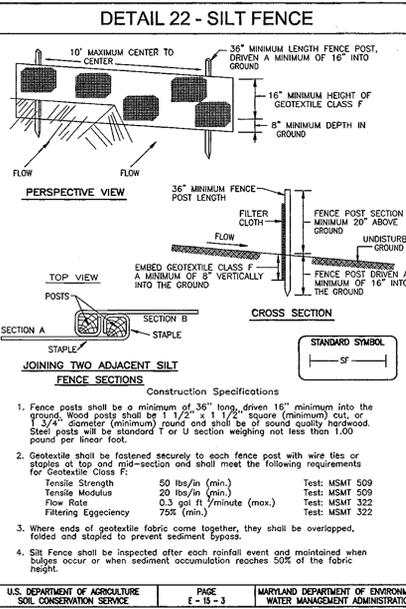
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 18 - 10	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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Construction Specifications

- Rip-rap lined inflow channels shall be 1" in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and 3" (min.) bottom width. The channel shall be lined with 4" to 12" rip-rap to a depth of 18".
- Filter cloth shall be installed under all rip-rap. Filter cloth shall be Geotextile Class C.
- Entrance and exit sections shall be installed as shown on the detail section.
- Rip-rap used for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.
- Gabion Inflow Protection may be used in lieu of Rip-rap Inflow Protection.
- Rip-rap should blend into existing ground.
- Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1, for slopes flatter than 10:1 use Earth Dike or Temporary Swale lining criteria.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 8 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 15 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 7 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G - 22 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE A - 1 - 6	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE H - 23 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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ENGINEERS CERTIFICATE
I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

3/17/06 DATE

DEVELOPERS CERTIFICATE
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

3/17/06 DATE

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

4/14/06 DATE

4/14/06 DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

4/21/06 DATE

4/23/06 DATE

NO.	REVISION	DATE

SEDIMENT & EROSION CONTROL DETAILS

WORTHINGTON WEST
LOTS 1 - 8 AND OPEN SPACE LOT 9
DPZ REF: S-02-06, WP-02-52 & P-04-10

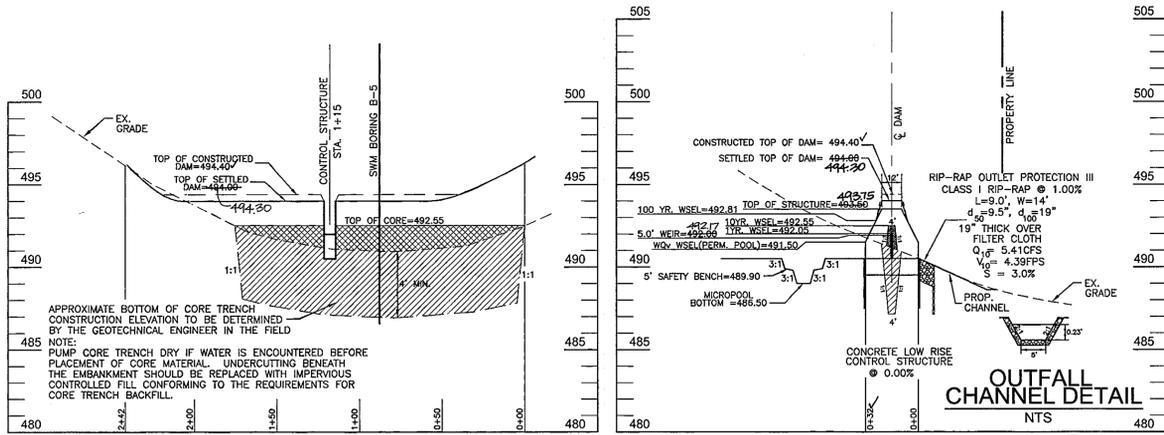
TAX MAP 31, BLOCK 14, PARCEL 501
2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

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

DESIGN BY: LJ/TJCO
DRAWN BY: LJ/TJCO
CHECKED BY: RHV
DATE: NOVEMBER, 2005
SCALE: 1"=50'
W.O. NO.: 00-158.00

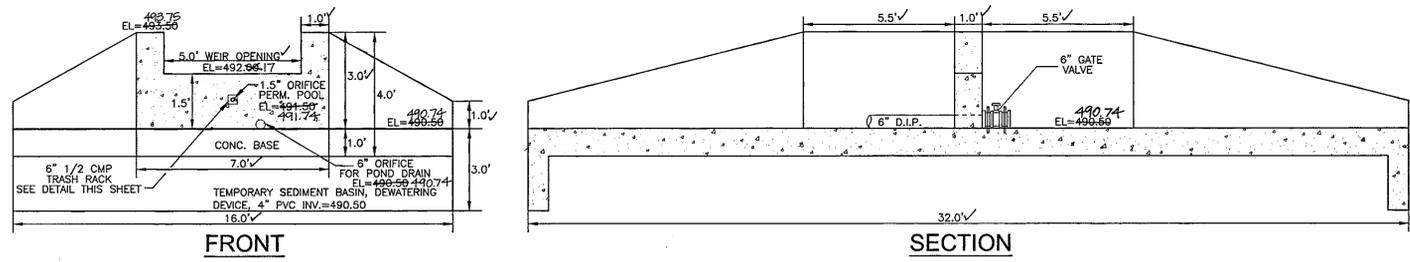
6 SHEET OF 7

F-05-114



PROFILE ALONG CENTERLINE OF DAM
SCALE: 1"=50' HORIZ.
1"=5' VERT.

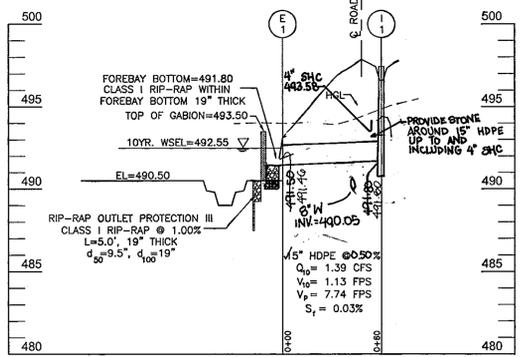
PRINCIPAL SPILLWAY PROFILE
SCALE: 1"=50' HORIZ.
1"=5' VERT.



FRONT

SECTION

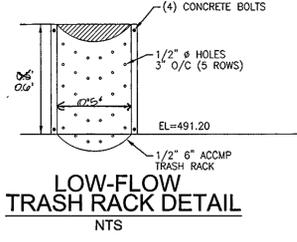
LOW RISE CONTROL STRUCTURE DETAIL
SCALE: 1"=3'



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

SEQUENCE OF CONSTRUCTION

NO.	DESCRIPTION	DURATION
1.	OBTAIN GRADING PERMIT.	1 DAY
2.	NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (313-1850) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.	1 DAY
3.	CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AND INSTALL PERIMETER SLOTTED FILTER FABRIC, SILT FENCE AND CLEANWATER DIKE.	2 DAYS
4.	WITH COUNTY INSPECTOR'S APPROVAL, STABILIZE DISTURBED AREAS AND START SWM FACILITY CONSTRUCTION.	2 WEEKS
5.	BEGIN CONSTRUCTION OF WATER, SEWER AND STORM DRAIN SYSTEM.	1 WEEK
6.	GRADE ROAD TO SUB-BASE AND ROUTE GRADE REMAINING SITE AND INSTALL STORM DRAIN SYSTEMS.	1 WEEK
7.	WITH COUNTY INSPECTOR'S APPROVAL, STABILIZE DISTURBED AREAS AND START SWM FACILITY CONSTRUCTION.	2 WEEKS
8.	CONSTRUCT STORMWATER MANAGEMENT FACILITY (SEDIMENT BASIN 1) AND INSTALL PERIMETER SLOTTED FILTER FABRIC, SILT FENCE AND CLEANWATER DIKE.	2 WEEKS
9.	WITH COUNTY INSPECTOR'S APPROVAL, STABILIZE DISTURBED AREAS AND START SWM FACILITY CONSTRUCTION.	2 WEEKS
10.	CONSTRUCT STORMWATER MANAGEMENT FACILITY (SEDIMENT BASIN 2) AND INSTALL PERIMETER SLOTTED FILTER FABRIC, SILT FENCE AND CLEANWATER DIKE.	2 WEEKS
11.	WITH ROAD PAVED, INSTALL STREET TREES.	1 WEEK
12.	AS STORMWATER MANAGEMENT POND IS STABILIZED, INSTALL POND LANDSCAPING AS SHOWN IN SCHEDULE 'D' AND PERIMETER LANDSCAPING AS SHOWN IN SCHEDULE 'A'. SEE SHEET 7 FOR SCHEDULE TABLES.	1 WEEK
13.	WITH INSPECTOR'S APPROVAL AND ROAD PAVING COMPLETE AND CONTROLLING DRAINAGE AREAS STABILIZED, CONDUCT SEDIMENT BASIN TO FINAL STORMWATER MANAGEMENT BY REMOVING DEWATERING DEVICE AND INSTALLING PERMANENT WATER QUALITY EXTENDED DETENTION PIPE PER DETAIL. CONSTRUCT BIORETENTION FACILITY AND PLANTINGS.	1 WEEK



LOW-FLOW TRASH RACK DETAIL
NTS

NOTES:
DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN HEREON.
FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, SLOTTED PERIMETER SLOTTED SLOPES AND ALL SLOPES GREATER THAN 3:1.
B. 14 CALENDAR DAYS FOR ALL OTHER DISTURBED AREAS.

POND #1 SUMMARY

	1 YEAR	10 YEAR	100 YEAR
FLOW INTO POND	2.10 c.f.s.	9.00 c.f.s.	15.70 c.f.s.
FLOW OUT OF POND	0.06 c.f.s.	6.40 c.f.s.	11.70 c.f.s.
W.S. ELEVATION	492.05	492.55	492.81
STORAGE VOLUME	0.11 AC FT	0.19 AC FT	0.23 AC FT
WQv	Q10	Rev	
	0.08 Ac.Ft.	0.10 Ac.Ft.	0.02 Ac.Ft.

OPERATION, MAINTENANCE AND INSPECTION

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

OPERATION AND MAINTENANCE SCHEDULE FOR STORMWATER MANAGEMENT EXTENDED DETENTION FACILITY

ROUTINE MAINTENANCE
1. FACILITY WILL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IS FUNCTIONING PROPERLY.
2. TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHOULD BE MOWED AS NEEDED.
3. DEBRIS AND LITTER NEXT TO THE OUTLET STRUCTURE SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
4. VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS RIPRAP OUTLET AREAS SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
NON-ROUTINE MAINTENANCE
1. STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON DETECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
2. SEDIMENT SHOULD BE REMOVED WHEN ITS ACCUMULATION SIGNIFICANTLY REDUCES THE DESIGN STORAGE, INTERFERE WITH THE FUNCTION OF THE RISER, WHEN DEEMED NECESSARY FOR AESTHETIC REASONS, OR WHEN DEEMED NECESSARY BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

AS-BUILT CERTIFICATION

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



SIGNATURE
RE. NO. 16193

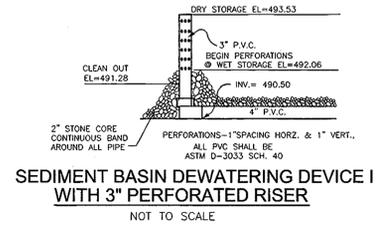
PIPE SCHEDULE

PIPE SIZE	TYPE	TOTAL LENGTH
15"	HDPE	60 LF

STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	TOP ELEV.	INV IN	INV OUT	REMARKS
E-1	15" METAL END SECTION	N 570,714 E 1,370,970	-	-	491.50	SD 5.61
I-1	TYPE 'D' INLET	N 570,662 E 1,371,000	496.60	-	491.90	SD 4.39

TOP ELEVATION FOR TYPE 'D' INLET IS THROAT OPENING.



SEDIMENT BASIN DEWATERING DEVICE I WITH 3" PERFORATED RISER
NOT TO SCALE

HILLS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: WORTHINGTON WEST
Location: HOWARD COUNTY, MD
Job Number: 13003A
Soil Number: 2000A

Soil Log 1 of 1

Soil Log 2 of 1

Soil Log 3 of 1

Soil Log 4 of 1

Soil Log 5 of 1

Soil Log 6 of 1

Soil Log 7 of 1

Soil Log 8 of 1

Soil Log 9 of 1

Soil Log 10 of 1

Soil Log 11 of 1

Soil Log 12 of 1

Soil Log 13 of 1

Soil Log 14 of 1

Soil Log 15 of 1

Soil Log 16 of 1

Soil Log 17 of 1

Soil Log 18 of 1

Soil Log 19 of 1

Soil Log 20 of 1

NO.	REVISION	DATE
1	STORMWATER MANAGEMENT FACILITY AS-BUILTS	2-3-09
2	REVISE STORM DRAIN PROFILE	11-20-06

STORM DRAIN PROFILES AND SWM PROFILES & DETAILS
LOTS 1 - 8 AND OPEN SPACE LOT 9
DPZ REF: S-02-06, WP-02-52 & P-04-10

TAX MAP 31 BLOCK 14
2ND ELECTION DISTRICT
PARCEL 501
HOWARD COUNTY, MARYLAND

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

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

3/17/06
SIGNATURE OF ENGINEER
ROBERT H. VOGEL, P.E.

DEVELOPER'S CERTIFICATE
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

3/16/06
SIGNATURE OF DEVELOPER
D. PARK COVELL

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

4/19/06
DATE
John K. Robertson
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

4/27/06
DATE
Cindy Harms
CHIEF, DIVISION OF LAND DEVELOPMENT

DESIGN BY: LJT/CO
DRAWN BY: LJT/CO
CHECKED BY: RHV
DATE: NOVEMBER, 2005
SCALE: 1"=50'
W.C. NO.: 00-158.00

7 SHEET OF 7