

GENERAL NOTES

- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS, UNLESS WAIVERS HAVE BEEN APPROVED.
- EXISTING TOPOGRAPHY BY OTHERS, INFORMATION SUPPLIED BY THE CLIENT.
- PROPERTY OUTLINE SHOWN HEREON IS BASED ON FIELD RUN BOUNDARY SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC., DATED MARCH 27, 2015.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM, HOWARD COUNTY MONUMENT NOS. 24FA AND 25AA WERE USED FOR THIS PROJECT.
- WATER FOR THIS PROJECT IS TO BE PUBLIC. EXISTING CONTRACT NUMBER 118-W&S. (PATAPSCO RIVER DRAINAGE AREA) SEWER FOR THIS PROJECT IS TO BE PUBLIC. EXISTING CONTRACT NUMBER 118-W&S. (PATAPSCO RIVER DRAINAGE AREA)
- EXISTING UTILITIES ARE BASED ON RECORDED DRAWINGS AND FIELD RUN TOPOGRAPHY.
- THE STORMWATER MANAGEMENT SYSTEM/FACILITIES SHOWN ON THESE PLANS IS AN APPROXIMATION OF THE SIZE, SHAPE AND LOCATION. IT IS UNDERSTOOD THAT THIS SYSTEM HAS NOT BEEN DESIGNED AND THE ACTUAL DESIGN MAY CHANGE, ALTERING THE NUMBER OF UNITS ALLOCATED FOR THIS DEVELOPMENT. ESDV IS PROVIDED BY DRY WELLS (M-5), MICRO BIO-RETENTION FACILITIES (M-6) AND FILTERED STRUCTURAL PRACTICES. 100 YEAR STORMWATER MANAGEMENT IS PROVIDED BY UNDERGROUND PIPE STORAGE.
- THIS SITE IS LOCATED WITHIN THE HISTORIC DISTRICT.
- NO RARE, THREATENED OR ENDANGERED SPECIES OR THEIR HABITATS WERE OBSERVED ON THE PROPERTY.
- THERE IS NO 100-YR FLOODPLAIN LOCATED WITHIN THE LIMITS OF THIS SITE.
- WETLANDS SHOWN ON-SITE ARE BASED ON A FIELD INVESTIGATION PERFORMED BY JOHN CANOLES OF ECO-SCIENCE PROFESSIONALS, INC. DATED SEPTEMBER 29, 2015. THERE ARE SOME NECESSARY PROPOSED DISTURBANCES TO THE WETLANDS OR ASSOCIATED BUFFERS.
- A FOREST STAND DELINEATION AND ENVIRONMENTAL RESOURCES ASSESSMENT WAS PERFORMED BY JOHN CANOLES OF ECO-SCIENCE PROFESSIONALS, INC., DATED SEPTEMBER 29, 2015.
- A TOTAL OF 8 BUILDABLE LOTS AND ONE OPEN SPACE LOT ARE PROPOSED UNDER THIS PLAN.
- A PRE-SUBMISSION COMMUNITY MEETING WAS HELD ON MARCH 1, 2017 AT 6:00 PM AT THE MILLER BRANCH LIBRARY.
- THE ADVISORY HISTORIC PRESERVATION COMMISSION MEETING WAS HELD MARCH 2, 2017.
- THIS PROJECT IS EXEMPT FROM RECREATIONAL OPEN SPACE REQUIREMENTS PER SECTION 16.121(a)(4)(i) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- IN ACCORDANCE WITH SECTION 112.1.F. OF THE 10/06/13 COMPREHENSIVE ZONING REGULATIONS, THIS PROJECT IS SUBJECT TO MODERATE INCOME HOUSING UNITS. A MIHU AGREEMENT AND MIHU COVENANTS WILL BE REQUIRED IN ACCORDANCE WITH SECTION 13.402 OF THE HOWARD COUNTY CODE. THE MIHU REQUIREMENTS FOR THIS PROJECT WILL BE ONE UNIT.
- REFERENCE WAIVER PETITION WP-16-067, APPROVED MARCH 14, 2016, TO WAIVE SECTION 16.166(a)(2)(i) "STREAMS AND WETLANDS" AND SECTION 16.116(d)(1) "STEEP SLOPES". THIS APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
 - COMPLIANCE WITH THE ATTACHED COMMENTS FROM THE DEVELOPMENT ENGINEERING DIVISION.
 - THE PROPERTY WILL REQUIRE THE PLANNING AND ZONING DIRECTORS APPROVAL TO EXCEED THE 120' BUILDING LENGTH REQUIREMENT SET FORTH IN SECTION 112.0.D.1.e OF THE HOWARD COUNTY ZONING REGULATIONS. WRITTEN APPROVAL FOR THE GREATER BUILDING LENGTH THAN SPECIFIED WILL BE REQUIRED FROM THE PLANNING AND ZONING DIRECTOR WITH THE SUBMISSION OF THE SKETCH PLAN OR THE PRELIMINARY EQUIVALENT SKETCH PLAN.
 - APPROVAL IS RESTRICTED TO MINIMIZE THE SITE DISTURBANCES SHOWN ON THE REVISED WAIVER EXHIBIT TO THE MAXIMUM EXTENT POSSIBLE FOR IMPACTS TO THE STREAM BUFFER AREA AND THE STEEP SLOPE AREA SHOWN ON THE PLANS. THIS HAS BEEN ACCOMPLISHED BY REDUCTION OF UNITS, COMBINING BUILDINGS, AND RECONFIGURATION OF STORMWATER MANAGEMENT.
- TRAFFIC CONTROL DEVICES:
 - THE R1-1 ("STOP") SIGN AND STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
 - THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
 - ALL TRAFFIC CONTROL DEVICES, AND THEIR LOCATIONS, SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUMUTCD).
 - ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH"), SQUARE TUBE POST (1 1/4 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- THIS PROJECT DOES NOT CONTRIBUTE TO ANY TIER II WATERS.
- TRASH COLLECTION AND RECYCLING PICKUP FOR TOWNHOUSE UNITS 1-8 TO BE PRIVATE. PICKUP WILL BE MADE AT THE END OF EACH DRIVEWAY.
- REFERENCE ALTERNATIVE COMPLIANCE REQUEST WP-18-012, APPROVED SEPTEMBER 12, 2017, FOR AN ALTERNATIVE COMPLIANCE OF SECTION 16.120(c)(4) "MINIMUM FRONTS", SECTION 16.146 "PRELIMINARY PLAN", AND SECTION 16.1205(a)(7) "ON-SITE FOREST RETENTION". THE SITE DESIGN SHOWN HEREON MAY BE ALTERED BASED ON WP-18-012.

SITE DATA

LOCATION: TAX MAP 25, BLOCK 7
 PARCEL: 43
 2ND ELECTION DISTRICT
 PRESENT ZONING: R-A-15
 GROSS AREA OF PROJECT: 3.42 AC.
 AREA OF RIGHT-OF-WAY DEDICATION: 0.00 AC.
 LIMIT OF DISTURBANCE: 0.65 AC.
 PROPOSED USE OF SITE: RESIDENTIAL (SFA)
 NUMBER OF RESIDENTIAL LOTS PROPOSED: 8 LOTS
 AREA OF RESIDENTIAL LOTS PROPOSED: 0.26 AC.
 OPEN SPACE REQUIRED: 0.86 AC.
 OPEN SPACE PROVIDED: 2.46 AC.
 CREDITED OPEN SPACE PROVIDED: 2.22 AC.
 NON-CREDITED OPEN SPACE PROVIDED: 0.24 AC.
 AREA OF STREAM/BUFFER: 0.52 AC.
 AREA OF WETLANDS/BUFFER: 0.08 AC.
 AREA OF MODERATE SLOPES (15% - 24.99%): 0.29 AC.
 AREA OF STEEP SLOPES (25% OR GREATER): 1.16 AC.
 AREA OF FLOOD PLAIN: 0.00 AC.
 NET PROJECT AREA: 2.26 AC.
 AREA OF EXISTING FOREST COVER: 1.60 AC.
 AREA OF ERODIBLE SOILS: 3.42 AC.
 AREA MANAGED BY ESDV (THIS PLAN): 0.95 AC.
 IMPERVIOUS AREA: 0.39 AC.
 *GREEN AREA: 0.56 AC.
 MODERATE INCOME HOUSING UNITS (MIHU): 8 x 10% = 0.8 OR 1 UNIT REQUIRED
 DPZ REF: SDP-66-011, ECP-16-029, CONT. 118-W&S, WP-16-067

SKETCH PLAN

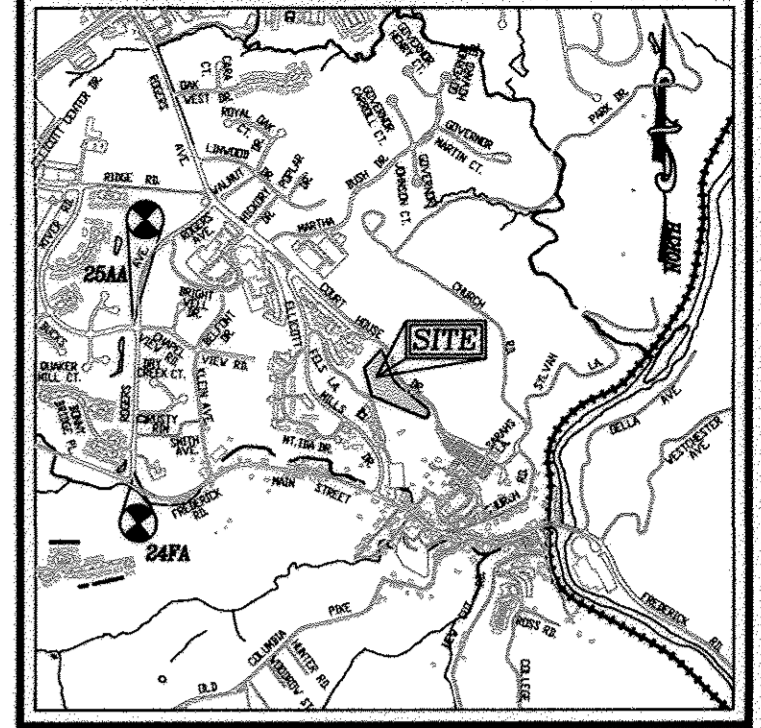
THE TOWNS AT COURT HILL

LOTS 1-8 AND OPEN SPACE LOT 9

PARCEL 43 (L. 7128 / F. 548)
 3614 COURT HOUSE DRIVE
 ELLICOTT CITY, MD 21043

BENCHMARKS

HOWARD COUNTY BENCHMARK 24FA (CONC. MON.)
 N 583751.41 E 1366091.86 ELEV. 262.88
 *LOCATED ON THE NORTH-EAST CORNER OF THE INTERSECTION AT FREDERICK ROAD AND ROGERS AVENUE.
 HOWARD COUNTY BENCHMARK 25AA (CONC. MON.)
 N 585307.19 E 1366070.97 ELEV. 307.71
 *LOCATED ON THE NORTH-WEST CORNER OF THE INTERSECTION AT PATAPSCO RIVER ROAD AND ROGERS AVENUE.



VICINITY MAP

SCALE: 1"=2000'
 ADC MAP COORDINATE: 21 B8

LEGEND

- RIGHT-OF-WAY LINE
- BOUNDARY LINE
- ADJ. BOUNDARY LINES
- EXISTING EDGE OF PAVEMENT
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING FENCE
- EXISTING STORMWATER
- EXISTING SANITARY SEWER
- EXISTING OVERHEAD LINES
- EXISTING WATER
- EXISTING GUARDRAIL
- EXISTING TREELINE
- EXISTING WETLANDS
- EXISTING WETLAND BUFFER
- EXISTING STREAM BUFFER
- EXISTING STREAM
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SANITARY MANHOLE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- PROPOSED TREELINE
- PROPOSED SIDEWALK
- PROPOSED MICRO-BIORETENTION FACILITY (M-6)
- PROPOSED DRY WELL (M-5)
- PROPOSED FOREST CONSERVATION EASEMENT
- EXISTING PUBLIC WATER, SEWER, AND UTILITY RIGHT OF WAY (PER COM. # 118-W&S)
- PROPOSED PUBLIC WATER, SEWER & UTILITY EASEMENT
- PROPOSED PRIVATE DRAINAGE EASEMENT

NO.	SIZE (IN DBH)	CRZ (FEET RADIUS)	COMMON NAME	CONDITION	COMMENTS
ST 1	34"	51'	SYCAMORE	GOOD CONDITION, WITHIN THE STREAM BUFFER	TO BE REMOVED

OWNER/DEVELOPER

COURT HILL, LLC
 5881 STEARMAN COURT
 ELK RIDGE, MD 21075
 C/O ART WARSHAW
 443-255-1976

	REQUIRED
TOWNHOUSE	8 UNITS @ 2 SPACES PER UNIT = 16 SPACES
OVERFLOW PARKING	8 UNITS @ 0.5 SPACES PER UNIT = 4 SPACES
TOTAL SPACES REQUIRED:	20 SPACES
TOWNHOUSE GARAGE SPACES PROVIDED (1-CAR GARAGE TOWNHOMES = 8)	8 SPACES*
TOWNHOUSE DRIVEWAY SPACES PROVIDED ON-STREET PARKING PROVIDED	4 SPACES
TOTAL SPACES PROVIDED:	20 SPACES

LAYOUT PLAN

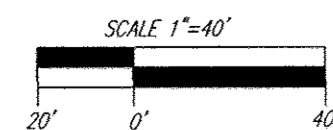
SCALE: 1"=40'

GROSS AREA	FLOODPLAIN AREA	STEEP SLOPES AREA	NET AREA	UNITS PERMITTED BY NET AREA	EXISTING UNITS UNDER PHASE II	PROPOSED UNITS UNDER PHASE II	TOTAL UNITS
3.42 AC.	0.00 AC.	1.16 AC.	2.26 AC.	33 UNITS	22 UNITS	8 UNITS	30 UNITS

DESCRIPTION	SHEET NO.
LAYOUT PLAN	1 OF 4
SOILS MAP, GRADING, EROSION AND SEDIMENT CONTROL PLAN	2 OF 4
PROPOSED ESDV, DRAINAGE AREA MAP AND SWM DETAILS	3 OF 4
FOREST CONSERVATION PLAN	4 OF 4

TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY

PLANNING DIRECTOR: *Robert H. Vogel*
 DATE: 9-22-17



NO. _____ REVISION _____ DATE _____

SKETCH PLAN
 LAYOUT PLAN

THE TOWNS AT COURT HILL
 LOTS 1-8 AND OPEN SPACE LOT 9

PARCEL 43 (L. 7128 / F. 548)
 3614 COURT HOUSE DRIVE
 ELLICOTT CITY, MD 21043

TAX MAP: 25 GRID: 7
 2ND ELECTION DISTRICT

PROFESSIONAL CERTIFICATE I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16183, EXPIRATION DATE: 09-27-2018

ROBERT H. VOGEL, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410-461-7666
 FAX: 410-461-1818

DESIGN BY: RHY
 DRAWN BY: JMR
 CHECKED BY: RHY
 DATE: SEPTEMBER 2017
 SCALE: AS SHOWN
 W.O. NO.: 04-104

1 SHEET OF 4

ROBERT H. VOGEL, PE No. 16183

SOILS LEGEND				
SYMBOL	NAME/DESCRIPTION	GROUP	K-FACTOR	ERODIBLE
M ₂ D	MANOR-BANNERTOWN SANDY LOAMS, 15 TO 25 PERCENT SLOPES, ROCKY	B	.15	YES
M ₂ F	MANOR-BANNERTOWN SANDY LOAMS, 25 TO 65 PERCENT SLOPES, ROCKY	B	.20	YES

-SOILS INFORMATION FROM USDA WEB SOIL SURVEY WEBSITE
 -HOWARD COUNTY SOILS MAP NUMBER 14 - ELLICOTT CITY SE
 NOTE:
 HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT
 OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH
 A SLOPE GREATER THAN 5 PERCENT

LEGEND	
RIGHT-OF-WAY LINE	---
BOUNDARY LINE	---
ADJ. BOUNDARY LINES	---
EXISTING EDGE OF PAVEMENT	---
EXISTING CURB AND GUTTER	---
PROPOSED CURB AND GUTTER	---
EXISTING FENCE	X
EXISTING STORMDRAIN	SD
EXISTING SANITARY SEWER	SS
EXISTING OVERHEAD LINES	OH
EXISTING WATER	W
EXISTING GUARDRAIL	---
EXISTING TREE LINE	---
EXISTING WETLANDS	---
EXISTING WETLAND BUFFER	---
EXISTING STREAM BUFFER	---
EXISTING STREAM	---
EXISTING UTILITY POLE	---
EXISTING LIGHT POLE	---
EXISTING SANITARY MANHOLE	SM
EXISTING CLEANOUT	CO
EXISTING FIRE HYDRANT	FH
PROPOSED TREE LINE	---
PROPOSED SIDEWALK	---
PROPOSED MICRO-BIORETENTION FACILITY (M-6)	---
PROPOSED DRY WELL (M-5)	DW
PROPOSED FOREST CONSERVATION EASEMENT	---
EXISTING PUBLIC WATER, SEWER, AND UTILITY RIGHT OF WAY (PER CONT. # 118-WBS)	---
PROPOSED PUBLIC WATER, SEWER & UTILITY EASEMENT	---
PROPOSED PRIVATE DRAINAGE EASEMENT	---
EXISTING 10' CONTOUR	---
EXISTING 2' CONTOUR	---
SOILS	---
PROPOSED 10' CONTOUR	---
PROPOSED 2' CONTOUR	---
PROPOSED SPOT ELEVATION	---
EXISTING STEEP SLOPES (25% SLOPES OR GREATER)	---
EXISTING MODERATE SLOPES (15% TO 24.99% SLOPES)	---
PROPOSED SUPER SILT FENCE	SSF
PROPOSED DIVERSION FENCE	DF
PROPOSED INLET PROTECTION	CIP / IAGIP
PROPOSED LIMIT OF DISTURBANCE	LOD
PROPOSED EROSION CONTROL MATTING	---
PROPOSED STABILIZED CONSTRUCTION ENTRANCE	SC
PROPOSED TREE PROTECTION FENCE	TF
SPECIMEN TREE CRITICAL ROOT ZONE	---



GRADING PLAN
 SCALE: 1" = 40'

TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY

Natalia J. J. [Signature]
 PLANNING DIRECTOR

9-22-17
 DATE

NO.	REVISION	DATE

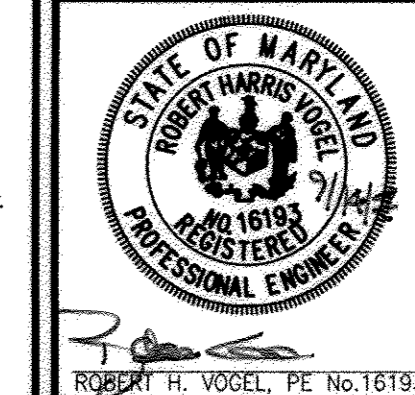
SKETCH PLAN
 SOILS MAP, GRADING, EROSION, AND
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THE TOWNS AT COURT HILL
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TAX MAP: 25 GRID: 7
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PARCEL: 43
 ZONED: R-A-15
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
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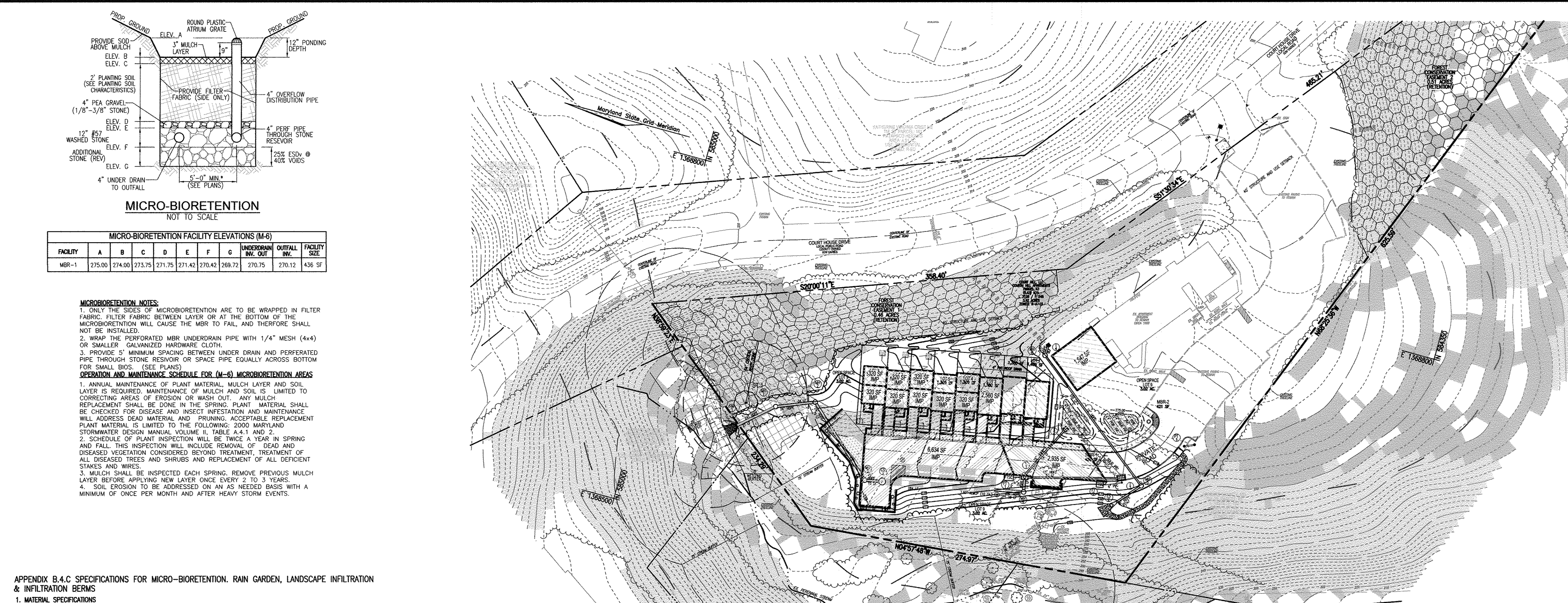


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 ENGINEER UNDER THE LAWS OF THE STATE
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 DRAWN BY: JMR
 CHECKED BY: RHV
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2 SHEET OF 4

OWNER/DEVELOPER
 COURT HILL, LLC
 5881 STEARMAN COURT
 ELK RIDGE, MD 21075
 C/O ART WARSHAW
 443-255-1976



LEGEND

- RIGHT-OF-WAY LINE
- BOUNDARY LINE
- ADJ. BOUNDARY LINES
- EXISTING EDGE OF PAVEMENT
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- PROPOSED CURB AND GUTTER
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- PROPOSED MICRO-BIORETENTION FACILITY (M-6)
- PROPOSED DRY WELL (M-5)
- PROPOSED FOREST CONSERVATION EASEMENT
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- SOILS
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING STEEP SLOPES (20% SLOPES OR GREATER)
- EXISTING MODERATE SLOPES (15% TO 24.99% SLOPES)
- IMPERVIOUS AREA TO DRY WELL (M-5)
- IMPERVIOUS AREA TO MICRO BIO-RETENTION FACILITY (M-6)
- IMPERVIOUS AREA TO FILTERTRA STRUCTURAL PRACTICES

MICRO-BIORETENTION FACILITY ELEVATIONS (M-6)

FACILITY	A	B	C	D	E	F	G	UNDERDRAIN INV.	OUTFALL INV.	FACILITY SIZE
MBR-1	275.00	274.00	273.75	271.75	271.42	270.42	269.72	270.75	270.12	436 SF

MICROBIORETENTION NOTES

1. ONLY THE SIDES OF MICROBIORETENTION ARE TO BE WRAPPED IN FILTER FABRIC. FILTER FABRIC BETWEEN LAYER OR AT THE BOTTOM OF THE MICROBIORETENTION WILL CAUSE THE MBR TO FAIL, AND THEREFORE SHALL NOT BE INSTALLED.

2. WRAP THE PERFORATED MBR UNDERDRAIN PIPE WITH 1/4" MESH (4x4) OR SMALLER GALVANIZED HARDWARE CLOTH.

3. PROVIDE 5' MINIMUM SPACING BETWEEN UNDER DRAIN AND PERFORATED PIPE THROUGH STONE RESERVOIR OR SPACE PIPE EQUALLY ACROSS BOTTOM FOR SMALL BIDS.

OPERATION AND MAINTENANCE SCHEDULE FOR (M-6) MICROBIORETENTION AREAS

- 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 1, TABLE A-4.1 AND 2.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION. INSPECTED BEYOND TREATMENT. TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STEMMS AND WIRES.
- MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

APPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS

1. MATERIAL SPECIFICATIONS

THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

2. FILTERING MEDIA OR PLANTING SOIL

THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DAMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVIDE A HINDBAR TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.03.05. THE PLANTING SOIL SHALL MEET THE FOLLOWING CRITERIA:

- SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION).
- ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%).
- CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.
- PH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED IN TO THE SOIL TO INCREASE OR DECREASE PH.

3. COMPACTION

IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING LOADERS, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TYRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TYRES, RUBBER TYRES WITH LARGE LUGS, OR HIGH-PRESSURE TYRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILTING OPERATION SUCH AS CHISEL, PLow, RIPPER, OR SUBSOILER. THESE TILTING OPERATIONS ARE TO RESTRUCTURE THE SOIL PROFILE THROUGHOUT THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.

ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING ROTOTILLING BASE.

WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.

WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 16". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SOIL. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

4. PLANT MATERIAL

RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

5. PLANT INSTALLATION

COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.

ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/3TH OF THE BALL IS ABOVE THE FINISH GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION. TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY.

STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL.

GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.

THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS, DEFECTS, OR AT A MINIMUM, WATERS THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL USE FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

6. UNDERDRAINS

UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:

- PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F758, TYPE PS 28, OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OF HDPE).
- PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/4" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4 OR 4+4) GALVANIZED HARDWARE CLOTH.
- GRAVEL - THE GRAVEL LAYER (NO. 57 STONE-PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.
- THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
- A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
- A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".

THIS MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED ONE MINIMUM PER EVERY 1,000 SQUARE FEET OF SURFACE AREA.

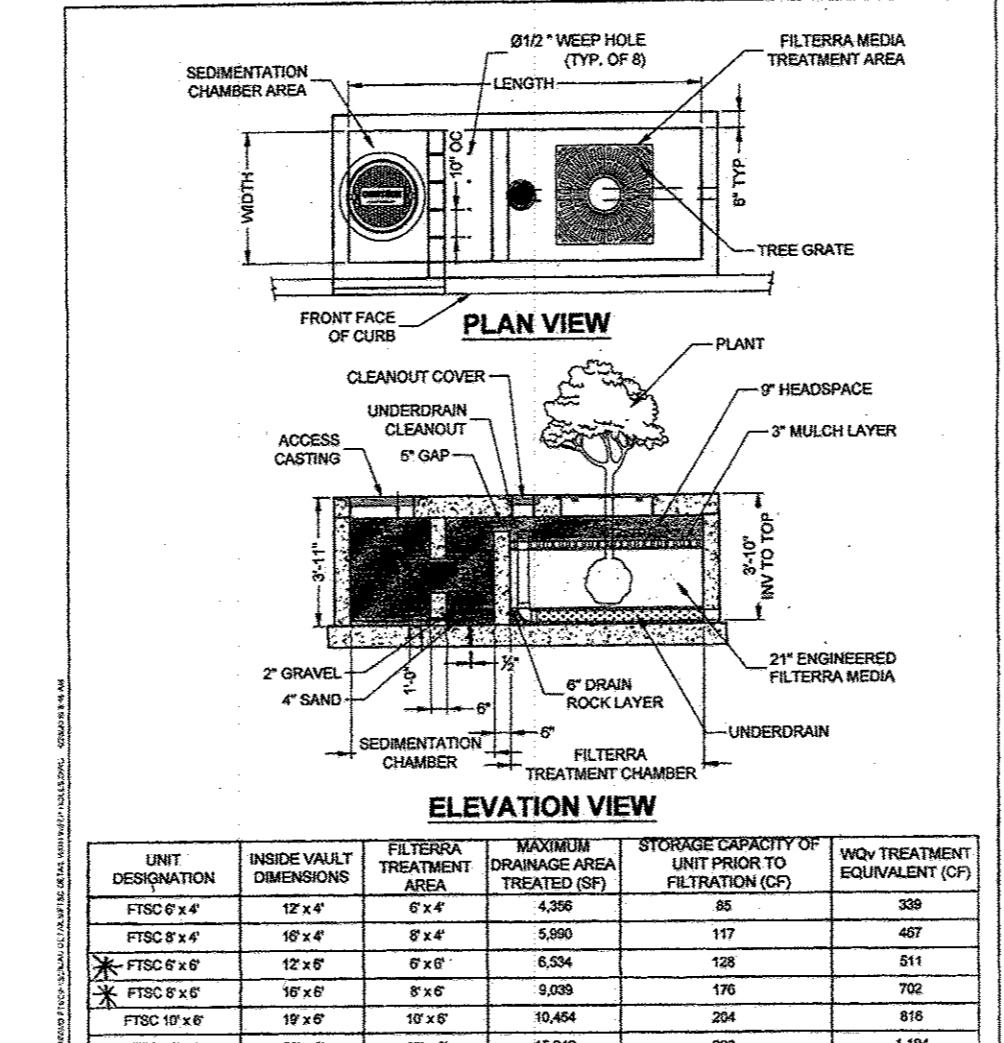
7. MISCELLANEOUS

THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

Appendix B.4. Construction Specifications for Environmental Site Design Practices

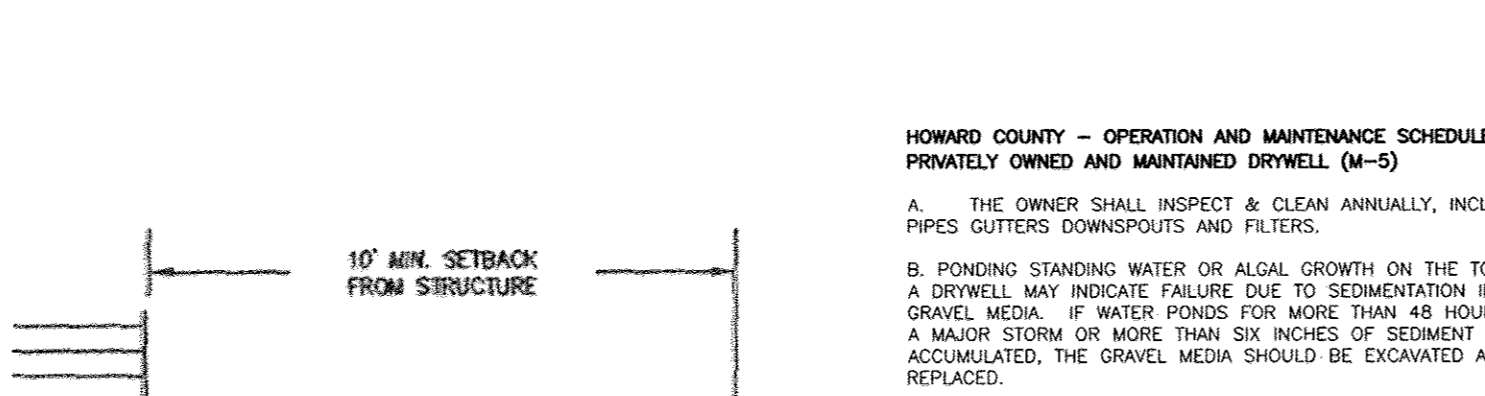
Table B.4.1 Materials Specifications for Micro-Bio-retention, Rain Gardens & Landscape Infiltration

Material	Specification	Size	Notes
Planting soil	see Appendix A, Table A.4	n/a	plantings are site-specific
	loamy sand (60-65%) & compost (35-40%) or sandy loam (30%) & coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)	n/a	
Mulch	shredded hardwood	n/a	aged 6 months, minimum; no pine or wood chips
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	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" TO 3/4")	FE Type 1 nonwoven
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" perft @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary undermeath pipes. Perforated pipe shall be wrapped with 1/4" inch galvanized hardware cloth.
Poured in place concrete (if required)	MSHA Mix No. 3, $f_c = 3500$ psi @ 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 ACT Code 360-R(9): 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 Gneiss (AASHTO #10 are not acceptable. No calcium carbide or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.



DESIGNED BY: DATE: CHECKED BY: DATE:

UNIT DESIGNATION	INSIDE VAULT DIMENSIONS	FILTERTRA TREATMENT AREA	MINIMUM DRAINAGE AREA TREATED (SF)	STORAGE CAPACITY OF UNIT PRIOR TO FILTRATION (CF)	WOV TREATMENT EQUIVALENCY (CF)
FTSFC 12 x 4	12' x 4'	8' x 4'	1,500	117	407
FTSFC 8 x 6	12' x 6'	8' x 6'	1,524	128	211
FTSFC 6 x 8	12' x 8'	8' x 8'	1,509	176	810
FTSFC 12 x 8	12' x 8'	12' x 8'	1,504	208	816
FTSFC 12 x 8	12' x 8'	12' x 8'	1,526	208	1,194
FTSFC 12 x 8	12' x 8'	12' x 8'	16,990	300	1,332



HOWARD COUNTY - OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRYWELL (M-5)

A. THE OWNER SHALL INSPECT & CLEAN ANNUALLY, INCLUDING PIPES GUTTERS DOWNSPOUTS AND FILTERS.

B. PONDED STANDING WATER OR ALGAL GROWTH ON THE TOP OF A DRYWELL MAY INDICATE FAILURE DUE TO SEDIMENTATION IN THE GRATE MEDIA. IF WATER POUNDS FOR MORE THAN 48 HOURS AFTER A MAJOR STORM OR MORE THAN SIX INCHES OF SEDIMENT HAS ACCUMULATED, THE GRAVEL MEDIA SHOULD BE EXCAVATED AND REPLACED.

SWM PRACTICE CHART ESD PRACTICES BY LOT

LOT	ESD PRACTICE
1	MICRO BIO-RETENTION (M-6)
2	MICRO BIO-RETENTION (M-6)
3	MICRO BIO-RETENTION (M-6)
4	MICRO BIO-RETENTION (M-6) AND DRY WELL (M-5)
5	MICRO BIO-RETENTION (M-6) AND DRY WELL (M-5)
6	DRY WELLS (M-5)
7	DRY WELLS (M-5)
8	DRY WELLS (M-5)
9	MICRO BIO-RETENTION (M-6), UNDERGROUND STORM FILTRATION SYSTEM AND FILTERTRA UNITS

TENTATIVELY APPROVED DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY

PLANNING DIRECTOR: [Signature] DATE: 9-22-17

SKETCH PLAN PROPOSED ESDv DRAINAGE AREA MAP AND SWM DETAILS

THE TOWNS AT COURT HILL LOTS 1-8 AND OPEN SPACE LOT 9

PARCEL 43 (L. 7128 / F. 548)
3614 COURT HOUSE DRIVE
ELLICOTT CITY, MD 21045

TAX MAP: 25 GRD: 7 2ND ELECTION DISTRICT

ROBERT H. VOGEL ENGINEERING, INC. ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.1896

DESIGN BY: RHW. DRAWN BY: JMR. CHECKED BY: RHW. DATE: SEPTEMBER 2017. SCALE: AS SHOWN. W.O. NO.: 04-104.

PROFESSIONAL CERTIFICATE 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. 16193. EXPIRATION DATE: 09-27-2018

SCALE 1"=50'

3 SHEET OF 4

LEGEND

RIGHT-OF-WAY LINE	---
BOUNDARY LINE	---
ADJ. BOUNDARY LINES	---
EXISTING EDGE OF PAVEMENT	---
EXISTING CURB AND GUTTER	---
PROPOSED CURB AND GUTTER	---
EXISTING FENCE	---
EXISTING STORMDRAIN	---
EXISTING SANITARY SEWER	---
EXISTING OVERHEAD LINES	---
EXISTING WATER	---
EXISTING GUARDRAIL	---
EXISTING TREETRINE	---
EXISTING WETLANDS	---
EXISTING WETLAND BUFFER	---
EXISTING STREAM BUFFER	---
EXISTING STREAM	---
EXISTING UTILITY POLE	---
EXISTING LIGHT POLE	---
EXISTING SANITARY MANHOLE	---
EXISTING CLEANOUT	---
EXISTING FIRE HYDRANT	---
PROPOSED TREETRINE	---
PROPOSED SIDEWALK	---
PROPOSED MICRO-BIORETENTION FACILITY (M-6)	---
PROPOSED DRY WELL (M-5)	---
PROPOSED FOREST CONSERVATION EASEMENT	---
EXISTING PUBLIC WATER, SEWER, AND UTILITY RIGHT OF WAY (PER CONT. # 118-W&S)	---
PROPOSED PUBLIC WATER, SEWER & UTILITY EASEMENT	---
PROPOSED PRIVATE DRAINAGE EASEMENT	---
EXISTING 10' CONTOUR	---
EXISTING 2' CONTOUR	---
SOILS	---
PROPOSED 10' CONTOUR	---
PROPOSED 2' CONTOUR	---
EXISTING STEEP SLOPES (25% SLOPES OR GREATER)	---
EXISTING MODERATE SLOPES (15% TO 24.9% SLOPES)	---
PROPOSED LIMIT OF DISTURBANCE	---
PROPOSED TREE PROTECTION FENCE	---



SITE DATA
 LOCATION: TAX MAP 25, BLOCK 7
 PARCEL: 43
 2ND ELECTION DISTRICT
 PRESENT ZONING: R-A-15
 GROSS AREA OF PROJECT: 3.42 AC.
 AREA OF STREAM/BUFFER: 0.52 AC.
 AREA OF WETLANDS/BUFFER: 0.08 AC.
 AREA OF MODERATE SLOPES (15% - 24.9%): 0.29 AC.
 AREA OF STEEP SLOPES (25% OR GREATER): 1.16 AC.
 AREA OF FLOOD PLAIN: 0.00 AC.
 NET PROJECT AREA: 2.26 AC.
 AREA OF EXISTING FOREST COVER: 1.60 AC.

FOREST CONSERVATION PLAN
 SCALE: 1"=50'

FSD NOTES

- SURROUNDING LAND USE IS PRIMARILY HIGH DENSITY RESIDENTIAL DEVELOPMENT.
- APPROXIMATELY 2.1 ACRES OF FOREST IS PRESENT WITHIN 100 FEET OF THE SUBJECT PROPERTY.
- ALL OF THE WETLANDS AND STREAMS ARE PART OF THE PATAPSCO RIVER WATERSHED (02132000). THE WETLANDS AND STREAMS ON WEST HALF OF THE SITE ARE CLASSIFIED AS USE 1.
- NO 100 YEAR FLOODPLAIN IS PRESENT ON THE PROPERTY.
- STEEP SLOPES ARE PRESENT ON THE PROPERTY.
- ONE SPECIMEN TREE IS LOCATED ON STEEP SLOPES ON THE EASTERN END OF THE PROPERTY. GIVEN THE PROTECTED NATURE OF ITS LOCATION ON THE STEEP SLOPES, THE TREE WAS NOT SPECIFICALLY LOCATED. SHOULD IMPACTS TO THIS PORTION OF THE SITE BE REQUIRED, THE TREE WILL BE FIELD LOCATED.

SOILS LEGEND

SYMBOL	NAME/DESCRIPTION	GROUP	K-FACTOR	ERODIBLE
MgD	MANOR-BANNERTOWN SANDY LOAMS, 15 TO 25 PERCENT SLOPES, ROCKY	B	.15	YES
MgF	MANOR-BANNERTOWN SANDY LOAMS, 25 TO 65 PERCENT SLOPES, ROCKY	B	.20	YES

NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

GENERAL NOTES

- EXISTING TOPOGRAPHY BY OTHERS. INFORMATION SUPPLIED BY THE CLIENT.
- PROPERTY OUTLINE SHOWN HEREON IS BASED ON FIELD RUN BOUNDARY SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC., DATED MARCH 27, 2015.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO CEMETERIES OR GRAVE SITES LOCATED ON THE SUBJECT PROPERTY.
- THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, DEVELOPMENT OR CONSTRUCTION OF THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION, OR BUILDING AND GRADING PERMITS.
- THE SUBJECT PROPERTY IS ZONED "R-A-15" IN ACCORDANCE WITH THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- THIS SITE IS LOCATED WITHIN THE HISTORIC DISTRICT.
- NO RARE, THREATENED OR ENDANGERED SPECIES, OR THEIR HABITATS, WERE OBSERVED ON THE PROPERTY.
- THERE IS NO 100 YEAR FLOODPLAIN LOCATED WITHIN THE LIMITS OF THIS SITE.
- WETLANDS SHOWN ON-SITE ARE BASED ON A FIELD INVESTIGATION PERFORMED BY JOHN CANOLES OF ECO-SCIENCE PROFESSIONALS, INC. DATED SEPTEMBER 29, 2015. THERE ARE SOME NECESSARY PROPOSED DISTURBANCES TO THE WETLANDS OF ASSOCIATED BUFFERS.
- A FOREST STAND DELINEATION AND ENVIRONMENTAL RESOURCES ASSESSMENT WAS PERFORMED BY JOHN CANOLES OF ECO-SCIENCE PROFESSIONALS, INC., DATED SEPTEMBER 29, 2015.

SPECIMEN TREE CHART

NO.	SIZE (IN DBH/FEET HEIGHT)	COMMON NAME	CONDITION	COMMENTS
ST 1	34' 51'	SYCAMORE	GOOD CONDITION, WITHIN THE STREAM BUFFER	TO REMAIN

FOREST STAND DATA

KEY	COMMUNITY TYPE	ACREAGE (NTA)	DOMINANT VEGETATION	GENERAL CONDITION	RETENTION PRIORITY
F1	POPLAR	1.6	LIRIODENDRON TULIPIFERA, ACER RUBRUM, PRUNUS SEROTINA, PLATANUS OCCIDENTALIS, ACER NEGUNDO	GOOD	1.0± SLOPES, BUFFERS

SEE ACCOMPANYING REPORT FOR COMPLETE STAND DESCRIPTIONS

HOWARD COUNTY FOREST CONSERVATION WORKSHEET

ZONED R-A-15
 NET TRACT AREA:
 A. TOTAL TRACT AREA: 3.42 AC.
 B. AREA WITHIN 100 YEAR FLOODPLAIN: 0.00 AC.
 C. AREA TO REMAIN IN AGRICULTURAL PRESERVATION: 0.00 AC.
 D. NET TRACT AREA: 3.42 AC.

LAND USE CATEGORY
 INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY. ZONED R-20

ARA	MDR	IDA	HDR	MPD	CIA
0	0	0	1	0	0

E. AFFORESTATION THRESHOLD: 15% X D. = 0.51 AC
 F. CONSERVATION THRESHOLD: 20% X D. = 0.68 AC

EXISTING FOREST COVER:
 G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) = 1.60 AC
 H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD = 1.09 AC
 I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD = 0.92 AC

BREAK EVEN POINT:
 (2 X I) + F = BREAK EVEN POINT (0 AC)

J. FOREST RETENTION ABOVE THRESHOLD W/ NO MITIGATION = 0.87 AC
 K. CLEARING PERMITTED WITHOUT MITIGATION = 0.73 AC

PROPOSED FOREST CLEARING:
 L. TOTAL AREA OF FOREST TO BE CLEARED = 0.63 AC
 M. TOTAL AREA OF FOREST TO BE RETAINED = 0.97 AC

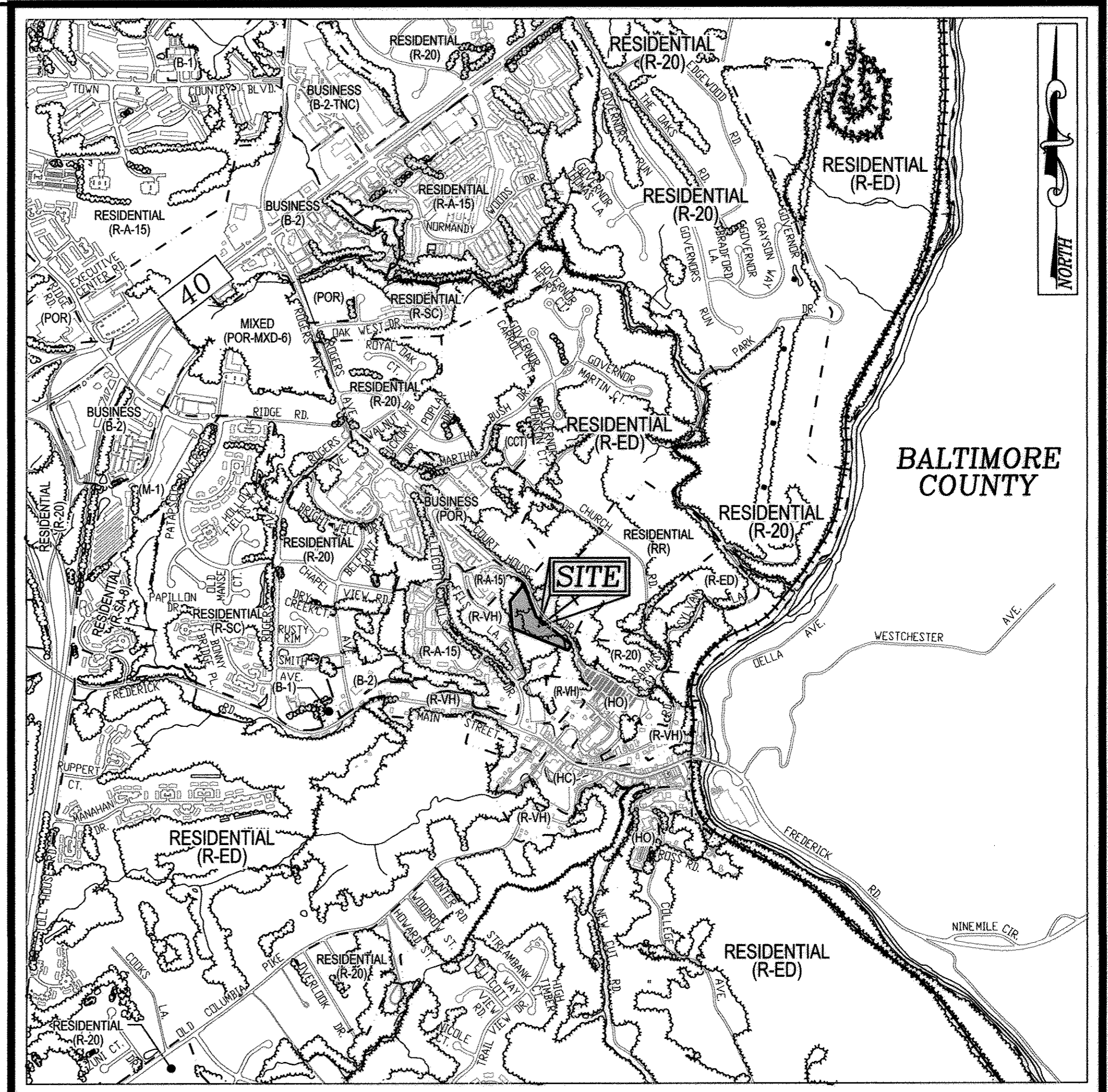
PLANTING REQUIREMENTS:
 L. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD (L X 25) = 0.16 AC
 M. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD = 0.00 AC
 N. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD (M-F) = 0.29 AC
 P. TOTAL REFORESTATION REQUIRED (N+F-Q) = 0.00 AC
 Q. TOTAL AFFORESTATION REQUIRED = 0.00 AC
 R. TOTAL PLANTING REQUIREMENT (REFORESTATION AND AFFORESTATION) = 0.00 AC

FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL A PORTION OF THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION MANUAL. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

THE REQUIRED FOREST CONSERVATION WILL BE PROVIDED BY THE RETENTION OF 0.97 ACRES OF EXISTING FOREST, LOCATED ON OPEN SPACE LOT 9 AND SHALL MEET THE INTENT OF SECTION 16.117 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. NO SURETY IS REQUIRED.

FSD PLAN PREPARED BY

 JOHN CANOLES
 DNR QUALIFIED PROFESSIONAL



VICINITY MAP
 SCALE: 1"=1,000'
 ADC MAP: PAGE: 21 / GRID: B8

OWNER/DEVELOPER
 COURT HILL, LLC
 5881 STEARMAN COURT
 ELK RIDGE, MD 21075
 C/O ART WARSHAW
 443-255-1976

SKETCH PLAN

FOREST CONSERVATION PLAN

THE TOWNS AT COURT HILL
 LOTS 1-8 AND OPEN SPACE LOT 9

PARCEL 43 (L. 7128 / F. 548)
 3614 COURT HOUSE DRIVE
 ELLICOTT CITY, MD 21043

TAX MAP: 25 GRID: 7
 2ND ELECTION DISTRICT

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 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2018.

DESIGN BY: RHV
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: SEPTEMBER 2017
 SCALE: AS SHOWN
 W.O. NO.: 04-104

4 SHEET OF 4

TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY

PLANNING DIRECTOR

9-22-17
 DATE