

# SITE DEVELOPMENT PLAN

## SCHAFER PROPERTY

### LOTS 2 AND 3

### FIRST ELECTION DISTRICT

### HOWARD COUNTY, MARYLAND

**GENERAL NOTES:**

- SUBJECT PROPERTY ZONED "R-12" PER HOWARD COUNTY ZONING REGULATIONS EFFECTIVE 10/06/13.
- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS.
- SITE ANALYSIS DATA:**  
 LOCATION: TAX MAP: 38 PARCEL: 64; BLOCK: 7  
 ELECTION DISTRICT: FIRST  
 ZONING: R-12  
 TOTAL AREA: 0.59 AC.±  
 LIMIT OF DISTURBED AREA: 0.51 AC.±  
 PROPOSED USE FOR SITE: RESIDENTIAL  
 TOTAL NUMBER OF UNITS: 2  
 TYPE OF PROPOSED UNIT: SFD  
 DPZ FILE NO: ECP-13-069, F-14-047
- ON-SITE TOPOGRAPHY SHOWN HEREON IS BASED ON A FIELD RUN SURVEY CONDUCTED BY MILDENBERG, BOENDER & ASSOCIATES ON OR ABOUT APRIL 2013.
- HORIZONTAL AND VERTICAL DATUMS ARE RELATED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM AS PROJECTED FROM HOWARD COUNTY CONTROL STATIONS NO. 0043 AND 0054.  
 STATION NO. 0043 N 558479.008 E 1386642.060 EL. 189.501  
 STATION NO. 0054 N 560818.409 E 1385770.210 EL. 235.681
- IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, WINDOW WELLS, ORIELS, VESTIBULES, BALCONIES, CHIMNEYS, HEATING OR AIR CONDITIONING UNITS, AND EXTERIOR STAIRWAYS OR RAMPS WHICH ARE ABOVE OR BELOW GROUND LEVEL MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACK OR A REQUIRED DISTANCE BETWEEN BUILDINGS, PROVIDED THE FEATURE HAS A MAXIMUM WIDTH OF 16 FEET. EXTERIOR STAIRWAYS OR RAMPS WHICH ARE ABOVE OR BELOW GROUND LEVEL MAY PROJECT NOT MORE THAN 10 FEET INTO A FRONT SETBACK OR A SETBACK FROM A PROJECT BOUNDARY OR A DIFFERENT ZONING DISTRICT AND 16 FEET INTO A REAR SETBACK. OPEN AND ENCLOSED PORCHES AND DECKS MAY PROJECT NOT MORE THAN 10 FEET INTO FRONT OR REAR SETBACK, A SETBACK FROM A PROJECT BOUNDARY, A SETBACK FROM A DIFFERENT ZONING DISTRICT OR A REQUIRED DISTANCE BETWEEN BUILDINGS.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, OR PLACEMENT OF NEW PAVING OR STRUCTURES IS PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAM(S), OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100-YEAR FLOODPLAIN.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:  
 - WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE).  
 - SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2 INCH MINIMUM).  
 - GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM OF 45-FOOT TURNING RADIUS.  
 - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.  
 - MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.
- LANDSCAPING FOR LOTS 2 AND 3 IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING (6 SHADE TREES) IN THE AMOUNT OF \$1,800.00 WILL BE PROVIDED WITH THE GRADING PERMIT APPLICATION FOR LOTS 2 AND 3.
- THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY PAYMENT OF A FEE-IN-LIEU OF 0.18 ACRES (7,840.80 SQ.FT.) OF AFFORESTATION IN THE AMOUNT OF \$5,851.00 TO THE FOREST CONSERVATION FUND UNDER F-14-047.
- 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.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST 48 HOURS PRIOR TO EXCAVATION WORK BEING DONE.  
 MISS UTILITY 800-257-7777  
 VERIZON TELEPHONE COMPANY (410) 725-9976  
 HOWARD COUNTY BUREAU OF UTILITIES (410) 313-4900  
 AT&T CABLE LOCATION DIVISION (410) 393-3533  
 BALTIMORE GAS & ELECTRIC (410) 685-0123  
 STATE HIGHWAY ADMINISTRATION (410) 531-5533
- STORMWATER MANAGEMENT IS PROVIDED VIA NON-ROOFTOP DISCONNECTIONS AND MICRO-BIOTRETENTION FACILITY IN ACCORDANCE WITH THE 2007 MDE STORMWATER DESIGN MANUAL USING ESD METHODS, APPROVED UNDER F-14-047.
- EXISTING UTILITIES ARE BASED ON ACTUAL FIELD LOCATIONS, IN COMBINATION WITH EXISTING WATER AND SEWER CONTRACTS.
- ANY DAMAGE TO THE COUNTY RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- SEWER HOUSE CONNECTION ELEVATIONS SHOWN ARE LOCATED AT THE PROPERTY LINE OR EASEMENT LINE.
- NO CEMETERIES EXIST ON SITE.
- NO HISTORIC STRUCTURE EXISTS ON SITE.
- NO STREAMS OR THEIR BUFFER AND FLOODPLAINS OR THEIR BUFFERS EXIST ON SITE.
- NO STEEP SLOPES EXIST ON SITE.
- NO WETLANDS EXIST ON SITE.
- PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. PUBLIC WATER AND SEWER WILL BE UTILIZED UNDER CONTRACT 44-3298-D AND 14-4799-D.
- WATER AND SEWER SERVICE TO THESE LOTS WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 18.122.B OF THE HOWARD COUNTY CODE.
- PUBLIC WATER AND SEWAGE ALLOCATIONS WILL BE GRANTED AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.
- A PRIVATE RANGE OF ADDRESS SIGN SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT (410) 313-2430. SIGNS AND THE STREET NAME SIGN (SNS) ASSEMBLIES MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
- THE OPEN SPACE REQUIREMENT OF SECTION 16.121(g)(2) OF THE SUBDIVISION REGULATIONS WAS SATISFIED UNDER F-14-047 BY PAYMENT OF A FEE-IN-LIEU IN THE AMOUNT OF \$3,000.00.
- THE OWNER, TENANT, 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.
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWIT LISTED AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS 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.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION, FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OF EQUAL OR GREATER HEIGHT, SPREAD, AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST MEET SIZE AND INSTALLATION REQUIREMENTS AS SPECIFIED IN THE LANDSCAPE MANUAL.
- 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.
- PLEASE NOTE THAT ALL LOTS/RESIDENTIAL UNITS IN THE SUBDIVISION ARE SUBJECT TO THE MIHU FEE-IN-LIEU REQUIREMENT THAT IS TO BE CALCULATED AND PAID TO THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS AT THE TIME OF BUILDING PERMIT ISSUANCE BY THE PERMIT APPLICANT.
- COMMUNITY MEETING FOR THIS PROJECT WAS HELD ON MAY 8, 2013 AT 6:00 PM AT THE ELK RIDGE LIBRARY.
- THE HEALTH DEPARTMENT MUST BE NOTIFIED IF ANY WELLS OR SEPTIC SYSTEMS ARE ENCOUNTERED DURING THE CONSTRUCTION PROCESS. ANY WELL OR SEPTIC SYSTEMS DISCOVERED MUST BE PROPERLY ABANDONED.

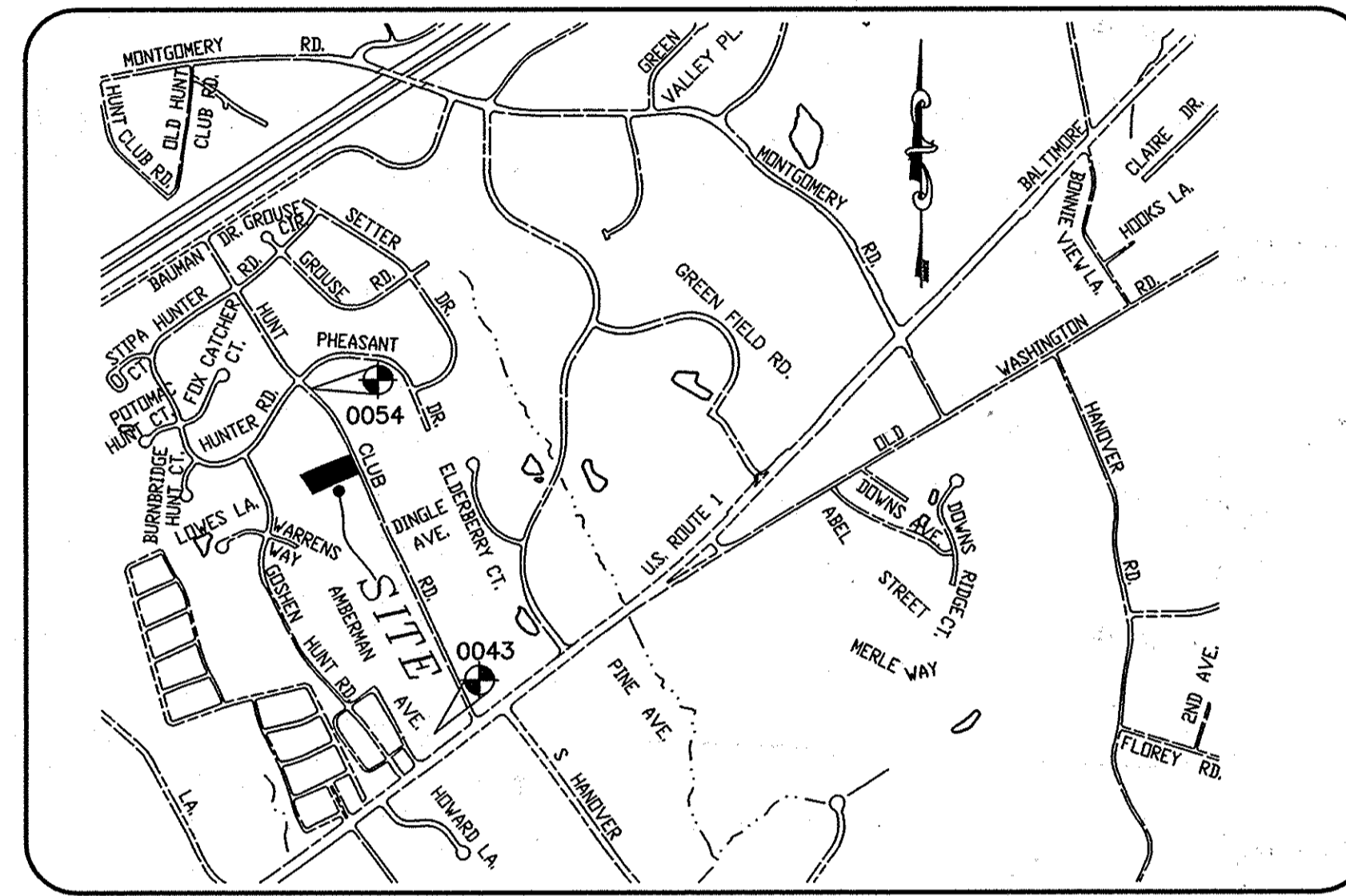
PERMIT INFORMATION BLOCK					
SUBDIVISION NAME: SCHAFER PROPERTY		SECTION/AREA: N/A		PARCEL: 64 LOTS 2 AND 3	
PLAT NO. 23180	BLOCK(S) 7	ZONING R-12	TAX MAP NO. 38	ELECTION DISTRICT FIRST	CENSUS TRACT 6023.03

**INDEX OF DRAWINGS**

NO.	DESCRIPTION
1	COVER SHEET
2	SITE DEVELOPMENT PLAN
3	SEDIMENT CONTROL NOTES AND DETAILS

**ADDRESS CHART**

LOT #	ADDRESS
2	6006 CHRIS WAY
3	6010 CHRIS WAY



**VICINITY MAP**

SCALE: 1"=1000'  
 ADC MAP: 35, GRID C-2

STORMWATER MANAGEMENT PRACTICES															
LOT #	ADDRESS	GREEN PERMEABLE PAVEMENTS A-1 (Y/N)	REINFORCED TURF A-2 (Y/N)	DISCONNECTION OF ROOFTOP RUNOFF A-3 (Y/N)	DISCONNECTION OF NON-ROOFTOP RUNOFF N-1 (NUMBER)	SHEETFLOW TO CONSERVATION AREAS N-2 (Y/N)	RAINWATER HARVESTING N-3 (NUMBER)	SUBMERGED GRAVEL WETLANDS M-1 (NUMBER)	LANDSCAPE INFILTRATION M-2 (NUMBER)	INFILTRATION BERMS M-3 (NUMBER)	DRY WELLS M-4 (NUMBER)	MICRO-BIOTRETENTION M-5 (NUMBER)	RAIN GARDENS M-6 (NUMBER)	SWALES M-7 (NUMBER)	ENHANCED FILTERS M-8 (NUMBER)
2	6006 CHRIS WAY				4	Y						1			
3	6010 CHRIS WAY														

**DEVELOPER**

HARMONY BUILDERS  
 4228 COLUMBIA ROAD  
 ELLICOTT CITY, MARYLAND 21042  
 410-461-0833

**DEVELOPERS CERTIFICATE**

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

*Christopher Brown* 2/14/15  
 SIGNATURE OF DEVELOPER DATE  
 PRINTED NAME OF DEVELOPER

**ENGINEER'S CERTIFICATE**

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT 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 NATURAL RESOURCE CONSERVATION SERVICE.

*R. Jacob Hikmat, P.E.* 2/5/15  
 SIGNATURE OF ENGINEER DATE  
 PRINTED NAME OF ENGINEER

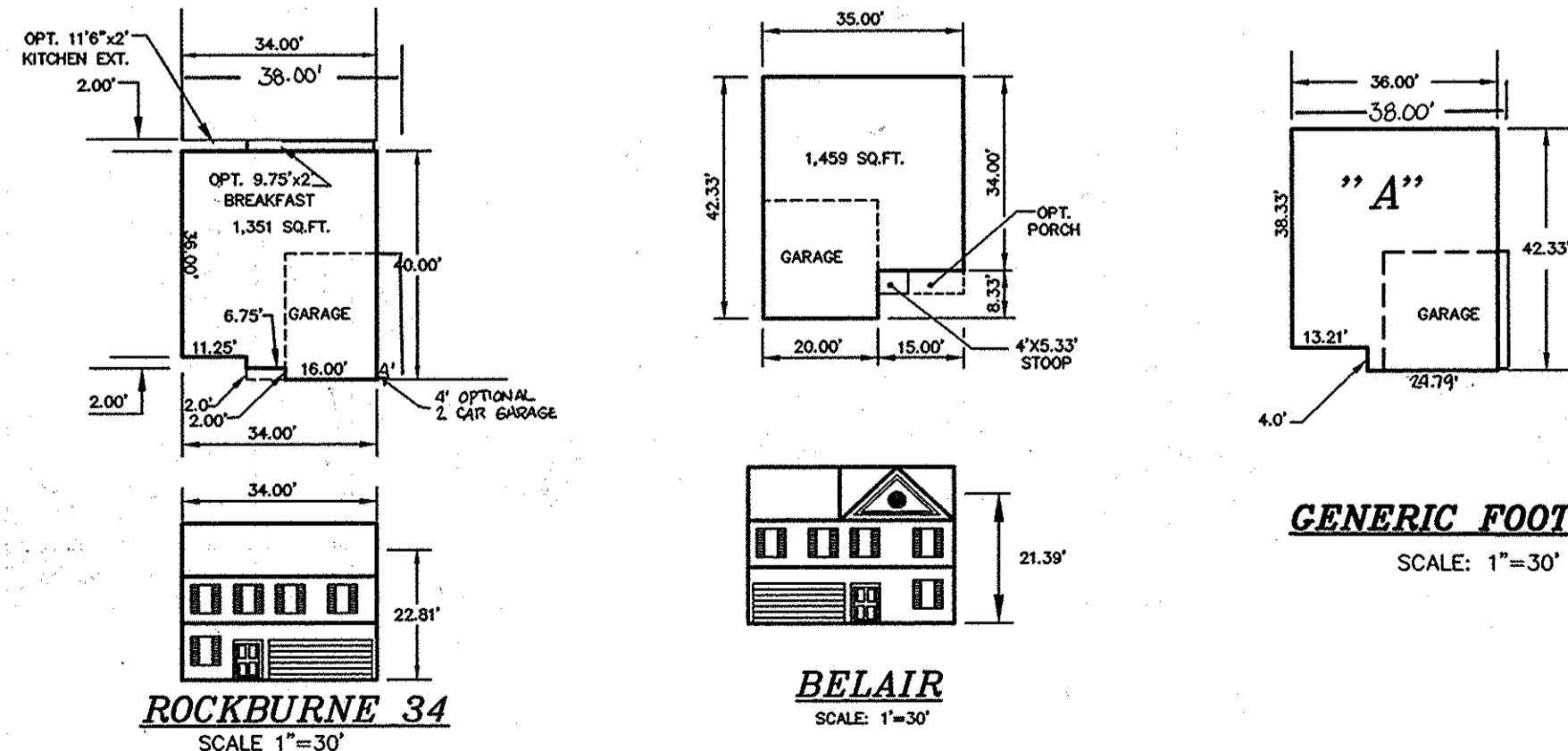
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

*John P. ...* 2/17/15  
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*...* 3-3-15 DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*...* 3/06/15 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*...* 3/6/15 DATE  
 DIRECTOR



**GENERIC FOOTPRINT**

SCALE: 1"=30'

NOTE:  
 UNPERVIOUS AREA OF ANY OF THE HOUSES IS LESS THAN 2,000.00 SF.

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. 17942, EXP. DATE 9/03/16.

*...* 2/5/15 DATE  
 JACOB HIKMAT, P.E.

PLEASE NOTE THAT ALL LOTS/RESIDENTIAL UNITS IN THE SUBDIVISION ARE SUBJECT TO THE MIHU FEE-IN-LIEU REQUIREMENT THAT IS TO BE CALCULATED AND PAID TO THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS AT THE TIME OF BUILDING PERMIT ISSUANCE BY THE PERMIT APPLICANT.

Project	date	approval
13-006	FEB. 2015	RH
illustration	engineering	approval
MM/M	MM/M	MM/M
scale	scale	scale
	1"=30'	

no.	description	date
1	As per program, the user agrees to incorporate all changes to the drawings.	

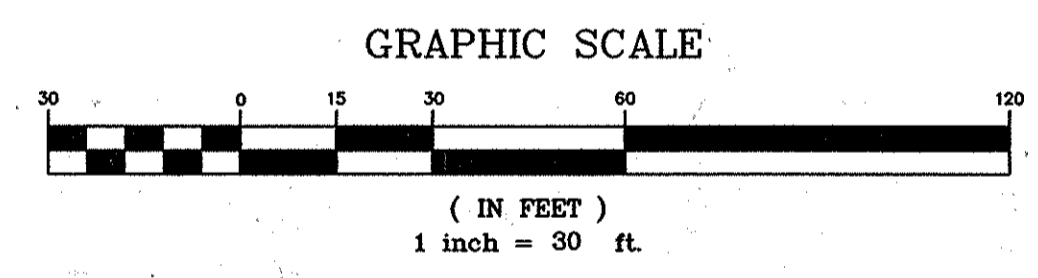
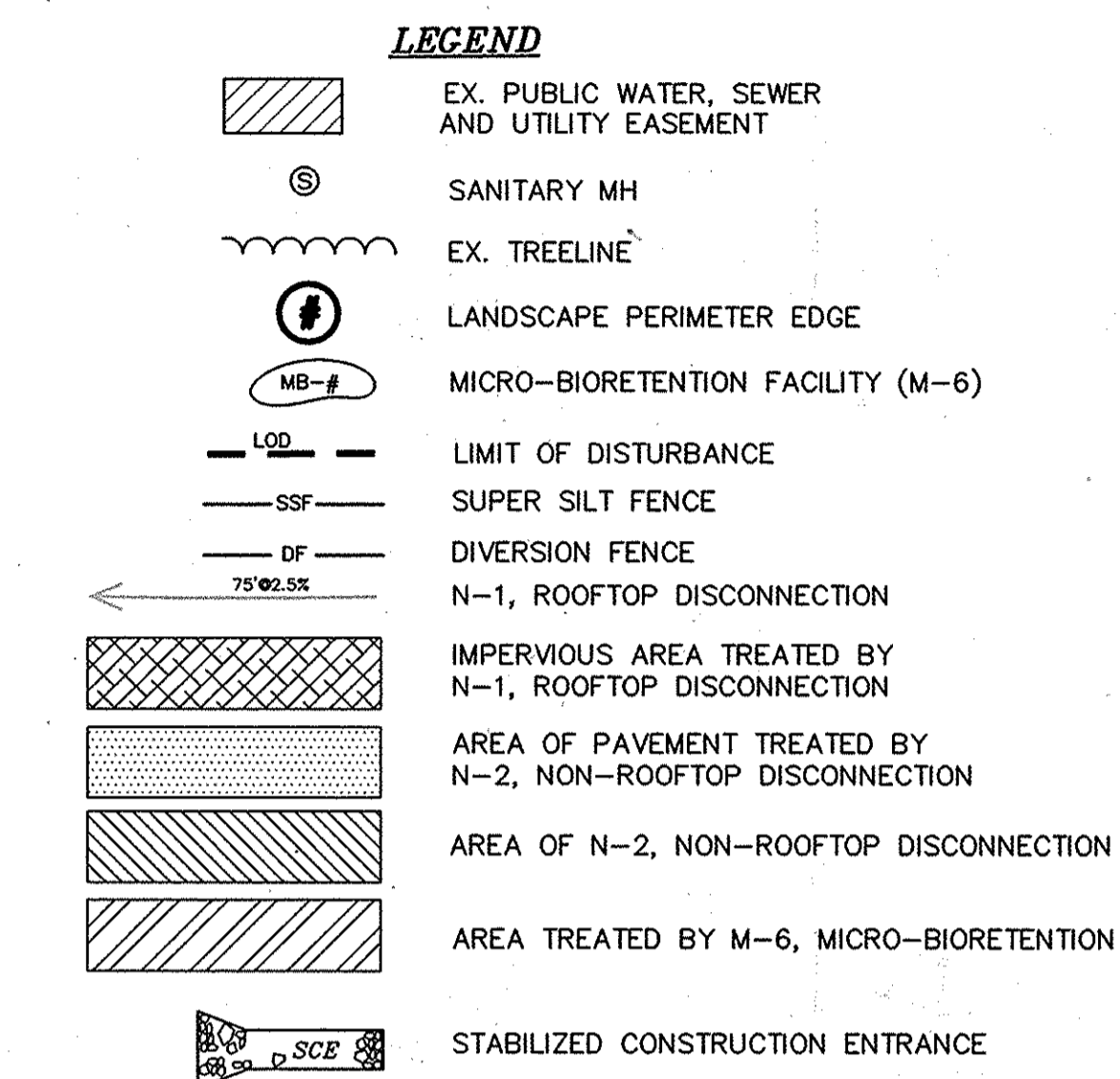
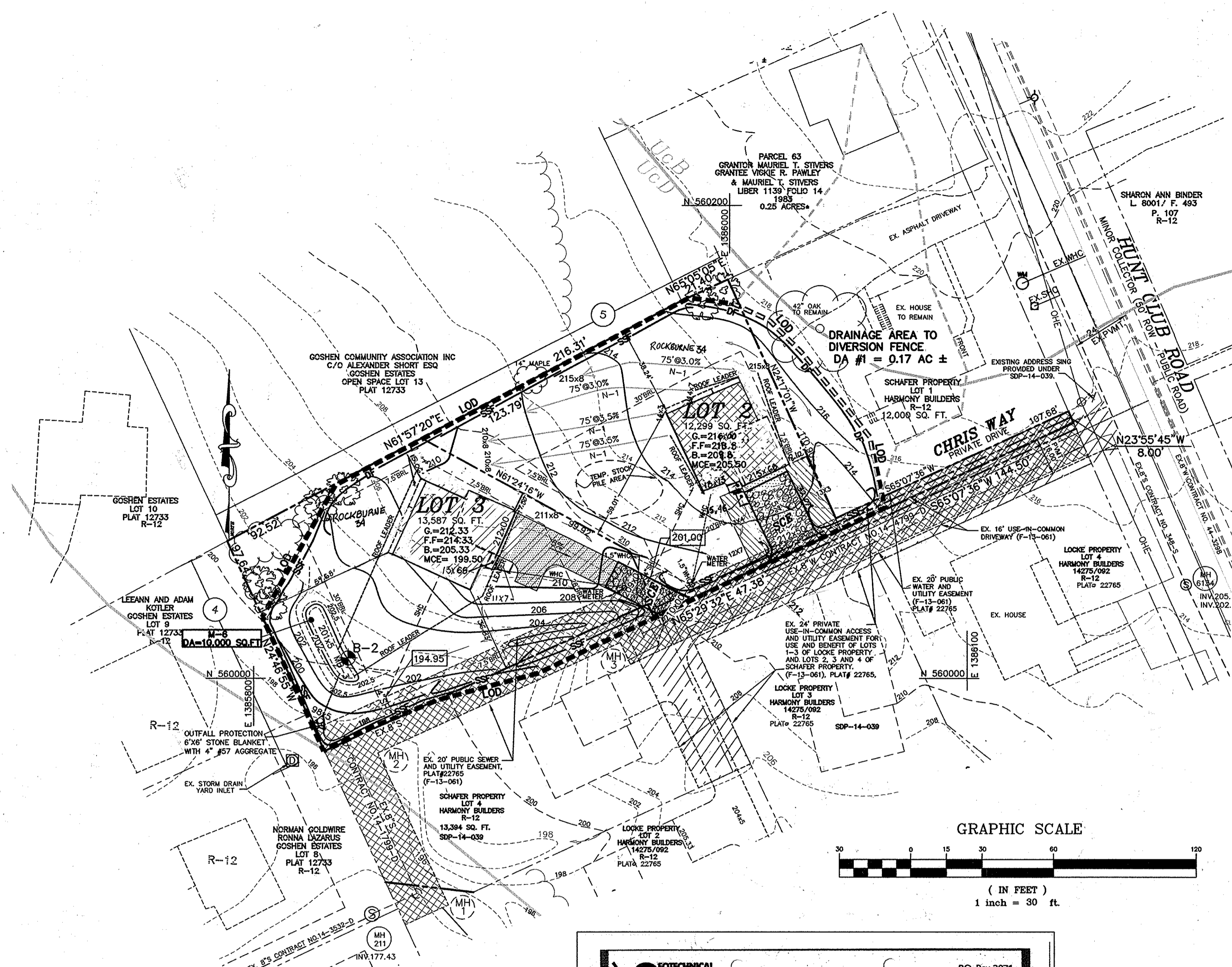
**SCHAFER PROPERTY, LOTS 2 AND 3**  
 SINGLE FAMILY DWELLING  
 TAX MAP: 38 PARCEL: 64, GRID: 7  
 HOWARD COUNTY, MARYLAND  
 COVER SHEET

**MILDENBERG, BOENDER & ASSOC., INC.**  
 Engineers Planners Surveyors  
 7950-B Grace Drive, Columbia, Maryland 21044  
 (410) 997-0298 Fax: (410) 997-0298



**SOILS DESCRIPTION**

U6 - (D) - URBAN LAND-CHILLUM-BELTSVILLE COMPLEX, 0-5% SLOPES  
 U6 - (D) - URBAN LAND-CHILLUM-BELTSVILLE COMPLEX, 5-15% SLOPES



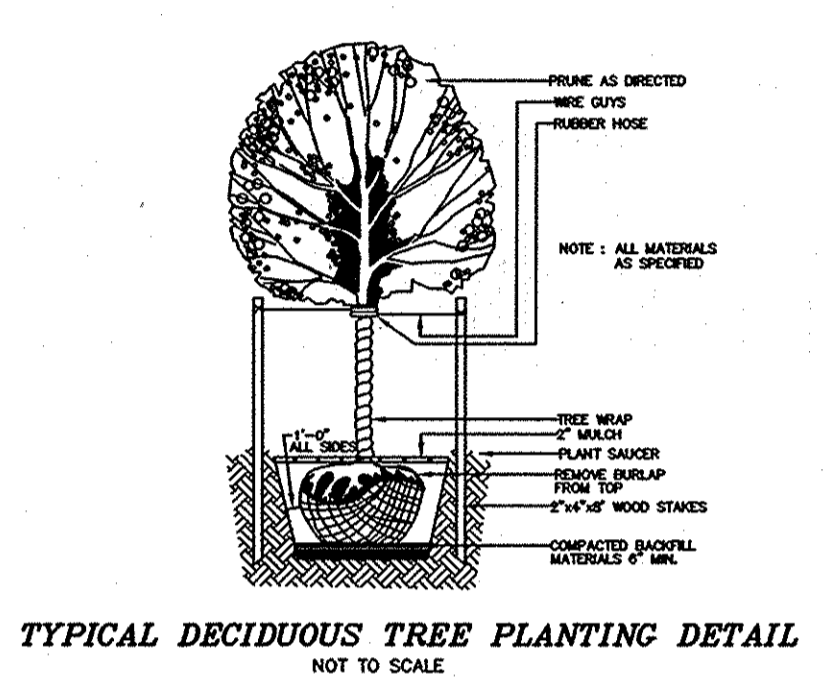
**MICRO-BIORETENTION DESIGN DATA**

FACILITY LOT#	BOTTOM EL.	MAX PONDING DEPTH	WER ELEVATION	UNDERDRAIN INV. IN	UNDERDRAIN INV. OUT	SURFACE AREA
3	201.5	12"	202.5	199.0	198.5	240

**PLANT LIST**

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
4	○	ILEX GLABRA	INK BERRY	2' - 3' HT.
12	○	LOBELIA SIPHILLICA	GREAT BLUE LOBELIA	1 GAL. CONTAINER
8	○	ONOCLEA SENSIBILIS	SENSITIVE FERN	1 GAL. CONTAINER
6	○	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	1 GAL. CONTAINER

TOTAL: 24 PERENNIALS, 4 SHRUB



**DEVELOPER'S/OWNER'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 CODE, AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

*Christopher Brown*  
 OWNER

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

*Christopher Brown* 2/6/15  
 SIGNATURE OF DEVELOPER DATE  
 Christopher Brown  
 PRINTED NAME OF DEVELOPER

**ENGINEER'S CERTIFICATE**  
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT 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 NATURAL RESOURCE CONSERVATION SERVICE.

*John R. Hickmat* 2/11/15  
 SIGNATURE OF ENGINEER DATE  
 R. JACOB HIKMAT, PE  
 PRINTED NAME OF ENGINEER

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

*John R. Hickmat* 2/17/15  
 SIGNATURE OF ENGINEER DATE  
 HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Mark M. Goyette* 2/6/15  
 SIGNATURE OF DIRECTOR DATE  
 DIRECTOR

**SCHEDULE A : PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO PERIMETER PROPERTIES	TOTAL
LANDSCAPE TYPE	A (PERIMETER 4) A (PERIMETER 5)	
LINEAR FEET OF PERIMETER	97.64 LF 237.68 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO NO	
NUMBER OF PLANTS REQUIRED	2 SHADE TREES 4 SHADE TREES 6 SHADE TREES 0 EVERGREEN TREES 0 EVERGREEN TREES 0 EVERGREEN TREES 0 SHRUBS 0 SHRUBS 0 SHRUBS	
NUMBER OF PLANTS PROVIDED	2 SHADE TREES 4 SHADE TREES 6 SHADE TREES 0 EVERGREEN TREES 0 EVERGREEN TREES 0 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SUBSTITUTION TREES 0 SUBSTITUTION TREES 0 SHRUBS 0 SHRUBS 0 SHRUBS	

**LANDSCAPE REQUIREMENT PLANTING SCHEDULE**

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
6	○	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.

OR EQUIVALENT AS OUTLINED IN THE HOWARD COUNTY LANDSCAPE MANUAL.  
 OR EQUIVALENT AS OUTLINED IN THE HOWARD COUNTY LANDSCAPE MANUAL.

TOTAL  
 6 TREES (6 SHADE TREES)

**DEVELOPER**  
 HARMONY BUILDERS  
 4228 COLUMBIA ROAD  
 ELLICOTT CITY, MARYLAND 21042  
 410-461-0833

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. 17942, EXP DATE 9/3/16.

*John R. Hickmat* 2/11/15  
 SIGNATURE OF ENGINEER DATE  
 R. JACOB HIKMAT, P.E.  
 DATE

**GEOTECHNICAL CONSULTANTS, INC.**  
 P.O. Box 2071  
 Columbia, MD 21045-2071  
 Phone: (410) 381-5330  
 Fax: (410) 381-1064  
 e-mail: mount54@yahoo.com

October 26, 2013

Mildenberg, Boender & Associates, Inc.  
 6800 Deerspath Road, Suite 150  
 Elkridge, Maryland 21075

Attn: Ms. Maya M. Mildenberg  
 Vice President

Ref: Limited Subsurface Exploration  
 Proposed Development  
 Schaffer Property  
 Howard County, Maryland  
 GE&T Project No. G-229

Dear Ms. Mildenberg:

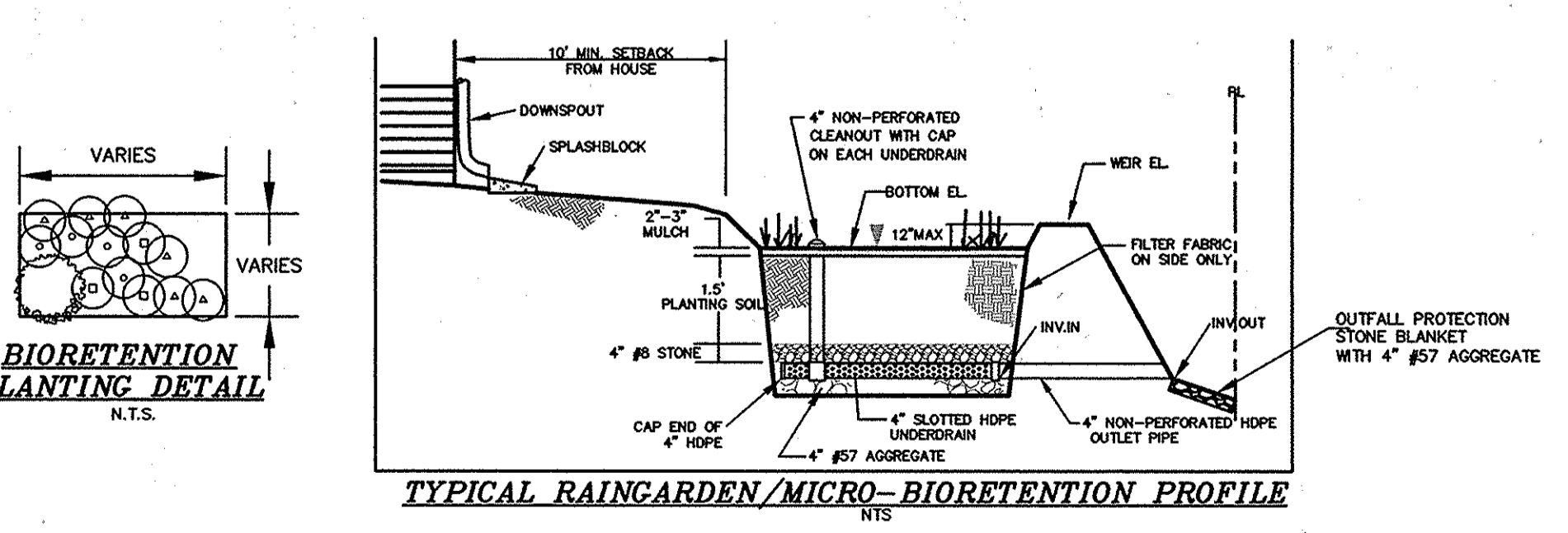
On October 20th, 2013, GE&T Consultants, Inc. utilized a hand auger to bore two (2) soil borings at the locations shown on the attached Hand-Augers Location Map. The purpose of the hand augers was to evaluate the presence/absence of bedrock and groundwater at the locations shown, within 5-ft below existing site grades. The number, location, and depth of the borings were determined by others and the borings were staked-out in the field by others.

Our field observations are summarized in Table 1 below:

Boring No.	Depth to Groundwater (ft)	Depth to Hard-Auger Refusal (ft)	Termination Depth (ft)
B-1	33	N/A	65
B-2	N/A	N/A*	60

\* Hand auger refusal was encountered at depths of 27" and 29" in early attempts.

Note: All depths are below existing site grades.



Project: 13-006  
 Illustration: MAM/MRT  
 Scale: MAM/MRT  
 Date: FEB. 2015  
 Engineering: MAM/MRT  
 Approval: MAM/MRT  
 Scale: 1"=30'

Rev. No. 2  
 Description: REVISIONS  
 Date: 9/15

SCHAFFER PROPERTY  
 LOTS 2 AND 3  
 TAX MAP: 38 PARCEL 64, GRID: 7  
 HOWARD COUNTY, MARYLAND  
 FIRST ELECTION DISTRICT  
 SITE DEVELOPMENT PLAN

**MILDENBERG & ASSOC., INC.**  
 Engineers Planners Surveyors  
 7860-F Grace Drive, Columbia, Maryland 21044  
 (410) 997-0298 Fax: (410) 997-0298

2 OF 3  
 SDP-14-085



STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

DEFINITION THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION. PURPOSE TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. CRITERIA A. SOIL PREPARATION 1. TEMPORARY STABILIZATION c. SEEDING PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT...

STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

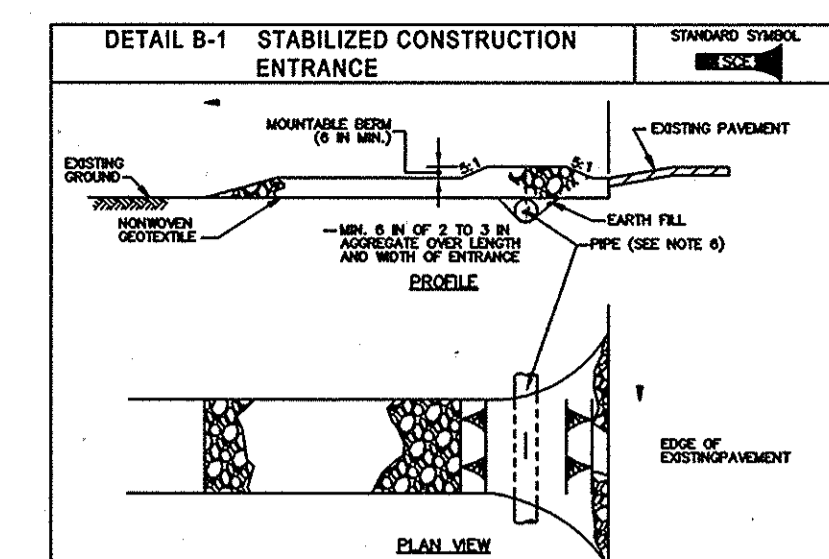
DEFINITION THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER. PURPOSE TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION. CRITERIA A. SEEDING 1. SPECIFICATIONS a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY...

EROSION AND SEDIMENT CONTROL NOTES

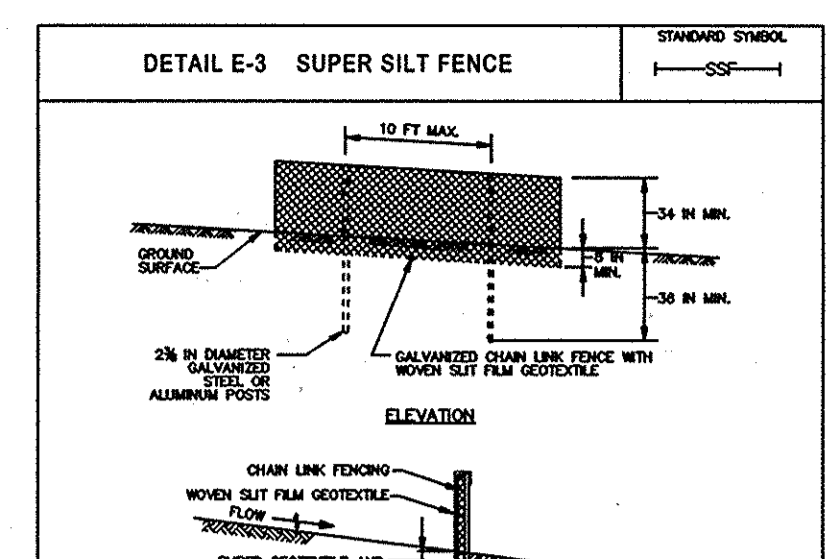
- 1. ALL SEDIMENT CONTROL OPERATIONS ARE TO BE DONE IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY VOLUME IV DESIGN MANUAL AND THE STANDARDS AND SPECIFICATIONS FOR SEDIMENT CONTROL IN DEVELOPING AREAS. 2. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF BUSINESS.

SEQUENCE OF CONSTRUCTION

- 1. OBTAIN GRADING PERMIT (1 DAY) 2. CONSTRUCT STABILIZATION CONSTRUCTION ENTRANCE AT LOCATIONS SHOWN FOR THE HOUSE UNDER CONSTRUCTION (1 DAY) 3. PERFORM CLEARING AND GRUBBING NECESSARY FOR THE INSTALLATION OF DIVERSION FENCE AND SUPER SILT FENCE (1 DAY)



CONSTRUCTION SPECIFICATIONS 1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN VIEWS. 2. PERFORM CLEARING AND GRUBBING NECESSARY TO MAINTAIN CLEAR PASSAGE THROUGH THE ENTRANCE...



CONSTRUCTION SPECIFICATIONS 1. INSTALL 24 INCH DIAMETER GALVANIZED STEEL PIPES OF 6000 MCH WALL THICKNESS AND 30 FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. 2. FASTEN IN GROUND OR HEAVY GALVANIZED CHAIN LINK FENCE (24 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT...

B. TOPSOILING 1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. 2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS...

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS) 1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. 2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT...

STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION (B-4-4)

DEFINITION TO STABILIZE DISTURBED SOIL WITH VEGETATION FOR UP TO 6 MONTHS. PURPOSE TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOIL. CRITERIA 1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3)...

STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION (B-4-5)

DEFINITION TO STABILIZE DISTURBED SOIL WITH PERMANENT VEGETATION. PURPOSE TO USE LONG-LEAFED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER OF DISTURBED AREAS. CRITERIA 1. GENERAL A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE...

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF ROOFTOP RUNOFF (N-1), DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)

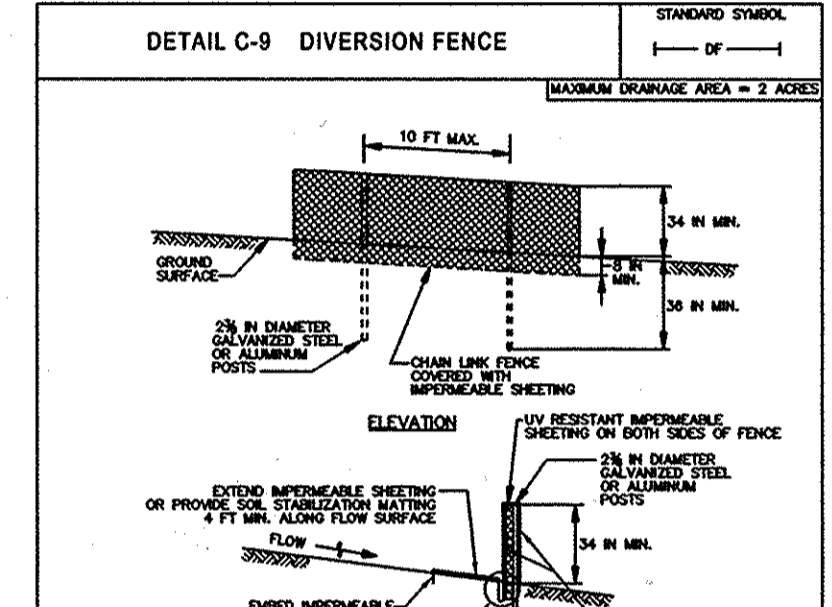
MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE OWNER SHALL ENSURE THE AREAS RECEIVING RUNOFF ARE PROTECTED FROM FUTURE COMPACTION OF DEVELOPMENT OF IMPERVIOUS AREA...

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIOTENTATION (M-6)

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 REPLACEMENT SHALL BE DONE IN THE SPRING. 2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL...

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN: A. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3:1 HORIZONTAL TO 1 VERTICAL (3:1), AND B. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.



CONSTRUCTION SPECIFICATIONS 1. USE 24 INCH DIAMETER GALVANIZED STEEL PIPES OF 6000 MCH WALL THICKNESS AND 30 FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. 2. FASTEN CHAIN LINK FENCE SECURELY TO THE PIPE POSTS WITH WIRE NAILS...

STANDARD SEDIMENT CONTROL NOTES

- 1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION. 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...

STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA (B-4-8)

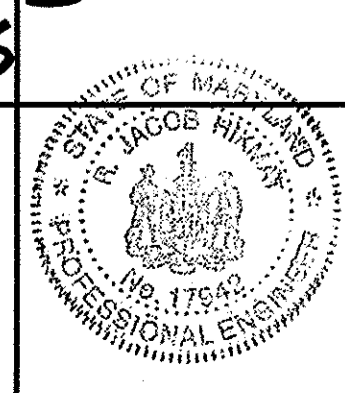
DEFINITION A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES. PURPOSE TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION AND CHANGES TO DRAINAGE PATTERNS. CRITERIA 1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY CONTROL PLAN. 2. THE FOOTPRINT OF STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1...

TEMPORARY SEEDING FOR SITE STABILIZATION. Table with columns: PLANT SPECIES, SEEDING RATE (LB/AC), SEEDING DEPTH (INCHES), and RECOMMENDED SEEDING DATES BY PLANT HARDNESS ZONE (5B AND 6A, 6B, 7A AND 7B).

PERMANENT SEEDING SUMMARY. Table with columns: NO., SPECIES, APPLICATION RATE (LB/AC), SEEDING DATES, SEEDING DEPTHS, FERTILIZER RATE (N, P2O5, K2O), and LIME RATE.

DEVELOPERS CERTIFICATE I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY REQUIRED PERMITS AND LICENSES INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DATE AND TIME TO BE DETERMINED BY THE ENGINEER...

ENGINEER'S CERTIFICATE I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PROFESSIONAL ENGINEER'S DESIGN AND THAT THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.



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. 17942, EXP DATE 9/3/16. DEVELOPER HARMONY BUILDERS 4228 COLUMBIA ROAD ELLICOTT CITY, MARYLAND 21042

Project: FEB. 2015, 13-008, illustration, MAM, MAM/MNT, approval, R/JH

date, description, revisions, no.

SCHAFFER PROPERTY LOTS 2 AND 3 TAX MAP: 38 PARCEL: 64, GRID: 7, HOWARD COUNTY, MARYLAND FIRST ELECTION DISTRICT SEDIMENT CONTROL NOTES AND DETAILS

MILDENBERG & ASSOC., INC. Engineers Planners Surveyors 7350-B Grace Drive, Columbia, Maryland 21044 (410) 997-0296 Fax.