

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

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
21-A	3018-A Southview Road

# SITE DEVELOPMENT PLAN HOWARD HEIGHTS LOT 21A TAX MAP No. 17 GRID No. 22 PARCEL NO. 211 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SOILS LEGEND			
SOIL	NAME	CLASS	K FACTOR
B&A	B&A Silt Loam, 0 to 3 percent slope	D	.32
G&H	Glenelg-Urb&n Land Complex, 0 to 8 percent slope	B	.20

Soil Map Number: 13 (Ellicott City, 5W)

STORMWATER MANAGEMENT SUMMARY			
AREA ID.	ESD PROVIDED CU.FT.	ESD REQUIRED CU.FT.	REMARKS
SITE	1067	1728	DRYWELLS (M-5) & (MICRO-BIORETENTION (M-6) & STORAGE PIPE FOR 10YR, 100YR, & 3.55HR 6.6IN STORM MANAGEMENT)
TOTAL	1067	1728	

GROSS AREA = 0.57 AC. (TOTAL)  
LOD = 0.46 ACRES  
RCN = 56.1  
TARGET Pe = 1.79"

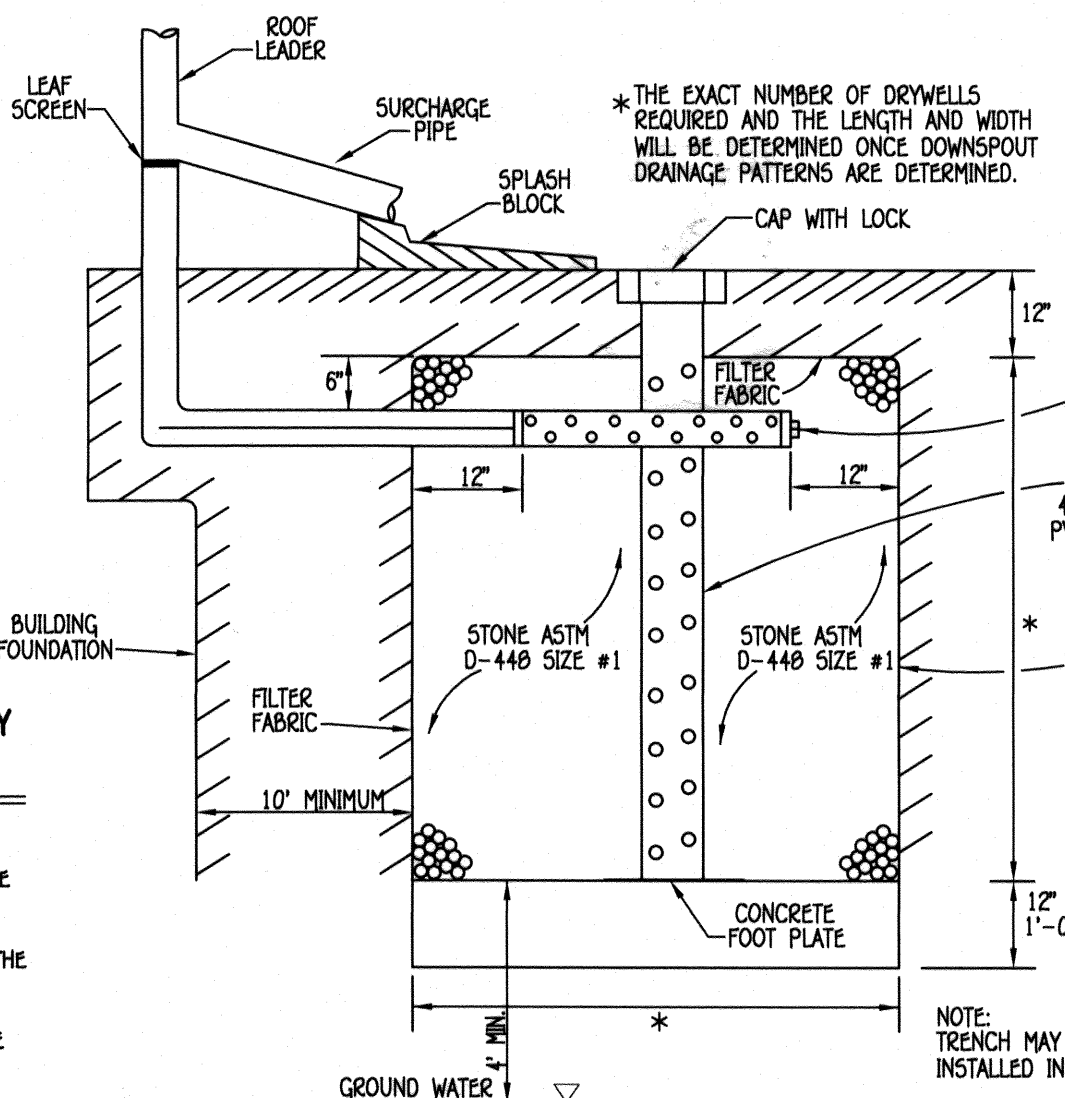
$R_v = 0.05 + (0.009)(I); I = 30.8\%$   
 $R_v = 0.33$   
 $S = 0.25 (95\% \text{ 'B' Soils, } 5\% \text{ 'D' Soils})$   
 $Rev = (S)(R_v)(A)/12$   
 $= (0.25)(0.33)(0.57)/12$   
 $= 0.0039 \text{ ac-ft or } 171 \text{ cu-ft}$

### 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% SLOPE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET.
- FINAL GRADING IS SHOWN ON THIS SITE DEVELOPMENT PLAN.

### 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.

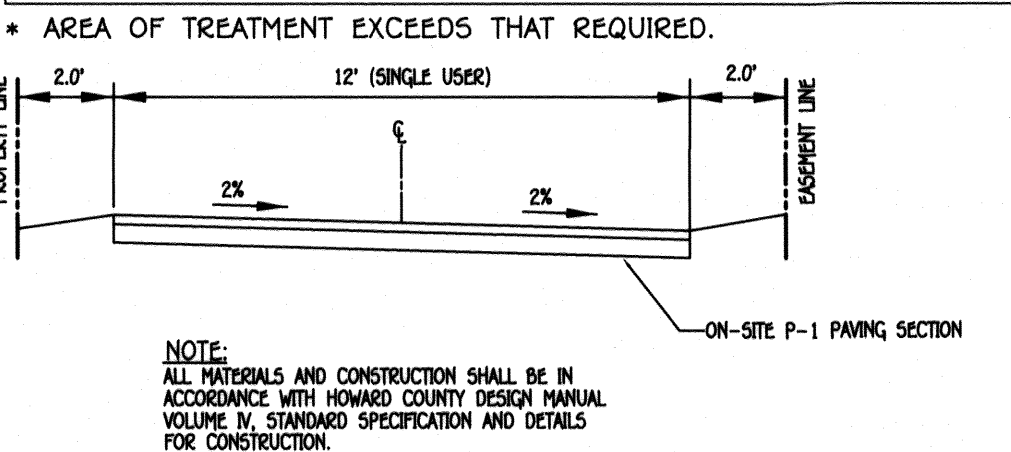


**DRY WELL DETAIL (M-5)**  
NOT TO SCALE

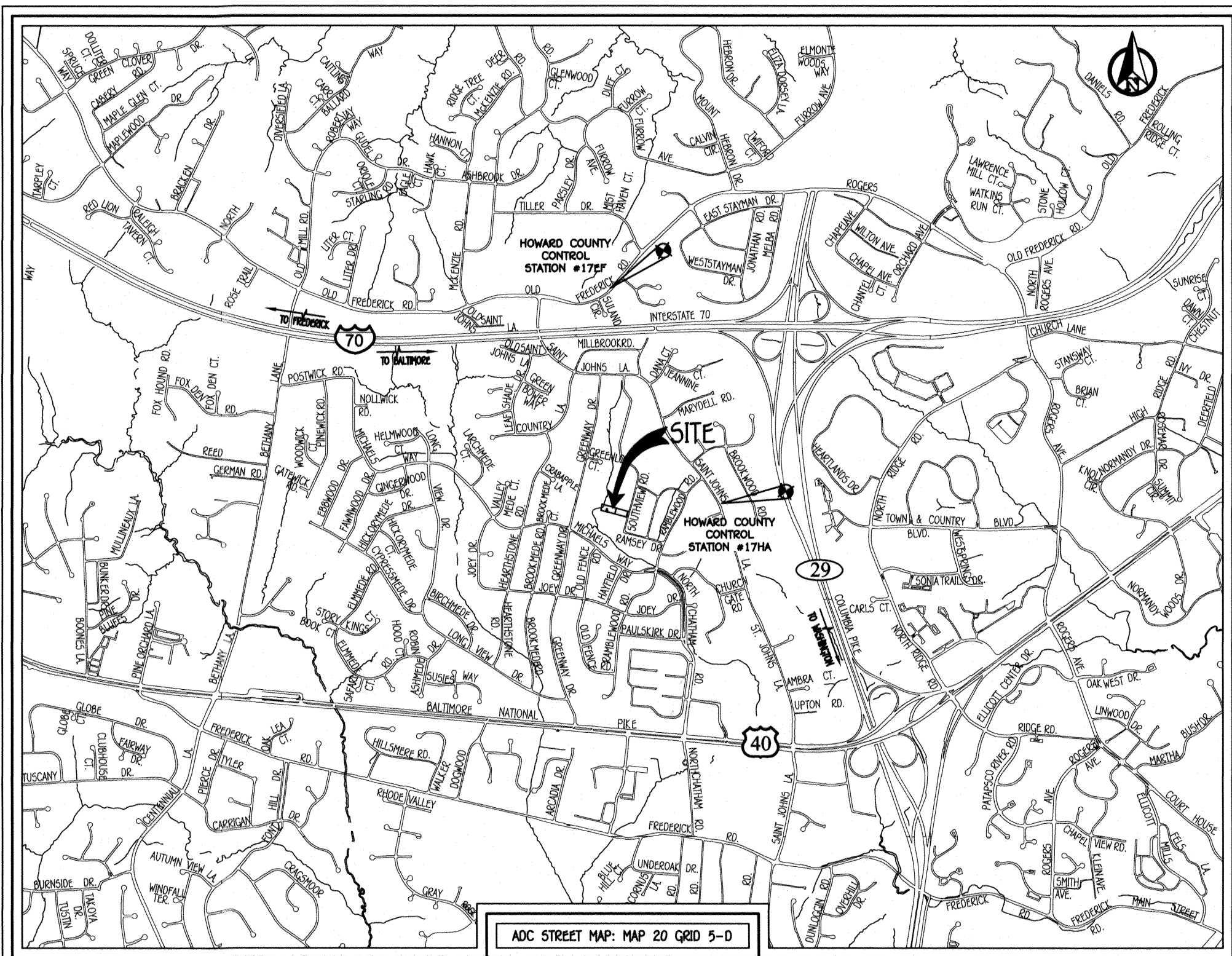
Table B.4. Materials Specifications for Micro-Bioretenion, Rain Gardens & Landscape Infiltration

Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil	loamy sand 60-85% compost 30-40% 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	abraded 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	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 756, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or 50829	Sloped or perforated pipe; 3/8" pert. @ 6" on center, 4 holes per row; minimum of 9" of gravel over pipes; 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 at 28 days, normal weight, 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 308.8/9; vertical loading (1-10 or 1-20); allowable horizontal loading (based on soil pressures); and analysis of potential cracking	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 308.8/9; vertical loading (1-10 or 1-20); allowable horizontal loading (based on soil pressures); and analysis of potential cracking
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Gneiss (AASHTO #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

DRY WELL CHART					
DRYWELL NO.	AREA OF ROOF PER DOWN SPOUT	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF TREATMENT	L W D
Dw#1	750 Sq. Ft.	107 C.F.	288 C.F.	100%*	12 x 12 x 5
Dw#2	750 Sq. Ft.	107 C.F.	288 C.F.	100%*	12 x 12 x 5
Dw#3	750 Sq. Ft.	107 C.F.	288 C.F.	100%*	12 x 12 x 5
Dw#4	750 Sq. Ft.	107 C.F.	288 C.F.	100%*	12 x 12 x 5
Dw#5	1000 Sq. Ft.	142 C.F.	288 C.F.	100%*	12 x 12 x 5
Dw#6	1000 Sq. Ft.	142 C.F.	288 C.F.	100%*	12 x 12 x 5



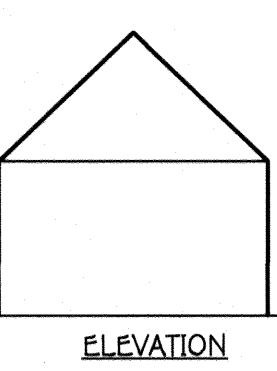
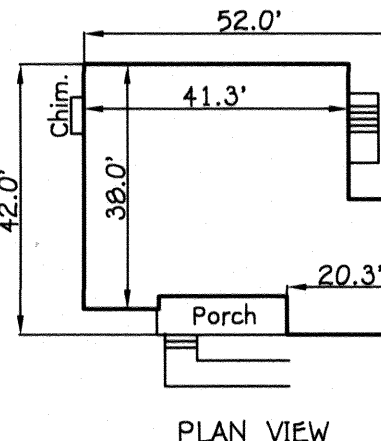
**TYPICAL PRIVATE DRIVE CROSS SLOPE SECTION**  
NOT TO SCALE  
SLOPE THE DRIVEWAY SO THAT WATER DOES NOT FLOW DIRECTLY ONTO THE ADJACENT SOUTHERN PARCEL.



**VICINITY MAP**  
SCALE: 1" = 2,000'

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

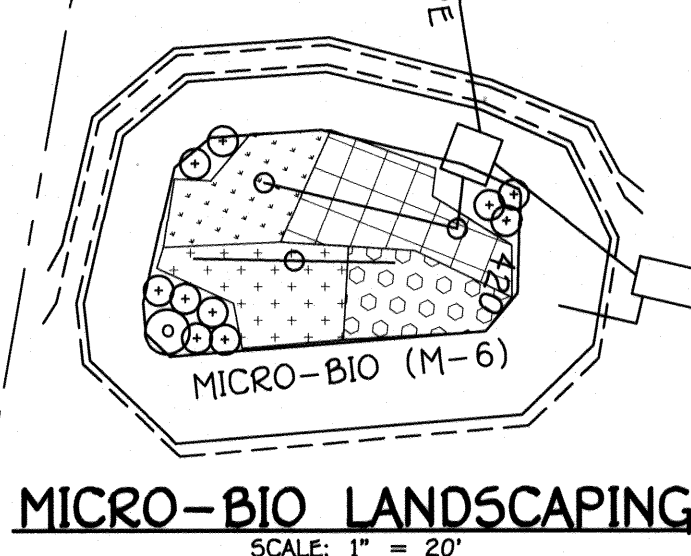
- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE 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 SPACES AND WILDS.
- 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.



**HOUSE MODEL**  
SCALE: 1" = 30'

BIORETENTION FACILITY (BMP#1) PLANTING SCHEDULE					
KEY	PLANT NAME	MIN. SIZE	BMP #1 QUANTITY	NOTES	SYMBOL
SG	SWITCH GRASS (Panicum virgatum)	1' @	15	Grass	○
TS	TUSSOCK SEDGE (Carex stricta)	1' @	20	Grass	○
CC	CUTLEAF CONSELWAGER (Rudbeckia hirta)	1' @	18	Flower	○
BE	BEEBALM (Monarda didyma)	1' @	15	Flower	○
JP	JOB PINE NEED (Equisetum maximum)	1' @	9	7" @ 6" min	○
ROO	RED OBER DUODER (Cornus sericea)	7' @	1	7" @ 6" min	○
TOTAL			78		

**PLANTING SPECIFICATIONS:**  
1. PLANT INSTALLATION SHALL BE PER MDE SPECIFICATIONS IN THE 2000 STORMWATER DESIGN MANUAL, PER THE PROJECT SPECIFICATIONS, AND AS FOLLOWS.  
**ADDITIONAL SPECIFICATIONS:**  
1. PLANT BMP LEVEL SURFACE AS SHOWN IN THE ABOVE TABLE WITH AN EVEN DISTRIBUTION DENSITY. STABILIZE BMP SIDE SLOPES WITH PERMANENT GRASS SEED PER NRCS SPECIFICATIONS. SIDE SLOPE PERMANENT GRASS AREAS SHALL HAVE 3" OF CLEAN TOPSOIL ON TILLED SUB-SOIL AND CURLEX MATTING, WATER AS NECESSARY UNTIL ESTABLISHED VEGETATION.  
2. THE CONTRACTOR SHALL PROVIDE PLANT MAINTENANCE AND GUARANTEE IN ACCORDANCE WITH THE PROJECT LANDSCAPING SPECIFICATIONS.  
3. PLANT MATERIAL SHALL CONFORM TO THE U.S. STANDARD FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN.  
4. PLANTING PERENNIALS & GRASSES: ROOT SYSTEMS SHALL BE SPLIT OR CRUMBLUED. POTTED PLANTS SHALL BE SET SO THAT THE TOP OF THE POT IS EVEN WITH EXISTING GRADE. TREAT THE MULCHED AND PLANTED AREA WITH A PRE-EMERGENT HERBICIDE.  
5. ALL PLANTS MUST BE THOROUGHLY AND REGULARLY WATERED PRIOR TO ACCEPTANCE.  
6. DO NOT PLANT VEGETATION WITHIN 1.5 FT OF THE FOREBAY WEIR SPLASH APRONS AND IN THE NO PLANTING ZONE NEAR THE RISER.



**MICRO-BIO LANDSCAPING**  
SCALE: 1" = 20'

SWM SUMMARY TABLE					
EXISTING (TYPE 2 (CFS))	PROPOSED (TYPE 2 (CFS))	EXISTING (TYPE 2 (CFS))	PROPOSED (TYPE 2 (CFS))	EXISTING (TYPE 2 (CFS))	PROPOSED (TYPE 2 (CFS))
0.56	0.45	1.69	1.67	2.49	2.13

BMP SUMMARY TABLE					
MICRO-BIO	10YR D (CFS)	100YR D (CFS)	3.55HR/6.6IN WSEL	3.55HR/6.6IN WSEL	3.55HR/6.6IN WSEL
MICRO-BIO	420.61	0.45	421.40	1.67	421.92

### SITE ANALYSIS DATA CHART

- TOTAL AREA OF THIS SUBMISSION = 0.57 AC. (LOT 21-A)
- LIMIT OF DISTURBED AREA = 20,081 S.F. OR 0.46 AC.
- PRESENT ZONING DESIGNATION = R-20 (PER 10/06/2013 COMPREHENSIVE ZONING PLAN)
- PROPOSED USE: 1 SINGLE FAMILY DETACHED DWELLING (RESIDENTIAL)
- PREVIOUS HOWARD COUNTY FILES: D-1158, ECP-20-018, WF-20-084
- TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0.04 AC. MODERATED STEEP SLOPES: 15%-24.9% = 0.00 AC. STEEP SLOPES: 25% OR GREATER = 0.00 AC.
- TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.11 AC.
- TOTAL AREA OF STREAM (INCLUDING BUFFER) = 0.27 AC.
- TOTAL AREA OF EXISTING FOREST = 0.33 AC.
- TOTAL AREA OF FOREST TO BE RETAINED = 0.00 AC.
- TOTAL AREA OF LOTS / BUILDABLE PARCELS = 0.57 AC.
- TOTAL GREEN OPEN AREA = 0.43 AC.
- TOTAL IMPERVIOUS AREA = 0.14 AC.
- TOTAL AREA OF ERODIBLE SOILS = 0.00 AC.
- TOTAL AREA OF ROAD DEDICATION = 0.00 AC.

STORMWATER MANAGEMENT PRACTICES					
LOT NO.	ADDRESS	DRYWELLS (M-5) Y/N, NUMBER	MICRO-BIORETENTION UNDERGROUND PIPE (M-6) Y/N, NUMBER	Y/N, NUMBER	PARCEL NO.
21	3018 SOUTHVIEW ROAD	YES, TWO (2)	-	-	211
21A	3018A SOUTHVIEW ROAD	YES, FOUR (4)	YES, ONE (1)	YES, ONE (1)	211

NOTE: ALL SWM DEVICES TO BE PRIVATELY OWNED & MAINTAINED BY EACH LOT OWNER.

**OWNER / DEVELOPER**  
HoCo HOLDING, LLC  
4652 SHEPPARD LANE  
ELICOTT CITY, MARYLAND 21042  
410-409-0333

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21042  
(410) 461-2995

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

**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. 38366, EXPIRATION DATE: 01/12/2022.

Signature of Professional Land Surveyor: Stephen J. Junt  
DATE: 12/12/20

**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 PERSONS ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Signature of Developer: John R. Brunton  
DATE: 12/15/20

**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 REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Signature of Engineer: Stephen Junt  
DATE: 12/12/20

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: [Signature]  
Date: 3/22/21

Chief, Division of Land Development: [Signature]  
Date: 3/24/21

Director, Department of Planning and Zoning: [Signature]  
Date: 3/29/21

**TITLE SHEET**

**HOWARD HEIGHTS - LOT 21A**  
3018-A SOUTHVIEW ROAD  
ZONED: R-20

TAX MAP NO.: 17 GRID NO.: 22 PARCEL NO.: 211  
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: NOVEMBER, 2020  
SHEET 1 OF 3

PROJECT: HOWARD HEIGHTS - LOT 21A SECTION / AREA: - PARCEL NO.: 211  
PLAT: N/A GRID #: 22 ZONE: R-20 TAX MAP #: 17 ELEC. DIST.: SECOND CENSUS TR.: 602800

**SDP-20-058**

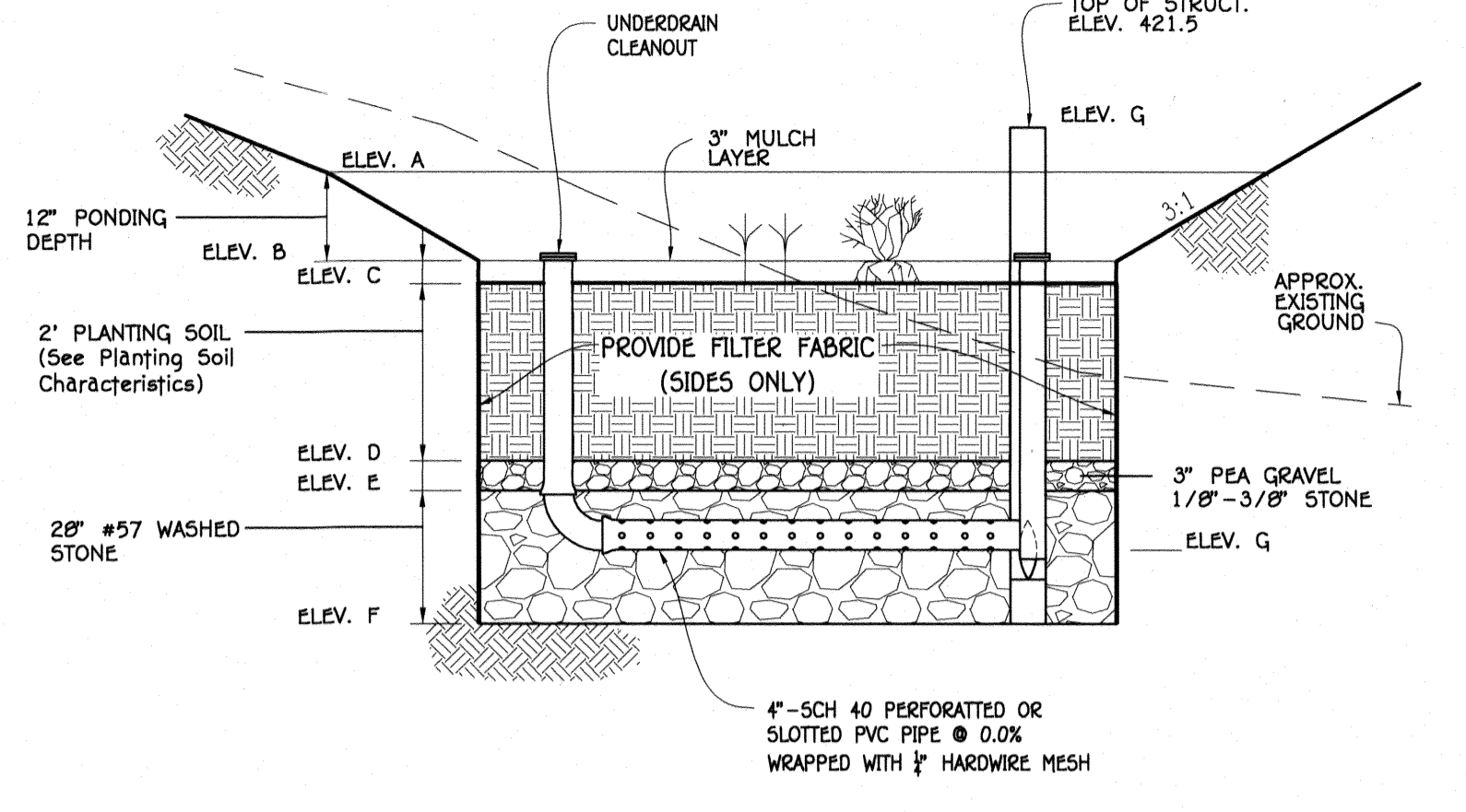
SCHEDULE A - PERIMETER LANDSCAPE EDGE				
PERIMETER	1	2	3	TOTAL
CATEGORY	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	
LANDSCAPE TYPE	A	A	A	
LINEAR FEET OF PERIMETER	241 L.F.	101 L.F.	254 L.F.	
CREDIT FOR EXISTING TREES (YES/NO, LENGTH)	69LF OF EX. TREES 172 LF REMAINING	101LF OF EX. TREES 0 LF REMAINING	90LF OF EX. TREES 164 LF REMAINING	
NUMBER OF PLANTS REQUIRED SHADE TREES/EVERGREENS	3 (172'/60' = 2.9 OR 3)	0	3 (164'/60' = 2.7 OR 3)	6 0
CREDIT FOR EXISTING VEGETATION SHADE TREES SMALL/MEDIUM DECIDUOUS TREES/ EVERGREENS	0 5 0	0 0 0	0 0 0	0 5 0
NUMBER OF PLANTS PROVIDED SHADE TREES SMALL/MEDIUM DECIDUOUS TREES/ EVERGREENS	0 1 0	0 0 0	3 0 0	3 1 0

NOTE: CREDIT ALONG PERIMETER 1 IS FOR FIVE (5) EXISTING 2" CAL. EVERGREENS.

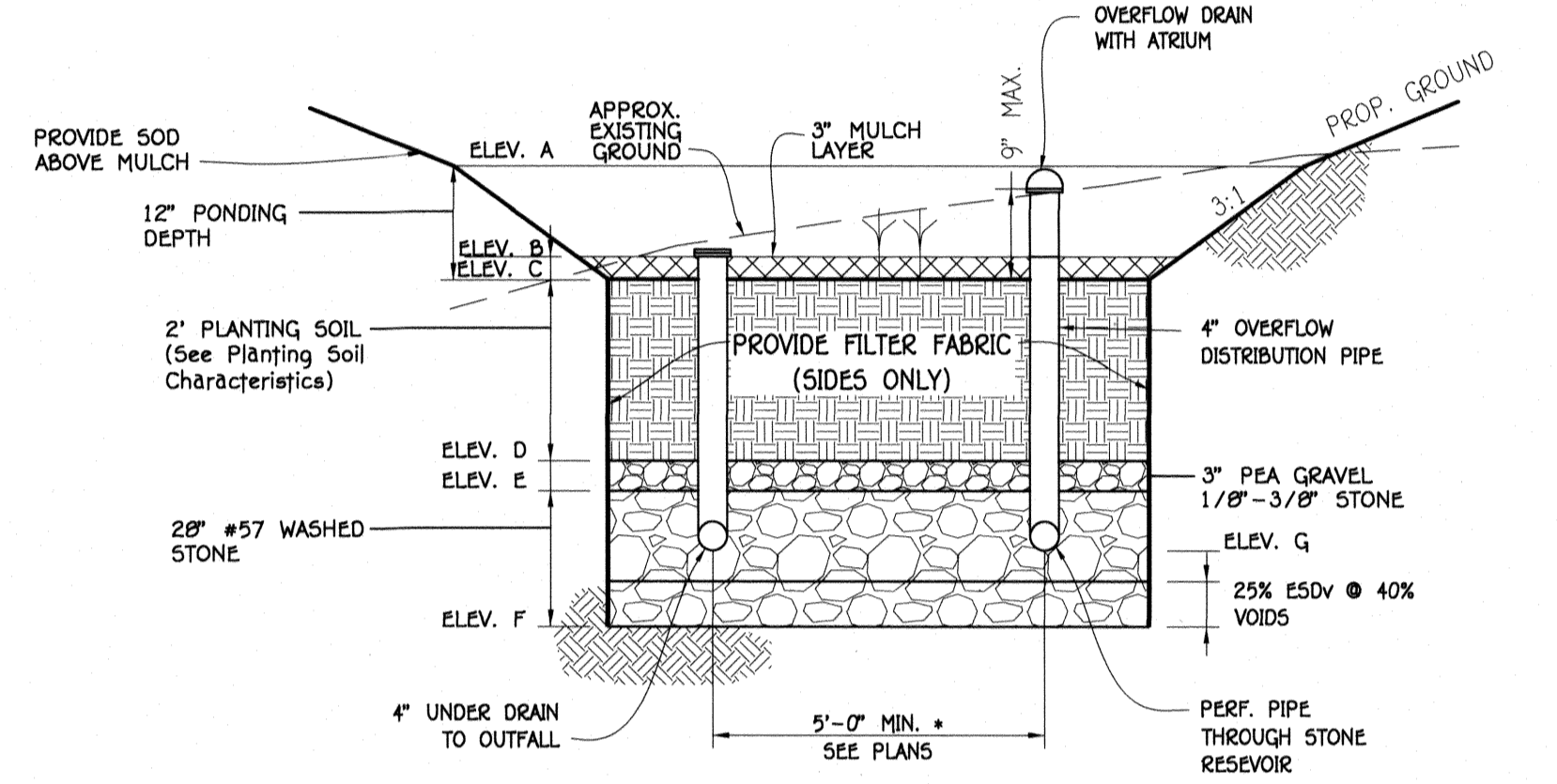
SOILS LEGEND			
SOIL	NAME	CLASS	K. FACTOR
BaA	Baile Silt Loam, 0 to 3 percent slope	D	.32
GhB	Glenn-Urban Land Complex, 0 to 8 percent slope	B	.20

Soil Map Number: 13 (Ellicott City, SW)

LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
---	EXISTING 2" CONTOURS	---	PROPOSED CONTOUR
---	EXISTING 10' CONTOURS	---	SPOT ELEVATION
GhB	SOILS LINES AND TYPE	---	LIMITS OF DISTURBANCE
---	EXISTING TREE LINE	---	DRAINAGE AREA DIVIDE
○	INDIVIDUAL TREES & SHRUBS	---	SILT FENCE
---	EXISTING FENCE LINE	---	SUPER SILT FENCE
---	PROPOSED PAVING	---	PERMANENT SOIL STABILIZATION MATTING
T.B.R.	TO BE REMOVED	---	STABILIZED CONSTRUCTION ENTRANCE
FP	FLOOD PLAN (PER D-1158)	---	STREAM BANK BUFFER
---	EXIST. WETLANDS		



MICRO-BIORETENTION (UNDERDRAIN) (M-6)  
NO SCALE  
(PROFILE B-B)

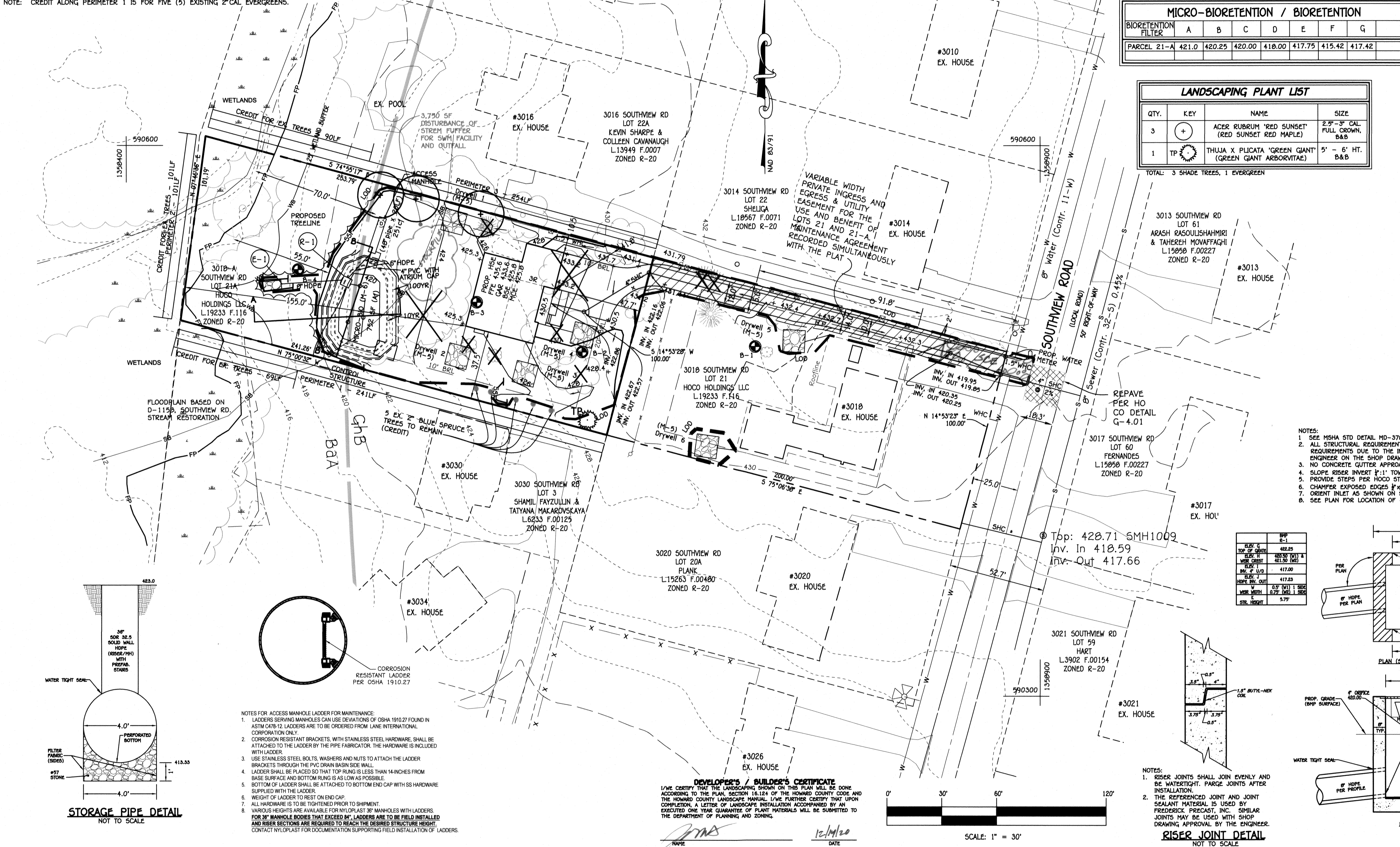


MICRO-BIORETENTION (OVERDRAIN) (M-6)  
NO SCALE  
(PROFILE A-A)

MICRO-BIORETENTION / BIORETENTION						
BIORETENTION FILTER	A	B	C	D	E	F
PARCEL 21-A	421.0	420.25	420.00	418.00	417.75	415.42

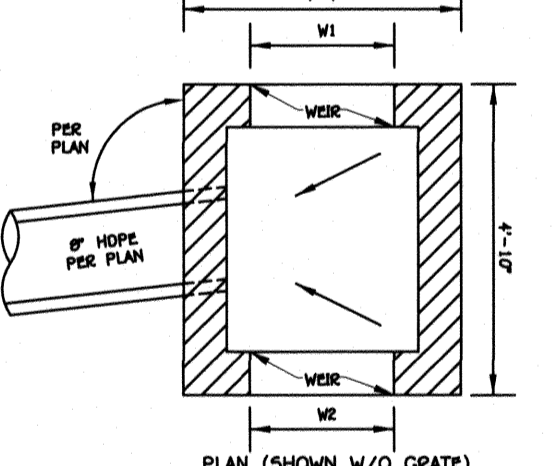
LANDSCAPING PLANT LIST			
QTY.	KEY	NAME	SIZE
3	+	ACER RUBRUM 'RED SUNSET' (RED SUNSET RED MAPLE)	2.5" - 3" CAL. FULL CROWN, B&B
1	TP	THUJA X PULICATA 'GREEN GIANT' (GREEN GIANT ARBOVITAE)	5' - 6' HT. B&B

TOTAL: 3 SHADE TREES, 1 EVERGREEN



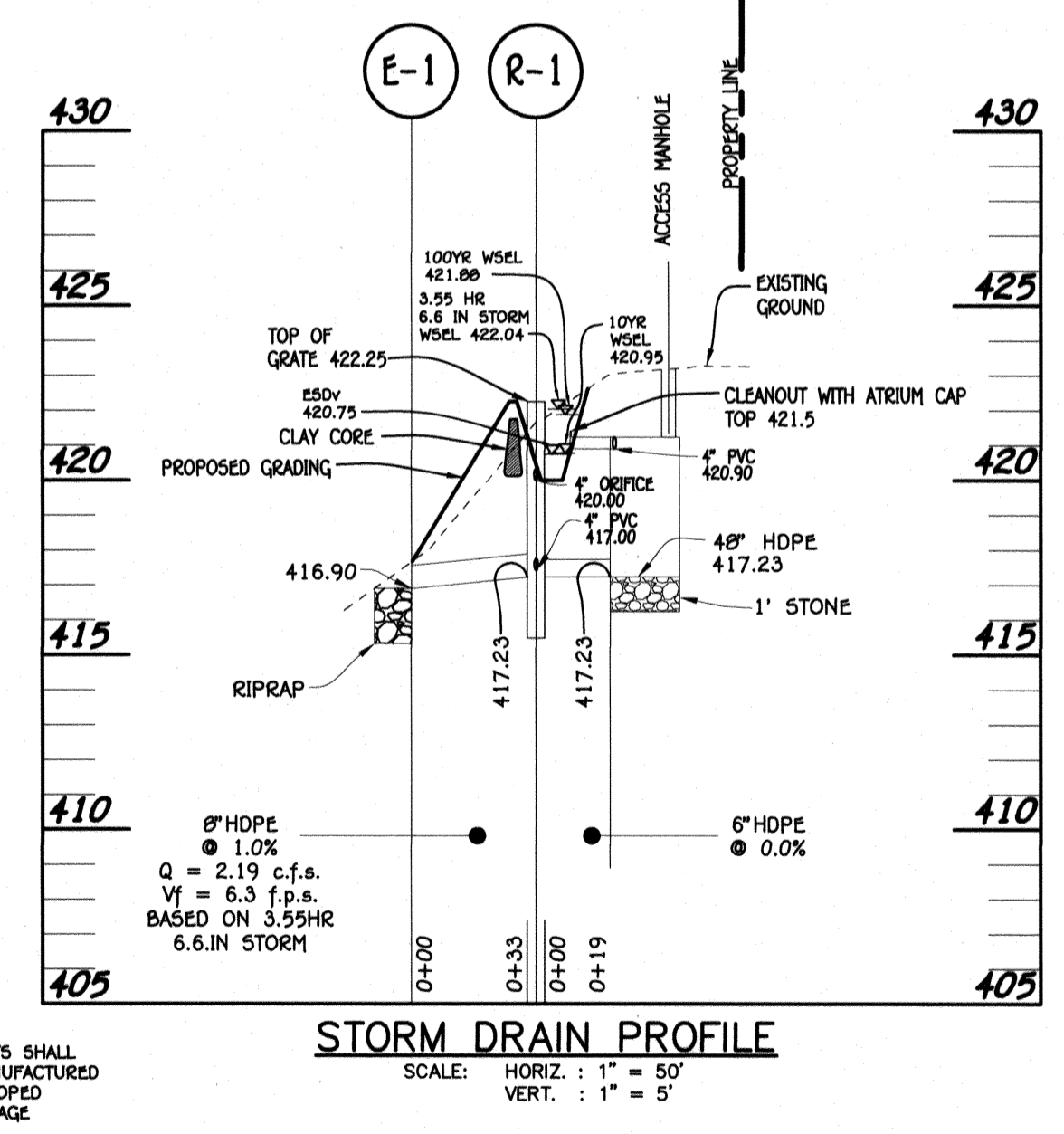
- NOTES:
- SEE MSHA STD DETAIL MD-378.11 FOR DETAILS NOT SHOWN ABOVE.
  - ALL STRUCTURAL REQUIREMENTS SHALL CONFORM TO THE D-INLET HO. CO. STD. (DETAIL D-4.10) REQUIREMENTS DUE TO THE INCREASED INLET DEPTH, OR AS CERTIFIED BY A PROFESSIONAL ENGINEER ON THE SHOP DRAWING.
  - NO CONCRETE GUTTER APPROACHES ARE USED FOR THIS STRUCTURE.
  - SLOPE RISER INVERT 1" TOWARD OUTFALL. USE 2" MIN. MORTAR THICKNESS.
  - PROVIDE STEPS PER HOOD STD. DETAIL G-5.21.
  - CHAMFER EXPOSED EDGES 1/4" INCLUDING WEIR CRESTS.
  - ORIENT INLET AS SHOWN ON SOP (GRATE SUPPORT WALL IS HATCHED).
  - SEE PLAN FOR LOCATION OF 4" UNDERDRAIN CONNECTION TO INLET.

INVERT	OUTLET	DIFFERENCE
421.00	420.25	0.75
420.25	420.00	0.25
418.00	417.75	0.25
417.75	417.43	0.32
417.43	417.10	0.33
417.10	416.75	0.35
416.75	416.40	0.35
416.40	416.00	0.40
416.00	415.60	0.40
415.60	415.20	0.40
415.20	414.80	0.40
414.80	414.40	0.40
414.40	414.00	0.40
414.00	413.60	0.40
413.60	413.20	0.40
413.20	412.80	0.40
412.80	412.40	0.40
412.40	412.00	0.40
412.00	411.60	0.40
411.60	411.20	0.40
411.20	410.80	0.40
410.80	410.40	0.40
410.40	410.00	0.40
410.00	409.60	0.40
409.60	409.20	0.40
409.20	408.80	0.40
408.80	408.40	0.40
408.40	408.00	0.40
408.00	407.60	0.40
407.60	407.20	0.40
407.20	406.80	0.40
406.80	406.40	0.40
406.40	406.00	0.40
406.00	405.60	0.40
405.60	405.20	0.40
405.20	404.80	0.40
404.80	404.40	0.40
404.40	404.00	0.40
404.00	403.60	0.40
403.60	403.20	0.40
403.20	402.80	0.40
402.80	402.40	0.40
402.40	402.00	0.40
402.00	401.60	0.40
401.60	401.20	0.40
401.20	400.80	0.40
400.80	400.40	0.40
400.40	400.00	0.40



NOTES:

- RISER JOINTS SHALL JOIN EVENLY AND BE WATER-TIGHT. PARGE JOINTS AFTER INSTALLATION.
- THE REFERENCED JOINT AND JOINT SEALANT MATERIAL IS USED BY FREDERICK PRECAST, INC. SIMILAR JOINTS MAY BE USED WITH SHOP DRAWING APPROVAL BY THE ENGINEER.



STORM DRAIN PROFILE  
SCALE: HORIZ. : 1" = 50'  
VERT. : 1" = 5'

- NOTES FOR ACCESS MANHOLE LADDER FOR MAINTENANCE:
- LADDERS SERVING MANHOLES CAN USE DEVIATIONS OF OSHA 1910.27 FOUND IN ASTM OR 12 LADDERS ARE TO BE ORDERED FROM LANE INTERNATIONAL CORPORATION ONLY.
  - CORROSION RESISTANT BRACKETS, WITH STAINLESS STEEL HARDWARE, SHALL BE ATTACHED TO THE LADDER BY THE PIPE FABRICATOR. THE HARDWARE IS INCLUDED WITH LADDER.
  - USE STAINLESS STEEL BOLTS, WASHERS AND NUTS TO ATTACH THE LADDER BRACKETS THROUGH THE PVC DRAIN BASIN SIDE WALL.
  - LADDER SHALL BE PLACED SO THAT TOP RUNG IS LESS THAN 14 INCHES FROM BASE SURFACE AND BOTTOM RUNG IS AS LOW AS POSSIBLE.
  - BOTTOM OF LADDER SHALL BE ATTACHED TO BOTTOM END CAP WITH SS HARDWARE SUPPLIED WITH THE LADDER.
  - WEIGHT OF LADDER TO REST ON END CAP.
  - ALL HARDWARE IS TO BE TIGHTENED PRIOR TO SHIPMENT.
  - VARIOUS HEIGHTS ARE AVAILABLE FOR 30" MANHOLES WITH LADDERS. FOR 30" MANHOLE BODIES THAT EXCEED 30" LADDERS ARE TO BE FIELD INSTALLED AND RISER SECTIONS ARE REQUIRED TO REACH THE DESIRED STRUCTURE HEIGHT. CONTACT NYLOPLAST FOR DOCUMENTATION SUPPORTING FIELD INSTALLATION OF LADDERS.

DEVELOPER'S / BUILDER'S CERTIFICATE  
I/WE CERTIFY THAT THE LANDSCAPING PLANS ON THIS PLAN HAVE BEEN DONE ACCORDING TO THE PLAN, SECTION 18.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/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.

NAME: *John R. Robert* DATE: 12/14/20

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. 36386, EXPIRATION DATE: 01/12/2022.

Signature of Professional Land Surveyor: *Stephen J. Fair* DATE: 12/12/20

BUILDER/DEVELOPER'S CERTIFICATE  
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR EROSION AND SEDIMENT 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.

Signature of Developer: *John R. Robert* DATE: 12/14/20

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

Signature of Engineer: *Stephen J. Fair* DATE: 12/12/20

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *[Signature]* DATE: 3-22-21

Chief, Division of Land Development: *[Signature]* DATE: 3/22/21

Director, Department of Planning and Zoning: *[Signature]* DATE: 3/22/21

PROJECT	SECTION / AREA	PARCEL NO.			
HOWARD HEIGHTS - LOT 21A		211			
PLAT	GRID #	ZONE	TAX MAP #	ELEC. DIST.	CENSUS TR.
N/A	22	R-20	17	SECOND	602800

SITE DEVELOPMENT & LANDSCAPE PLAN

HOWARD HEIGHTS - LOT 21A  
3018-A SOUTHVIEW ROAD  
ZONED: R-20

TAX MAP NO.: 17 GRID NO.: 22 PARCEL NO.: 211  
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: NOVEMBER, 2020  
SHEET 2 OF 3

SOP-20-058

OWNER / DEVELOPER  
HoCo HOLDING, LLC  
4652 SHEPPARD LANE  
ELLCOTT CITY, MARYLAND 21042  
410-409-0333

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21042  
(410) 461-2895

NO.	REVISION	DATE

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

A. Soil Preparation

- 1. Temporary Stabilization
a. Seeded preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment...
b. Apply fertilizer and lime as prescribed on the plans.
c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by diking or other suitable means.

B. Topsoiling

- 1. Topsoil is prepared over prepared subsoil prior to establishment of permanent vegetation...
2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications...
3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

C. Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the existing ratios and application rates for both lime and fertilizer on sites having disturbed areas of 1/2 acre or more...
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application...
3. Lime materials must be ground limestone (hydrated or burnt lime) which may be substituted except when hydroseeding...
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by diking or other suitable means.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

- 1. The application of seed and mulch to establish vegetative cover.
2. To protect disturbed soils from erosion during and at the end of construction.
3. To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.
A. Seeding
1. Specifications
a. All seed must meet the requirement of the Maryland State Seed Law.

- 1. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly sprayed apply.
2. Application
a. Apply mulch to all seeded areas immediately after seeding.
b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches.
c. Wood cellulose fiber used as mulch must be applied to a wet dry weight of 1500 pounds per acre.

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.

- 1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Hardness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with Application rates, seeding dates and seeding depths.
2. For sites having soil tests performed, use and show the recommended rates by the testing agency.
3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.A.1.b.

TEMPORARY SEEDING SUMMARY

Table with columns: SPECIES, APPLICATION RATE (LB/AC), SEEDING DATES, SEEDING DEPTHS, FERTILIZER RATE (10-20-20), LIME RATE (2 TONS/AC)

PERMANENT SEEDING NOTES (B-4-5)

- A. Seed Mixtures
1. General Use
Figure B.3) and based on the site condition or purpose found on Table B.2.
2. Turfgras Mixtures
a. Areas where turfgras may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
b. Select one or more of the species or mixtures listed below based on the site conditions or purpose.

Table with columns: NO., SPECIES, APPLICATION RATE, SEEDING DATES, SEEDING DEPTHS, FERTILIZER RATE, LIME RATE

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

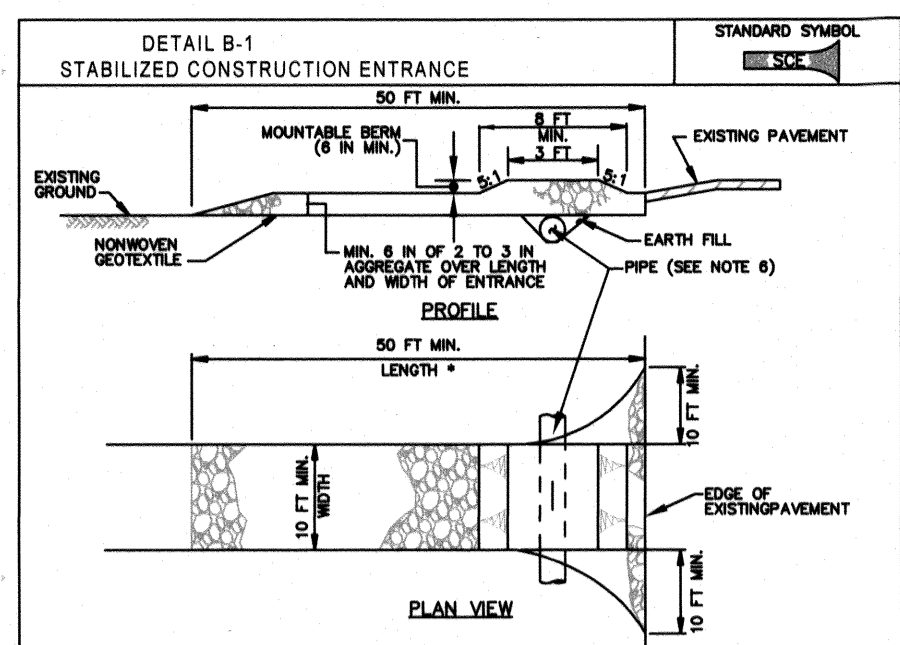
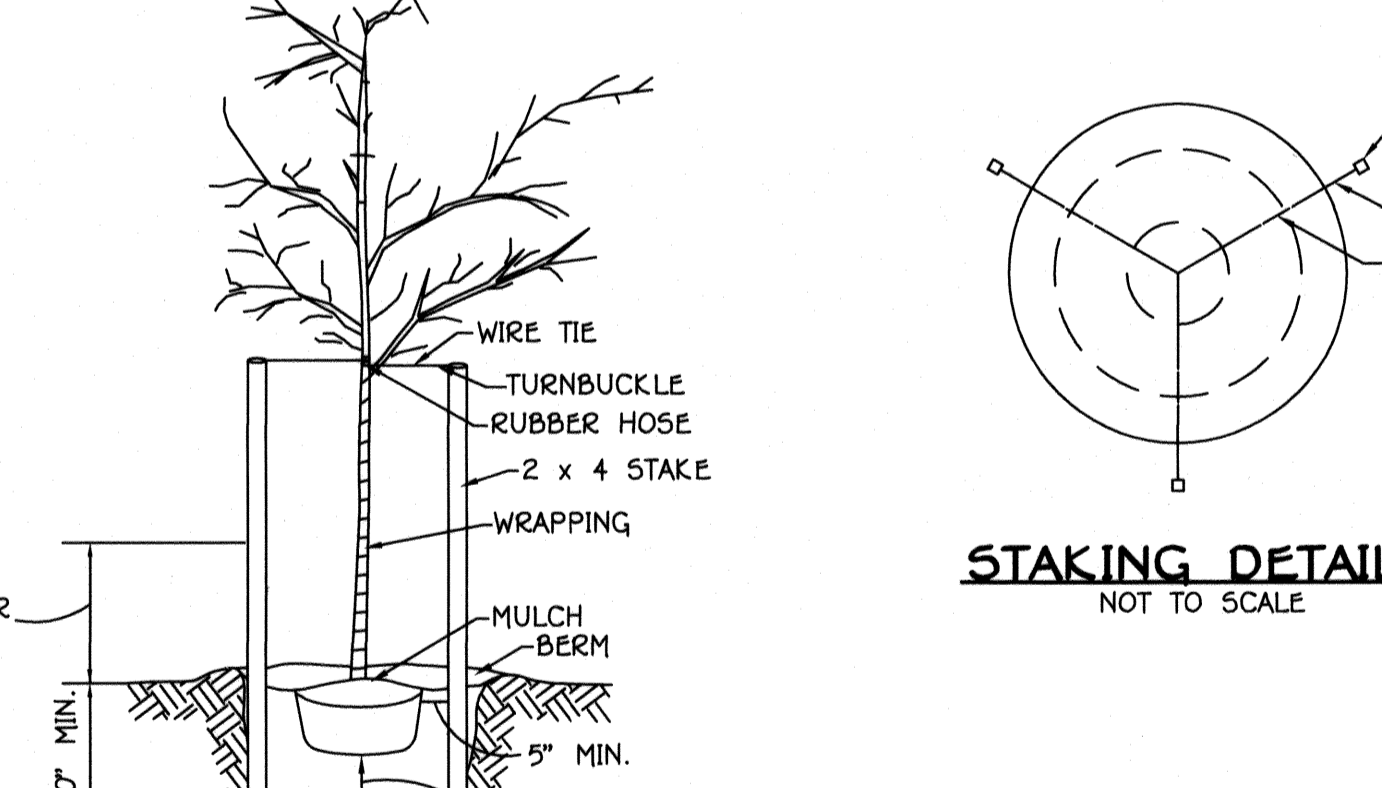
- 1. General Specifications
a. Class of turfgras sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
b. Sod must be machine cut at a uniform soil thickness of 3/4 inch, plus or minus 1/16 inch, at the time of cutting.
2. Sod Installation
a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.

B-4-B STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREAS

- A mound or pile of soil protected by appropriately designed erosion and sediment control measures.
1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1.

HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

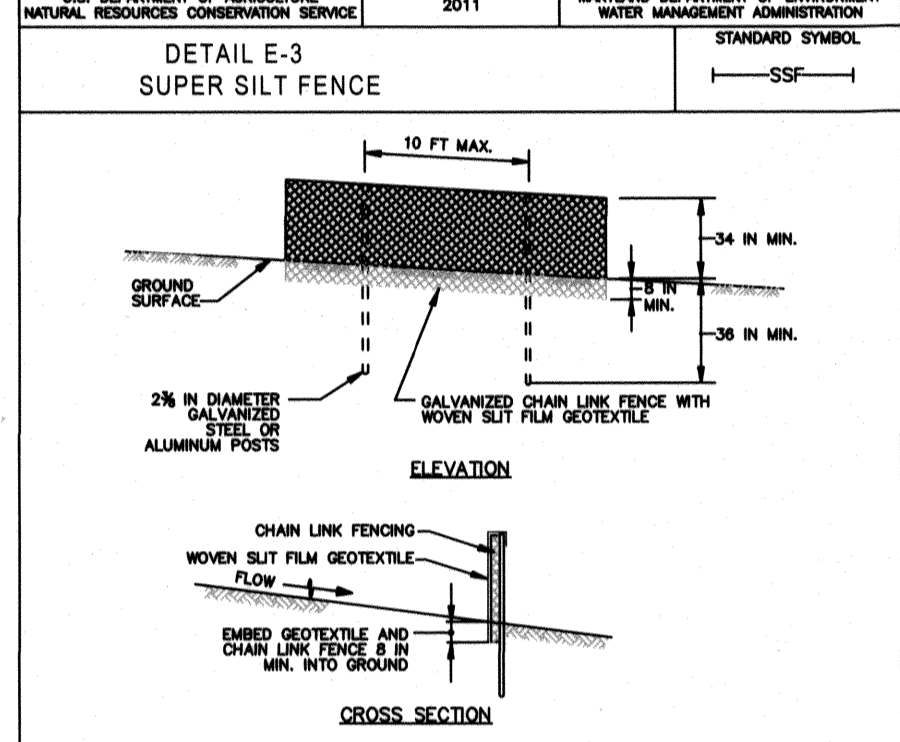
- 1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410-313-1095).
2. ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DEMARCATION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 8 (EIGHT) DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DICES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.



CONSTRUCTION SPECIFICATIONS

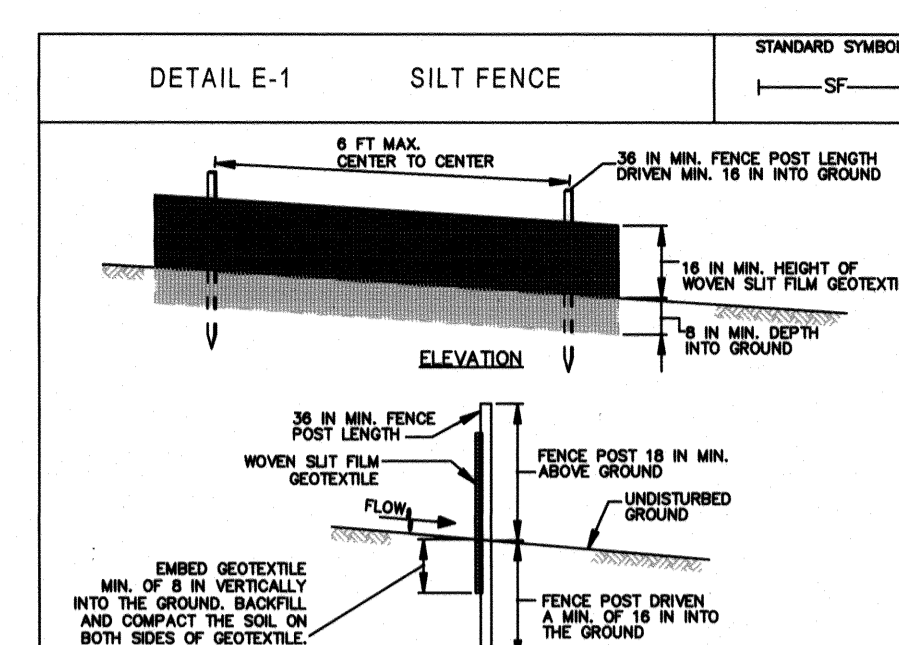
- 1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SOIL. USE MINIMUM LENGTH OF 50 FEET (150 FEET FOR SINGLE RESIDUE LOT).
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SOIL UNDER THE ENTRANCE MAINTAINING POSITIVE DRAINAGE.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.

DETAIL E-3 SUPER SILT FENCE



CONSTRUCTION SPECIFICATIONS

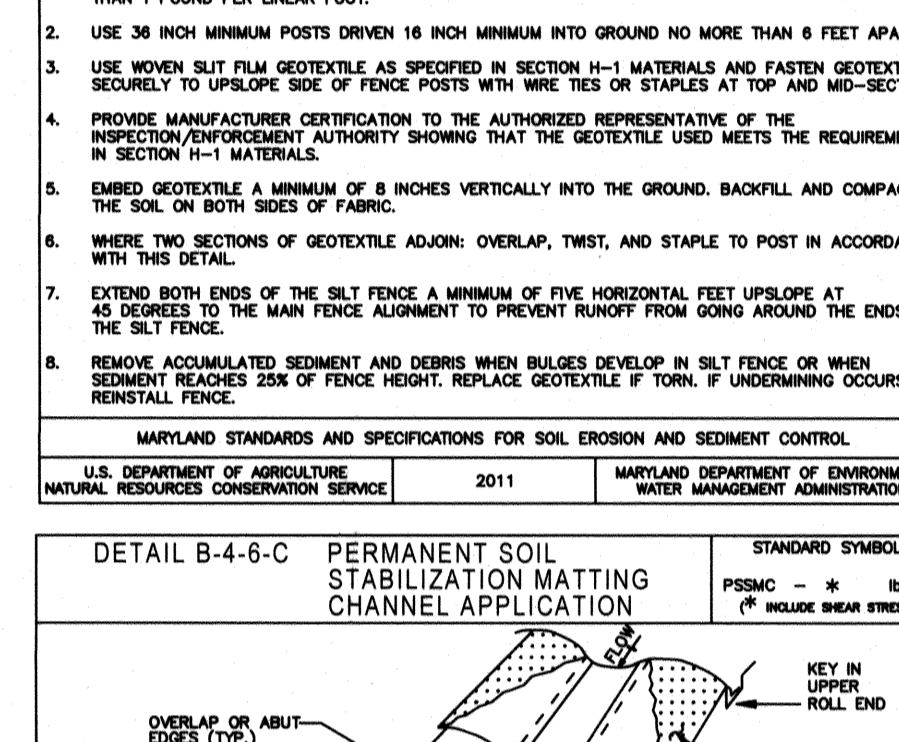
- 1. INSTALL 2 IN. DIAMETER GALVANIZED STEEL POSTS OF 0.939 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED FURTHER THAN 10 FEET APART.
2. FASTEN A GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 IN. MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HARD BRIMS.
3. FASTEN WOVEN SILT FENCE GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSTREAM SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION.



CONSTRUCTION SPECIFICATIONS

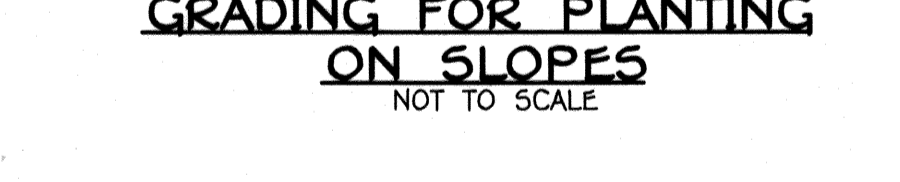
- 1. USE WOOD POSTS 1 1/2 x 3/4 x 1/2 (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD, AS AN ALTERNATIVE TO GALVANIZED STEEL POSTS STANDARD "T" OR "U" SECTION SIZE POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS SPACED 18 INCH MINIMUM INTO EACH OTHER NO MORE THAN 4 FEET APART.
3. USE WOVEN SILT FENCE GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO WOOD POSTS WITH WIRE TIES OR HARD BRIMS AT TOP AND MID-SECTION.

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



CONSTRUCTION SPECIFICATIONS

- 1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC NON-DEGRADABLE FIBRES OR BLEND OF LAMINA PROGRESSIVE AND DISTRIBUTION THROUGHOUT. CHANNELS USED IN THE MAT MUST BE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 8 INCHES LONG.
3. SECOND MATTING USING STEEL STAPLES OR WOOD STAPLES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WITH A MINIMUM 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 8 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCHES LONG AND LOVELY COMPACTED UNDERGROUND STORAGE PIPE WITH GRAVEL BARGE, AND HYDRO-DEMARCATION. (7 DAYS)



SEQUENCE OF CONSTRUCTION

- 1. OBTAIN A GRADING PARTY AND HOLD PRE-CONSTRUCTION MEETING WITH COUNTY INSPECTOR. (2 WEEKS)
2. NOTIFY "MUD UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 410-313-2577. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION INSPECTION AT 410-313-1330 AT LEAST 24 HOURS BEFORE STARTING WORK.
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER SILT FENCE, AND TREE PROTECTIVE FENCING, IF REQUIRED. (1 DAY)
4. REMOVE NECESSARY TREES AND ROUGH GRADE. (2 DAYS)

OWNER / DEVELOPER

HoCo HOLDING, L.L.C.
1652 SHEPARD LANE
ELLICOTT CITY, MARYLAND 21042
410-409-0333

Table with columns: NO., REVISION, 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 PROCEED ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

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. 36386, EXPIRATION DATE: 01/12/2022.

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 REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Approved: Department of Planning and Zoning

Signature of Chief, Development Engineering Division
Signature of Chief, Division of Land Development

Sediment Control Notes and Details

HOWARD HEIGHTS - LOT 21A
3018-A SOUTHWEST ROAD
ZONED: R-20
TAX MAP NO.: 17 GRID NO.: 22 PARCEL NO.: 211
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: NOVEMBER, 2020
SHEET 3 OF 3