SITE DEVELOPMENT PLAN
RIVER HILL OVERLOOK,
LOTS 1 THRU 8 AND
OPEN SPACE LOTS 9, 11, & 12
TAX MAP No. 35 GRID No. 8 PARCEL NO. 66
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SHEET INDEX

LEGEND

SYMBOL	DESCRIPTION
- - - - -	EXISTING CONTOUR 2' INTERVAL
———	PROPOSED CONTOUR 2' INTERVAL
—SF—SF—	EXISTING SILT FENCE
—SSF—SSF—	EXISTING SUPER SILT FENCE
—SFD—SFD—	EXISTING DIVERSION FENCE
LOD	LIMIT OF DISTURBANCE
——x——	EXISTING FENCE LINE
	EX. LIMIT OF TREES AND FOREST
	LANDSCAPING FROM F-15-010
	EXISTING TREES
	PROPOSED TREES
	PROPOSED GRAVEL / RIPRAP
	15% TO 25% SLOPES
	25% OR GREATER SLOPES
	SOIL LINES AND TYPES
	PROPOSED FOREST CONSERVATION EASEMENT
	EXISTING STREAM BANKS
	EXISTING RIPRAP/STONE

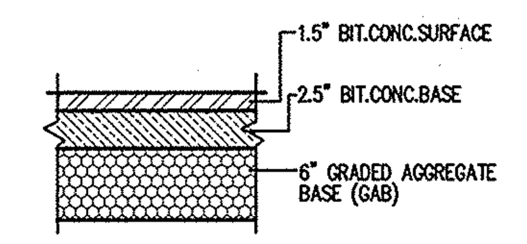
STORMWATER MANAGEMENT SUMMARY

AREA ID.	ESDv REQUIRED CU.FT.	ESDv PROVIDED CU.FT.	REMARKS
SITE	4,644	5,269	DRY WELL (M-5) & MICRO-BIORETENTION (M-6)
TOTAL	4,644	5,269	

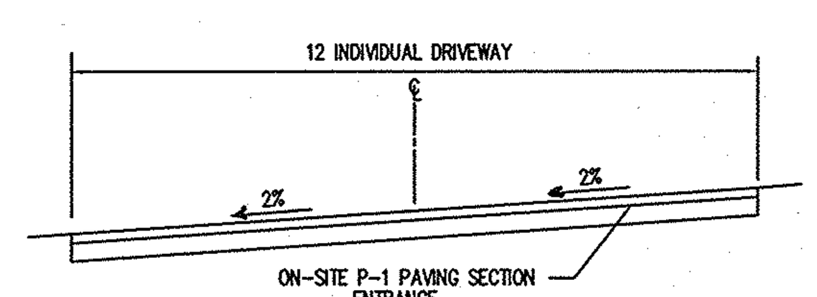
GROSS AREA OF SUBDIVISION = 4.99 ACRES
AREA OF SUBMISSION = 3.30 ACRES
LOD = 2.68 ACRES
RCN = 58.1
TARGET Pe = 1.16"

STORMWATER MANAGEMENT PRACTICES

LOT No.	ADDRESS	DRY WELLS M-5 (NUMBER)	OFF LOT (ON OPEN SPACE) MICRO-BIORETENTION M-6 (NUMBER, FACILITY ID)
1	6303 RIVER HILL OVERLOOK DRIVE	0	1, #1
2	6307 RIVER HILL OVERLOOK DRIVE	0	2, #1 & #2
3	6311 RIVER HILL OVERLOOK DRIVE	0	2, #1 & #2
4	6315 RIVER HILL OVERLOOK DRIVE	2	1, #3
5	6319 RIVER HILL OVERLOOK DRIVE	0	1, #3
6	6316 RIVER HILL OVERLOOK DRIVE	0	2, #3 & #4
7	6310 RIVER HILL OVERLOOK DRIVE	0	2, #2 & #4
8	6304 RIVER HILL OVERLOOK DRIVE	0	1, #2
–	(COMMON DRIVEWAY)	0	2, #2 & #3

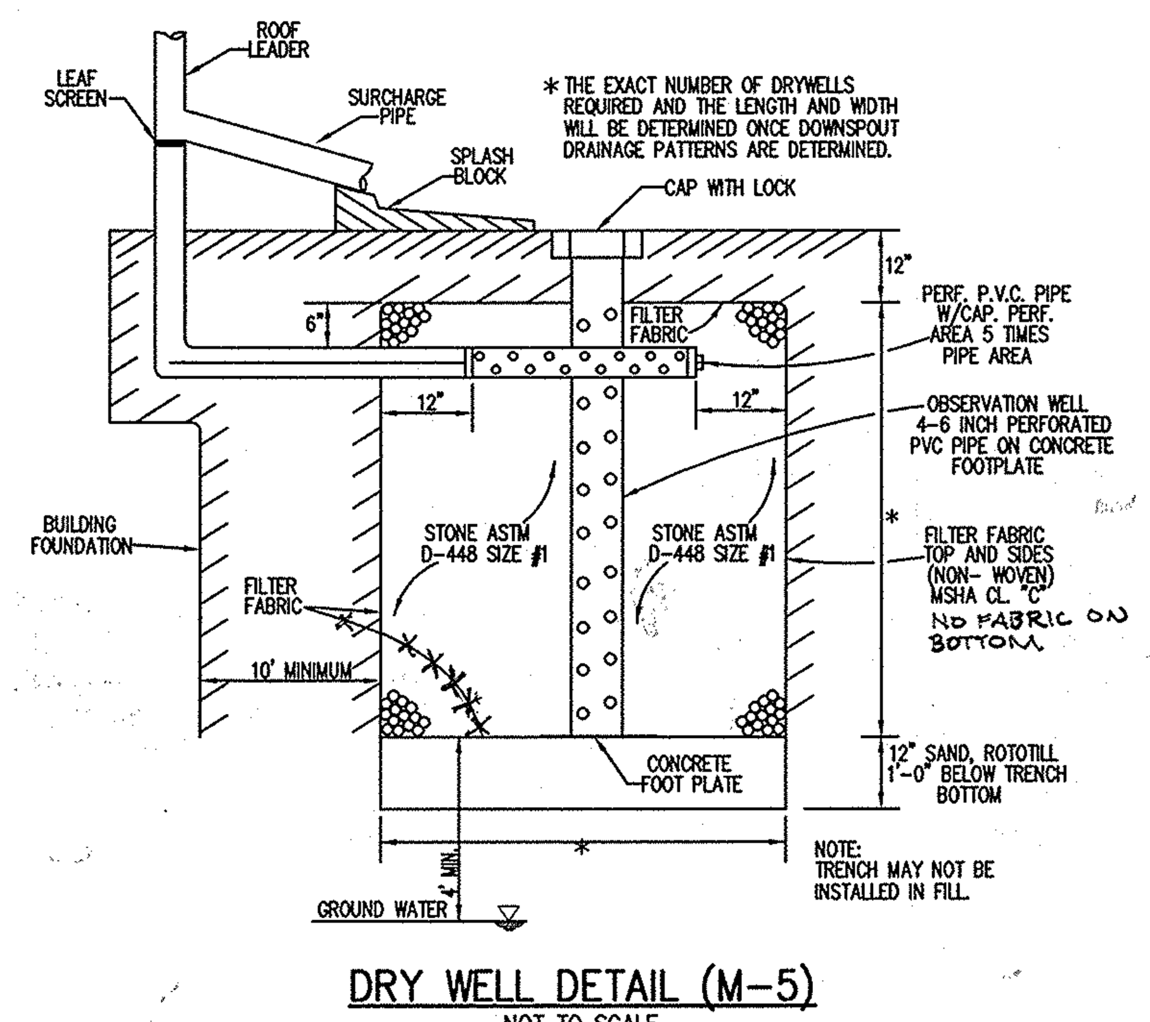


P-1 DRIVEWAY PAVING SECTION
NOT TO SCALE

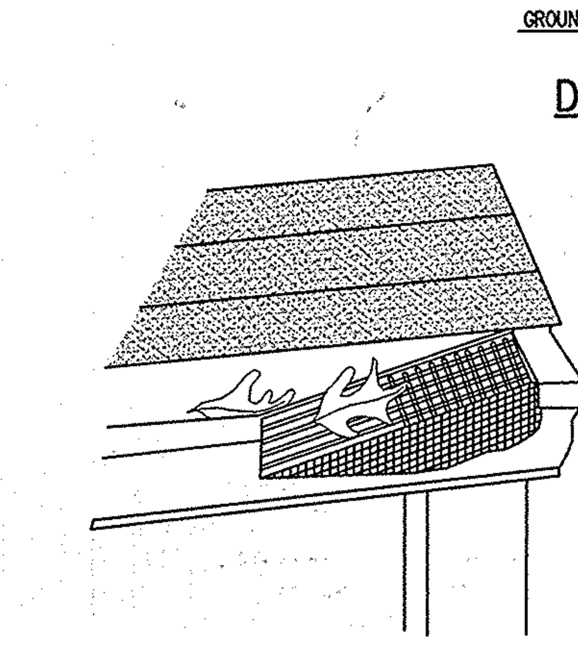


NOTE:
1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION.

12' INDIVIDUAL DRIVEWAY SECTION
NOT TO SCALE



DRY WELL DETAIL (M-5)
NOT TO SCALE



GUTTER DRAIN FILTER DETAIL
NOT TO SCALE

STORMWATER MANAGEMENT NOTES

1. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010.
2. MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1,000 SQ. FT. OR LESS.
3. DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET.
4. FINAL GRADING IS SHOWN ON THIS SITE DEVELOPMENT PLAN.

Table B.4. Materials Specifications for Micro-Bioretention, Rain Gardens & Landscape Infiltration

Material	Specification	Size	Notes
Plantings	see Appendix A; Table A.4	n/a	plantings are site-specific
Planting soil [2' to 4' deep]	loamy sand 60-65% compost 35-40% or sandy loam 30% coarse sand 30% compost 40%		USDA soil types loamy sand or sandy loam; clay content <5%
Organic Content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum
Pea gravel diaphragm	pea gravel: ASTM-D-448	No. 8 or No. 9 (1/8" to 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile		n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	No. 57 or No. Aggregate (3/8" to 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4 inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; f = 3500 psi at 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n.a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland – design to include meeting ACI Code 350.R/89; vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressures); and analysis of potential cracking
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

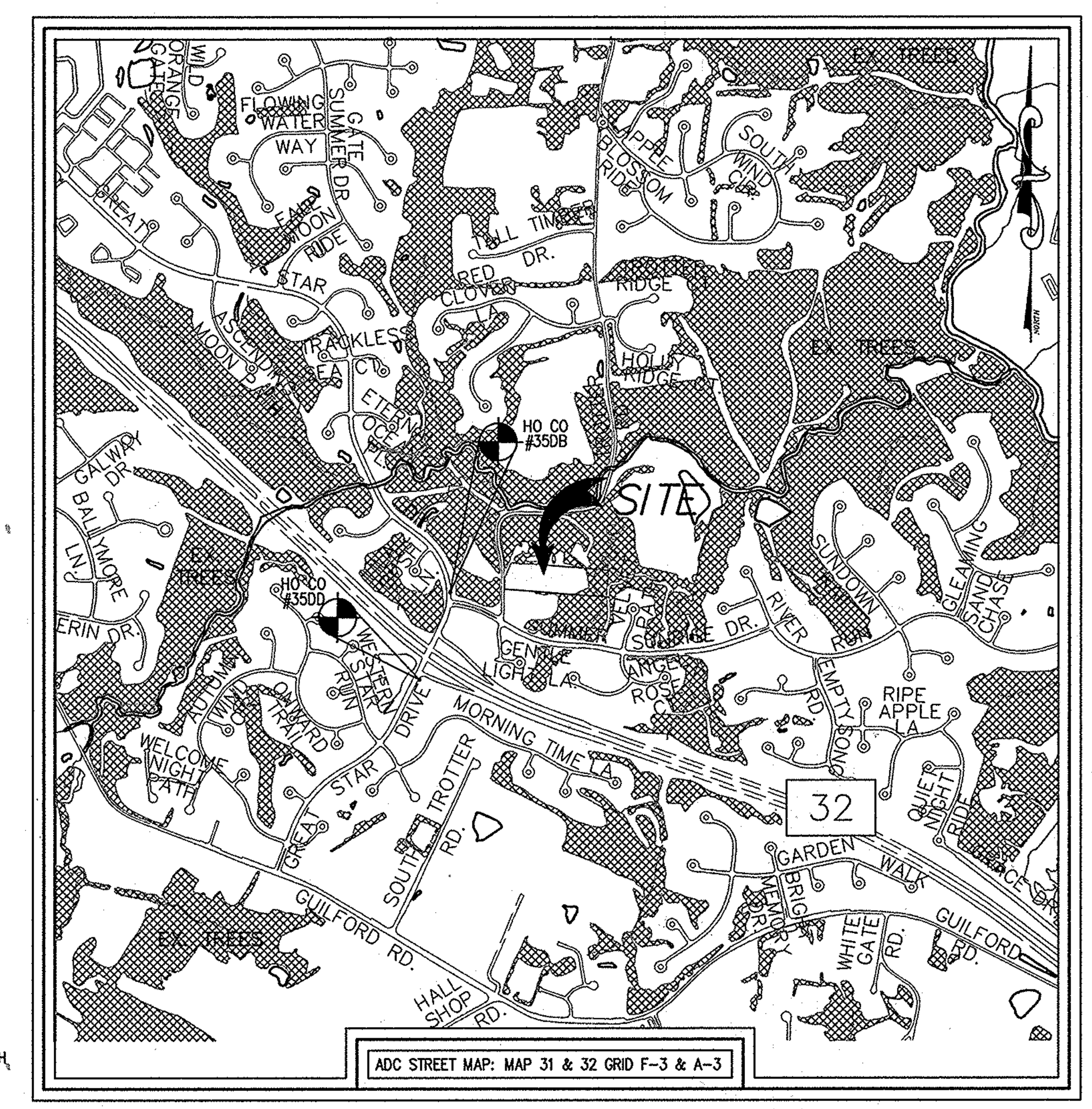
OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY WELLS (M-5)

A. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
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 SEVENTY-TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
E. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE 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.

DRY WELL CHART

DRYWELL NO.	AREA OF ROOF PER DOWN SPOUT	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF TREATMENT	L W D
1	1,000 SQ. FT.	92 C.F.	98 C.F.	100%*	7' x 7' x 5'
2	667 SQ. FT.	62 C.F.	66 C.F.	100%*	5.75' x 5.75' x 5'

* AREA OF TREATMENT EXCEEDS THAT REQUIRED.



VICINITY MAP
SCALE: 1" = 1200'

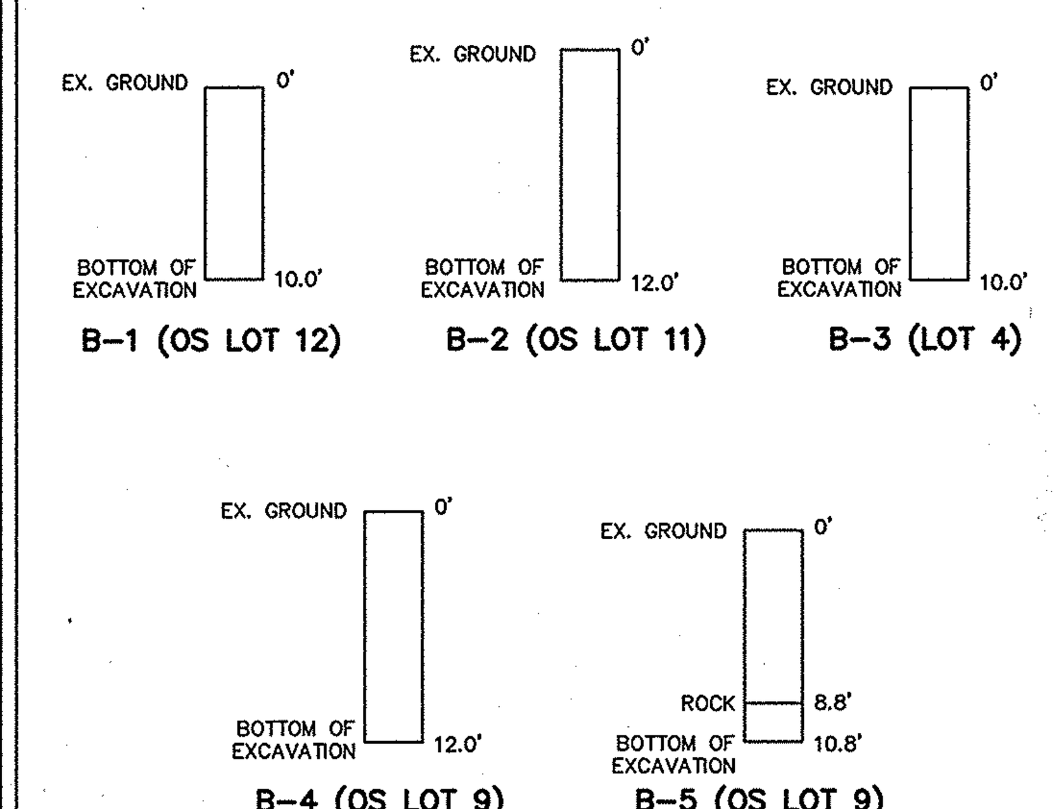
BENCHMARK INFORMATION

B.M.#1 – HOWARD COUNTY CONTROL STATION #35DD – HORIZONTAL – NAD '83)
(ALONG GREAT STAR DRIVE WHERE THE EASTBOUND RAMP TO MD RT 32 TURNS OFF TO THE EAST, 52' NORTHEAST OF A BELL MANHOLE ALONG GREAT STAR DRIVE, 36.4' NORTH OF THE CORNER OF A CHAIN LINK FENCE, 10.5' NORTHWEST OF AN ELECTRIC BOX, AND 55' WEST OF A LIGHT POLE ALONG THE EASTBOUND RAMP TO MD RT 32 FROM GREAT STAR DRIVE.)
N 556,936.5472
E 1,333,705.5852
ELEVATION = 424.21 – VERTICAL – (NAVD '88)

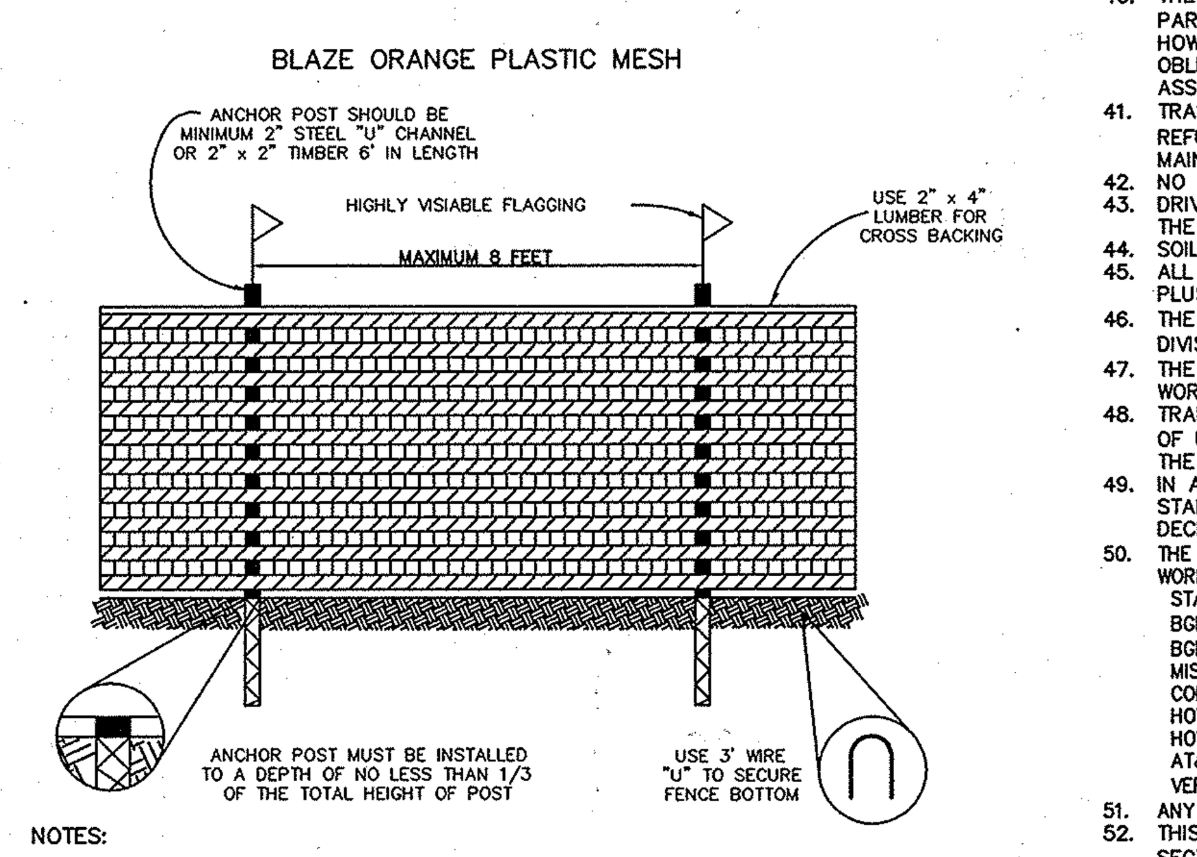
B.M.#2 – HOWARD COUNTY CONTROL STATION #35DB – HORIZONTAL – (NAD '83)
(LOCATED 7.3' EAST OF THE FACE OF CURB ALONG GREAT STAR DRIVE, 46.9' NORTH OF A LIGHT POLE NORTHEAST OF THE INTERSECTION OF GREAT STAR DRIVE AND SUMMER SUNRISE DRIVE, 21' NORTHWEST OF AN OAK TREE, AND 18' SOUTHEAST OF AN OAK TREE)
N 557,696.1674
E 1,333,974.5506
ELEVATION = 400.94 – VERTICAL – (NAVD '88)

SITE ANALYSIS DATA CHART

A. TOTAL AREA OF THIS SUBDIVISION = 4.99 AC. (FROM FINAL PLANS INCLUDING OPEN SPACE).
AREA OF THIS SUBMISSION = 3.30 AC.±. (LOTS 1 THRU 8 & OPEN SPACE LOTS 9, 11, & 12)
B. LIMIT OF DISTURBANCE = 2.68 Ac.±
C. PRESENT ZONING DESIGNATION = R-ED
(PER 10/06/2013 COMPREHENSIVE ZONING PLAN)
D. PROPOSED USE: RESIDENTIAL
K. BUILDING COVERAGE OF SITE: N/A.
L. PREVIOUS HOWARD COUNTY FILES: ECP-14-010, SP-14-001, F-15-010, PLAT #23468-23470, WP-15-115, WP-16-019.
M. TOTAL AREA OF FLOODPLAIN LOCATED ON OPEN SPACE LOT 10 = 0.29 AC±
N. TOTAL AREA OF SLOPES IN EXCESS OF 25% = 0.36 AC±
O. NET TRACT AREA OF SUBDIVISION = 4.34 ACRES (TOTAL AREA LESS FLOODPLAIN AND STEEP SLOPES)
P. TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0 AC.±
Q. TOTAL AREA OF FOREST = 0.86 AC± (EXCLUDES FLOODPLAIN), 0.86 ACRES PLACED IN FOREST CONSERVATION EASEMENT.
R. TOTAL GREEN OPEN AREA = 3.21 AC± (2.505 ACRES IN OPEN SPACE LOT 9)
S. TOTAL IMPERVIOUS AREA = 0.74 AC±
T. DENSITY TABULATION FOR SUBDIVISION BASED ON F-15-010:
1. NET TRACT AREA = 4.99 ACRES – 0.29 ACRES – 0.36 ACRES = 4.34 ACRES
2. DENSITY ALLOWED = 4.34 ACRES X 2 BUILDABLE LOTS/ACRE = 8 BUILDABLE LOTS MAXIMUM.
3. DENSITY PROPOSED = 8 BUILDABLE LOTS.
4. MINIMUM OPEN SPACE REQUIRED = 4.99 ACRES X 0.50 = 2.495 ACRES
5. OPEN SPACE PROVIDED = 2.53 ACRES
U. AREA OF PROPOSED BUILDABLE LOTS = 2.45 ACRES± (106,697 SQ.FT.)
V. PARKING REQUIRED: 2.5 SPACES PER DWELLING UNIT X 8 UNITS = 20 PARKING SPACES.
PARKING PROVIDED: 3 SPACES PER DWELLING UNIT X 8 UNITS = 24 PARKING SPACES (2 GARAGE SPACES & 1 DRIVEWAY SPACE PER UNIT).



NOTE: NO ROCK OR WATER WAS ENCOUNTERED DURING SOIL EXCAVATIONS IN HOLES 1 THRU 4. ROCK WAS ENCOUNTERED NEAR BOTTOM OF HOLE 5. PROFILES REFLECT THE DEPTHS OF THE EXCAVATIONS CONDUCTED ON SEPTEMBER 23, 2013.



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

TREE PROTECTION DETAIL
NOT TO SCALE

ADDRESS CHART

LOT #	STREET ADDRESS
1	6303 RIVER HILL OVERLOOK DRIVE
2	6307 RIVER HILL OVERLOOK DRIVE
3	6311 RIVER HILL OVERLOOK DRIVE
4	6315 RIVER HILL OVERLOOK DRIVE
5	6319 RIVER HILL OVERLOOK DRIVE
6	6316 RIVER HILL OVERLOOK DRIVE
7	6310 RIVER HILL OVERLOOK DRIVE
8	6304 RIVER HILL OVERLOOK DRIVE

General Notes:

1. SUBJECT PROPERTY IS ZONED 'R-ED' PER THE 10/06/13 COMPREHENSIVE ZONING PLAN.
2. THE BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY DATED OCTOBER, 2013 BY FISHER, COLLINS & CARTER, INC. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY FISHER, COLLINS & CARTER, INC. DATED SEPTEMBER 2013 AND SUPPLEMENTED BY HOWARD COUNTY GIS TOPOGRAPHY.
3. THIS PLAT AND THE COORDINATES SHOWN HEREON ARE BASED ON NAD '83, MARYLAND STATE COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 35DB AND NO. 35DD.
STA. NO. 35DB N 557,696.1674 E 1,333,974.5506 ELEV. = 400.94
STA. NO. 35DD N 556,936.5472 E 1,333,705.5852 ELEV. = 424.21
4. B.R.L. DENOTES BUILDING RESTRICTION LINE.
5. DENOTES IRON PIN SET CAPPED "F.C.C. 106".
6. DENOTES IRON PIPE OR IRON BAR FOUND.
7. DENOTES ANGULAR CHANGE IN BEARING OF BOUNDARY OR RIGHTS-OF-WAY.
8. DENOTES CONCRETE MONUMENT SET WITH ALUMINUM PLATE "F.C.C. 106".
9. DENOTES CONCRETE MONUMENT OR STONE FOUND.
10. ALL LOT AREAS ARE MORE OR LESS (±).
11. DISTANCES SHOWN ARE BASED ON SURFACE MEASUREMENT AND REDUCED TO NAD '83 GRID MEASUREMENT.
12. PLAT SUBJECT TO PRIOR DEPARTMENT OF PLANNING AND ZONING FILE NOS.: SP-14-001; ECP-14-010; F-15-010; PLAT #23468-23470; WP-15-115; WP-16-019.
13. 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 OR PIPE STEM LOT DRIVEWAY.
14. 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:
A) WIDTH – 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE);
B) SURFACE – SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING. (1 -1/2" MINIMUM);
C) GEOMETRY – MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45-FOOT TURNING RADIUS;
D) STRUCTURES (CULVERTS/BRIDGES) – CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING);
E) DRAINAGE ELEMENTS – CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER SURFACE;
F) STRUCTURE CLEARANCES – MINIMUM 12 FEET;
G) MAINTENANCE – SUFFICIENT TO ENSURE ALL WEATHER USE.
15. EXISTING UTILITIES ARE BASED UPON FIELD LOCATION OF MISS UTILITY MARKINGS IN JUNE, 2013
16. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
17. SITE IS ADJACENT TO A SCENIC ROAD.
18. NO CEMETERY OR HISTORIC STRUCTURES EXIST WITHIN THE LIMITS OF THIS PLAT SUBMISSION.
19. THIS SUBDIVISION IS SUBJECT TO SECTION 18.122B OF THE HOWARD COUNTY CODE. PUBLIC WATER AND SEWER SERVICE HAS BEEN GRANTED UNDER THE TERMS AND PROVISIONS, THEREOF, EFFECTIVE ON THE DATE THE DEVELOPERS AGREEMENT IS FILED AND ACCEPTED. WATER AND SEWER IS PROVIDED UNDER CONTRACT NO. 24-4831-D.
20. THE NON-CRITICAL FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY FISHER, COLLINS & CARTER, INC. DATED OCTOBER 2013, AND APPROVED ON DECEMBER 12, 2013 UNDER F-15-010.
21. THERE ARE NO WETLANDS ON THIS SITE PER INVESTIGATION BY ECO-SCIENCE PROFESSIONALS, INC. DATED JULY, 2013. WETLAND BUFFERS SHOWN HEREON ARE BASED ON WETLANDS LIMITS PER PLATS OF CRICKET CREEK SUBDIVISION, F-05-043, PLAT NOS. 17718 THRU 17721.
22. FOREST STAND DELINEATION PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED JULY, 2013 UNDER F-15-010.
23. STEEP SLOPES, STREAM AND ITS BUFFERS, WETLAND BUFFER, AND 100 YEAR FLOODPLAIN EXIST ON-SITE.
24. NO CLEARING, GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF STREAM BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.
25. TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP, AND WAS APPROVED ON DECEMBER 12, 2013 UNDER F-15-010.
26. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
27. NO GEOTECHNICAL REPORT IS REQUIRED FOR THIS PROJECT. EXCAVATIONS TO VERIFY DEPTH TO ROCK AND WATER WERE CONDUCTED ON SEPTEMBER 23, 2013.
28. ON DECEMBER 12, 2013 APPROVAL WAS GRANTED FOR A WAIVER FROM DESIGN MANUAL, VOLUME III, SECTION 2.6.A, WHICH ALLOWS NO MORE THAN 6 LOTS ON A USE-IN-COMMON DRIVEWAY TO ALLOW 9 LOTS UNDER SP-14-001.
29. STORMWATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORMWATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. NON-STRUCTURAL PRACTICES (FOUR (4) MICRO BIO-RETENTION FACILITIES (M-6) AND TWO (2) DRYWELLS (M-5) IN ACCORDANCE WITH CHAPTER 5 ARE BEING UTILIZED. THESE PRACTICES SHALL BE PRIVATELY OWNED AND MAINTAINED IN ACCORDANCE WITH INDIVIDUAL DECLARATIONS OF COVENANTS.
30. ENCROACHMENT INTO THE 100' STREAM BUFFER FOR THE EXTENSION OF THE SEWER MAIN AND EASEMENT IS CONSIDERED ESSENTIAL DISTURBANCE BY DPZ PER SECTION 16.116(C)(I) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
31. ARTICLES OF INCORPORATION FOR THE RIVER HILL OVERLOOK HOMEOWNERS ASSOCIATION, INC. WILL BE FILED WITH THE MARYLAND STATE DEPARTMENT OF ASSESSMENTS AND TAXATION PRIOR TO SUBMISSION OF RECORD PLAT ORIGINALS.
32. THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION HAS BEEN FULFILLED BY ON-SITE RETENTION OF 0.86 ACRES OF FOREST (RETENTION) UNDER F-15-010.
33. A LANDSCAPING SURETY IN THE AMOUNT OF $2,310.00 FOR PERIMETER LANDSCAPE REQUIREMENTS (1) SHADE TREE, (12) EVERGREEN TREES AND (7) SHRUBS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL WAS POSTED WITH THE FINAL PLAN DEVELOPER'S AGREEMENT FOR THIS SUBDIVISION UNDER F-15-010. LANDSCAPE SURETY IN THE AMOUNT OF $600 FOR TWO (2) REPLACEMENT SHADE TREES AS REQUIRED BY APPROVAL OF WP-16-019, SHALL BE POSTED AS PART OF THE BUILDERS GRADING PERMIT FOR LOT 3.
34. THIS SUBDIVISION IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
35. THE 24' PRIVATE USE-IN-COMMON DRIVEWAY EASEMENT AND MAINTENANCE AGREEMENT FOR THE BENEFIT OF LOTS 1 THRU 8 WAS RECORDED SIMULTANEOUSLY WITH THE RECORDATION OF THE PLAT. THE PRIVATE PEDESTRIAN ACCESS EASEMENT FOR THE USE AND BENEFIT OF LOTS 1 THRU 8 ALSO WAS RECORDED SIMULTANEOUSLY WITH THE PLAT.
36. A PRE-SUBMISSION COMMUNITY MEETING WAS HELD FOR THIS PROJECT ON JULY 12, 2013.
37. OPEN SPACE LOTS 9, 11 AND 12 WAS CONVEYED TO THE RIVER HILL OVERLOOK HOMEOWNERS ASSOCIATION, INC. SIMULTANEOUSLY WITH THE FINAL PLAT RECORDATION.
38. OPEN SPACE LOT 10 WAS CONVEYED TO HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS SIMULTANEOUSLY WITH THE FINAL PLAT RECORDATION.
39. EXISTING HOUSE AND ACCESSORY STRUCTURES TO BE REMOVED.
40. THE LOTS CREATED BY THE SUBDIVISION PLAT ARE SUBJECT TO A FEE OR ASSESSMENT TO COVER OR DEFRAY ALL OR PART OF THE DEVELOPER'S COST OF THE INSTALLATION OF THE WATER AND SEWER FACILITIES, PURSUANT TO THE HOWARD COUNTY CODE SECTION 18.112. THIS FEE OR ASSESSMENT, WHICH RUNS WITH THE LAND, IS A CONTRACTUAL OBLIGATION BETWEEN THE DEVELOPER AND EACH OWNER OF THIS PROPERTY AND IS NOT IN ANY WAY A FEE OR ASSESSMENT OF HOWARD COUNTY.
41. TRASH AND RECYCLABLES COLLECTION WILL BE AT TROTTER ROAD WITHIN 5' OF THE COUNTY ROADWAY. TRASH / REFUSE COLLECTION PAD WILL BE MAINTAINED BY THE PROPERTY OWNERS (IF AN HOA) IS NOT PROPOSED. THE MAINTENANCE OF THIS COLLECTION AREA SHOULD BE REFERENCED IN THE PRIVATE USE-IN-COMMON ACCESS AGREEMENT.
42. NO HISTORIC STRUCTURES EXIST ON THIS SITE BASED ON THE HOWARD COUNTY HISTORIC SITES INVENTORY LIST.
43. DRIVEWAYS FOR LOTS 1 THRU 8 SHALL BE PROVIDED IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAIL R-6.06 IN THE VOL. IV DESIGN MANUAL.
44. SOILS INFORMATION BASED ON NRCS WEB SOIL SURVEY FOR HOWARD COUNTY, MARYLAND.
45. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
46. 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.
47. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
48. TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
49. 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.
50. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

STATE HIGHWAY ADMINISTRATION	410.531.5533
BGE(CONTRACTOR SERVICES)	410.850.4620
BGE(UNDERGROUND DAMAGE CONTROL)	410.787.9068
MISS UTILITY	1.800.257.7777
COLONIAL PIPELINE COMPANY	410.795.1390
HOWARD COUNTY, DEPT. OF PUBLIC WORKS, BUREAU OF UTILITIES	410.313.4900
HOWARD COUNTY HEALTH DEPARTMENT	410.313.2640
AT&T	1.800.252.1133
VERIZON	1.800.743.0033/410.224.9210

51. ANY DAMAGE TO PUBLIC RIGHT-OF WAYS, PAVING OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
52. THIS PLAN IS SUBJECT TO WP-16-019 WHICH THE PLANNING DIRECTOR APPROVED ON SEPTEMBER 9, 2015 TO WAIVE SECTION 16.1205(a)(7) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, WHICH STATES THAT ON-SITE RETENTION OF 30" IN DIAMETER OR LARGER SPECIMEN TREES ARE CONSIDERED PRIORITY FOR ON-SITE RETENTION AND PROTECTION. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
(1) THE DEVELOPER / BUILDER SHALL PLANT A TOTAL OF TWO (2) 2.5" CALIPER SHADE TREES AS REPLACEMENT MITIGATION FOR REMOVAL OF THE ONE (1) 45" NORWAY MAPLE TREE. THESE TREES MUST BE PLANTED ALONG THE REAR PROPERTY BOUNDARY OF LOT 3.
(2) THE PROPOSED LOCATION OF THESE TREES SHALL BE INCORPORATED INTO THE SITE DEVELOPMENT PLAN DESIGN (SDP-15-080). ALL APPLICABLE LANDSCAPE NOTES, SCHEDULES, CHARTS, AND PLANTING DETAILS SHALL BE SHOWN ON THE SDP.
(3) AN INSPECTION FEE SHALL BE PAID AT THE TIME OF SUBMISSION OF THE ORIGINAL MYLAR SDP AND FINANCIAL SURETY FOR THE INSTALLATION OF THESE TREES SHALL BE POSTED AT THE TIME OF APPLICATION FOR THE GRADING PERMIT FOR LOT 3.
(4) ON ALL SUBSEQUENT PLANS AND PLATS, PROVIDE A BRIEF DESCRIPTION OF THE WAIVER PETITION, WP-16-019, AS A GENERAL NOTE TO INCLUDE REQUESTS, SECTIONS OF THE REGULATIONS, ACTION, AND DATE.
53. THIS PLAN IS SUBJECT TO APPROVAL OF A REQUEST FOR WAIVER TO GRAVITY SEWER SERVICES FOR THE BASEMENT SEWER SERVICE FOR LOTS 1 & 8 AND ENCROACHMENT INTO 10 FOOT STRUCTURAL SETBACK OF UTILITY EASEMENT DATED SEPTEMBER 21, 2015. WAIVER DENIALS / APPROVALS ISSUED AS FOLLOWS:
(1) FIRST FLOOR ONLY GRAVITY SEWER SERVICES FOR LOTS 1 & 8 TO PREVENT AN EXCESSIVELY DEEP SEWER WAS APPROVED.
(2) LOT 4 BUILDING CORNERS CLEARANCE OF 5.5 FEET AND 7.1 FEET WITH THE SEWER DEPTH OF 23.5 FEET WAS NOT APPROVED.
(3) LOT 5 BUILDING CORNER CLEARANCE OF 4.3 FEET WITH THE SEWER DEPTH OF 24 FEET WAS NOT APPROVED.
(4) LOT 8 BUILDING CORNERS CLEARANCE OF 5.3 FEET AND 8.6 FEET WITH THE SEWER DEPTH BETWEEN 6 TO 11 FEET WAS APPROVED.

Please Note That Lots 2 Thru 8 In This Subdivision Are Subject To The Moderate Income Housing Unit (M.I.H.U.) 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. Lot 1 is exempt.

DESIGN BY:
DRAWN BY:
CHECKED BY:

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

DATE	DESCRIPTION
	REVISION BLOCK

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. 38386, EXPIRATION DATE: 01/12/2016.
STATE OF MARYLAND STEPHANIE J. TUITE No. 38386 PROFESSIONAL ENGINEER
11/5/15
STEPHANIE TUITE Date

OWNERS
RIVER HILL OVERLOOK, LLC
5034 DORSEY HALL DRIVE
ELLICOTT CITY, MARYLAND 21042
410-740-0522
ATTN: DOUG DIERINGER & RICHARD DEMMITT

BUILDER
NV HOMES
9720 PATUXENT WOODS DRIVE
COLUMBIA, MARYLAND 21046
410-379-5956
ATTN: RYAN JOHNSON

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director – Department of Planning and Zoning — Date 12-10-15
Chief, Division of Land Development — Date 12-10-15
Chief, Development Engineering Division JP — Date 12-7-15

SUBDIVISION			SECTION/AREA		LOT NO.
RIVER HILL OVERLOOK			N/A		1 THRU 8, OS 9,11,12
PLAT NO.	BLOCK NO.	ZONE	TAX/PARCEL	ELEC. DIST.	CENSUS TR.
23468-23470	8	R-ED	35/66	FIFTH	605505

TITLE SHEET

RIVER HILL OVERLOOK,
LOTS 1 THRU 8 AND OPEN SPACE LOTS 9, 11, & 12
ZONED R-ED
TAX MAP No. 35 GRID No. 8 PARCEL No. 66
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: NOVEMBER, 2015
SHEET 1 OF 5

SDP-15-080

SPECIMEN TREE TABLE				
KEY	SPECIES, SIZE (DBH)	CRZ (FT)	CONDITION	COMMENT
A	NORWAY MAPLE, 45"	67.5	GOOD CONDITION	NOT NATIVE, TO BE REMOVED
B	SLIPPERY ELM, 44.5"	66.75	GOOD CONDITION	TO REMAIN
C	RED MAPLE, 34.5"	51.75	GOOD CONDITION	TO REMAIN

SWM SUMMARY CHART	
AREA ID	SWM TREATMENT PROVIDED
LOT 1	MICRO-BIORETENTION 1 (M-6)
LOT 2	MICRO-BIORETENTION 1 & 2 (M-6)
LOT 3	MICRO-BIORETENTION 1 & 2 (M-6)
LOT 4	MICRO-BIORETENTION 3 (M-6) & DRYWELLS (M-5)
LOT 5	MICRO-BIORETENTION 3 (M-6)
LOT 6	MICRO-BIORETENTION 3 & 4 (M-6)
LOT 7	MICRO-BIORETENTION 2 & 4 (M-6)
LOT 8	MICRO-BIORETENTION 2 (M-6)

STORMWATER MANAGEMENT SUMMARY CHART

AREA OF SUBDIVISION = 4.99 ACRES (FROM FINAL PLANS)
AREA OF SUBMISSION = 3.30 ACRES
RCN = 58.1
TARGET PE = 1.16"

NOTE:

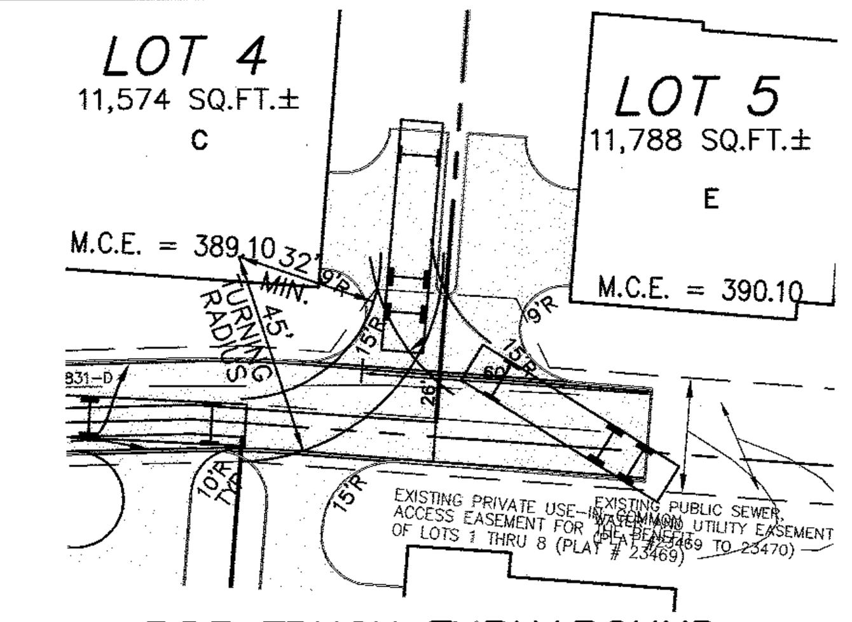
1. ALL DRIVEWAYS SHALL PROVIDE PARKING FOR AT LEAST ONE VEHICLE AND BE AT LEAST 18 FEET LONG AS MEASURED FROM THE GARAGE OR END OF THE PARKING PAD TO THE EDGE OF FLOWLINE OF THE CURB.
2. MICRO-BIORETENTION FACILITIES TO BE PRIVATELY OWNED AND MAINTAINED BY THE HOA.
3. LANDSCAPE SURETY IN THE AMOUNT OF $600 FOR TWO (2) REPLACEMENT SHADE TREES AS REQUIRED BY APPROVAL OF WP-16-019, SHALL BE POSTED AS PART OF THE BUILDERS GRADING PERMIT FOR LOT 3.

LANDSCAPING PLANT LIST			
QTY.	KEY	NAME	SIZE
2	⊙	TILIA CODATA 'GREENSPIRE' (GREENSPIRE LITTLELEAF LINDEN)	2.5"-3" CAL. FULL CROWN, B&B

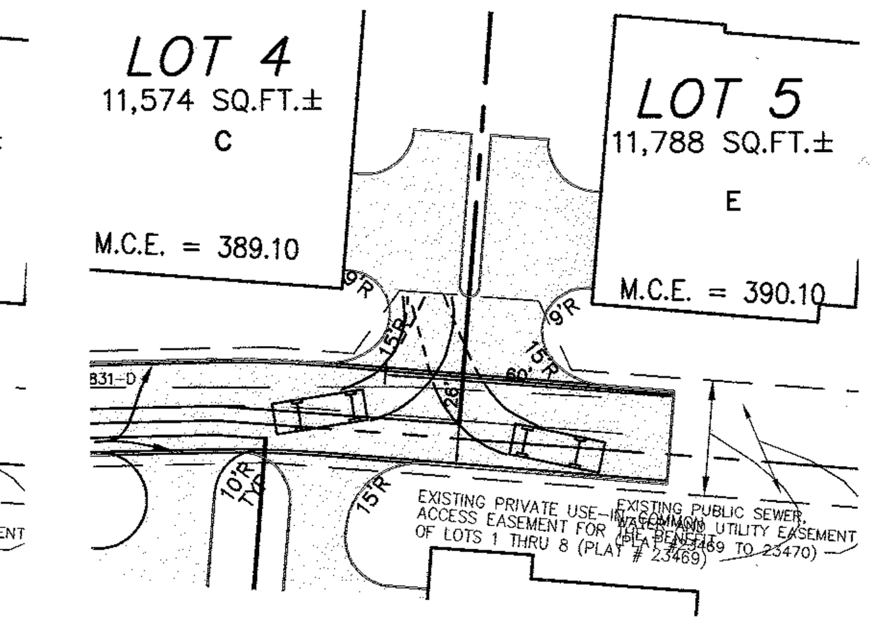
TOTAL: 2 SHADE TREES

SCHEDULE A – PERIMETER LANDSCAPE EDGE		
CATEGORY	SPECIMEN TREE REPLACEMENTS (WP-16-019)	TOTAL
LANDSCAPE TYPE	N/A	
LINEAR FEET OF PERIMETER	N/A	
NUMBER OF PLANTS REQUIRED SHADE TREES	2	2
CREDIT FOR EXISTING VEGETATION SHADE TREES SMALL/MEDIUM DECIDUOUS TREES (2:1 SUBSTITUTION)	 0 0	 0 0
NUMBER OF PLANTS PROVIDED SHADE TREES SMALL/MEDIUM DECIDUOUS TREES (2:1 SUBSTITUTION) SHRUBS	 2 0 0	 2 0 0

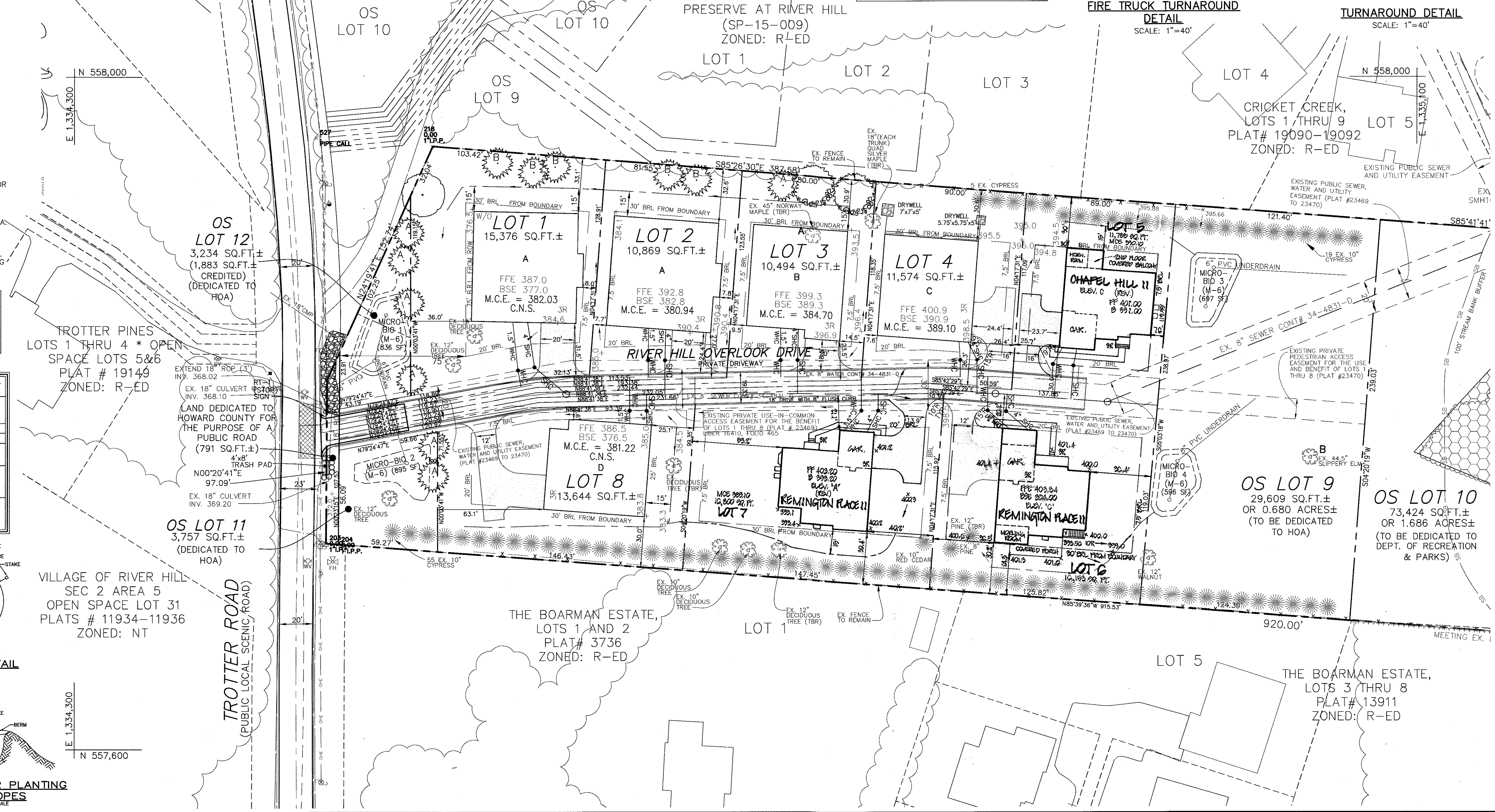
SEWER HOUSE CONNECTION CHART		
LOT	ELEVATION AT MAIN	ELEVATION AT R/W
MH 305 TO MH 310		
5 (DHC)	385.00	385.40
6 (DHC)	385.00	385.20
MH 310 TO MH 315		
4 (DHC)	384.00	384.40
7 (DHC)	384.00	384.20
3 (DHC)	380.00	380.40
2	376.24	376.64
8	376.32	376.52
1	376.83	377.33

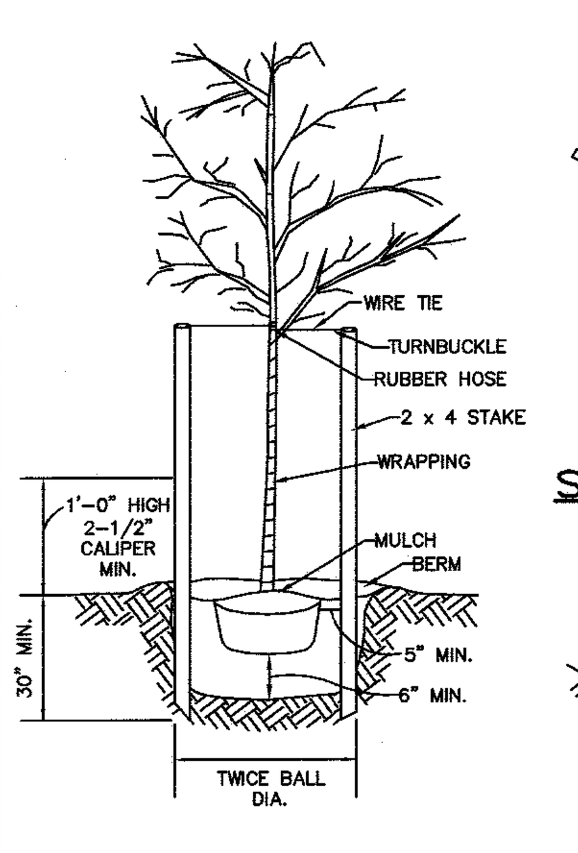


FIRE TRUCK TURNAROUND DETAIL
SCALE: 1"=40'

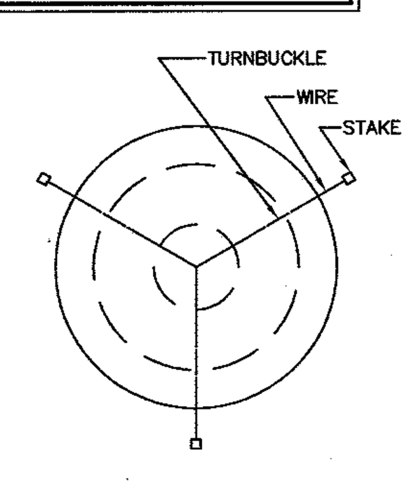


TURNAROUND DETAIL
SCALE: 1"=40'

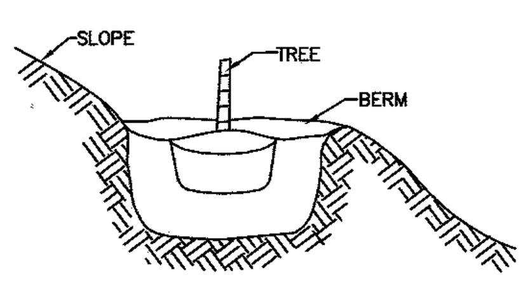




TREE PLANTING
NOT TO SCALE



STAKING DETAIL
NOT TO SCALE



GRADING FOR PLANTING ON SLOPES
NOT TO SCALE

DESIGN BY:
DRAWN BY:
CHECKED BY:

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

DATE	DESCRIPTION
8/19/16	AS-BUILT, HOUSE & DRIVEWAY, LOT 5
7/20/16	AS-BUILT OF HOUSE & DRIVEWAY FOR LOT 7 & REVISE DISTANCE TO LOT LINES
2/10/16	REV. HSE. & GRD. LOT 6, FROM GEN. BOX 'B' TO REMINGTON PLACE II

REVISION BLOCK

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. 38386, EXPIRATION DATE: 01/12/2016.

STATE OF MARYLAND
STEPHANIE J. TUITE
No. 38386
PROFESSIONAL ENGINEER

[illegible] 11/5/15
STEPHANIE TUITE Date

0' 30' 60' 120'
SCALE: 1" = 30'

OWNERS
RIVER HILL OVERLOOK, LLC
5034 DORSEY HALL DRIVE
ELLICOTT CITY, MARYLAND 21042
410-740-0522
ATTN: DOUG DIERINGER & RICHARD DEMMITT

BUILDER
NV HOMES
9720 PATUXENT WOODS DRIVE
COLUMBIA, MARYLAND 21046
410-379-5956
ATTN: RYAN JOHNSON

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[illegible] 12-10-16
Director – Department of Planning and Zoning Date

[illegible] 12-10-15
Chief, Division of Land Development Date

[illegible] 12-7-15
Chief, Development Engineering Division JP Date

SUBDIVISION			SECTION/AREA		LOT NO.
RIVER HILL OVERLOOK			N/A		1 THRU 8, OS 9,11,12
PLAT NO.	BLOCK NO.	ZONE	TAX/PARCEL	ELEC. DIST.	CENSUS TR.
23468-23470	8	R-ED	35/66	FIFTH	605505

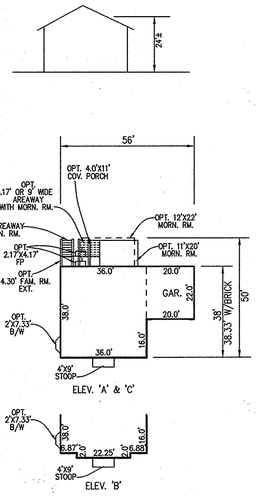
SITE DEVELOPMENT PLAN

RIVER HILL OVERLOOK,

LOTS 1 THRU 8 AND OPEN SPACE LOTS 9, 11, & 12
ZONED R-ED
TAX MAP No. 35 GRID No. 8 PARCEL No. 66
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: NOVEMBER, 2015
SHEET 2 OF 5

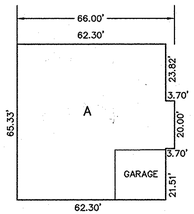
SDP-15-080

I:\2009\09040\dwg\09040-6005 RHO\09040-6005 SDP.dwg, 11/5/2015 11:20:51 AM, 1:1

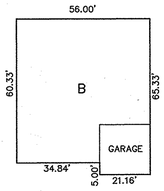


BEACONSFIELD

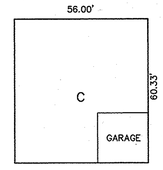
MAX MODEL SIZE 2,532 SQ.FT.



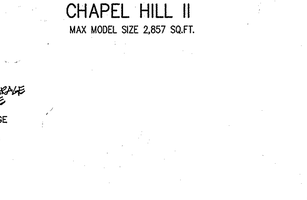
BEACONSFIELD – ALL OPTIONS
CHAPEL HILL II – NO 3-CAR SIDELOAD GARAGE
EMPRESS II – NO 3-CAR SIDELOAD OR 1-CAR. GARAGE
KENNEDY – ALL OPTIONS
REMINGTON PLACE II – NO 3–CAR
SIDELOAD GARAGE WITH REAR
MORNING ROOM OR 4' FAMILY ROOM
EXTENSION & NO 1-CAR GARAGE

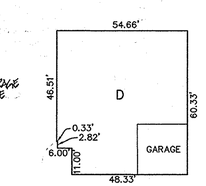


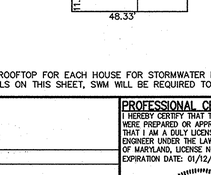
BEACONSFIELD – ALL OPTIONS
CHAPEL HILL II – NO OPTIONAL 1–CAR
FRONTLOAD GARAGE & NO 2-CAR SIDELOAD GARAGE
EMPRESS II – NO 3-CAR SIDELOAD OR 1-CAR GARAGE
KENNEDY – ALL OPTIONS
REMINGTON PLACE II – NO 3–CAR SIDELOAD GARAGE
WITH MORNING ROOM, COVERED PORCH, OR 4'
FAMILY ROOM EXTENSION & NO 1-CAR GARAGE

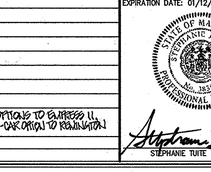


BEACONSFIELD – ALL OPTIONS
CHAPEL HILL II – NO OPTIONAL 1–CAR
FRONTLOAD GARAGE & NO 2-CAR SIDELOAD GARAGE
EMPRESS II – NO 3-CAR SIDELOAD OR 1-CAR GARAGE
KENNEDY – ALL OPTIONS
REMINGTON PLACE II – NO REAR COVERED PORCH
& NO 3–CAR SIDELOAD GARAGE
& NO 1-CAR GARAGE







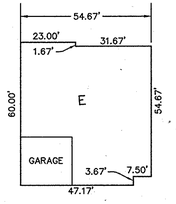


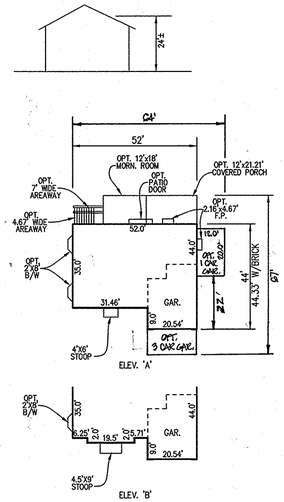
CHAPEL HILL II

MAX MODEL SIZE 2,857 SQ.FT.

BEACONSFIELD – ALL OPTIONS
CHAPEL HILL II – NO OPTIONAL 1–CAR
FRONTLOAD GARAGE & NO 2-CAR SIDELOAD GARAGE
EMPRESS II – NO 3-CAR SIDELOAD OR 1-CAR GARAGE
KENNEDY – ALL OPTIONS
REMINGTON PLACE II – NO 3–CAR SIDELOAD GARAGE
WITH MORNING ROOM, COVERED PORCH, OR 4'
FAMILY ROOM EXTENSION & NO 1-CAR GARAGE

BEACONSFIELD – DOES NOT FIT
CHAPEL HILL II – NO OPTIONAL 1–CAR
FRONTLOAD GARAGE & NO 2-CAR SIDELOAD GARAGE
EMPRESS II – NO 3-CAR SIDELOAD OR 1-CAR GARAGE
KENNEDY – ALL OPTIONS
REMINGTON PLACE II – NO REAR COVERED PORCH
& NO 3–CAR SIDELOAD GARAGE
& NO 1-CAR GARAGE

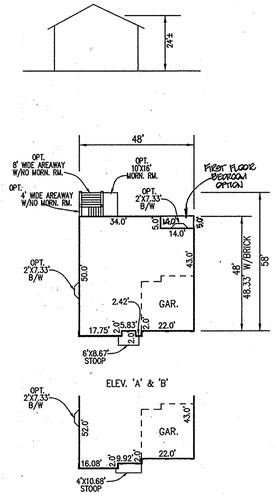




EMPRESS II

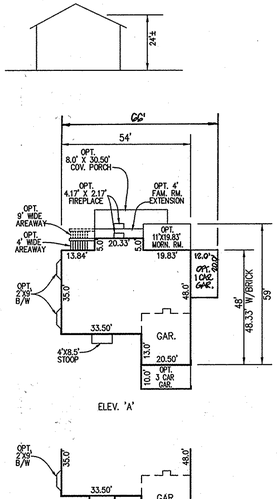
MAX MODEL SIZE 2,727 SQ.FT.

BEACONSFIELD – DOES NOT FIT
CHAPEL HILL II – NO OPTIONAL 1–CAR
FRONTLOAD GARAGE & NO 2-CAR SIDELOAD GARAGE
EMPRESS II – NO 3-CAR SIDELOAD OR 1-CAR GARAGE
KENNEDY – ALL OPTIONS
REMINGTON PLACE II – NO REAR COVERED PORCH
& NO 3–CAR SIDELOAD GARAGE
& NO 1-CAR GARLAGE



KENNEDY

MAX MODEL SIZE 2,654 SQ.FT.



REMINGTON PLACE II

MAX MODEL SIZE 3,039 SQ.FT.

GENERIC BOXES

SCALE: 1" = 30'

NOTE: THE MAXIMUM MODEL SIZE OF 3,039 SQ.FT. HAS BEEN USED FOR THE IMPERVIOUS ROOFTOP FOR EACH HOUSE FOR STORMWATER MANAGEMENT SIZING. SHOULD HOUSE MODELS OR ADDITIONAL OPTIONS BE ADDED TO THE MODELS ON THIS SHEET, SWM WILL BE REQUIRED TO REEVALUATED.

DESIGN BY:
DRAWN BY:
CHECKED BY:

DATE	DESCRIPTION
2/10/16	ADD 3-CAR OPTION TO CHAPEL HILL II, 3-CAR OPTIONS TO EMPRESS II, FRONT FLOOR DISCUSSION OPTION TO KENNEDY & 1-CAR OPTION TO REMINGTON PLACE II

REVISION BLOCK

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

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. 38306, EXPIRATION DATE: 01/12/2016.

STATE OF MARYLAND · STEPHANIE A. TUITE · No. 38306 · PROFESSIONAL ENGINEER

STEPHANIE TUITE — Date 11/5/15

0' 30' 60' 120'

SCALE: 1" = 30'

OWNERS

RIVER HILL OVERLOOK, LLC
5034 DORSEY HALL DRIVE
ELLICOTT CITY, MARYLAND 21042
410-740-0522
ATTN: DOUG DIERINGER & RICHARD DEMMITT

BUILDER

NV HOMES
9720 PATUXENT WOODS DRIVE
COLUMBIA, MARYLAND 21048
410-379-5956
ATTN: RYAN JOHNSON

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director – Department of Planning and Zoning — Date 12-10-15

Chief, Division of Land Development — Date 12-10-15

Chief, Development Engineering Division — Date 12-7-15

SUBDIVISION			SECTION/AREA		LOT NO.
RIVER HILL OVERLOOK			N/A		1 THRU 8, OS 9,11,12
PLAT NO.	BLOCK NO.	ZONE	TAX/PARCEL	ELEC. DIST.	CENSUS TR.
23468-23470	8	R-ED	35/66	FIFTH	605505

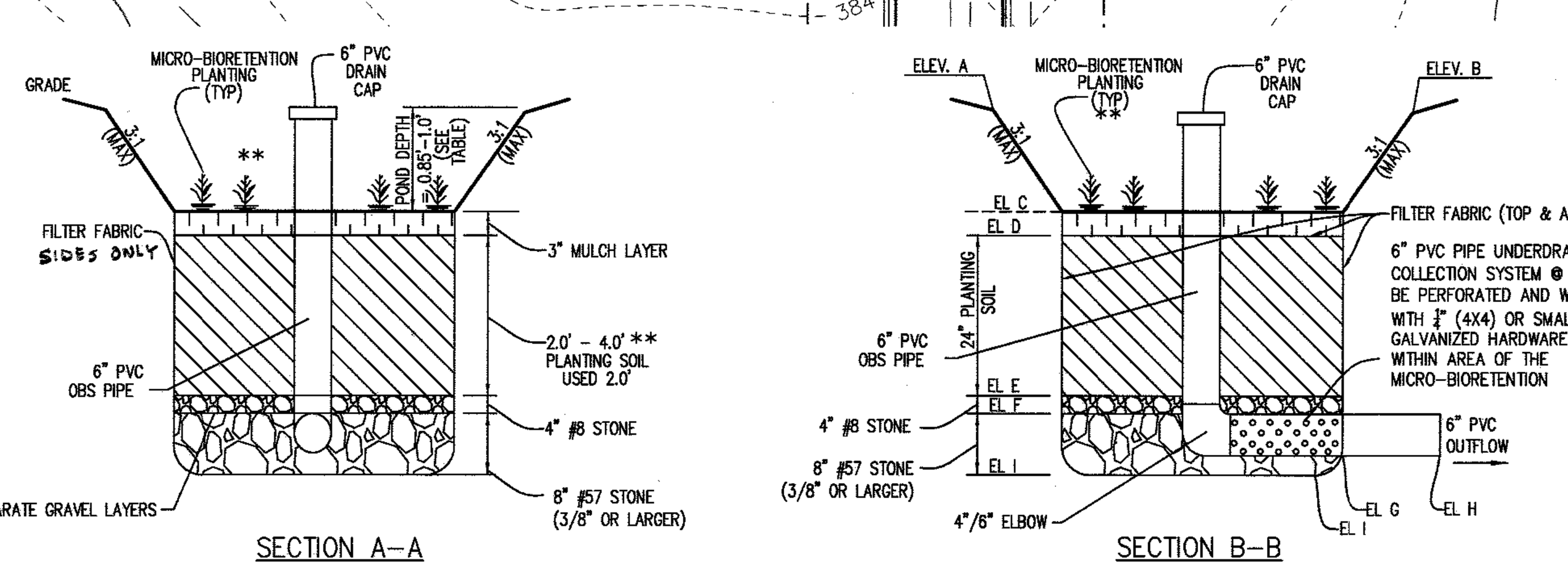
HOUSE MODELS

RIVER HILL OVERLOOK,

LOTS 1 THRU 8 AND OPEN SPACE LOTS 9, 11, & 12
ZONED R-ED
TAX MAP No. 35 GRID No. 8 PARCEL No. 66
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: NOVEMBER, 2015
SHEET 3 OF 5

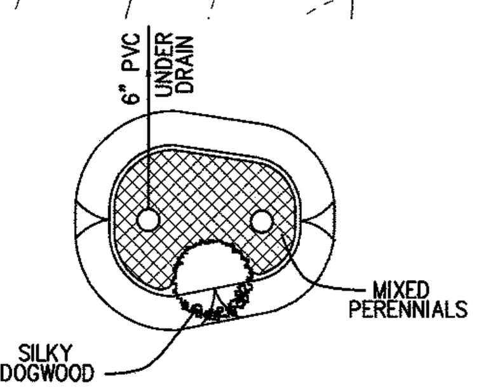
SDP-15-080

I:\2009\09040\dwg\09040-6005 RHOV\09040-6005 SDP Models - S3.dwg, 11/5/2015 10:50:35 AM, 11



MICRO-BIORETENTION DETAIL (M-6)

NOT TO SCALE



MICRO-BIORETENTION PLANTING DETAIL

NOT TO SCALE

▨	*MIXED PERENNIALS CUT-LEAF CONEFLOWER (1.5' SP.) BEEBALM (1.5' SP.) JOE-PYE-WEED (3' SP.)
○	SILKY DOGWOOD

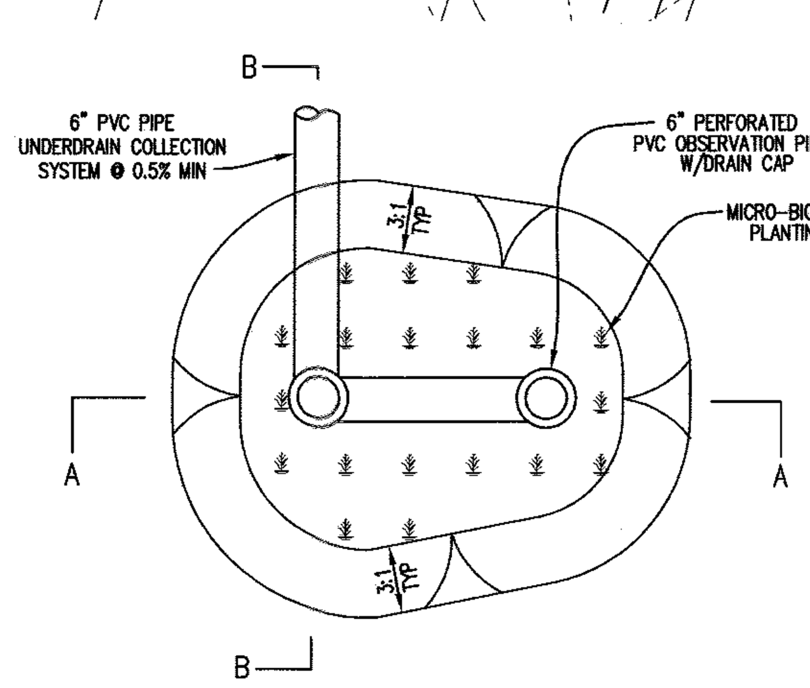
* SEE PLANT MATERIAL CHARTS FOR QUANTITIES AND SPACING

NOTE:
PLANT MATERIAL MUST COVER AT LEAST 50% OF THE SURFACE AREA OF THE MICRO-BIORETENTION

MICRO-BIORETENTION PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
12	MIXED PERENNIALS	1.5 TO 3.0 FT.
1	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION

0' 30' 60' 120'

SCALE: 1" = 30'



PLAN

NOT TO SCALE

OPERATION & MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

A. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. 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. THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS AND REPLACE ALL DEFICIENT STAKES AND WIRES.

C. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.

D. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

MICRO-BIORETENTION									
BIORETENTION FILTER	A	B	C	D	E	F	G	H	I
1 (OS LOT 12)	371.90	371.90	371.10	370.85	368.85	368.52	368.02	367.95	367.85
2 (OS LOT 11)	374.00	374.00	373.15	372.90	370.90	370.57	370.07	369.95	369.90
3 (OS LOT 9)	392.00	392.00	391.00	390.75	388.75	388.42	387.92	387.52	387.75
4 (OS LOT 9)	397.90	397.90	396.90	396.65	394.65	394.32	393.82	393.44	393.65

NOTE:
1. SEEDING AND STABILIZATION IS TO BE PERFORMED AT THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE TIME FRAME REQUIRED BY THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION & SEDIMENT CONTROL, WHICHEVER IS MORE RESTRICTIVE.
2. STOCKPILES SHALL NOT EXCEED 15 FEET IN HEIGHT.
3. WATER AND SEWER HOUSE CONNECTIONS ARE EXISTING AS PER CONTRACT #24-4831-D.
4. SEDIMENT CONTROLS ARE EXISTING PER F-15-010. IN SOME LOCATIONS, DIVERSION FENCE AND SUPER SILT FENCE HAVE BEEN SHIFTED FOR ADDITIONAL GRADING PROPOSED UNDER THIS PLAN.
5. TCD ARE TEMPORARY CHECK DAMS INSTALLED WITH F-15-010.

DESIGN BY:
DRAWN BY:
CHECKED BY:

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

DATE	DESCRIPTION
8/10/16	AS-BUILT, HOUSE, DRIVEWAY, & GRADING LOT 5
7/20/16	AS-BUILT OF HOUSE AND GRADING FOR LOT 7
2/10/16	REV. HSE. & GRD. LOT 6, FROM GEN. BOX 'B' TO REMINGTON PLACE II
	REVISION BLOCK

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. 38386, EXPIRATION DATE: 01/12/2016.

STATE OF MARYLAND STEPHANIE J. TUITE No. 38386 PROFESSIONAL ENGINEER

Stephanie Tuite 11/24/15
STEPHANIE TUITE Date

ENGINEER'S CERTIFICATE

"I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Stephanie Tuite 11/24/15
Signature of Engineer Date

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

[illegible] 11/24/15
Signature of Developer Date

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

[illegible] 11/24/15
Howard SCD Date

OWNERS	BUILDER
RIVER HILL OVERLOOK, LLC 5034 DORSEY HALL DRIVE ELLICOTT CITY, MARYLAND 21042 410-740-0522 ATTN: DOUG DIERINGER & RICHARD DEMMITT	NV HOMES 9720 PATUXENT WOODS DRIVE COLUMBIA, MARYLAND 21046 410-379-5956 ATTN: RYAN JOHNSON

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[illegible] 12-10-15
Director – Department of Planning and Zoning Date

[illegible] 12-10-15
Chief, Division of Land Development Date

[illegible] 12-7-15
Chief, Development Engineering Division JP Date

SUBDIVISION	SECTION/AREA	LOT NO.
RIVER HILL OVERLOOK	N/A	1 THRU 8, OS 9,11,12

PLAT NO.	BLOCK NO.	ZONE	TAX/PARCEL	ELEC. DIST.	CENSUS TR.
23468-23470	8	R-ED	35/66	FIFTH	605505

GRADING, SEDIMENT & EROSION CONTROL PLAN

RIVER HILL OVERLOOK,

LOTS 1 THRU 8 AND OPEN SPACE LOTS 9, 11, & 12
ZONED R-ED
TAX MAP No. 35 GRID No. 8 PARCEL No. 66
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: NOVEMBER, 2015
SHEET 4 OF 5

SDP-15-080

SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

A. Soil Preparation

1. Temporary Stabilization

a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.

c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.

2. Permanent Stabilization

a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:

i. Soil pH between 6.0 and 7.0.
ii. Soluble salts less than 500 parts per million (ppm).
iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 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 clay) would be acceptable.
iv. Soil contains 1.5 percent minimum organic matter by weight.
v. Soil contains sufficient pore space to permit adequate root penetration.

b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.

c. 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.

d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.

e. 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 other equipment to roughen the surface where site conditions will not permit normal seedbed 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 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

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. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

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 USDA-NRCS.

3. Topsoiling is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible.

4. Areas having slopes steeper than 2:1 require special consideration and design.

5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:

a. 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 fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter.

b. 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.

c. 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.

6. Topsoil Application

a. Erosion and sediment control practices must be maintained when applying topsoil.

b. 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 corrected in order to prevent the formation of depressions or water pockets.

c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

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. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
2. 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 according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
3. 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 pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

B-4-3 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.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

A. Seeding
1. Specifications
a. All seed must meet the requirement of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
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 later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keepinoculant as cook as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
d. Sod or seed must not 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 phyto-toxic materials.

2. Application
a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with weighted roller to provide good seed to soil contact.
b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
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; P O (phosphorus), 200 pounds per acre; K O (potassium), 200 pounds per acre.
ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
iii. Mix seed and fertilizer on site and seed immediately and without interruption.
iv. When hydroseeding do not incorporate seed into the soil.

B. Mulching
1. Mulch Materials (in order of preference)
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 areas where one species of grass is desired.
b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into uniform fibrous physical state.
i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
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 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 without inhibiting the growth of the grass seedlings.
iv. WCFM material must not contain elements or compounds at concentration levels that will by phyto-toxic.
v. WCFM must conform to the following physical requirements: fiber length of 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.

2. Application
a. Apply mulch to all seeded areas immediately after seeding.
b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform 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.
c. Wood cellulose fiber used as mulch must be applied to 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.

3. Anchoring
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 4-15 feet wide and 300 to 3,000 feet long.

TEMPORARY SEEDING NOTES (B-4-4)

Definition

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

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 practices are required.

Criteria

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below 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 fertilizer and lime rates must be put on the plan.

2. For sites having soil tests performed, use and show the recommended 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.1.b and maintain until the next seeding season.

Temporary Seeding Summary

Hardiness Zone (from Figure B.3): 6b
Seed Mixture (from Table B.1):

Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20)	Lime Rate
BARLEY	96	3/1 - 5/15, 8/15 - 10/15	1"	436 lb/ac (10 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
OATS	72		1"		
RYE	112		1"		

PERMANENT SEEDING NOTES (B-4-5)

A. Seed Mixtures

1. General Use

a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.

b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.

c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency. d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary .

2. Turfgrass Mixtures

a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.

b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.

i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.

iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.

Notes:
Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland"

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

c. Ideal Times of Seeding for Turf Grass Mixtures 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 Zones: 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 stones and debris over 1 1/2 inches in diameter The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.

e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 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 hot seasons, or on adverse sites.

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): 6b
Seed Mixture (from Table B.3): 8

No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20) N	P_2O_5	K_2O	Lime Rate
8	TALL FESCUE	100	Mar. 1-May 15 Aug. 15-Oct. 15	1/4-1/2 in.	45 lbs. per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)

B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

1. General Specifications
a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
b. Sod must be machine cut at a uniform soil thickness fo ¾ inch, plus or minus ¼ inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
d. Sod must not be harvested or transplanted when moisture content (excessively dry of wet) may adversely affect its survival.
e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.
2. Sod Installation
a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
c. Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
d. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping, and irrigating for any piece of sod within eight hours.
3. Sod Maintenance
a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
b. After the first week, sod watering is required as necessary to maintain adequate moisture content.
c. Do not mow until the sod is firmly rooted. No more than ⅓ of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREAS

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.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Criteria

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. 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 sediment control practice.
4. Access the stockpile area from the upgrade side.
5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

Maintenance

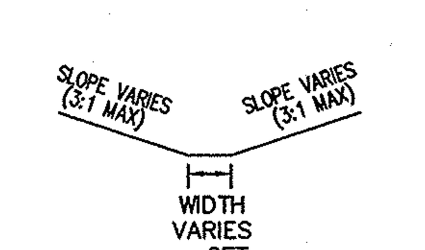
The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

HOWARD SOIL CONSERVATION DISTRICT
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 (410-313-1855).
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.
3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: 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 (SEC. 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 COUNTY SEDIMENT CONTROL INSPECTOR.
6) SITE ANALYSIS:

TOTAL AREA OF SITE	3.30 ACRES (THIS SUBMISSION)
AREA DISTURBED	2.68 ACRES
AREA TO BE ROOFED OR PAVED	0.93 ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.75 ACRES
TOTAL CUT	5,000 CU.YDS.
TOTAL FILL	5,000 CU.YDS.
OFFSITE WASTE/BORROW AREA LOCATION	N/A

7) ANY SEDIMENT CONTROL PRACTICE THAT 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 SEDIMENT CONTROL INSPECTOR.
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 WORKDAY, WHICHEVER IS SHORTER.
11) ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.
12) A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 ACRE 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 PROCEEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.



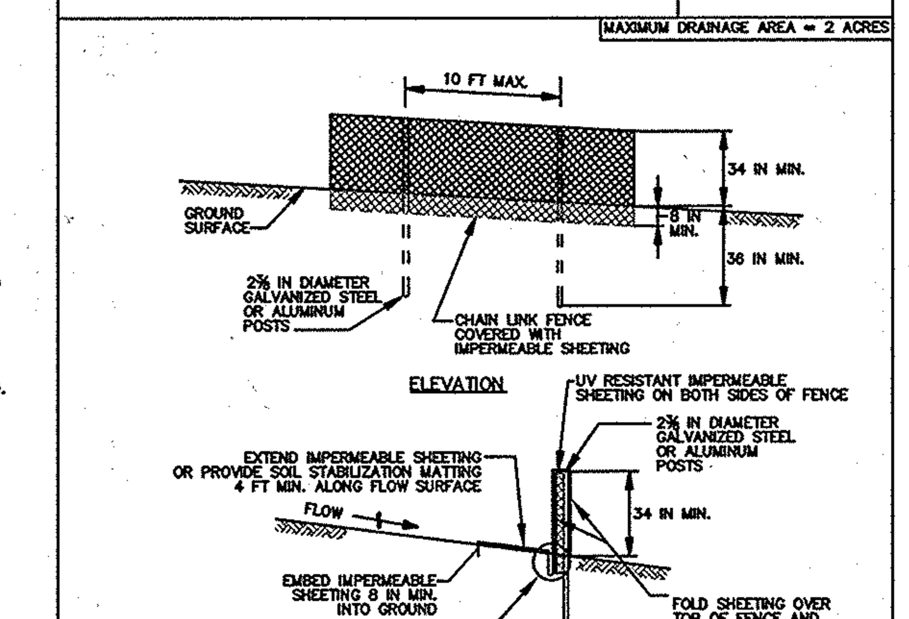
NOTE:
1. SLOPE OF BOTTOM OF PROPOSED SWALE VARIES.
2. EXISTING CHECK DAMS WILL BE UTILIZED FOR SEDIMENT CONTROL DURING CONSTRUCTION. COMPUTATIONS PROVIDED WITH F-15-010 AND WILL BE 0.8 FT IN HEIGHT AND SPACED BETWEEN 7 AND 13 FEET DEPENDING ON SLOPE OF BOTTOM OF SWALE, (7 FEET (10% SLOPE), 9 FEET (8% SLOPE), AND 13 FEET (6% SLOPE)).
3. SHEER STRESS = 2.6 lbs/sq ft.
4. AVERAGE SWALE SLOPE = 8% WITH VELOCITY = 0.2 FPS (2 YR STORM).

SWALE DETAIL
NOT TO SCALE

DETAIL C-9 DIVERSION FENCE

STANDARD SYMBOL —SFD—

MAXIMUM DRAINAGE AREA = 2 ACRES

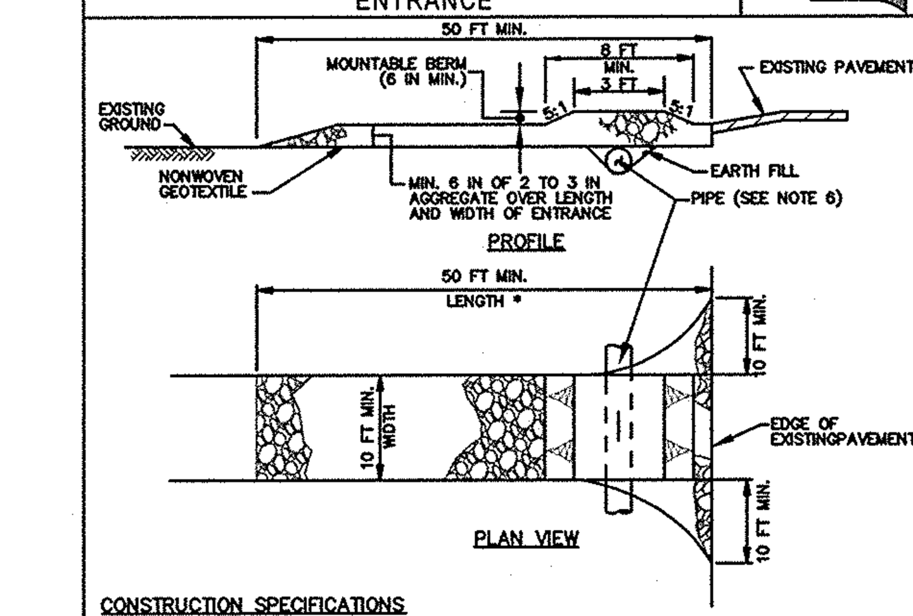


CONSTRUCTION SPECIFICATIONS
1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2⅜ INCH MAXIMUM OPENING).
2. USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL | U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL SCE

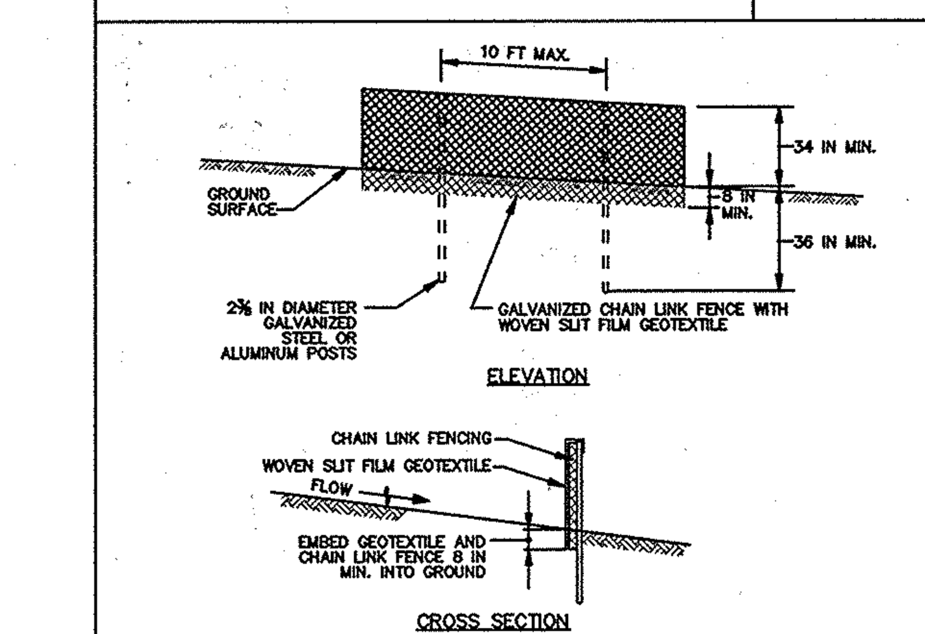


CONSTRUCTION SPECIFICATIONS
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. 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 DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. 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.
5. 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 | U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL —SSF—

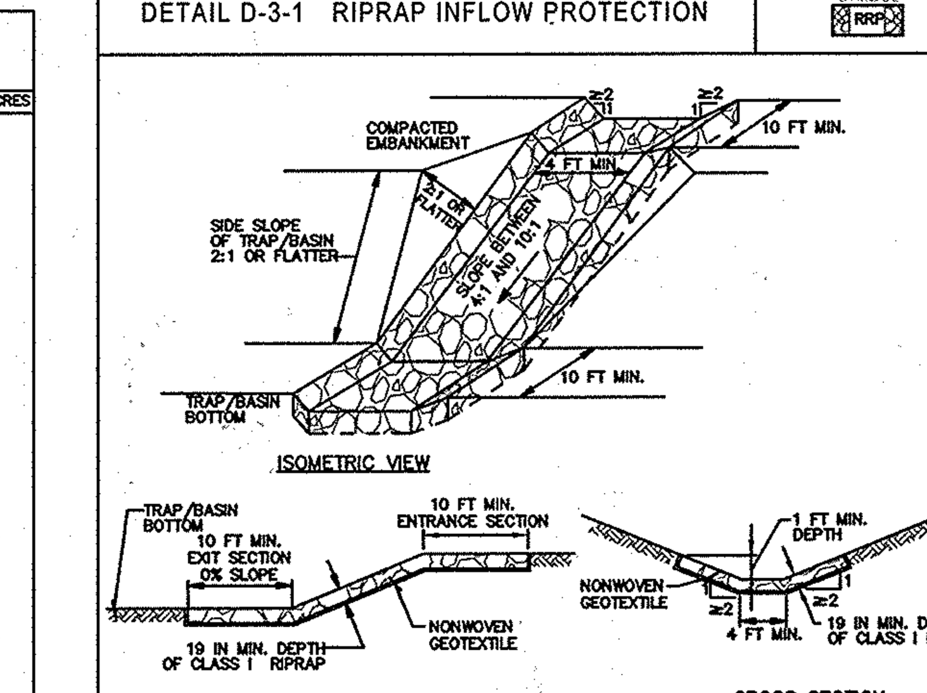


CONSTRUCTION SPECIFICATIONS
1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER 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 SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL | U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL D-3-1 RIPRAP INFLOW PROTECTION

STANDARD SYMBOL RRP

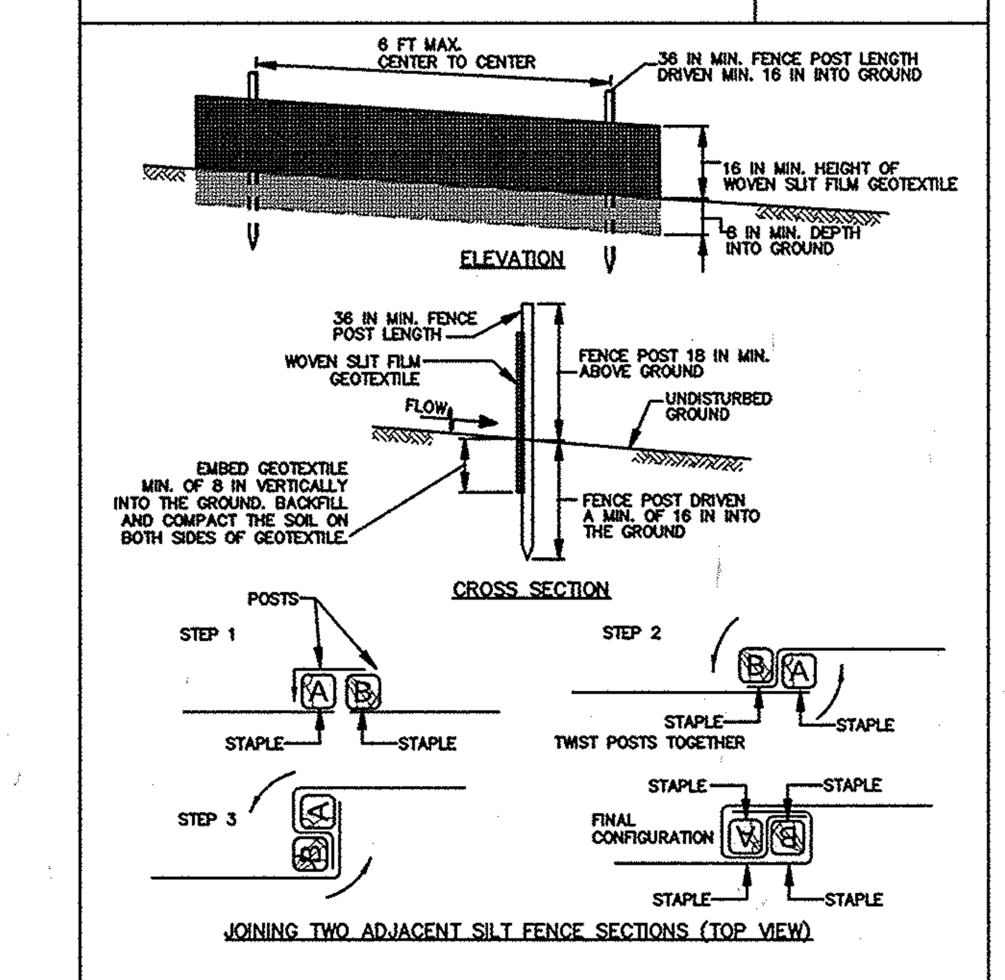


CONSTRUCTION SPECIFICATIONS
1. PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL RIPRAP.
2. CONSTRUCT INFLOW CHANNEL WITH CLASS I RIPRAP OR EQUIVALENT RECYCLED CONCRETE LINING TO A MINIMUM DEPTH OF 19 INCHES (2 x D_{50}) AND A 1 FOOT DEEP FLOW CHANNEL. INFLOW RIPRAP PROTECTION CHANNEL MUST HAVE A TRAPEZOIDAL CROSS SECTION WITH 2:1 OR FLATTER SIDE SLOPES AND A 4 FOOT MINIMUM BOTTOM WIDTH.
3. INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE.
4. BLEND RIPRAP INTO EXISTING GROUND.
5. MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL | U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL —SF—

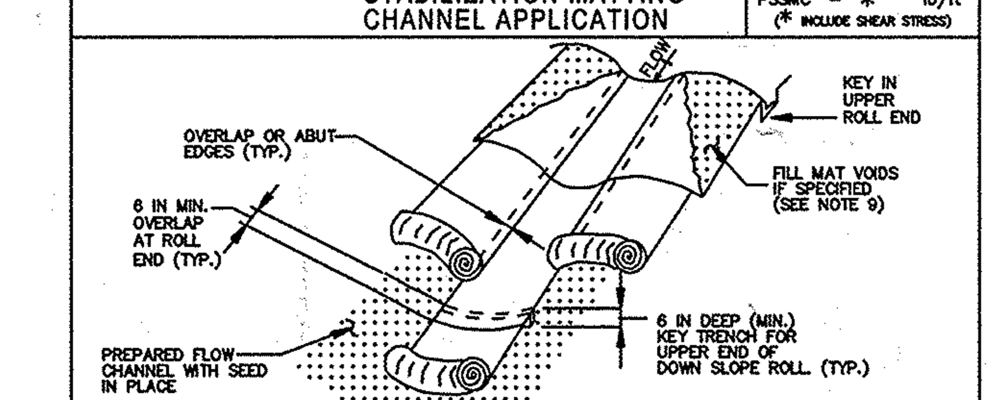


CONSTRUCTION SPECIFICATIONS
1. USE WOOD POSTS 1¾ X 1¾ ± ⅟₁₆ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE 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 MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. 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.
8. 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.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL | U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL B-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL PSSMC - * lb/ft² (* INCLUDE SHEAR STRESS)



CONSTRUCTION SPECIFICATIONS:
1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 ½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL | U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SEQUENCE OF CONSTRUCTION

1. OBTAIN A GRADING PERMIT AND HOLD PRE-CONSTRUCTION MEETING WITH COUNTY INSPECTOR. (2 WEEKS)
2. NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/ INSPECTION AT 410-313-1330 AT LEAST 24 HOURS BEFORE STARTING WORK.
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND ANY ADDITIONAL SILT FENCE OR SUPER-SILT FENCE REQUIRED BY SEDIMENT CONTROL INSPECTOR. EXISTING SEDIMENT CONTROLS INCLUDING EXISTING CHECK DAMS IN SWALES PROVIDED UNDER F-15-010 ARE TO BE UTILIZED FOR HOUSE CONSTRUCTION. (1 DAY)
4. REMOVE NECESSARY TREES AND ROUGH GRADE LOTS. (1 YEAR)
5. INSTALL TEMPORARY SEEDING. (1 DAY)
6. CONSTRUCT BUILDINGS AND DRIVEWAY. INSTALL WATER AND SEWER HOUSE CONNECTIONS TO HOUSES. INSTALL DRYWELLS ON LOT 4 UPON CONSTRUCTION OF HOUSE ON THAT LOT. INSTALL EROSION CONTROL MATTING AS EACH LOT IS CONSTRUCTED. (1 YEAR)
7. INSTALL ROOF LEADERS WHERE NECESSARY WHEN POSSIBLE, FINE GRADE SITE, AND INSTALL PERMANENT SEEDING WITH CONSTRUCTION ON EACH LOT. (3 DAYS EACH)
8. UPON COMPLETION OF ALL GRADING WITHIN DRAINAGE AREA TO EACH MICRO-BIORETENTION AREA, CONSTRUCT EACH MICRO-BIORETENTION FACILITY AND UNDERDRAIN WHEN POSSIBLE. (2 DAYS EACH)
9. INSTALL MICRO-BIORETENTION PLANT MATERIAL AND MULCH UPON CONSTUCTION OF EACH FACILITY. (1 DAY EACH)
10. ALL FINAL GRADES AND STABILIZATION SHOULD BE COMPLETED BEFORE ANY REMOVAL OF CONTROLS. WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE SEDIMENT CONTROL DEVICES MAY BE REMOVED. (3 DAYS)

NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE EACH RAINFALL AND ON A DAILY BASIS.

DESIGN BY:
DRAWN BY:
CHECKED BY:

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DATE	DESCRIPTION

REVISION BLOCK

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. 38386, EXPIRATION DATE: 01/12/2016.

STATE OF MARYLAND — STEPHANIE J. TUITE — No. 38386 — PROFESSIONAL ENGINEER

STEPHANIE TUITE — Date 11/24/15

ENGINEER'S CERTIFICATE
"I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer — Date 11/24/15

DEVELOPER'S CERTIFICATE
"I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer — Date 11/24/15

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

Howard SCD — Date 11/24/15

OWNERS
RIVER HILL OVERLOOK, LLC
5034 DORSEY HALL DRIVE
ELLICOTT CITY, MARYLAND 21042
410-740-0522
ATTN: DOUG DIERINGER & RICHARD DEMMITT

BUILDER
NV HOMES
9720 PATUXENT WOODS DRIVE
COLUMBIA, MARYLAND 21046
410-379-5956
ATTN: RYAN JOHNSON

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — Date 12-10-15
Chief, Division of Land Development — Date 12-10-15
Chief, Development Engineering Division JP — Date 12-7-15

SUBDIVISION			SECTION/AREA		LOT NO.
RIVER HILL OVERLOOK			N/A		1 THRU 8, OS 9,11,12
PLAT NO.	BLOCK NO.	ZONE	TAX/PARCEL	ELEC. DIST.	CENSUS TR.
23468-23470	8	R-ED	35/66	FIFTH	605505

SEDIMENT & EROSION CONTROL NOTES & DETAILS

RIVER HILL OVERLOOK,
LOTS 1 THRU 8 AND OPEN SPACE LOTS 9, 11, & 12
ZONED R-ED
TAX MAP No. 35 GRID No. 8 PARCEL No. 66
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: NOVEMBER, 2015
SHEET 5 OF 5

SDP-15-080