

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SITE PLAN
3	ESC NOTES AND DETAILS

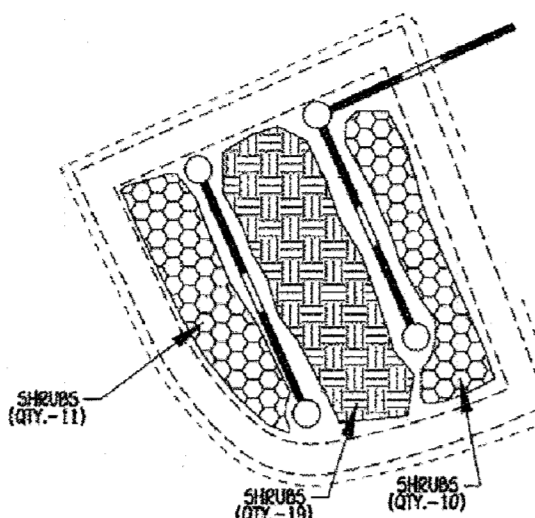
ADDRESS CHART	
LOT	ADDRESS
1	5518 MONTGOMERY ROAD
2	5522 MONTGOMERY ROAD

PERMIT INFORMATION CHART				
SUBMISSION NAME:	SECTION/AREA:	PARCEL/LOT:	WATER CODE G-01	
IDREES RESIDENCE	N/A	PARCEL 199/LOT 1	SEWER CODE 1255028	
PLAT NO. 24546	ZONING R-20	BLOCK 0020	TAX MAP 31	ELECTION DISTRICT FIRST
				CENSUS TRACT 601105

SITE DEVELOPMENT PLAN IDREES RESIDENCE LOT 1

TAX MAP NO. 31 GRID NO. 20 PARCEL NO. 199
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

MICRO-BIORETENTION PLANT MATERIAL			
MICRO-BIO QUANTITY	NAME	SIZE (HT.)	MAXIMUM SPACING (FT.)
15	Ilex virginica 'Henry's Garnet' Virginia Sweetspire	24" - 30"	3.0 FT.
15	Ilex crenata 'Helleri' Japanese Holly	24" - 30"	2.5 FT.



* SEE PLANT MATERIAL CHARTS FOR QUANTITIES AND SPACING
NOTE: PLANT MATERIAL MUST COVER AT LEAST 50% OF THE SURFACE AREA OF THE MICRO-BIORETENTION

SOILS LEGEND			
SOIL	NAME	CLASS	K FACTOR
U1A	Urban Land-Fallsington Complex, 0 to 2 percent slope	D	.02
U1B	Urban Land-Sassafras-Beltsville Complex, 0 to 2 percent slope	D	.37

Soil Map Number: 19 (Savage, NE)

STORMWATER MANAGEMENT SUMMARY			
AREA ID.	ESDv REQUIRED CU.FT.	ESDv PROVIDED CU.FT.	REMARKS
SITE	837	452	MICRO-BIORETENTION (M-6) & GRASS SWALE (M-8)
TOTAL	837	452	

GROSS AREA = 1.28 ACRES (LOTS 1 & 2)
LOD = 0.69 ACRES
RCN = 77
TARGET Pe = 1.2"

MICRO-BIORETENTION / BIORETENTION									
BIORETENTION FILTER	A	B	C	D	E	F	G	H	I
1	404.00	404.00	402.00	401.75	400.25	400.00	399.50	399.0	397.95

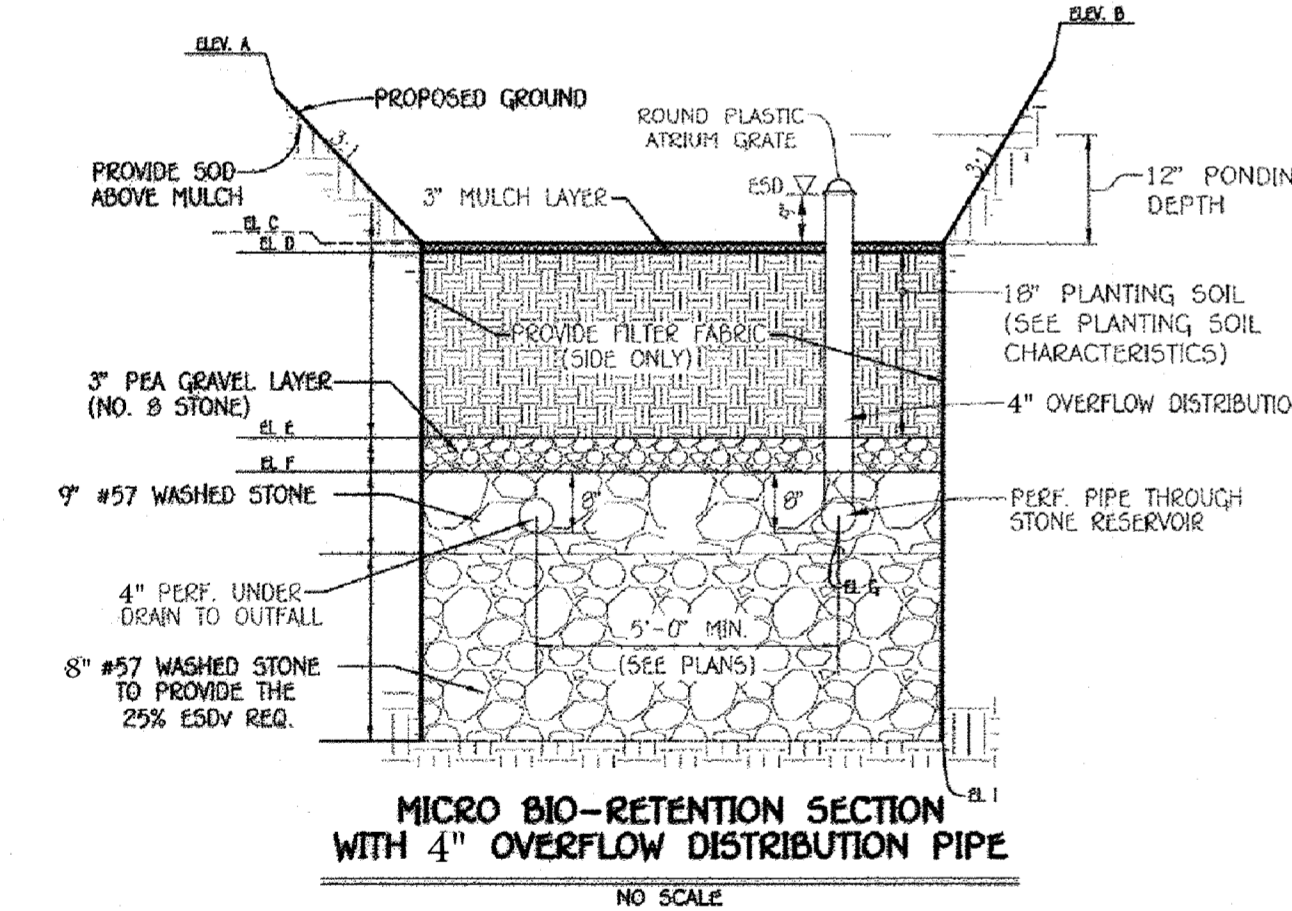
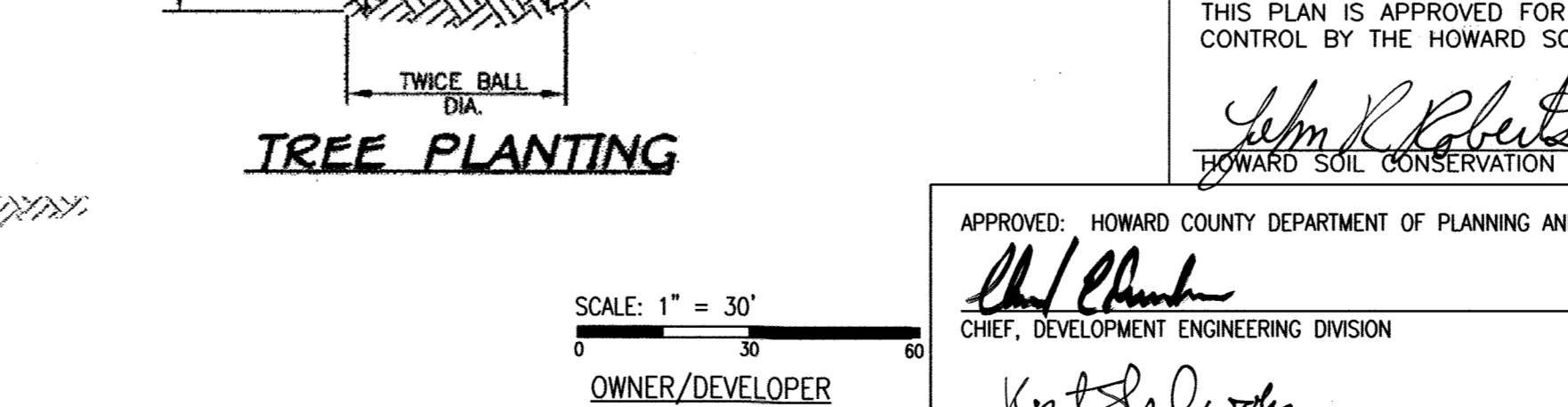
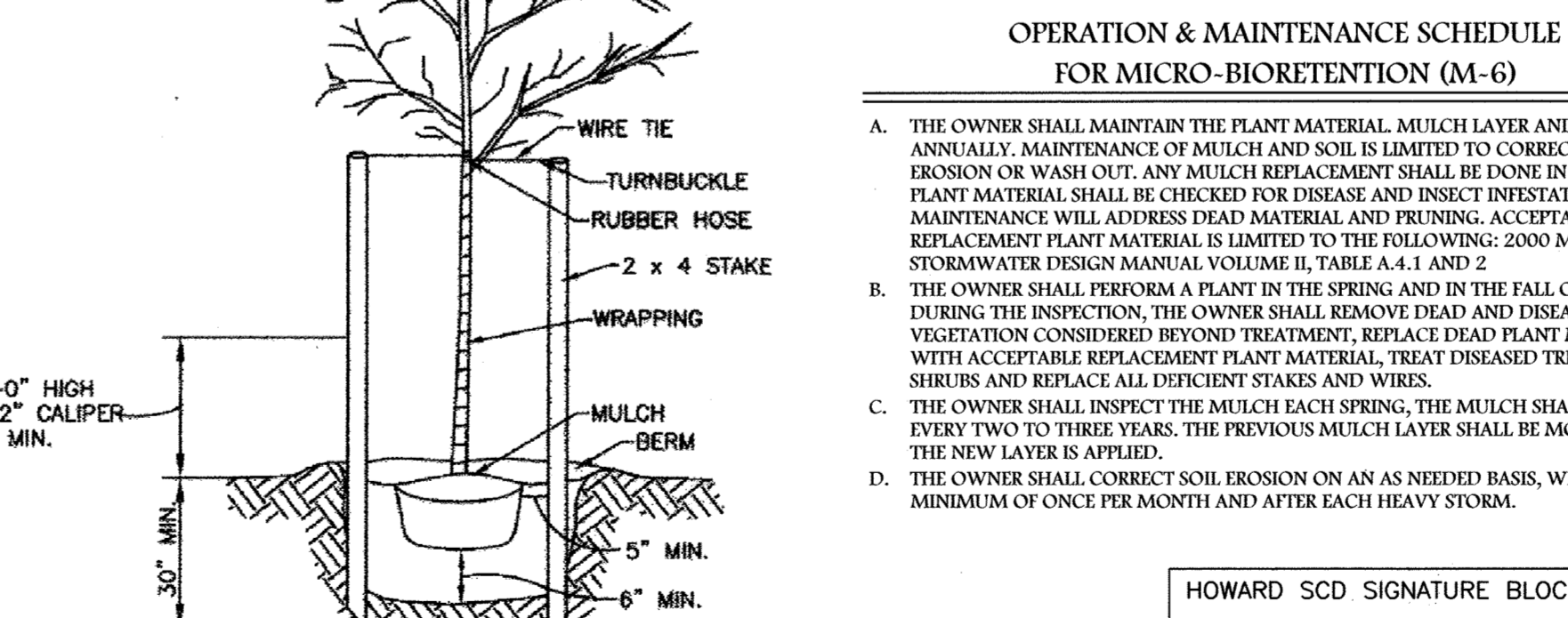
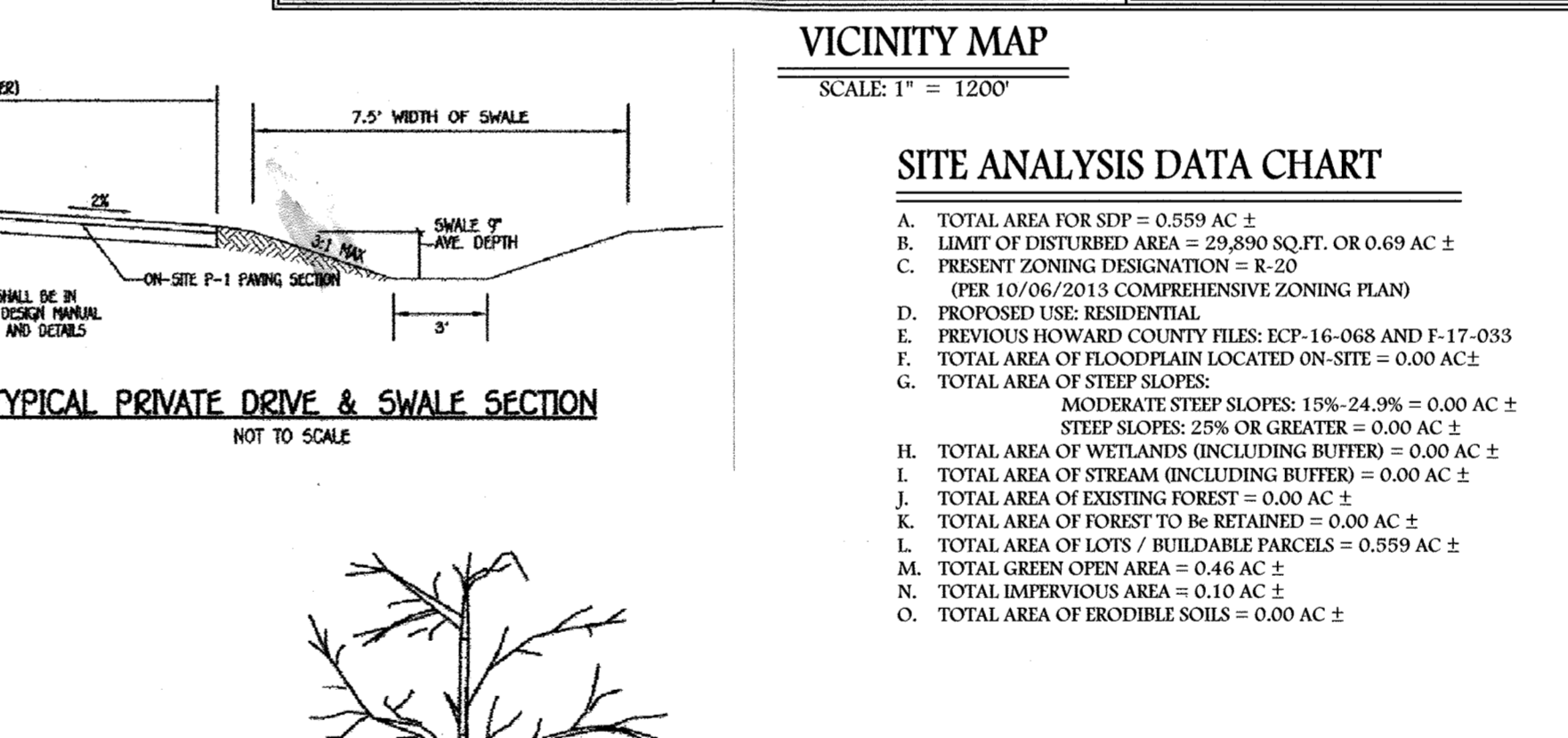
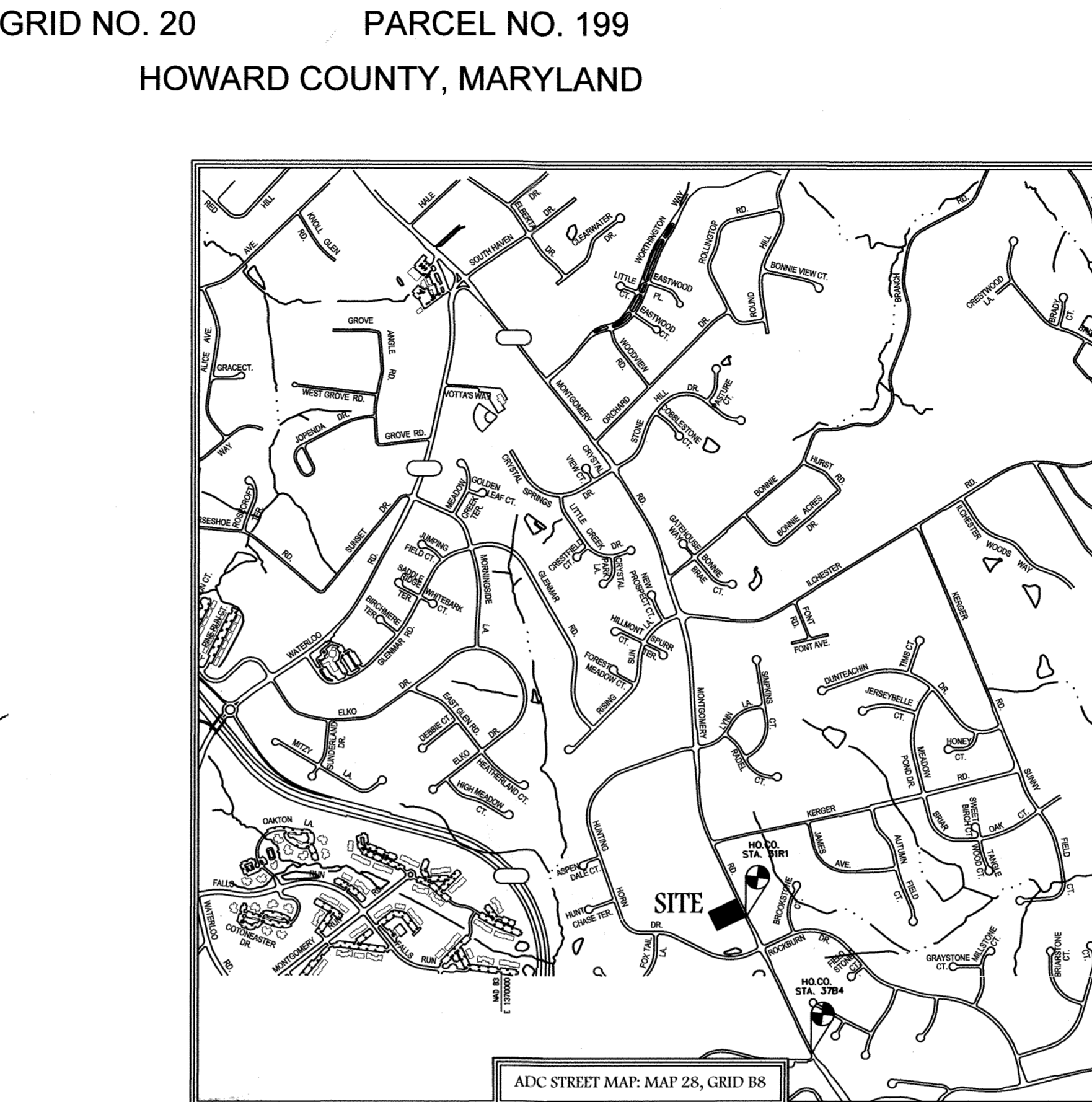
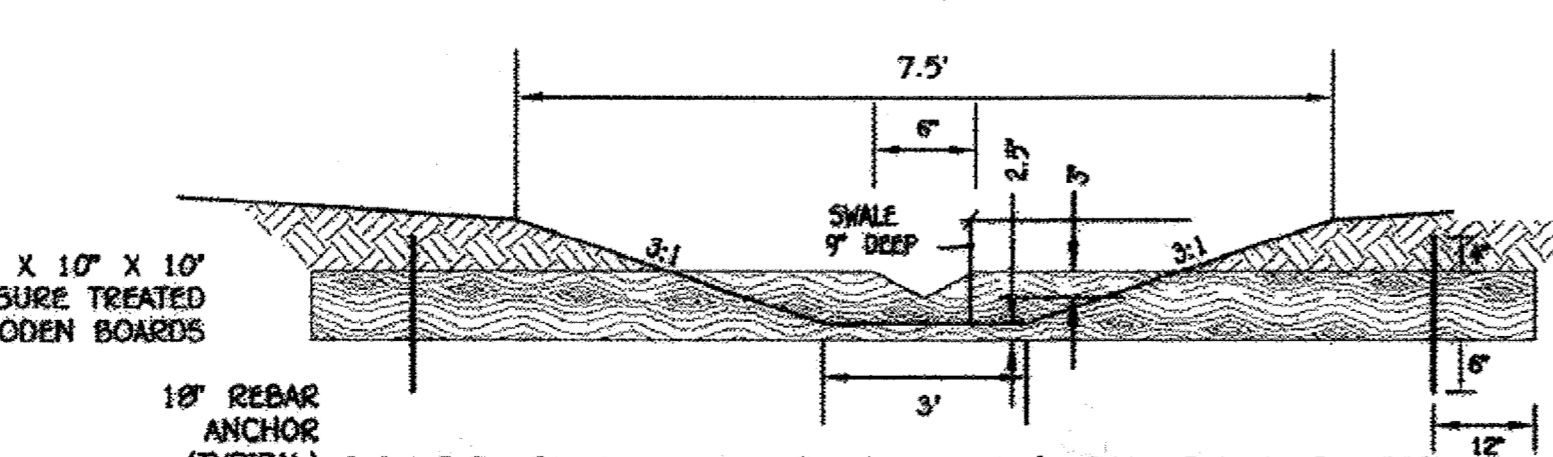
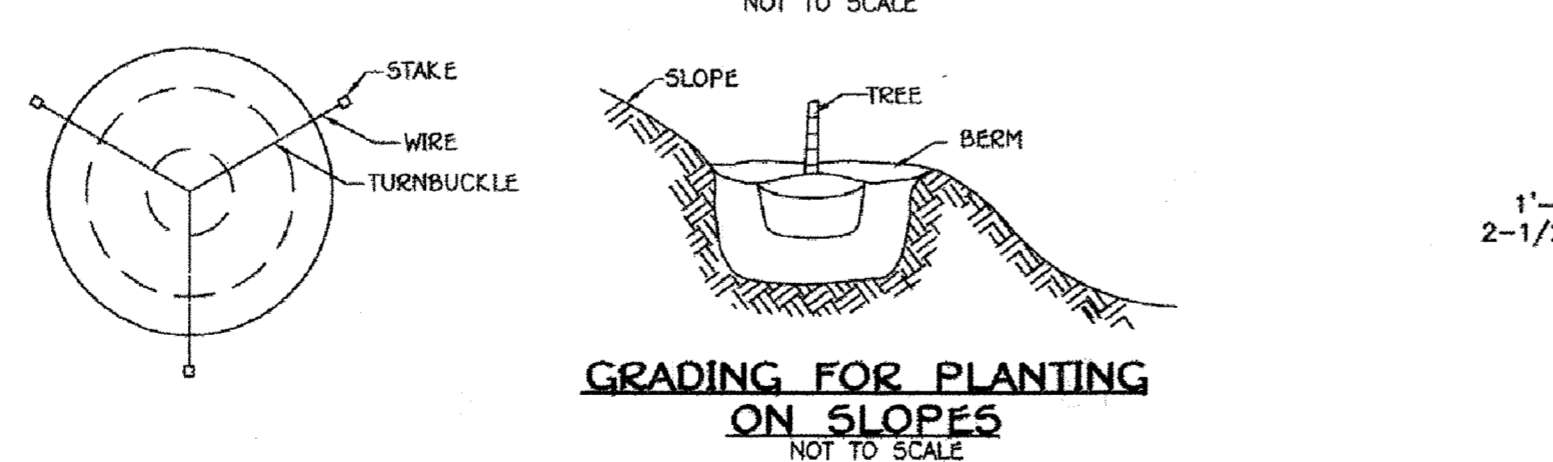
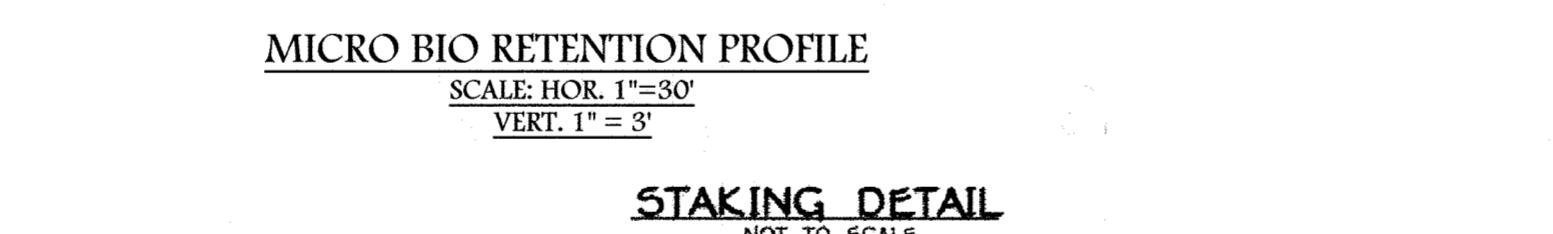
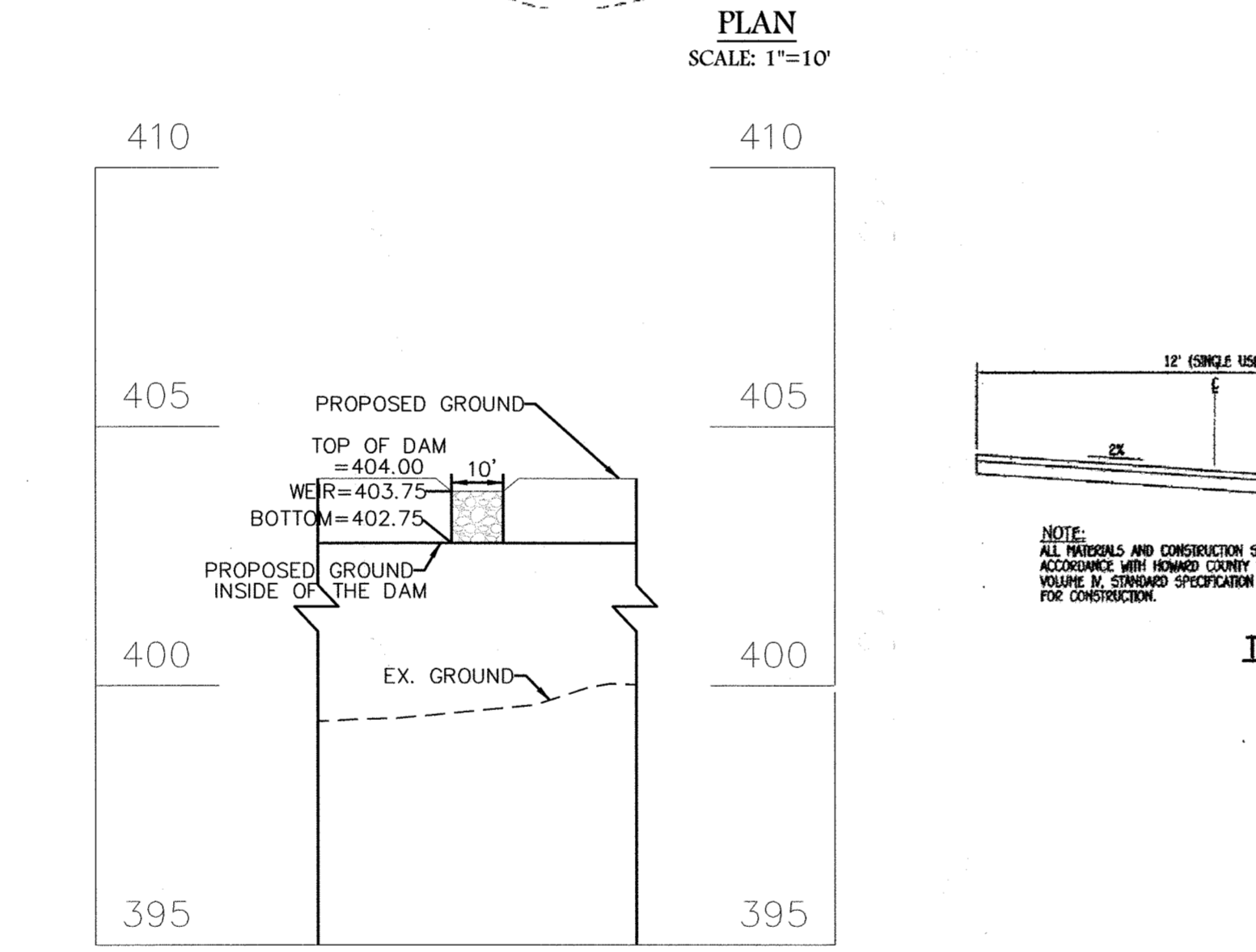
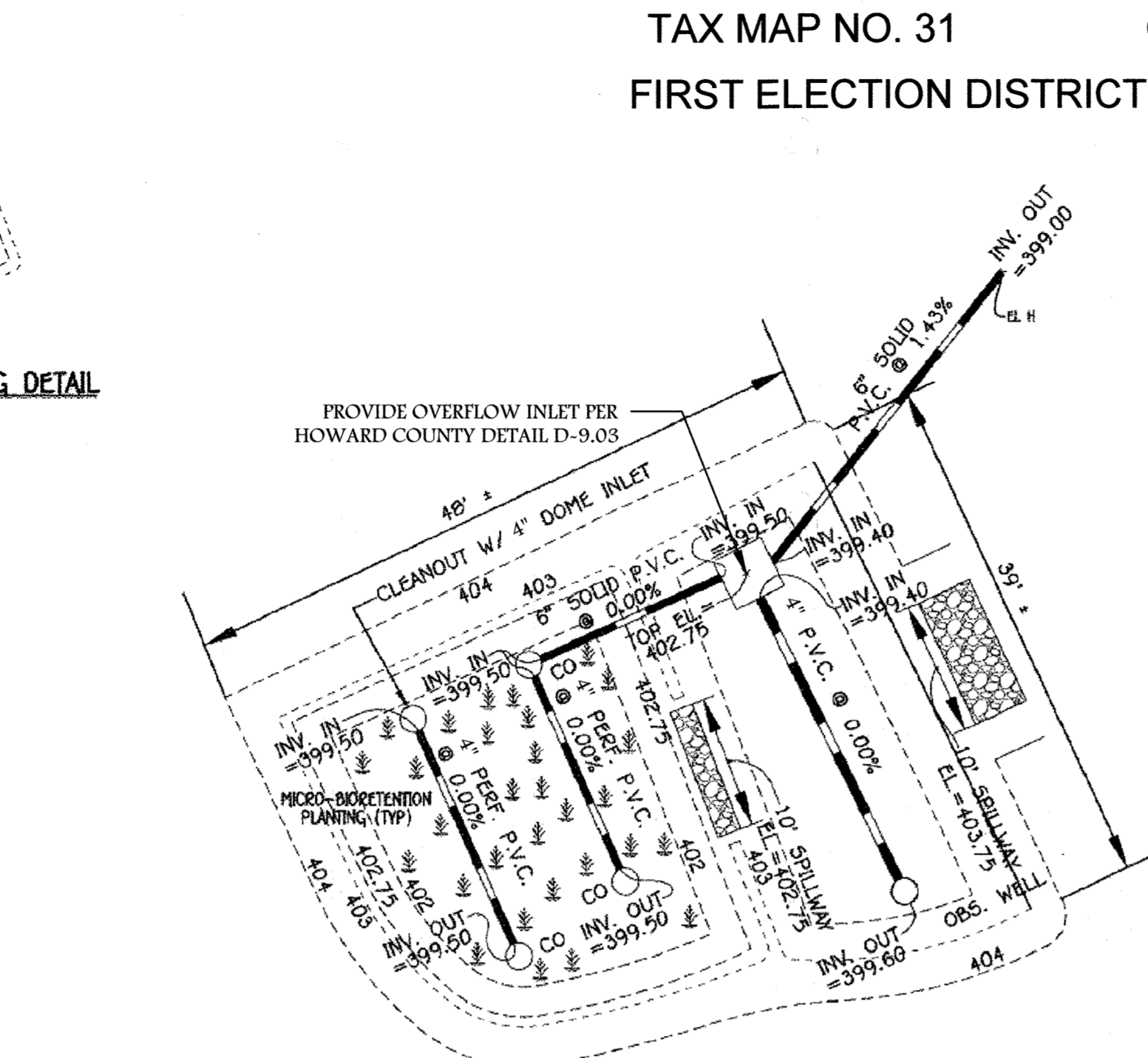


Table B.4. Materials Specifications for Micro - Bioretention, Rain Gardens & Landscape Infiltration

Material	Specification	Size	Notes
Plantings	see Appendix Table A.4	n/a	plantings are site-specific
Planting soil	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 D3974)		
Mulch	shredded hardwood		aged 6 months, minimum
Pea gravel diaphragm	pea gravel ASTM-D-448	No. 8 or No. 9 (1/8" - 1/8")	
Cutrain 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 40VP5 or SDR35	Slotted or perforated pipe; 3/8" pert. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/8 inch galvanized hardware cloth on-site testing of joints 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 setting ACI Code 350.8/89; vertical loading (CH-10 or H-20); and analysis of potential cracking
Poured in place concrete (if required)	MSHA Min. No. 3: 1 = 3500 psi at 28 days, normal weight, air-entrained; reinforcing to meet ASTM-G15-60	n/a	Sand substitutions such as Diabase and Graystone (AASHTO #10) are not acceptable. No calcium carbide or dolomite; sand substitutions are acceptable. No "rock dust" can be used for sand
Sand	AASHTO-M-6 or ASTM-C-33	0.075" to 0.04"	



- General Notes:
- SUBJECT PROPERTY ZONED R-20 PER 1006/13 COMPREHENSIVE ZONING PLAN.
 - COORDINATES BASED ON NAD 83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 31R1 AND NO. 37B4.
STA. 31R1 N 565,303.479 E 1,372,517.790 ELEV = 400.94
STA. 37B4 N 563,920.557 E 1,971,109.173 ELEV = 401.36
 - THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY FISHER, COLLINS AND CARTER, INC. DATED JANUARY, 2016
 - B.R.L. DENOTES BUILDING RESTRICTION LINE
 - DENOTES IRON PIN SET CAPPPED W/ 6" C.C. 108"
 - DENOTES IRON PIPE OR IRON BAR FOUND.
 - DENOTES ANGULAR CHANGE IN BEARING OF BOUNDARY OR RIGHTS-OF-WAY.
 - DENOTES CONCRETE MONUMENT SET WITH ALUMINUM PLATE "F.C.C. 106"
 - DENOTES CONCRETE MONUMENT OR STONE FOUND.
 - ALL AREAS ARE MORE OR LESS (±).
 - DISTANCES SHOWN ARE BASED ON SURFACE MEASUREMENT AND NOT REDUCED TO NAD '83 GRID MEASUREMENT.
 - FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE IS TO BE PROVIDED AT THE JUNCTION OF THE FLAG OR PIPESTEM AND THE ROAD RIGHT-OF-WAY AND NOT ONTO THE FLAG OR PIPESTEM DRIVEWAY
 - 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 CLEARANCE - MINIMUM 12 FEET;
G) MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.
 - PROPERTY SUBJECT TO PRIOR DEPARTMENT OF PLANNING AND ZONING FILE NO'S: ECP-16-068 AND F-17-033
 - NO CEMETERIES EXIST ON THE SUBJECT PROPERTY BASED ON VISUAL OBSERVATION OR LISTED IN AVAILABLE HOWARD COUNTY CEMETERY INVENTORY MAP.
 - SITE IS NOT ADJACENT TO A SCENIC ROAD.
 - A LETTER OF FINDINGS DATED JULY 14, 2016 PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DETERMINED THAT THERE ARE NO 100 YEAR FLOODPLAIN, WETLANDS, FOREST OR SPECIMEN TREE, STREAM(S) AND/OR THEIR BUFFERS, AND STEEP SLOPES ON-SITE.
 - PLAT IS EXEMPT FROM PROVIDING FOREST CONSERVATION OBLIGATION IN ACCORDANCE WITH SECTION 16.1202(B)(1)(VII) BECAUSE THIS LOT IS PART OF MINOR SUBDIVISION THAT CREATES ONE (1) NEW LOT AND HAS NO FURTHER SUBDIVISION POTENTIAL.
 - OPEN SPACE REQUIREMENTS ARE PROVIDED BY A FEE-IN-LIEU PAYMENT OF \$1,500.00 UNDER F-17-033.
 - A PRE-SUBMISSION COMMUNITY MEETING WAS CONDUCTED ON JUNE 17, 2016 FOR THE PURPOSE OF THE DEVELOPER TO PROVIDE INFORMATION TO THE COMMUNITY REGARDING THE PROPOSED RESIDENTIAL DEVELOPMENT AND TO ALLOW THE COMMUNITY TO ASK QUESTIONS AND TO MAKE COMMENTS, PER SECTION 16.128(D) OF THE SUBDIVISION REGULATIONS.
 - A TRAFFIC STUDY IS NOT REQUIRED FOR THIS PROJECT SINCE THIS IS A MINOR SUBDIVISION.
 - THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT AND WILL BE SERVED BY PUBLIC WATER AND SEWER.
 - NOISE ANALYSIS STUDY DATED JANUARY, 2017 WAS PREPARED BY MARS GROUP. THE UNMITIGATED 65DBA NOISE LINE CONTOUR LINE DRAWN ON THIS PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL, CHAPTER 5, REVISED FEBRUARY, 1992 AND CANNOT BE CONSIDERED TO EXACTLY LOCATED THE 65DBA NOISE EXPOSURE. THE UNMITIGATED 65DBA NOISE CONTOUR LINE WAS ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS, BUILDERS AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.
 - THE PRIVATE USE-IN-COMMON DRIVEWAY ACCESS EASEMENT AND MAINTENANCE AGREEMENT FOR SHARED DRIVEWAY ON LOTS 1 AND 2 IS RECORDED UNDER F-17-033.
 - NO HISTORIC STRUCTURES EXIST WITHIN THE LIMITS OF THIS PLAT SUBMISSION.
 - THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SURVEY PERFORMED BY FISHER, COLLINS & CARTER, INC. IN APRIL, 2016 AND SUPPLEMENTED WITH HOWARD COUNTY GIS TOPOGRAPHY AT 5' CONTOUR INTERVAL INTERPOLATED FOR 2' CONTOUR INTERVAL.
 - THIS DEVELOPMENT IS DESIGNED TO BE IN ACCORDANCE WITH SECTION 16.127 - RESIDENTIAL INFILL DEVELOPMENT OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. THE DEVELOPER OF THIS PROJECT SHALL CREATE COMPATIBILITY WITH THE EXISTING NEIGHBORHOOD THROUGH THE USE OF ENHANCED PERIMETER LANDSCAPING, BERMS, FENCES, SIMILAR HOUSING UNIT TYPES AND THE DIRECTIONAL ORIENTATION OF THE PROPOSED HOUSE. THE MINIMUM SETBACK REQUIREMENTS HAVE BEEN MET AND THE SHOWN SETBACK IS IN COMPLIANCE WITH THE RESIDENTIAL INFILL DEVELOPMENT REGULATIONS. IN ADDITION A SHARED USE-IN-COMMON DRIVEWAY WILL BE PROVIDED AS A CONNECTION TO THE PUBLIC ROAD.
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATION IF APPLICABLE.
 - THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 315-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
 - THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
 - 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.
 - EXISTING UTILITIES ARE BASED ON ACTUAL FIELD LOCATIONS, IN COMBINATION WITH EXISTING WATER AND SEWER CONTRACTS.
 - ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
 - SHC ELEVATIONS SHOWN ARE LOCATED AT THE PROPERTY LINE.
 - FOR DRIVEWAY ENTRANCE DETAILS REFERS TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R-2.01
 - 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.
 - LANDSCAPING FOR LOTS 1 AND 2 IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A LANDSCAPE SURETY IN THE AMOUNT OF \$4,650.00 BASED ON 8 SHADE TREES @ \$300/SHADE TREE AND 15 EVERGREEN TREES @ \$150/EVERGREEN TREE WILL BE COMPLETED WITH THE SDP AND BONDED WITH THE BUILDING/GRADING PERMIT.
 - STORMWATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL VOLUME I & II, REVISED 2003. NON-STRUCTURAL PRACTICES IN ACCORDANCE WITH CHAPTER 5 ARE BEING UTILIZED

M.I.H.U. NOTE: PLEASE NOTE THAT LOT 1 IS SUBJECT TO THE MIHU FEE-IN-LIEU REQUIREMENT THAT IS TO BE CALCULATED AND PAID TO THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS AT THE TIME OF BUILDING PERMIT ISSUANCE BY THE PERMIT APPLICANT

TITLE SHEET
IDREES RESIDENCE
LOTS 1 AND 2
SINGLE FAMILY DETACHED DWELLING
5518 MONTGOMERY ROAD, ELLICOTT CITY, MD-21042
PLAT NO. 24546, (L. 18303, F. 345)
ECP-16-068 AND F-17-033
PARCEL 199, TAX MAP 31 GRID 20, ZONING R-20
FIRST ELECTION DISTRICT-HOWARD COUNTY, MARYLAND

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 6/19/19
CHIEF, DEVELOPMENT ENGINEERING DIVISION NY DATE

OWNER/DEVELOPER
IDREES MOHAMMAD
114 URICK LANE
MONROEVILLE, PA 15146
PHONE: 412-638-4819

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. 35194, Expiration Date: 6/26/20

Professional Engineer
[Signature]
KUI LIN, P.E.
8221 Ruxton Crossing Circle
Towson, MD 21204
PHONE (410) 948-7948

DRAWN BY: KL
CHECKED BY: KL
SCALE: 1" = 30'
DATE: 05/30/2019

SHEET
1 OF 3

LEGEND		LEGEND	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
-492-	EXISTING 2' CONTOURS	-492-	PROPOSED CONTOUR
-450-	EXISTING 10' CONTOURS	+362.5	SPOT ELEVATION
Gp	SOILS LINES AND TYPE	LOD	LIMITS OF DISTURBANCE
Gc	EXISTING TREELINE	---	DRAINAGE AREA DIVIDE
⊙	INDIVIDUAL TREES & SHRUBS	-SF-	SILT FENCE
---	EXISTING FENCE LINE	ECM	EROSION CONTROL MATTING
---	EXISTING & PROPOSED PAVING	---	STABILIZES CONSTRUCTION ENTRANCE
H.P.	HIGH POINT	T.B.R.	TO BE REMOVED OR RELOCATED

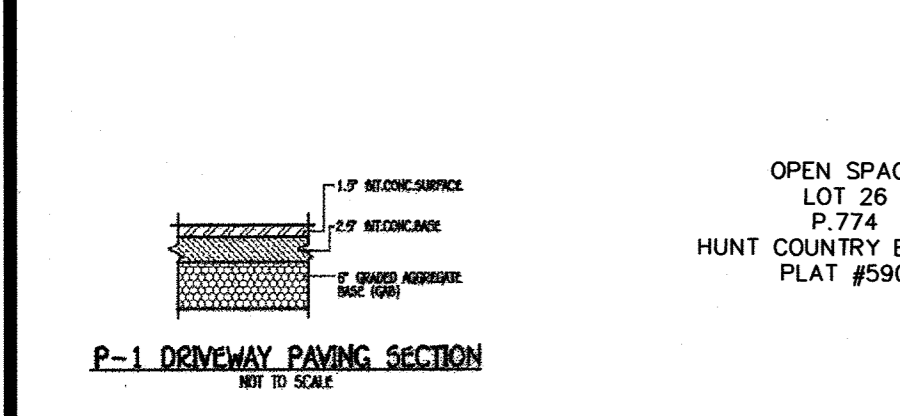
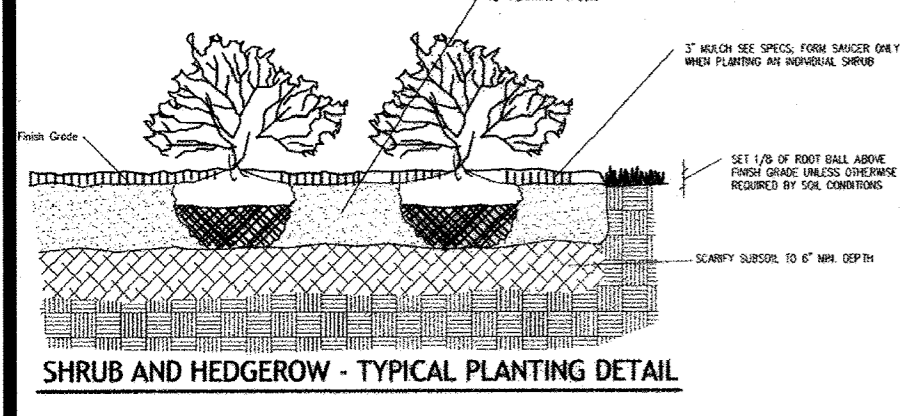
STRUCTURE SCHEDULE									
STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	ROAD NAME/COORDINATES	ROAD STA.	OFFSET	TYPE	REMARKS	
1-1	402.00	---	399.50 (6")	N 565460.21 E 1372319.94	---	---	ADS INLET -6" DOME	ADS NYLOPLAST	
1-2	402.75	399.50 (6")	399.40 (6")	N 565471.34 E 1372344.96	---	---	S' INLET	D-4.22	
5-1	399.50	---	399.00 (6")	N 565493.47 E 1372364.12	---	---	MITERED TO SLOPE		

SCHEDULE A - PERIMETER LANDSCAPE EDGE			
PERIMETER	P-1	P-2	TOTAL
CATEGORY	ADJACENT TO OPEN SPACE	ADJACENT TO PERIMETER PROPERTIES	
LANDSCAPE TYPE	A	A	
LINEAR FEET OF PERIMETER	87 L.F.	280 L.F.	
NUMBER OF PLANTS REQUIRED	(87/60) = 1.5 OR 2	(280/60) = 4.6 OR 5	
SHADE TREES	0	0	7
EVERGREEN TREES	0	0	0
CREDIT FOR EXISTING VEGETATION			
SHADE TREES	0	0	0
SMALL/MEDIUM DECIDUOUS TREES (2:1 SUBSTITUTION)	0	0	0
NUMBER OF PLANTS PROVIDED	2	(280/50) = 5.6 OR 6*	8*
SHADE TREES	0	(280/40) = 7*	15*
EVERGREEN TREES			

* NOTE: THE ADDITIONAL PLANTINGS ARE TO MEET THE REQUIREMENTS OF SECTION 16.127 RESIDENTIAL INFILL DEVELOPMENT

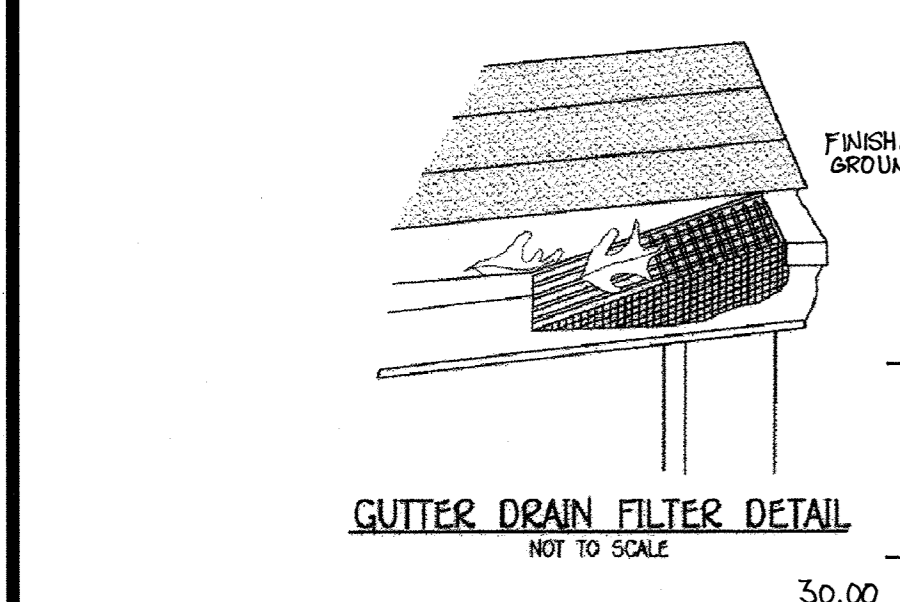
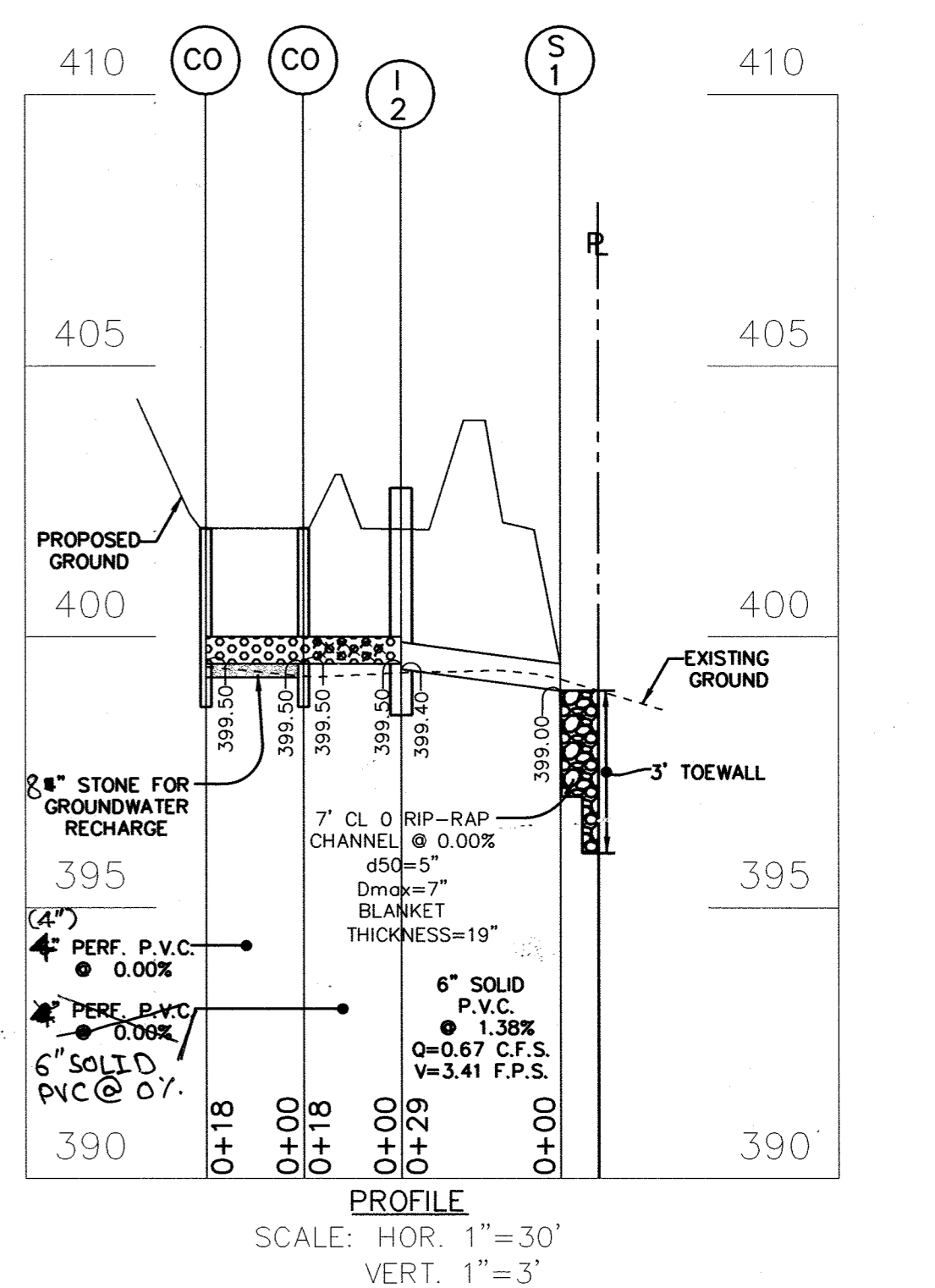
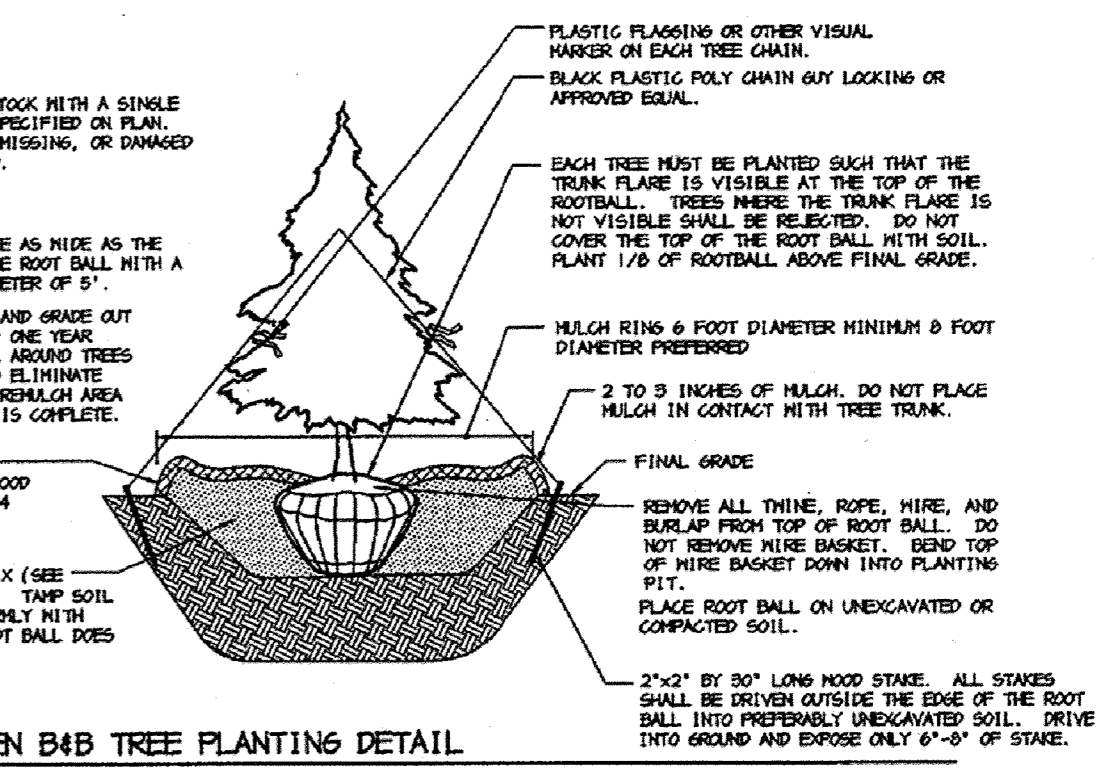
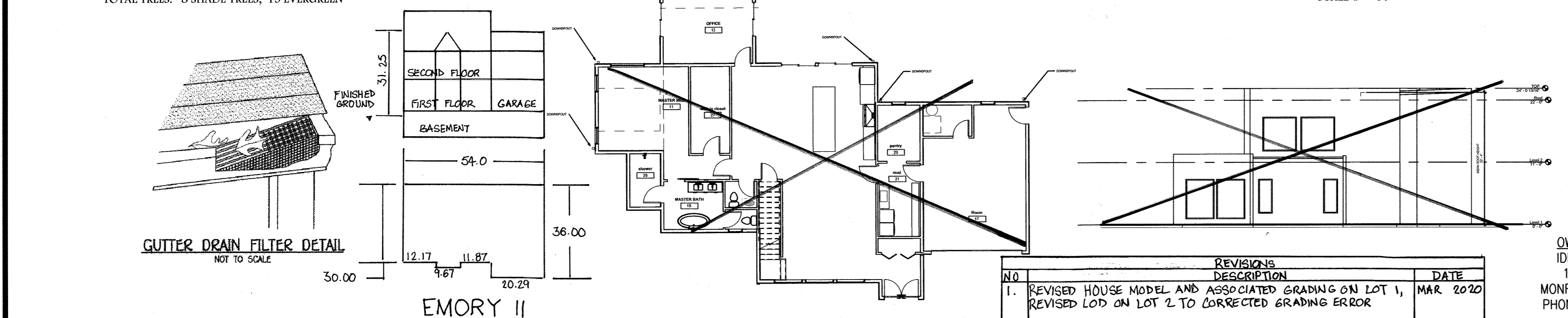
PIPE SCHEDULE		
SIZE	CLASS	LENGTH
4"	PVC SCH. 40 (PERFORATED)	84"
6"	PVC SCH. 40 (SOLID)	29"

STORMWATER MANAGEMENT PRACTICES				
LOT NO.	DISCONNECTION OF ROOFTOP RUNOFF (N-1) Y/N	DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2) Y/N	DRY WELLS (M-5) Y/N, NUMBER	MICRO-BIORETENTION (M-6) Y/N, NUMBER
2				
1	NO	NO	NO	YES (1)



LANDSCAPING PLANT LIST			
QTY.	KEY	NAME	SIZE
4	(Symbol)	ACER RUBRUM 'OCTOBER GLORY' (OCTOBER RED MAPLE)	2 1/2" - 3" CALIPER FULL CROWN, B&B
4	(Symbol)	PRUNUS SARGENTII (SARGENT CHERRY)	2 1/2" - 3" CALIPER FULL CROWN, B&B
3	(Symbol)	ILEX 'NELLIE R. STEVENS' (NELLIE R. STEVENS HOLLY)	5' - 6' HT B&B
12	(Symbol)	THUJA STANDISHII X PPLICATA (GREEN GIANT ARBORVITAE)	5' - 6' HT B&B

TOTAL TREES: 8 SHADE TREES, 15 EVERGREEN



Note: Access to the existing house must remain while new driveway is constructed. Proper maintenance of traffic will be required throughout construction.

HOWARD SCD SIGNATURE BLOCK
 THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Robertson 6/1/19
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
John R. Robertson 6-19-19
 CHIEF, DEVELOPMENT ENGINEERING DIVISION NY DATE
Kevin J. Schaefer 7-01-19
 CHIEF, DIVISION OF LAND DEVELOPMENT, Z&S DATE
William J. [Signature] 7-2-19
 DIRECTOR DATE

OWNER/DEVELOPER
 IDREES MOHAMMAD
 114 URICK LANE
 MONROEVILLE, PA 15146
 PHONE: 412-638-4819

NO.	REVISIONS DESCRIPTION	DATE
1.	REVISED HOUSE MODEL AND ASSOCIATED GRADING ON LOT 1, REVISED LOD ON LOT 2 TO CORRECTED GRADING ERROR	MAR 20 20

SITE DEVELOPMENT PLAN
IDREES RESIDENCE
 LOTS 1 AND 2
 SINGLE FAMILY DETACHED DWELLING
 5518 MONTGOMERY ROAD, ELLICOTT CITY, MD-21042
 PLAT NO. 24546, (L. 18303, F. 345)
 ECP-16-088 AND F-17-033
 PARCEL 199, TAX MAP 31 GRID 20, ZONING R-20
 FIRST ELECTION DISTRICT-HOWARD COUNTY, MARYLAND

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. 35195, Expiration Date: 6/6/20

DRAWN BY: KL
 CHECKED BY: KL
 SCALE: 1" = 30'
 DATE: 05/30/2019

KUI LIN, P.E.
 8221 Ruxton Crossing Ct.
 Towson, MD 21204
 PHONE (410) 948-7948

SHEET
 2 OF 3

