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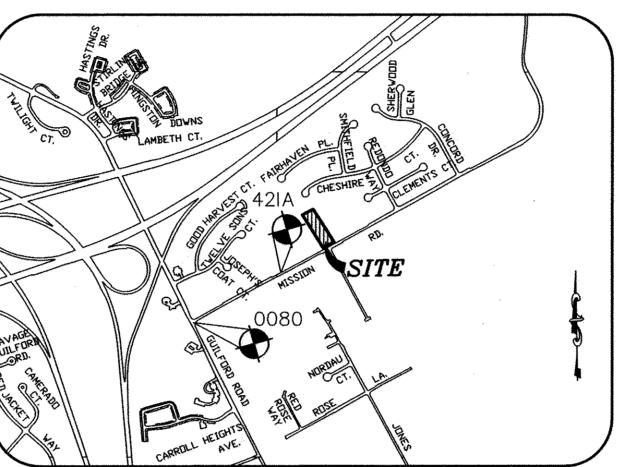
NO.	DESCRIPTION
1	COVER SHEET
2	SITE DEVELOPMENT, SEDIMENT CONTROL PLANS AND SOIL MAP
3	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
4	EROSION AND SEDIMENT CONTROL, STORMWATER MANAGEMENT NOTES AND DETAILS

SITE DEVELOPMENT PLAN

MISSION RIDGE

LOTS 1 THRU 4

SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



VICINITY MAP

	,				S	TORMWATER	MANAGEN	MENT PR	ACTICES							
ŧ	ADDRESS	GREEN ROOF	PERMEABLE PAVEMENTS	REINFORCED TURF	DISCONNECTION OF ROOFTOP RUNOFF	DISCONNECTION OF NON-ROOFTOP RUNOFF	SHEETFLOW TO CONSERVATION AREAS	RAINWATER HARVESTING	SUBMERCED GRAVEL WETLANDS	LANDSCAPE INFILTRATION	INFILTRATION BERMS		MICRO- BIORETENTION	RAIN GARDENS	SWALES	ENHANCED FILTERS
		A-1 (Y/N)	A-2 (Y/N)	A-3 (Y/N)	N-1 (NUMBER)	N-2 (Y/N)	N-3 (Y/N)	M-1 (NUMBER)	M-2 (NUMBER)	M-3 (NUMBER)	M-4 (NUMBER)	M-5 (NUMBER)	M-6 (NUMBER)	M-7 (NUMBER)	M-8 (NUMBER)	M-9 (NUMBER)
	7903 BURKARD LANE	N	N	N	2	. N	N	0	0	0	0	2	0	0	1 (SHARED)	0
	7907 BURKARD LANE	N	N	N	2	N	N	0	0	0	0	2	0	0	1 (SHARED)	0
	7911 BURKARD LANE	N	N.	N	2	N	N	0	0	0	0	2	0	0	1 (SHARED)	0
	7915 BURKARD LANE	N	N	N	0	N	N	0	0	0	0	0	1	0	1 (SHARED)	. 0

GENERAL NOTES

- 1. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTIONS AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- 2. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- 3. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY FISHER, COLLINS AND CARTER, INC. ON OR ABOUT OCTOBER, 2012.
- 4. COORDINATES BASED ON NAD '83 (HORIZONTAL) AND NAVD '88 (VERTICAL) MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATION'S NO.42IA & 0080
- STA. No. 42IA N 543,390.4139 E 1,364,912.6624 ELEV. 312.01 STA. No. 0080 N 542,366.9140 E 1,363,075.9745 ELEV. 282.39
- 5. STORMWATER MANAGEMENT REQUIREMENTS HAVE BEEN SATISFIED VIA THE USE OF MICRO-BIORETENTION FACILITIES (M-6), ROOFTOP DISCONNECTION (N-1), DRY WELLS (M-5), AND GRASSED SWALES (M-8) IN ACCORDANCE WITH THE 2000 MARYLAND STORMWATER DESIGN MANUAL AS APPROVED UNDER F-13-053.
- 6. EXISTING UTILITIES ARE BASED ON ACTUAL FIELD LOCATIONS, IN COMBINATION WITH EXISTING WATER AND SEWER CONTRACTS.
- 7. ANY DAMAGE TO THE COUNTY RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- 8. SEWER HOUSE CONNECTION ELEVATIONS SHOWN ARE LOCATED AT THE PROPERTY LINE OR EASEMENT LINE. 9. FOR DRIVEWAY ENTRANCE DETAILS, REFER TO HOWARD COUNTY DESIGN MANUAL, VOLUME IV,
- STANDARD DETAIL R-6.06.
- 10. SITE ANALYSIS DATA CHART:
- LOCATION: TAX MAP 42 PARCEL 507 & 512, PLAT 22641 ZONING: R-12 (ZONING MAP DATED JULY 28, 2006)
- ELECTION DISTRICT: 6TH TOTAL PROJECT AREA:
- LIMIT OF DISTURBED AREA: 0.78 AC ±
- PROPOSED USE FOR SITE: RESIDENTIAL
- TOTAL NUMBER OF UNITS: 4
- TYPE OF PROPOSED UNIT: SFD DPZ FILES: F-13-053, ECP-13-036
- SUBJECT PROPERTY ZONED R-12 RESIDENTIAL PER THE 02/02/04 COMPREHENSIVE ZONING PLAN AND PER THE COMP LITE ZONING AMENDMENT EFFECTIVE 7/28/06.
- 12. 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.
- 13. 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 MIN. (16 FEET MIN. 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 (CULVERT/BRIDGES) CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING); - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT
 - DEPTH OVER DRIVEWAY SURFACE:
 - MAINTENANCE SUFFICIENT TO ENSURE ALL WEATHER USE.
- 14. PUBLIC WATER AND SEWER WILL BE UTILIZED. LOTS 1 THRU 4 WILL BE SERVICED UNDER CONTRACT # 24-4781-D.
- 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 RIGHT-OF-WAY LINE. MINIMUM LOT SIZE AND OPEN SPACE REQUIREMENTS SHOWN ABOVE ARE IN ACCORDANCE
- WITH SECTION 16.121(a)(2) OF THE HOWARD COUNTY SUBDIVISION REGULATIONS, AMMENDED 5th ED.
- 17. BASED ON AVAILABLE COUNTY DATA, NO HISTORIC STRUCTURES OR BURIAL GROUNDS EXIST ON SITE.
- 18. NO STEEP SLOPES (FOR A VERTICAL HEIGHT OF 10 FEET OR MORE) OR FLOODPLAINS EXIST ON SITE.
- 19. THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY
- CODE HAVE BEEN SATISFIED UNDER F-13-053 BY PROVIDING A FEE-IN-LIEU PAYMENT OF \$6,207.30.
- PERIMETER LANDSCAPING SHALL BE PROVIDED AS SHOWN ON THE SUPPLEMENTAL/ROAD CONSTRUCTION DRAWINGS FOR F-13-053, AND STREET TREES ALONG MISSION ROAD ARE IN ACCORDANCE WITH F-13-053.
- THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING PLANT MATERIALS. BERMS, FENCES AND WALLS (AS REQUIRED UNDER F-13-053) 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.
- 22. A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATES.
- 23. A USE-IN-COMMON ACCESS MAINTENANCE AGREEMENT BETWEEN LOTS 1 THRU 4 AND TRASH PAD MAINTENANCE HAVE BEEN RECORDED SIMULTANEOUSLY WITH THE FINAL PLAT IN THE LAND RECORDS OFFICE OF HOWARD COUNTY,
- 24. STORMWATER MANAGEMENT HAS BEEN APPROVED UNDER F-13-053.

FINISHED GRADE

BASEMENT

POPT. 6' KITCH EXT.

PROFILE

25. A WAIVER TO THE THE HOWARD COUNTY DESIGN MANUAL TO ALLOW LOTS 2, 3, 4 TO NOT HAVE BASEMENT GRAVITY SEWER SERVICE PROVIDED BASEMENT SEWER SERVICE IS PROVIDED BY A PRIVATE ON-SITE PUMP WAS GRANTED ON

OWNER

DEVELOPER

BURKARD HOMES, LLC

5300 DORSEY HALL DR.

5300 DORSEY HALL DRIVE

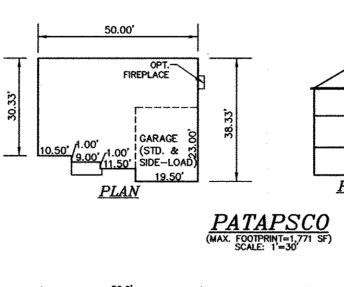
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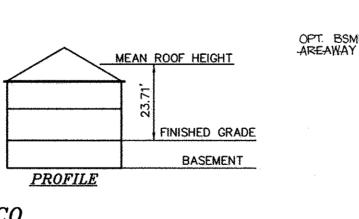
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SUITE 102

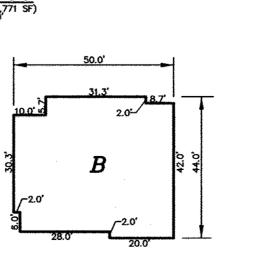
CLLICOTT, 21TY, MD 21042 ELLICOTT CITY, MARYLAND 21042 (443)367 - 0422**DEVELOPERS CERTIFICATE** I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON—SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT. PRINTED NAME OF DEVELOPER I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

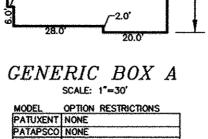
OPT.
MORNING
ROOM MEAN ROOF HEIGHT GARAGE FINISHED GRADE PROFILE

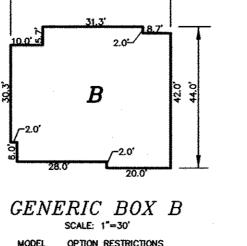


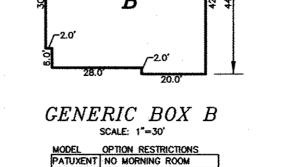


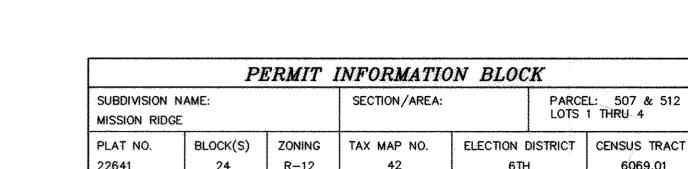
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ADDDE	00		

LOT #	ADDRESS
1	7903 BURKARD LANE
2	7907 BURKARD LANE
3	7911 BURKARD LANE
4	7915 BURKARD LANE

OF 4

0

SSION RIDGE
LE-FAMILY DETACHE
42, PARCEL 507,

LEGEND STREET AND PERIMETER TREES PROVIDED UNDER F-13-053 EXISTING TREES TO REMAIN UNDER EXISTING TREES TO BE REMOVED UNDER F-13-053 LIMIT OF DISTURBANCE SUPER SILT FENCE, SILT FENCE

STABLIZED CONSTRUCTION ENTRANCE ROOFTOP DISCONNECTION (N-1) FLOW PATH

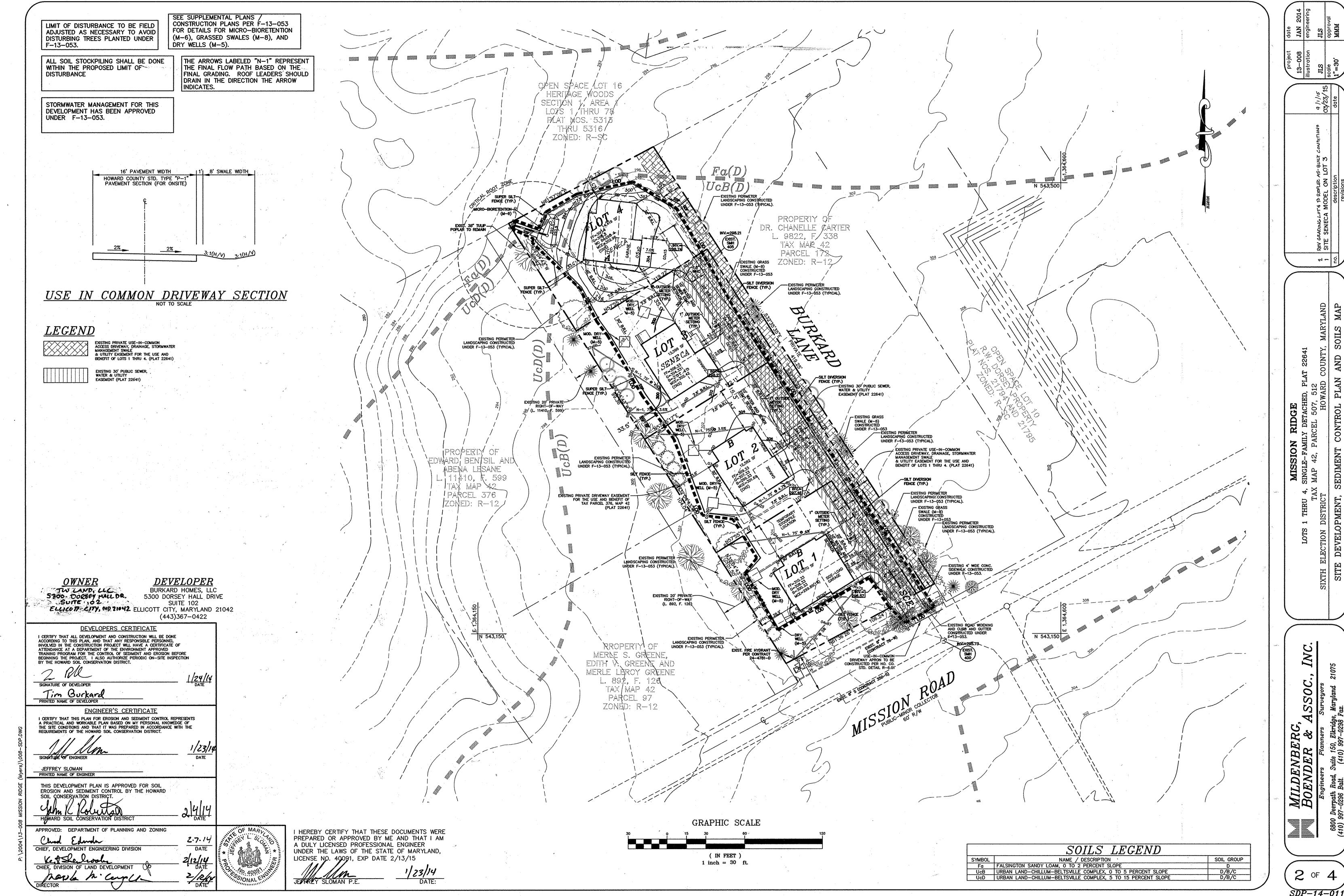
ROOF LEADER

PRINTED NAME OF ENGINEER

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

APPROVED: DEPARTMENT OF PLANNING AND ZONING 6.7.14 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE CHIEF, DIVISION OF LAND DEVELOPMENT

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. 40091, EXP DATE 2/13/15



2 of 4

SDP-14-011

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
- 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", AND REVISIONS THERETO. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION
- A) 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1,
- B) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. 4) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC.B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SDC.B-4-3) TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED
- SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES. 5) 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
- 6) SITE ANALYSIS:
- TOTAL AREA OF SITE AREA DISTURBED: AREA TO BE ROOFED OR PAVED: -AREA TO BE VEGITATIVELY STABILIZED: -0.43 ACRES <u>500 CU. YDS.</u>
- OFFSITEWASTE/BORROW AREA LOCATION: ___OTHER DEVELOPER PROJECT SITE THESE QUANTITIES ARE FOR PERMIT PURPOSES ONLY. CONTRACTOR IS REQUIRED TO PROVIDE HIS
- 7) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE. 8) ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY
- 9) 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.
- 10) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK FILLED AND STABILIZED BY THE END OF EACH WORKING DAY, WHICHEVER IS SHORTER. ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCESSING WITH CONSTRUCTION.
- A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITIES, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

TO STABILIZE DISTURBED SOIL WITH VEGETATION FOR UP TO 6 MONTHS.

TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURB SOIL.

CONDITIONS WHERE PRACTICE APPLIES EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION

CRITERIA

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN SELECT ONE OF THE SPECIES OR SEED MIXTURES LISTED IN SELECT ONE OF THE SPECIES OR SEED MIXTURES LISTED IN SELECT OR SELECT OR SEED MIXTURES LISTED IN SELECT OR SEL TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3). AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B-1 PLUS FORTELIZER AND LIME RATES MUST BE PUT ON THE PLAN.

2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMENTED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.

3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1b, AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

DEVELOPER BURKARD HOMES, LLC TW LAND: LICE 5300 DORSEY HALLDA. 5300 DORSEY HALL DRIVE SUITE 103 SUITE 102 ELLICOTT CITY, MD 2104 ELLICOTT CITY, MARYLAND 21042 (443)367-0422

DEVELOPERS CERTIFICATE 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 EGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER Tim Burkard

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 KNOWEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

PRINTED NAME OF ENGINEER THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD

APPROVED: DEPARTMENT OF PLANNING AND ZONING 2.7.14 DATE CHIEF, DEVELOPMENT ENGINEERING DIVISION CHIEF, DIVISION OF LAND DEVELOPMENT

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. 40091, EXP DATE 2/13/15

STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

TO STABILIZE DISTURBED SOIL WITH PERMANENT VEGETATION.

TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER OF DISTURBED

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA A. SEED MIXTURES

STANDARDS AND SPECIFICATIONS FOR

TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

CONDITIONS WHERE PRACTICE APPLIES

VERIFY TYPE OF SEED AND SEEDING RATE.

DISSIPATION OF PHYTO-TOXIC MATERIALS.

1. MULCH MATERIALS (IN ORDER OF PREFERENCE)

AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.

PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.

WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.

EACH DIRECTION.

WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.

A. SEEDING

SEEDING AND MULCHING

TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

1. SPECIFICATIONS

a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT

b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.

C. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE

OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED

USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP

I. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1,

II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN

EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL

I. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST

I. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P2 05 (PHOSPHOROUS),

II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN

II. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY

a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN

COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN

HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE

c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).

III. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.

b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE

II. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.

V. WOFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF

I. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN

III. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL

IV. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL

APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5,

ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.

BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH

MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION

AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL

APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.

d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR

b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.

a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.

PERMANENT SEEDING TABLE B.3, OR SITE—SPECIFIC SEEDING SUMMARIES.

1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.

200 POUNDS PER ACRE; K20 (POTASSIUM), 200 POUNDS PER ACRE.

TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.

IV. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT

LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE.

INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN

TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6

B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO

MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE

- 1. GENERAL USE A. SELECT ONE OR MORE OF THE SPIECES OF MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED IN THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING
- B. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DINES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD GUIDE, SECTION 342-CRITICAL AREA PLANTING.
- FOR SITES HAVING DISTURBAD AREA OVER 5 ACRES, USE AND SHOW RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
- FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FROM FERTILIZED (40-0-01) AT 3 1/2 POUNDS PER 1000 S.F. (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS
- 2. TURFGRASS MIXTURES A. AREAS WHERE TURFGRASS MAY BE DESIRE INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
- PURPOSE. ENTER SELECTED MIXTURE(S), APPLOCATION RATES, AND SEEDING DATES IN THE PERMANENT KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASRERN SHORE RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS SEEDING RETA: 1.5 TO 2.0 POUNDS PER 1000 S.F. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO

SELECT ONE OR MORE OF THE SPECIES OF MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR

- 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT. KENTUCKY BLUEGRASS/PERENIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY ABD WHEN TURF WILL RECEIVE MEDIUM TO INTENSUVE MANAGEMENT. CERTIFIED PERENIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDINGRATE: 2 POUNDS MIXTURE PER 1000 S.F. SHOOSE A MINIMUM OF THREE KENTUCKYBLUEGRASS CULTIVARS EITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL
- III. TALL FESCUE/KENTUCKY BLUEGRASS: FULL MIXTURE: FOR USE IN DROUGHT AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 65 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 PERCENT PER 1000 S.F. ONE OR
- KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TIRF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCANT AND CERTIFIES
- FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATES 1 1/2 TO 3 POUNDS PER 1000 S.F. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURE WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B,6A) CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B) SOUTHERN MD. EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS
- ZONE: 7A, 7B) D. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONE AND DEBRIS OVER 1.5 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASS WILL POSE NO DIFFICULTY.
- E. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH 0.5 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR

2. APPLICATION

B-5 STANDARD AND SPECIFICATIONS

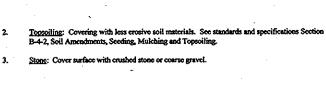
DUST CONTROL

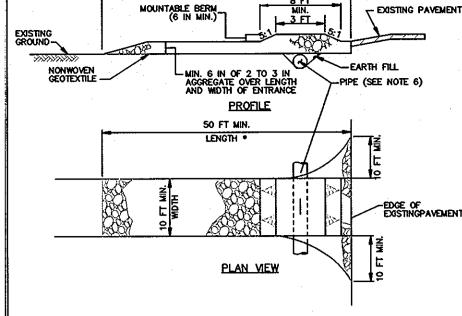
o prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health

is practice is applicable to areas subject to dust blowing and movement where on and off-site damage is likely

- fulching and Topsoiling and Section B-4-3, Temporary Stabilization. Mulch should be
- Tillago: To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches spart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.
- <u>Infraction</u>: This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point that
- Barriers: Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing. Barriers placed at right angles
- Calcium Chloride: Apply at rates that will keep surface moist and may need retreatment

DRAFT October 15, 2009





SCE

DETAIL B-1 STABILIZED CONSTRUCTION

ENTRANCE

CONSTRUCTION SPECIFICATIONS

MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.

PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAG TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT

. Prepare subgrade and place nonwoven geotextile, as specified in section H-1 materials. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.

MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR

TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.

DETAIL E-1 SILT FENCE DETAIL E-1 SILT FENCE **├**\$F**─** CONSTRUCTION SPECIFICATIONS USE WOOD POSTS $1\frac{1}{4}$ X $1\frac{1}{4}$ \pm $\frac{1}{16}$ Inch (Minimum) square cut of sound quality hardwood. As an alternative to wooden post use standard "t" or "u" section steel posts weighing not less than 1 pound per linear foot.

> JSE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION 12-1 MATERIALS.

EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL, AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.

EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.

REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

OBTAIN GRADING PERMIT. (1 DAY) 2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AT LOCATION

SEQUENCE OF CONSTRUCTION

- SHOWN (1 DAYS)
- 3. INSTALL SILT FENCE AT LOCATIONS SHOWN. (1 DAYS) CONSTRUCT HOUSES AND STORMWATER MANAGEMENT FACILITIES
- AND OUTFALL PIPES. (90 120 DAYS) 5. COMPLETE FINE GRADING OF SITE TO GRADES INDICATED. (2 DAYS PER HOUSE)
- 6. SEED AND MULCH ALL REMAINING DISTURBED AREAS. (1 DAY PER
- WHEN ALL CONTRIBUTING DRAINAGE AREAS TO SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED, AND WITH PERMISSION OF SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE REMAINING DISTURBED AREAS (1 DAY)
- 8. AFTER THE DISTURBED AREAS ARE STABILIZED, CONSTRUCT THE MICRO-BIORETENTION FACILITIES (2 DAYS).

STANDARDS AND SPECIFICATIONS FOR

THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.

CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:

V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

PERMANENT SEEDING SUMMARY

MIXTURES 1, 4-7, 9, AND 10 FROM TABLE B.3 OF THE 2011 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT

DEPTHS

II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).

IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.

1. TEMPORARY STABILIZATION

G. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF

INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL

SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR

OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE

III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30

APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.

PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN

EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS

GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.

APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF SOIL TEST.

MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND

READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR

PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP

PER ACRE

1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY

OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED

(10-20-20)

90 LBS. PER ACRE

1 LB./1000 SF) (2 LB./1000 SF)(2 LB./1000 SF)

LIME RATE

90 LBS. 2 TONS / ACRE PER ACRE (90 LBS / 1000

RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED

SOIL PREPARATION. TOPSOILING. AND SOIL AMENDMENTS

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CONDITIONS WHERE PRACTICE APPLIES

I. SOIL PH BETWEEN 6.0 AND 7.0.

CLAY) WOULD BE ACCEPTABLE

DATES

A. SOIL PREPARATION

HARDINESS ZONE (FROM FIGURE B.3): 6b

SEED MIXTURE (FROM TABLE B.3): 8

APPLICATION I

RATE (LB/AC)

SPECIES

TALL FESCUE

CONTROL MAY BE USED.

- a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING. JNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE
- APPLICATION RATE TO 2.5 TONS PER ACRE. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
- a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD: I. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS,
- BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR. II. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF
- 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER. III. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
- IV. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000

ELEVATION WOVEN SLIT FILM-MIN. OF 8 IN VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF GEOTEXTILE. CROSS SECTION STAPLE-TWIST POSTS TOGETHER FENCE SECTIONS (TOP VIEW) MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL U.S. DEPARTMENT OF AGRICULTURE TURAL RESOURCES CONSERVATION SERVICE

CENTER TO CENTER

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MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY

TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE: THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE

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. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA: TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE

GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1½ INCHES IN DIAMETER. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE. OR OTHERS AS SPECIFIED.

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

EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO 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 MUST BE

GRADING AND SEEDBED PREPARATION. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH

PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED

LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL

SOIL BY DISKING OR OTHER SUITABLE MEANS. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE

1. 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. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE

AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.

CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE

ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND

PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF

AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

DETAILS COUN RO. CON SEDIME MAF AND

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3 of 4

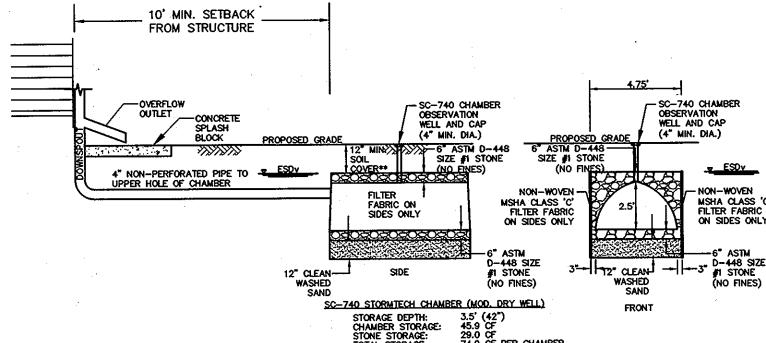
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MICRO-BIORETENTION SCHEDULE

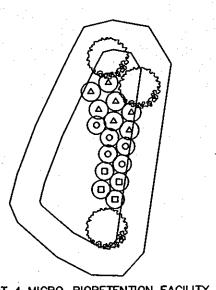
FACILITY TOP EL. TOP OF INV. IN INV. OUT AREA AT Af—(A) BERM(B) (C) (D) TOP EL. (Af) LOT 4 292.80 293.80 289.72 289.57 130 SF

DIMENSIONS OF THE PROPOSED MICRO-BIORETENTION FACILITIES MAY BE REVISED IN THE FIELD SO LONG AS THE TOP OF FACILITY AREAS ARE MAINTAINED AND ALL REQUIRED SETBACKS ARE OBSERVED.

GRASS SWALE AND TIMBER CHECK DAM (M-8)



DETAILNOT TO SCALE



LOT 4 MICRO-BIORETENTION FACILITY

<u> </u>	CRO-BIO	RET	'ENTION	I FACI	LITY (M-6) PLA.	<u>NT LIS</u>
ſ	QUANTITY REQUIRED	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY REQUIRED / P FOR EACH FACILITY	ROVIDED
Γ	1 PER 60 SF	0	ILEX GLABRA	INK BERRY	2' - 3' HT.	LOT 4: 130 SF / 60 = 3	
	1 PER 20 SF	0	LOBELIA SIPHILITICA	GREAT BLUE LOBELIA	1 GAL. CONTAINER	LOT 4: 130 SF / 20 = 7	
-	1 PER 30 SF	0	ONOCLEA SENSIBILIS	SENSITIVE FERN	1 GAL CONTAINER	LOT 4: 130 SF / 30 = 5	·
l	1 PER 40 SF	•	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	1 GAL. CONTAINER	LOT 4: 130 SF / 40 = 4	

TOTAL: 16 PERENNIALS, 3 SHRUBS

PIPE SCHEDULE

SIZE	LENGTH	TYPE / CLASS
4"	199 LF	HDPE (MICRO-BIORETENTION OUTLET)
4"	72 LF	HDPE (NON-PERFORATED)
6"	9 LF	HDPE
6"	29 LF	RCP (CLASS IV)

CLEANOUT CO CLEANOUT CO CLEANOUT CO CLEANOUT CO NO FILTER FABRIC ABOVE PIPE RIVATE 4" PERFORATED PVC 100 LF @ 2.50% (CARRIES ESDV ONLY) PRIVATE 4" NON-PERFORATED PVC 57 LF @ 1.00% (CARRIES_ESDv_ONLY PRIVATE 4" PERFORATED PVC PRIVATE 4" NON-100 LF @ 2.75% PERFORATED PVC (CARRIES ESDV ONLY) 16 LF @ 1.00% (CARRIES ESDV ONLY)

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

A. 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. IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6) AND GRASSED SWALES (M-8)

- A. 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. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
- B. 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 DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
- MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3

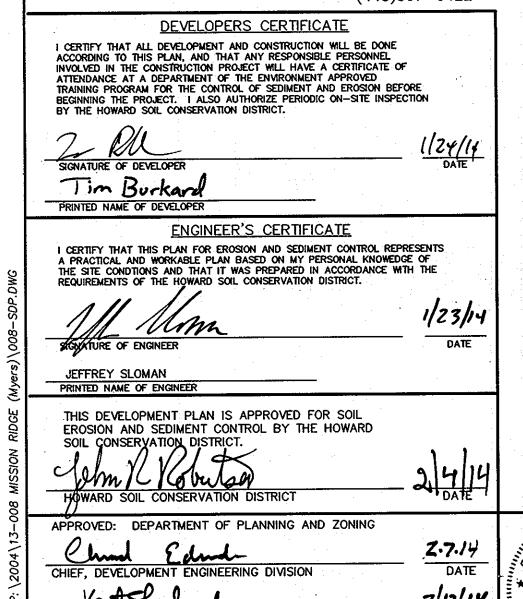
SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM

OPERATION AND MAINTENANCE SCHEDULE FOR MODIFIED DRY WELLS (M-5)

- A. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY
- B. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD—UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO ENSURE TRENCH DRAINAGE.
- C. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- D. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A 72-HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
- E. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO ENSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- F. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED. THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

STORMWATER MANAGEMENT FOR THIS DEVELOPMENT HAS BEEN APPROVED

DEVELOPER BURKARD HOMES, LLC TW LAND, LLC3 5300 DORSEY HALLDR. 5300 DORSEY HALL DRIVE SUITE 102 ELLICOTT CITY, MD 2042 ELLICOTT CITY, MARYLAND 21042 (443)367-0422



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. 40091, EXP DATE 2/13/1,5

DETAIL C-9 DIVERSION FENCE |----- OF ------| MAXIMUM DRAINAGE AREA = 2 ACR ELEVATION SECTION CONSTRUCTION SPECIFICATIONS USE 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.

UNDERDRAIN AND SWALE (M-8) PROFILE

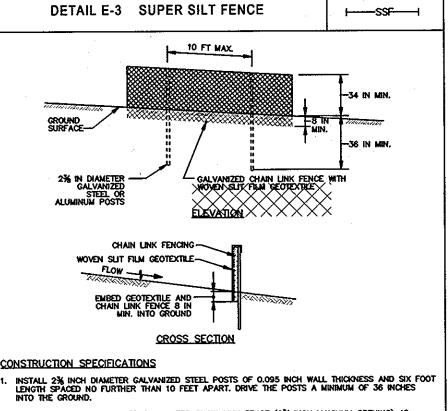
WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.

STOCKPILE AREA

The stockpile location and all related sediment control practices must be clearly indicated on the

- The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
- 3. Runoff from the stockpile area must drain to a suitable sedimen an earth dike, temporary swale or diversion fence. Provisions must be made for discharging

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of crossion. If the vertical height of a stockpile exceeds 20 feet for 2:1



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

_ OF **4**

HOWARD COUN

STORMWATER

INC. SOC. V MILDENBERG, BOENDER & A