

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SUPPLEMENTAL PLAN

STORMWATER MANAGEMENT PRACTICES							
LOT NO.	HOUSE ADDRESS	PERMEABLE CONCRETE (A-G) Y/N, NUMBER	DISCONNECTION OF ROOFTOP RUNOFF (N-1) Y/N, NUMBER	DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2) Y/N, NUMBER	INFILTRATION BERMS Y/N, NUMBER	DRY WELLS (W-1) Y/N, NUMBER	MICRO-BIORETENTION (M-6) Y/N, NUMBER
1	10509 Scaggsville Rd.	-	-	-	-	-	-
2	8626 Tower Drive	-	NO	NO	NO	NO	YES, ONE (1)

SOILS LEGEND			
SOIL	NAME	CLASS	K FACTOR
UcB	Urban Land-Chillum-Bethville Complex, 0 to 5 percent slope	D	0.37

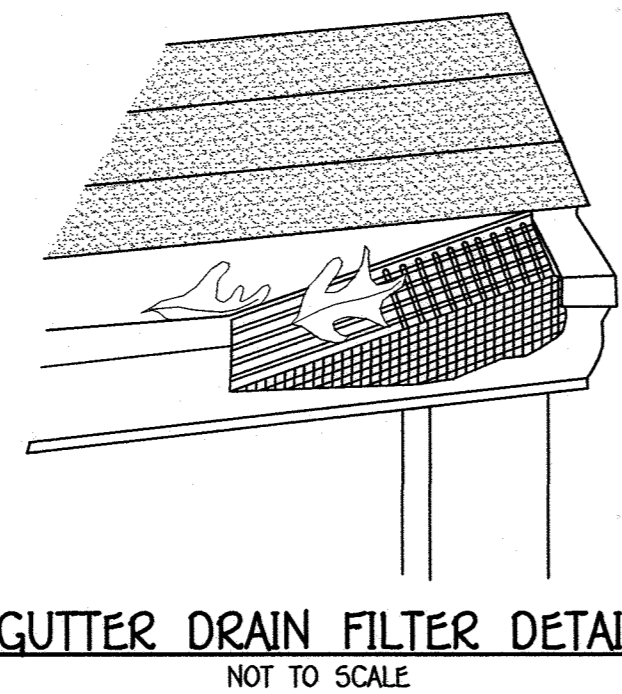
Soil Map Number: 23 (Clarkville, SE)

STORMWATER MANAGEMENT SUMMARY			
AREA ID.	ESDV REQUIRED CU.FT.	ESDV PROVIDED CU.FT.	REMARKS
SITE	263	505	MICRO-BIORETENTION (M-6)
TOTAL	263	505	

GROSS AREA = 0.474 AC. (LOT 2) 1.00 AC. (TOTAL)  
 LOD = 0.432 ACRES  
 RCN = 77  
 TARGET Pe = 1.0'

**GENERAL NOTES (CONTINUED)**

- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREETLIGHT AND ANY TREE.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL PERFORATED, SQUARE TUBE POST (1 1/4 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- EXISTING UTILITIES ARE BASED ON FIELD LOCATION.
- THERE IS NO FLOODPLAIN ON THIS SITE.
- THERE ARE NO WETLANDS ON THIS SITE.
- SUBJECT TO AN APPROVED ALTERNATIVE COMPLIANCE DATED SEPTEMBER 18, 2017 TO SECTION 16.122(C)(4)(I) WHICH REQUIRES A LIMIT ON ADJACENT DRIVEWAYS. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITION: COMPLIANCE WITH THE SRC AGENCY COMMENTS FOR PROCESSING THE FINAL PLAN, F-17-099.
- SUBJECT TO AN APPROVED DESIGN MANUAL WAIVERS DATED AUGUST 15, 2017, ALLOWING A 4" SEWER HOUSE CONNECTION (SHC) AT A SLOPE OF 1.00%, WITHIN A 10' WIDE PRIVATE EASEMENT ACROSS LOT 1 OF THE GOPEZ PROPERTY, LOT SERVE THE FIRST FLOOR ONLY OF THE PROPOSED DWELLING ON LOT 2 GOPEZ PROPERTY;  
 A. PROVIDED THAT THE PUBLIC PORTION OF THE SHC SHALL BE SLOPED AT 2.00%.

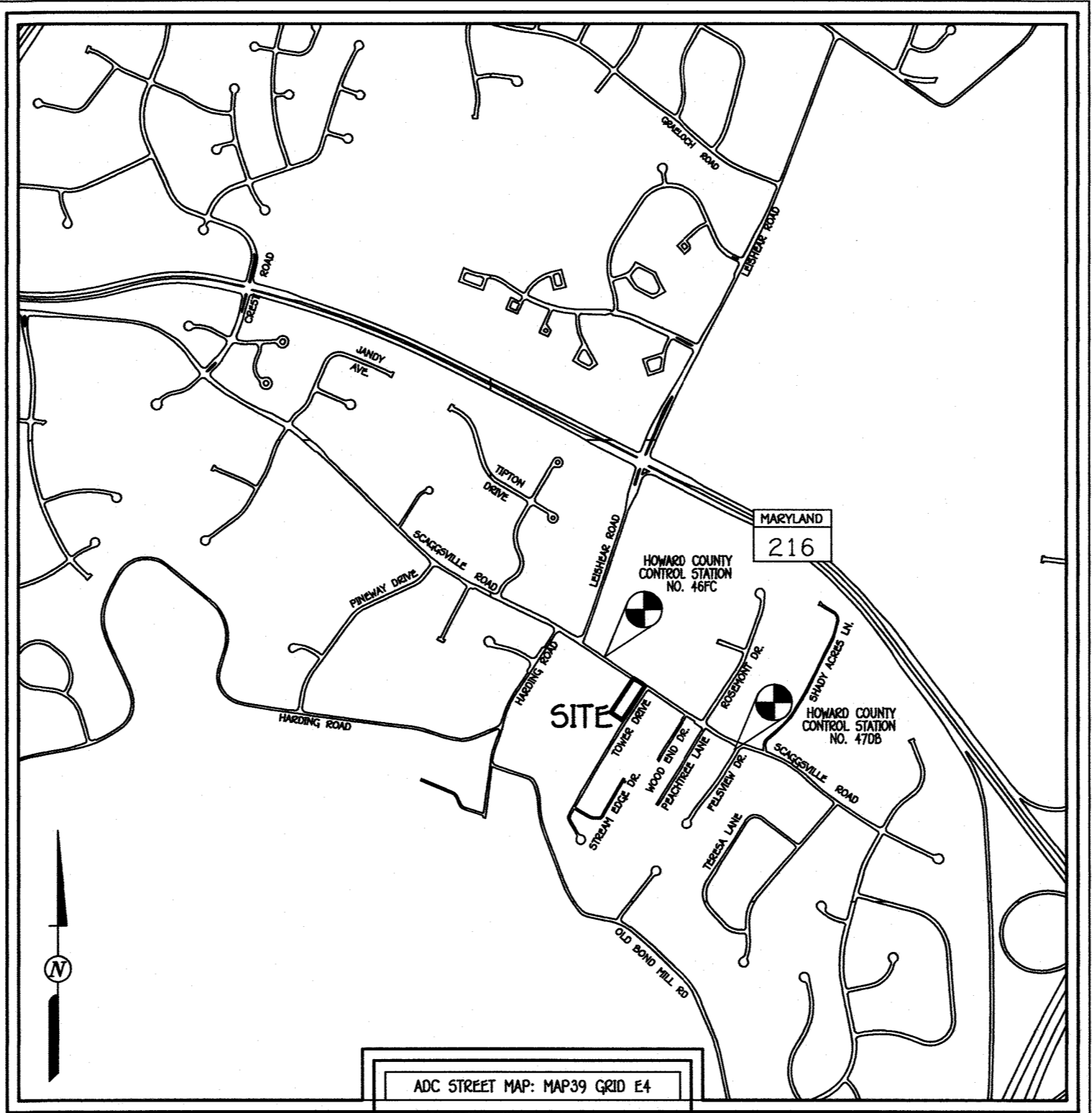


**STORMWATER MANAGEMENT NOTES**

- STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010.
- MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1,000 SQ. FT. OR LESS.
- 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.
- FINAL GRADING IS SHOWN ON THIS PLAN.

# SUPPLEMENTAL PLAN GOPEZ PROPERTY LOTS 1 AND 2

TAX MAP No. 46 GRID No. 18 PARCEL NO. 175  
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

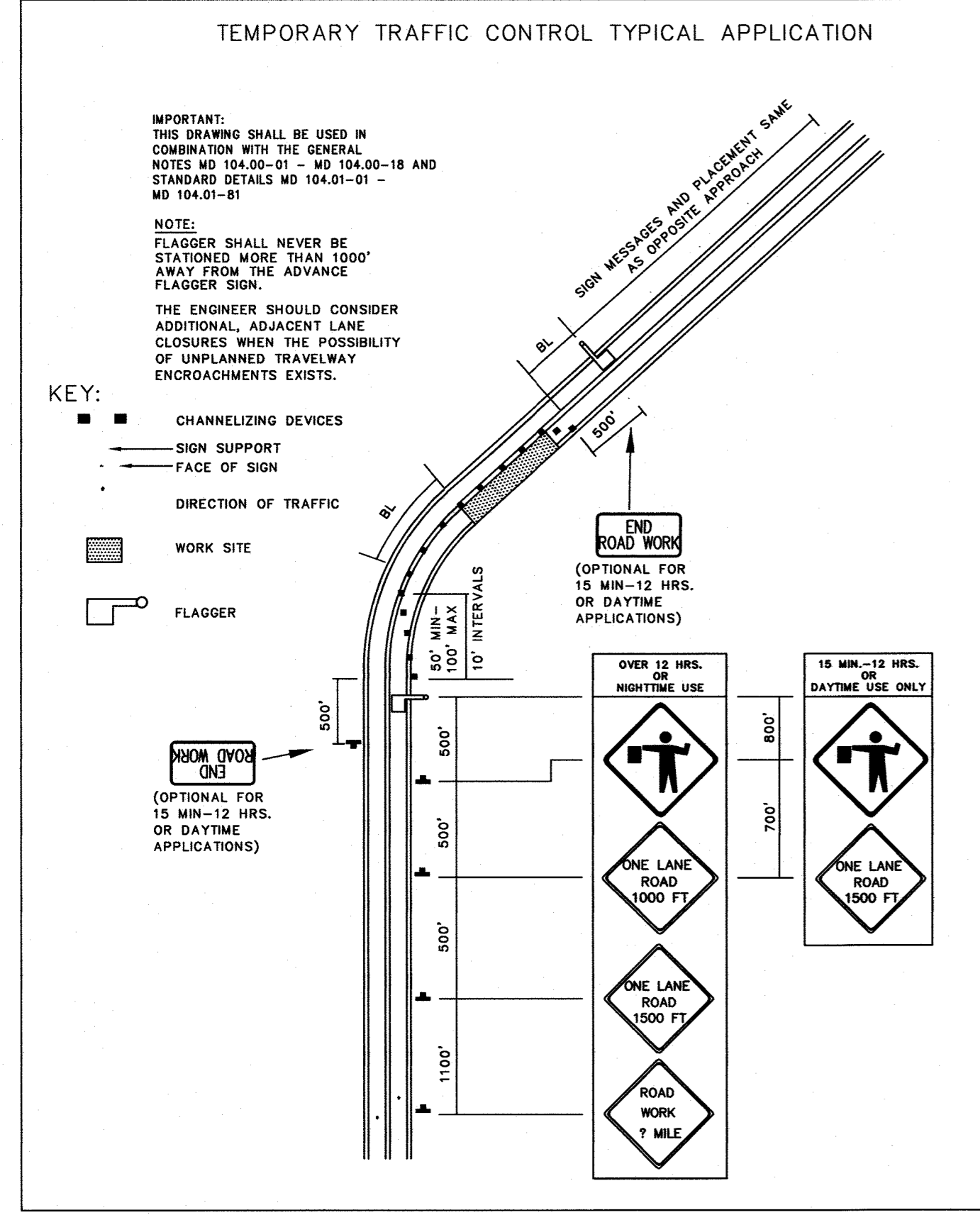


**SITE ANALYSIS DATA CHART**

- TOTAL AREA OF THIS SUBMISSION = 0.474 AC. (Lot 2)
- LIMIT OF DISTURBED AREA = 19,832 SQ.FT. OR 0.432 AC.
- PRESENT ZONING DESIGNATION = R-20 (PER 10/06/2013 COMPREHENSIVE ZONING PLAN)
- PROPOSED USE: RESIDENTIAL
- PREVIOUS HOWARD COUNTY FILES: ECP-17-044, WP-18-019
- TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0.00 AC.
- TOTAL AREA OF STEEP SLOPES:  
 MODERATED STEEP SLOPES: 15%-24.9% = 0.00 AC.  
 STEEP SLOPES: 25% OR GREATER = 0.00 AC.
- TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 AC.
- TOTAL AREA OF STREAM (INCLUDING BUFFER) = 0.00 AC.
- TOTAL AREA OF EXISTING FOREST = 0.00 AC.
- TOTAL AREA OF FOREST TO BE RETAINED = 0.00 AC.
- TOTAL AREA OF LOTS / BUILDABLE PARCELS = 0.474 AC.
- TOTAL GREEN OPEN AREA = 0.402 AC.
- TOTAL IMPERVIOUS AREA = 0.06 AC.
- TOTAL AREA OF ERODIBLE SOILS = 0.414 AC.
- TOTAL AREA OF ROAD DEDICATION = 0.081 AC.

LANDSCAPING PLANT LIST			
QTY.	KEY	NAME	SIZE
2	(Symbol)	ACER RUBRUM (OCTOBER GLORY) (OCTOBER RED MAPLE)	2 1/2" - 3" CALIPER FULL CROWN, B&B
1	(Symbol)	PRUNUS SARGENTII (SARGENT CHERRY)	2 1/2" - 3" CALIPER FULL CROWN, B&B
6	(Symbol)	ILEX 'NELLIE R. STEVENS' (NELLIE R. STEVENS HOLLY)	9"-6" HT. B&B
6	(Symbol)	THUJA STANOSHIKI X PLICATA (GREEN GANT ARBORVITAE)	9"-6" HT. B&B

TOTAL: 3 SHADE TREES, 12 EVERGREEN TREES



SCHEDULE A - PERIMETER LANDSCAPE EDGE			
PERIMETER CATEGORY	P-1 ADJACENT TO PERIMETER PROPERTIES	P-2 ADJACENT TO PERIMETER PROPERTIES	TOTAL
LANDSCAPE TYPE	A	C +	
LINEAR FEET OF PERIMETER	170 L.F.	121 L.F.	
NUMBER OF PLANTS REQUIRED			
SHADE TREES	(170'/60' = 2.8 OR 3)	(121'/40' = 3.0 OR 3)	6
EVERGREEN TREES		(121'/20' = 6.0 OR 6)	6
CREDIT FOR EXISTING VEGETATION	0	0	0
SHADE TREES	0	0	0
EVERGREEN TREES	0	0	0
NUMBER OF PLANTS PROVIDED			
SHADE TREES	0	3	3
EVERGREEN TREES	6	6	12

\* NOTE: NO CREDIT ALONG P-1 AND P-2, MISCELLANEOUS SHRUBS ONLY. ENHANCED PERIMETER LANDSCAPING HAS BEEN PROVIDED ON LOT 2 TO MITIGATE VIEWS AND TO ADDRESS PRIVACY.

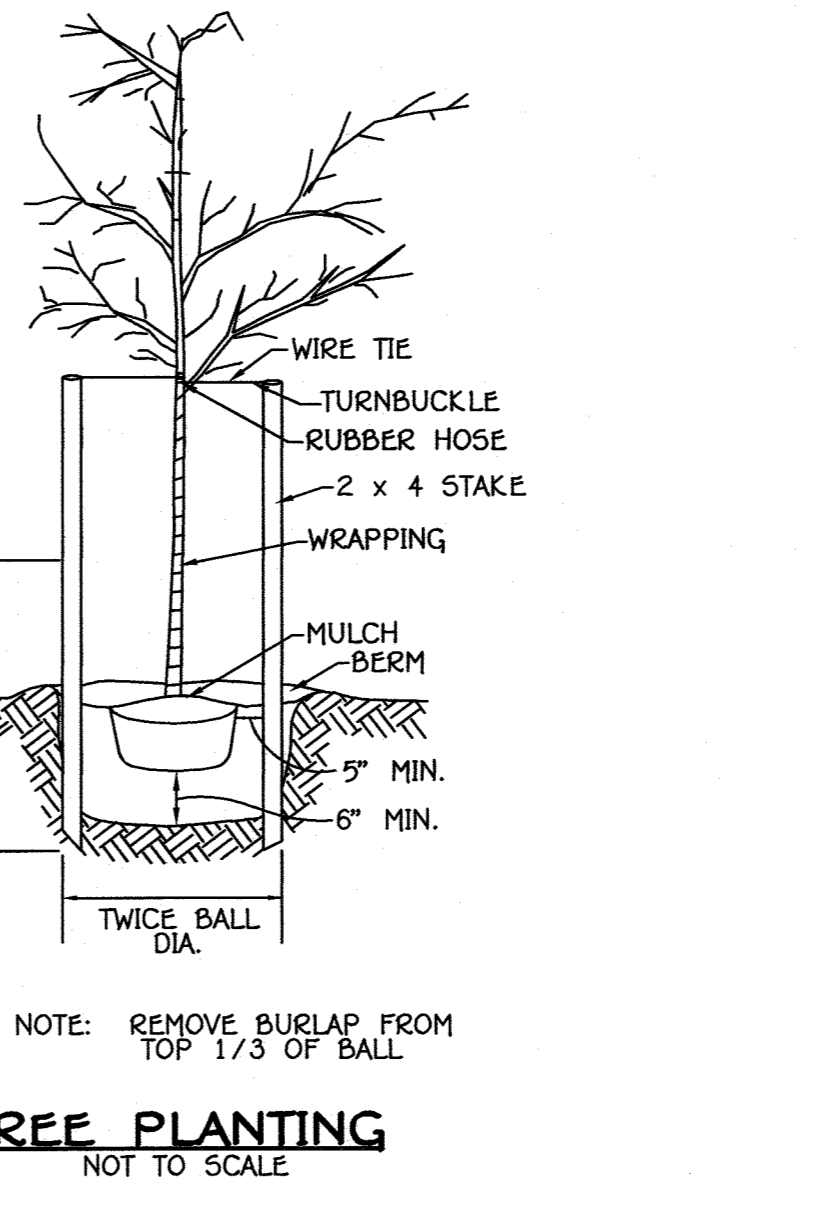
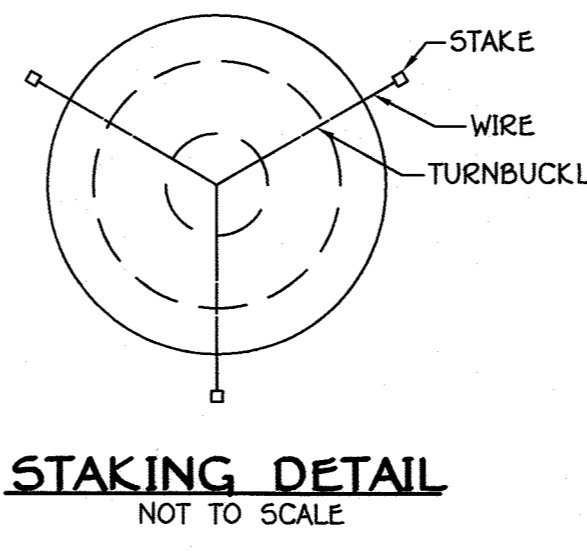
**DEVELOPER'S / BUILDER'S CERTIFICATE**  
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

*Jonathan and Joselyn Gopez* 8/11/21  
 DATE

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE 07/14/2023.

*Frank John Marzolan II* 8/10/21  
 DATE  
 Signature of Professional Land Surveyor

**OWNER/DEVELOPER**  
 JONATHAN AND JOSIELYN GOPEZ  
 10509 SCAGGSVILLE ROAD  
 LAUREL, MARYLAND 20723  
 757-925-1660



LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
(Symbol)	EXISTING 2' CONTOURS	(Symbol)	PROPOSED CONTOUR
(Symbol)	EXISTING 10' CONTOURS	(Symbol)	SPOT ELEVATION
(Symbol)	SOILS LINES AND TYPE	(Symbol)	LIMITS OF DISTURBANCE
(Symbol)	EXISTING TREE LINE	(Symbol)	DRAINAGE AREA DIVIDE
(Symbol)	INDIVIDUAL EXISTING TREES & SHRUBS	(Symbol)	SILT FENCE
(Symbol)	EXISTING FENCE LINE	(Symbol)	PERMANENT SOIL STABILIZATION MATTING
(Symbol)	EXISTING & PROPOSED PAVING	(Symbol)	STABILIZED CONSTRUCTION ENTRANCE
(Symbol)	TO BE REMOVED	(Symbol)	TREE PROTECTION FENCE
(Symbol)	SILT FENCE	(Symbol)	SUPER SILT FENCE
(Symbol)	RIGHT-OF-WAY	(Symbol)	DIVERSION FENCE

**GENERAL NOTES**

- SUBJECT PROPERTY ZONED R-20 PER 10/06/13 COMPREHENSIVE ZONING PLAN.
- COORDINATES BASED ON NAD '83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 46FC AND NO. 470B.  
 STA. 46FC N 534,145.8940 E 1,348,934.8620 ELEVATION 403.720  
 STA. 470B N 534,316.8030 E 1,348,131.2620 ELEVATION 398.510
- THIS PLAN IS BASED ON FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT DECEMBER, 2016 BY FISHER, COLLINS AND CARTER, INC.
- B.L. DENOTES BUILDING RESTRICTION LINE.
- (Symbol) DENOTES IRON PIN SET CAPPED "F.C.C. 106".
- (Symbol) DENOTES IRON PIPE OR IRON BAR FOUND.
- (Symbol) DENOTES ANGLE CHANGE IN BEARING OF BOUNDARY OR RIGHTS-OF-WAY.
- (Symbol) DENOTES CONCRETE MONUMENT SET WITH ALUMINUM PLATE "F.C.C. 106".
- (Symbol) 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 PIPE STEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF FLAG OR PIPE STEM AND ROAD RIGHT-OF-WAY LINE ONLY AND NOT ONTO THE FLAG OR PIPE STEM LOT 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-17-044 AND WP-18-019.
- NO CEMETRIES EXIST ON THE SUBJECT PROPERTY BASED ON VISUAL OBSERVATION OR LISTED IN AVAILABLE HOWARD COUNTY CEMETERY DIRECTORY MAP.
- THERE IS AN EXISTING DWELLING ON LOT 1 TO REMAIN. NO NEW BUILDINGS, EXTENSIONS OR ADDITIONS TO THE EXISTING DWELLING ARE TO BE CONSTRUCTED AT A DISTANCE LESS THAN THE ZONING REGULATION REQUIREMENTS.
- THERE ARE NO FOREST STANDS, WETLANDS, WETLAND BUFFER, STREAM, STREAM BUFFER AND FLOODPLAIN EXISTING ON-SITE. SEE ENVIRONMENTAL FINDINGS LETTER PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED MARCH 15, 2016.
- SITE IS NOT ADJACENT TO SCENIC ROAD.
- THIS PROJECT IS A MINOR SUBDIVISION CREATING ONE NEW LOT WITH NO FURTHER SUBDIVISION POTENTIAL. THIS SUBDIVISION IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202(B)(1)(VIII) OF THE COUNTY CODE.
- WATER AND SEWER SERVICE TO THESE LOTS WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 16.122B OF THE HOWARD COUNTY CODE.
- PUBLIC WATER AND SEWER ALLOCATION WILL BE GRANTED AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.
- STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. NON-STRUCTURAL PRACTICES IN ACCORDANCE WITH CHAPTER 5 ARE BEING UTILIZED. A MICRO-BIORETENTION IS PROPOSED AND WILL BE PRIVATELY OWNED AND MAINTAINED.
- THIS PLAN IS IN COMPLIANCE WITH THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL 45-2003 AND THE 10/06/13 COMPREHENSIVE ZONING PLAN. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION, OR BUILDING/GRADING PERMIT.
- LANDSCAPING IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A LANDSCAPE SURETY IN THE AMOUNT OF \$2,700 BASED ON (3) SHADE TREES @ \$300/SHADE TREE AND (12) EVERGREEN TREES @ \$150/EVERGREEN TREE WILL BE COMPLETED WITH THE S&P AND BONDED WITH THE BUILDING/GRADING PERMIT.
- SITE DEVELOPMENT PLAN APPROVAL BY THE DEPARTMENT OF PLANNING AND ZONING IS REQUIRED PRIOR TO BUILDING PERMITS BEING ISSUED FOR THE CONSTRUCTION OF RESIDENTIAL DWELLINGS ON THESE LOTS.
- 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 ENHANCED LANDSCAPE BUFFER HAS BEEN PROVIDED ON LOT 2 TO MITIGATE VIEWS AND TO ADDRESS PRIVACY AND COMPATIBILITY CONCERNS EXPRESSED BY THE ADJACENT LOT OWNERS AT THE PRE-SUBMISSION COMMUNITY MEETING.
- NO NOISE STUDY IS REQUIRED BECAUSE THE PROJECT DOES NOT FALL WITHIN THE GUIDELINES OF DESIGN MANUAL, VOLUME III, ROADS, BRIDGES, SECTION 5.2.F.2.
- OPEN SPACE REQUIREMENTS ARE PROVIDED BY FEE-IN-LIEU PAYMENT OF \$1,500.00.
- A COMMUNITY MEETING WAS CONDUCTED FEBRUARY 9, 2017 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.
- PROPERTY IS A MINOR SUBDIVISION AND IS EXEMPT FROM APPO TRAFFIC REPORT IN ACCORDANCE WITH SECTION 4.7.B.5. OF THE HOWARD COUNTY DESIGN MANUAL, VOLUME III - ROADS AND BRIDGES.
- THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT AND WILL BE SERVED BY PUBLIC WATER AND SEWER.
- SUBDIVISION IS SUBJECT TO SECTION 104.0.F. OF THE ZONING REGULATIONS. AT LEAST 10% OF THE DWELLING UNITS SHALL BE MODERATE INCOME HOUSING UNITS (M.I.H.U.) OR AN ALTERNATIVE COMPLIANCE WILL BE PROVIDED. THE DEVELOPER SHALL EXECUTE A M.I.H.U. AGREEMENT WITH THE DEPARTMENT OF HOUSING TO INDICATE HOW THIS M.I.H.U. REQUIREMENT WILL BE MET. THE M.I.H.U. AGREEMENT AND COVENANTS WILL BE RECORDED SIMULTANEOUSLY WITH THE PLAT IN THE LAND RECORDS OFFICE OF HOWARD COUNTY, MARYLAND. THIS DEVELOPMENT WILL MEET M.I.H.U. ALTERNATIVE COMPLIANCE BY A PAYMENT OF A FEE-IN-LIEU TO THE DEPARTMENT OF HOUSING FOR EACH REQUIRED UNIT.  
 MODERATE INCOME HOUSING UNIT (M.I.H.U.) TABULATION:  
 a. M.I.H.U. REQUIRED = (1 LOT X 10%) = 0.1 M.I.H.U.  
 b. M.I.H.U. PROPOSED = DEVELOPER WILL PURSUE ALTERNATIVE COMPLIANCE BY PAYING A FEE-IN-LIEU TO THE HOWARD COUNTY HOUSING DEPARTMENT FOR THE UNITS REQUIRED BY THE DEVELOPMENT.  
 c. AN EXECUTED M.I.H.U. AGREEMENT WITH THE HOWARD COUNTY HOUSING DEPARTMENT HAS BEEN COMPLETED AND RECORDED SIMULTANEOUSLY WITH THE FINAL PLAN.
- TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SURVEY PERFORMED BY FISHER, COLLINS & CARTER, INC. IN DECEMBER, 2016 AND SUPPLEMENTED WITH HOWARD COUNTY GIS TOPOGRAPHY AT 5' CONTOUR INTERVALS. APPROVAL IS SUBJECT TO COMPLIANCE WITH THE SRC COMMENTS FOR PROCESSING OF FINAL PLANS, F-17-099.
- THIS PLAN IS SUBJECT TO WP-18-019, APPROVED ON SEPTEMBER 18, 2017 WHICH GRANTED ALTERNATIVE COMPLIANCE TO SECTION 16.127 OF THE SUBDIVISION REGULATIONS, TO ALLOW THE EXISTING DRIVEWAYS TO REMAIN. APPROVAL IS SUBJECT TO COMPLIANCE WITH THE SRC COMMENTS FOR PROCESSING OF FINAL PLANS, F-17-099.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1080 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.

## GOPEZ PROPERTY LOTS 1 AND 2

ZONED: R-20  
 TAX MAP #46 GRID #18 PARCEL #175  
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: 1" = 30' DATE: AUGUST, 2021  
 SHEET 1 OF 2

Table B.4. Materials Specifications for Micro-Bioretenion, 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-446	No. 8 or No. 9 (1/8" to 3/8")	
Curbside drain	ornamental stone: washed cobble	stone: 2" to 5"	
Geotextile	n/a	n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	ASTM M-43	No. 57 or No. Aggregate (3/8" to 3/4")	
Underdrain piping	1" 750, Type P5 2B or ASTM H-278	4" to 6" rigid schedule 40 PVC 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 1/4 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-A15-02	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 forms 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 350.8/89; vertical loading (H-10 or H-20); allowable horizontal loading (based on soil pressure); and analysis of potential cracking.
Sand	ASTM-M-6 or ASTM-C-33	0.02" to 0.04"	sand substitutions such as Diabase and Geystone (ASTM) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	EXISTING 2' CONTOURS		PROPOSED CONTOUR
	EXISTING 10' CONTOURS		SPOT ELEVATION
	SOILS LINES AND TYPE		LIMITS OF DISTURBANCE
	EXISTING TREELINE		DRAINAGE AREA DIVIDE
	INDIVIDUAL EXISTING TREES & SHRUBS	T.B.R.	TO BE REMOVED
	EXISTING FENCE LINE	PSM/C	PERMANENT SOIL STABILIZATION MATTING
	EXISTING & PROPOSED PAVING	TPF	STABILIZED CONSTRUCTION ENTRANCE
	SILT FENCE	TPF	TREE PROTECTION FENCE
	R.O.W.	SSF	SUPER SILT FENCE
		DF	DIVERSION FENCE

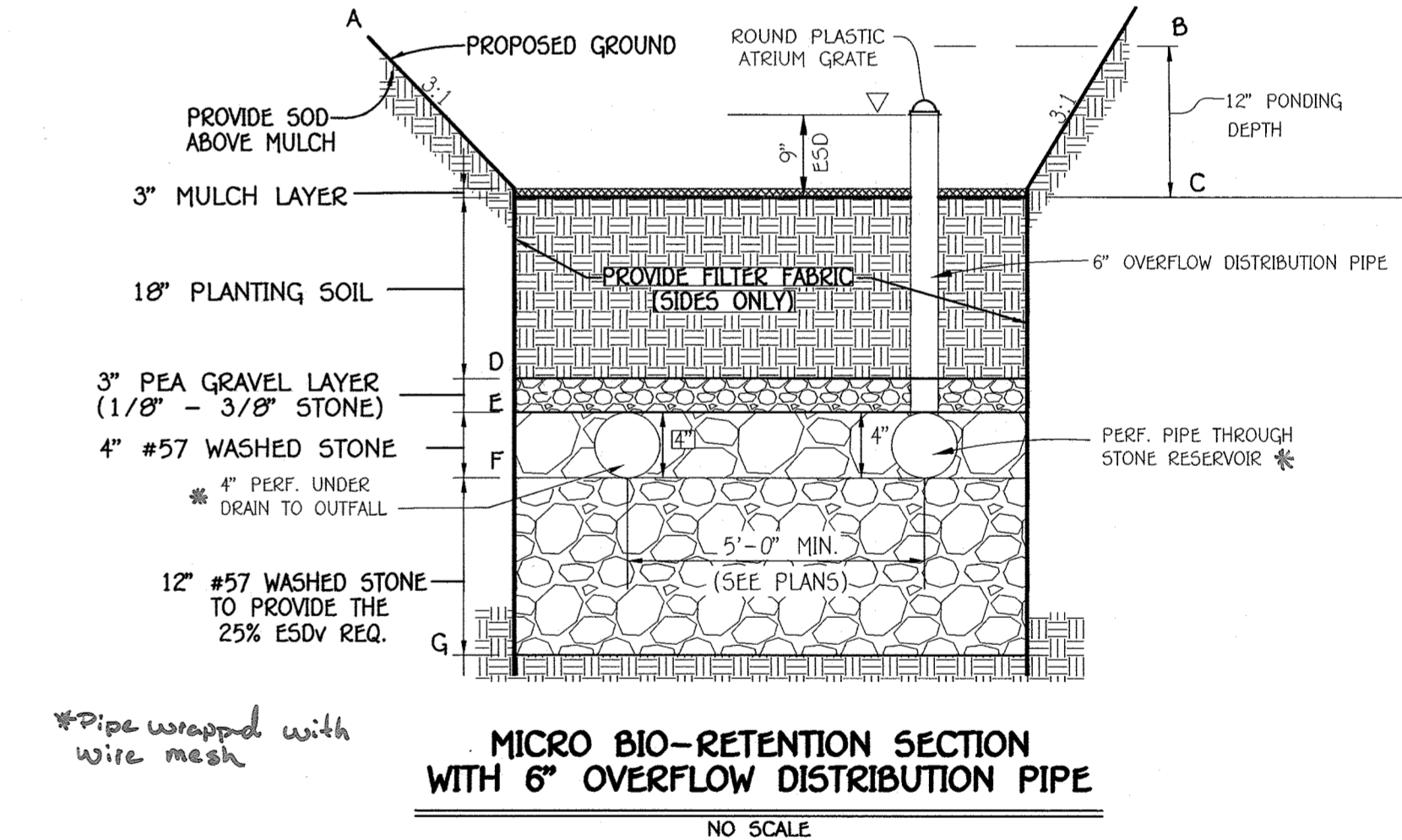
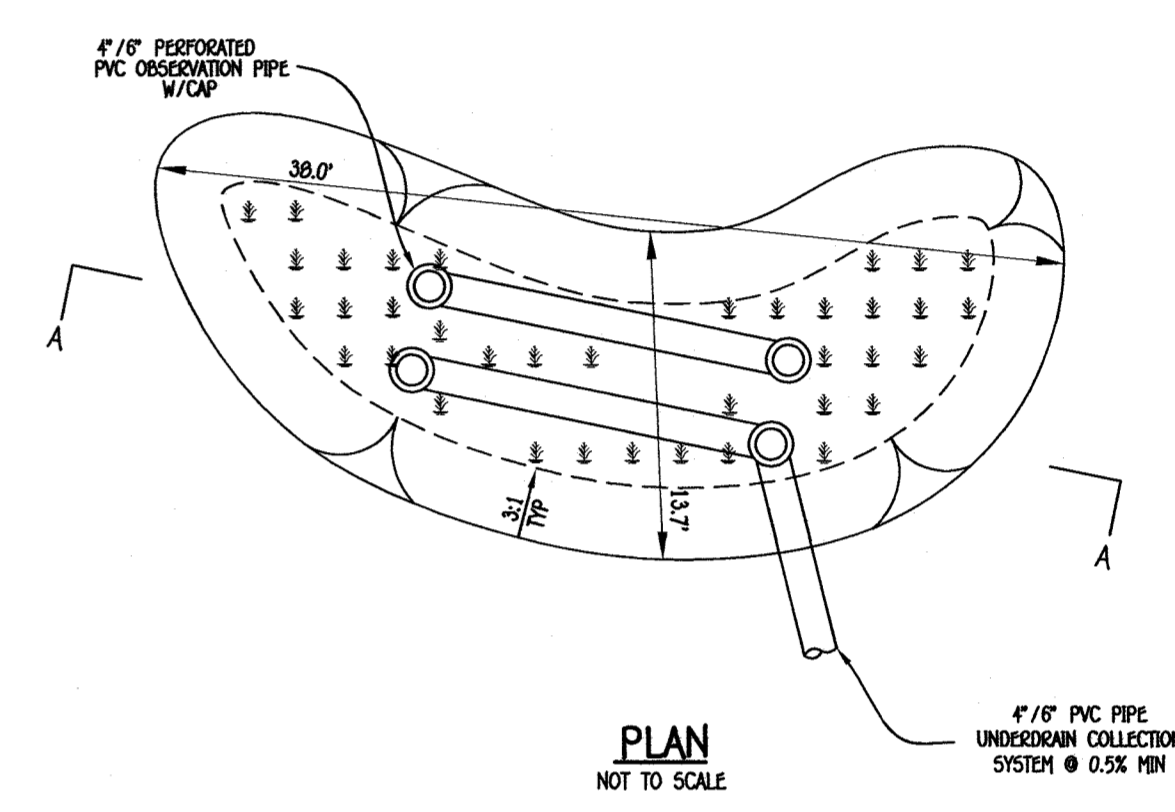
**MIXED PERENNIALS**  
CUT-LEAF CONIFER (1.5' SP.)  
SISYRINCH (1.5' SP.)  
JOE-PYE-WEED (3' SP.)

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

MICRO-BIORETENTION / BIORETENTION							
BIORETENTION FILTER	A	B	C	D	E	F	G
LOT 2	398.0	398.0	397.0	395.5	395.25	394.92	393.92

MICRO-BIORETENTION PLANT MATERIAL		
MICRO-BIO QUANTITY	NAME	MAXIMUM SPACING (FT.)
30	MIXED PERENNIALS	1.5 TO 3.0 FT.

MICRO-BIORETENTION PLANTING DETAIL  
NOT TO SCALE

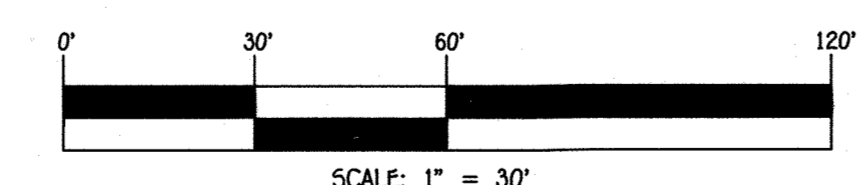
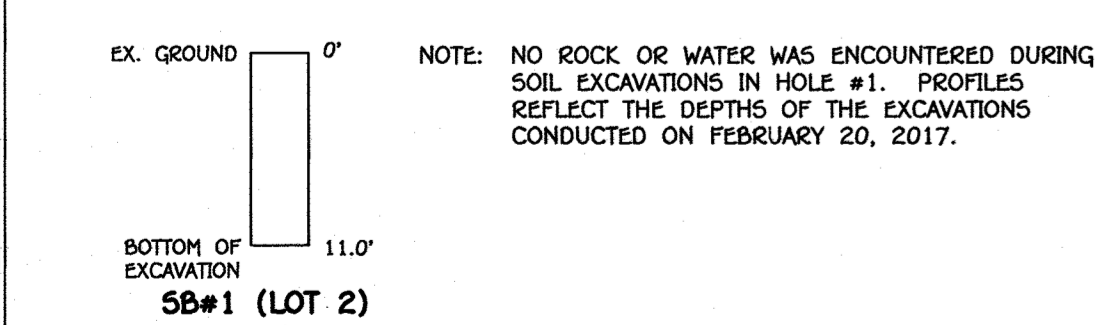


OPERATION & MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

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

SWM SEQUENCE OF CONSTRUCTION

- NOTE: THIS SEQUENCE OF CONSTRUCTION IS TO BE USED IN COMBINATION WITH THE SITE DEVELOPMENT PLAN THAT WILL BE PREPARED AT TIME OF GRADING PERMIT. THE FACILITIES ARE TO BE CONSTRUCTED AT TIME OF GRADING PERMIT AND NOT WITH THIS PLAN.
- OBTAIN BUILDING AND GRADING PERMITS ASSOCIATED WITH HOUSE CONSTRUCTION. (30 DAYS)
  - UPON COMPLETION OF EXTERIOR CONSTRUCTION OF THE HOUSE AND ESTABLISHING FINAL GRADES ON-SITE, STORMWATER MANAGEMENT DEVICES MAY BE INSTALLED. (4 MONTHS PER LOT)
  - AS NECESSARY DURING CONSTRUCTION OF THE MICRO-BIORETENTION, DEPTH AND QUANTITY OF STONE SHALL BE VERIFIED FOR COMPLIANCE WITH THE SIZING SHOWN HEREON. (2 DAYS)
  - UPON APPROVAL OF SEDIMENT CONTROL INSPECTOR AT TIME OF PERMIT, ALL SEDIMENT CONTROLS CAN BE REMOVED ASSOCIATED WITH THE STORMWATER MANAGEMENT FACILITIES. (1 WEEK)



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development  
*[Signature]*  
Date: 8/24/21

Chief, Development Engineering Division  
*[Signature]*  
Date: 8/24/21

**PROFESSIONAL CERTIFICATION**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14282, EXPIRATION DATE: 07/14/2023.

*[Signature]*  
Signature Of Professional Land Surveyor  
DATE: 8/10/21

**OWNER/DEVELOPER**

JONATHAN AND JOSIELYN GOPEZ  
10509 SCAGGSVILLE ROAD  
LAUREL, MARYLAND 20723  
757-525-1650

**FISHER, COLLINS & CARTER, INC.**  
Civil, Engineering, Consultants & Land Surveyors

CENTRAL SQUARE OFFICE PARK - 10275 BALTIMORE NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 21042  
(410) 461 - 2895

**GOPEZ PROPERTY**  
LOTS 1 AND 2

ZONED: R-20  
TAX MAP #46 GRID #18 PARCEL #175  
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: 1"=30'  
DATE: AUGUST, 2021  
SHEET 2 OF 2