

GENERAL NOTES

- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- 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 COMPANY: 410-694-6281
 - HOWARD COUNTY BUREAU OF UTILITIES: 410-313-2366
 - AT&T CABLE LOCATION DIVISION: 410-393-3553
 - B.G. & CO. CONTRACTOR SERVICES: 410-890-4800
 - B.G. & CO. UNDERGROUND DAMAGE CONTROL: 410-787-4620
 - STATE HIGHWAY ADMINISTRATION: 410-531-5533
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS, OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS. PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - A) WIDTH - 12 FEET (16 FEET IF SERVING MORE THAN ONE RESIDENCE)
 - B) SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING
 - C) GEOMETRY - MAXIMUM 14% GRADE, MAXIMUM 10% GRADE CHANGE, AND MINIMUM 45 FOOT TURNING RADIUS
 - D) STRUCTURES (CULVERTS/BRIDGES) - MUST SUPPORT 25 GROSS TON LOADING (H25 LOADING)
 - E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD EVENTS WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
 - F) STRUCTURE CLEARANCES - MINIMUM 12 FEET
 - G) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE
- THE SUBJECT PROPERTY IS ZONED R-20 PER THE JULY 28, 2006 COMPREHENSIVE ZONING PLAN.
- THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE OCTOBER 7, 2007.
- THE PROJECT BOUNDARY IS BASED ON A BOUNDARY SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC. DATED JANUARY 2007.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHICAL SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC. DATED JANUARY 2007.
- ACCESS TO PUBLIC WATER HAS BEEN PROVIDED UNDER CONTRACT NO. 10-W. ACCESS TO PUBLIC SEWER HAS BEEN PROVIDED UNDER CONTRACT NO. 129-S.
- NO BURIAL GROUNDS, CEMETERIES, OR HISTORIC SITES ARE LOCATED ON THIS PROPERTY. THIS SITE IS NOT ADJACENT TO A DESIGNATED SCENIC ROAD.
- NO STREAMS OR WETLANDS EXIST ON SITE. THE ENVIRONMENTAL REPORT FOR THIS SITE DATED DECEMBER 21, 2005 WAS PREPARED BY ECO SCIENCE PROFESSIONALS, INC.
- NO 100 YEAR FLOODPLAINS EXIST ON SITE.
- NO STEEP SLOPES EXIST ON THIS SITE.
- THE SUBDIVISION IS IN THE METROPOLITAN DISTRICT.
- FOR DRIVEWAY ENTRANCE DETAILS REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R-6.06 (OPEN SECTION).
- THIS PROJECT IS IN COMPLIANCE WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION. AT THE TIME OF SUBDIVISION THE DEVELOPER PAID \$22,542.30 AS A "FEE-IN-LIEU" SATISFYING THE 0.69 ACRE REFORESTATION REQUIREMENT ASSESSED UNDER FINAL PLAN F-07-184.
- PERIMETER LANDSCAPING SHALL BE IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. SURETY IN THE AMOUNT OF \$3,300.00 FOR THE 11 SHADE TREES & 6 EVERGREEN TREES SHALL BE POSTED WITH SITE DEVELOPMENT PLAN.
- THIS PROJECT IS EXEMPT FROM CPV SINCE THE 1-YEAR RUNOFF IS LESS THAN 2.0 CFS. WDW AND REV REQUIREMENTS FOR THE HOUSES WILL BE FULFILLED BY ROOFTOP DISCONNECT CREDIT AND RAIN GARDENS. SWM FOR THE DRIVEWAYS WILL BE PROVIDED BY GRASS CHANNELS.
- THE ENVIRONMENTAL REPORT FOR THIS SITE DATED DECEMBER 21, 2005 WAS PREPARED BY ECO SCIENCE PROFESSIONALS, INC. NO WETLANDS WERE FOUND ON THIS SITE.
- THERE IS AN EXISTING DWELLING/ STRUCTURE LOCATED ON LOT 1 TO REMAIN. NO NEW BUILDINGS, EXTENSIONS OR ADDITIONS TO THE EXISTING DWELLING ARE TO BE CONSTRUCTED AT A DISTANCE LESS THAN THE ZONING REGULATIONS REQUIRE.
- THE SIZE OF THE REQUIRED OPEN SPACE AREA DEDICATED IS SMALL (UNDER HALF ACRE) AND HAS NO POTENTIAL FOR EXPANSION FOR THE SUBDIVISION AND ADJACENT PARCEL. OBLIGATION TO PROVIDE OPEN SPACE FOR THIS SUBDIVISION WILL BE PROVIDED BY A FEE-IN-LIEU IN THE AMOUNT OF \$3,000 TO THE HOWARD COUNTY AND HELD IN ESCROW AND USED BY THE COUNTY FOR THE PURPOSE OF ACQUIRING OPEN SPACE LAND IN THE GENERAL AREA OF THE SUBDIVISION. THIS FEE HAS BEEN PAID IN CONJUNCTION WITH F-07-184.
- TRASH AND RECYCLABLE COLLECTION WILL BE AT CHATHAM ROAD WITHIN 5' OF THE COUNTY ROADWAY.
- SURETY IN THE AMOUNT OF \$26,000.00 FOR FOUR RAIN GARDENS HAS BEEN POSTED BY THIS SITE DEVELOPMENT PLAN.
- A FEE-IN-LIEU OF SIDEWALK CONSTRUCTION IN THE AMOUNT OF \$2,498.00 HAS BEEN PAID IN CONJUNCTION WITH F-07-184.
- THE FEE-IN-LIEU FOR OPEN SPACE LOTS 2 AND 3 IN THE AMOUNT OF \$3,000.00 HAS BEEN PAID IN CONJUNCTION WITH F-07-184.
- WATER AND SEWER TO THESE LOTS WILL BE PROVIDED IN ACCORDANCE WITH SECTION 18.1228 OF THE HOWARD COUNTY CODE. PUBLIC WATER AND SEWER ALLOCATION WILL BE GRANTED AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE.
- A USE-IN-COMMON MAINTENANCE AGREEMENT FOR LOTS 1-3 HAS BEEN RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, MARYLAND, LIBER 11168 FOLIO 682.
- THIS DEVELOPMENT IS DESIGNED TO BE IN ACCORDANCE WITH SECTION 16.127 - RESIDENTIAL INFILL DEVELOPMENT - OF SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. THE DEVELOPER SHALL CREATE COMPATIBILITY WITH THE EXISTING NEIGHBORHOOD THROUGH THE USE OF ENHANCED PERIMETER LANDSCAPING, BERMS, FENCES, SIMILAR HOUSING UNIT TYPES AND THE DIRECTIONAL ORIENTATION OF THE PROPOSED HOUSES.
- THE STAKING OF FOUNDATIONS PRIOR TO CONSTRUCTION TO ENSURE COMPLIANCE WITH REGULATORY BUILDING RESTRICTION LINES IS RECOMMENDED.
- 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 TO THE PIPESTEM LOT DRIVEWAY.
- NO CLEARING OF EXISTING VEGETATION IS PERMITTED WITHIN THE LANDSCAPE EDGE FOR WHICH CREDIT IS BEING TAKEN; HOWEVER, LANDSCAPE MAINTENANCE IS AUTHORIZED.
- DEVELOPER SHALL BE RESPONSIBLE FOR ANY DAMAGE(S) TO THE PUBLIC RIGHT-OF-WAY.

LANDSCAPE NOTES
 THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, PLANT MATERIALS, 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 REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTION OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.

BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF NOTICE, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 8/18/09
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 8/26/09
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 8/26/09
 DIRECTOR, DEP.

SITE DATA
 LOCATION: TAX MAP 24, GRID 10, PARCEL 134
 2nd ELECTION DISTRICT
 EXISTING ZONING: ZONE R-20
 GROSS AREA OF PROJECT: 1.00 AC.
 AREA OF 100-YEAR FLOODPLAIN DRAINAGE & UTILITY EASEMENT: 0.00 AC.
 AREA OF STEEP SLOPES OUTSIDE THE FLOODPLAIN: 0.00 AC.
 NET AREA OF PROJECT: 1.00 AC.
 AREA OF PROPOSED BUILDABLE LOTS: 1.00 AC.
 LOT 2: 21386 SF. (0.49 AC.)
 LOT 3: 22241 SF. (0.51 AC.)
 TOTAL: 1.00 AC.

NUMBER OF LOTS/PARCELS PROPOSED: 2 BUILDABLE LOTS
 TOTAL APPROXIMATE LIMIT OF DISTURBANCE: 0.77 AC.
 APPLICABLE DPZ FILE REFERENCE:
 PLAT# 19843, F-07-184

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP
Md	MONTALTO AND RELAY VERY STONY SILT LOAMS, 3 TO 25% SLOPES	C
MpB2	MONTALTO SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C

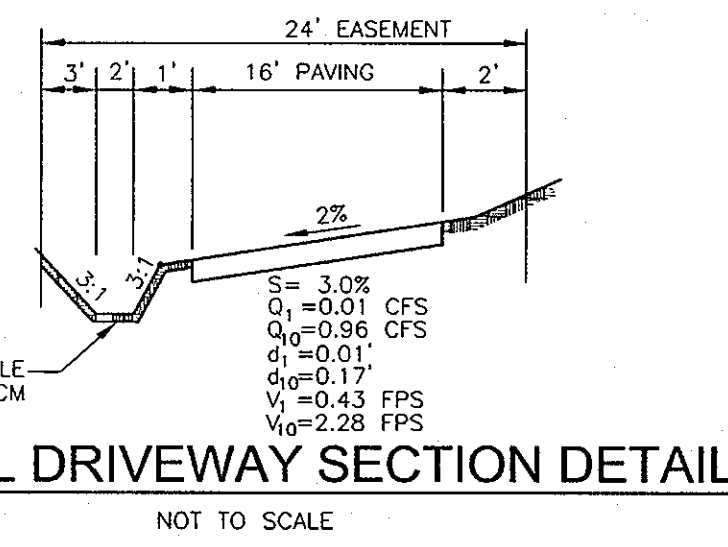
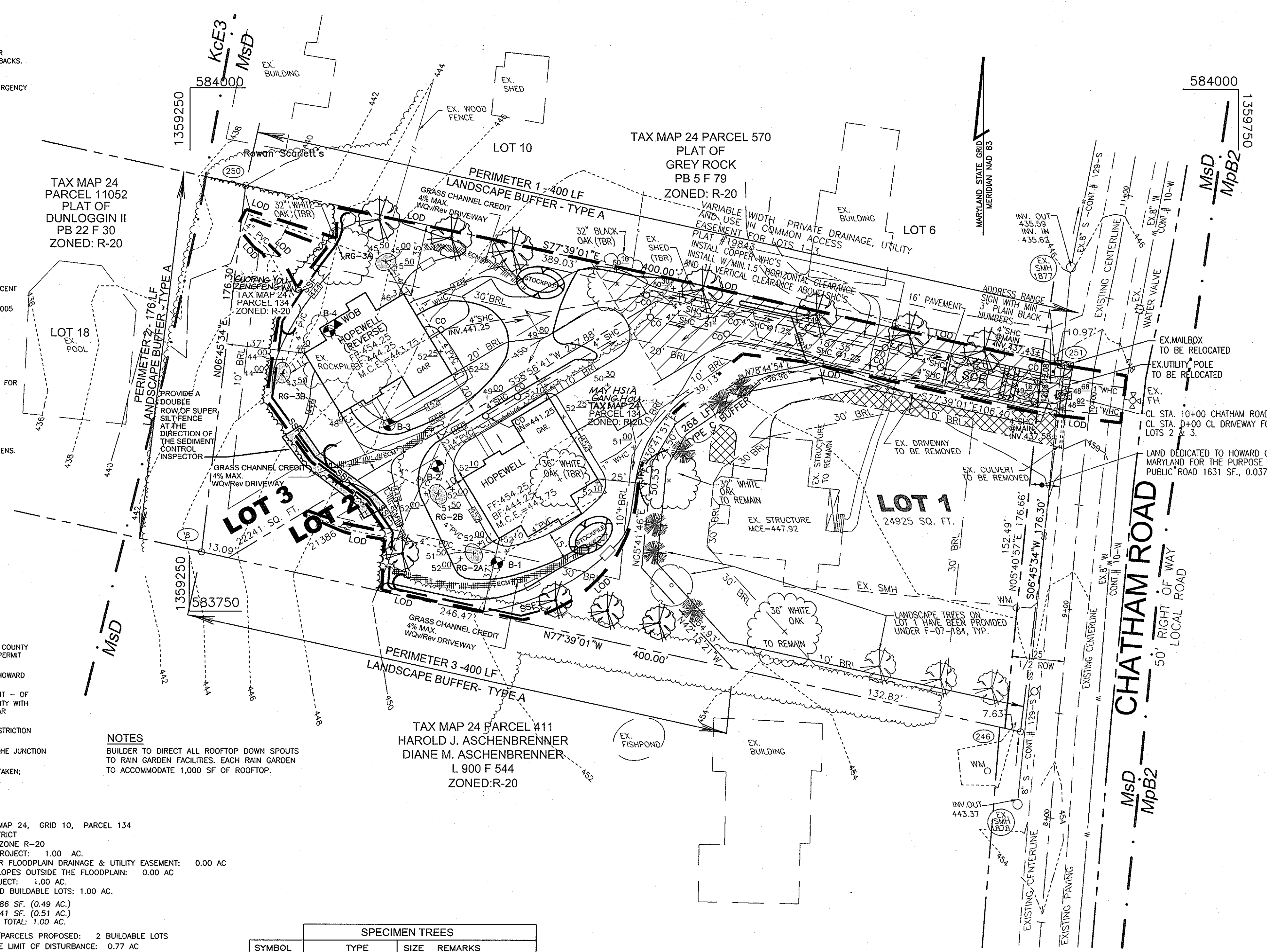
SPECIMEN TREES

SYMBOL	TYPE	SIZE	REMARKS
(Symbol)	WHITE OAK	32"	TO REMAIN
(Symbol)	WHITE OAK	36"	TO REMAIN
(Symbol)	BLACK OAK	32"	TO BE REMOVED
(Symbol)	WHITE OAK	36"	TO BE REMOVED
(Symbol)	WHITE OAK	32"	TO BE REMOVED

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP
Md	MONTALTO AND RELAY VERY STONY SILT LOAMS, 3 TO 25% SLOPES	C
MpB2	MONTALTO SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C

SITE DEVELOPMENT PLAN BALLEW PROPERTY LOTS 2 & 3

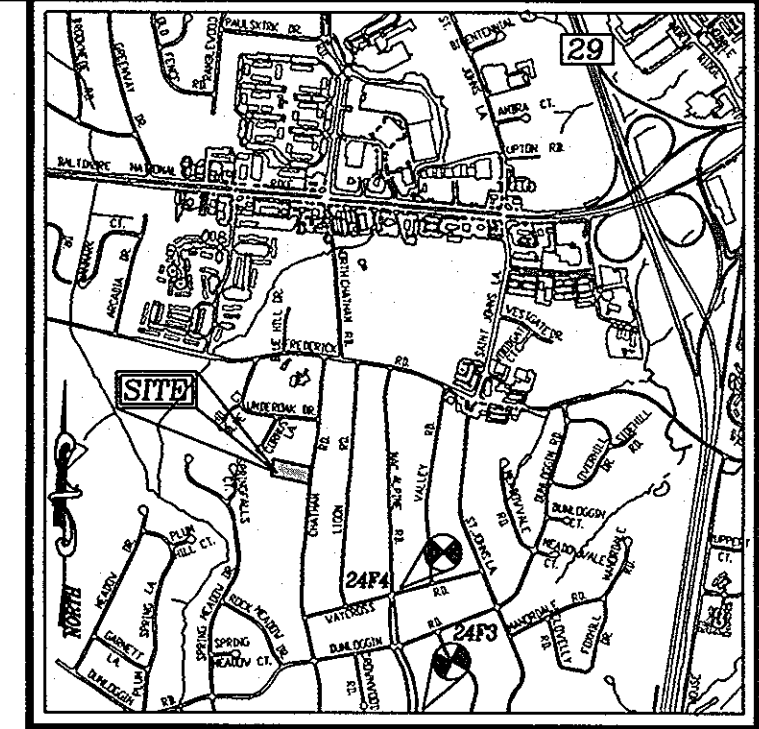


MINIMUM LOT SIZE CHART

LOT NET AREA	PIPE STACK	TOTAL AREA
2	2011B	1288
3	20002	2239
		22241 SQ. FT.

COORDINATE LIST

POINT	NORTH	EAST
8	583778.37360	1359255.80880
24B	583692.82249	1359646.55297
25A	583692.44819	1359276.55925
251	583867.89707	1359667.30342



BENCHMARKS
 SCALE: 1"=200'
 ADC MAP NO. 12A9
BENCHMARK NO. 1:
 HOWARD COUNTY CONTROL STA. 24F3
 N 581299.844
 E 1360713.730
BENCHMARK NO. 2:
 HOWARD COUNTY CONTROL STA. 24F4
 N 582298.617
 E 1360750.970

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- DIRECTION OF FLOW
- EXISTING TREELINE
- SOILS
- EXISTING TREE
- PERIMETER TREE
- TREE PROTECTION FENCE
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- SEDIMENT CONTROL STRUCTURE
- EROSION CONTROL MATTING
- TREE PROTECTION FENCE

ADDRESS CHART

LOT #	STREET ADDRESS
2	3640 CHATHAM ROAD
3	3638 CHATHAM ROAD

PERMIT INFORMATION CHART

PROJECT NAME	SECTION/AREA	LOT/PARCEL #
BALLEW PROPERTY	N/A	134

SHEET INDEX

DESCRIPTION	SHEET NO.
SITE DEVELOPMENT PLAN AND LANDSCAPE PLAN	1 OF 2
LANDSCAPE AND SITE DETAILS	2 OF 2

REVISION

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN AND LANDSCAPE PLAN
BALLEW PROPERTY
 LOTS 2 & 3

SECOND ELECTION DISTRICT
 TAX MAP 24 GRID 10,
 HOWARD COUNTY, MARYLAND
 PARCEL 134

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

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MARYLAND, LICENSE NO. 16183, EXPIRATION DATE 09-27-2010

DESIGN BY: RHW/JR
 DRAWN BY: KG
 CHECKED BY: RHW
 DATE: MAY 2009
 SCALE: 1"=30'
 W.O. NO.: 06-50

1 SHEET OF 2

ENGINEERS CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 [Signature] 8/18/09
 SIGNATURE OF ENGINEER
 ROBERT H. VOGEL, PE 16193

DEVELOPER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 [Signature] 8/17/09
 SIGNATURE OF DEVELOPER/OWNER MAY HSIA

APPROVED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
 [Signature] 8/21/09
 USDA-NATURAL RESOURCES CONSERVATION SERVICE
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 [Signature] 8/21/09
 HOWARD SCD

BUILDER
 QUALITY FIRST BUILDER
 4240 KLEIN AVENUE
 NOTTINGHAM, MD 21236
 (410) 870-0756
OWNER
 MAY HSIA/GANG HOU
 4571 ROLLING MEADOW ROAD
 ELLICOTT CITY, MARYLAND 21043
 GUOFANG YOU
 ZENGFENG WANG
 3606 GROSVENOR DRIVE
 ELLICOTT CITY, MARYLAND 21042

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.

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.

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.

IV. FOR SITES HAVING DISTURBED AREAS UNDER 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 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.

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

II. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4" - 8" HIGHER IN ELEVATION.
III. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" - 6" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.

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

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

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

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:
1) PREFERRED-APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/100 SQ.FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING.

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.

3) 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.

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.

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.).

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.

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

SEQUENCE OF CONSTRUCTION

- 1. OBTAIN GRADING PERMIT.
2. INSTALL SEDIMENT CONTROL AS SHOWN ON PLAN IN ACCORDANCE WITH DETAILS.(1 DAY)
3. CLEAR AND ROUGH GRADE SITE.(1 WEEK)
4. CONSTRUCT HOUSES.(6 MONTHS)
5. FINE GRADE AND STABILIZE THE SITE WITH TOPSOIL AND SEEDING (SEE NOTES THIS PLAN).(3 DAYS)
6. INSTALL RAIN GARDEN LOTS 2 & 3. (3 DAYS)
7. AFTER THE SITE IS PERMANENTLY STABILIZED AND PERMISISON IS GRANTED FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROLS AND STABILIZE ANY REMAINING DISTURBED AREAS.

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 (313-1855).
2. ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: (A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3:1; (B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

- 4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.

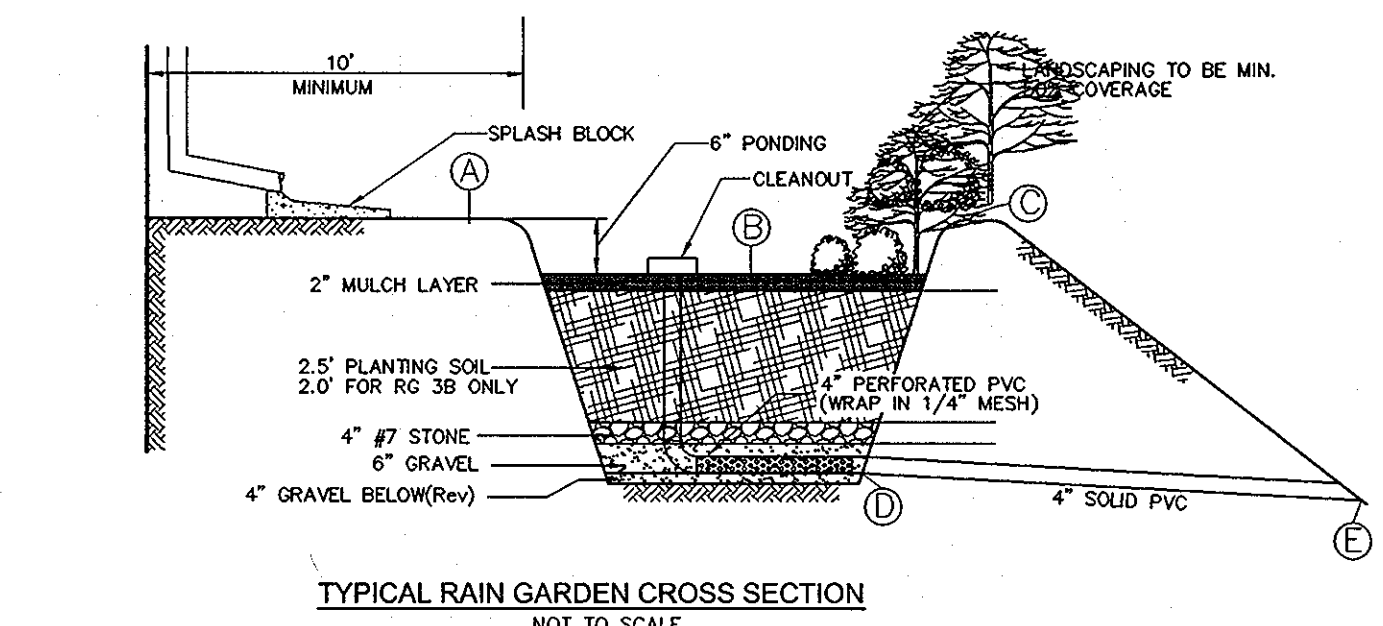
- 6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS :

TOTAL AREA 1.00 AC
AREA DISTURBED 0.78 AC
AREA TO BE ROOFED OR PAVED 12,632 SF
AREA TO BE VEGETATIVELY STABILIZED 21,009 SF
TOTAL CUT 610 CY
TOTAL FILL 610 CY
OFFSITE WASTE/BORROW AREA LOCATION N/R

- 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.

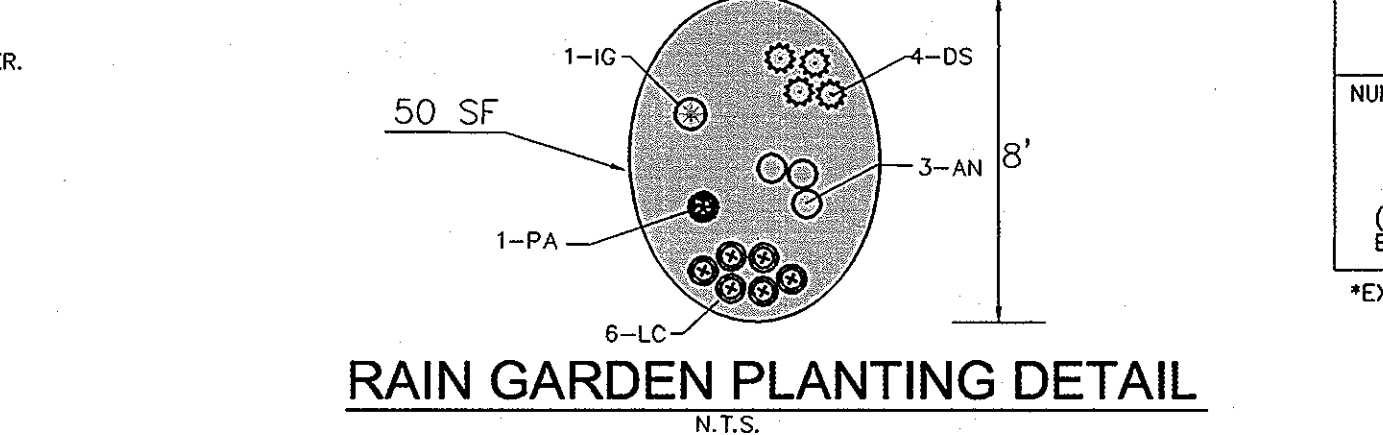
- 10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS 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.



RAIN GARDEN ELEVATIONS
RAIN GARDEN A B C D E
RG 2A 452.0 451.5 452.0 448.0 447.5
RG 2B 452.0 451.5 452.0 448.0 447.5
RG 3A 445.5 445.0 445.5 441.5 440.0
RG 3B 444.0 443.5 444.0 440.5 440.0

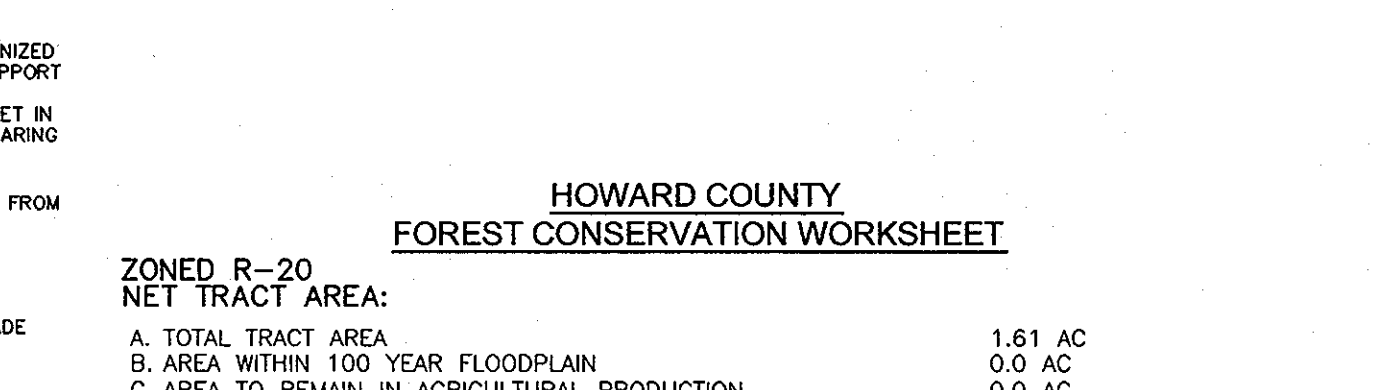
SCHEDULE A: PERIMETER LANDSCAPE EDGE
CATEGORY ADJACENT TO PERIMETER PROPERTIES TOTAL EXISTING UNDER F-07-184 EX. LOT 1 TYPE C
PERIMETER/FRONTAGE DESIGNATION LANDSCAPE TYPE 1 2 3 4
LINEAR FEET OF ROADWAY, PERIMETER/FRONTAGE 400' 176' 400' 346'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED) NO YES* NO YES*
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED) - - - - NO 0
NUMBER OF PLANTS PROVIDED (LF REMAINING) SHADE TREES 1-60 0 1-60 0 1-60 7
EVERGREEN TREES SHRUBS - - - - - -
NUMBER OF PLANTS PROVIDED SHADE TREES 7 - - 4 11 5
EVERGREEN TREES - - - - - -
OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED) - - - - - -
*EXISTING WOODS TO REMAIN



OPERATION AND MAINTENANCE SCHEDULE FOR RAIN GARDEN AREAS

- 1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH OR PLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.
2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DEFICIENT STAKES AND WIRES.
3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

SHRUB PLANTING DETAIL



TREE PLANTING AND STAKING

- 1. KEY-IN THE MATTING BY PLACING THE TOP ENDS OF THE MATTING IN A NARROW TRENCH. DEPTHD BACKFILL THE TRENCH AND TAMP FROM BOTTOM TO TOP TO THE CHANNEL CROSS-SECTION. SECURE WITH A 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 SMOOTH AND IN FIRM CONTACT WITH THE SOIL.
4. STAPLES SHALL BE PLACED AT A MINIMUM OF 6" FROM EACH STRIP, 2" OUTER ROWS, AND 2" ALTERNATING ROWS DOWN THE CENTER.
5. WHERE ONE ROLL OF MATTING ENDS AND ANOTHER BEGINS, THE END OF A STRIP SHALL OVERLAP THE UPPER END OF THE LOWER STRIP BY 4". SHIPLAP FASHION, REINFORCE THE OVERLAP WITH A DOUBLE ROW OF STAPLES SPACED 6" APART IN A STAGGERED PATTERN ON EITHER SIDE.
6. THE DISCHARGE END OF THE MATTING LINE SHOULD BE SIMILARLY SECURED WITH 2 DOUBLE ROWS OF STAPLES.
NOTE: IF FLOW WILL ENTER FROM THE EDGE OF THE MATTING THEN THE AREA EXCEPTED BY THE FLOW MUST BE NOTED-IN.

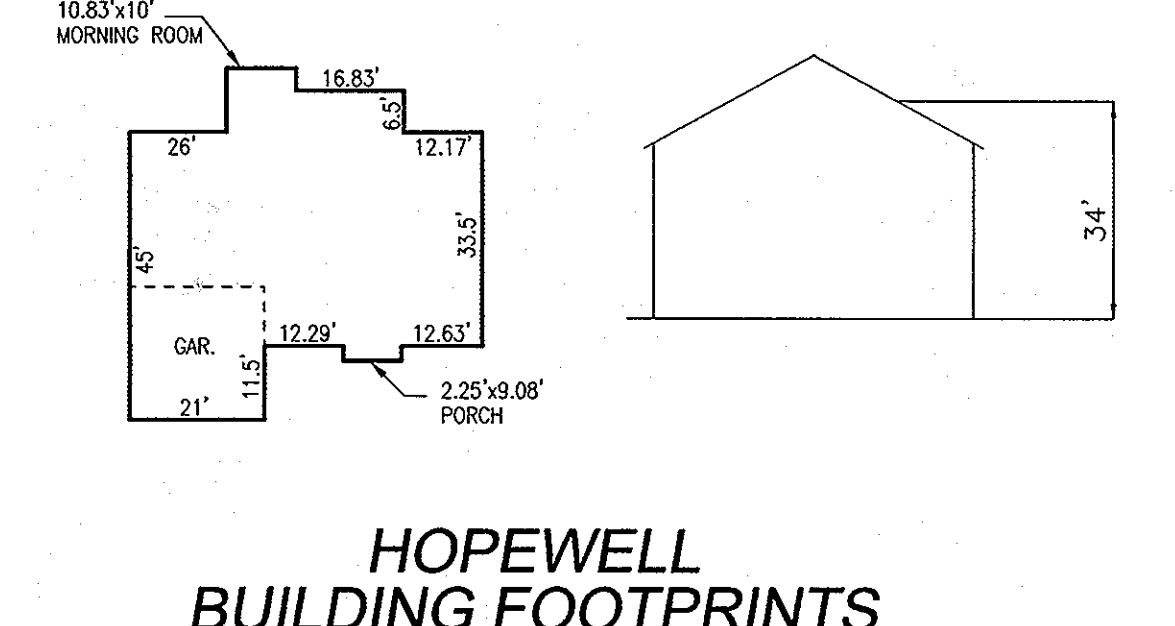
LANDSCAPE SCHEDULE

LANDSCAPE SCHEDULE table with columns: KEY, QUAN., BOTANICAL NAME, SIZE, REM.
11 ACER RUBRUM 'OCTOBER GLORY' 2 1/2"-3" Col. B & B
PERIMETER 1 & 3
5* CORNELLIAN CHERRY CORNUS MAS TYPE C BUFFER BETWEEN LOT 1 & 2 2"-3" Col. B & B
6* PINUS STROBUS EASTERN WHITE PINE TYPE C BUFFER BETWEEN LOT 1 & 2 6'-8" HI. B & B

HOWARD COUNTY FOREST CONSERVATION WORKSHEET

ZONED R-20 NET TRACT AREA:
A. TOTAL TRACT AREA 1.61 AC
B. AREA WITHIN 100 YEAR FLOODPLAIN 0.0 AC
C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION 0.0 AC
D. NET TRACT AREA 1.61 AC
LAND USE CATEGORY:
INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY. ZONED R-20
ARA MDR IDA HDR MPD CIA
0 0 0 1 0 0
E. AFFOREST THRESHOLD 15% X D = 0.24 AC
F. CONSERVATION THRESHOLD 20% X D = 0.32 AC
EXISTING FOREST COVER:
G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) = 0.50 AC
H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD = 0.26 AC
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD = 0.18 AC
BREAK EVEN POINT:
(0.2 X 1) + F = BREAK EVEN POINT
J. FOREST RETENTION WITH NO MITIGATION = 0.36 AC
K. CLEARING PERMITTED WITHOUT MITIGATION = 0.14 AC
PROPOSED FOREST CLEARING:
L. TOTAL AREA OF FOREST TO BE CLEARED = 0.50 AC
M. TOTAL AREA OF FOREST TO BE RETAINED = 0.00 AC
PLANTING REQUIREMENTS:
N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD = 0.04 AC
O. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD = 0.04 AC
P. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD = 0.00 AC
R. TOTAL REFORESTATION REQUIRED (N+P-Q) = 0.69 AC
S. TOTAL AFFORESTATION REQUIRED = 0.00 AC
T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED = 0.69 AC

TOTAL FOREST CONSERVATION OBLIGATION (0.69 AC OF REFORESTATION) HAS BEEN FULFILLED BY FEE-IN-LIEU FOR THE BUILDER (0.69 AC.) 300564 SF x 0.75 = \$22,542.30 BE PAID TO 240 KLEIN AVENUE, BLDG 100, NOTTINGHAM, MD 21068 (410) 870-0756
THE FOREST CONSERVATION FUND UNDER PLAT # 19843, AND F-07-184.

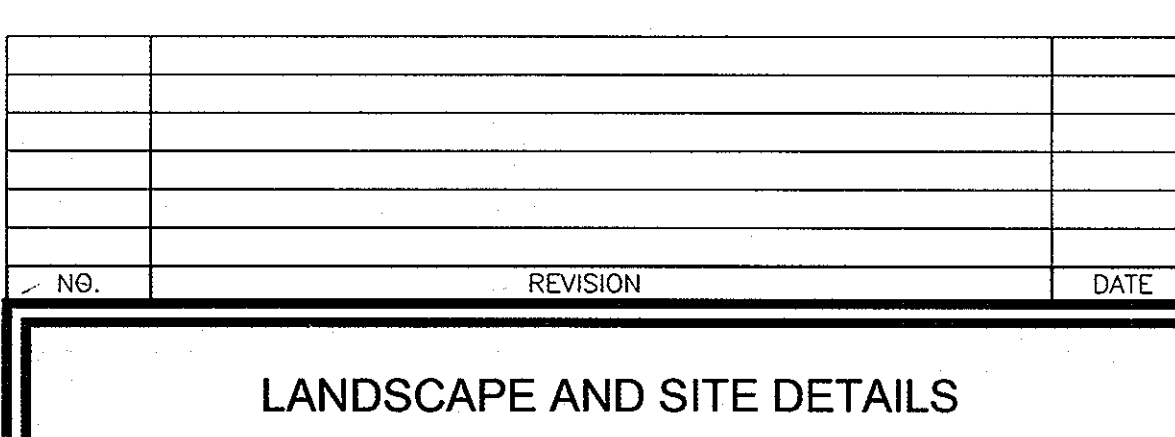
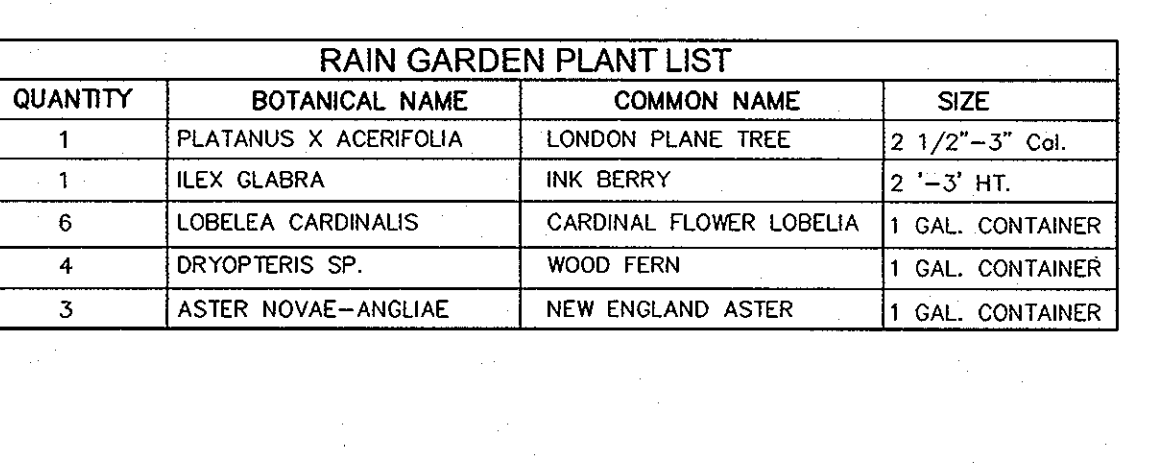


BUILDER'S CERTIFICATE

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

RAINFALL GARDEN PLANT LIST
QUANTITY BOTANICAL NAME COMMON NAME SIZE
1 PLATANUS X ACERIFOLIA LONDON PLANE TREE 2 1/2"-3" Col.
1 ILEX GLABRA INK BERRY 2"-3" HT.
6 LOBELIA CARDINALIS CARDINAL FLOWER LOBELIA 1 GAL. CONTAINER
4 DRYOPTERIS SP. WOOD FERN 1 GAL. CONTAINER
3 ASTER NOVAE-ANGLIAE NEW ENGLAND ASTER 1 GAL. CONTAINER

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 8/17/09
REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
SIGNATURE OF ENGINEER DATE 8/17/09
SIGNATURE OF DEVELOPER/OWNER DATE 8/17/09



LANDSCAPE SCHEDULE table with columns: KEY, QUAN., BOTANICAL NAME, SIZE, REM.
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LANDSCAPE AND SITE DETAILS
BALLEW PROPERTY LOTS 2 & 3
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TAX MAP 24 GRID 10, PARCEL 134
ROBERT H. VOGEL ENGINEERING, INC. ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8956
DESIGN BY: RHV/RJL
DRAWN BY: KG
CHECKED BY: RHV
DATE: MAY 2009
SCALE: AS SHOWN
W.O. NO.: 06-50
PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY APPROVED BY ME AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE PROVISIONS OF THE STATE OF MARYLAND LICENSE NO. 16193 EXPIRATION DATE: 09-27-2010
ROBERT H. VOGEL, PE #16193
2 SHEET OF 2