

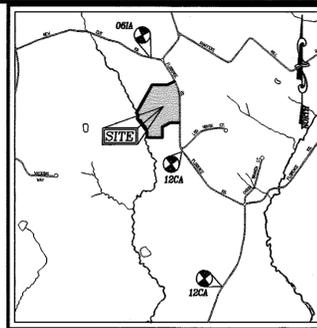
GENERAL NOTES

- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- THE SUBJECT PROPERTY IS ZONED RC-DEO PER THE FEBRUARY 2, 2004 COMPREHENSIVE ZONING PLAN AND THE COMP LITE ZONING REGULATION AMENDMENTS EFFECTIVE JULY 28, 2006.
- THIS SUBDIVISION COMPLIES WITH THE AMENDED 5TH EDITION OF THE SUBDIVISION AND ZONING REGULATIONS (CB-45-2003) AND THE ZONING REGULATIONS, AS AMENDED BY COUNCIL BILL 75-2003.
- DENSITY TABULATION:
GROSS AREA OF PROJECT: 20.87 AC
AREA OF 100-YEAR FLOODPLAIN DRAINAGE & UTILITY EASEMENT: 3.03 AC
AREA OF STEEP SLOPES: 1.86 AC
NET AREA OF PROJECT: 16.00 AC
NUMBER OF ENTITIES PERMITTED BY RIGHT: 20.87/4.25 = 4
MAXIMUM RECEIVING YIELD: 16/2 = 8
NUMBER OF BUILDABLE ENTITIES PROPOSED: 4
NUMBER OF DEO UNITS NEEDED: 0
- THE PROJECT BOUNDARY IS BASED ON BOUNDARY SURVEY BY ROBERT H. VOGEL ENGINEERING PERFORMED ON OR ABOUT OCTOBER 2005.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON A FIELD RUN TOPOGRAPHICAL SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING, DATED DECEMBER 2005.
- WATER AND SEWER FOR THIS PROJECT WILL BE PRIVATE.
- STORMWATER MANAGEMENT FOR THIS SITE IS PROVIDED BY RAINGARDENS/AND GRASS CHANNELS FOR WQV AND REV. AS APPROVED BY SP-06-020 CPV IS NOT REQUIRED FOR THIS PROJECT. ALL STORMWATER MANAGEMENT CONTROLS ARE TO BE PRIVATELY MAINTAINED.
- THIS SITE IS NOT LISTED IN THE HOWARD COUNTY HISTORIC INVENTORY.
- A WETLAND DELINEATION WAS PERFORMED BY ECO-SCIENCE PROFESSIONALS, INC., DATED FEBRUARY 2006.
- THE FLOODPLAIN SHOWN HEREON IS BASED ON HOWARD COUNTY RECORD PLAT 10011, DATED AUGUST 1991.
- A TRAFFIC STUDY/APFO STUDY IS NOT REQUIRED FOR THIS SITE, BECAUSE IT IS TWO MILES FROM THE INTERSECTION OF TWO MINOR COLLECTOR ROADS.
- A FOREST STAND DELINEATION WAS PERFORMED BY ECO-SCIENCE PROFESSIONALS, INC., DATED FEBRUARY 2006.
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT, BECAUSE:
 - IT IS NOT LOCATED WITHIN 1000 FEET OF AN EXISTING RIGHT OF WAY LINE OF ROUTE 1-95 OR THAT SEGMENT OF U.S. ROUTE 1 FROM MD.100 TO MD.32 OF ANY OTHER ROADWAY WHERE HEAVY TRUCK TRAFFIC IS EXPECTED TO EXCEED AN ADT OF 10,000 VEHICLE.
 - IT IS NOT LOCATED WITHIN 500' OF ANY OTHER EXISTING OR PROPOSED PRINCIPAL OR INTERMEDIATE ARTERIAL HIGHWAY RIGHT OF WAY LINE.
 - IT IS NOT LOCATED WITHIN 250' OF ANY EXISTING OR PROPOSED MINOR ARTERIAL RIGHT OF WAY LINE.
 - IT IS NOT LOCATED WITHIN 500' OF AN EXISTING OR PROPOSED RAIL LINE.
 - IT IS NOT LOCATED WITHIN THE APPROVED AIRPORT NOISE ZONE IS ESTABLISHED BY THE STATE AVIATION ADMINISTRATION.
- THIS SECTION OF FLORENCE ROAD IS NOT A SCENIC ROAD.
- THIS PROPERTY IS OUTSIDE THE METROPOLITAN DISTRICT.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL/CEMETERY LOCATIONS ON SITE.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL NUMBERS 12CA AND 12CB.
- STREET LIGHTING IS NOT REQUIRED FOR THIS SITE.
- EXISTING SEPTIC LOCATIONS SHOWN ARE BASED ON RECORD PLATS AND HEALTH DEPARTMENT RECORDS.
- ALL EXISTING WELLS AND SEPTIC AREAS WITHIN 100' OF THE SITE HAVE BEEN SHOWN TO THE BEST OF OUR KNOWLEDGE.
- ALL WELLS TO BE DRILLED PRIOR TO SUBMITTAL OF FINAL PLAT FOR SIGNATURE.
- IT IS THE DEVELOPERS' RESPONSIBILITY TO SCHEDULE THE WELL DRILLING PRIOR TO FINAL PLAT SUBMISSION. IT WILL NOT BE CONSIDERED 'GOVERNMENT DELAY' IF THE WELL DRILLING DELAYS THE HEALTH DEPARTMENT SIGNATURE OF THE RECORD PLAT.
- THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
- THIS PROJECT IS A RESUBDIVISION OF KOGAN TRUST PROPERTY LOT 8 (F-89-83).
- TREE PROTECTION FENCING WILL BE PROVIDED AT THE LIMITS OF DISTURBANCE WHERE GRADING IS ADJACENT TO ENVIRONMENTAL AREAS.
- FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF HOWARD COUNTY CODE FOR THIS PROJECT SHALL BE FULFILLED BY THE ON SITE RETENTION OF 4.76 ACRES. SURETY IN THE AMOUNT OF \$41,470.00 SHALL BE POSTED AS PART OF THE DEVELOPERS AGREEMENT.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL WITH 23 SHADE TREES, WITH LANDSCAPE SURETY IN THE AMOUNT OF \$6,900.00 WITH THE DPW, DEVELOPER'S AGREEMENT.
- SEDIMENT AND EROSION CONTROL IS PROVIDED FOR THIS SITE.
- NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, STREAMS, OR THEIR BUFFERS, AND THE FOREST CONSERVATION EASEMENTS AND 100 YEAR FLOODPLAIN.
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL, AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND ROAD RIGHT-OF-WAY LINE AND NOT ONTO THE PIPESTEM LOT DRIVEWAY.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
MISS UTILITY: 1-800-257-7777
VERIZON TELEPHONE CO.: 725-9976
HOWARD COUNTY BUREAU OF UTILITIES: 313-2366
VERIZON CABLE LOCATION DIVISION: 393-3553
B.G.&C. CO. CONTRACTOR SERVICES: 850-4620
B.G.&C. CO. UNDERGROUND DAMAGE CONTROL: 787-4620
STATE HIGHWAY ADMINISTRATION: 531-5533
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PACEMENT OF ANY ASPHALT.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE)- 3' LONG. A GALVANIZED STEEL POLE GAP SHALL BE MOUNTED ON TOP OF EACH POST.
- THIS SUBDIVISION COMPLIES WITH THE AMENDED 5TH EDITION OF THE SUBDIVISION AND ZONING REGULATIONS, BOTH AS AMENDED BY COUNCIL BILL 75-2003.
- THE SUBJECT PROPERTY IS ZONED RC-DEO PER THE 2/02/04 COMPREHENSIVE ZONING PLAN
- FLORENCE ROAD IMPROVEMENTS AND PAVEMENT WIDENING; PROVIDE A MINIMUM OF 1 FOOT WIDE FULL DEPTH SAW CUT ONTO FLORENCE ROAD, PER HOWARD COUNTY DETAIL R10.1.

DEWELLS (4.5), ROOFTOP DISCONNECTS (1-1), NON-ROOFTOP DISCONNECT (2-2)

FINAL ROAD CONSTRUCTION PLAN KOGAN TRUST

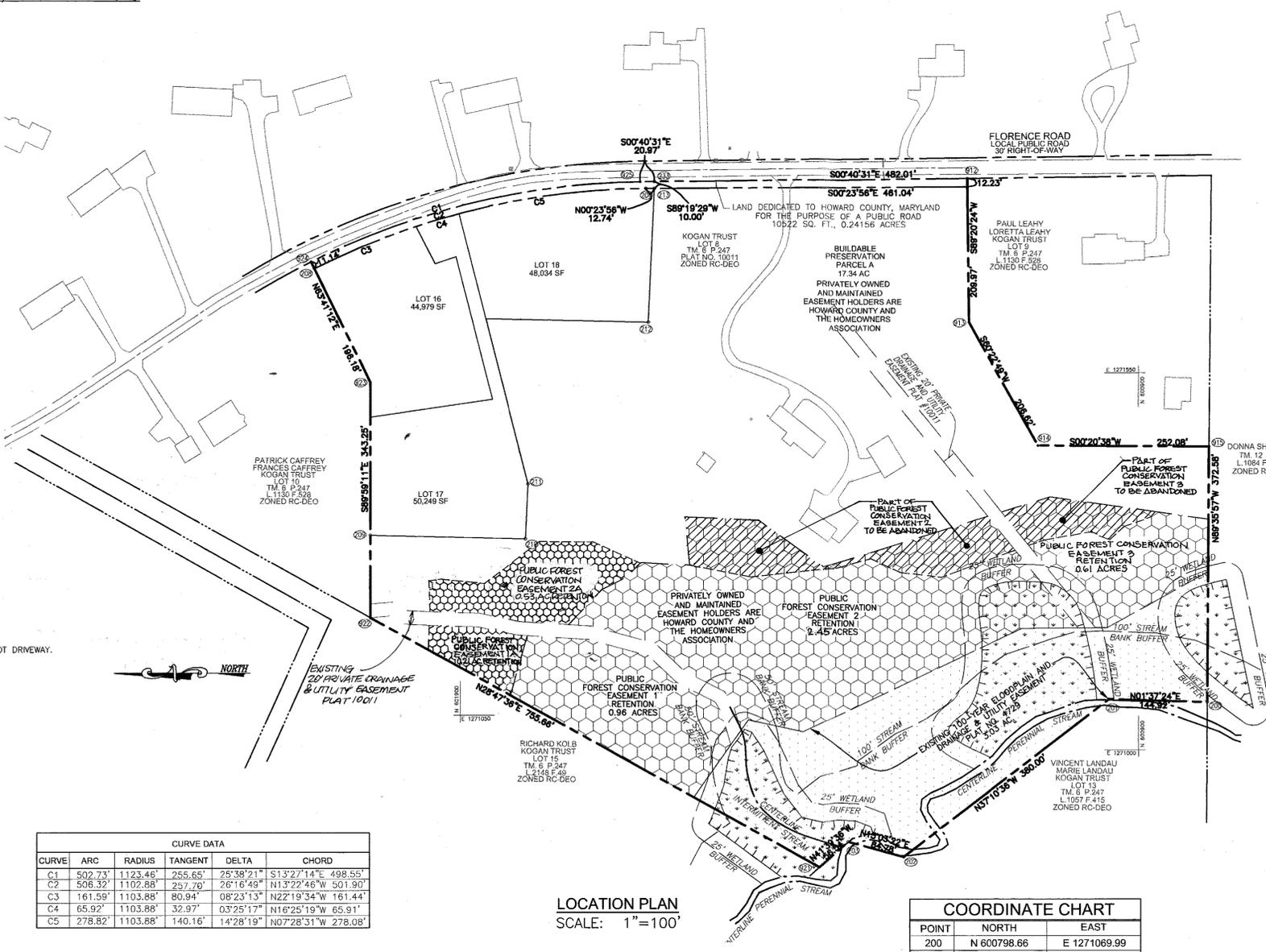
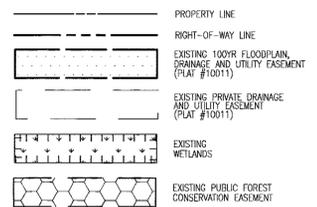
LOTS 16-18 AND BUILDABLE PRESERVATION PARCEL 'A' A RESUBDIVISION OF KOGAN TRUST PROPERTY LOT 8 HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE: 1"=2000'
ADC MAP COORDINATE: 2 E-13

BENCHMARKS				
NO	NORTHING	EASTING	ELEVATION	TYPE
061A	N 602649.52	E 1271163.31	713.67	CONC. MONUMENT
12CA	N 600463.81	E 1271900.23	694.76	CONC. MONUMENT
12CB	N 597303.86	E 1272860.57	690.47	CONC. MONUMENT

LEGEND:



SITE ANALYSIS

LOCATION: TAX MAP 6, GRID 23, PARCEL 247
4TH ELECTION DISTRICT
EXISTING ZONING: RC-DEO
GROSS AREA OF PROJECT: 20.89 AC
AREA OF 100-YEAR FLOODPLAIN DRAINAGE & UTILITY EASEMENT: 3.03 AC
AREA OF STEEP SLOPES OUTSIDE THE FLOODPLAIN: 1.86 AC
NET AREA OF PROJECT: 16.00 AC
NUMBER PROPOSED BUILDABLE LOTS: 3 LOTS
AREA OF PROPOSED BUILDABLE LOTS: 3.29 AC
NUMBER OF PROPOSED BUILDABLE PRESERVATION PARCELS: 1 PARCEL
AREA OF PROPOSED BUILDABLE PRESERVATION PARCELS: 17.34 AC
TOTAL LIMIT OF DISTURBANCE: 24,134.96 SF, 0.55 AC
DPZ FILE REFERENCES: SP-06-020, F-89-83, VP-80-81, F-81-17, WP-09-024

SHEET INDEX		
DESCRIPTION	SHEET NO.	
COVER SHEET	1 OF 6	
ROAD CONSTRUCTION, GRADING, AND SEDIMENT CONTROL PLAN	2 OF 6	
CROSS SECTIONS AND SITE DETAILS	3 OF 6	
SEDIMENT AND EROSION CONTROL DETAILS	4 OF 6	
FOREST CONSERVATION, AND LANDSCAPE PLAN	5 OF 6	
FOREST CONSERVATION, AND LANDSCAPE DETAILS	6 OF 6	

CURVE DATA					
CURVE	ARC	RADIUS	TANGENT	DELTA	CHORD
C1	502.73	1123.46	255.65	25°38'21"	S13°27'14"E 498.55'
C2	506.32	1102.88	257.70	26°16'49"	N13°22'46"W 501.90'
C3	161.59	1103.88	80.84	08°23'13"	N22°19'34"W 161.44'
C4	65.92	1103.88	32.97	03°25'17"	N16°25'19"W 65.91'
C5	278.82	1103.88	140.16	14°28'19"	N07°28'31"W 278.08'

LOCATION PLAN
SCALE: 1"=100'

COORDINATE CHART		
POINT	NORTH	EAST
200	N 600798.66	E 1271069.99
201	N 600943.53	E 1271074.10
202	N 601246.30	E 1270844.47
203	N 601328.17	E 1270866.49
206	N 601626.31	E 1271818.13
208	N 602114.58	E 1271701.99
209	N 602032.61	E 1271312.95
210	N 601803.61	E 1271307.62
211	N 601799.88	E 1271387.73
212	N 601622.61	E 1271623.31
213	N 601613.57	E 1271818.21
233	N 601613.68	E 1271828.22
912	N 601152.68	E 1271833.65
913	N 601150.26	E 1271623.70
914	N 601048.14	E 1271444.07
915	N 600796.06	E 1271442.56
921	N 601370.41	E 1270828.91
922	N 602032.64	E 1271192.87
923	N 602032.56	E 1271536.12
924	N 602119.52	E 1271711.97
925	N 601634.65	E 1271827.97

MINIMUM LOT SIZE CHART (SQ. FT.)			
LOT NO.	GROSS AREA	PIPE STEM AREA	MINIMUM LOT SIZE
17	50,249 SF	7,827 SF	42,422 SF

OWNER/
DEVELOPER
WILLIAM S. DEVEREUX
1850 FLORENCE ROAD
MT. AIRY, MD 21771
(301) 831-5141

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. 16193 EXPIRATION DATE: SEPTEMBER 27, 2010

FINAL ROAD CONSTRUCTION PLAN
COVER SHEET
KOGAN TRUST PROPERTY
LOTS 16-18 AND BUILDABLE PRESERVATION PARCEL 'A'
A RESUBDIVISION OF KOGAN TRUST PROPERTY LOT 8
DPZ REF: SP-06-020, F-89-83, VP-80-81, F-81-17, WP-09-024

TAX MAP 6 BLOCK 23 LOT 8, PARCEL 247
4TH 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: RHV
DRAWN BY: JMR
CHECKED BY: RHV
DATE: JANUARY 06, 2009
SCALE: AS SHOWN
W.O. NO.: 04-28-00

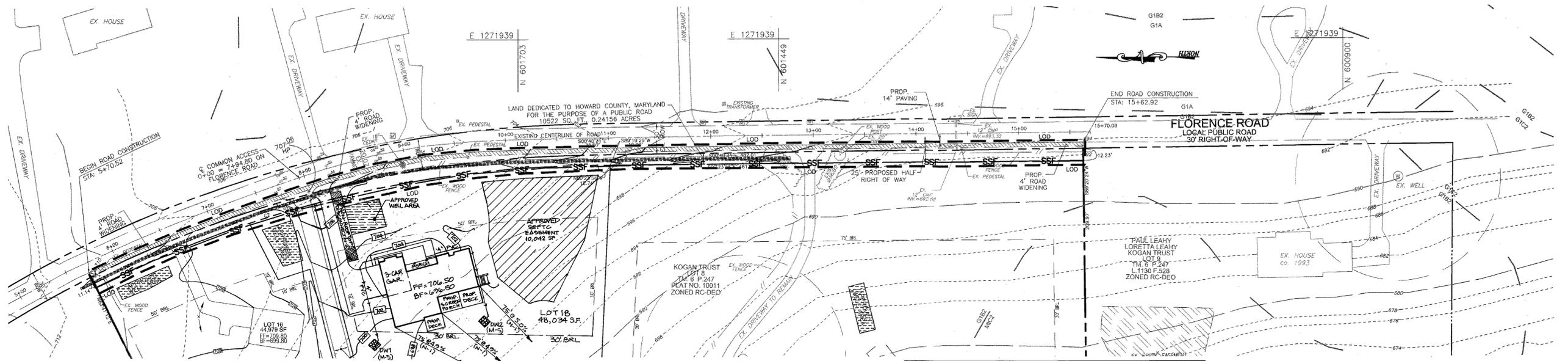
1 SHEET OF 6

APPROVED: DEPARTMENT OF PUBLIC WORKS
William S. Devereux 3-10-09
Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Robert H. Vogel 3/17/09
Chief, Division of Land Development Date

William S. Devereux 3/16/09
Chief, Development Engineering Division Date

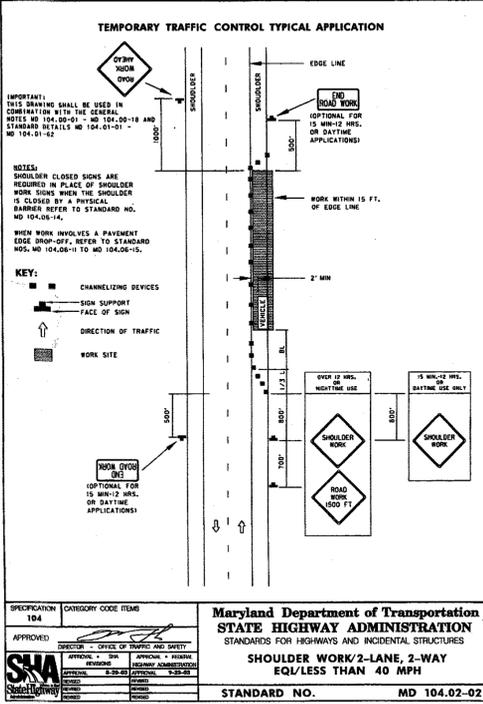
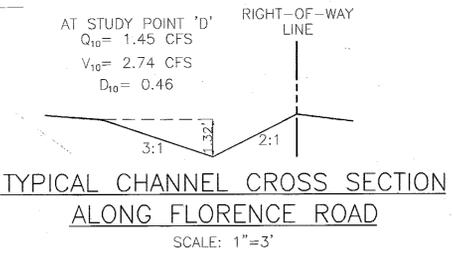
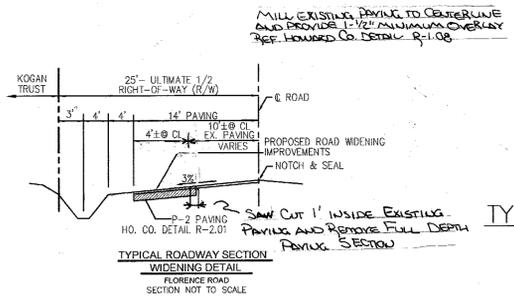
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO THE ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - WIDTH--12' (16' SERVING MORE THAN ONE RESIDENCE)
 - SURFACE--6" OF COMPACTED CRUSHER RUN BASE W/TAR AND CHIP COATING (1-1/2" MIN.)
 - GEOMETRY--MAX. 15% GRADE, MAX. 10% GRADE CHANGE AND MIN. 45' TURNING RADIUS
 - STRUCTURES (CULVERTS/BRIDGES)--CAPABLE OF SUPPORTING 25 GROSS TONS (425 LOADINGS)
 - DRAINAGE ELEMENTS--CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
 - MAINTENANCE--SUFFICIENT TO INSURE ALL-WEATHER USE
- REFERENCE WP-09-024 APPROVED ON OCTOBER 7, 2008 TO WAIVE SECTION 16.144 (a)(2) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS TO EXTEND THE 45 DAY RESUBMISSION DEADLINE TO NOVEMBER 20, 2008.



PLAN SCALE
SCALE: 1"=50'

LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- +402.65 PROPOSED SPOT ELEVATION
- EXISTING STORMDRAIN LINE
- EXISTING SIGN
- EXISTING VEGETATION (APPROXIMATE LOCATION)
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- MBS SOILS BOUNDARY
- EXISTING 100YR FLOODPLAIN, DRAINAGE AND UTILITY EASEMENT (PLAT #10011)
- SSS EXISTING PRIVATE DRAINAGE AND UTILITY EASEMENT (PLAT #10011)
- SSS SUPER SILT FENCE
- LOD LIMIT OF DISTURBANCE
- STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED EROSION CONTROL MATTING
- PROPOSED TREELINE
- EXISTING TREELINE
- EXISTING MODERATE SLOPES
- EXISTING STEEP SLOPES
- EXISTING WETLANDS
- PROPOSED PRIVATE COMMON ACCESS, DRAINAGE, AND UTILITY EASEMENT
- EXISTING PUBLIC FOREST CONSERVATION EASEMENT
- SEPTIC EASEMENT



SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)			
		3 TO 4.5 TO 4.7	4.7 TO 5 TO 5.5	5.5 TO 6 TO 6.5	6.5 TO 7 TO 7.5
P-1	PAVING DRIVE AND NON-RESIDENTIAL PAVING DRIVE WITH NO MORE THAN 15' WIDE DRIVEWAY	1.5	1.5	1.5	1.5
		2.0	2.0	2.0	2.0
P-2	PAVING DRIVE ALLEY DRIVEWAY AND NON-RESIDENTIAL DRIVEWAY WITH NO MORE THAN 15' WIDE DRIVEWAY	1.5	1.5	1.5	1.5
		2.0	2.0	2.0	2.0
P-3	PAVING DRIVE ALLEY DRIVEWAY AND NON-RESIDENTIAL DRIVEWAY WITH NO MORE THAN 15' WIDE DRIVEWAY	1.5	1.5	1.5	1.5
		2.0	2.0	2.0	2.0
P-4	WORK COLLECTION MAJOR COLLECTION	2.0	2.0	2.0	2.0
		4.0	4.0	4.0	4.0

SYMBOL	NAME/DESCRIPTION	GROUP
Ba	BAILE SILT LOAM	D
Co	CODORUS SILT LOAM	C
G1A	GLENELG LOAM, 0 TO 3 PERCENT SLOPES	B
G1B2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
G1C2	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
G1A	GLENVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES	C
M1d	MANOR VERY STONY LOAM, 3 TO 25 PERCENT SLOPES	B
M1B2	MT. AIRY CHANNERY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	A
M1C2	MT. AIRY CHANNERY LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	A
M1C3	MT. AIRY CHANNERY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	A
M1D2	MT. AIRY CHANNERY LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	A

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 Date: 3-10-09

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development
 Date: 3/17/09

Chief, Development Engineering Division
 Date: 3/16/09

THIS DEVELOPMENT PLAN IS APPROVED FOR EXISTING AND PROPOSED EROSION CONTROL MEASURES BY THE HOWARD COUNTY ENGINEER-IN-CHARGE.

THIS DEVELOPMENT PLAN IS APPROVED FOR EXISTING AND PROPOSED EROSION CONTROL MEASURES BY THE HOWARD COUNTY ENGINEER-IN-CHARGE.

OWNER/DEVELOPER
 WILLIAM S. DEVEREUX
 1850 FLORENCE ROAD
 MT. AIRY, MD 21771
 (301) 831-5141

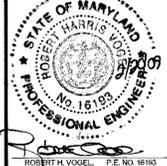
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FINAL ROAD CONSTRUCTION PLAN, ROAD CONSTRUCTION, GRADING, AND SEDIMENT CONTROL PLAN
 KOGAN TRUST PROPERTY

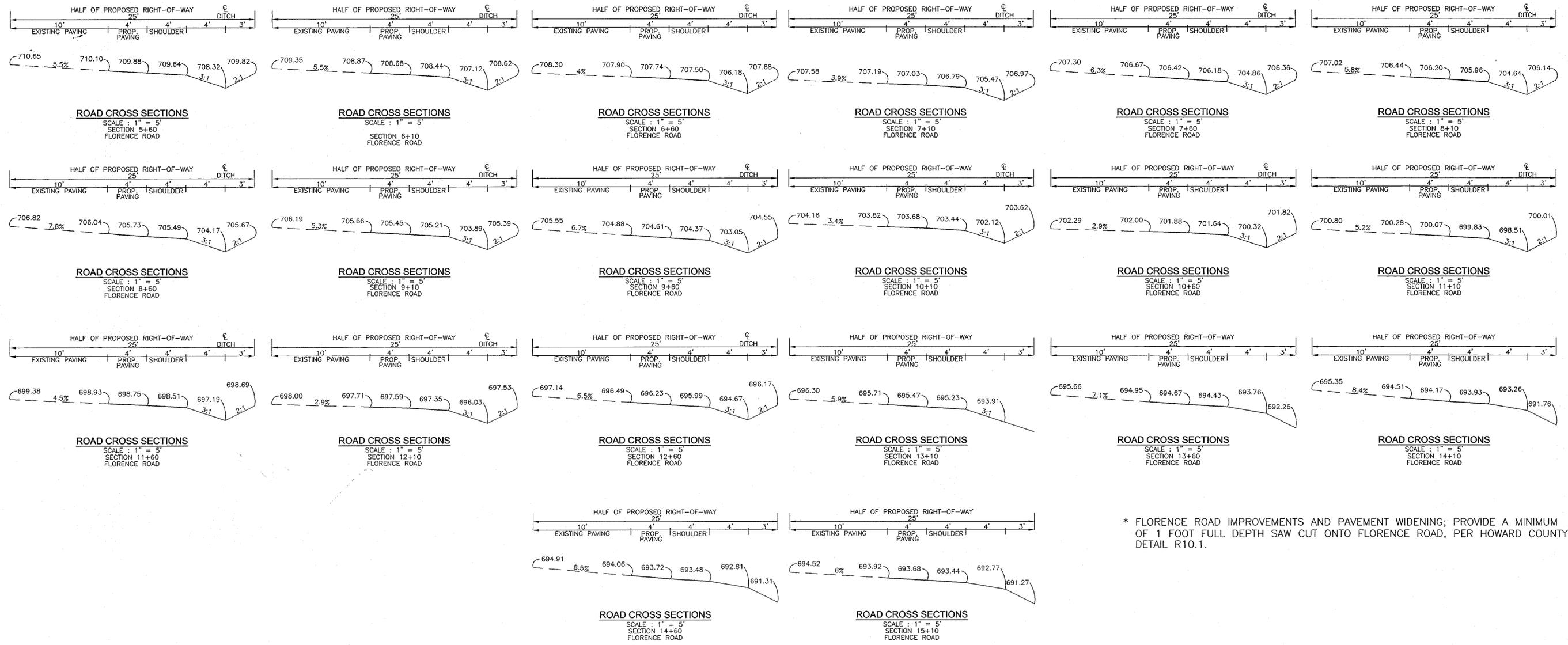
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 A RESUBDIVISION OF KOGAN TRUST PROPERTY LOT 8
 DPZ REF: SP-06-020, F-89-83, VP-80-81, F-81-17, WP-09-024

TAX MAP 8 BLOCK 23 LOT 8, PARCEL 247
 4TH 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: RHV
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: JANUARY 06, 2009
 SCALE: AS SHOWN
 W.O. NO.: 04-28-00



* FLORENCE ROAD IMPROVEMENTS AND PAVEMENT WIDENING; PROVIDE A MINIMUM OF 1 FOOT FULL DEPTH SAW CUT ONTO FLORENCE ROAD, PER HOWARD COUNTY DETAIL R10.1.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Approved: *John R. Robertson* 2/25/09
 Howard S.C.D.A. Date

APPROVED: DEPARTMENT OF PUBLIC WORKS
William Z. McMillan 3-10-09
 Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Walter Devereux 3/17/09
 Chief, Division of Land Development Date

John Devereux 3/16/09
 Chief, Development Engineering Division Date

OWNER/DEVELOPER
 WILLIAM S. DEVEREUX
 1850 FLORENCE ROAD
 MT. AIRY, MD 21771
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FINAL ROAD CONSTRUCTION PLAN
 CROSS SECTIONS AND SITE DETAILS
 KOGAN TRUST PROPERTY
 LOTS 16-18 AND BUILDABLE PRESERVATION PARCEL 'A'
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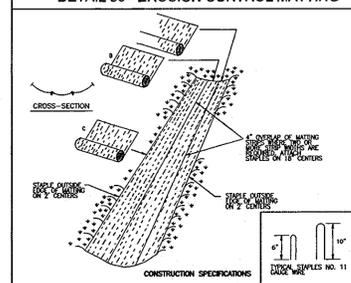
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 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.481.7886 FAX: 410.481.8911

DESIGN BY: RHW
 DRAWN BY: JMR
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3 SHEET OF 6

DETAIL 30 - EROSION CONTROL MATTING



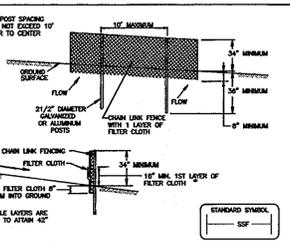
CONSTRUCTION SPECIFICATIONS

1. KEY-IN THE MATTING BY PLACING THE TOP EDGE OF THE MATTING IN A NARROW TRENCH. IN NO EVENT, SHOULD THE TRENCH AND TAMP FINALLY TO CORNER OF THE TRENCH. COVER THE TRENCH WITH A DOUBLE ROW OF STAPLES ABOUT 4" DOWN SLOPE FROM THE TRENCH. SPACING BETWEEN STAPLES IS 6".
2. STAPLE THE 4" OVERLAP IN THE CHANNEL CENTER USING AN 18" SPACING BETWEEN STAPLES.
3. BEFORE STAPLING THE OUTER EDGES OF THE MATTING, MAKE SURE THE MATTING IS FULLY IN CONTACT WITH THE SOIL.
4. STAPLES SHALL BE PLACED AT 2' SPACING FOR EACH STRIP. 2' OUTER ROWS, AND 2' ALTERNATING ROWS DOWN CENTER.
5. WHERE ONE END OF MATTING ENDS AND ANOTHER BEGINS, THE END OF THE TOP STRIP SHALL OVERLAP THE UPPER END OF THE LOWER STRIP BY 4".
6. THE OVERLAP SHALL BE COVERED WITH A DOUBLE ROW OF STAPLES SPACED 6" APART IN A STAGGERED PATTERN ON EITHER SIDE.
7. THE OVERLAP OF THE MATTING UNDER SHOULD BE SIMILARLY SECURED WITH 2 DOUBLE ROWS OF STAPLES.

NOTE: IF FLOW WILL ENTER FROM THE EDGE OF THE MATTING THEN THE AREA EXPOSED BY THE FLOW MUST BE KEYED-IN.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 6-28-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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 42" FENCE SHALL BE USED, SUBSTITUTING 42" HEIGHT AND 4' LENGTH POSTS.
2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES. THE LOWER TENSION WIRE SHALL BE DRAPED OVER THE POSTS AND NOT CUT OFF AT THE POINTS OF CONTACT.
3. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH WIRE TIES EVERY 24" AT THE TOP AND MID SECTION.
4. FILTER CLOTH SHALL BE EXTENDED A MINIMUM OF 6" INTO THE GROUND.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED 6" AND FASTENED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOVED WHEN "THICKER" OVERLAP IN THE SILT FENCE, OR WHEN SILT REACHES TOP 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 CLOTHS:

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 6-28-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

STORMWATER MANAGEMENT REQUIREMENTS - STUDY POINT 'A'

AREA	REQUIREMENT	VOLUME REQUIREMENT WITHOUT CREDITS	CREDITS	VOLUME REQUIREMENT WITH CREDITS	NOTES
13.07 AC.					
1	WATER QUALITY VOLUME (WQV)	0.218 AC. FT.	0.1305 AC. FT.	0.0875 AC. FT.	NATURAL AREA CONSERVATION CREDIT ROOFTOP DISCONNECTION CREDIT GRASS CHANNEL CREDIT
2	RECHARGE VOLUME (REV)	0.32 AC.	0.32 AC.	0 AC.	ROOFTOP DISCONNECTION CREDIT GRASS CHANNEL CREDIT
3	CHANNEL PROTECTION VOLUME (CPV)	NA	NA	NA	1 YR PEAK DISCHARGE < 2.0 CFS
4	OVERHEAD FLOOD PROTECTION (OF _P)	NA	NA	NA	
5	EXTREME FLOOD VOLUME (EF _{100P})	NA	NA	NA	

SUMMARY
1. WATER QUALITY VOLUME (WQV) IS PROVIDED BY RAIN GARDENS AND GRASS SWALES.
2. RECHARGE VOLUME (REV) IS PROVIDED BY RAIN GARDENS AND GRASS SWALES.

STORMWATER MANAGEMENT REQUIREMENTS - STUDY POINT 'B'

AREA	REQUIREMENT	VOLUME REQUIREMENT WITHOUT CREDITS	CREDITS	VOLUME REQUIREMENT WITH CREDITS	NOTES
10.24 AC.					
1	WATER QUALITY VOLUME (WQV)	NA	NA	NA	NO NEW IMPERVIOUS AREA IS PROPOSED
2	RECHARGE VOLUME (REV)	NA	NA	NA	NO NEW IMPERVIOUS AREA IS PROPOSED
3	CHANNEL PROTECTION VOLUME (CPV)	NA	NA	NA	1 YR PEAK DISCHARGE < 2.0 CFS
4	OVERHEAD FLOOD PROTECTION (OF _P)	NA	NA	NA	
5	EXTREME FLOOD VOLUME (EF _{100P})	NA	NA	NA	

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously SOIL AMENDMENTS: In lieu of soil test recommendations, use one of the following:

1. Preferred—Apply 2 tons per acre dolomitic limestone (92 lbs./1000 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. At the time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs./1000 sq.ft.)

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 (.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 50 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw mulch.

MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq. ft.) of unrattled 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 asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons asphalt on flat areas.

MAINTENANCE: Inspect all seeded areas and make needed repairs.

TEMPORARY SEEDING NOTES

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously SOIL AMENDMENTS: Apply 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.)

SEEDING: For the periods March 1 thru 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 well anchored straw mulch and seed as soon as possible in the spring.

MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq.ft.) of unrattled 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 asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons asphalt on flat areas.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

Definition: Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose: To provide a suitable soil medium for vegetable growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies: Topsoiling 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 vegetable 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.

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 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-SSC in cooperation with Maryland Agricultural Experiment 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 textures, colors, 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, nutgrass, or any other species as specified.
 - iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be applied 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.
- III. 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.

SEQUENCE OF CONSTRUCTION

1. OBTAIN HOWARD COUNTY GRADING PERMIT (1 DAY)
2. NOTIFY HOWARD COUNTY AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION. (1 DAY)
3. CONDUCT A PRE-CONSTRUCTION MEETING WITH THE SEDIMENT CONTROL INSPECTOR PRIOR TO ANY LAND DISTURBANCE. (1 DAY)
4. ADD TREE PROTECTION FENCE AND INSTALL SILT FENCE AROUND THE LIMIT OF DISTURBANCE, AS SHOWN ON THE PLAN. (1 DAY)
5. BEGIN ROAD IMPROVEMENTS, BEGIN GRADING OPERATION. (1 WEEK)
6. INSTALL BASE PAVING. (1 DAY)
7. FINALIZE GRADING, AND INSTALLATION OF ROAD SIDE SWALE WITHIN RIGHT OF WAY. (3 DAYS)
8. INSTALL FINAL PAVING. (1 DAY)
9. WITH PERMISSION OF SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL MEASURES. (1 DAY)

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 (315-1855).
 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	0.55 Acres
Area Disturbed	0.16 Acres
Area to be roofed or paved	0.16 Acres
Area to be vegetatively stabilized	0.45 Acres
Total Cut	800 CY
Total Fill	800 CY
WASTE/BOROW LOCATION	N/A
 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 construction 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.
- * To be determined by contractor, with pre-approval of the Sediment Control Inspector with an approved and active grading permit.

NOTES

1. DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN HEREON.
2. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLIED WITH.

APPROVED: DEPARTMENT OF PUBLIC WORKS

William Z. ... 3-10-09
Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Robert H. Vogel 3/17/09
Chief, Division of Land Development Date

William Z. ... 3/16/09
Chief, Development Engineering Division Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Robert H. Vogel 3/25/09
Signature of Engineer Date
ROBERT H. VOGEL

ENGINEERS CERTIFICATE

"I hereby certify that this plan for sediment and erosion 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."

Robert H. Vogel 3/25/09
Signature of Engineer Date
ROBERT H. VOGEL

DEVELOPER'S CERTIFICATE

"I/WE certify that all development and construction will be done according to this plan of approval 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 Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

William S. Devereux 2-19-09
Signature of Developer Date

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. 18193 EXPIRATION DATE SEPTEMBER 27, 2010

FINAL ROAD CONSTRUCTION PLAN
SEDIMENT AND EROSION CONTROL
NOTES AND DETAILS
KOGAN TRUST PROPERTY

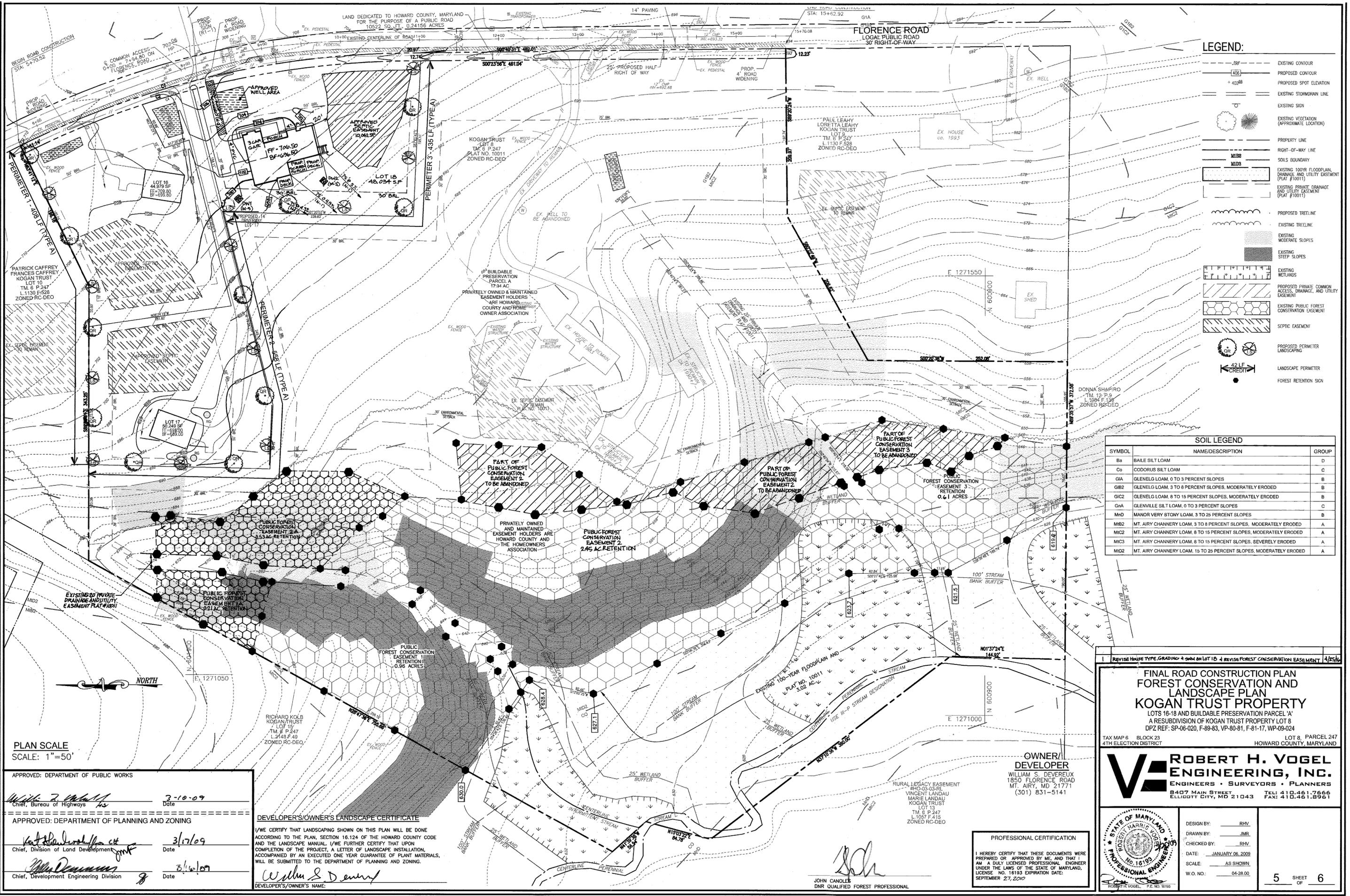
LOTS 16-18 AND BUILDABLE PRESERVATION PARCEL 'A'
A RESUBDIVISION OF KOGAN TRUST PROPERTY LOT 8
DPZ REF: SP-06-020, F-89-83, VP-80-81, F-81-17, WP-09-024

TAX MAP 6 BLOCK 23 LOT 8 PARCEL 247
4TH 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: RVV
DRAWN BY: JMR
CHECKED BY: RVV
DATE: JANUARY 06, 2009
SCALE: AS SHOWN
W.O. NO.: 04-28.00

4 SHEET OF 6



LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING STORM DRAIN LINE
- EXISTING SIGN
- EXISTING VEGETATION (APPROXIMATE LOCATION)
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- EXISTING 100YR FLOODPLAIN, DRAINAGE AND UTILITY EASEMENT (PLAT #10011)
- EXISTING PRIVATE DRAINAGE AND UTILITY EASEMENT (PLAT #10011)
- PROPOSED TREELINE
- EXISTING TREELINE
- EXISTING MODERATE SLOPES
- EXISTING STEEP SLOPES
- EXISTING WETLANDS
- PROPOSED PRIVATE COMMON ACCESS, DRAINAGE, AND UTILITY EASEMENT
- EXISTING PUBLIC FOREST CONSERVATION EASEMENT
- SEPTIC EASEMENT
- PROPOSED PERIMETER LANDSCAPING
- LANDSCAPE PERIMETER
- FOREST RETENTION SIGN

SOIL LEGEND

SYMBOL	NAME/DESCRIPTION	GROUP
Ba	BAILE SILT LOAM	D
Co	CODORUS SILT LOAM	C
G1A	GLENEGL LOAM, 0 TO 3 PERCENT SLOPES	B
G1B2	GLENEGL LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
G1C2	GLENEGL LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
G1A	GLENEVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES	C
Mnd	MANOR VERY STONY LOAM, 3 TO 25 PERCENT SLOPES	B
M82	MT. AIRY CHANNERY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	A
M1C2	MT. AIRY CHANNERY LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	A
M1C3	MT. AIRY CHANNERY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	A
M1D2	MT. AIRY CHANNERY LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	A

PLAN SCALE
SCALE: 1"=50'

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 3-10-09
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development
 3/17/09
 Chief, Development Engineering Division
 3/17/09

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.
 DEVELOPER'S/OWNER'S NAME: *William S. Devereux*

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. 16193 EXPIRATION DATE: SEPTEMBER 27, 2010
 JOHN CANOLES
 DNR QUALIFIED FOREST PROFESSIONAL

REVISE HOUSE TYPE, GRADING 4 SWM ON LOT 16 & REVISE FOREST CONSERVATION EASEMENT 4/25/09

**FINAL ROAD CONSTRUCTION PLAN
 FOREST CONSERVATION AND
 LANDSCAPE PLAN
 KOGAN TRUST PROPERTY**
 LOTS 16-18 AND BUILDABLE PRESERVATION PARCEL 'A'
 A RESUBDIVISION OF KOGAN TRUST PROPERTY LOT 8
 DPZ REF: SP-06-020, F-89-83, VP-80-81, F-81-17, WP-09-024

TAX MAP 6 BLOCK 23 LOT 8, PARCEL 247
 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER
 WILLIAM S. DEVEREUX
 1850 FLORENCE ROAD
 MT. AIRY, MD 21771
 (301) 831-5141

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

DESIGN BY: RHV
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: JANUARY 08, 2009
 SCALE: AS SHOWN
 W.O. NO.: 04-28.00

5 SHEET OF 6

FOREST CONSERVATION WORKSHEET

NET TRACT AREA:
 A. TOTAL TRACT AREA 20.89 AC
 B. AREA WITHIN 100 YEAR FLOODPLAIN 3.03 AC
 C. NET TRACT AREA 17.86 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	CJA
0	0	0	0	0	0

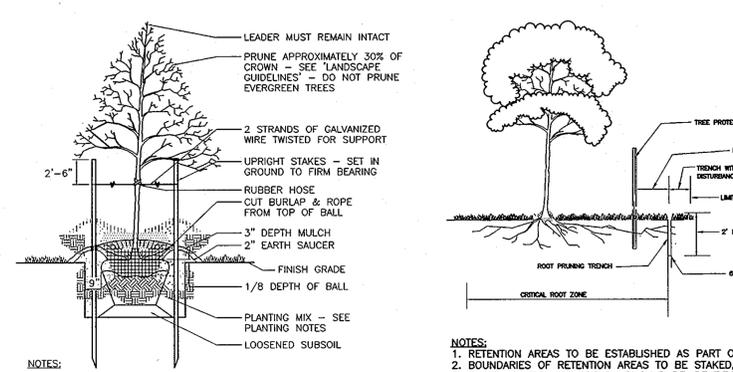
D. AFFORESTATION THRESHOLD 20% X D = 3.57 AC
 E. CONSERVATION THRESHOLD 25% X D = 4.47 AC

EXISTING FOREST COVER:
 F. EXISTING FOREST COVER 5.94 AC
 G. AREA OF FOREST ABOVE CONSERVATION THRESHOLD 1.48 AC

BREAK EVEN POINT:
 H. BREAK EVEN POINT 4.78 AC
 I. FOREST CLEARING PERMITTED WITHOUT MITIGATION 1.18 AC

PROPOSED FOREST CLEARING:
 J. TOTAL AREA OF FOREST TO BE CLEARED 1.18 AC
 K. TOTAL AREA OF FOREST TO BE RETAINED 4.76 AC

PLANTING REQUIREMENTS:
 L. REFORESTATION FOR CLEARING ABOVE THE CONSERVATION THRESHOLD 0.00 AC
 M. REFORESTATION FOR CLEARING BELOW THE CONSERVATION THRESHOLD 0.00 AC
 N. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD 0.00 AC
 P. TOTAL REFORESTATION REQUIRED 0.00 AC
 Q. TOTAL AFFORESTATION REQUIRED 0.00 AC
 R. TOTAL PLANTING REQUIRED 0.00 AC



LEADER MUST REMAIN INTACT
 PRUNE APPROXIMATELY 30% OF CROWN - SEE 'LANDSCAPE GUIDELINES' - DO NOT PRUNE EVERGREEN TREES

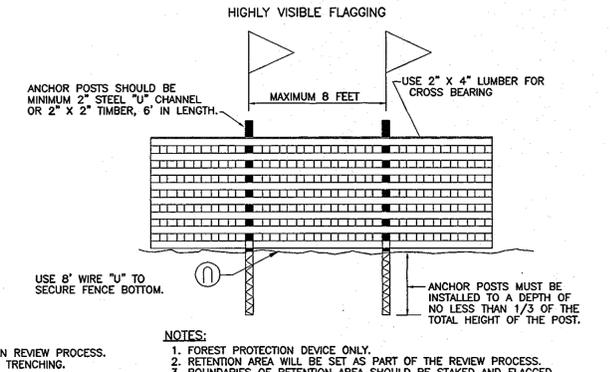
2 WIRTS OF GALVANIZED WIRE TWISTED FOR SUPPORT

UPRIGHT STAKES - SET IN GROUND TO FIRM BEARING

RUBBER HOSE CUT BARK & ROPE FROM TOP OF BALL

3\"/>

NOTES:
 1. SEE 'LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS' FOR ALL MATERIAL, PRODUCT AND PROCEDURE SPECIFICATIONS.
 2. SEE 'LANDSCAPE GUIDELINES' FOR SUPPORTING TREES LARGER THAN 2 1/2\"/>



ANCHOR POSTS SHOULD BE MINIMUM 2\"/>

NOTES:
 1. FOREST PROTECTION DEVICE ONLY.
 2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
 3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
 4. ROOF DAMAGE SHOULD BE AVOIDED.
 5. PROTECTION SIGNAGE SHOULD BE USED.
 6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES		
	1	2	3
Perimeter/Frontage Designation	A	A	A
Linear Feet of Roadway Frontage/Perimeter	408'	558'	435'
Credit for Existing Vegetation (Yes, No, Linear Feet Describe below if needed)	No	No	No
Credit for Wall, Fence or Berm (Yes, No, Linear Feet Describe below if needed)	No	No	No
Number of Plants Required	180	9	7
Shade Trees	-	-	-
Evergreen Trees	-	-	-
Shrubs	-	-	-
Number of Plants Provided	7	9	7
Shade Trees	-	-	-
Evergreen Trees	-	-	-
Other Trees (2:1 Substitution)	-	-	-
Shrubs (10:1 Substitution)	-	-	-
Describe Plant Substitution Credits Below if needed	-	-	-

LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
	12	LIQUIDAMBAR STYRACIFLUA AMERICAN SWEETGUM	2 1/2"-3" Cal.	B & B
	11	QUERCUS ROBUR 'FASTIGIATA' COLUMNAR ENGLISH OAK	2 1/2"-3" Cal.	B & B

1. ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT A&M SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LC&M PLANTING SPECIFICATIONS.
 2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
 3. FINAL LOCATION OF PLANT MATERIAL MAY VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
 4. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

NOTES

- FOREST CONSERVATION REQUIREMENTS FOR THIS PROJECT SHALL BE FULFILLED BY THE ON SITE RETENTION OF 4.76 ACRES. SURETY IN THE AMOUNT OF \$41,470.00 SHALL BE POSTED AS PART OF THE DEVELOPERS AGREEMENT.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL WITH 23 SHADE TREES, WITH LANDSCAPE SURETY IN THE AMOUNT OF \$6,900.00 WITH THE DPW, DEVELOPERS AGREEMENT

CONSTRUCTION PERIOD PRACTICES

The construction period extends from final approval of the development proposal until the release of all required guarantees specified for forest conservation requirements in the developers agreement.

Construction Period Supervision
 As part of the construction period management and planting program, the developer shall designate an individual or firm to be fully responsible for implementing the requirements of the approved forest conservation plan or requesting modifications of previously approved requirements concerning planting techniques, species or maintenance needs. Those responsible for implementation of the approved forest conservation plan during the construction period shall conform to the professional qualifications cited in Chapter V of this manual.

Protecting and Managing Forest Retention Areas

Forest retention stands are extremely vulnerable to damage, long term decline, and death stemming from improper design and construction practices. Saving forests and specimen trees during the construction process requires site planning, engineering practices and construction methods that respect the biological needs of the forest. The following issues are of particular concern:

General site preparation for planting: For undisturbed sites, disturbance of soils should be limited to the planting field for each plant. For disturbed areas, soils should be treated by incorporating natural mulch within the top 12 inches, or with needed amendments as determined by a soils analysis. Natural amendments such as organic mulch or leaf mold compost are preferred.

Stream buffer planting: Borders of streams and other waterways may have been damaged before reforestation and afforestation and therefore may need more extensive restoration work before reforestation or afforestation can be successful. The following are guidelines for any work within a riparian zone:

- Correct any erosion problems
- Minimize any erosion chemical use
- Maintain an undisturbed leaf layer and understorey
- Eliminate exotics

Steep slope planting: In areas of steep slopes or erodible soils, the preferred method of reforestation or afforestation is the use of seedlings to minimize disturbance. Planting on open or disturbed steep slopes eventually will stabilize them. Until the roots become established, however, there may still be erosion problems. Monitoring the stability of the soil will be important to the survival of the trees.

Post-Disturbance Considerations: For areas of large-scale disturbance, soils must be stabilized using a non-turf-building ground cover or engineering fabric. To protect against intrusion and to prevent damage of planted areas, all reforestation and afforestation sites must be posted with appropriate signs and fenced.

Certification of Completion
 At the end of the construction period, the designated qualified professional shall convey to the Department of Planning and Zoning certification that all forest retention areas have been preserved, all reforestation and afforestation plantings have been installed as required by the forest conservation plan, and that all protection measures required for the post-construction period have been put in place. Appendix J contains a sample format for such certification. Planting must occur before June 30th to be credited toward the current growing season.

Post-Construction Management Practices
 Many of the protection and management practices for the construction period must be continued for at least 2 growing seasons following the official notification of completion of the development (or a specific phase of the overall development if phasing has been approved). The responsibility to meet the survival standards requires adequate watering, replanting, thinning or other appropriate measures. Also, inappropriate uses or intrusions must not occur, a responsibility that requires the knowledge and cooperation of the new occupants of the development.

Final Inspection and Release of Obligations
 At the end of the post-construction management and protection period, the designated responsible professional shall convey to the Department of Planning and Zoning certification that all forest retention areas have been preserved, all reforestation and afforestation plantings have been installed as required by the forest conservation plan, and that all protection measures required by the plan are in place. Appendix J contains a sample format for such certification.

Minimum Two Growing Season Post-Construction Management Program
 A post-construction management program must be approved as part of the original forest conservation plan and remain in effect for a minimum of two growing seasons. A longer period may be required for specific strategies (e.g. natural regeneration near high use areas where long-term viability may take longer to confirm). Implementation of the post-construction management program must be supervised by a qualified professional who should inspect the status of all forest retention, reforestation and afforestation areas at specified times during the life of the post construction agreement and who must certify that the required survival rates have been achieved in accordance with the agreement prior to release of bonds.

There are five primary components of the post-construction program: inspection, management of retained or new plantings, replacement of dead or damaged material when

storage of equipment and materials
 disposal of construction debris
 washing of equipment, disposal of wastewater from concrete operations, etc.
 employee parking
 temporary structures such as trailers, sanitary facilities, etc.

Unless specifically exempted by the approved forest conservation plan, any use of forest retention areas for these activities or other intrusions shall be a violation of the approved forest conservation plan.

Because reforestation and afforestation typically may involve disturbance of soils should be limited to the planting field for each plant. For disturbed areas, soils should be treated by incorporating natural mulch within the top 12 inches, or with needed amendments as determined by a soils analysis. Natural amendments such as organic mulch or leaf mold compost are preferred.

Stream buffer planting: Borders of streams and other waterways may have been damaged before reforestation and afforestation and therefore may need more extensive restoration work before reforestation or afforestation can be successful. The following are guidelines for any work within a riparian zone:

Steep slope planting: In areas of steep slopes or erodible soils, the preferred method of reforestation or afforestation is the use of seedlings to minimize disturbance. Planting on open or disturbed steep slopes eventually will stabilize them. Until the roots become established, however, there may still be erosion problems. Monitoring the stability of the soil will be important to the survival of the trees.

Post-Disturbance Considerations: For areas of large-scale disturbance, soils must be stabilized using a non-turf-building ground cover or engineering fabric. To protect against intrusion and to prevent damage of planted areas, all reforestation and afforestation sites must be posted with appropriate signs and fenced.

Certification of Completion
 At the end of the construction period, the designated qualified professional shall convey to the Department of Planning and Zoning certification that all forest retention areas have been preserved, all reforestation and afforestation plantings have been installed as required by the forest conservation plan, and that all protection measures required for the post-construction period have been put in place. Appendix J contains a sample format for such certification. Planting must occur before June 30th to be credited toward the current growing season.

Post-Construction Management Practices
 Many of the protection and management practices for the construction period must be continued for at least 2 growing seasons following the official notification of completion of the development (or a specific phase of the overall development if phasing has been approved). The responsibility to meet the survival standards requires adequate watering, replanting, thinning or other appropriate measures. Also, inappropriate uses or intrusions must not occur, a responsibility that requires the knowledge and cooperation of the new occupants of the development.

Final Inspection and Release of Obligations
 At the end of the post-construction management and protection period, the designated responsible professional shall convey to the Department of Planning and Zoning certification that all forest retention areas have been preserved, all reforestation and afforestation plantings have been installed as required by the forest conservation plan, and that all protection measures required by the plan are in place. Appendix J contains a sample format for such certification.

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 A post-construction management program must be approved as part of the original forest conservation plan and remain in effect for a minimum of two growing seasons. A longer period may be required for specific strategies (e.g. natural regeneration near high use areas where long-term viability may take longer to confirm). Implementation of the post-construction management program must be supervised by a qualified professional who should inspect the status of all forest retention, reforestation and afforestation areas at specified times during the life of the post construction agreement and who must certify that the required survival rates have been achieved in accordance with the agreement prior to release of bonds.

There are five primary components of the post-construction program: inspection, management of retained or new plantings, replacement of dead or damaged material when

necessary, education of new occupants of the development and final inspection and release of developer from additional responsibilities.

Inspection
 Inspections should be carried out at the beginning and end of the growing season to pinpoint any problems, monitor survival rates, and specify remedial actions needed to correct existing problems. Appendix J has an example of an inspection report checklist.

Management of Forest Conservation Areas
 Post construction management includes: maintenance of all fences, signs or other devices delineating forest conservation areas and other measures. Such other measures include:
 - needed watering; removal of dead or damaged material and control of undesirable competing species; thinning or pruning to encourage proper growth; fertilizing, if necessary, and control of pests. Specific practices will depend on the weather prevailing during the post construction period, the types of plant material and planting methods used, and specific site conditions such as proximity to high use areas. It is the responsibility of the post-construction plan supervisor to take appropriate actions as needed. This manual, therefore, does not cite required measures. Survival success, not fulfillment of a given series of tasks, will be the measure of conformance to the needs of the post-construction program.

Newly planted trees, whether they are seedlings or 4" caliper transplants, have basic needs. Some of these needs can be met by nature alone; others may require human intervention. (The three most likely causes of death for newly planted trees are drought, competing vegetation and deer.) The basic maintenance regime should be determined by on-site environmental conditions, structure and nutrient content of soil, and rainfall. Understanding these factors and the specific needs of the species and size of plants used will result in a healthy forested area at the end of the maintenance period. Appendix H contains guideline specifications for maintenance of forest conservation areas and focuses on the following critical needs:

Watering
 watering
 fertilizing
 control of competing vegetation
 protection from pests, diseases and mechanical injury.

Replacement of Plant Material
 An inspection shall take place at the end of year one or before the second growing season to evaluate survival rates with reference to the survival required at the end of the two year period. This is an opportunity to avoid the penalty for violating survival rate standards. This inspection should estimate survival potential based on the following:
 - vigor and threat of competing vegetation (i.e. if seedlings are free to grow)
 - structure
 - growth rate
 - crown development
 - trunk health

If, after one year, the possibility exists that the original planting will not meet survival standards, the applicant may choose to establish reinforcement plantings. If plant mortality of reforestation or afforestation exceeds 10% of planted material at the end of the first growing season, such material should be replaced to bring the total number of trees to 90% of the original total. Such material shall be installed by the beginning of the second growing season. If at the end of the second growing season, survival rate drops below 75%, such material as needed to guarantee a 75% survival rate by the end of the third growing season shall be installed.

Education of New Occupants
 The occupants of a new development, whether owners or tenants, must avoid activities that destroy or degrade protected forest resources. The post-construction management program must therefore include steps to educate the new occupants about the proper use of forest conservation areas, about the need for the developer to carry out the post-construction management program, and the eventual transfer of long-term responsibilities to the owners or occupants. Such educational material should include a plan locating all protected areas on the site and a description of permitted and prohibited activities within or affecting such areas. The format and method of conveying such information is left to the discretion of the developer.

Final Inspection and Release of Obligations
 At the end of the post-construction management and protection period, the designated responsible professional shall convey to the Department of Planning and Zoning certification that all forest retention areas have been preserved, all reforestation and afforestation plantings have been installed as required by the forest conservation plan, and that all protection measures required by the plan are in place. Appendix J contains a sample format for such certification.

Upon review of the final certification document for completeness and accuracy, the County will notify the developer of release of surety and all future obligations. The developer's last official responsibility will be to transmit a copy of this notification to the owner(s) of the property(ies). Such transmittal will have been official notice to the owner(s) of their assumption of full responsibility for all future forest conservation obligations.

UPON REVIEW OF THE FINAL CERTIFICATION DOCUMENT FOR COMPLETENESS AND ACCURACY, THE COUNTY WILL NOTIFY THE DEVELOPER OF RELEASE OF SURETY AND ALL FUTURE OBLIGATIONS. THE DEVELOPER'S LAST OFFICIAL RESPONSIBILITY WILL BE TO TRANSMIT A COPY OF THIS NOTIFICATION TO THE OWNER(S) OF THE PROPERTY(IES). SUCH TRANSMITTAL WILL HAVE BEEN OFFICIAL NOTICE TO THE OWNER(S) OF THEIR ASSUMPTION OF FULL RESPONSIBILITY FOR ALL FUTURE FOREST CONSERVATION OBLIGATIONS.

FOREST RETENTION AREAS AND NOTES

- THE FOREST STAND DELINEATION PLAN WAS SUBMITTED WITH SP-06-020.
- FORESTED STREAM AND WETLAND BUFFERS ARE RETAINED IN OPEN SPACE LOTS.
- NO RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THIS SITE.
- FORESTED AREAS ADJACENT TO FLOODPLAINS AND STREAM BUFFERS ARE SUBSTANTIALLY RETAINED IN OPEN SPACE LOTS.
- THERE ARE NO ISOLATED FOREST STANDS ON THIS SITE.
- CHANGES IN GRADING AND RUNOFF WITHIN CONSTRUCTION/INSTALLATION AREAS WILL NOT ADVERSELY AFFECT THE SOILS WITHIN THE FOREST RETENTION AREA. SEDIMENT CONTROL MEASURES WILL REDIRECT CONCENTRATED FLOW RUNOFF TO STORMWATER MANAGEMENT FACILITIES. RETAIN SEDIMENT WITHIN THE CONSTRUCTION SITE, AND/OR REDIRECT CLEAN WATER AWAY FROM CONSTRUCTION AREAS.
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- THE DPW, REAL ESTATE SERVICES (RES) DIVISION WILL PREPARE A DEED OF FOREST CONSERVATION EASEMENT WHICH WILL BE RECORDED BY RES AFTER THE PLAN. A FOREST CONSERVATION AGREEMENT INCLUDING SURETY FOR THE FOREST CONSERVATION RETENTION REQUIRED BY THE FCP IS REQUIRED. FOREST CONSERVATION AGREEMENT FORMS MAY BE OBTAINED FROM RES.

FOREST PROTECTION NOTES

- PRE-CONSTRUCTION ACTIVITIES**
- FOR RETENTION AREAS, INSTALL BLAZE ORANGE FENCE AND RETENTION SIGNS BEFORE CONSTRUCTION BEGINS.
 - FENCING SHALL BE MAINTAINED IN GOOD CONDITION AND PROMPTLY REPAIRED OR RESTORED AS THE SITUATION WARRANTS.
 - A QUALIFIED TREE CARE EXPERT SHALL DETERMINE IF ROOT PRUNING IS REQUIRED ALONG THE LIMIT OF DISTURBANCE. ROOT PRUNE TREES AS REQUIRED. WATER ANY ROOT-PRUNED TREES IMMEDIATELY AFTER ROOT-PRUNING AND MONITOR FOR SIGNS OF STRESS DURING CONSTRUCTION.

TREE PLANTING AND MAINTENANCE NOTES

AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.

THE OWNER, TENANTS AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

SEQUENCE OF CONSTRUCTION-FOREST CONSERVATION

- PRECONSTRUCTION MEETING /SITE WALK WITH CONTRACTORS AND OTHER RESPONSIBLE PARTIES TO DEFINE PROTECTION MEASURES TO BE UTILIZED AND TO POINT OUT PARTICULAR TREES TO BE SAVED.
- STAKE OUT LIMITS OF DISTURBANCE AND TREE PROTECTION FENCING LOCATIONS.
- INSTALL TREE PROTECTION FENCING: FENCING TO BE INSPECTED BY THE PROJECT ENGINEER OR THE PROJECT ECOLOGIST AND HOWARD COUNTY PLANNING AND ZONING.
- PROCEED WITH TREE REMOVAL AND SITE IMPROVEMENTS AS PER APPROVED SEDIMENT CONTROL PLAN - TO BE INSPECTED BY HOWARD COUNTY PLANNING AND ZONING.
- TEMPORARY TREE PROTECTION DEVICES SHALL BE REMOVED AFTER ALL FINISHED GRADING AND UTILITY CONSTRUCTION HAS OCCURRED AND WITH APPROVAL FROM THE HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

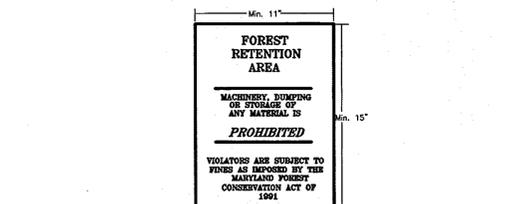
APPROVED: DEPARTMENT OF PUBLIC WORKS

William Z. Hall 3-10-09
 Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Victor Henderson 3/16/09
 Chief, Division of Land Development Date

John Canoles 3/16/09
 Chief, Development Engineering Division Date



RETENTION PROTECTION SIGNAGE

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

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.

William S. Devereux
 DEVELOPER'S/OWNER'S NAME:

SOIL LEGEND

SYMBOL	NAME/DESCRIPTION	GROUP
Ba	BALE SILT LOAM	D
Co	CODORUS SILT LOAM	C
G1A	GLENNELG LOAM, 0 TO 3 PERCENT SLOPES	B
G1B2	GLENNELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
G1C2	GLENNELG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
G1A	GLENNVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES	C
MnD	MANOR VERY STONY LOAM, 3 TO 25 PERCENT SLOPES	B
MB2	MT. AIRY CHANNERY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	A
MC2	MT. AIRY CHANNERY LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	A
MC3	MT. AIRY CHANNERY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	A
MD2	MT. AIRY CHANNERY LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	A

FINAL ROAD CONSTRUCTION PLAN FOREST CONSERVATION AND LANDSCAPE NOTES AND DETAILS KOGAN TRUST PROPERTY
 LOTS 16-18 AND BUILDABLE PRESERVATION PARCEL 'A'
 A SUBDIVISION OF KOGAN TRUST PROPERTY LOT 8
 DPZ REF: SP-06-020, F-89-83, VP-80-81, F-81-17, WP-09-024

TAX MAP 6 BLOCK 23 LOT 8, PARCEL 247
 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER
 WILLIAM S. DEVEREUX
 1850 FLORENCE ROAD
 MT. AIRY, MD 21771
 (301) 831-5141

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

DESIGN BY: RHV
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: JANUARY 06, 2009
 SCALE: AS SHOWN
 W.O. NO.: 04-28.00



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. 16193 EXPIRATION DATE: SEPTEMBER 27, 2010

John Canoles
 JOHN CANOLES
 DNR QUALIFIED FOREST PROFESSIONAL