

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT & LANDSCAPE PLAN
3	SEDIMENT CONTROL NOTES AND DETAILS

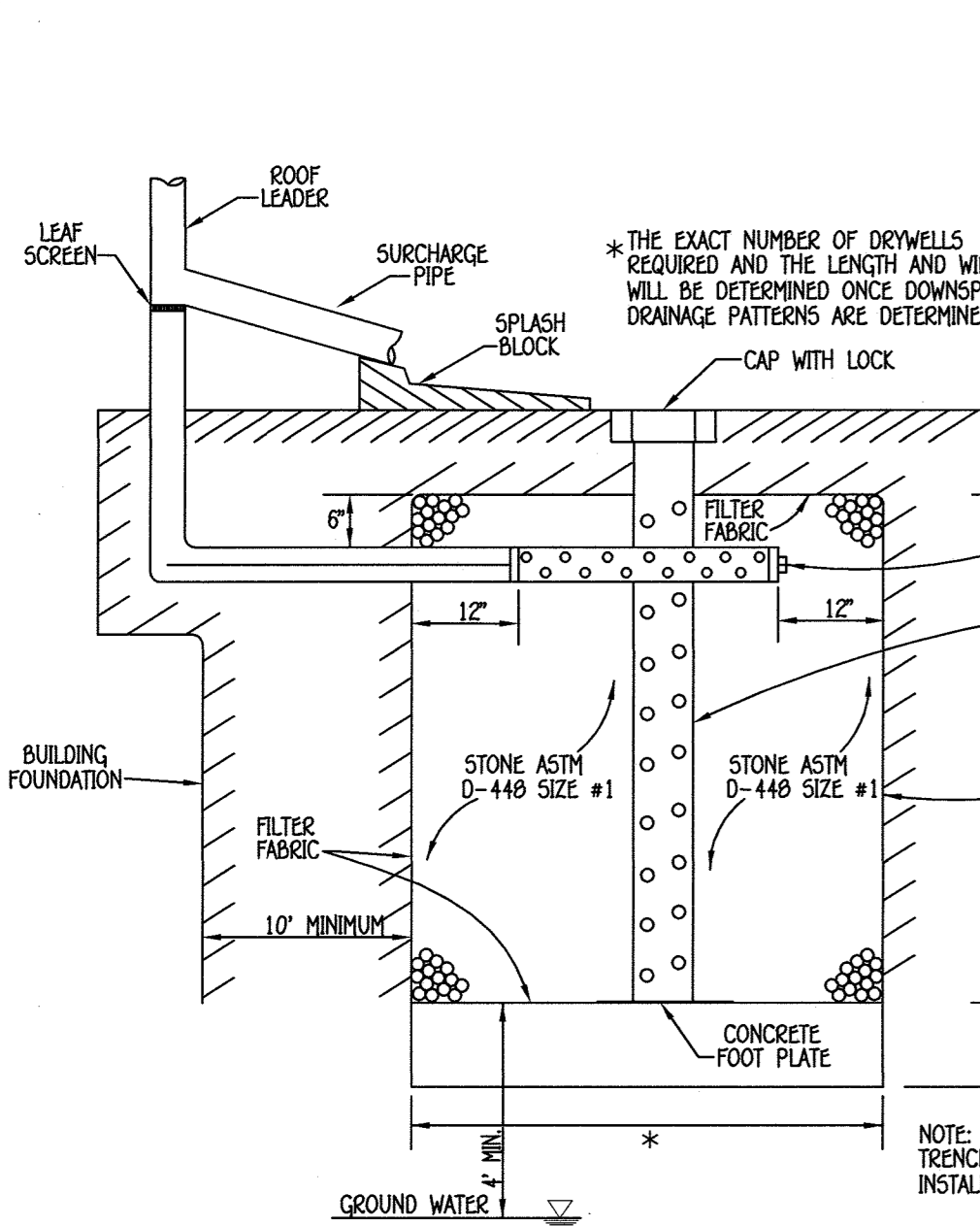
Street Address Chart	
Lot/Parcel No.	Street Address
Lot 5	4773 Montgomery Road

SOILS LEGEND			
SOIL	NAME	CLASS	K-VALUE
LmB	Legore-Montalto silt loams, 3 to 8 percent slopes	B	0.64

HOWARD COUNTY SOILS MAP No. 19; SAVAGE NE

STORMWATER MANAGEMENT SUMMARY			
AREA ID.	ESDV REQUIRED CU.FT.	ESDV PROVIDED CU.FT.	REMARKS
SITE	827	858	DRYWELLS (M-5) & MICRO-BIORETENTION (M-6)
TOTAL	827	858	

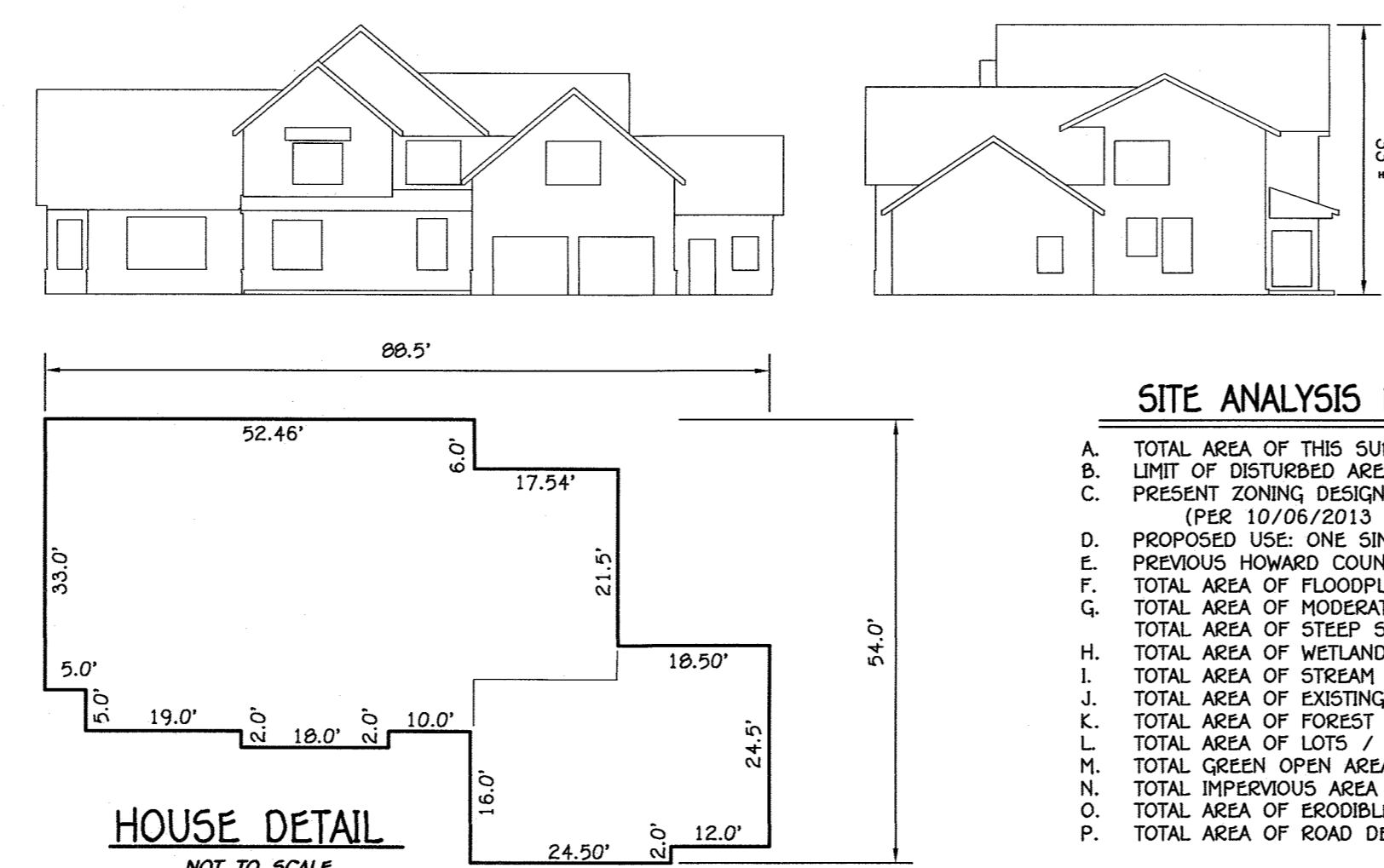
GROSS AREA = 0.79 AC. (TOTAL)
 LOD = 0.69 ACRES
 RCN = 55.0
 TARGET Pe = 1.2"
 Rv = 0.05 + (0.009) (I); I = 17
 = 0.21
 S = 0.26 (100% 'B' Soils)
 Rev = (S) (Rv) (A)/12
 = (0.26) (0.21) (0.79)/12
 = 0.0036 ac-ft or 157 cu-ft



DRY WELL CHART					
DRYWELL NO.	AREA OF ROOF PER DOWN SPOUT	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF TREATMENT	L W D
5-A	670 SQ. FT.	64 C.F.	101 C.F.	100%	9' x 7' x 4'
5-B	700 SQ. FT.	67 C.F.	101 C.F.	100%	9' x 7' x 4'
5-C	696 SQ. FT.	67 C.F.	101 C.F.	100%	9' x 7' x 4'
5-D	880 SQ. FT.	84 C.F.	101 C.F.	100%	9' x 7' x 4'
5-E	670 SQ. FT.	64 C.F.	101 C.F.	100%	9' x 7' x 4'



Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil	USDA soil types loamy sand or sandy loam; clay content <5% (2' to 4' deep)		
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 cobble	stone: 2" to 5"	
Geotextile		n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	No. 57 or No. 20 aggregate (3/8" to 3/4")	
Underdrain piping	F 758, Type 25 28 or AASHTO M-279	4" to 6" rigid schedule 40 PVC or 50835	Slotted or perforated pipe; 3/8" per ft. @ 6" on center, 4 holes per row; minimum of 2" of gravel over pipe; not necessary underdrain 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 @ 28 days, normal weight. 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 site 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 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 carbonate or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.



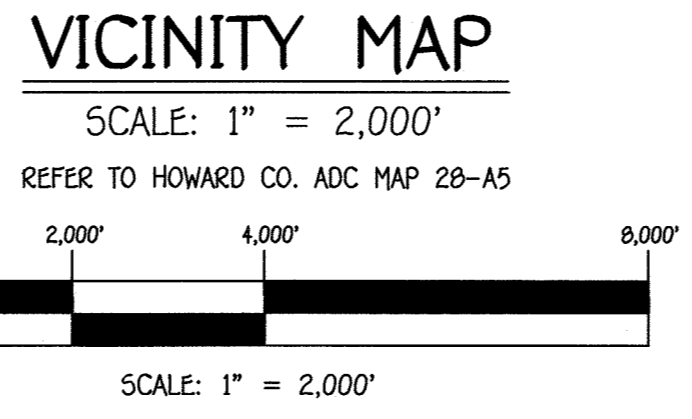
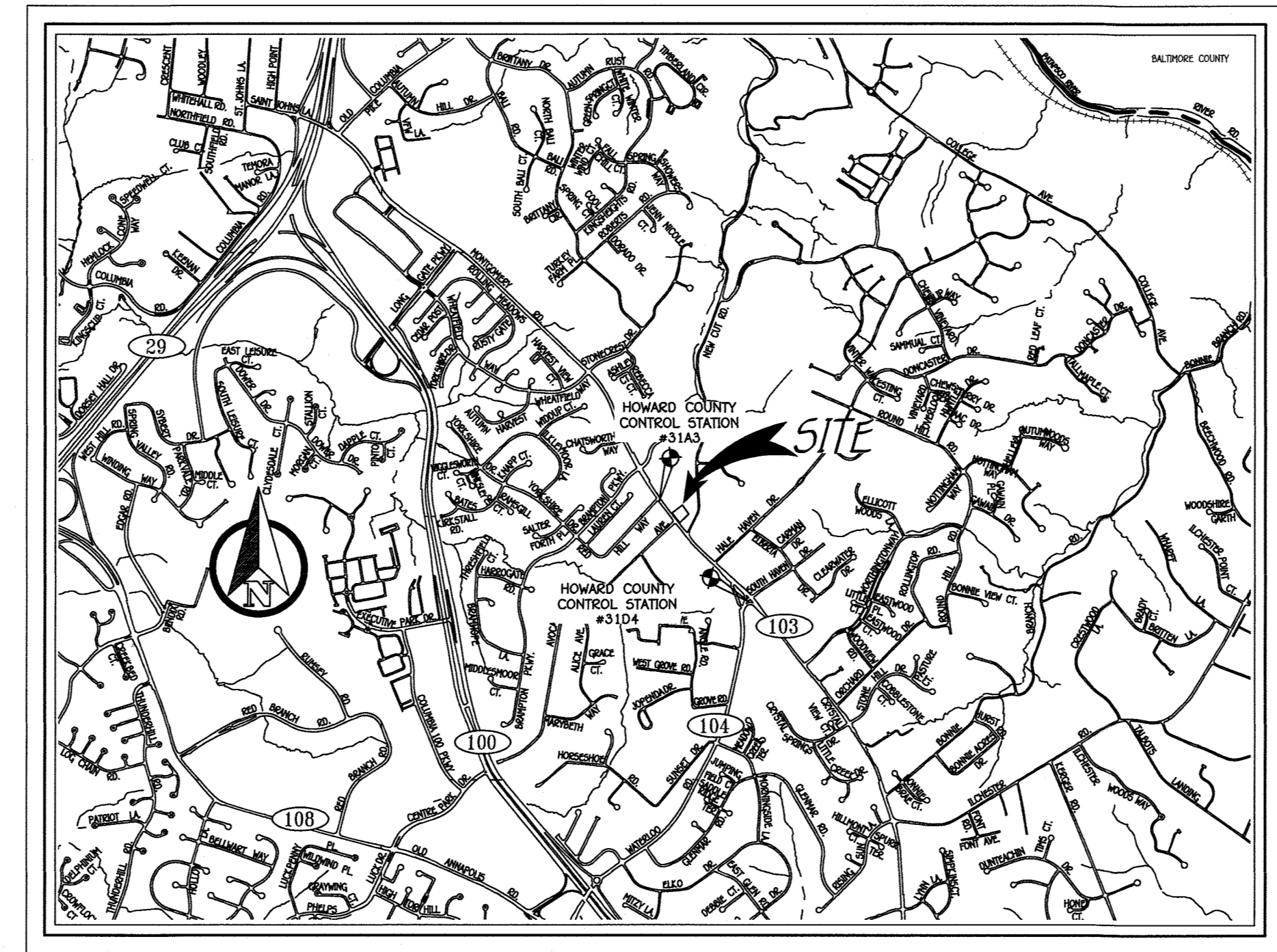
SITE ANALYSIS DATA CHART	
A.	TOTAL AREA OF THIS SUBMISSION = 0.79 AC. ±
B.	LIMIT OF DISTURBED AREA = 29,900 SQ.FT. OR 0.69 AC. ±
C.	PRESENT ZONING DESIGNATION = R-20 (PER 10/06/2013 COMPREHENSIVE ZONING PLAN)
D.	PROPOSED USE: ONE SINGLE-FAMILY DETACHED DWELLING
E.	PREVIOUS HOWARD COUNTY FILES: ECP-19-050
F.	TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0.00 AC. ±
G.	TOTAL AREA OF MODERATE STEEP SLOPES: 15% - 24.9% = 0.00 AC. ±
H.	TOTAL AREA OF STEEP SLOPES: 25% OR GREATER = 0.00 AC. ±
I.	TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 AC. ±
J.	TOTAL AREA OF STREAM (INCLUDING BUFFER) = 0.00 AC. ±
K.	TOTAL AREA OF EXISTING FOREST = 0.00 AC. ±
L.	TOTAL AREA OF FOREST TO BE RETAINED = 0.00 AC. ±
M.	TOTAL AREA OF LOTS / BUILDABLE PARCELS = 0.79 AC. ±
N.	TOTAL GREEN OPEN AREA = 0.65 AC. ±
O.	TOTAL IMPERVIOUS AREA = 0.14 AC. ±
P.	TOTAL AREA OF ERODIBLE SOILS = 0.00 AC. ±
Q.	TOTAL AREA OF ROAD DEDICATION = 0.00 AC. ±

SITE DEVELOPMENT PLAN

BAUGHER PROPERTY

LOT 5

TAX MAP No.31 GRID No. 07 PARCEL NO. 415
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

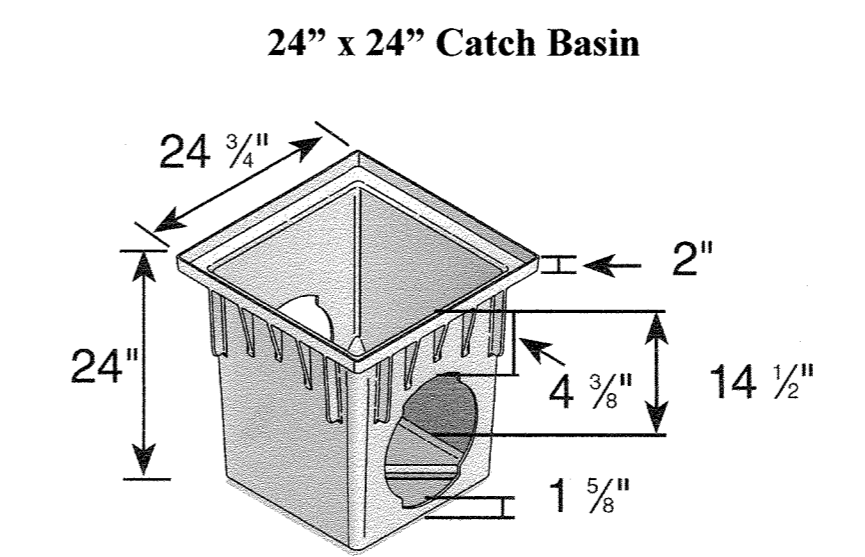


OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY WELLS (M-5)

- THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- 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.
- THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- 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.
- THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- 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.

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

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYERS 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 STEMMS 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.



Part # 2400 (3 Opening) and 4204 (4 Opening)
 Material: HDPE (High Density Polyethylene)
 Color: Black
 Use with 24" x 24" Grates
 Fits 3" or 4" S&B, 40, sewer, drain, corrugated, and triple wall pipe, 6" and 8" sewer, drain and corrugated pipe, 10" and 12" sewer, drain and dual wall corrugated pipe, 12" single wall corrugated pipe with 6" 10" angle wall corrugated pipe.
 Requires 2" or 4" x 24" Unvented Outlet
 Weight: 18.8 lbs. (C2000), 18.0 lbs. (4204)
 UV Inhibitor



- #### 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 STATION NO. 3143 AND NO. 3104.
 5th, 3143 N 573,217,899 E 1,368,237,788 Elev. = 486.905
 5th, 3104 N 571,700,664 E 1,369,606,417 Elev. = 494.445
 - THIS PLAN IS BASED ON FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT MAY, 2019 BY FISHER, COLLINS AND CARTER, INC.
 - B.R.L. DENOTES BUILDING RESTRICTION LINE
 - DENOTES IRON PIPE SET CAPPED "F.C.C. 106".
 - 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.
 - 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 (HEAVY-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: PLAT BOOK 7, PAGE 4, ECP-19-050.
 - NO CEMETERIES EXIST ON THE SUBJECT PROPERTY BASED ON VISUAL OBSERVATION OR LISTED IN AVAILABLE HOWARD COUNTY CEMETERY INVENTORY MAP.
 - NO DWELLINGS OR HISTORIC STRUCTURES EXIST ON LOT 5.
 - THERE ARE NO FOREST STANDS, WETLANDS, WETLAND BUFFER, STREAM, STREAM BUFFER, STEEP SLOPES AND FLOODPLAIN EXISTING ON-SITE. SEE ENVIRONMENTAL FINDINGS LETTER PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED MAY 05, 2019.
 - SITE IS NOT ADJACENT TO A SCENIC ROAD.
 - THIS PROJECT IS EXEMPT FROM THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT, PER SECTION 16.1202.(b)(1)(i) A SUBDIVISION, SITE DEVELOPMENT OR GRADING PERMIT FOR DEVELOPMENT ON LAND WHICH IS LESS THAN 40,000 SQUARE FEET.
 - WATER AND SEWER CONNECTIONS TO THESE LOTS WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 16.1226 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.
 - STORMWATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. ESD PRACTICES IN ACCORDANCE WITH CHAPTER 5 ARE BEING UTILIZED.
 - 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 \$900.00 BASED ON (2) SHADE TREES @ \$300/SHADE TREE AND (2) EVERGREEN TREES @ \$150/EVERGREEN TREE WILL BE BONDED WITH THE BUILDING/GRADING PERMIT.
 - A NOISE STUDY IS REQUIRED.
 - A SPEED STUDY WAS NOT REQUIRED FOR THIS SITE.
 - THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT AND WILL BE SERVED BY PUBLIC WATER AND SEWER (SEE CONTRACT NO. 12-W-8419-5).
 - 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) 313-1800 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.
 - DRIVEWAY SHALL BE PROVIDED IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAIL R-6.06 IN THE VOL. IV DESIGN MANUAL.
 - SOILS INFORMATION BASED ON NCS VS SOIL SURVEY FOR HOWARD COUNTY, MARYLAND.
 - IN ACCORDANCE WITH SECTION 129 (01A)(1)(E) 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.
 - 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) 410.787.9069
 MISS UTILITY 1.800.257.7777
 COLUMBIA GAS SYSTEM 410.795.1300
 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
 - ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
 - THIS IS AN EXISTING LOT, AS SHOWN ON A PLAT DATED MARCH 5, 1959 AND ENTITLED "BIRSELL H. BAUGHER AND RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND IN PLAT BOOK 7, PAGE 4 AND NOT SUBJECT TO M.H.U. FEES.
 - THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SURVEY PERFORMED BY FISHER, COLLINS & CARTER, INC. IN MAY, 2019 AND SUPPLEMENTED WITH HOWARD COUNTY GIS TOPOGRAPHY AT 2' CONTOUR INTERVAL.
 - A STATE HIGHWAY ADMINISTRATION ENTRANCE PERMIT WAS ISSUED ON JULY 26, 2019 WITH A PERMIT NUMBER OF SH-4-7-10-7309-19.
 - EXISTING UTILITIES ARE BASED ON FIELD LOCATION OF VISIBLE STRUCTURES AND SUPPLEMENTED WITH HOWARD COUNTY GIS DATA.
 - SEWER HOUSE CONNECTION (SHC) ELEVATIONS ARE LOCATED AT THE PROPERTY LINE.
 - EXISTING UTILITIES ARE BASED ON FIELD LOCATION OF VISIBLE STRUCTURES AND SUPPLEMENTED WITH HOWARD COUNTY GIS DATA.
 - MAINTAIN 10 FEET OF SEPARATION BETWEEN THE WATER HOUSE CONNECTION (WHC) AND THE SEWER HOUSE CONNECTION (SHC) AT THE STREET RIGHT-OF-WAY.
 - THE DEPARTMENT OF PLANNING AND ZONING AND OFFICE OF TRANSPORTATION DETERMINED NO SIDEWALKS ARE REQUIRED FOR THIS SITE DEVELOPMENT PLAN IN ACCORDANCE WITH SECTION 16.134(8) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS BECAUSE THIS LOT WAS CREATED UNDER PLAT BOOK 7 PAGE 4 IN 1959 AND IT IS THE FINAL LOT TO BE BUILT IN THE SUBDIVISION AND NONE OF THE OTHER ADJACENT LOTS (LOTS 1-4) PROVIDED IMPROVEMENTS DURING THE TIME OF CONSTRUCTION.

OWNER/BUILDER	NO.	REVISION	DATE
ANDY AHN & PARK JIWOON 4596 ROUNDHILL ROAD ELLCOTT CITY, MARYLAND 21043 410-440-9706			

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

John R. Robertson 5/20/20
 Howard SCD

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. 21351, EXPIRATION DATE: 07/15/2021.

John R. Robertson May 14, 2020
 Signature of Professional Land Surveyor DATE

BUILDER/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 ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

John R. Robertson 5/14/2020
 SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE
 "I/WE CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

John R. Robertson 5/14/2020
 SIGNATURE OF ENGINEER DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

John R. Robertson 10-1-20
 Chief, Development Engineering Division My Date

John R. Robertson 10/9/20
 Chief, Division of Land Development S Date

John R. Robertson 10-16-20
 Director of Department of Planning and Zoning Date

PROJECT: BAUGHER PROPERTY, LOT 5 SECTION / AREA: PARCEL NO. 415
 PLAT P.B. 7 / P. 04 GRID # 07 ZONE R-20 TAX MAP # 31 ELEC. DIST. SECOND CENSUS TR. 602800

TITLE SHEET

BAUGHER PROPERTY,
 LOT 5,
 4773 MONTGOMERY ROAD
 ZONED R-20
 TAX MAP No. 31 GRID No. 07 PARCEL No. 415
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MAY 14, 2020
 SHEET 1 OF 3

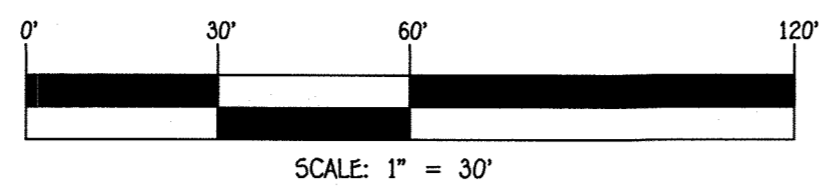
SDP-20-029

SOILS LEGEND			
SOIL	NAME	CLASS	K VALUE
LmB	Legore-Montalto silt loams, 3 to 6 percent slopes	B	0.64

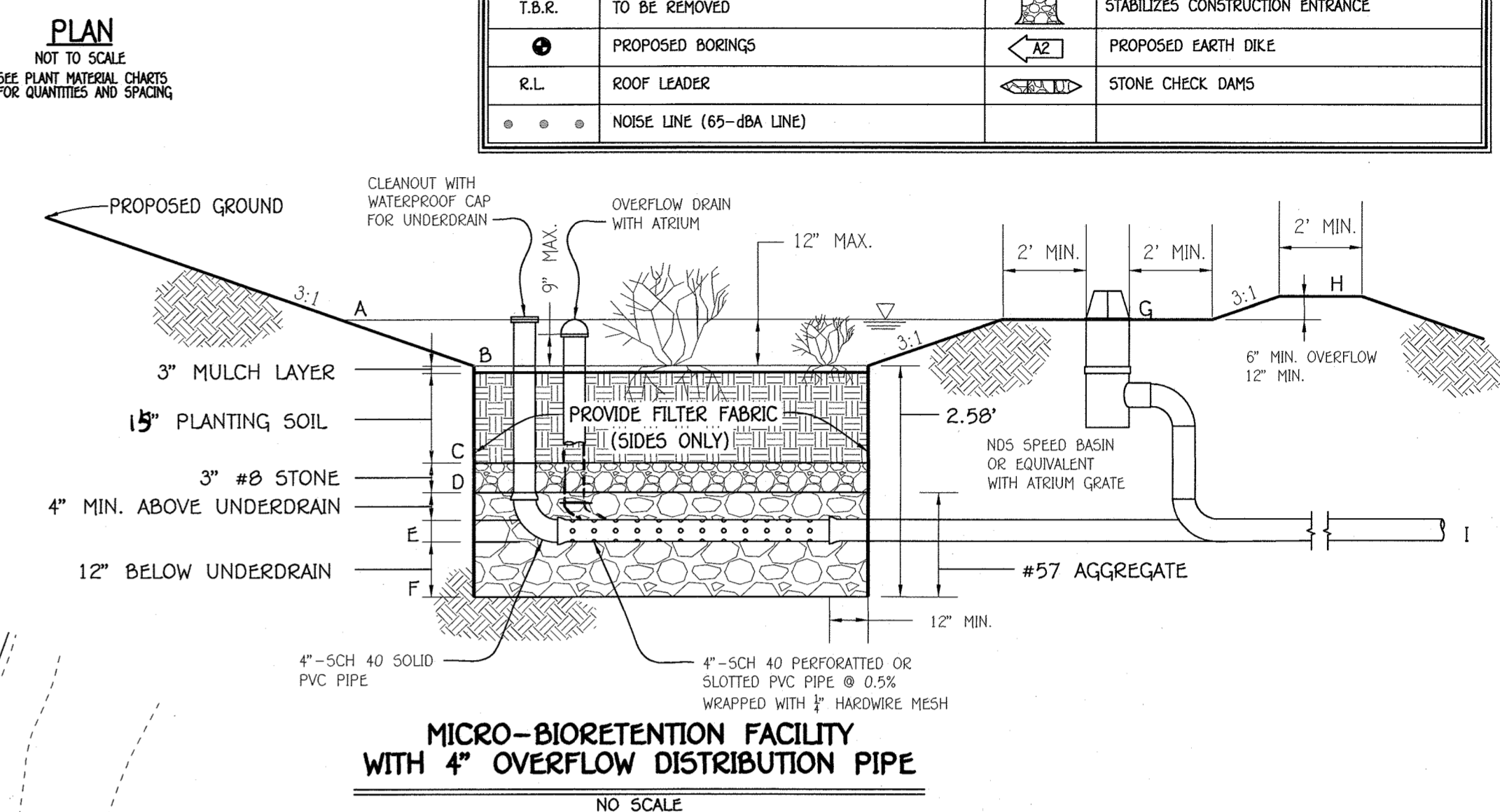
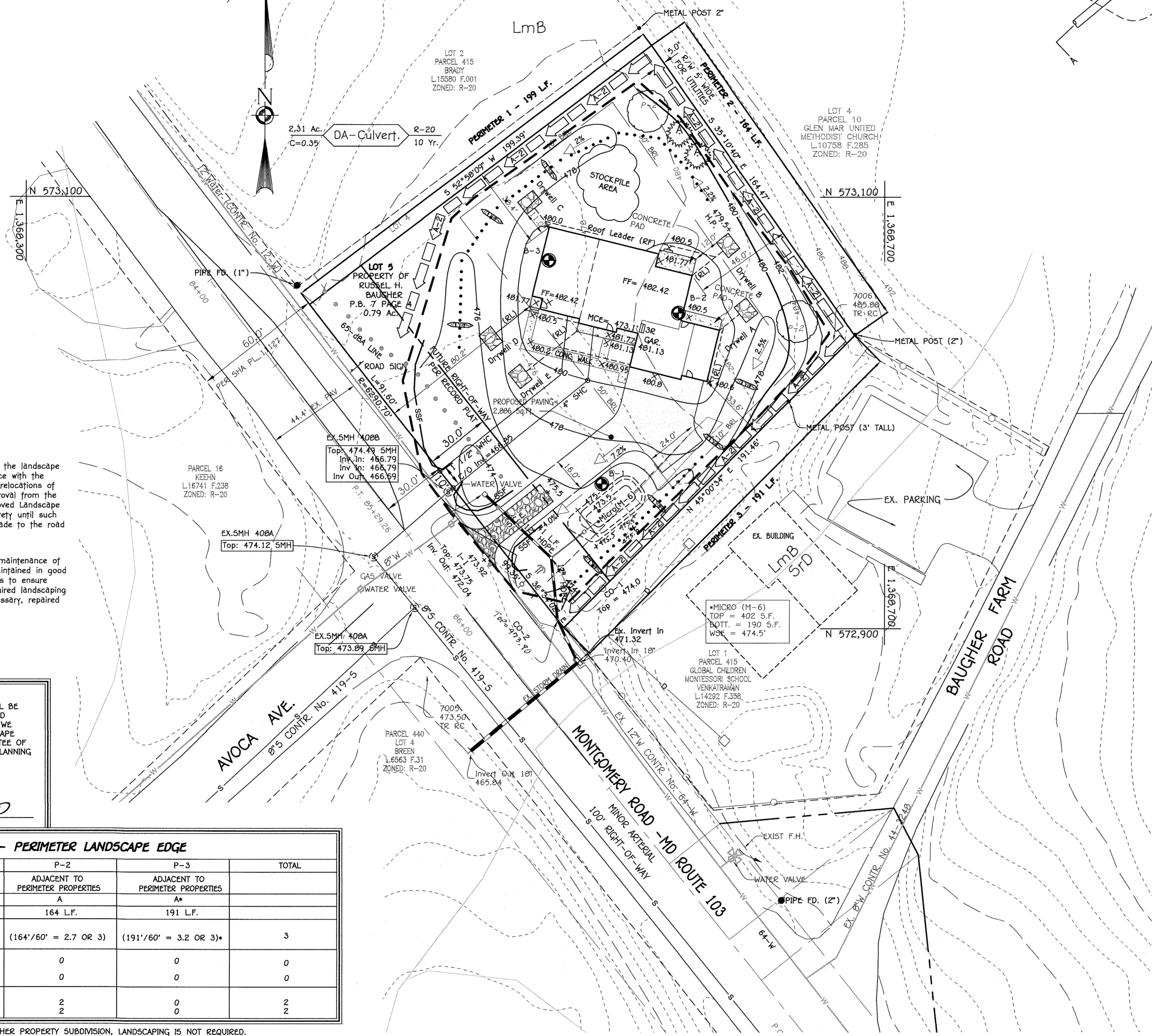
HOWARD COUNTY SOILS MAP No. 19; SAVAGE NE

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
2	(Symbol)	PICEA ABIES (NORWAY SPRUCE)	5'-6" HT. B&B

TOTAL: 2 SHADE TREES, 2 EVERGREEN TREES



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 TREELINE	(Symbol)	DRAINAGE AREA DIVIDE
(Symbol)	INDIVIDUAL TREES & SHRUBS	(Symbol)	SILT FENCE
(Symbol)	EXISTING FENCE LINE	(Symbol)	SUPER SILT FENCE
(Symbol)	EXISTING & PROPOSED PAVING	(Symbol)	TEMPORARY SOIL STABILIZATION MATTING
(Symbol)	T.B.R. TO BE REMOVED	(Symbol)	STABILIZES CONSTRUCTION ENTRANCE
(Symbol)	PROPOSED BORINGS	(Symbol)	PROPOSED EARTH DIKE
(Symbol)	R.L. ROOF LEADER	(Symbol)	STONE CHECK DAMS
(Symbol)	NOISE LINE (65-88A LINE)		



MICRO-BIORETENTION / BIORETENTION									
BIORETENTION FILTER	A	B	C	D	E	F	G	H	I
LOT 5	474.5	473.5	472.0	470.75	471.00	470.00	472.5	475.0	470.5

"At the time of plant installation, all trees listed and approved on the landscape Plan, shall comply with the proper height requirement in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocations of the required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviations from the approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are made to the road drawing plans."

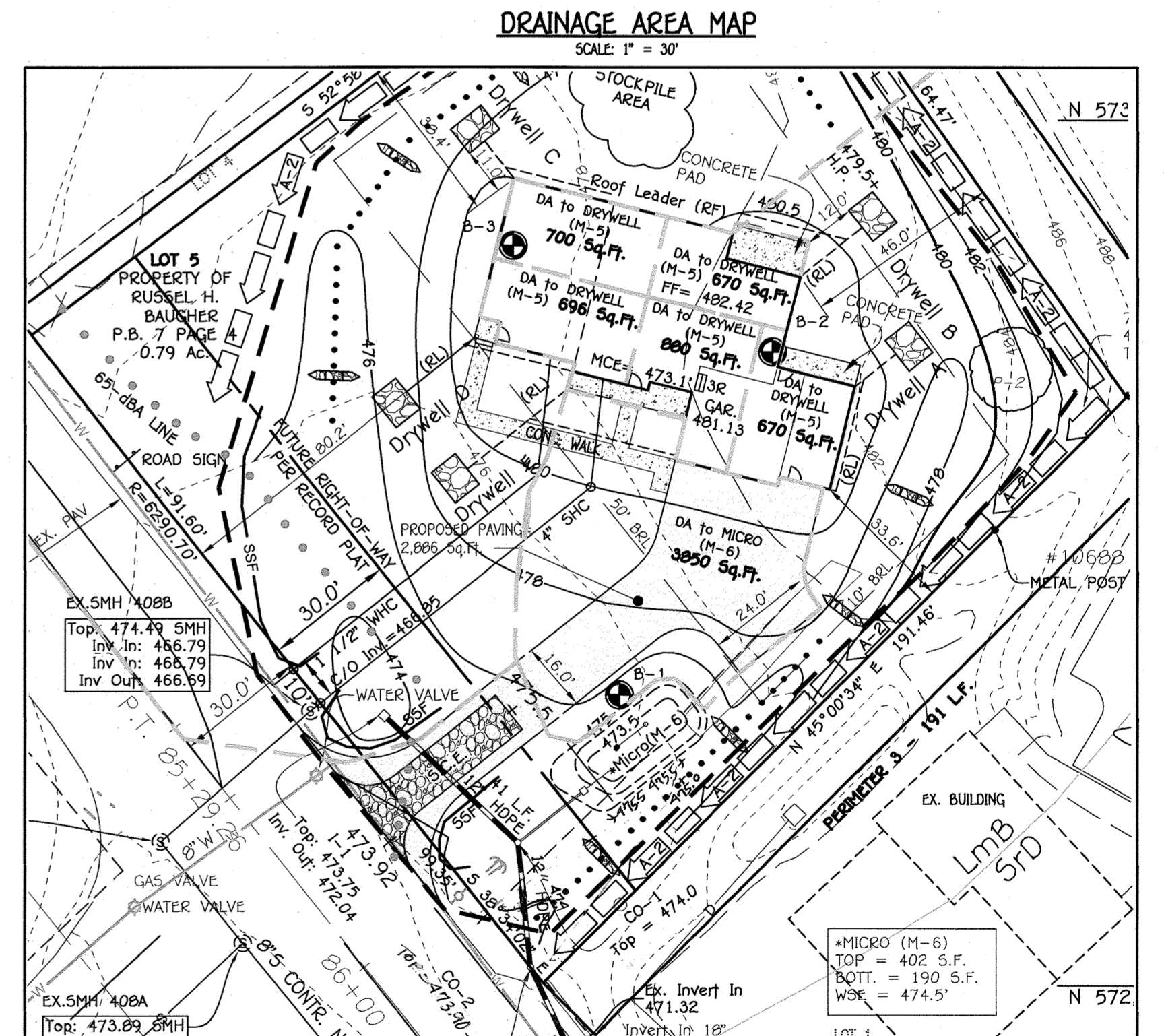
"The Owner, tenants and/or their agents shall be responsible for maintenance of the required perimeter landscaping. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All the other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced."

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.

John K. Whelan 5/14/2020
NAME DATE

SCHEDULE A - PERIMETER LANDSCAPE EDGE				
PERIMETER CATEGORY	P-1 ADJACENT TO PERIMETER PROPERTIES	P-2 ADJACENT TO PERIMETER PROPERTIES	P-3 ADJACENT TO PERIMETER PROPERTIES	TOTAL
LANDSCAPE TYPE	A*	A	A*	
LINEAR FEET OF PERIMETER	199 L.F.	164 L.F.	191 L.F.	
NUMBER OF PLANTS REQUIRED				
SHADE TREES	(199'/60' = 3.3 OR 3)*	(164'/60' = 2.7 OR 3)	(191'/60' = 3.2 OR 3)*	3
EVERGREEN TREES				
CREDIT FOR EXISTING VEGETATION	0	0	0	0
SHADE TREES	0	0	0	0
EVERGREEN TREES	0	0	0	0
NUMBER OF PLANTS PROVIDED				
SHADE TREES	0	2	0	2
EVERGREEN TREES	0	2	0	2

* NOTE: P-1 AND P-3, ARE INTERNAL LOT LINES TO THE BAUGHER PROPERTY SUBDIVISION, LANDSCAPING IS NOT REQUIRED.



OWNER/BUILDER			
ANDY AHN & PARK JIWOON 4596 ROUNDHILL ROAD ELLICOTT CITY, MARYLAND 21043 410-440-9706			
FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CONTINENTAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21042 (410) 461-2995			
NO.	REVISION	DATE	X

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

John K. Whelan 5/20/20
Signature of Professional Land Surveyor 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. 21351, EXPIRATION DATE: 07/15/2021.

John K. Whelan May 14, 2020
Signature of Professional Land Surveyor DATE

BUILDER/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 ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

John K. Whelan 5/14/2020
Signature of Developer DATE

ENGINEER'S CERTIFICATE
"I/WE 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 PROGRAMMANENT PLAN OF THE HOWARD SOIL CONSERVATION DISTRICT."

John M. Vitoreo 5/14/2020
Signature of Engineer DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

John M. Vitoreo 10-1-20
Chief, Development Engineering Division DATE

John M. Vitoreo 10-1-20
Chief, Division of Land Development DATE

John M. Vitoreo 10-16-20
Director - Department of Planning and Zoning DATE

PROJECT	BAUGHER PROPERTY, LOT 5	SECTION / AREA		PARCEL NO.	415
PLAT	P.B. 7 / P. 04	GRID #	07	ZONE	R-20
TAX MAP #	31	ELEC. DIST.	SECOND	CENSUS TR.	602800

SITE DEVELOPMENT & LANDSCAPE PLAN

BAUGHER PROPERTY,
LOT 5,
4773 MONTGOMERY ROAD
ZONED R-20

TAX MAP No. 31 GRID No. 07 PARCEL No. 415
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY 14, 2020
SHEET 2 OF 3

SOP-20-029

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

- ### A. Soil Preparation
- Temporary Stabilization
 - Seeded 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 be flattened smooth and left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plans.
 - Soil incorporation time and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
 - Permanent Stabilization
 - A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
 - Soil pH between 6.0 and 7.0.
 - Soil salinity less than 500 parts per million (ppm).
 - 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 loesslike soils will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
 - Soil contains 1.5 percent minimum organic matter by weight.
 - Soil contains sufficient pore space to permit adequate root penetration.
 - Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
 - Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
 - Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
 - Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit disking 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. Seeded loosening may be unnecessary on newly disturbed areas.

- ### B. Topsoiling
- Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetation growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
 - 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.
 - Topsoiling is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The original soil to be treated contains material toxic to plant growth.
 - The soil is so acidic that vegetation with limestone is not feasible.
 - Areas having slopes steeper than 2:1 require special consideration and design.
 - Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
 - Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, alkali, coarse gravels, gravel, sticks, rocks, trash, or other materials larger than 1 1/2 inches in diameter.
 - Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
 - Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
 - Topsoil Application
 - Erosion and sediment control practices must be maintained when applying topsoil.
 - Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or other pockets.
 - Topsoil must not be placed in the topsoil or subsoil 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 seeded preparation.

- ### C. Soil Amendments (Fertilizer and Lime Specifications)
- Soil tests must be performed to determine the exact rates 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 analysis.
 - Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Material 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.
 - Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydrosulfides) which contains at least 90 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground such that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
 - Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
 - 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 vegetation 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 control, slopes, and any disturbed area not under active grading.
- Criteria**
- Seeding
 - 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.
 - Mulch alone may be applied between the fall and spring seedings only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
 - Inoculant: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the inoculant for the species to be used. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydrosulfides. Note: It is very important to keep inoculant as cool as possible until use. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
 - 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 phytotoxic materials.
 - Application
 - Dry Seeding: This includes use of conventional drop or broadcast spreaders.
 - 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.
 - 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.
 - Roll or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
 - Cultipacker seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seeded must be firm after planting.
 - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
 - Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
 - 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; P₂O₅ (phosphorous), 200 pounds per acre; K₂O (potassium), 200 pounds per acre.
 - 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.
 - Mix seed and fertilizer on site and seed immediately and without interruption.
 - When hydroseeding do not incorporate seed into the soil.

- ### Mulching
- Mulch Materials (in order of preference)
 - 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.
 - Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into uniform fibrous physical state.

- 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 uniformity spread ratio.
 - WCFM, including dye, must contain no germination or growth inhibiting factors.
 - 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 batter-like ground cover, application, having moisture absorption and penetration properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - WCFM material must not contain elements or compounds of concentration levels that will be phytotoxic.
 - 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.
- Application
 - Apply mulch to all seeded areas immediately after seeding.
 - When straw mulch is used, spread 3 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.
 - 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 obtain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - Anchoring
 - 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:
 - 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.
 - Wood cellulose fiber may be used for anchoring soil. Apply the fiber binder of a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water to a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - Synthetic binders such as Acrylic DLR (Ago-Tack), DCA-70, Petrosol, Terra Tex II, Terra Tack AF 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 much, such as on valleys and on crests of banks. Use of epoxy binders is strictly prohibited.
 - 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)

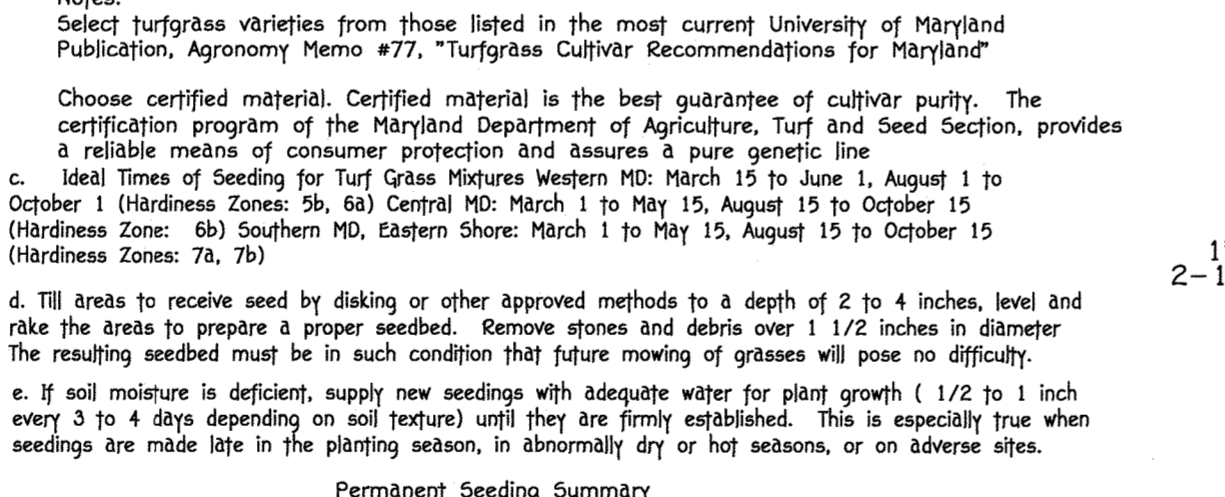
- Definition**
To stabilize disturbed soils with vegetation for up to 6 months.
- Purpose**
To use fast growing vegetation that provides cover on disturbed soils.
- Conditions Where Practice Applies**
Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.
- Criteria**
- 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.
 - Clear water runoff from 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.
 - Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
 - Stockpiles must be established 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.
 - 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.

- ### TEMPORARY SEEDING SUMMARY
- | Hardiness Zone (from Figure B.3): | Seeding Dates | Seeding Depths | Fertilizer Rate (10-20-20) | Lime Rate |
|-----------------------------------|--------------------------|----------------|----------------------------|---------------------------|
| BARLEY | 96 | 1" | 435 lb/ac (10 lb/1000 sf) | 2 tons/ac (90 lb/1000 sf) |
| OATS | 3/1 - 5/15, 8/15 - 10/15 | 1" | | |
| RYE | 112 | 1" | | |

PERMANENT SEEDING NOTES (B-4-5)

- #### A. Seed Mixtures
- General Use
 - 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.
 - 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.
 - For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency. For areas receiving low maintenance, apply used farm fertilizer (16-0-0) at 1 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.
 - Turfgrass Mixtures
 - Areas where turfgrasses may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
 - 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.

- 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.
 - Kentucky Bluegrass/Perennial Ryegrass: 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 Cultivars 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.
 - 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 9 pounds per 1000 square feet. One or more cultivars may be blended.
 - Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in bluegrass lawns. For establishment in high quality, intensively managed turf areas. 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.
 - Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardness Zones: 5b, 6d) Central MD: March 1 to May 15, August 15 to October 15 (Hardness Zones: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardness Zones: 7a, 7b)
 - 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.
 - 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):	Seeding Dates	Seeding Depths	N	P ₂ O ₅	K ₂ O	Lime Rate	
No.	Species	Application Rate (lb/ac)					
8	TALL FESCUE	100	Mar. 1-May 15, Aug. 15-Oct. 15	1/4-1/2 in.	45 lb/acre (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).

- General Specifications
 - Classes of turfgrasses sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
 - Sod must be machine cut to a uniform soil thickness of 3/4 inch, plus or minus 1/4 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.
 - 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.
 - Sod must not be harvested or transplanted when moisture content (excessively dry wet) may adversely affect its survival.
 - 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.
- Sod Installation
 - During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
 - Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger joint joints to provide 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 could allow drying of the soil.
 - Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, and otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
 - 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.
- Sod Maintenance
 - In the absence of adequate rainfall, water daily during the first week or so 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.
 - After the first week, sod watering is required as necessary to maintain adequate moisture content.
 - Do not mow until the sod is firmly rooted. No more than 1/3 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.

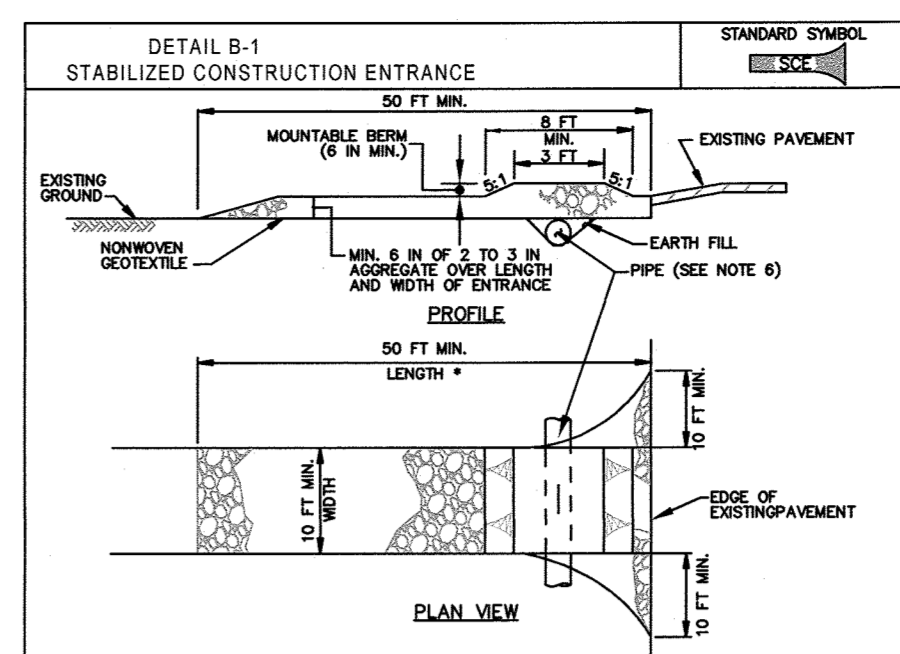
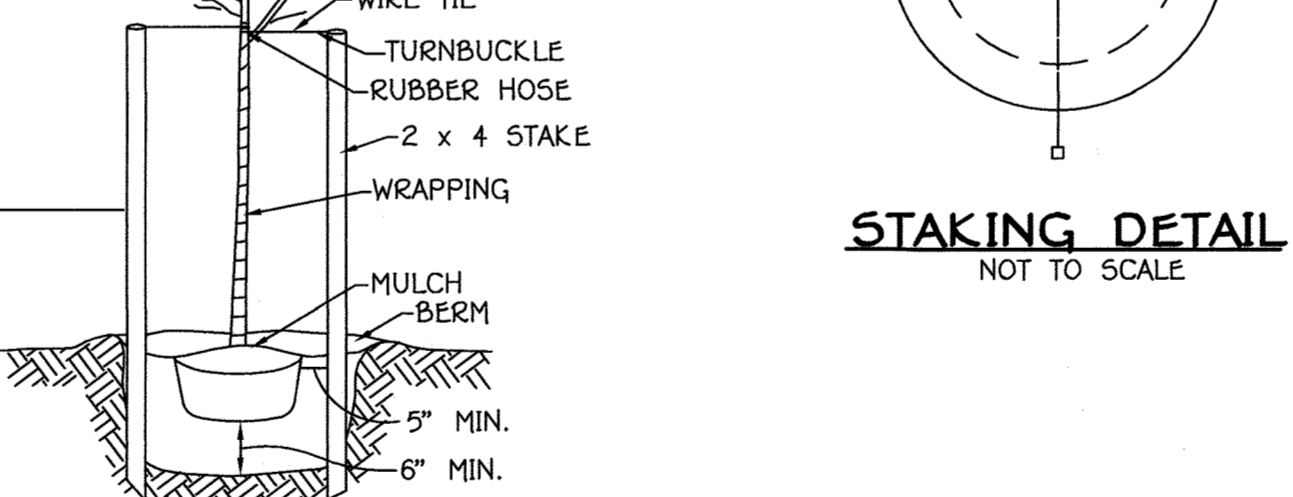
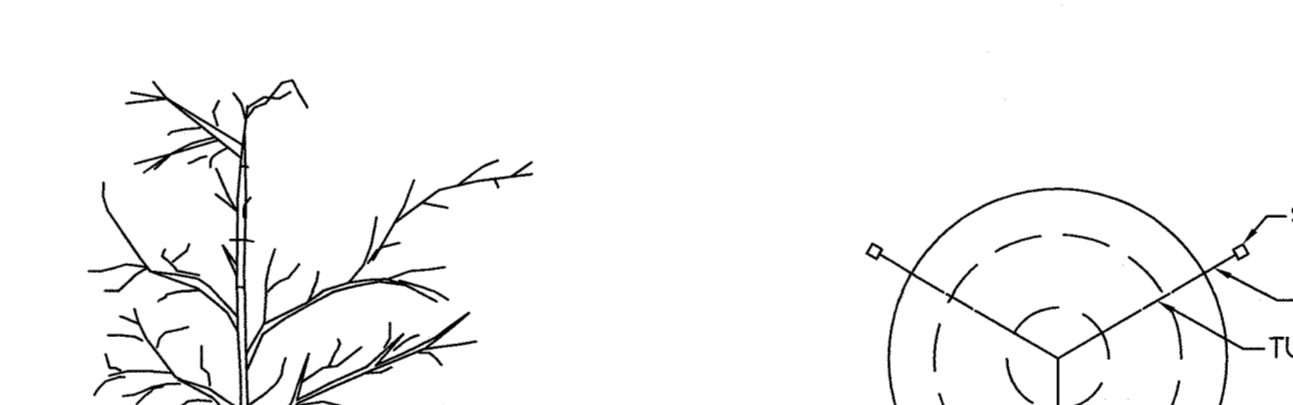
B-4-6 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREAS

- A mound or pile of soil protected by appropriate 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.

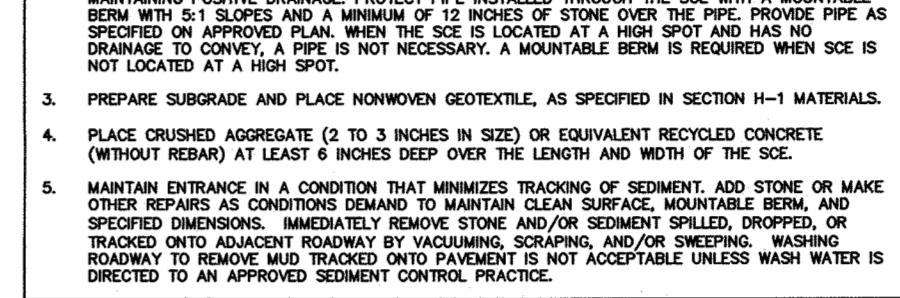
- The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
- The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
- Runoff from the stockpile area must drain to a suitable sediment control practice.
- Access the stockpile area from the upgrade side.
- 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.
- Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
- Stockpiles must be established 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.
- 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.

HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

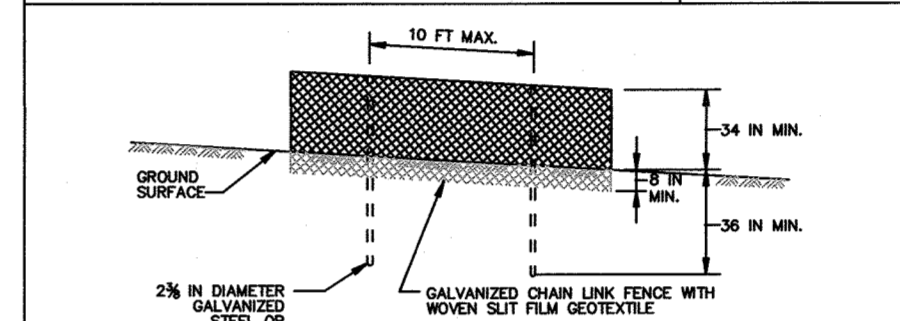
- A minimum of 48 hours notice must be given to the HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410-313-1895).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1. 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- 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.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSIBLE FOR THEIR REMOVAL. HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SEE ANALYSIS:
 - TOTAL AREA OF SITE: 0.79 ACRES
 - AREA DISTURBED: 0.69 ACRES
 - AREA TO BE ROOFED OR PAVED: 0.16 ACRES
 - AREA TO BE VEGETATIVELY STABILIZED: 0.53 ACRES
 - TOTAL CUT: 700 CU.YDS.
 - OFFSITE WASTE/BORROW AREA LOCATION: 700 CU.YDS.
- ANY SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- 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 SOIL DISTURBANCE OR GRADING OR GRADING INSPECTION APPROVALS MAY NOT BE BACK-DATED TO THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- 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.
- ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.
- A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 ACRES PER GRADING UNIT) AT A TIME, WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA OF THE PREVIOUS 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.



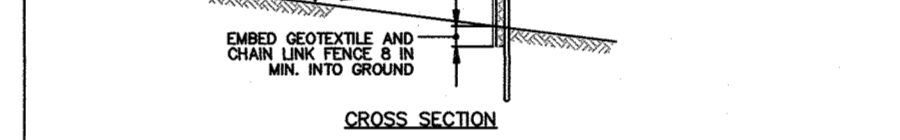
- ### CONSTRUCTION SPECIFICATIONS
- PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SOE. USE MINIMUM LENGTH OF 50 FEET (30 FEET FOR SMALL RESERVE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SIDE TO 16 INCH MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
 - PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SOE UNDER THE ENTRANCE. MAINTAINING POSTS TO BE PLACED TO PROTECT THE SOE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROTECTIVE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SOE IS LOCATED AT A HIGH SPOT AND NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SOE IS LOCATED AT A HIGH SPOT.
 - PREPARE SUBGRADE AND PLACE NONWEAR GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
 - PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SOE.
 - PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.



- ### CONSTRUCTION SPECIFICATIONS
- INSTALL 2 1/2 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.
 - FASTEN 8 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 1/2 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUD RINGS.
 - FASTEN WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSIDE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. ENDED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 6 INCHES INTO THE GROUND.
 - WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
 - EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPWARD AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
 - PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
 - REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 20% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

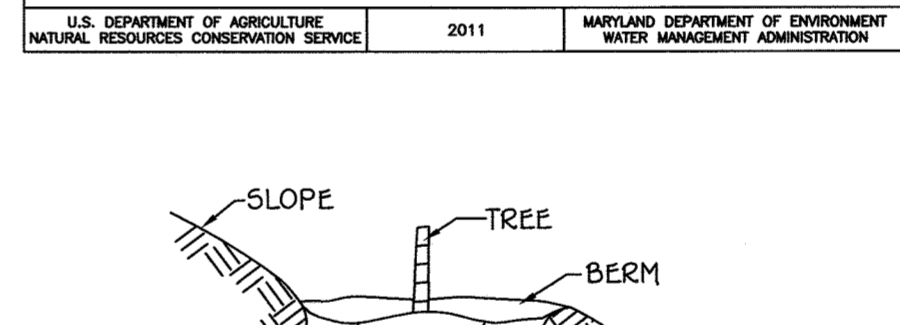


- ### CONSTRUCTION SPECIFICATIONS
- USE WOOD POSTS 1 1/2 x 1 1/2 x 1/4 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD, AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
 - USE 3/8 INCH MINIMUM POSTS DRIVEN 18 INCH MINIMUM INTO GROUND MORE THAN 6 FEET APART.
 - USE WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSIDE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
 - PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
 - ENDED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
 - WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH SECTION H-1 MATERIALS.
 - EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPWARD AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
 - REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 20% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.



- ### CONSTRUCTION SPECIFICATIONS
- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLAN.
 - USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC NON-DEGRADABLE FIBERS OR NON-LEACHING AND NON-TOXIC TO VEGETATION AND SOIL SEDIMENTATION AND NON-HARMFUL TO THE SOIL. IF PRESENT, TESTING MUST BE EXTENDED PLACING WITH A MAXIMUM WIND SPEED OF 200 MPH. TESTING MUST PREVENT SEPARATION OF THE NET FROM THE UNDERLYING SURFACE.
 - SECURE MATTING USING STEEL STAPLES OR WOOD STAPLES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE STAPLES A MINIMUM GAGE OF 11 AND NO. 8 RESPECTIVE. USE 1 1/2 INCHES WIRE STAPLES WITH A MINIMUM OF 8 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM OF 3/8 INCH MAN HOLE AND A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAPLES MUST BE ROUND-SAWN HARDWOOD, 1 1/2 TO 2 INCHES IN LENGTH, 1 1/2 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
 - PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDING 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.
 - UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD, FINISHING ROLLS LAY MATTING SMOOTHLY AND FINALLY UPON THE SEEDING SURFACE AND STRENGTHENING THE MATTING.
 - OVERLAP OR ABUT EDGES OF MATTING ROLLS FOR MANUFACTURER RECOMMENDATIONS. OVERLAP ROLLS BY 6 INCHES (MINIMUM), WITH THE UPSIDE MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT. SECURE MAT TO GROUND WITH WIRE TIES OR STAPLES AT 12 INCHES (MINIMUM) BY DOING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE DISCATED MATERIAL, AND TAMPING TO SECURE MAT TO GROUND.
 - STAPLE/STAKE MAT IN A STAGGERED PATTERN ON A FOOT (MINIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLLS.
 - IF SHOWN BY THE DESIGNER, MANUFACTURER, AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, UNCLIP THE MATTING AND STAPLES IN PLACE. LEAVE THE MAT ON TOP OF THE SOIL OR GRASS. UNCLIP AND REINSTALL STAPLES AS SHOWN IN SECTION H-1 MATERIALS.
 - ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

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- ### GRADING ON SLOPES</