

SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT AND GRADING PLAN, DETAILS AND MATERIAL SPECIFICATIONS
3	SEDIMENT & EROSION CONTROL PLAN, NOTES AND DETAILS AND ON-LOT SWM DETAILS

GENERAL NOTES

- THE SUBJECT PROPERTY IS ZONED R-20 PER THE 2/02/04 COMPREHENSIVE ZONING PLAN AND PER COMP. LITE ZONING AMENDMENTS EFFECTIVE 7/28/06.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM ROAD CONSTRUCTION PLANS F-08-038 AND FIELD RUN SURVEY BY BENCHMARK ENGINEERING, DATED JULY, 2006. ALL VERTICAL CONTROLS ARE BASED ON NAVD83. BOUNDARY IS BASED ON A MONUMENTED FIELD-RUN SURVEY PERFORMED BY BENCHMARK ENGINEERING, INC., DATED FEBRUARY, 2003.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE COORDINATE SYSTEM, HOWARD COUNTY MONUMENTS 46C3 & 47AA WERE USED FOR THIS PROJECT.
- WATER AND SEWER ARE PUBLIC AND EXISTING UTILITIES ARE BASED ON CONTRACT 24-4449-D.
- STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH F-08-038 AND THESE PLANS. QUALITY CONTROL SHALL BE PROVIDED BY A BIOTRETION FACILITY WITH AN UNDERGROUND RECHARGE FEATURE, STORMWATER CREDITS, AND A NUMBER OF ON-LOT FACILITIES, INCLUDING RAIN GARDENS AND INFILTRATION BERMS. QUANTITY CONTROL IS NOT REQUIRED. ALL OPEN SPACE SWM FACILITY/BMP PRACTICES SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE H.O.A. ON-LOT FACILITIES SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE PROPERTY OWNER.
- EXISTING UTILITIES SHOWN WERE TAKEN FROM RECORD DRAWINGS PER F-08-038. IF NECESSARY, CONTRACTOR SHALL ADJUST STRUCTURE TOPS TO MEET SDP GRADES.
- NO WETLANDS OR 100-YEAR FLOODPLAIN EXIST WITHIN THE PROJECT LIMITS AS PER A CERTIFICATION LETTER PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED SEPTEMBER 9, 2002 AND APPROVED UNDER S-03-007.
- A.P.F.O. TRAFFIC STUDY WAS PREPARED BY THE MARS TRAFFIC GROUP, INC. APRIL, 2002 AND APPROVED UNDER S-03-007.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING WAS POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT FOR FINAL PLAN F-08-038.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE(5) WORKING DAYS PRIOR TO THE START OF WORK.
- FINAL PLAN F-08-038 COMPLIED WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY THE FOLLOWING: A) FOREST CONSERVATION REQUIREMENTS FOR THIS PROJECT TO BE 0.8 AC. OF FOREST RETENTION. B) FOREST CONSERVATION WAS MET BY 0.23 AC. OF ON-SITE PLANTINGS PLACED WITHIN A FOREST CONSERVATION EASEMENT WITH A SURETY AMOUNT OF \$5,009.50 AND C) 0.11 AC. OF LANDSCAPING CREDIT IN OPEN SPACE LOT 11 THE SURETY PAID UNDER THE LANDSCAPING SURETY AND D) THE REMAINING 0.46 AC. HAS BEEN PROVIDED AS OFFSITE PLANTINGS ON THE TALLEY PROPERTY, PARCEL 2, AS A REVISION TO THE OFFSITE FOREST CONSERVATION PLAN F-07-003, SHEET 12. SURETY FOR THE TALLEY PLANTINGS WAS POSTED WITH THE ORIGINAL F-07-003 DEVELOPER'S AGREEMENT. THE REQUIRED SURETY AND FEES FOR THIS PROJECT WERE ESTABLISHED BY, AND PAID WITH THE DEVELOPER'S AGREEMENT FOR F-08-038.
- UNLESS NOTED AS "PRIVATE", ALL EASEMENTS ARE PUBLIC.
- BRL INDICATES ZONING BUILDING RESTRICTION LINE, OTHER RESTRICTIONS MAY APPLY.
- 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.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE BUILDERS EXPENSE. FOR FLAG OR PIPE STEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPE STEM AND ROAD RIGHT OF WAY LINE ONLY AND NOT ONTO THE FLAG OF PIPE STEM LOT DRIVEWAY.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO 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 COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN.)
 - GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM 45' TURNING RADIUS.
 - STRUCTURES (CULVERTS/SLOPES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING).
 - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
- STRUCTURE CLEARANCES - MINIMUM 12 FEET.
- MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- OPEN SPACE LOTS 4 AND 11 ARE OWNED BY THE HOA PER F-08-038. (PLAT 21973-21974)
- THERE ARE NO CEMETERIES ON THIS PROPERTY, TO THE BEST OF OUR KNOWLEDGE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
- ALL WATER METERS SHALL BE SET INSIDE.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- FOR DRIVEWAY ENTRANCE DETAIL SEE HOWARD COUNTY STANDARD DETAILS R-6.05.
- SIC ELEVATIONS SHOWN ARE AT THE PROPERTY LINE OR EASEMENT LINE.
- THE STAKING OF FOUNDATIONS PRIOR TO CONSTRUCTION TO ENSURE COMPLIANCE WITH REGULATORY BUILDING RESTRICTION LINES IS RECOMMENDED.
- DRIVEWAY SLOPES SHOWN ARE AVERAGE. THE SLOPE AT THE OUTSIDE EDGES COULD BE FLATTER OR STEEPER DEPENDING ON GRADE OF ROADWAY.
- THIS PLAN CONFORMS WITH THE AMENDED 5th EDITION OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 1993 ZONING REGULATIONS AMENDED BY CB 50-2001. THE BUILDER SHALL APPLY FOR BUILDING PERMITS FOR ALL LOTS AS SHOWN ON THIS SITE DEVELOPMENT PLAN WITHIN FIVE YEARS OF SIGNATURE APPROVAL OF THIS PLAN.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN.
- A WAIVER PETITION (WP-11-033) WAS APPROVED BY THE DEPARTMENT OF PLANNING & ZONING IN A LETTER DATED OCTOBER 8, 2010 FOR ARTICLE V, SECTIONS 16.156(i) & (m) TO ALLOW FOR A 180 DAY EXTENSION OF THE POSTING OF FEES AND PLAN SUBMISSION.
- A WAIVER PETITION (WP-12-047) WAS APPROVED BY THE DEPARTMENT OF PLANNING & ZONING IN A LETTER DATED NOVEMBER 3, 2011, FOR ARTICLE V, SECTIONS 16.156(i) & (m) TO ALLOW FOR A 180 DAY EXTENSION OF THE POSTING OF FEES AND PLAN SUBMISSION.

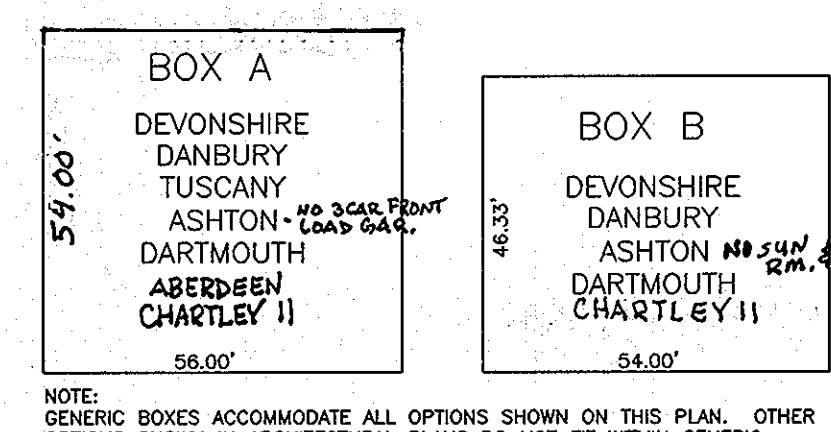
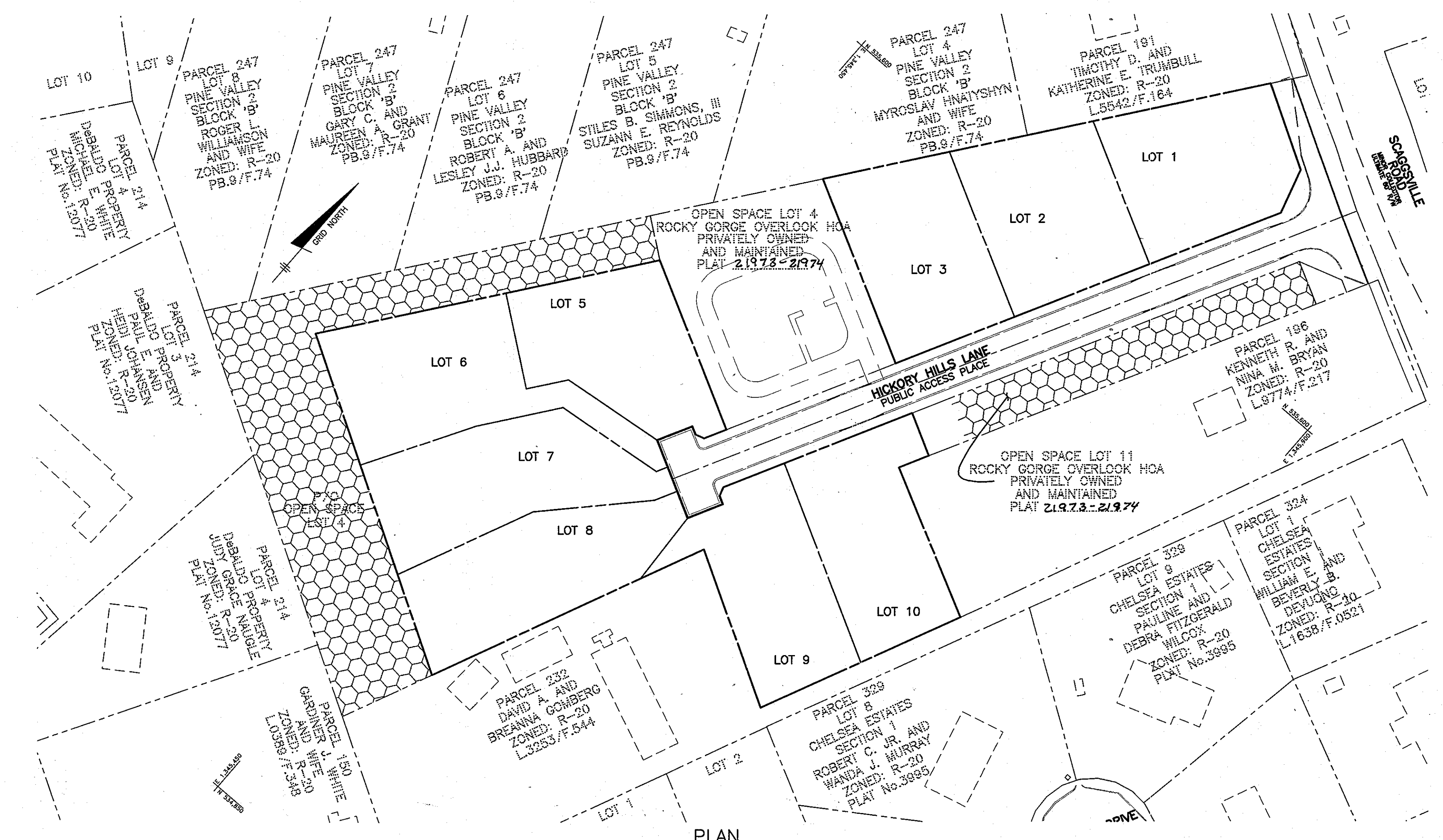
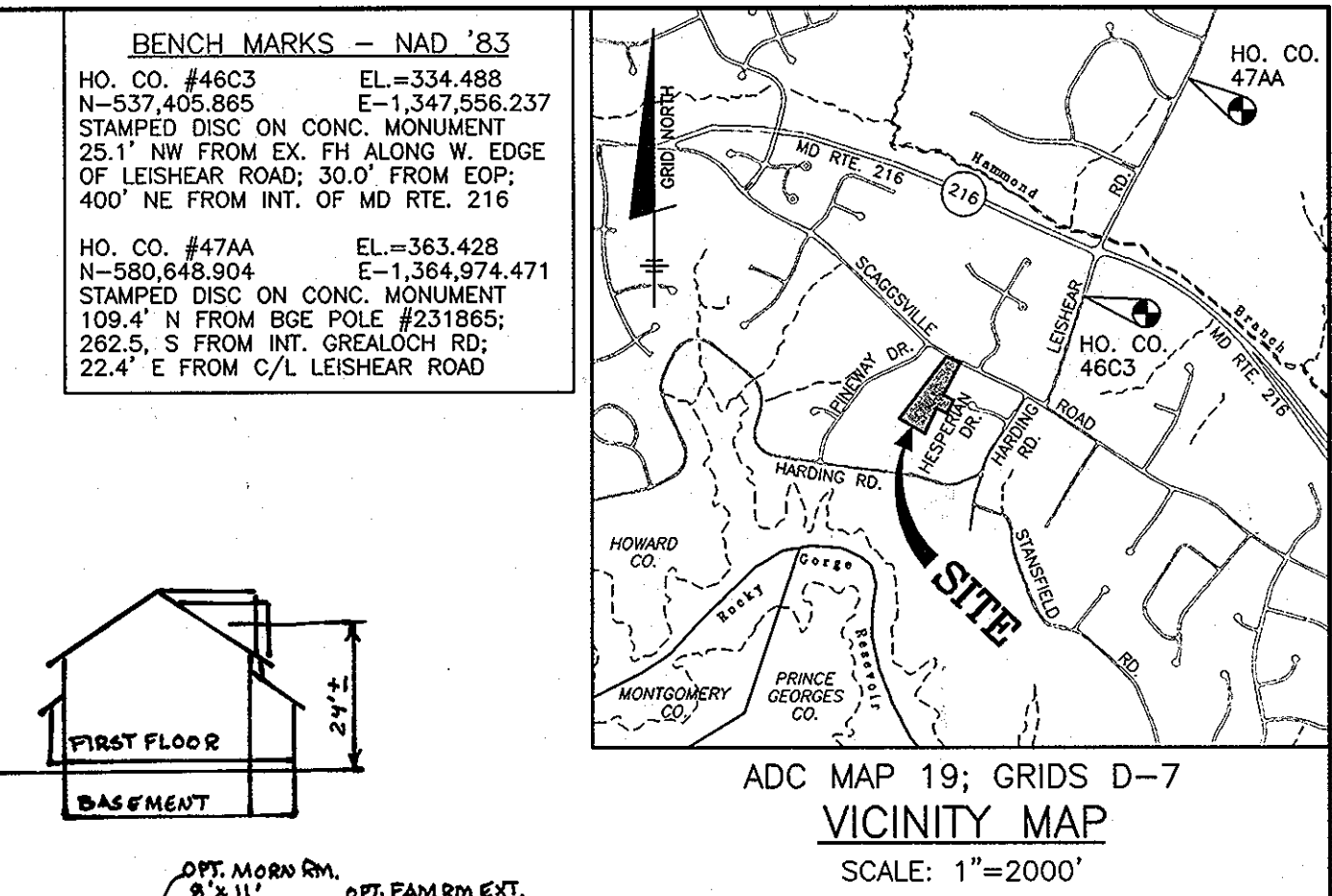
SITE DEVELOPMENT PLAN

ROCKY GORGE OVERLOOK

LOTS 1 THRU 3 & LOTS 5 THRU 10

6th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND



GENERIC BOXES
 SCALE: 1" = 30'

SITE ANALYSIS DATA CHART

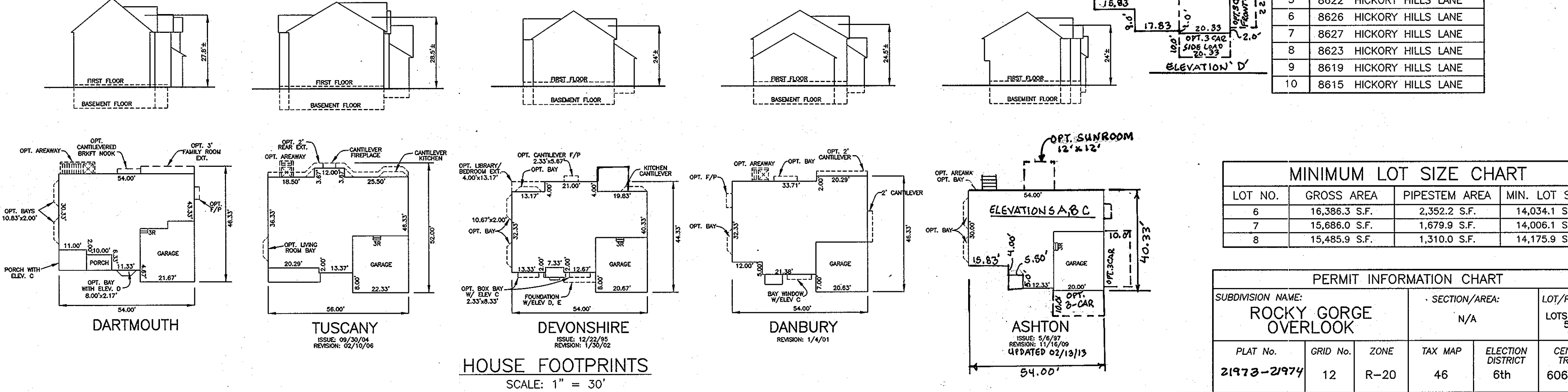
A) TOTAL PROJECT AREA	3.01 AC.
B) AREA OF THIS PLAN SUBMISSION	3.01 AC.
C) APPROXIMATE LIMIT OF DISTURBANCE	3.00 AC.
D) PRESENT ZONING:	R-20
E) PROPOSED USE OF SITE:	RESIDENTIAL SINGLE FAMILY DETACHED UNITS
F) TOTAL NUMBER OF UNITS ALLOWED AS SHOWN ON FINAL PLATS:	9
G) TOTAL NUMBER OF UNITS PROPOSED:	9
H) APPLICABLE DPZ FILE REFERENCES:	S-03-007, P-07-014, F-08-038, CONTR. NO. 24-4449-D, WP-09-038, WP-09-124 (& HB921), WP-11-032, WP-11-033, WP-12-046, WP-12-047
I) PROPOSED WATER AND SEWER SYSTEMS:	X PUBLIC PRIVATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Kurt Sheleff 8/1/12
 CHIEF, DIVISION OF LAND DEVELOPMENT

David J. ... 7/25/12
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

Mark S. ... 8/1/12
 DIRECTOR



ADDRESS CHART

LOT	STREET ADDRESS
1	8602 HICKORY HILLS LANE
2	8606 HICKORY HILLS LANE
3	8610 HICKORY HILLS LANE
5	8622 HICKORY HILLS LANE
6	8626 HICKORY HILLS LANE
7	8627 HICKORY HILLS LANE
8	8623 HICKORY HILLS LANE
9	8619 HICKORY HILLS LANE
10	8615 HICKORY HILLS LANE

MINIMUM LOT SIZE CHART

LOT NO.	GROSS AREA	PIPESTEM AREA	MIN. LOT SIZE
6	16,386.3 S.F.	2,352.2 S.F.	14,034.1 S.F.
7	15,686.0 S.F.	1,679.9 S.F.	14,006.1 S.F.
8	15,485.9 S.F.	1,310.0 S.F.	14,175.9 S.F.

PERMIT INFORMATION CHART

SUBDIVISION NAME:	SECTION/AREA:	LOT/PARCEL #
ROCKY GORGE OVERLOOK	N/A	LOTS 1-3 & 5-10
PLAT No. 21973-21974	GRID No. 12	ZONE R-20
TAX MAP 46	ELECTION DISTRICT 6th	CENSUS TRACT 6068.02

NO.	DATE	REVISION
3	5-1-13	REVISE CHARTLEY II FOOTPRINT TO INCLUDE ELEV. C, D, E
2	3-7-13	REVISE ASHTON FOOTPRINT PER NEW ARCHITECTURALS
1	1-31-13	ADD REVISE HOUSE FOOTPRINTS AND GENERIC BOXES

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE & SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6644
 E-Mail: benchmark@bel-civilengineering.com

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. 28559; Expiration Date: 7-22-2013

OWNER/DEVELOPER:
H.B. DEVELOPMENT INC.
 11807 WOLLINGFORD COURT
 CLARKSVILLE, MARYLAND, 21029
 (410)-792-2565

PROJECT:
ROCKY GORGE OVERLOOK
 LOTS 1 THRU 3 & LOTS 5 THRU 10

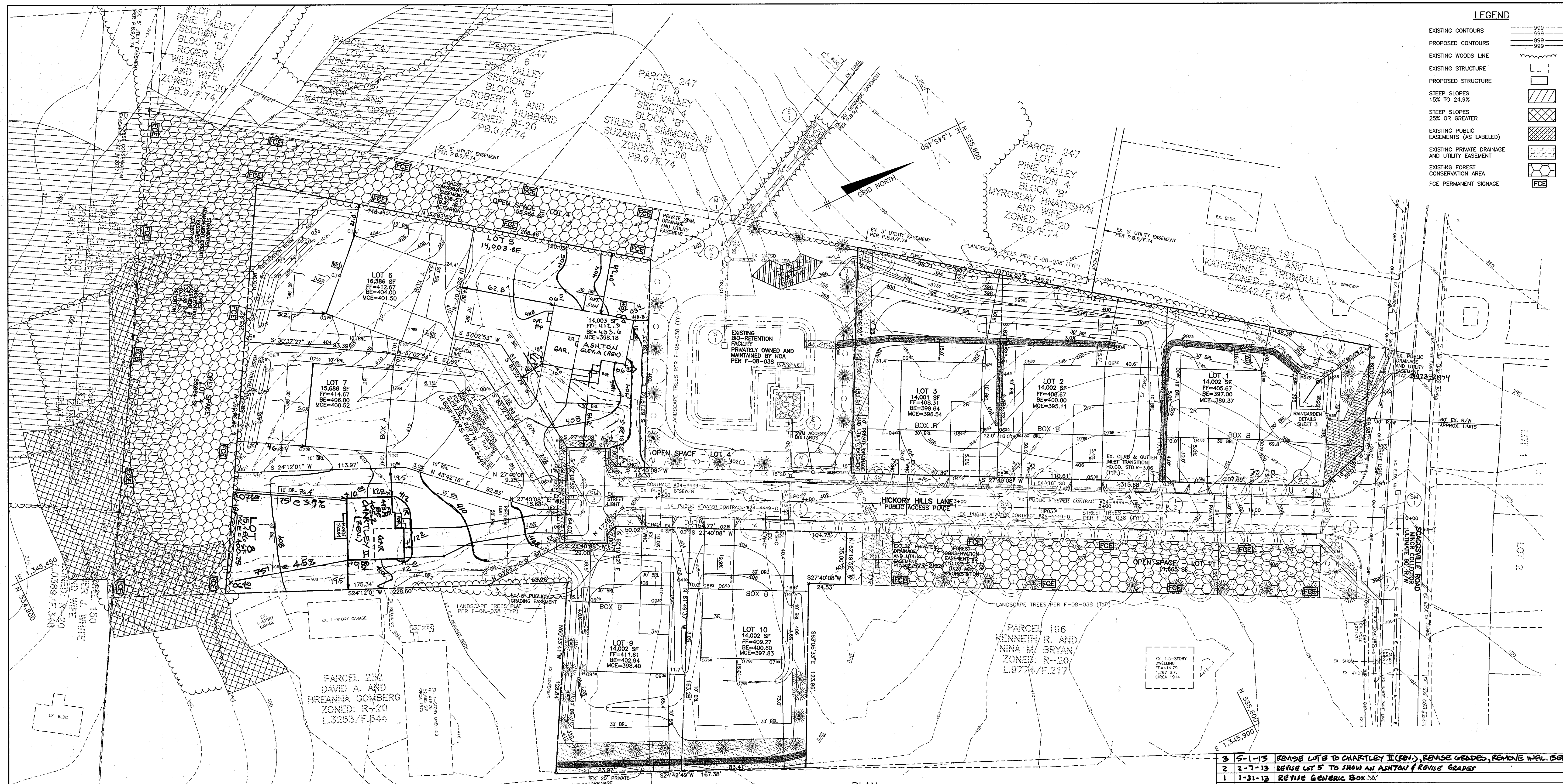
LOCATION: TAX MAP 46 - GRID 12 - PARCEL 289
 ZONE: R-20 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

BUILDER:
CORNERSTONE HOMES
 9695 NORFOLK AVE.
 LAUREL, MARYLAND, 20723
 (410)-792-2565

TITLE:
COVER SHEET

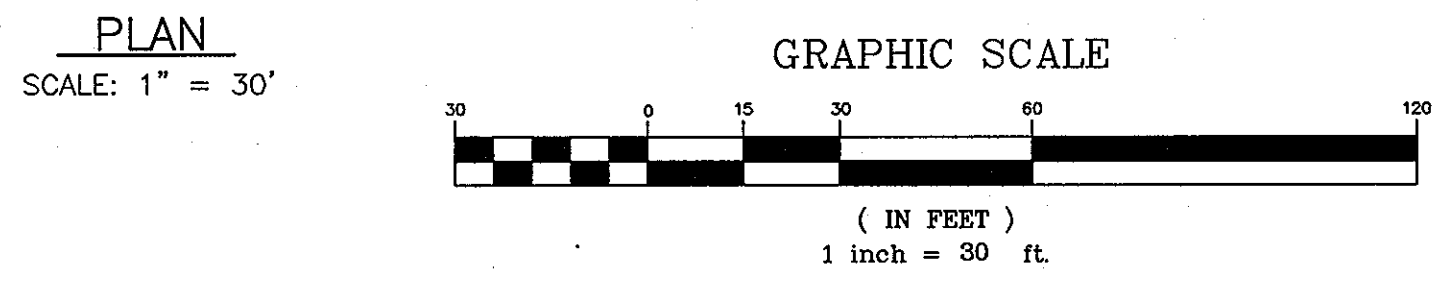
DATE: JANUARY, 2010 PROJECT NO. 1560
 MARCH, 2012

Des: AAM Draft: AAM Check: BFC SCALE: AS SHOWN DRAWING 1 OF 3



LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING WOODS LINE
- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- STEEP SLOPES 15% TO 24.9%
- STEEP SLOPES 25% OR GREATER
- EXISTING PUBLIC EASEMENTS (AS LABELED)
- EXISTING PRIVATE DRAINAGE AND UTILITY EASEMENT
- EXISTING FOREST CONSERVATION AREA
- FCE PERMANENT SIGNAGE



NO.	DATE	REVISION
3	5-1-13	REVISE LOT 8 TO CHARTLEY II (REV.), REVISE GRADES, REMOVE INFL. BORN
2	2-7-13	REVISE LOT 5 TO SHOW AN ASHTON & REVISE GRADES
1	1-31-13	REVISE GENERIC BOX 'A'

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS

ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE # SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644
E-MAIL: benchmark@bei-civilengineering.com

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. 28599; Expiration Date: 7-22-2013

Signature 4/17/12

OWNER/DEVELOPER:
H.B. DEVELOPMENT INC.
11807 WOLLINGFORD COURT
CLARKSVILLE, MARYLAND 21029
(410)-792-2565

BUILDER:
CORNERSTONE HOMES
9695 NORFOLK AVE.
LAUREL, MARYLAND, 20723
(410)-792-2565

PROJECT:
ROCKY GORGE OVERLOOK
LOTS 1 THRU 3 & LOTS 5 THRU 10

LOCATION: TAX MAP 46 - GRID 12 - PARCEL 289
ZONE: R-20 6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: SITE DEVELOPMENT AND GRADING PLAN, DETAILS, AND MATERIALS SPECIFICATIONS

DATE: JANUARY, 2010 PROJECT NO. 1560
MARCH, 2012

Des: AAM **Draft:** AAM **Check:** BFC **SCALE:** AS SHOWN **DRAWING** 2 OF 3

P-1 PAVING DETAIL

SECTION NUMBER	CALIFORNIA BEARING RATIO (CBR)	3 TO <5	5 TO <7	>7	3 TO <5	5 TO <7	>7
P-1	HMA SUPERPAVE FINAL SURFACE	1.5	1.5	1.5	1.5	1.5	1.5
	HMA SUPERPAVE INTERMEDIATE SURFACE	N/A	N/A	N/A	N/A	N/A	N/A
	HMA SUPERPAVE BASE	2.0	2.0	2.0	3.5	3.0	2.5
	GRADED AGGREGATE BASE (GAB)	8.5	7.0	5.0	4.0	4.0	4.0

SEWER HOUSE CONNECTION CHART

LOT	INV. @ R/W	MCE
1	385.36	389.37
2	390.57	395.11
3	391.70	396.54
5	393.44	398.18
6	393.94	401.50
7	393.92	400.52
8	393.89	400.25
9	393.52	398.40
10	392.72	397.83

MATERIALS & SPECIFICATIONS FOR BIO-RETENTION (RAINGARDEN-BMP)

MATERIAL	SPECIFICATION	SIZE	NOTES:
PLANTINGS	SEE APPENDIX A: TABLE A.4	N/A	PLANTINGS ARE SITE SPECIFIC
PLANTING SOIL (2.5' TO 4.0' DEEP)	SAND: 30-60% SILT: 30-50% CLAY: 0-25%	N/A	USDA SOIL TYPES: LOAMY SAND, SANDY LOAM OR LOAM
MULCH	SHREDDED HARDWOOD	N/A	AGED 6 MONTHS, MINIMUM
GEOTEXTILE (CLASS 'C')	APPARENT OPENING SIZE: (ASTM D-4751) GRAB TENSILE STRENGTH: (ASTM D-4632) PUNCTURE RESISTANCE: (ASTM D-4633)	N/A	FOR USE AS NECESSARY BENEATH UNDERDRAINS ONLY
GEOTEXTILE (1/4" WIRE MESH)	-	1/4" WIRE MESH	-
DRAIN STONE	-	#8 STONE	#8 STONE
UNDERDRAIN GRAVEL	AASHTO M-43	0.375" TO 0.750"	-
UNDERDRAIN PIPING	F758, TYPE PS28 OR AASHTO M-278	4" TO 6" RIGID SCH 40 PVC, SDR35 OR HDPE	3/8" PERF. @ 6" O/C, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES, NOT NECESSARY UNDERNEATH PIPES

CONTRACTOR TO CHECK SEWER HOUSE CONNECTION ELEVATION AT PROPERTY/EASEMENT LINE PRIOR TO CONSTRUCTION OF HOUSE TO ENSURE PROPER SLOPES CAN BE MAINTAINED.

NO.	DATE	REVISION
5	7-5-2013	REVISE P.F. 10.F. GRADES ON LOT 5 PER AS-BUILT CONDITIONS
4	10-1-2013	REVISE P.F. 10.F. ELEV. AND GRADES PER AS-BUILT CONDITIONS

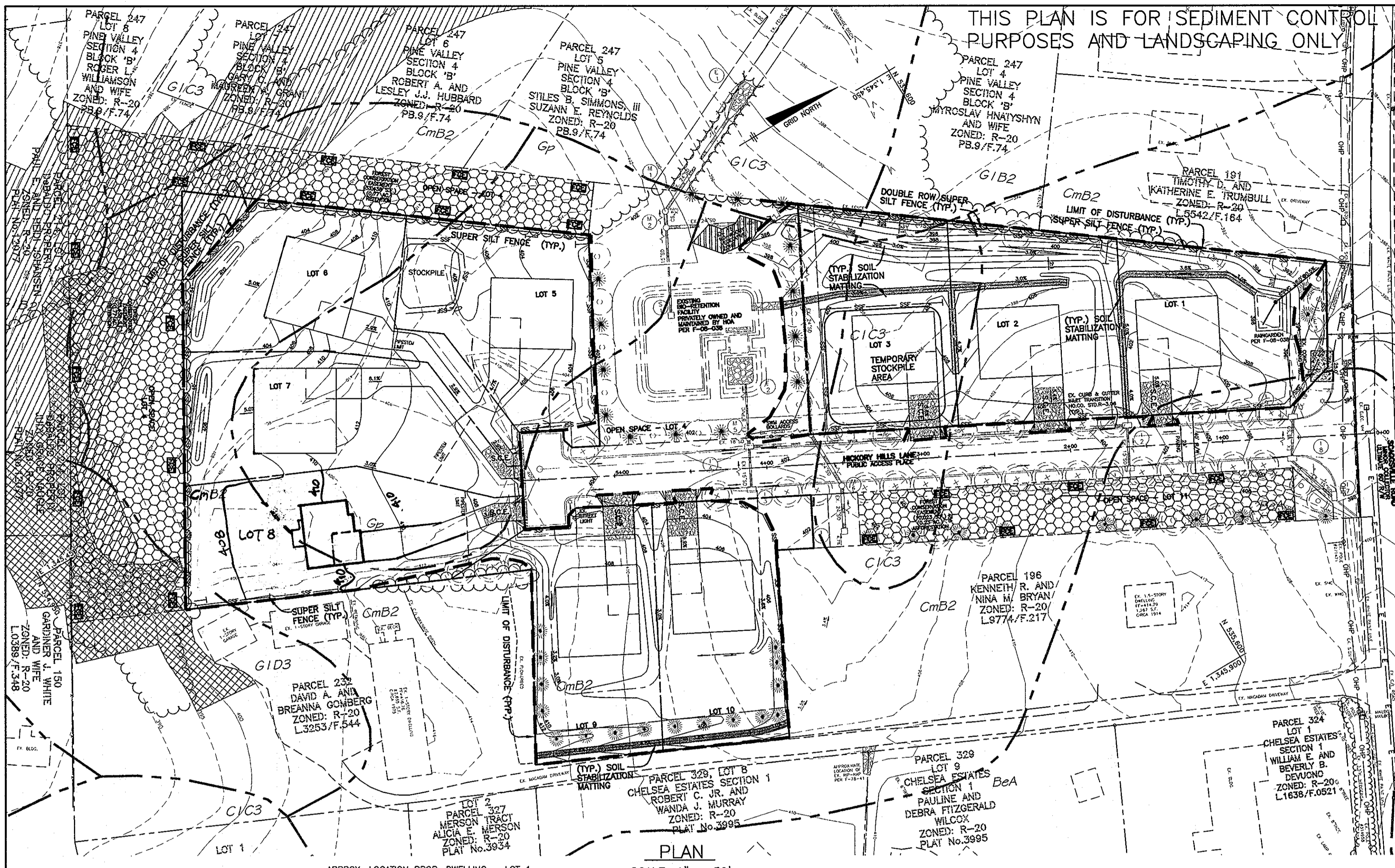
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Wanda J. McCullough 8/1/12
DIRECTOR

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Wesley Skelton 3/10/12
CHIEF, DIVISION OF LAND DEVELOPMENT

Wesley Skelton 7/25/12
CHIEF, DEVELOPMENT ENGINEERING DIVISION



THIS PLAN IS FOR SEDIMENT CONTROL PURPOSES AND LANDSCAPING ONLY

PERMANENT SEEDBED PREPARATIONS

- 1. SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
- 2. 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/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 TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREA-FORM FERTILIZER (9 LBS/1000 SQ FT).
 2. ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

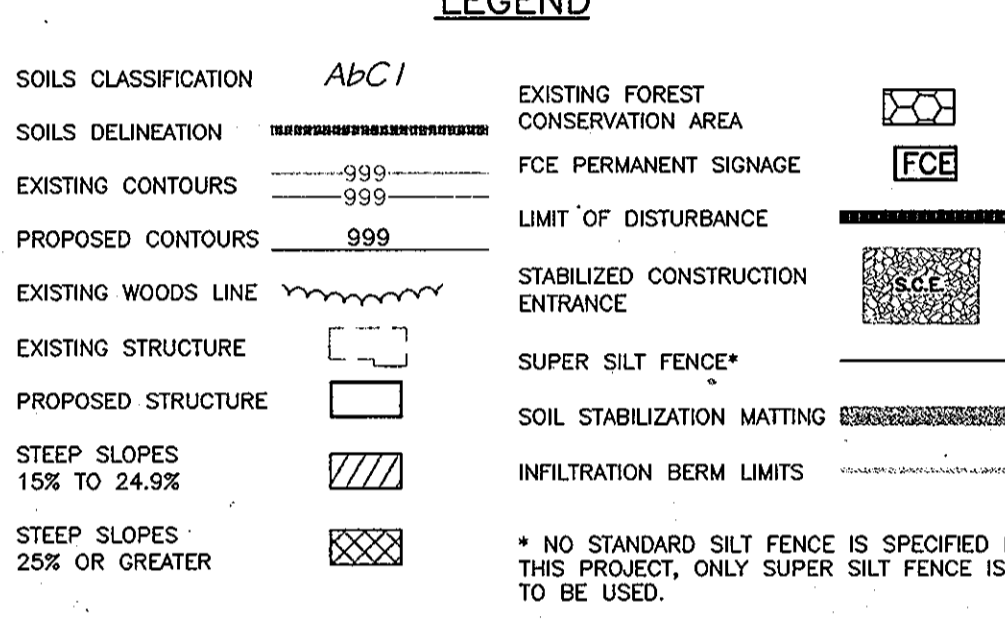
SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.5 LBS/1000 SQ FT) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOO. OPTION (3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

SEQUENCE OF CONSTRUCTION

- NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF CONSTRUCTION
- DAY 1 - OBTAIN GRADING PERMIT.
 - DAY 2-6 - INSTALL SEDIMENT CONTROLS THAT ARE INCLUDED UNDER THIS SDP.
 - DAY 7-10 - EXCAVATE FOR FOUNDATIONS AND ROUGH GRADE, TAKING CARE TO AVOID COMPACTION OF SOILS IN THE INFILTRATION BEIN AREAS. STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDBED NOTES.
 - DAY 11-80 - CONSTRUCT HOUSES, BACKFILL AND CONSTRUCT DRIVEWAYS.
 - DAY 81-85 - FINAL GRADE AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDBED NOTES. CONSTRUCT ON-SITE SWM PRACTICES. PLUS-4 STORM DRAIN SYSTEM.
 - DAY 86-89 - WITH THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY REMAINING DISTURBED AREAS.

NOTE: EROSION CONTROL MATTING SHALL BE PLACED IN SWALES WHERE DEEMED NECESSARY UNTIL VEGETATION IS ESTABLISHED OR SOLID SOO SHOULD BE USED.



RAINGARDEN PLANTING SCHEDULE

1. VINCA MINOR (COMMON PERIWINKLE)
2. AJUSTA REPTAN S (CREEPING BUGLEWEED)
3. IRIS VERSICOLOR (IRIS)
4. HEMEROCALLIS SP (DAYLILY)
5. ACER RUBRUM (RED MAPLE)

RAINGARDEN PLANTING DATA

1. PLANTINGS WITHIN THE PONDING AREA OF THE RAINGARDEN ARE TO BE OF A MEDIUM TO HIGH WATER TOLERANCE.
2. PLANTINGS ALONG THE PERIMETER (BERM) AREA OF THE RAINGARDEN ARE TO BE OF A LOW TO MEDIUM WATER TOLERANCE.
3. AVOID PLANTINGS WITH EXCESSIVE ROOT MASS IN POND AREA OF THE RAINGARDEN NEAR O.B. PIPE AND UNDERDRAN.

OPERATION & MAINTENANCE SCHEDULE FOR RAINGARDEN, LOT 1

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

TOPSOIL SPECIFICATIONS

1. Topsoil salvaged from the existing site may be provided that it meets that standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
2. Topsoil Specifications - Soil to be used as topsoil must follow the following:
 1. 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 soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textures and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
 2. Topsoil must be free of plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nutgrass, poison ivy, thistle, or others as specified.
 3. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures:

3. For sites having disturbed areas under 5 acres:
 1. Place topsoil (if required) and apply soil amendments as specified in 2.0.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
4. For sites having disturbed areas over 5 acres:
 1. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime requirements 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 or topsoil shall be not less than 1.5 percent by weight.
 2. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 3. No soil or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic 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.

5. Place topsoil (if required) and apply soil amendments as specified in 2.0.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

Topsoil Application

1. 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.
2. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4" - 8" higher in elevation.
3. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
4. 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 seedling preparation.

Alternative for Permanent Seeding - Instead of applying the full amounts of time and commercial fertilizer, composted sludge and amendments may be applied as specified below:

1. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas under 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
 - b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If controls does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
 - c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
2. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

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

SEDIMENT CONTROL NOTES

1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION, (313-1850).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, REVISIONS THERTO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RESTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 4 CALENDAR DAYS FOR ALL PERMANENT 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 12, OF THE HOWARD COUNTY 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 SEEDINGS (SEC. 51) SOO (SEC. 54), TEMPORARY SEEDING (SEC. 52), TEMPORARY SEEDING WITH MULCH ALONG WITH MULCH ALONE CAN ONLY 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 OF SITE (THIS SUBMISSION)	3.01	ACRES
AREA DISTURBED	3.00	ACRES
AREA TO BE ROOFED OR PAVED	0.90	ACRES
AREA TO BE VEGETATIVELY STABILIZED	2.14	ACRES
TOTAL OUT	6382	CY
TOTAL FILL	10,431	CY

 OFFSITE WASTE/BORROW AREA LOCATION: *

*IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY THE SPILL/BORROW SITE AND NOTIFY AND OBTAIN APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR OF THE SITE AND ITS GRADING PERMIT NUMBER AT THE TIME OF CONSTRUCTION.
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 CONTROL 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 CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

TEMPORARY SEEDBED PREPARATIONS

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE RESTORED WHERE A SHORT-TERM 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: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT).

SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOV. 15, SEED WITH 7 1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT) FOR THE PERIOD MAY 1 THROUGH SEPTEMBER 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (0.7 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOO.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FT. OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

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

APPROVED: DEPARTMENT OF PLANNING AND ZONING

W. J. Sweeney 8/10/12
CHIEF, DIVISION OF LAND DEVELOPMENT

John P. Khaton 7/25/12
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Mark J. Leylek 8/1/12
DIRECTOR

ENGINEER'S CERTIFICATE

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

ENGINEER: *John P. Khaton* 4/17/2012 DATE

DEVELOPER'S CERTIFICATE

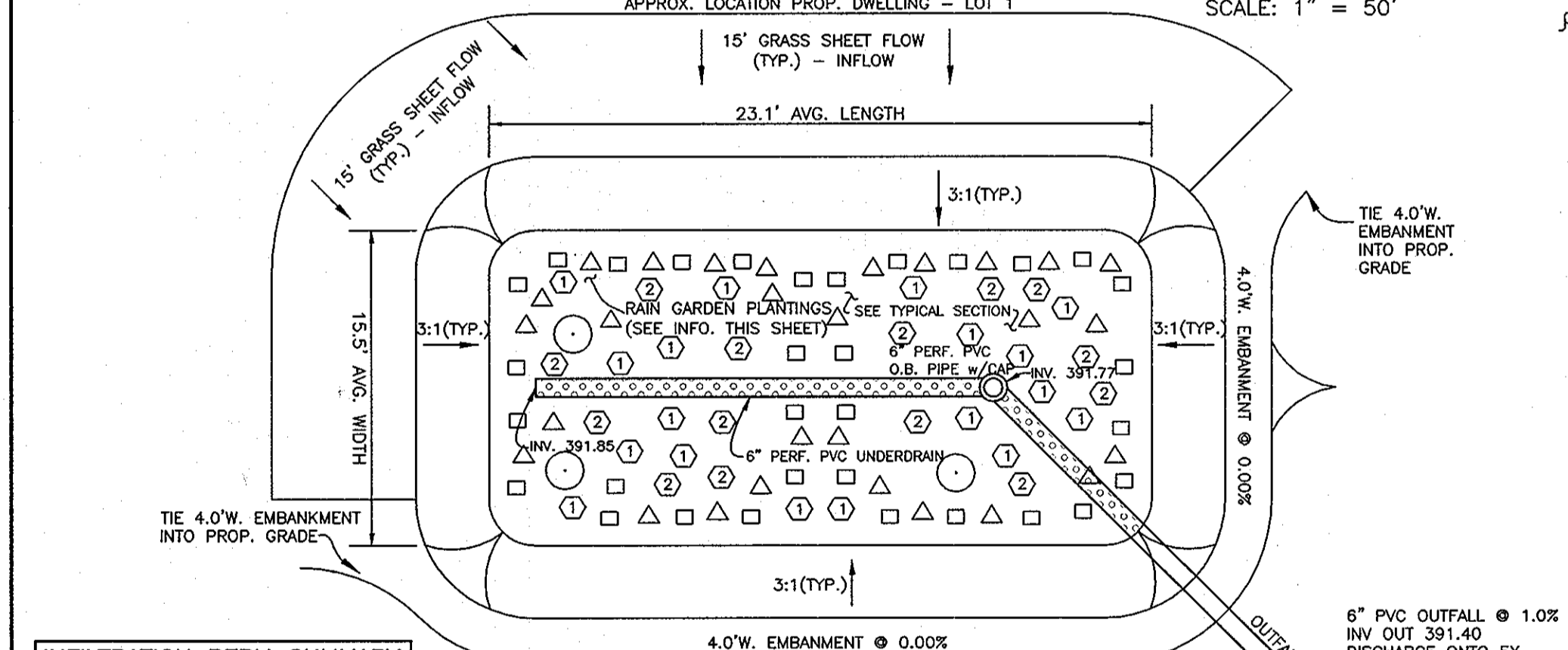
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER: *Brandt Boy* 4/19/12 DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

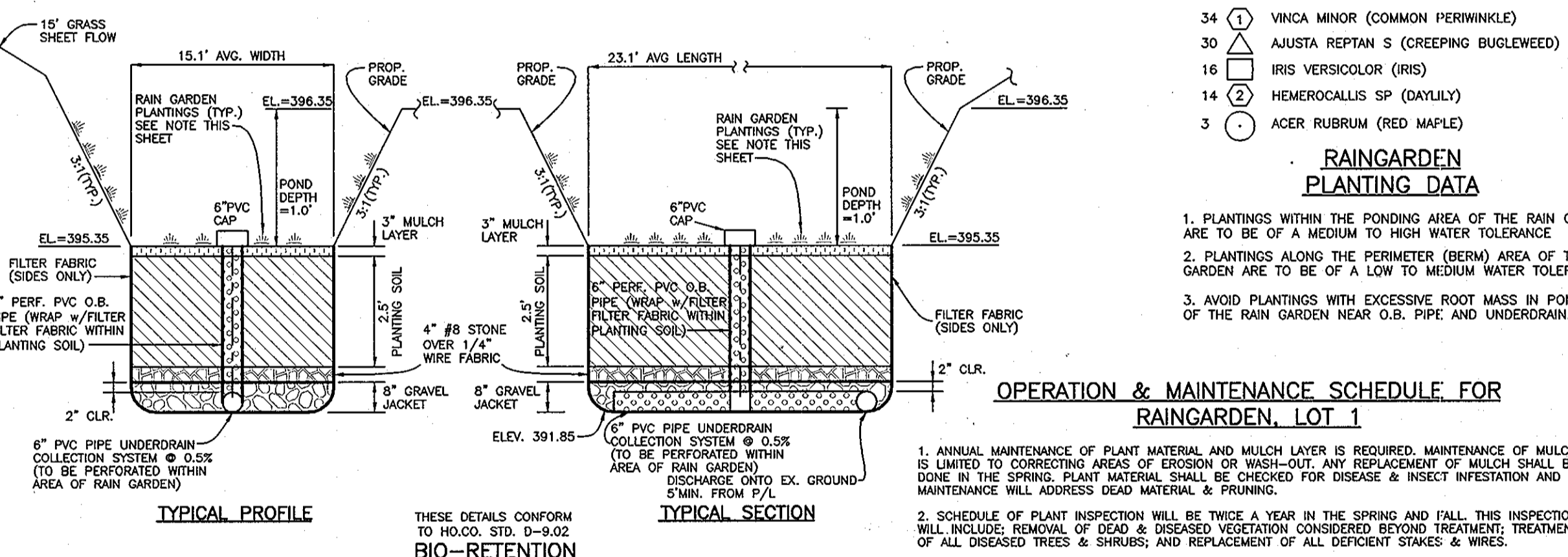
John P. Khaton 5/14/12 DATE



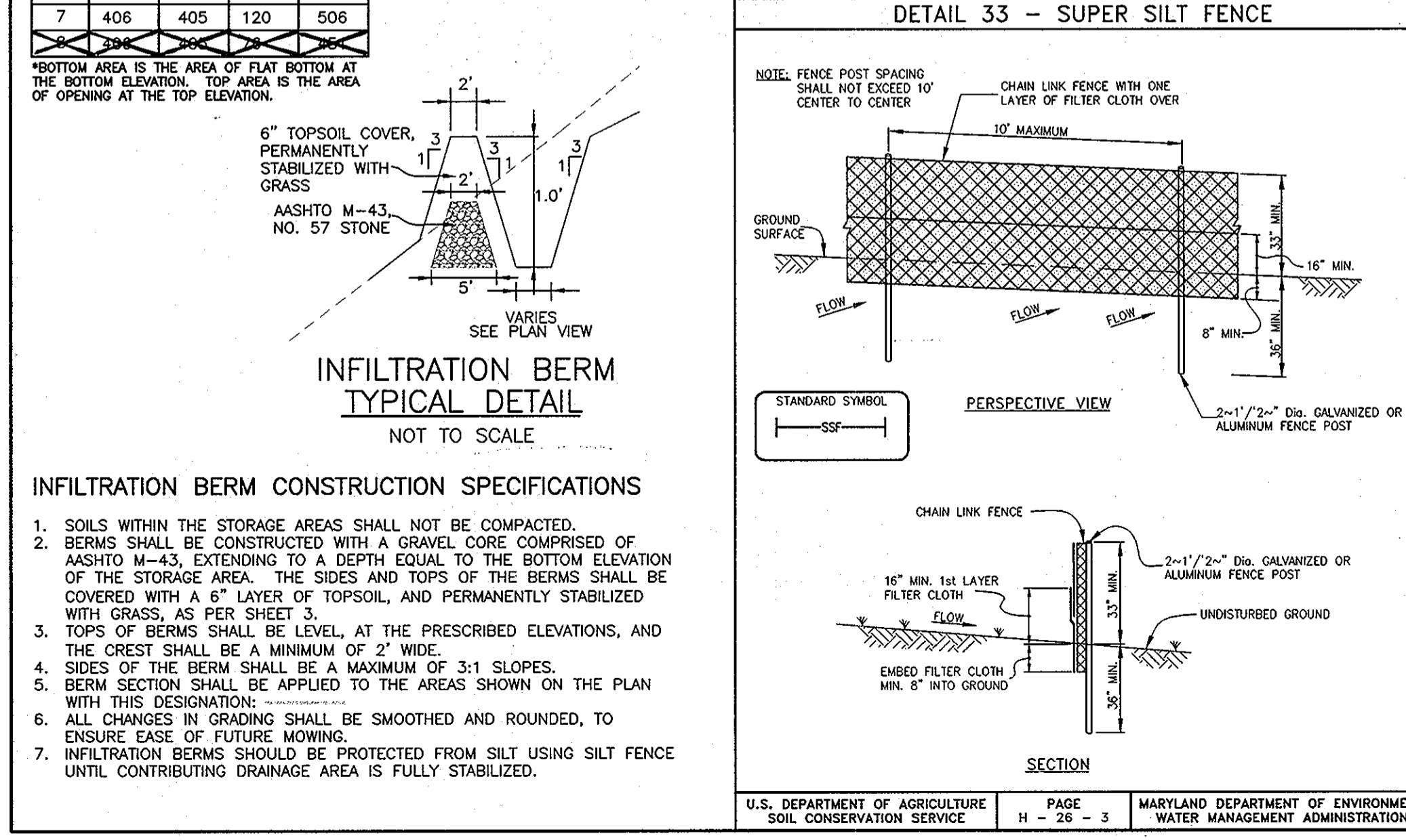
INFILTRATION BERM SUMMARY

LOT	TOP ELEVATION	BOTTOM ELEVATION	AREA*
6	402	401	170
7	406	405	120
8	406	405	120
506			

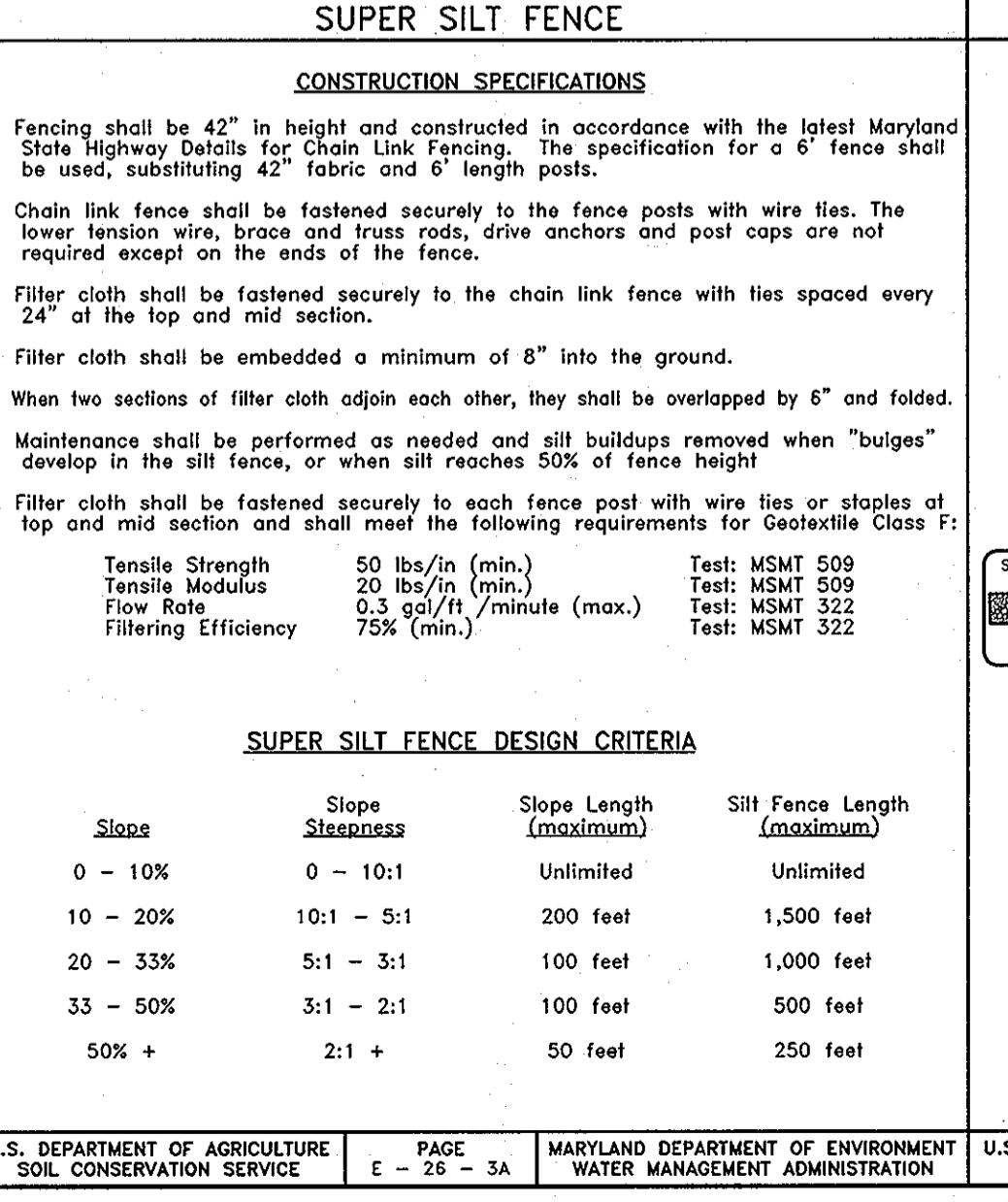
*BOTTOM AREA IS THE AREA OF FLAT BOTTOM AT THE BOTTOM ELEVATION. TOP AREA IS THE AREA OF OPENING AT THE TOP ELEVATION.



THESE DETAILS CONFORM TO H.O.C.D. STD. 0-9-02 BIO-RETENTION (RAIN GARDEN-BMP) LOT 1 NOT TO SCALE SEE SHEET 2 FOR MATERIAL SPECIFICATIONS

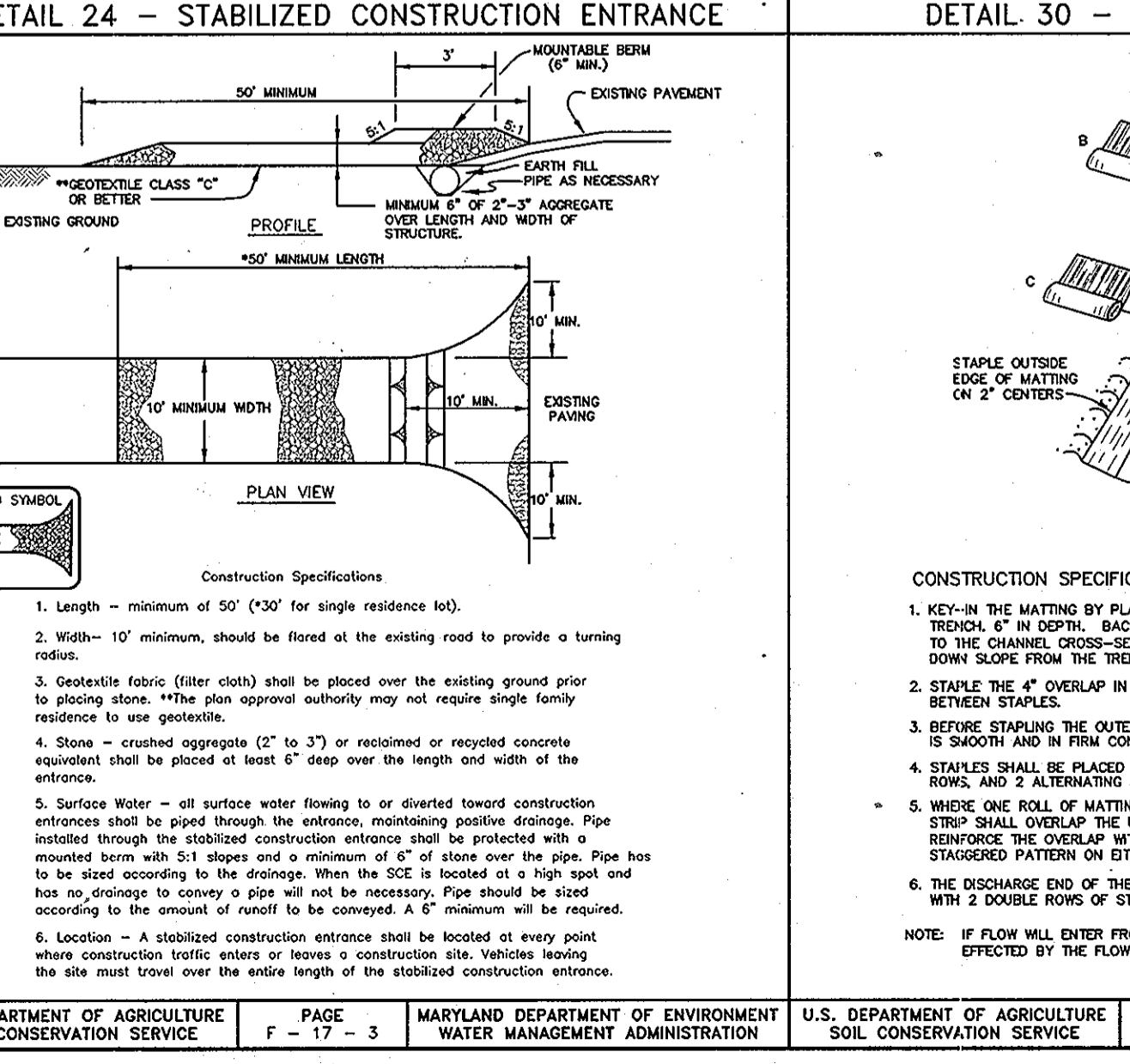


1. SOILS WITHIN THE STORAGE AREAS SHALL NOT BE COMPACTED.
2. BERMS SHALL BE CONSTRUCTED WITH A GRAVEL CORE COMPRISED OF ASHTO M-43, EXTENDING TO A DEPTH EQUAL TO THE BOTTOM ELEVATION OF THE STORAGE AREA. THE SIDES AND TOPS OF THE BERMS SHALL BE COVERED WITH A 6" LAYER OF TOPSOIL, AND PERMANENTLY STABILIZED WITH GRASS, AS PER SHEET 3.
3. TOPS OF BERMS SHALL BE LEVEL, AT THE PRESCRIBED ELEVATIONS, AND THE CREST SHALL BE A MINIMUM OF 2" WIDE.
4. SIDES OF THE BERM SHALL BE A MAXIMUM OF 3:1 SLOPES.
5. BERM SECTION SHALL BE APPLIED TO THE AREAS SHOWN ON THE PLAN WITH THIS DESIGNATION:
6. ALL CHANGES IN GRADING SHALL BE SMOOTHED AND ROUNDED, TO ENSURE EASE OF FUTURE MOWING.
7. INFILTRATION BERMS SHOULD BE PROTECTED FROM SILT USING SILT FENCE UNTIL CONTRIBUTING DRAINAGE AREA IS FULLY STABILIZED.

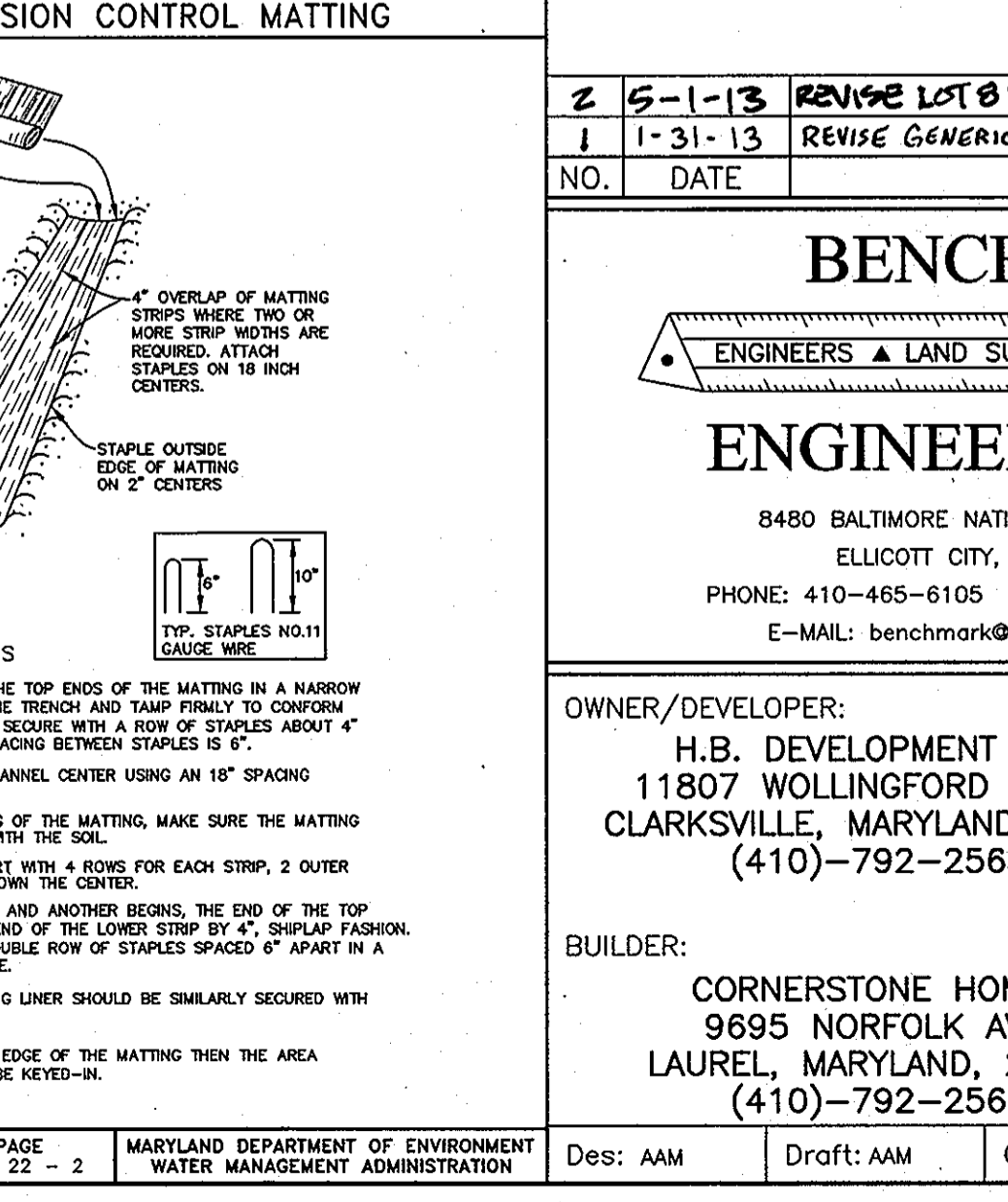


SUPER SILT FENCE DESIGN CRITERIA

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 33%	5:1 - 3:1	100 feet	1,000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet



1. Length - minimum of 50' (*50' for single retention lot).
2. Width - 10' minimum, shall be flared at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. (*The plan approval authority may not require single family residence to use geotextile).
4. Stone - crushed aggregate (2" to 3") or equivalent or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installers through the stabilized construction entrance shall be protected with a matting berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be staked according to the design. When the pipe is located in high spot and has no drainage to convey a pipe will not be necessary. A 6" minimum will be required.
6. Location - A stabilized construction entrance shall be located in a location where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.



1. KEY-IN THE MATTING BY PLACING THE TOP ENDS OF THE MATTING IN A NARROW TRENCH, 6" IN DEPTH, BACKFILL THE TRENCH AND TAMP FIRM TO CONFORM TO THE CHANNEL CROSS-SECTION. SEWING 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 2' APART WITH 4' ROWS FOR EACH STRIP, 2 OUTER ROWS AND 2 ALTERNATING ROWS DOWN CENTER.
 5. WHERE ONE ROLL OF MATTING ENDS AND ANOTHER BEGINS, THE END OF THE TOP STRIP SHALL OVERLAP THE UPPER END OF THE LOWER STRIP BY 4" STAPLE 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 UNDER SHOULD BE SIMILARLY SECURED WITH MIN 2 DOUBLE ROWS OF STAPLES.
- NOTE: IF FLOW WILL ENTER FROM THE EDGE OF THE MATTING THEN THE AREA EFFECTED BY THE FLOW MUST BE KEYED-IN.

2	5-1-13	REVISE LOT 8 TO CHARTER II, REMOVE INFIL. BERM & SUMMARY DATA
1	1-31-13	REVISE GENERIC BOX 'A' ON LOTS 6, 7 & 8

BENCHMARK ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE A SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-0644
E-MAIL: benchmark@bei-civilengineering.com

OWNER/DEVELOPER: H.B. DEVELOPMENT INC. 11807 WOLLINGFORD COURT CLARKSBURG, MARYLAND, 21029 (410)-792-2565

BUILDER: CORNERSTONE HOMES 9695 NORFOLK AVE. LAUREL, MARYLAND, 20723 (410)-792-2565

PROJECT: ROCKY GORGE OVERLOOK LOTS 1 THRU 3 & LOTS 5 THRU 10

LOCATION: TAX MAP 46 - GRID 12 - PARCEL 289 ZONE: R-20 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT AND EROSION CONTROL PLAN, NOTES AND DETAILS, AND ON-LOT SWM DETAILS

DATE: JANUARY, 2010 PROJECT NO. 1560
MARCH, 2012

Des: AM Draft: AM Check: BFC SCALE: AS SHOWN DRAWING 3 OF 3