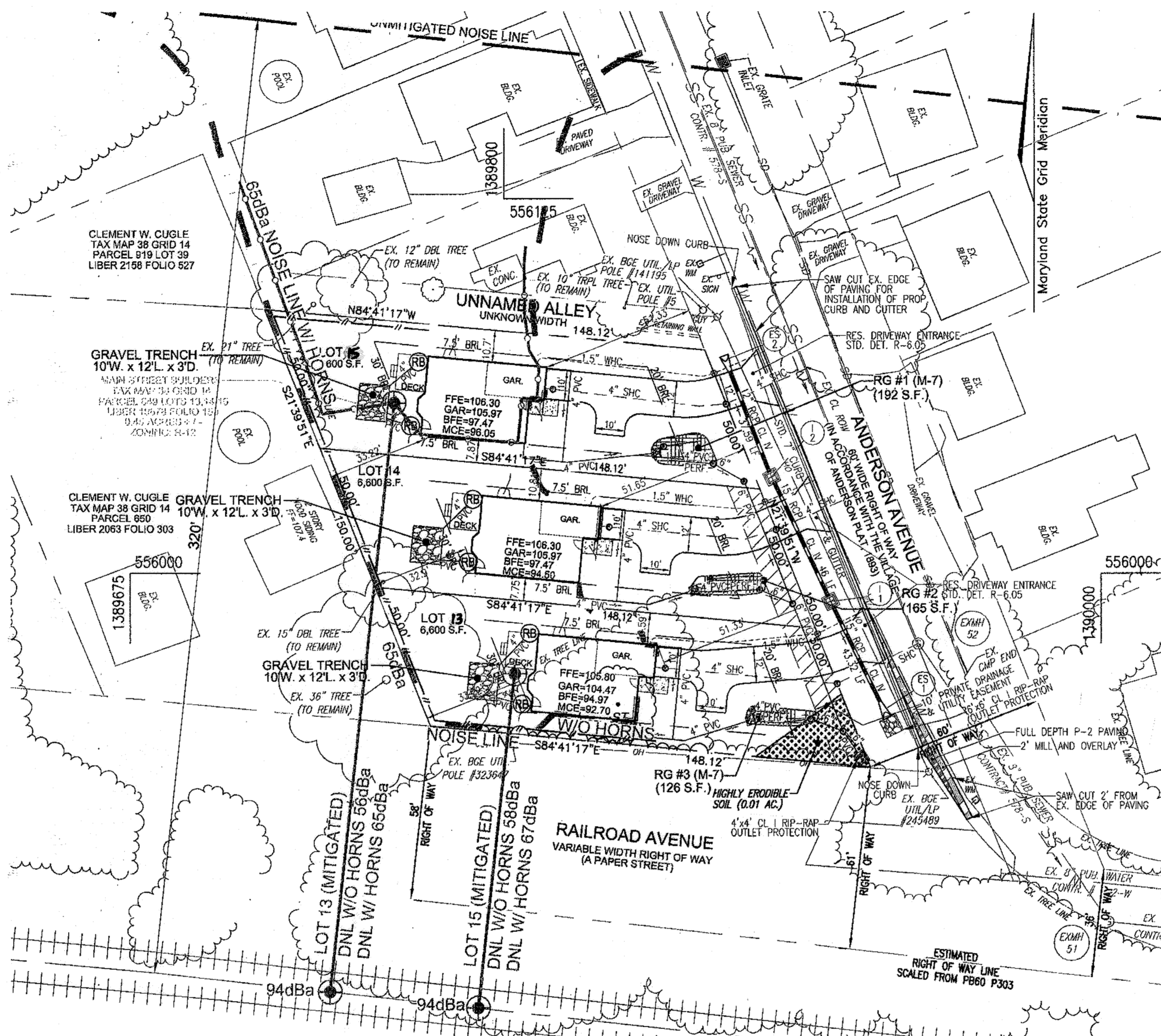


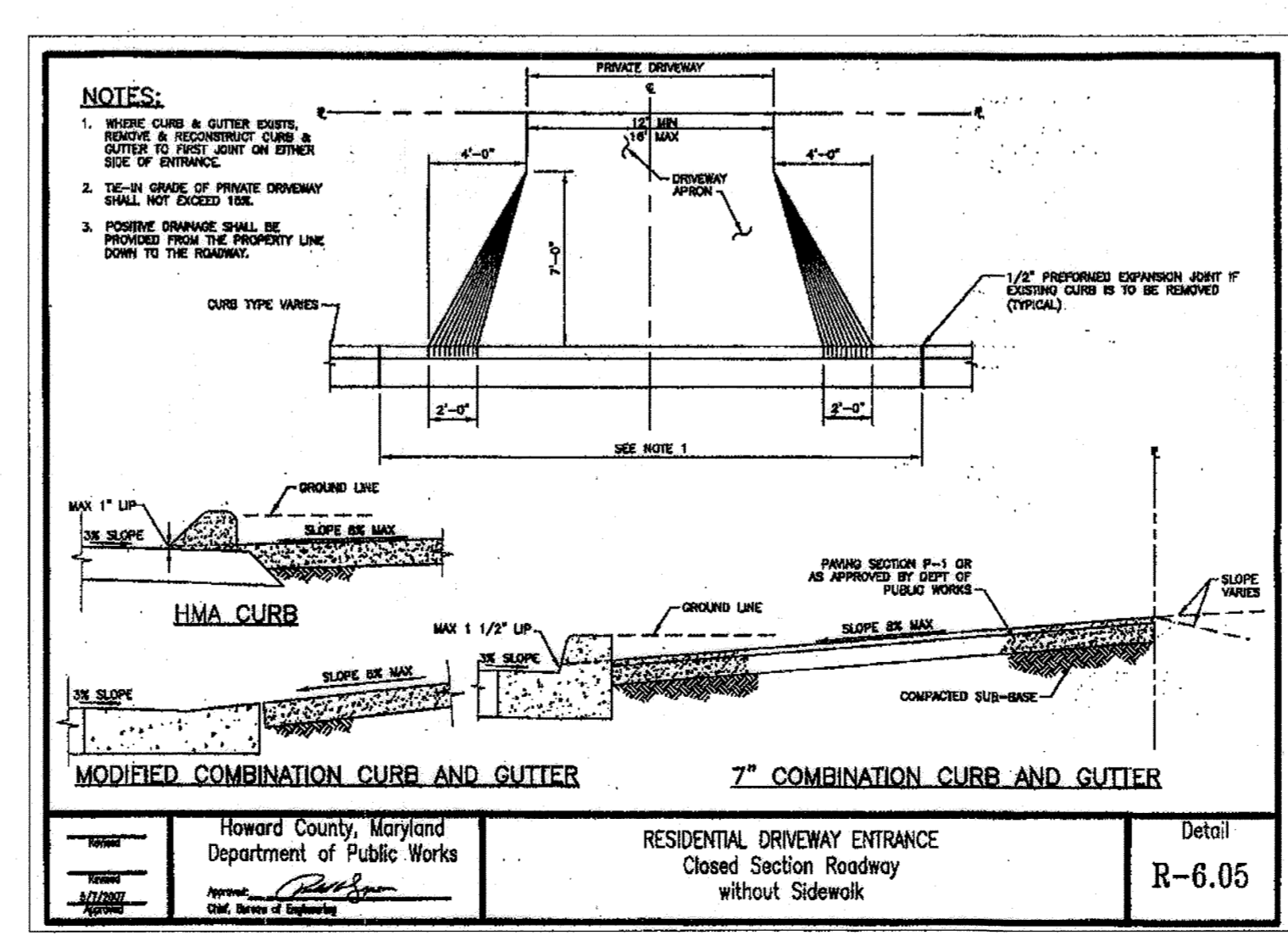
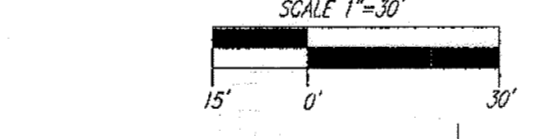
GENERAL NOTES

- 1. THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS ALTERNATIVE COMPLIANCE HAVE BEEN APPROVED...
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE...
3. THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS...
4. THE CONTRACTOR SHALL NOTIFY "ALL UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE...
5. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK...
6. ANY DAMAGE TO PUBLIC RIGHT-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE...
7. THIS SITE DEVELOPMENT PLAN IS SUBJECT TO THE FOLLOWING DPZ FILES: DPZ17 CONTRACT 1-46 CONTRACT 14-81-0, WP-19-026, R-6-05, R-6-06...
8. THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON A FIELD SURVEY BY VOGEL ENGINEERING + TIMMONS GROUP, DATED 04/19/19, AND SUPPLEMENTED BY HOWARD COUNTY GIS...
9. THE PROJECT BOUNDARY IS BASED ON A FIELD BOUNDARY PERFORMED BY VOGEL ENGINEERING + TIMMONS GROUP, DATED JANUARY 2019...
10. THE COORDINATES AND ELEVATIONS SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM...
11. EXISTING UTILITIES LOCATED FROM FIELD SURVEY BY VOGEL+TIMMONS GROUP PERFORMED APRIL 10, 2019 AND SUPPLEMENTED WITH AS-BUILT DRAWINGS...
12. THE SUBJECT PROPERTY IS ZONED R-12 IN ACCORDANCE WITH THE ZONING REGULATIONS EFFECTIVE OCT. 06, 2013, AND IS SUBJECT TO SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE OCT. 07, 2007 PER COUNCIL BILL 47-2007 & 48-2007...
13. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT...
14. THIS PLAN IS SUBJECT TO THE APPLICABLE PROVISIONS OF SUBDIVISION AND LAND DEVELOPMENT REGULATIONS...
15. THIS SITE IS NOT LOCATED IN A HISTORIC DISTRICT...
16. NO BARE, THREATENED OR ENDANGERED SPECIES OR THEIR HABITATS WERE OBSERVED ON THE PROPERTY...
17. EXISTING UTILITIES LOCATED FROM FIELD SURVEY BY VOGEL+TIMMONS GROUP PERFORMED APRIL 10, 2019 AND SUPPLEMENTED WITH AS-BUILT DRAWINGS...
18. THERE ARE NO "FLOODPLAIN" AREAS LOCATED WITHIN THE DEVELOPMENT AREA...
19. THERE ARE NO "TREE" SPECIES, "R" OR "OR" SPECIES ON THIS SITE...
20. THE PROJECT SITE WAS EVALUATED FOR THE PRESENCE OF ENVIRONMENTAL FEATURES IN JULY 2019, AND A LETTER HAS BEEN PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. C/O MR. JOHN CANOLES, DATED DECEMBER 18, 2019...
21. SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION, INCLUDING THE PROTECTION OF SPECIMEN TREES IS NOT APPLICABLE TO THIS PROJECT UNDER SECTIONS 16.1202.(b)(iv), RESUBDIVISIONS THAT DO NOT CREATE ADDITIONAL LOTS...
22. A LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL...
23. THERE ARE 0 SF (0.00 AC.) AREA OF OPEN SPACE PRESENT...
24. SUBDIVISION AND LAND DEVELOPMENT REGULATIONS TO NOT REQUIRE RIGHT OF WAY DEDICATION AND ALLOW A RECONFIGURATION OF THE EXISTING 3 LOTS...
25. AN OWNER OF THE DEED TO ADJUST/RECONFIGURE LOTS 13, 14 AND 15 (0.45 ACRES) STATED IN THIS REQUEST MUST BE RECORDED WITH THE HOWARD COUNTY LAND RECORDS WITHIN 120 DAYS OF THE DATE OF THIS ALTERNATIVE COMPLIANCE PETITION APPROVAL...
26. APPROVAL OF THIS ALTERNATIVE COMPLIANCE PETITION IS FOR THE STATED 3 LOTS (LOTS 13, 14 AND 15) INCLUDED IN THIS PETITION...
27. PRIOR TO THE APPLICATION FOR LAND DEVELOPMENT, THE PETITIONER/PROPERTY OWNER MUST SUBMIT AN ENVIRONMENTAL CONCEPT PLAN...
28. STORMWATER MANAGEMENT PRACTICES ON THESE LOTS CAN COMPLY WITH THE REGULATIONS AND TO IDENTIFY ALL ENVIRONMENTAL FEATURES ON THE SITE...
29. A SITE DEVELOPMENT PLAN (SDP) WILL BE REQUIRED FOR THE DEVELOPMENT OF THE THREE LOTS...
30. THE EXISTING HOUSE (6480 ANDERSON AVENUE) MUST BE REMOVED/DEMOLISHED PRIOR TO THE RECORDED OF THE NEW ADJOINER DEED TRANSFER...
31. ANDERSON AVENUE IS DESCRIBED AS A LOCAL ROAD...
32. A TRAFFIC STUDY IS NOT REQUIRED FOR THIS PROJECT...
33. SECTION 16.1100(A) OF THE HOWARD COUNTY ZONING REGULATIONS DO NOT INCREASE THE NUMBER OF HOUSING UNITS ALLOWED...
34. TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL GROUNDS, OR CEMETERIES...
35. STORMWATER MANAGEMENT FOR THE PROJECT SHALL BE PROVIDED BY MEANS OF RAIN GARDENS (M-7), RAIN BARRELS (M-1) AND CREDITS FOR ROOF TOP DISCONNECT...
36. SEDIMENT AND EROSION CONTROLS WILL BE PROVIDED FOR THIS SITE BY ON LOT PERIMETER CONTROLS...
37. THERE ARE 0.00 AC. OF HIGHLY ERODIBLE SOILS ON THIS SITE...
38. DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT...
39. THIS PROJECT IS AN EXISTING, RECORDED SUBDIVISION...
40. DECLARATION OF COVENANTS SHALL BE RECORDED WITH THE SITE DEVELOPMENT PLAN...
41. IN ACCORDANCE WITH SECTION 122.0 OF THE HOWARD COUNTY ZONING REGULATIONS...
42. PORCHES OR DECKS MAY PROJECT NOT MORE THAN 3 FEET INTO THE FRONT OR REAR YARD SETBACK...
43. A NOISE STUDY HAS BEEN PERFORMED BY VOGEL ENGINEERING + TIMMONS GROUP...
44. GEOTECHNICAL INVESTIGATIONS HAVE BEEN COMPLETED AS PART OF THE SITE DEVELOPMENT PLAN SUBMISSION...
45. A PRE-SUBMISSION MEETING IS NOT REQUIRED FOR THE DEVELOPMENT OF EXISTING SUBDIVIDED LOTS...
46. THE FOLLOWING STANDARDS (CONSTRUCTION AND TEMPORARY TRAFFIC CONTROL) ARE REQUIRED FOR THIS PROJECT...
47. ALL ITEMS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VERSION OF THE REFERENCED STANDARD...
48. DECLARATION OF COVENANTS SHALL BE RECORDED WITH THE DEVELOPER AGREEMENT...
49. TRASH COLLECTION SHALL BE PRIVATE...

SITE DEVELOPMENT PLAN ANDERSON VILLAGE LOTS 13-15 LIBER 19678 / FOLIO 159



LAYOUT PLAN VIEW SCALE: 1"=30'

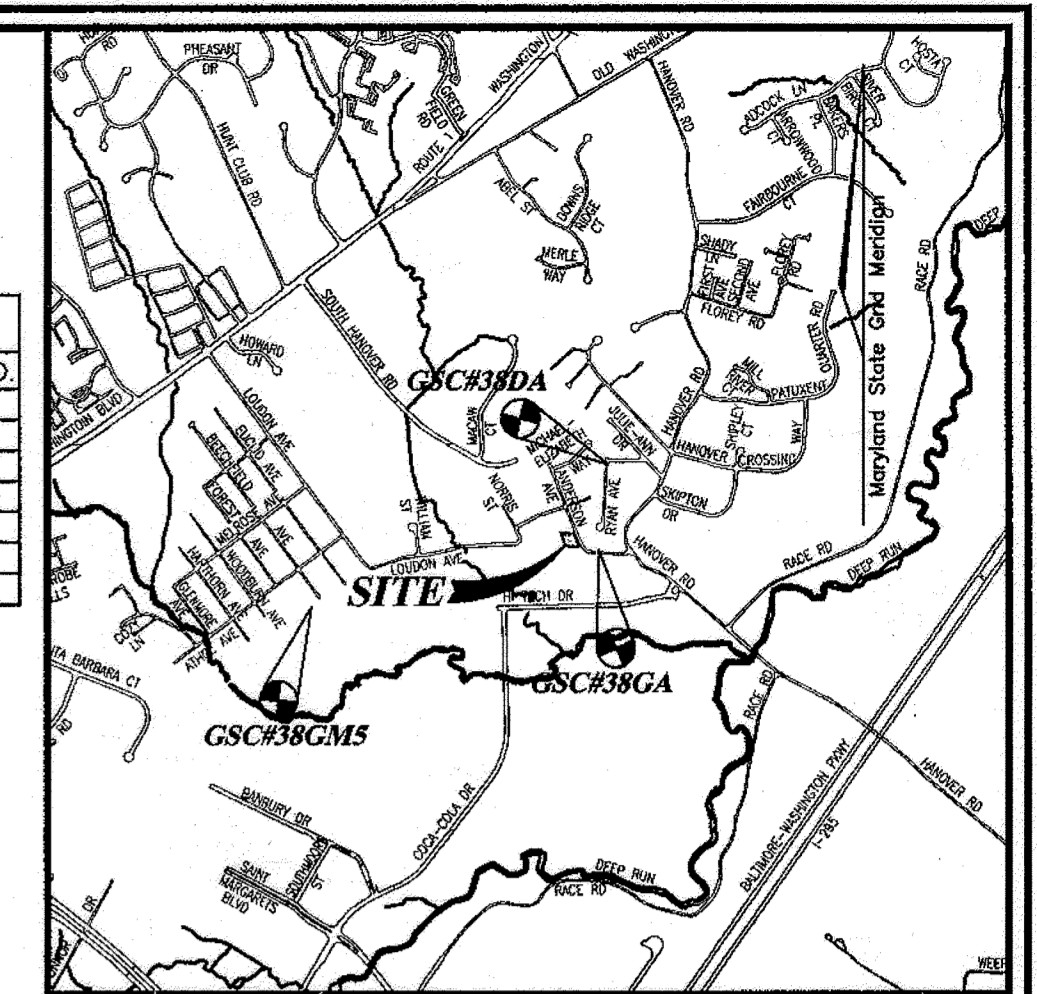


BENCHMARKS

Table with 4 columns: Benchmark Name, Easting, Northing, and Elevation. Includes Howard County Benchmarks 38DA, 38CA, and 38GA.

SHEET INDEX

Table with 2 columns: Description and Sheet No. Lists sheets for cover sheet, erosion control, grading, stormwater management, and landscape plan.



VICINITY MAP

SCALE: 1"=2000' ACD MAP COORDINATES: MAP 35, GRID E-4

LEGEND

- Legend symbols for existing contour, proposed contour, existing curb and gutter, proposed curb and gutter, existing overhead utility line, proposed overhead utility line, existing light pole, existing mailbox, existing sign, existing sanitary manhole, existing sanitary line, existing cleanout, existing fire hydrant, existing water line, property line, right-of-way line, existing tree line, existing railroad tracks, proposed tree line, limit of disturbance, 1.5" water house connection, 4" sewer house connection, storm drain inlet and end section, roof drain / under drain, rain garden (M-7), proposed rain barrel, proposed noise wall, unmitigated noise line (w/o horns), mitigated noise line (w/ horns), existing specimen tree.

SITE DATA

TAX MAP 38, BLOCK 14, PARCEL 649. 1ST ELECTION DISTRICT. PRESENT ZONING: R-12 RESIDENTIAL. TOTAL AREA OF PROPERTY: 0.50 AC. (EX. LOTS 13, 14 & 15). DPZ REFERENCES: WP-19-026, ECP-20-007. DEED/PLAT REFERENCES: L292/F.125 AND L19678/F.159. AREA MANAGED BY ESOV: 22,488 S.F./0.52 AC. (THIS PLAN). *DEVELOPMENT AREA (LOD EXTENDS OUTSIDE LIMITS OF PARCEL). USE OF PROPOSED STRUCTURES (THIS PLAN): 3 - SINGLE FAMILY DETACHED HOUSES. *TOTAL BUILDING COVERAGE WITHIN THE DEVELOPMENT AREA: 2,988 SF (0.586 AC. OR 13.19%). *DEVELOPMENT AREA (LOD EXTENDS OUTSIDE LIMITS OF PARCEL): 2,805 SF (0.644 AC. OR 12.38%). LIMIT OF DISTURBED AREA (THIS PLAN): 22,488 S.F. / 0.5163 AC. *WETLANDS ON SITE: 0.00 AC. *WETLAND BUFFERS ON SITE: 0.00 AC. *STREAMS AND THEIR BUFFERS ON SITE: 0.00 AC. *AREA OF 100 YEAR FLOODPLAIN: 0.00 AC. *AREA OF EXISTING FOREST ON SITE: 0.00 AC. *AREA OF WIDE STEEP SLOPES (20% OR GREATER): 0.00 SF / 0.00 AC. *AREA OF ERODIBLE SOILS: 1058 SF / 0.02 AC. *IMPERVIOUS AREA: 5,803 S.F. (0.1332 AC. OR 25.80%). *GREEN/OPEN AREA: 16,685 S.F. (0.383 AC. OR 74.20%). NOTE: *WITHIN LIMITS OF DEVELOPMENT AREA ONLY.

SWM TEST PIT RESULTS:

TEST PITS WERE EXCAVATED, OBSERVED AND CERTIFIED BY VOGEL ENGINEERING + TIMMONS GROUP ON JULY 24, 2019. B-1 - 8" DEEP, NO ROCK OR WATER ENCOUNTERED. B-2 - 9" DEEP, NO ROCK OR WATER ENCOUNTERED. B-3 - 8" DEEP, NO ROCK OR WATER ENCOUNTERED. *PHOTOS UPLOADED TO PDX.

SPECIMEN TREE CHART

Table with 6 columns: KEY, SPECIES, SIZE, CRZ, CONDITION, COMMENTS. Row 1: 1, RED CEDAR, 40", 60", GOOD, TO BE REMOVED.

OWNER/DEVELOPER

MAIN STREET BUILDERS C/O JOSEPH NODGRASS 5705 LANDING ROAD ELKRDGE, MARYLAND 21075 (410) 796-2003

Revision table with 3 columns: NO, REVISE ADDRESS CHART AND LOT NUMBERS, REVISION. Row 1: 1, 5-26-22.

SITE DEVELOPMENT PLAN COVER SHEET AND LAYOUT PLAN

ANDERSON VILLAGE LOTS 13-15 LIBER 19678 / FOLIO 159 ZONED: R-12 PARCEL 649 HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING

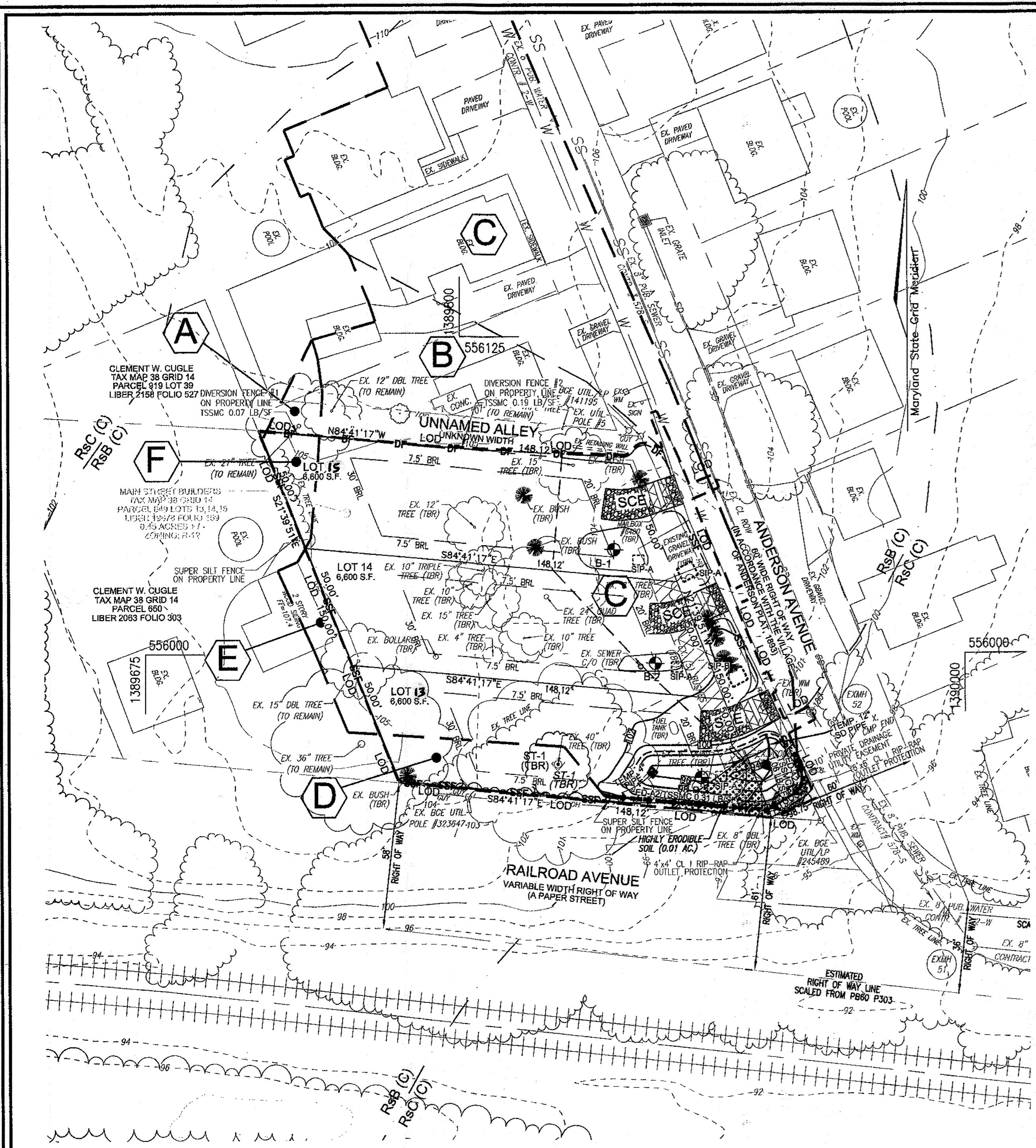
TIMMONS GROUP 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043 P: 410.461.7666 F: 410.461.8961 www.timmons.com

Professional Engineer Seal for Robert H. Vogel, PE No. 16193. Includes Design By, Drawn By, Checked By, Date, Scale, and W.O. No. information.

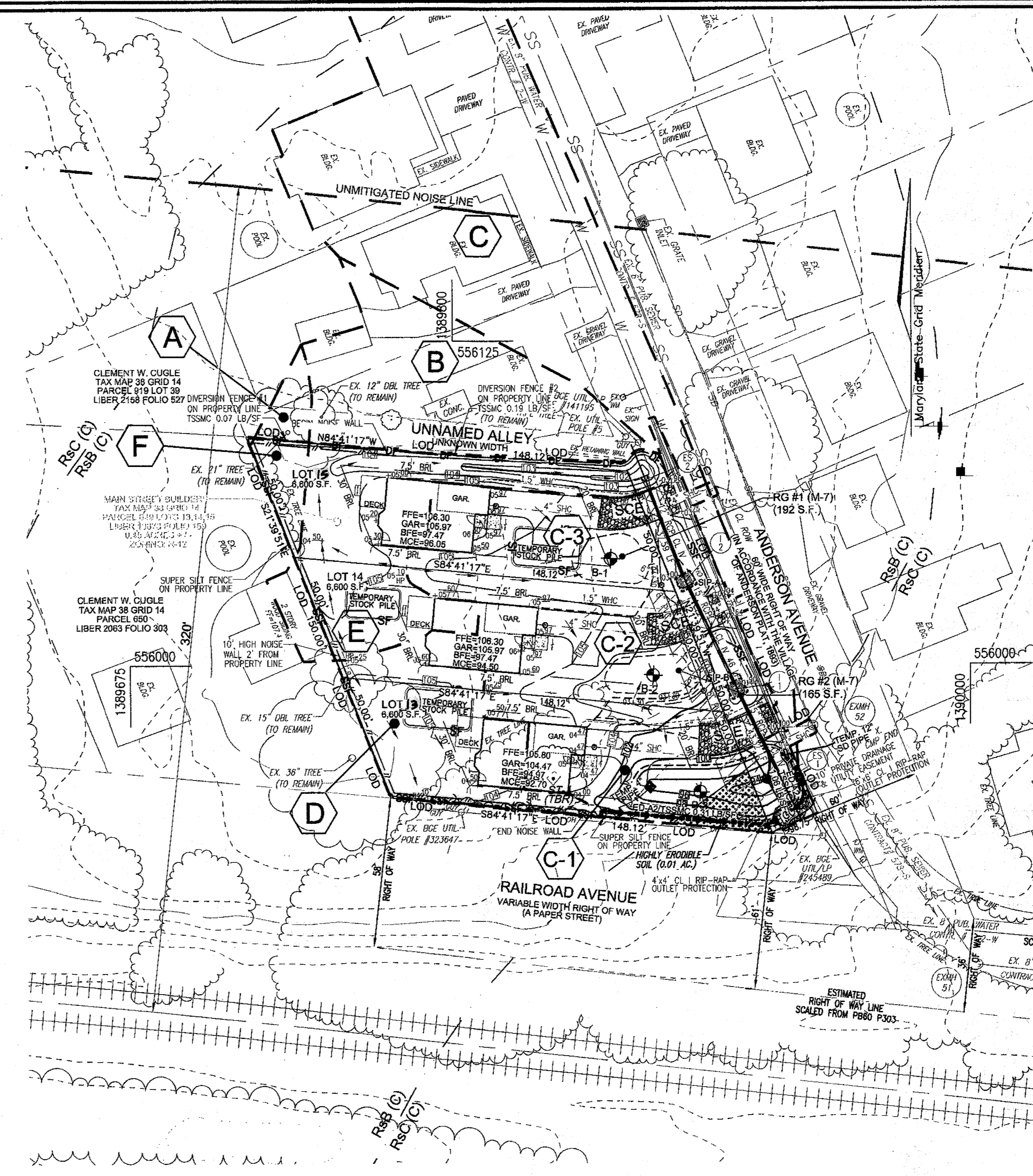
Approved: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. Includes signatures of Chad Edmondson and Amy Green, and dates 4/20/2022 and 4/22/2022.

STORMWATER MANAGEMENT INFORMATION CHART. Table with 7 columns: LOT/PARCEL #, STREET ADDRESS, FACILITY NAME & NUMBER, PRACTICE TYPE (QUANTITY), PUBLIC, PRIVATE, MAINTENANCE RESPONSIBILITY.

ADDRESS CHART and PERMIT INFORMATION CHART. Includes lot numbers and addresses, and subdivision name, section/area, parcel number, deed ref, block no, zone, tax/zone, elect. dist, census tr. #, water code, sewer code.



EXISTING CONDITIONS, DEMOLITION AND INITIAL EROSION AND SEDIMENT CONTROL PLAN
SCALE: 1"=30'



INTERMEDIATE GRADING, EROSION AND SEDIMENT CONTROL PLAN
SCALE: 1"=30'

LEGEND

	EXISTING CONTOUR
	PROPOSED CONTOUR
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING OVERHEAD UTILITY LINE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	EXISTING TREE LINE
	EXISTING RAILROAD TRACKS
	PROPOSED TREE LINE
	UNIT OF DISTURBANCE
	1.5" WATER HOUSE CONNECTION
	4" SEWER HOUSE CONNECTION
	STORM DRAIN INLET AND END SECTION
	ROOF DRAIN / UNDER DRAIN
	RAIN GARDEN (4-7)
	PROPOSED RAIN BARREL
	ROOFTOP DISCONNECTOR
	PROPOSED NOISE WALL
	HIGHLY ERODIBLE SOIL
	TEMPORARY GABION OUTLET STRUCTURE
	STABILIZED CONSTRUCTION ENTRANCE
	SUPER SILT FENCE
	DRAINAGE DIVIDE / AREA
	EARTH DIKE
	DIVERSION FENCE
	10" PRIVATE DRAINAGE AND UTILITY EASEMENT (L)
	PERMANENT SOIL STABILIZATION MATTING
	TEMPORARY SOIL STABILIZATION MATTING

OWNER/DEVELOPER
MAIN STREET BUILDERS
C/O JOSEPH SNOODGRASS
5705 LANDING ROAD
ELK RIDGE, MARYLAND 21075
(410) 796-2003

NOTE:
- SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
- SILT FENCE SHALL BE CURLLED UPHILL NO MORE THAN 35 FEET APART
- DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

NOTE:
EITHER PERMANENT OR TEMPORARY STABILIZATION IS TO BE APPLIED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR REGARDLESS OF DAYS/DATES IN THE STANDARD SEDIMENT CONTROL NOTES AND/OR SEEDING SPECIFICATIONS.

TEMPORARY STONE OUTLET STRUCTURE STAGE - STORAGE DATA

TSOS 1 (INITIAL)						
AREA (ac.)	STORAGE REQUIRED cf./Ac.	1973				
Elevation	Area	Avg. Area	Depth	Volume	Total Volume	
1.10	1800					
94.00	78				0	
96.00	464	271	2.00	542	542	
98.00	1004				0	
					1468	1468
						TOTAL 2010

SEDIMENT CONTROL DRAINAGE AREA CHART - INTERMEDIATE CONDITION

AREA	PRACTICE DESCRIPTION	DETAIL NO.	INTERMEDIATE ACRES	TYPE	SIZE	SLOPE	SLOPE LENGTH
A	DIVERSION FENCE #1	C-9	0.01	-	-	3.85%	39 LF.
B	DIVERSION FENCE #2	C-9	0.13	-	-	3.40%	80 LF.
C	TEMPORARY GABION OUTLET STRUCTURE (INCLUDES AREA B)	E-8	1.04	-	-	-	-
D	SUPER SILT FENCE	E-3	0.08	-	-	2.63%	85 LF.
E	SUPER SILT FENCE	E-3	0.01	-	-	3.85%	13 LF.
F	SUPER SILT FENCE	E-3	0.01	-	-	5.00%	99 LF.
ED-1	EARTH DIKE (TO TOGS)	C-1	0.07	A2	-	5.00%	-
ED-2	EARTH DIKE (TO TOGS)	C-1	0.97	A1	-	1.25%	-
I-1	STANDARD INLET PROTECTION	E-9-1	0.12	B	-	-	-
I-2	STANDARD INLET PROTECTION	E-9-1	0.59	A	-	-	-

TSOS 1 (INTERMEDIATE)

AREA (ac.)	STORAGE REQUIRED cf./Ac.	STORAGE REQUIRED (cf.)			
Elevation	Area	Avg. Area	Depth	Volume	Total Volume
1.04	1800				1869
94.00	78				0
96.00	464	271	2.00	542	542
98.00	1004				0
					1468
					TOTAL 2010

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Designated by: Chad Edmondson 4/20/2022
 CHIEF OF DEVELOPMENT ENGINEERING DIVISION
 DATE: 4/22/2022
 CHIEF OF DIVISION OF LAND DEVELOPMENT
 Designated by: Ray Gowan 4/22/2022
 DIRECTOR

OWNER/DEVELOPER CERTIFICATION:
I HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-WAY ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

Designated by: Joseph F. Snodgrass, P.E. 3/7/2022
 OWNER/DEVELOPER SIGNATURE
 PRINTED NAME & TITLE: Joseph F. Snodgrass, President

DESIGN CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL PLANS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Designated by: Rob Vogel 10/25/21
 DESIGNER SIGNATURE
 PRINTED NAME: ROBERT H. VOGEL MD REGISTRATION NO. 18193
 (E) R.L.S. OR R.L.A. (Circle one)

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Designated by: Alexander Bratchek 4/21/2022
 HOWARD S.C.D.

MAPPED SOIL TYPES - CLARKSVILLE NW / NE MAP #16 / 17

SYMBOL NAME / DESCRIPTION	GROUP	K-FACTOR	HYDRIC	HYDRIC INCLUSIONS	PRIME FARMLAND	<15% SLOPE	
						W/ EROSION POTENTIAL	POTENTIAL
RB6 RUSSETT FINE SANDY LOAM, 2 TO 5 PERCENT SLOPES	C	43	NO	NO	YES	NO	
RSC RUSSETT FINE SANDY LOAM, 5 TO 10 PERCENT SLOPES	C	43	NO	NO	*YES	YES	

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY *FARMLAND OF STATEWIDE IMPORTANCE

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

NO.	REVISE ADDRESS CHART AND LOT NUMBERS	5-26-22
	REVISION	DATE

SITE DEVELOPMENT PLAN
EXISTING CONDITIONS, DEMOLITION, GRADING, EROSION AND SEDIMENT CONTROL PLAN
ANDERSON VILLAGE LOTS 13-15
LIBER 19678 / FOLIO 159
 TAX MAP 38 BLOCK 14
 1ST ELECTION DISTRICT
 ZONED: R-12
 PARCEL 648
 HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING

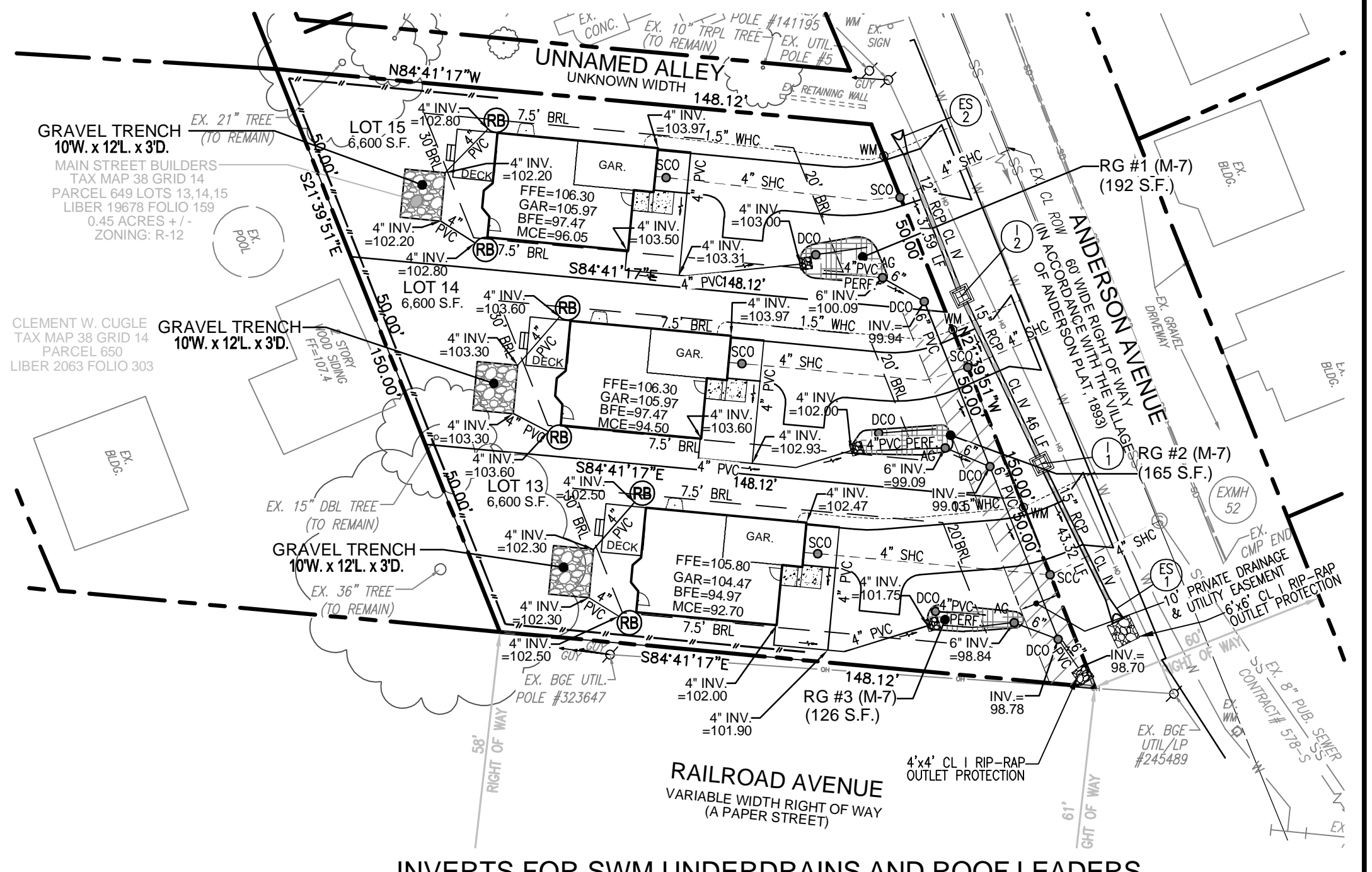
TIMMONS GROUP
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE
 DESIGN BY: GAH
 DRAWN BY: GAH
 CHECKED BY: RHV
 DATE: OCTOBER 2021
 SCALE: AS SHOWN
 W.O. NO.: 04-33
 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. 18193 EXPIRATION DATE: 09-27-2022

Designated by: Rob Vogel 10/25/21
 PROFESSIONAL ENGINEER
 ROBERT H. VOGEL, P.E. NO. 18193

2 SHEET OF 7

LEGEND		LOD	
	EXISTING CONTOUR		LIMIT OF DISTURBANCE
	PROPOSED CONTOUR		RAIN GARDEN (M-7)
	EXISTING CURB AND GUTTER		PROPOSED SIDEWALK/UNIT LEAD WALK
	PROPOSED CURB AND GUTTER		PROPOSED RIP-RAP
	EXISTING UTILITY POLE		WATER METER / 1.5" WATER HOUSE CONNECTION
	EXISTING LIGHT POLE		CLEANOUT / 4" SEWER HOUSE CONNECTION
	EXISTING MAILBOX		STORM DRAIN INLET AND END SECTION
	EXISTING SIGN		CLEANOUT / ROOF DRAIN / UNDER DRAIN
	EXISTING SANITARY MANHOLE		ATRIUM GRATE / UNDER DRAIN
	EXISTING SANITARY LINE		STABILIZED CONSTRUCTION ENTRANCE
	EXISTING CLEANOUT		DIVERSION FENCE
	EXISTING FIRE HYDRANT		SUPER SILT FENCE
	EXISTING WATER LINE		EARTH DIKE
	PROPERTY LINE		ESDV DRAINAGE DIVIDE
	RIGHT-OF-WAY LINE		TEMPORARY GABION OUTLET STRUCTURE
	EXISTING TREELINE		ESDV DRAINAGE AREA LABEL
	PROPOSED TREELINE		SOIL TEST PIT LOCATION
	EXISTING SOILS		
	HIGHLY ERODIBLE SOIL		
	10' PRIVATE DRAINAGE AND UTILITY EASEMENT (L / F.)		



NOTE:
 - SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
 - SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART
 - DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

NOTE:
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CONSTRUCTION OF FRONTAGE IMPROVEMENTS TO BE TEMPORARILY STABILIZED AT THE END OF EACH WORKING DAY.

GRADING SHALL NOT ADVERSELY IMPACT EXISTING HOUSE.

INVERTS FOR SWM UNDERDRAINS AND ROOF LEADERS

SCALE: 1"=30'
 *NOTE: SEE RAIN GARDEN DATA CHART, SHEET 6, FOR 4" UNDERDRAINS WITHIN RAIN GARDEN.

OWNER/DEVELOPER
 MAIN STREET BUILDERS
 C/O JOSEPH SNOODGRASS
 5705 LANDING ROAD
 ELKBRIDGE, MARYLAND 21075
 (410) 796-2003

AREA	PRACTICE DESCRIPTION	DETAIL NO.	FINAL ACRES	TYPE	SIZE	SLOPE	SLOPE LENGTH
A	DIVERSION FENCE	C-9	0.01	-	-	3.85%	39 LF
B	DIVERSION FENCE	C-9	0.13	-	-	3.40%	80 LF
C	TEMPORARY GABION OUTLET STRUCTURE (INCLUDES AREA B)	E-8	1.04*	-	-	-	-
C-1	STANDARD INLET PROTECTION	E-9-1	0.07	A	-	-	-
C-2	STANDARD INLET PROTECTION	E-9-1	0.07	A	-	-	-
C-3	STANDARD INLET PROTECTION	E-9-1	0.09	A	-	-	-
D	SUPER SILT FENCE	E-3	0.08	-	-	2.63%	85 LF
E	SUPER SILT FENCE	E-3	0.01	-	-	3.85%	13 LF
F	SUPER SILT FENCE	E-3	0.01	-	-	5.00%	20 LF
ED-1	EARTH DIKE (TO TOS)	C-1	0.07	A2	-	5.00%	-
ED-2	EARTH DIKE (TO TOS)	C-1	0.97	A1	-	1.25%	-
PSSMC #1	PERMANENT SOIL STABILIZATION CONTROL MATTING (2.52 LB/SF)	B-4-6	0.12	-	-	1.86%	-
PSSMC #2	PERMANENT SOIL STABILIZATION CONTROL MATTING (0.97 LB/SF)	B-4-6	0.04	-	-	1.64%	-
PCMC #3	PERMANENT SOIL STABILIZATION CONTROL MATTING (2.72 LB/SF)	B-4-6	0.03	-	-	6.06%	-
I-1	STANDARD INLET PROTECTION	E-9-1	0.12	B	-	-	-
I-2	STANDARD INLET PROTECTION	E-9-1	0.59	A	-	-	-

* AREA C INCLUDES AREAS C-1, C-2 AND C-3.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 4/20/2022
 CHIEF DEVELOPMENT ENGINEERING DIVISION
 DATE: 4/22/2022
 CHIEF DIVISION OF LAND DEVELOPMENT
 DATE: 4/22/2022
 DIRECTOR

SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR	HYDRIC	HYDRIC INCLUSIONS	PRIME FARMLAND	<15% SLOPE W/ EROSION POTENTIAL
Rsb	RUSSETT FINE SANDY LOAM, 2 TO 5 PERCENT SLOPES	C	.43	NO	NO	YES	NO
Rsc	RUSSETT FINE SANDY LOAM, 5 TO 10 PERCENT SLOPES	C	.43	NO	NO	YES	YES

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY *FARMLAND OF STATEWIDE IMPORTANCE

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

FINAL GRADING, EROSION AND SEDIMENT CONTROL PLAN
 SCALE: 1"=30'

LOT #	EL @ MAIN/SHC/DSHC	DIST TO R/W	EL @ R/W	DIST TO C/O	EL @ C/O	DIST TO REAR HSE	MCE*	SHC SLOPE
13	87.51	SHC	29.25	88.10	58	89.25	48	92.70
14	89.33	SHC	29.19	89.91	57	91.05	48	94.50
15	90.88	SHC	28.39	91.45	58	92.62	47	96.05

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
 FINAL GRADING, EROSION AND SEDIMENT CONTROL PLAN
 ANDERSON VILLAGE LOTS 13-15
 LIBER 19678 / FOLIO 159
 TAX MAP 38 BLOCK 14
 1ST ELECTION DISTRICT
 ZONED: R-12
 PARCEL 649
 HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING

TIMMONS GROUP
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

DESIGN BY: GAH
 DRAWN BY: GAH
 CHECKED BY: RHV
 DATE: FEBRUARY 2022
 SCALE: AS SHOWN
 W.O. NO.: 04-33

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16183 EXPIRATION DATE: 09-27-2022

3 SHEET OF 7

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
STANDARD SEDIMENT CONTROL NOTES

1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS...
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND AS TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF...
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF EXPOSED SOILS...
4. 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...
5. SITE ANALYSIS: TOTAL AREA OF SITE, DISTURBED DEVELOPMENT AREA, AREA TO BE VEGETATED, STABILIZED, OR PERMANENTLY MAINTAINED, etc.

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

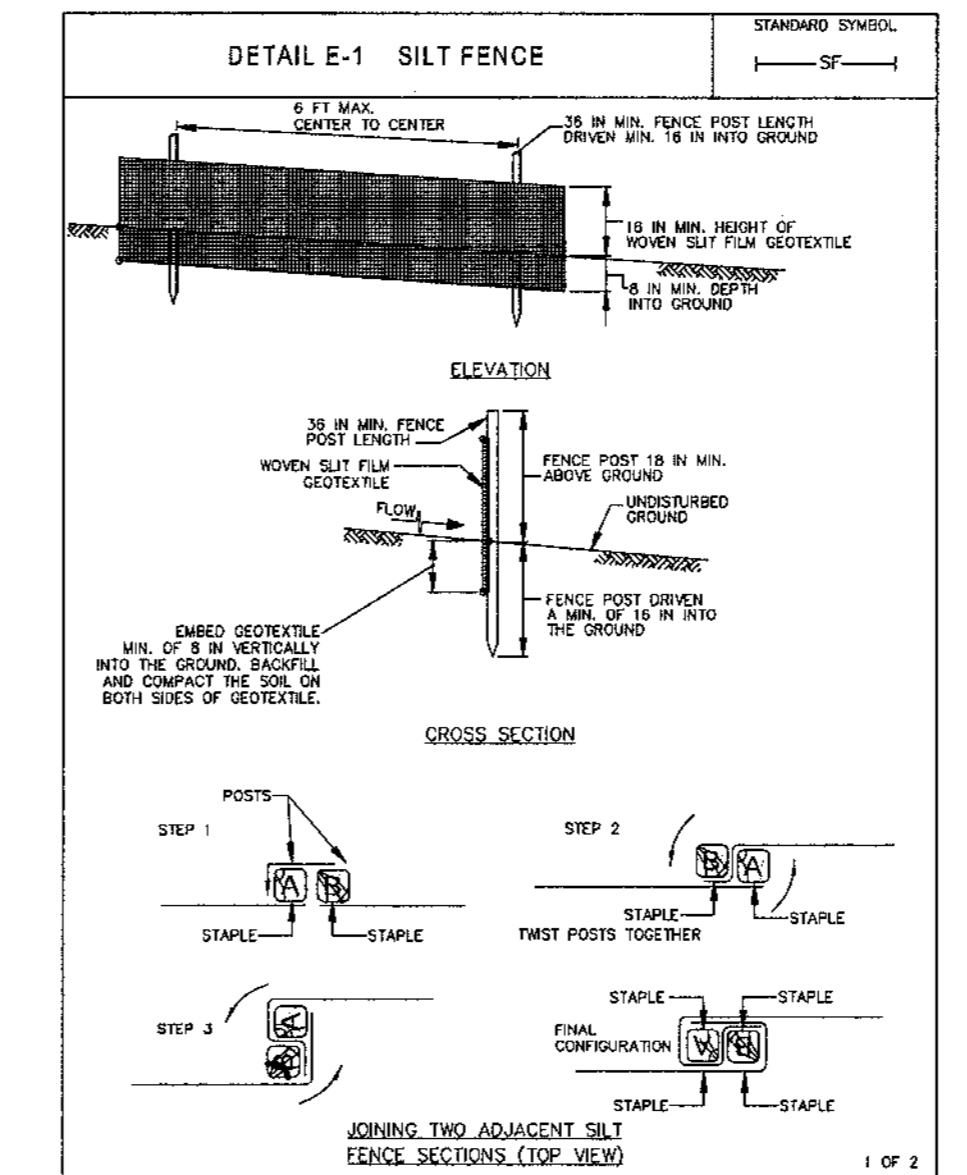
DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.
PURPOSE: TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.
CRITERIA: 1. SEEDING: SEED MIXTURE (FROM FIGURE B.3), FERTILIZER RATE, LIME RATE...
2. SOIL PREPARATION: TOPSOILING AND SOIL AMENDMENTS...
3. TOPSOILING: TOPOSSIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION...
4. MULCHING: MULCH MATERIALS (IN ORDER OF PREFERENCE) ARE STRAW, COMPOST, etc.

R-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS

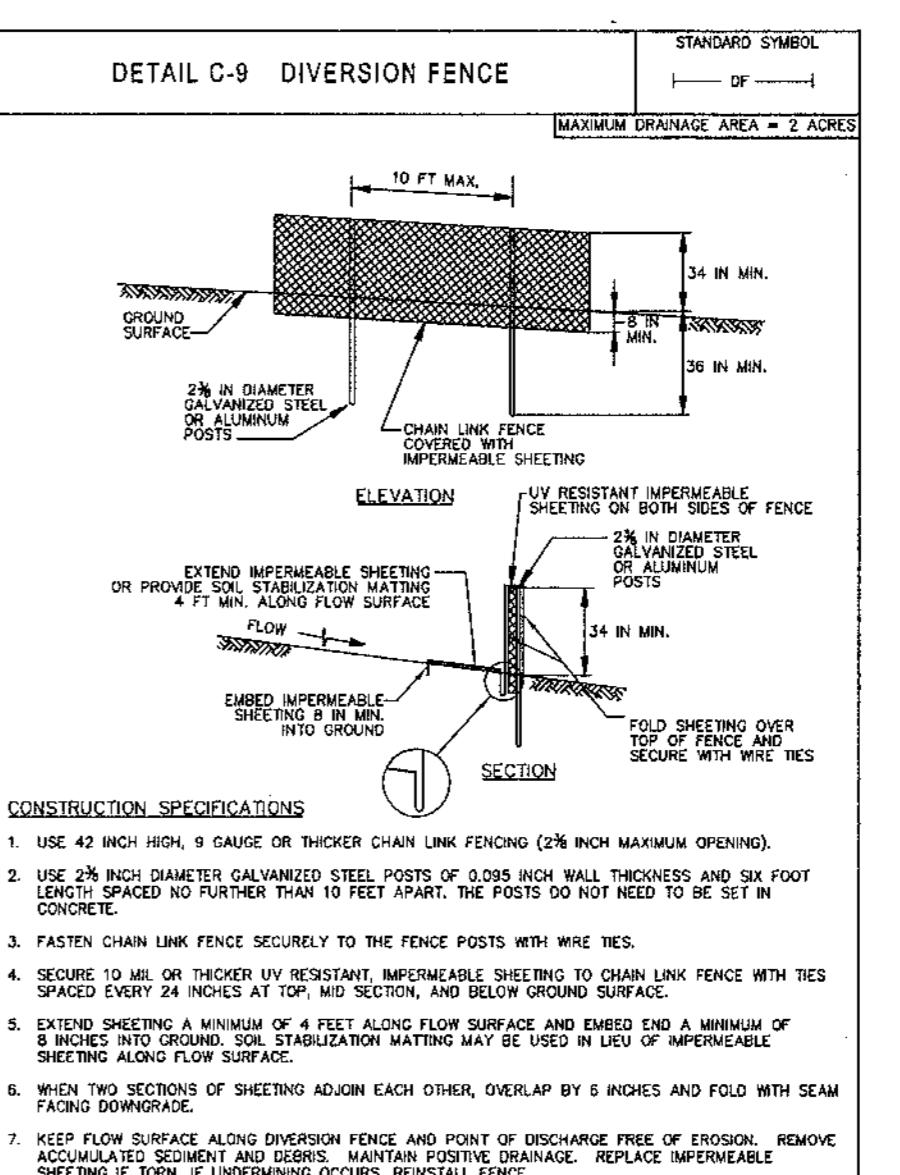
DEFINITION: THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.
PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
CRITERIA: 1. TEMPORARY STABILIZATION: SEEDING PREPARATION CONSISTS OF TOPSOILING SOIL TO A DEPTH OF 1 TO 5 INCHES...
2. PERMANENT STABILIZATION: A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE...
3. TOPSOILING: TOPOSSIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION...
4. MULCHING: MULCH MATERIALS (IN ORDER OF PREFERENCE) ARE STRAW, COMPOST, etc.

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

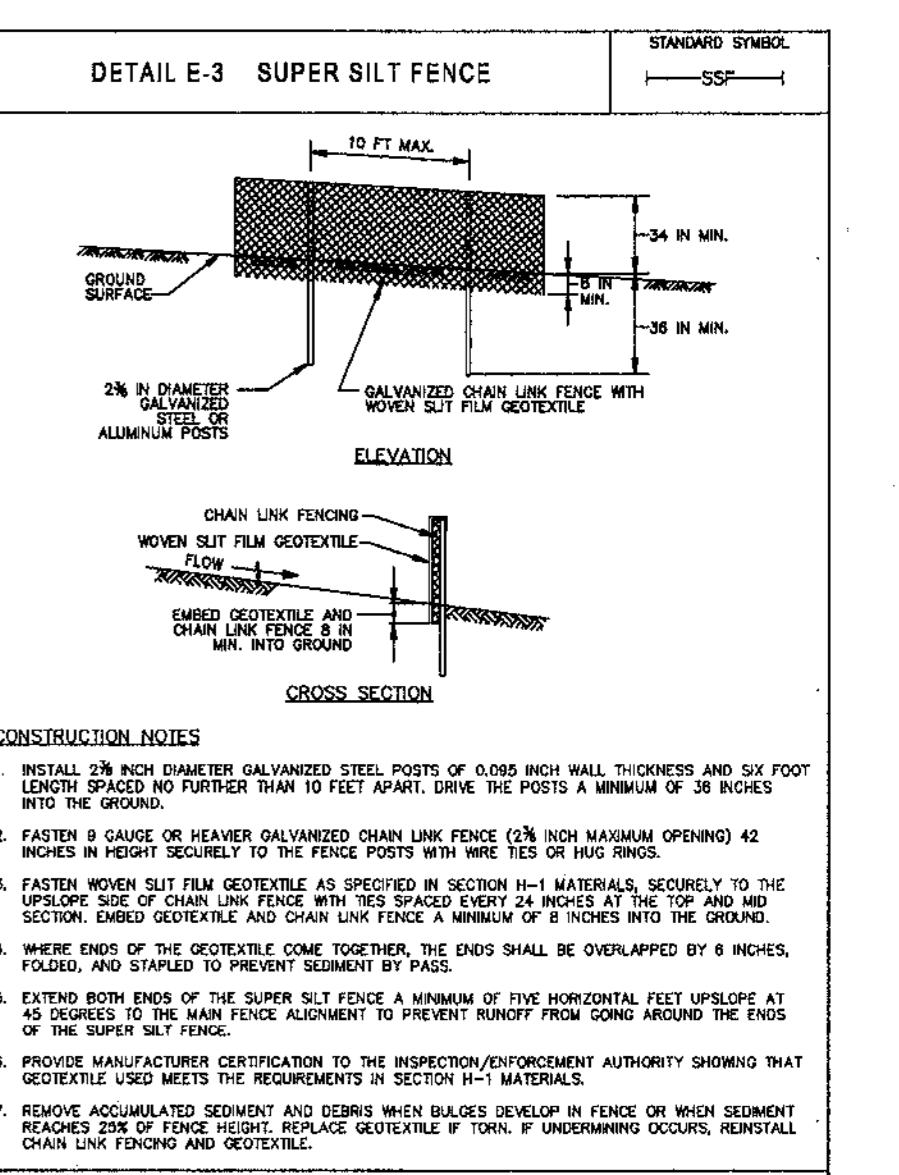
DEFINITION: THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.
PURPOSE: TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.
CRITERIA: 1. SEEDING: ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW...
2. MULCHING: MULCH MATERIALS (IN ORDER OF PREFERENCE) ARE STRAW, COMPOST, etc.



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. U.S. DEPARTMENT OF AGRICULTURE NATIONAL RESOURCES CONSERVATION SERVICE 2011



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. U.S. DEPARTMENT OF AGRICULTURE NATIONAL RESOURCES CONSERVATION SERVICE 2011



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. U.S. DEPARTMENT OF AGRICULTURE NATIONAL RESOURCES CONSERVATION SERVICE 2011

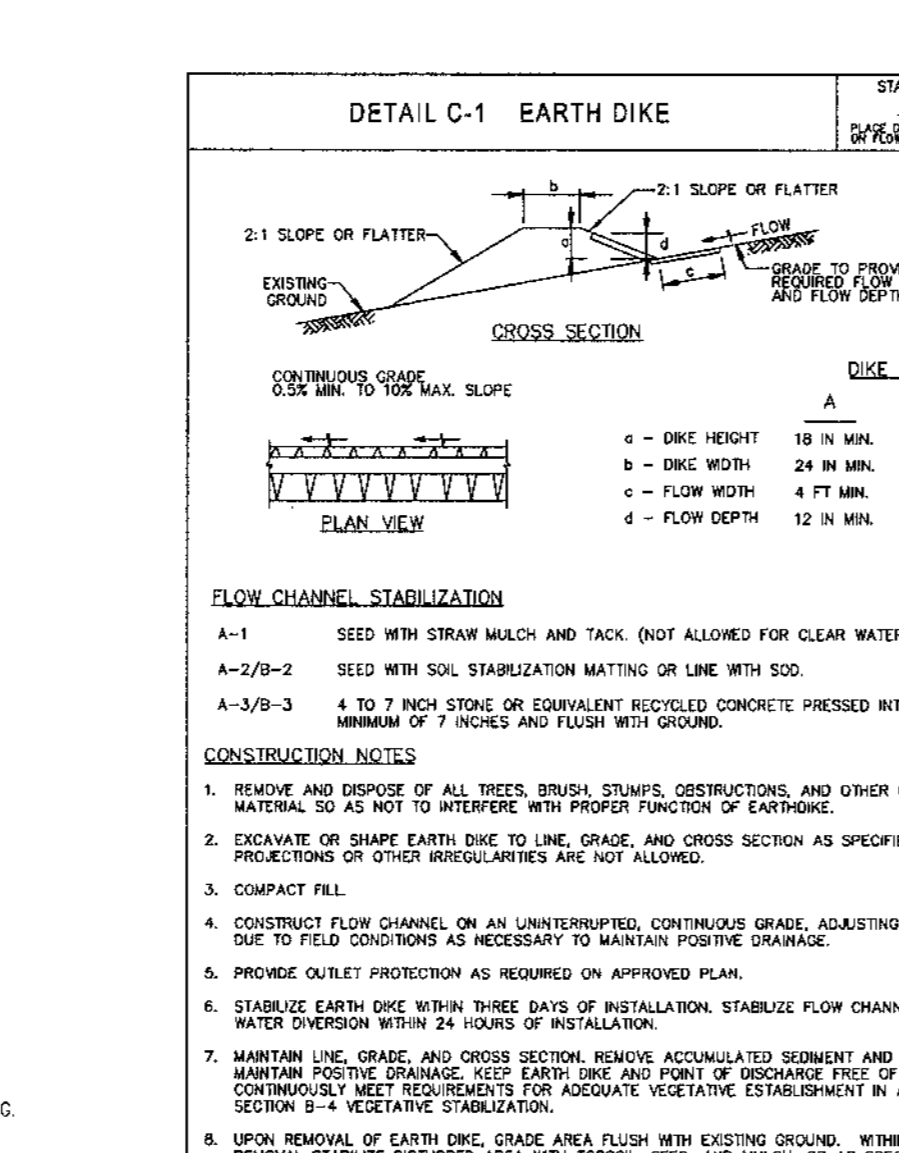
B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION: TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.
PURPOSE: TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.
CRITERIA: 1. SEED MIXTURE (FROM FIGURE B.3), FERTILIZER RATE, LIME RATE...
2. SOIL PREPARATION: TOPSOILING AND SOIL AMENDMENTS...
3. TOPSOILING: TOPOSSIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION...
4. MULCHING: MULCH MATERIALS (IN ORDER OF PREFERENCE) ARE STRAW, COMPOST, etc.

B-4-5 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

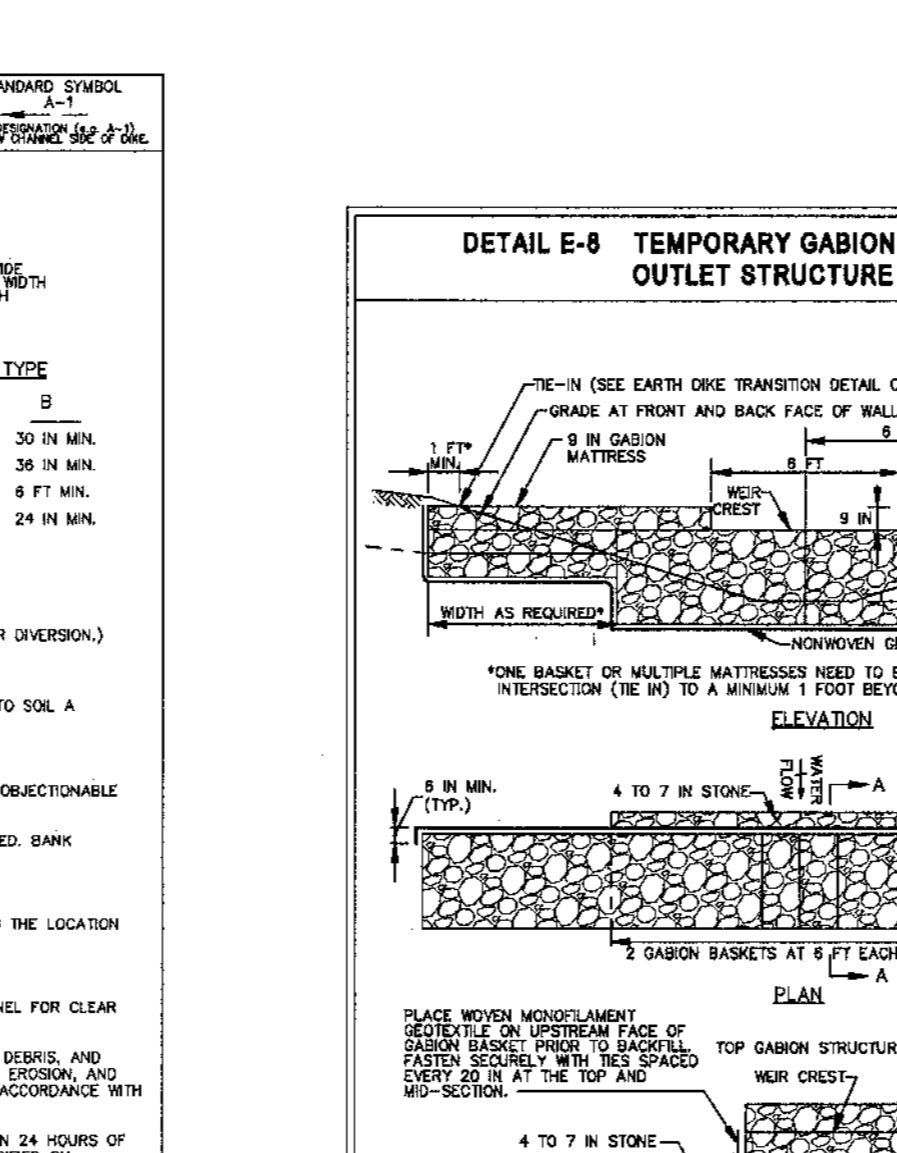
DEFINITION: A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.
PURPOSE: TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTAINS THE SOIL'S ORIGINAL VEGETATION AND/OR NUTRIENT CONTENT.
CRITERIA: 1. STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY IDENTIFIED ON THE EROSION AND SEDIMENT CONTROL PLAN...
2. FLOW CHANNEL STABILIZATION: SEED WITH STRAW MULCH AND TACK (NOT ALLOWED FOR CLEAR WATER DIVERSION)...
3. CONSTRUCTION NOTES: REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBSTRUCTIONAL MATERIAL...

DETAIL C-1 EARTH DIKE

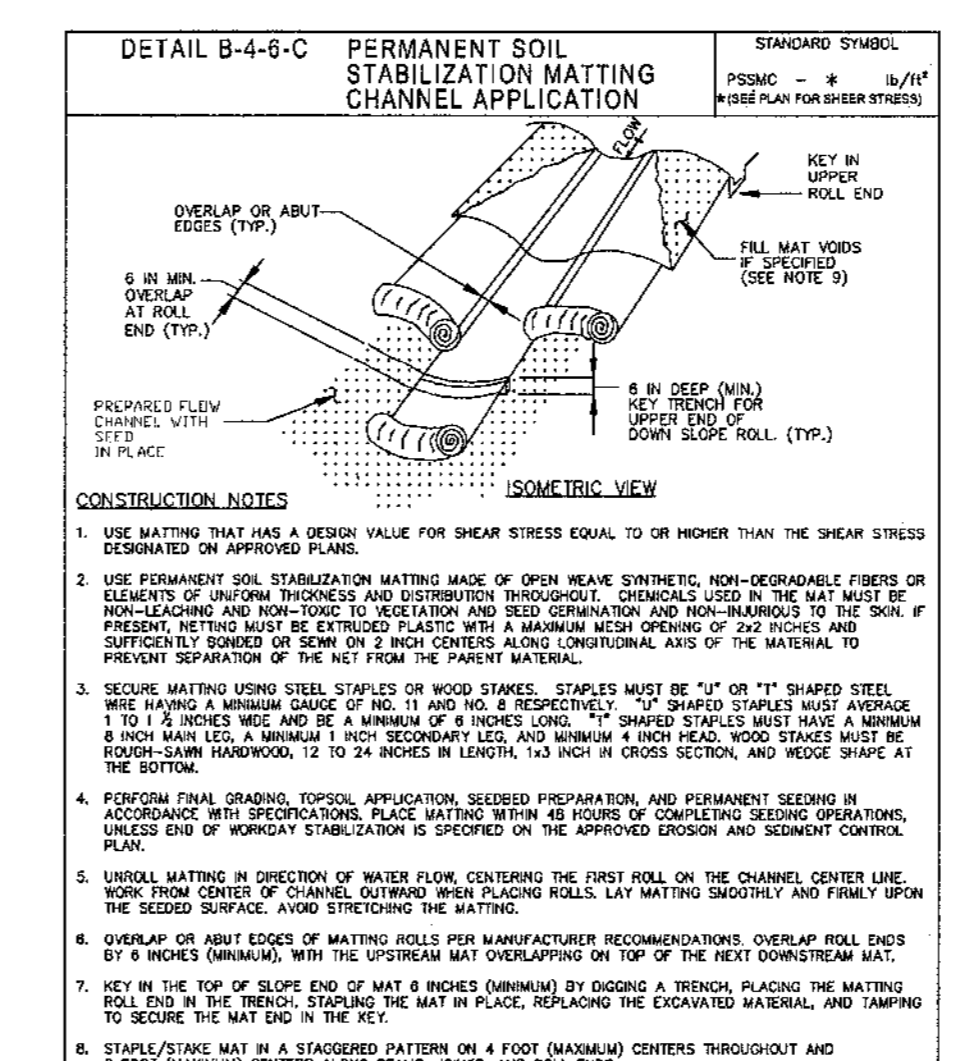


MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. U.S. DEPARTMENT OF AGRICULTURE NATIONAL RESOURCES CONSERVATION SERVICE 2011

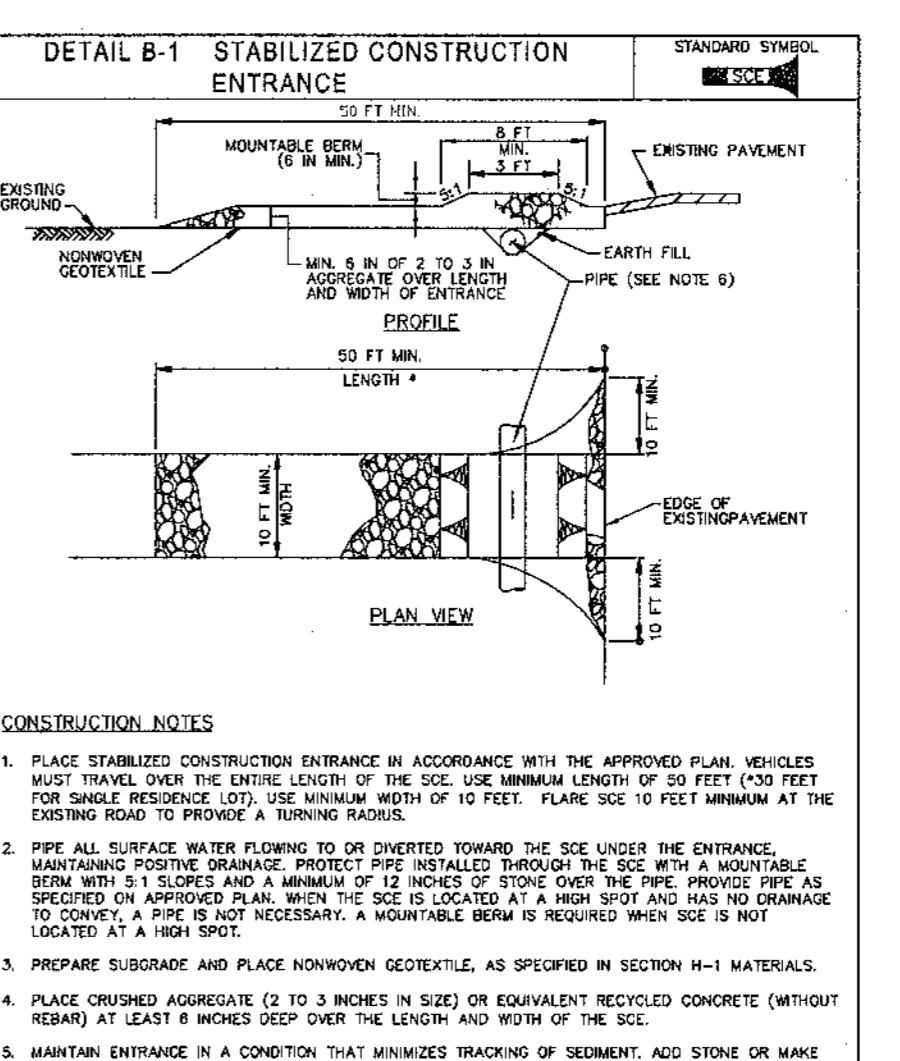
DETAIL E-8 TEMPORARY GABION OUTLET STRUCTURE



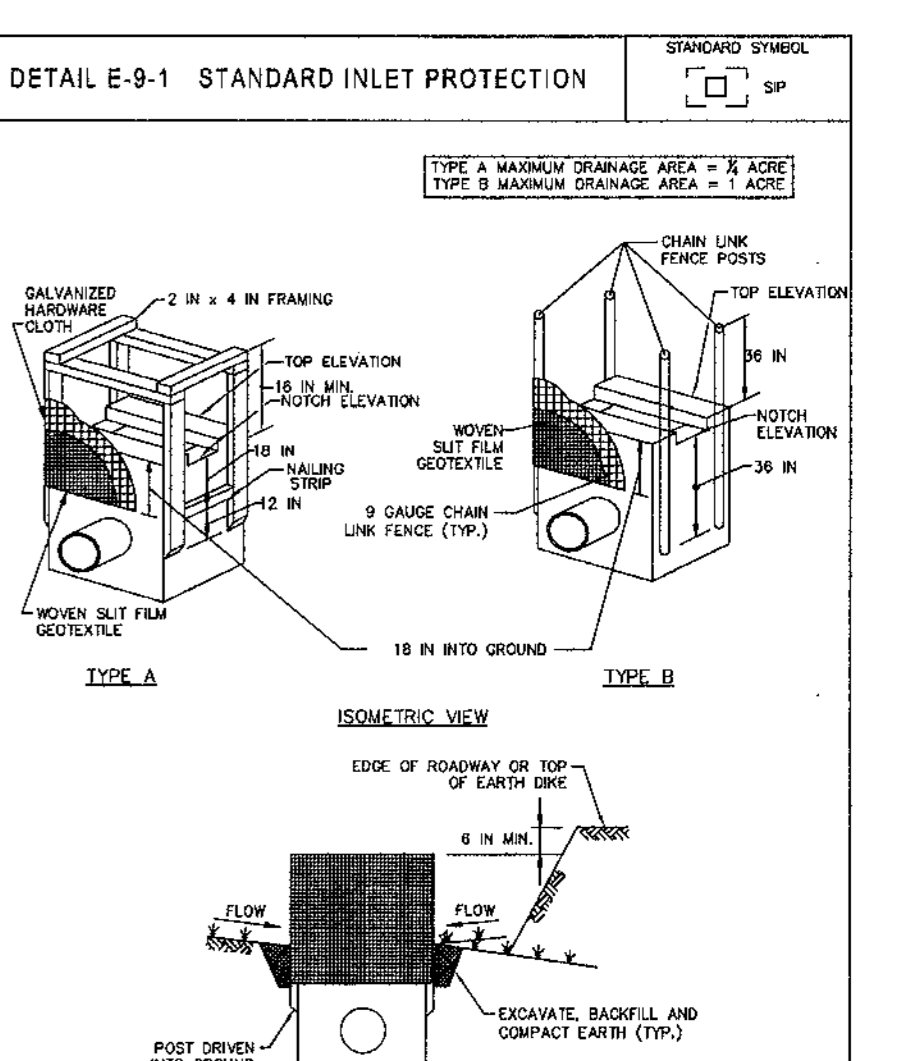
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. U.S. DEPARTMENT OF AGRICULTURE NATIONAL RESOURCES CONSERVATION SERVICE 2011



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. U.S. DEPARTMENT OF AGRICULTURE NATIONAL RESOURCES CONSERVATION SERVICE 2011



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. U.S. DEPARTMENT OF AGRICULTURE NATIONAL RESOURCES CONSERVATION SERVICE 2011



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. U.S. DEPARTMENT OF AGRICULTURE NATIONAL RESOURCES CONSERVATION SERVICE 2011

SEQUENCE OF CONSTRUCTION

- INITIAL STAGE: 1. OBTAIN GRADING PERMIT, (1 DAY) 2. DEVELOPER / CONTRACTOR SHALL REQUEST A PRE-CONSTRUCTION MEETING...
INTERMEDIATE STAGE: 10. WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, BRUSH GRADE SITE, BRING BUILDING PADS AND DRIVEWAYS TO SUBGRADE AND GRADE STABLES...
FINAL STAGE: 16. AS BUILDING COMPLETION, INSTALL STORMWATER MANAGEMENT FACILITIES, INCLUDING PAIN GRASSES, GRAVEL TREATMENT BARRELS, TRAP AND ASSOCIATED TRAPS AND UNDERDRAINS...

OWNER/DEVELOPER

MAIN STREET BUILDERS
C/O JOSEPH SNOGRASS
5705 LANDING ROAD
ELKRDGE, MARYLAND 21075
(410) 796-2003
NO. REVISION DATE
NO. REVISION DATE

SITE DEVELOPMENT PLAN

GRADING, EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
ANDERSON VILLAGE LOTS 13-15
LIBER 19678 / FOLIO 159
TAX MAP 38 BLOCK 14 1ST ELECTION DISTRICT
ZONED: R-12
PARCELS: 13-15
HOWARD COUNTY, MARYLAND
VOGEL ENGINEERING
TIMMONS GROUP
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

APPROVED BY PLANNING BOARD OF HOWARD COUNTY
DATE: 4/20/2022
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Date: 4/22/2022

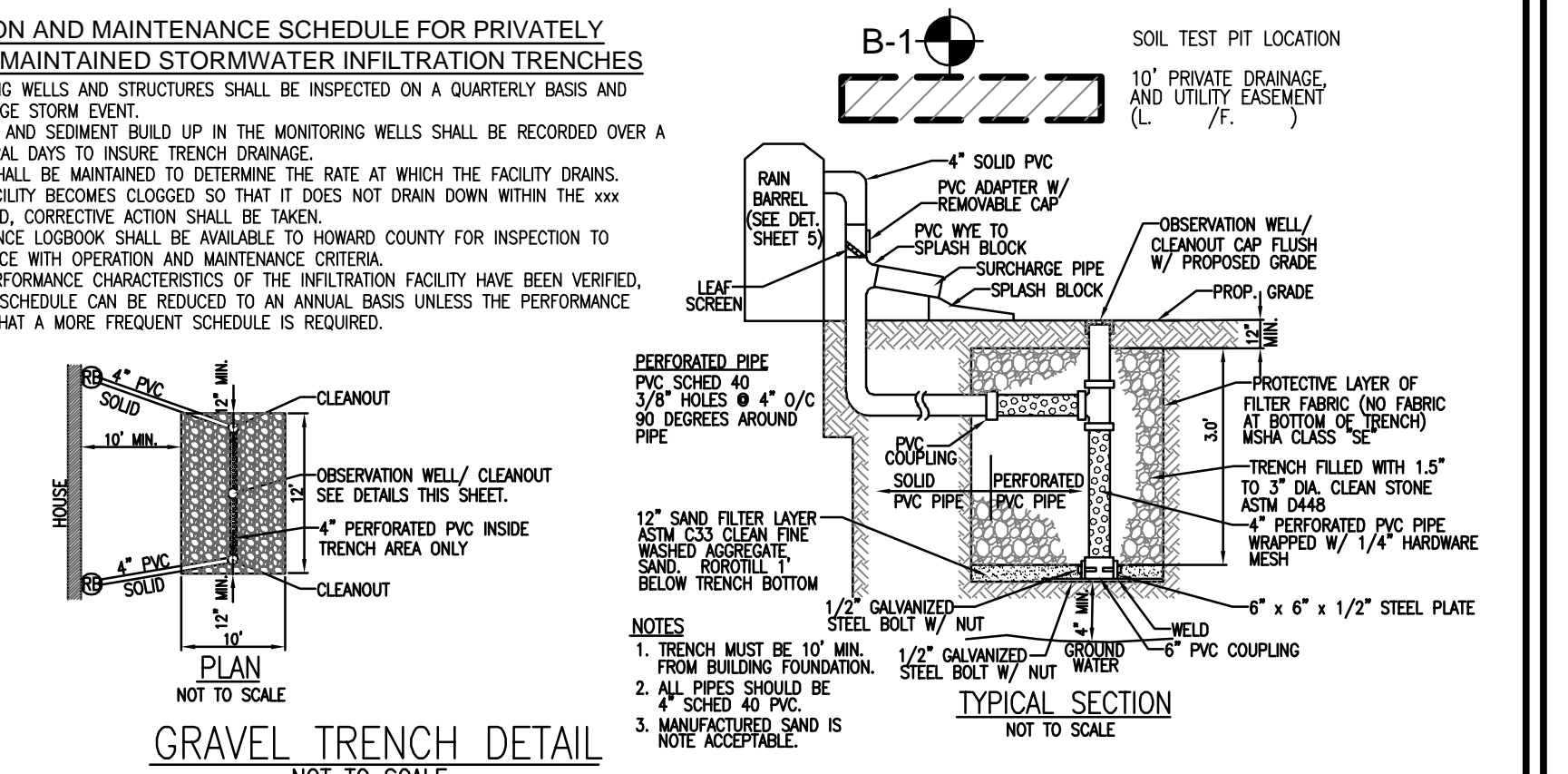
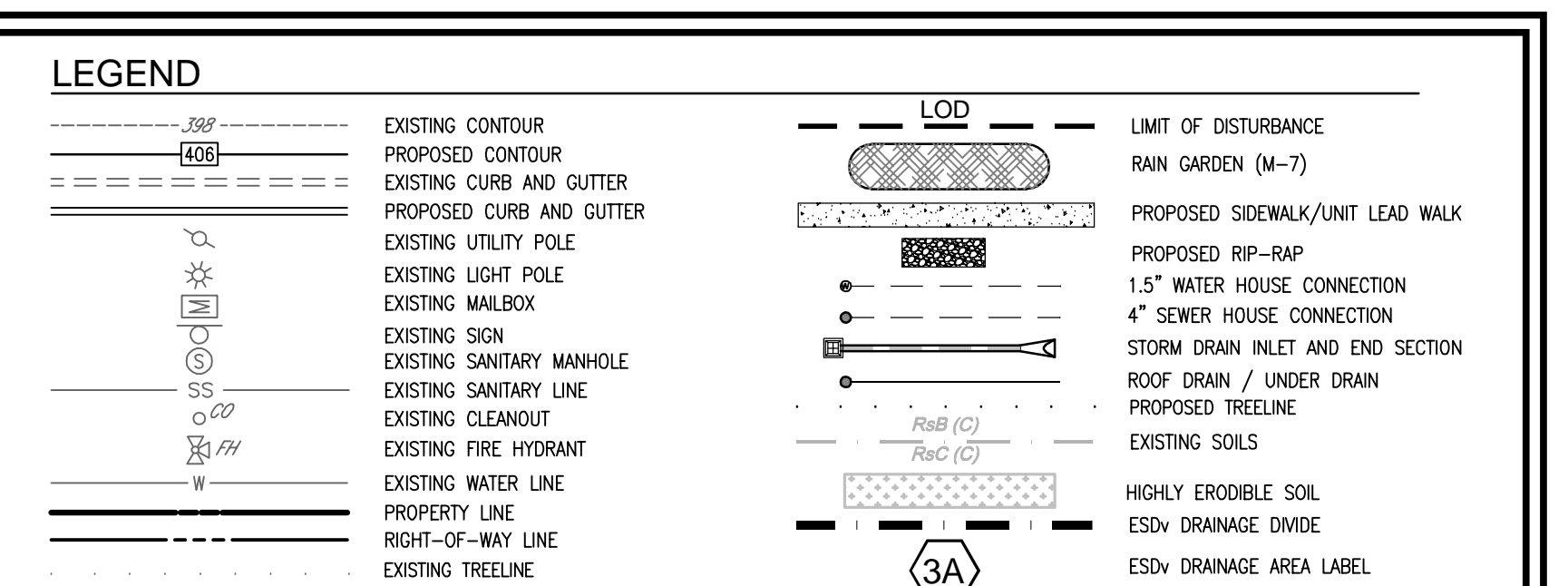
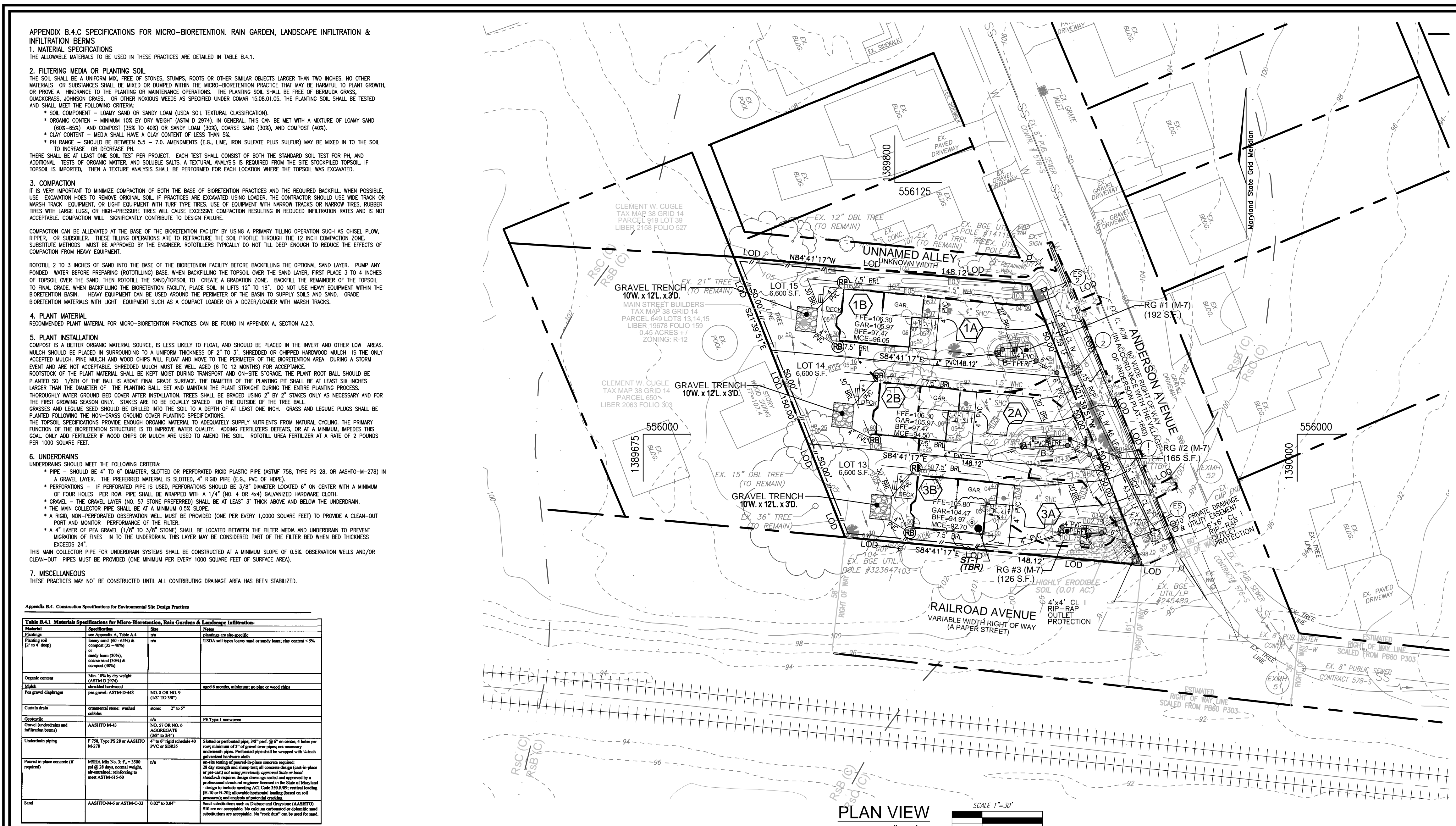
OWNER/DEVELOPER CERTIFICATION: I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN...
DATE: 3/7/2022
Joseph E. Snodgrass, President

DESIGN CERTIFICATION: I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS...
DATE: 4/22/2022
Robert H. Vogel, P.E.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DATE: 4/22/2022
Alexander Bratovic

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER OF THE STATE OF MARYLAND, LICENSE NO. 16193
DATE: 04-30-2022

DESIGN BY: GAH
DRAWN BY: GAH
CHECKED BY: RHY
DATE: OCTOBER 2021
SCALE: AS SHOWN
W.O. NO.: 04-33
4 SHEET OF 7



DA	% IMPERV	Rv	DA	ESDv REQ.	MINIMUM VOLUME	MAXIMUM VOLUME	VOLUME PROVIDED	AREA SF	PERV AREA	IMP AREA	RECHARGE VOL. REQ.	RECHARGE VOL. PROV.	100 YEAR VOL. REQ.	100 YEAR VOL. PROV.	
1A	38.32	0.3949	0.09	197	123	319	294	3734	2303	1431	64	64	0	115	
1B	100.00	0.9500	0.01	68	42	110	54	533	0	533	0	0	0	144	
2A	37.01	0.3831	0.07	162	101	263	240	3167	1995	1172	55	52	0	94	
2B	100.00	0.9500	0.01	68	42	110	54	533	0	533	0	0	0	144	
3A	54.81	0.5433	0.05	150	94	243	193	2067	934	1133	42	42	0	76	
3B	100.00	0.9500	0.01	68	42	110	54	533	0	533	0	0	0	144	
TOTAL ESDv BY SUBAREA												711	889	667	717
TOTAL ESDv REQUIRED FOR SITE												867	CF	69	
TOTAL REV. REQUIRED FOR SITE												69			
TOTAL REV. REQUIRED FOR SITE = 1500 CF - ESDv PROVIDED															

DRAINAGE AREA #	TREATED AREA	FACILITY NUMBER	PERMEABLE PAVT.	IMP. PAVT.	DISCONNECT	ROOFTOP	RANI	BIO	DRY	GREEN	MISKROBIO	ADD UNDER	RAIN GARDEN	RECHARGE VOLUME (REV)	ESDv VOLUME (REV)	GRAVEL TRENCH	ADDITIONAL STONE	100 YEAR VOL.					
1 (A&B)	4267	RG #1	0	0	0	8	54	0	0	0	255	0	357	144	115	259							
2 (A&B)	3700	RG #2	0	0	0	16	54	0	0	0	274	0	55	294	144	94	238						
3 (A&B)	2600	RG #3	0	0	0	24	54	0	0	0	328	0	42	246	144	76	220						
TOTALS															0	0	447	0	161	857	432	285	717

SYMBOL NAME / DESCRIPTION	GROUP	K-FACTOR	HYDRIC	HYDRIC INCLUSIONS	PRIME FARMLAND	<15% SLOPE W/ EROSION POTENTIAL
Rsb	RUSSETT FINE SANDY LOAM, 2 TO 5 PERCENT SLOPES	C	.43	NO	NO	YES
Rsc	RUSSETT FINE SANDY LOAM, 5 TO 10 PERCENT SLOPES	C	.43	NO	NO	YES

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

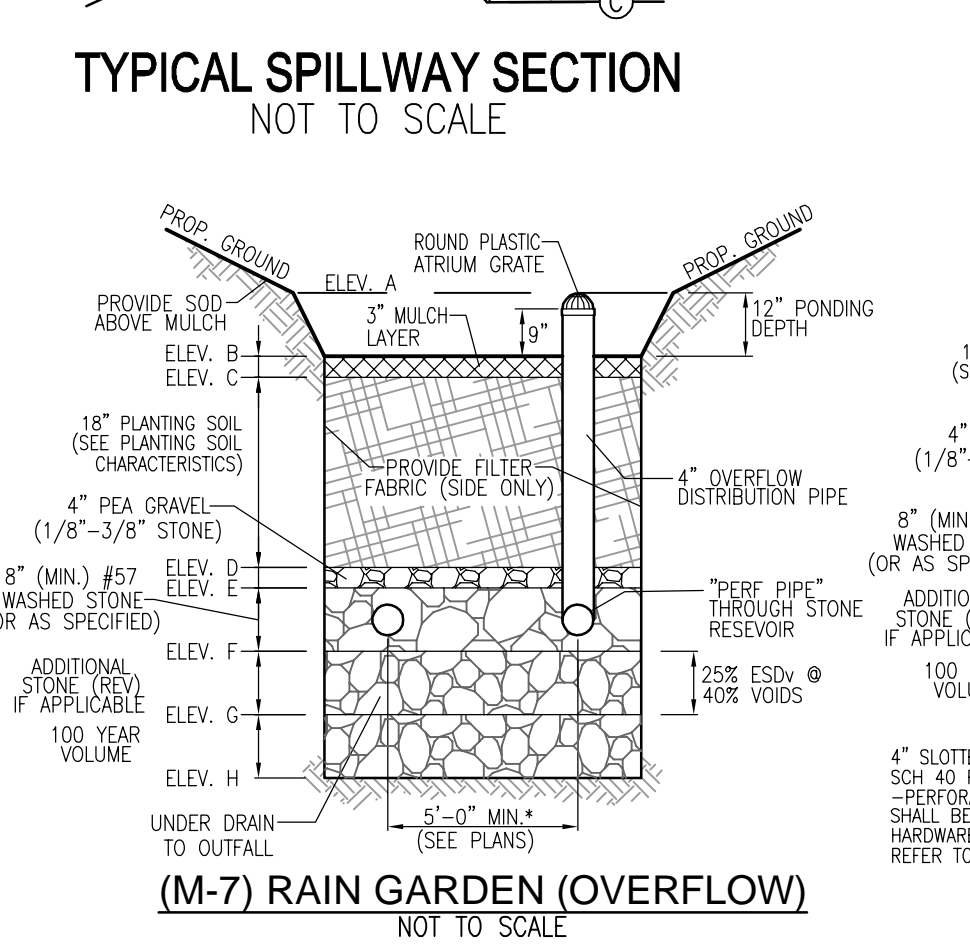
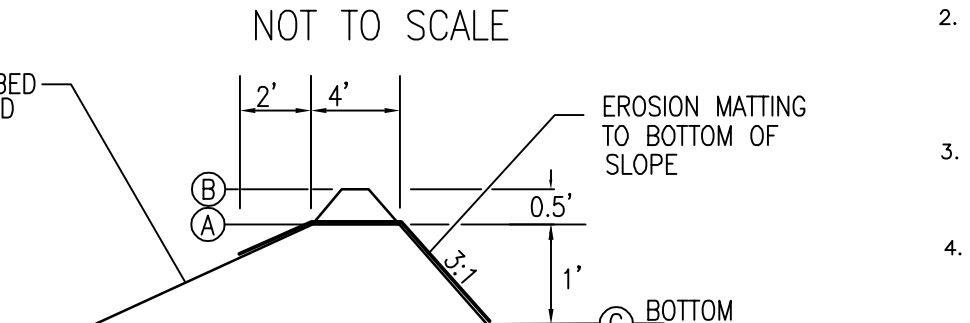
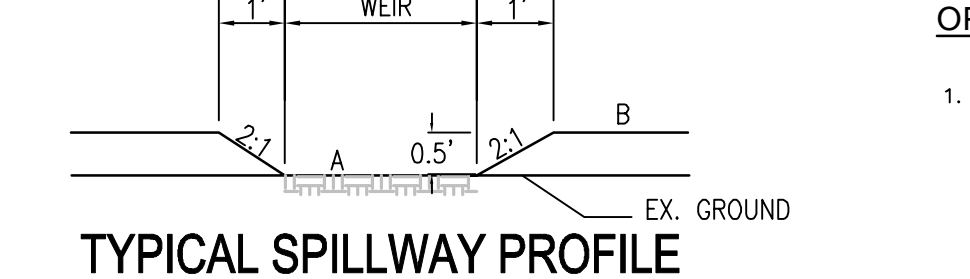
- 1. MATERIAL SPECIFICATIONS**
THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.
- 2. FILTERING MEDIA OR PLANTING SOIL**
THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH OR PROVIDE A HURDLE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERBERIS GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05. THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:
* SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)
* ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (06E-05S) AND COMPOST (35E TO 40E) OR SANDY LOAM (S05L), COARSE SAND (30S), AND COMPOST (40C).
* CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.
* PH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, NON SULFATE PLUS SULFUR) MAY BE MIXED IN TO THE SOIL TO INCREASE OR DECREASE PH.
THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.
- 3. COMPACTION**
IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE OVERLAYING EXISTING ROADWAYS, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARCH TRACK EQUIPMENT OR LIGHT EQUIPMENT WITH TURF TYRE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.
COMPACTION CAN BE AVOIDED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL PLOW, ROPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO RESTRICTURE THE SOIL PROFILE THROUGH THE 12" MIN COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.
- 4. PLANT MATERIAL**
RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.
- 5. PLANT INSTALLATION**
COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHROUDED OR COVERED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHROUDED MULCH MUST BE WELL ACED (8 TO 12 MONTHS) FOR ACCEPTANCE.
ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED 50 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST 5% LARGER THAN THE DIAMETER OF THE PLANT BALL. SET AND MAINTAIN THE PLANTING POSITION DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION. TREES SHALL BE BRANDED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL.
GRASSES AND LEGUME SEED SHOULD BE ORLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLANTS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.
- 6. UNDERDRAINS**
UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:
* PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM 758, TYPE PS 28, OR ASHOTO-M-278) IN A GRAVEL LAYER. THE PERFORATED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OF HDPE).
* PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 1/4" DIA. LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4 OR 4A) GALVANIZED HARDWARE CLOTH.
* GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.
* THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE TO PROVIDE A CLEAN-OUT POINT AND MONITOR PERFORMANCE OF THE FILTER.
* A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT POINT AND MONITOR PERFORMANCE OF THE FILTER.
* A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".
THIS MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5% OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).
- 7. MISCELLANEOUS**
THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

Table B.4.1 Material Specifications for Micro-Bioretention, Rain Gardens & Landscape Infiltration

Material	Specification	Test Method
Planting Soil	USDA Soil Type: Loamy Sand or Sandy Loam, Clay Content < 5% (per 4.1.c)	USDA Soil type based on a soil analysis, city contract - 1%
Planting Soil	Organic Content: Minimum 10% by dry weight (ASTM D 2974)	ASTM D 2974
Planting Soil	Clay Content: Media shall have a clay content of less than 5% (per 4.1.c)	ASTM D 2974
Planting Soil	pH Range: Should be between 5.5 - 7.0	ASTM D 2974
Planting Soil	Filter Fabric: 1/4" (No. 4 or 4A) Galvanized Hardware Cloth	ASTM A 975
Planting Soil	Gravel: No. 57 Stone (Preferred) or No. 89 Stone	ASTM D 447
Planting Soil	Pea Gravel: 1/8" to 3/8" Stone	ASTM D 447
Planting Soil	Mulch: Shrouded or Covered Hardwood	ASTM D 447
Planting Soil	Mulch: Pine Mulch and Wood Chips are not acceptable	ASTM D 447

ENVIRONMENTAL SITE DESIGN NARRATIVE

- IN ACCORDANCE WITH CHECKLIST ITEM III.K.
- THE PROJECT SITE IS LOCATED IN HANOVER, MARYLAND AT THE NW CORNER OF THE INTERSECTION OF ANDERSON AVENUE AND RAILROAD AVENUE (A PAPER STREET). THE CONTIGUOUS PARCEL AREA IS 0.50 AC. AND THE ACCESS TO THESE LOTS WILL BE PROVIDED BY INDIVIDUAL PRIVATE DRIVEWAYS TO ANDERSON AVENUE. THE TOTAL DEVELOPMENT AREA FOR THE PROJECT IS 0.52 AC. THE PROJECT SITE WAS EVALUATED FOR THE PRESENCE OF ENVIRONMENTAL FEATURES AND A LETTER HAS BEEN PREPARED BY GEO-SCIENCE PROFESSIONALS, INC. C/O MR. JOHN CANOLES, DATED JULY 31, 2019. MR. CANOLES NOTED THAT THE PROPERTY IS CURRENTLY DOMINATED BY OVERGROWN LAWN, SCATTERED LANDSCAPING AND ORNAMENTALS, AND A SINGLE SPECIEMEN SIZED TREE. BUT NO FOREST OR ANY OTHER REGULATED ENVIRONMENTAL FEATURES WERE FOUND WITHIN THE LIMITS OF THE DEVELOPMENT AREA FOR THIS PROJECT. THE TOPOGRAPHY DOES NOT RESULT IN ANY MDE STEEP SLOPES OVER 20% WITHIN THIS DEVELOPMENT AREA. ACCORDING TO CURRENT DIRM APPROVED BY FEMA AND HOWARD COUNTY, THERE IS NO 100YR FLOODPLAIN LOCATED WITHIN THE PROPERTY BOUNDARY. THE NATURAL RESOURCES WILL REMAIN UNDISTURBED, PROTECTED AND ENHANCED TO THE MAXIMUM EXTENT PRACTICABLE. THE SITE'S TOPOGRAPHY NATURALLY SLOPES FROM THE NORTHWEST TO THE SOUTHEAST, AND THEN ALONG ANDERSON AVENUE TO THE DEEP RUN BRANCH OF THE PATAPSCO RIVER. THE SITE HAS BEEN DESIGNED TO MAINTAIN THESE NATURAL FLOW PATTERNS.
 - MICRO-SCALE PRACTICES, TO INCLUDE THREE (3) RAINGARDENS (M-7) FACILITY AND SIX (6) RAIN BARRELS (M-1) ARE MOST APPROPRIATE FOR THE SITE. CREDITS FOR ROOFTOP DISCONNECT WILL ALSO BE UTILIZED. THE OVERFLOW FOR THE PROPOSED MICRO-BIORETENTION (M-7) WILL DISCHARGE BY DOMED RISER AND OUTFALL PIPE ALONG ANDERSON AVENUE TO THE DEEP RUN BRANCH OF THE PATAPSCO RIVER. THE SITE HAS BEEN DESIGNED TO MAINTAIN THESE NATURAL FLOW PATTERNS. THE SITE HAS BEEN GRADED SO THAT UNDISTURBED UPLAND AREAS ARE DIVERTED BY SMALL AROUND NEW IMPERVIOUS AREAS WHEREVER POSSIBLE.
 - SEDIMENT CONTROL FOR THIS SPECIFIC SITE PLAN WILL BE PROVIDED THROUGH THE USE OF PERMETER CONTROLS (PRIMARYLY SILT FENCE AND/OR SUPER SILT FENCE AND CLEAR WATER DIVERSION FENCE, EARTH DIKE AND TEMPORARY GABION OUTLET STRUCTURE). SEDIMENT CONTROL SHALL BE IN ACCORDANCE WITH THE CURRENT REQUIREMENTS AND SHALL BE APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
 - AS STATED IN #2 ABOVE, STORMWATER MANAGEMENT FOR THE PROJECT SHALL BE MET THROUGH THE USE OF THREE (3) RAINGARDENS (M-7) FACILITY AND SIX (6) RAIN BARRELS (M-1). CREDITS FOR ROOFTOP DISCONNECT WILL ALSO BE UTILIZED. THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED.
THE RESULTS OF THE ENVIRONMENTAL SITE DESIGN FOR THIS PROJECT WILL REFLECT "WOODS IN GOOD CONDITION".
TARGET PE = 1.60" PROVIDED PE = 1.60"
TARGET ESDv = 867 CUFT PROVIDED = 869 CUFT
 - NO DESIGN MANUAL WAIVERS ARE ANTICIPATED TO FULFILL THIS SWM CONCEPT.



OPERATION & MAINTENANCE SCHEDULE FOR RAIN GARDENS

- ANNUAL MAINTENANCE OF PLANT MATERIAL MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OF 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.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DECEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DEFICIENT STAKES AND WIRES.
- MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

ANDERSON VILLAGE LOTS 13-15 ESDv COMPUTATIONS

DA	% IMPERV	Rv	DA	ESDv REQ.	MINIMUM VOLUME	MAXIMUM VOLUME	VOLUME PROVIDED	AREA SF	PERV AREA	IMP AREA	RECHARGE VOL. REQ.	RECHARGE VOL. PROV.	100 YEAR VOL. REQ.	100 YEAR VOL. PROV.
1A	38.32	0.3949	0.09	197	123	319	294	3734	2303	1431	64	64	0	115
1B	100.00	0.9500	0.01	68	42	110	54	533	0	533	0	0	0	144
2A	37.01	0.3831	0.07	162	101	263	240	3167	1995	1172	55	52	0	94
2B	100.00	0.9500	0.01	68	42	110	54	533	0	533	0	0	0	144
3A	54.81	0.5433	0.05	150	94	243	193	2067	934	1133	42	42	0	76
3B	100.00	0.9500	0.01	68	42	110	54	533	0	533	0	0	0	144
TOTALS												867	CF	69

M/R Facility	Ponding Depth (ft.)	Ponding Grate Elevation (ELEV. A)	Top of Mulch Elevation (ELEV. B)	Bottom of Mulch Elevation (ELEV. C)	Bottom of Plant Mix Elevation (ELEV. D)	Bottom of Pea Gravel Elevation (ELEV. E)	Depth of Stone (ESDv) (ft.)	Bottom of Stone (ESDv) ELEV. F	Invert of 4" Underdrain	Depth of Stone (Rev) (100 Year) ELEV. G	Bottom of Stone (Rev) ELEV. G	Depth of Stone (100 Year) ELEV. H	Surface Area (S.F.)	Approx. Dimensions (at midpoint)
RG-#1	1.00	104.00	103.00	102.75	101.25	100.92	1.33	99.59	100.09	0.83	98.76	2.00	98.76	192 13' x 20'
RG-#2	1.00	103.00	102.00	101.75	100.25	99.92	1.33	98.59	99.09	0.83	97.76	2.00	97.76	156 7' x 25'
RG-#3	1.00	102.75	101.75	101.50	100.00	99.67	1.33	98.34	98.84	0.83	97.51	2.00	97.51	126 6' x 24'

NOTE: SEE SHEET 5 FOR RAIN BARREL DETAIL.

DESIGNED BY: gsh
DATE: 7/28/21
CHECKED BY: rlv
DATE:

OWNER/DEVELOPER
MAIN STREET BUILDERS
C/O JOSEPH SNOODGRASS
5705 LANDING ROAD
ELKRDGE, MARYLAND 21075
(410) 796-2003

**SITE DEVELOPMENT PLAN
ESDv STORMWATER MANAGEMENT PLAN,
DETAILS AND DRAINAGE AREA MAP**
ANDERSON VILLAGE LOTS 13-15
LIBER 19678 / FOLIO 159
ZONED: R-12
PARCEL 649
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

**TAX MAP 38 BLOCK 14
1ST ELECTION DISTRICT**

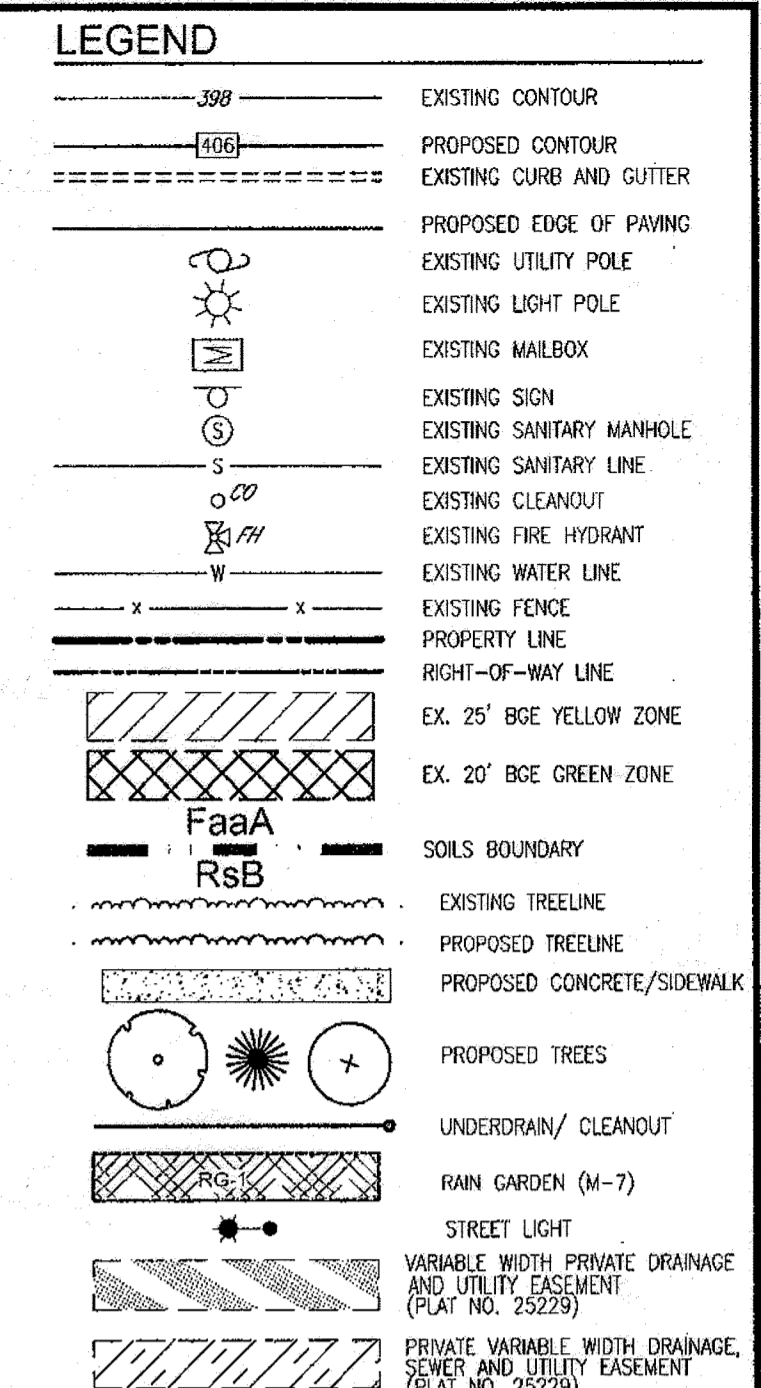
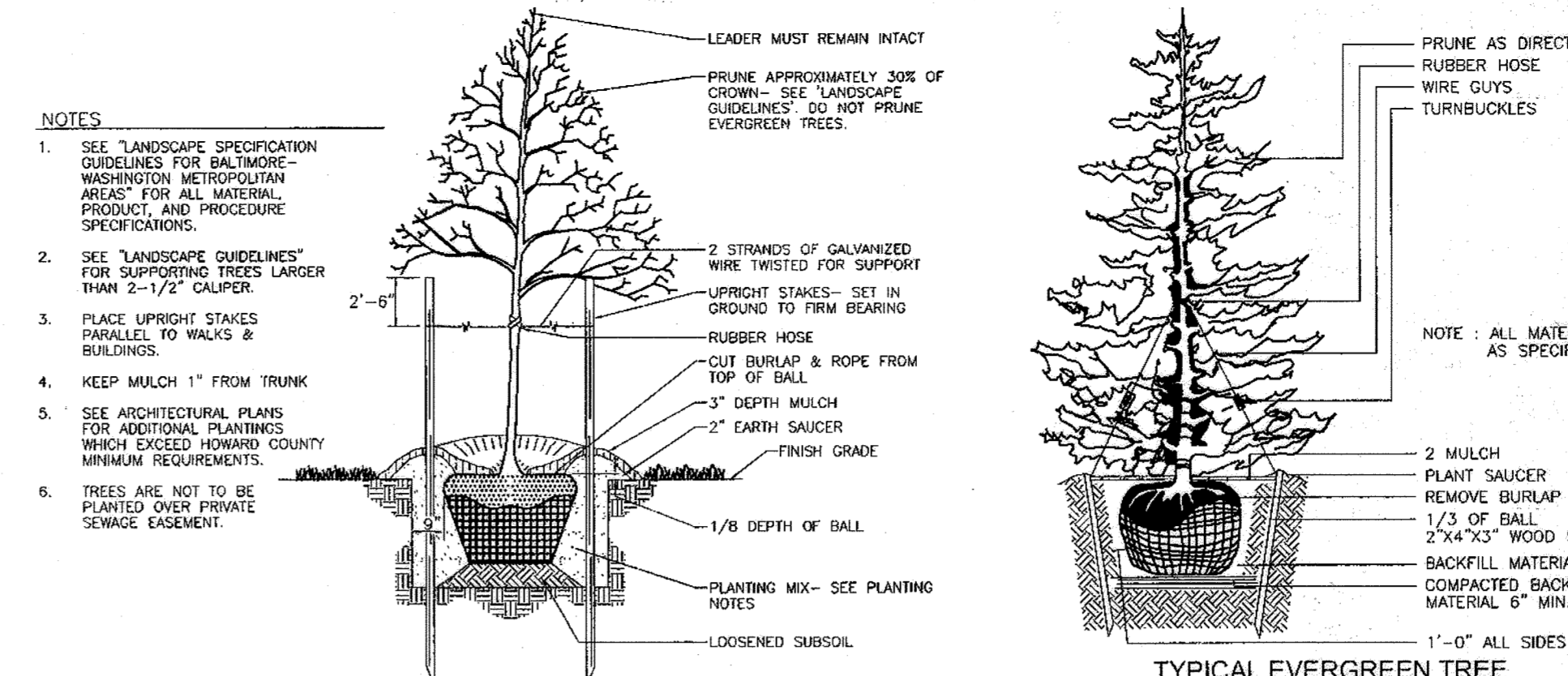
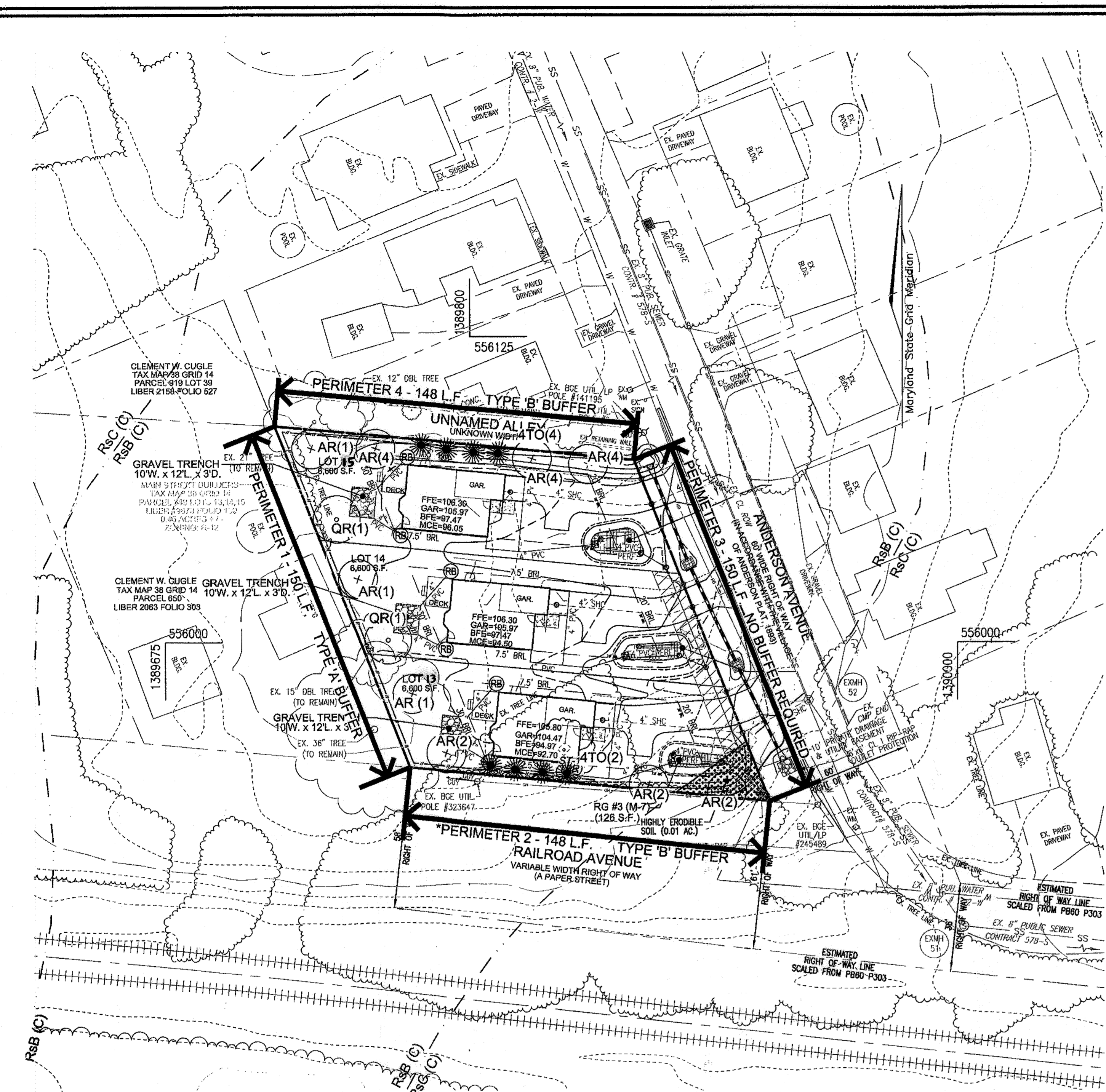
**VOGEL ENGINEERING
+
TIMMONS GROUP**
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

DESIGN BY: GAH
DRAWN BY: GAH
CHECKED BY: RHV
DATE: FEBRUARY 2022
SCALE: AS SHOWN
W.D. NO.: 04-33

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16183 EXPIRATION DATE: 09-27-2022.

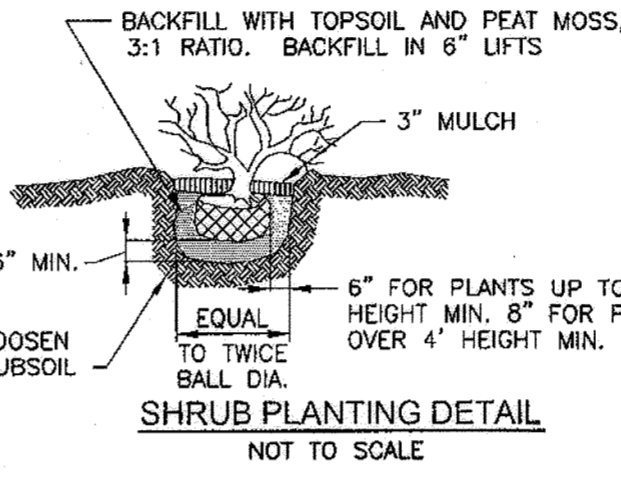
6 SHEET OF 7

SDP-21-008



TREE PLANTING AND STAKING
DECIDUOUS TREES UP TO 2-1/2" CALIPER NOT TO SCALE

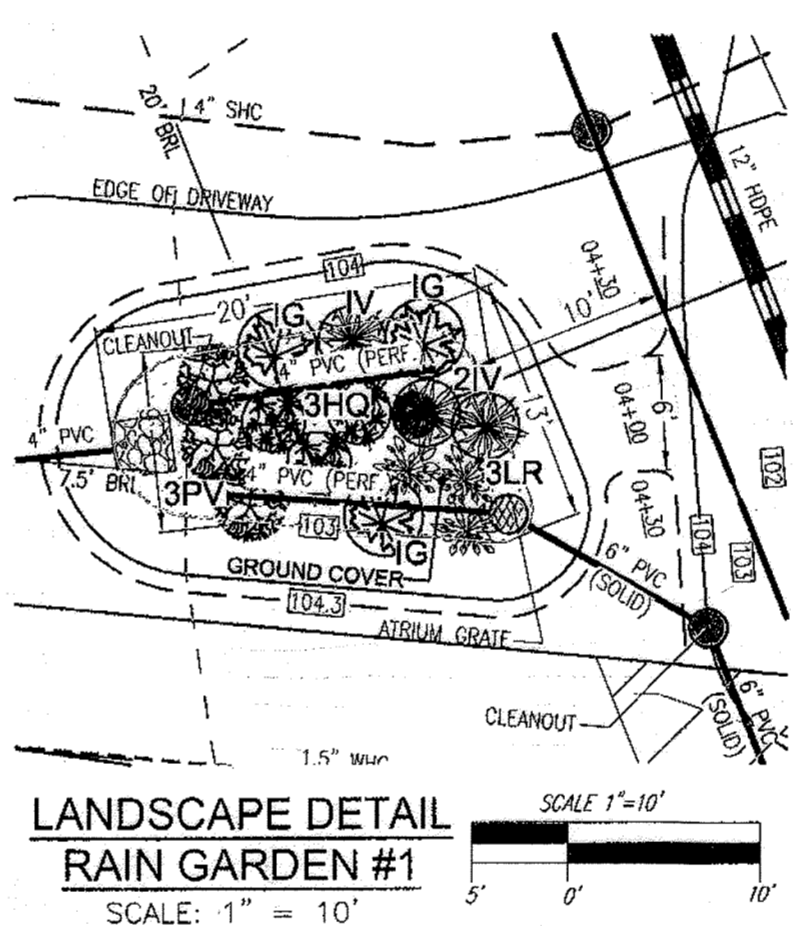
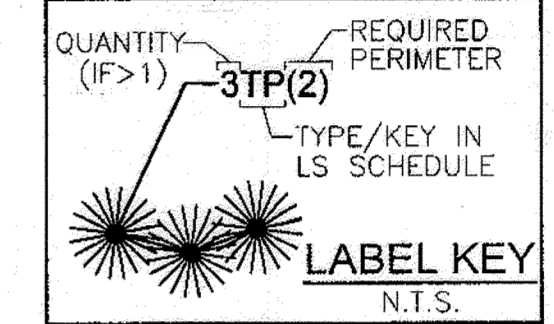
TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



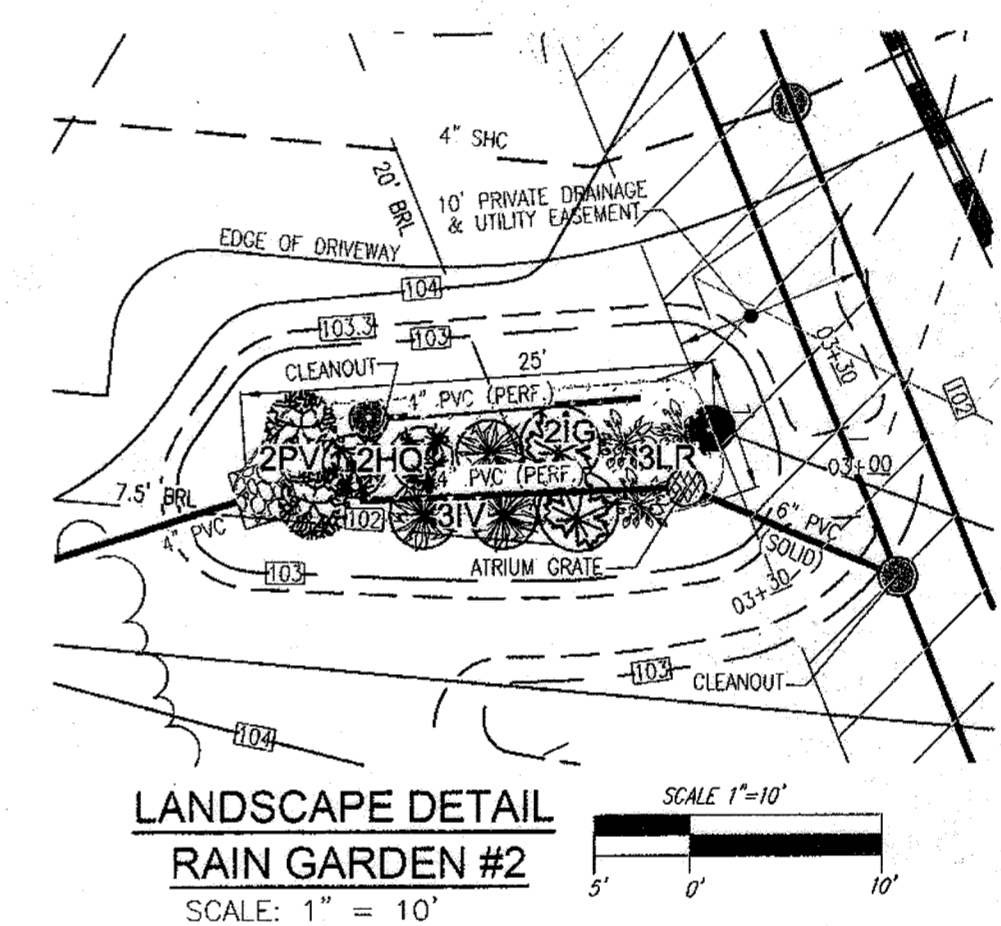
SHRUB PLANTING DETAIL
NOT TO SCALE

"RAIN GARDEN" PLANTING SCHEDULE NOTES:

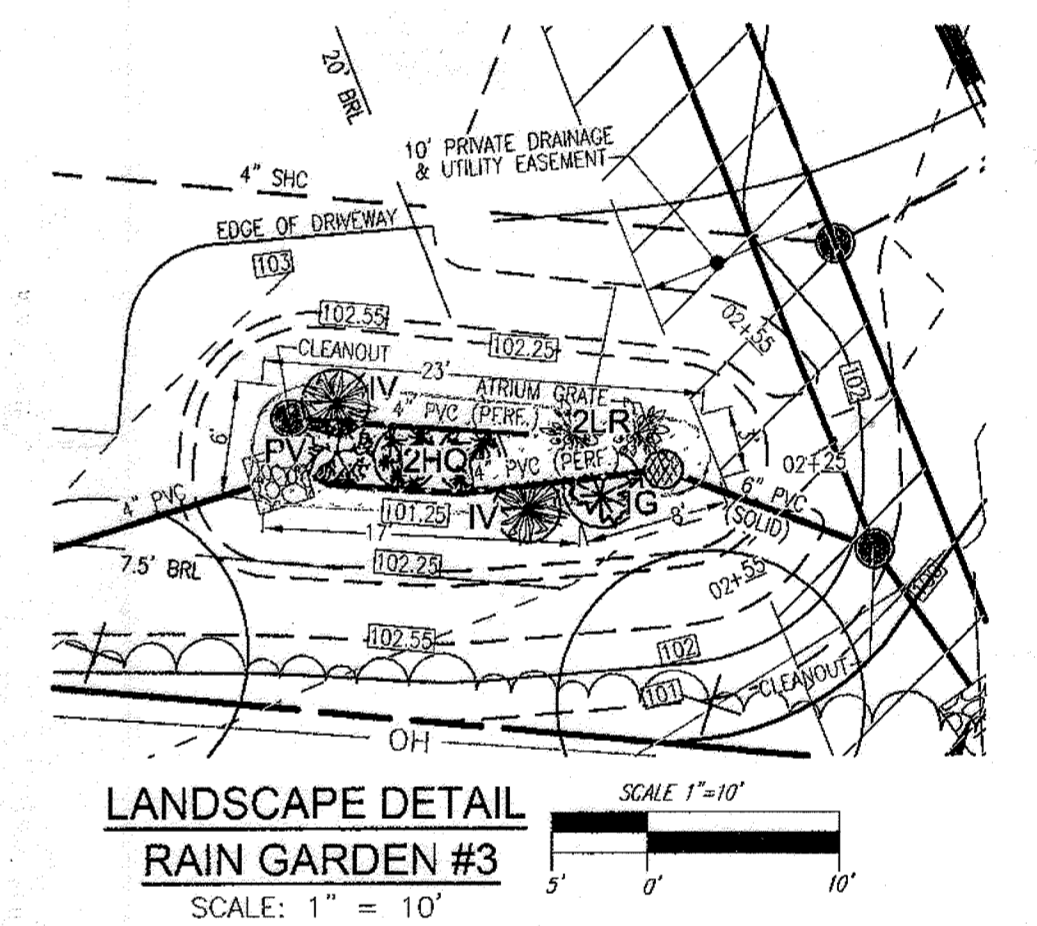
- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT ASY SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HOWARD COUNTY PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING. FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF UNDERGROUND SINKS.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.
- SEE THIS SHEET FOR TYPICAL PLANTING SPECIFICATIONS AND DETAILS.
- RAIN GARDEN AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER PLANTED ACRE (0.0229 STEMS PER SQUARE FOOT). ABOVE PLANTING RADII ARE TO BE APPLIED TO THE AREAS PROVIDED IN THE ESD SUMMARY.



LANDSCAPE DETAIL RAIN GARDEN #1
SCALE: 1" = 10'



LANDSCAPE DETAIL RAIN GARDEN #2
SCALE: 1" = 10'



LANDSCAPE DETAIL RAIN GARDEN #3
SCALE: 1" = 10'

LANDSCAPE PLAN
SCALE: 1" = 30'

LANDSCAPE NOTES:

- AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND 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 DEVIATION 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 APPLICABLE PLANS.
- THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMES, FENCES AND WALLS. 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 OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- IF ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIES PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD, AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE HOWARD COUNTY LANDSCAPE MANUAL. PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THE FINAL PLAN.

LANDSCAPE SCHEDULE NOTE:

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT ASY SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HOWARD COUNTY PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SINKS.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

GENERAL NOTES:

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE REQUIRED PARKING AND PERIMETER LANDSCAPING WILL BE SCHEDULED FOR THIS SUBMISSION.
- A LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY IN THE AMOUNT OF \$4,200.00 FOR THE REQUIRED 11 SHADE TREES (\$3,300,000) AND 8 EVERGREENS (\$1,200) WILL BE PAID WITH THE BUILDER'S GRADING PERMITS.
- THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, DEVELOPER OR CONSTRUCTION OF THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WATER PERMITS, OR BUILDING AND GRADING PERMITS.
- THERE ARE NO BURIAL GROUNDS, CEMETERIES, OR HISTORIC STRUCTURES LOCATED ON THIS PROPERTY.
- NO LANDSCAPING TO BE INSTALLED WITHIN ANY PUBLIC EASEMENT FOR WATER, SEWER, OR STORMDRAIN.
- ANY EXISTING STREET TREES DAMAGED OR DESTROYED DURING CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR.

NOTES:

- TABLE A4 IS TAKEN FROM THE "2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II - APPENDIX A"
- CONTRACTOR SHALL BE FAMILIAR WITH APPENDIX B.4.5 CONSTRUCTION SPECIFICATIONS. IN ADDITION, THE "2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II - APPENDIX A" OFFERS ADDITIONAL HELPFUL INFORMATION.
- NO TREES SHALL BE PLANTED WITHIN A RAIN GARDEN FACILITY. USE ONLY SHRUB OR HERBACEOUS SPECIES.
- TABLE A4 IS FOR INFORMATION PURPOSES ONLY. LANDSCAPE CONTRACTOR SHALL INSTALL PLANTINGS SPECIFIED OR USE OR APPROVED EQUAL SPECIES WHICH ARE TOLERANT TO FLUCTUATING WATER LEVELS.
- PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THIS PLAN.

SCHEDULE 'A' PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO PERIMETER AND ROADWAYS	TOTAL
PERIMETER/FRONTAGE DESIGNATION	A B NONE R	-
LANDSCAPE TYPE	150 LF 148 LF 150 LF 148 LF	596 LF
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER		
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO NO NO NO	-
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO NO NO NO	-
NUMBER OF PLANTS REQUIRED		
EVERGREEN TREES	1:60 3 1:50 3	1:50 3 9
SHRUBS	1:40 4	1:40 4 8
REPLACEMENT SHADE TREES	2:1 2	-
NUMBER OF PLANTS PROVIDED		
SHADE TREES	4 5	3 11
EVERGREEN TREES	-	-
EX SHADE TREES	4 6	8
OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION) DESCRIBE (10:1 SUBSTITUTION) CREDITS BELOW IF NEEDED.	-	-
*2 ADDITIONAL SHADE TREES PROVIDED TO REPLACE THE REMOVED SPECYER TREE.		

LANDSCAPE SCHEDULE

SYMBOL	KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
○	QR	2	QUERCUS RUBRA NORTHERN RED OAK	3" CAL.	B & B
⊗	AR	9	ACER RUBRUM "RED SUNSET" RED SUNSET RED MAPLE	2.5"-3" CAL.	B & B
☼	TO	8	THUJA OCCIDENTALIS "EMERALD GREEN" EMERALD GREEN ARBORVITAE	6'-8" HGT.	B & B

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief of Development Engineering Division: *Chad Edmondson* 4/20/2022

Chief of Division of Land Development: *Any Gorman* 4/22/2022

Director: *Any Gorman* 4/22/2022

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 CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Signature of Developer: *James S. Anderson* 3-7-2022

SPECIMEN TREE CHART

KEY	SPECIES	SIZE	CRZ	CONDITION	COMMENTS
1	RED CEDAR	40" 60"		GOOD	TO BE REMOVED

* A REQUEST FOR ALTERNATIVE COMPLIANCE WILL BE SUBMITTED AT SDP STAGE, IF REQUIRED.

OWNER/DEVELOPER
MAIN STREET BUILDERS
C/O JOSEPH SNOODGRASS
5705 LANDING ROAD
ELK RIDGE, MARYLAND 21075
(410) 796-2003

PERENNIALS/GROUND COVER PLANTING SCHEDULE

LEGEND	QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
☼	27	RUDEBECKIA HIRTA BLACK EYED SUSAN	4" POT	12"-15" O.C. FOR SIDES AND BOTTOM OF HOLES. USE WIRE MESH IN A NATURALIZED RANDOM PATTERN THROUGHOUT PLANT IN GROUPS OF NO LESS THAN 9 PLANTS PER CLUMP.
☼	27	PHLOX STOLONIFERA CREEPING PHLOX	1 QT.	

RAIN GARDEN PLANTING SCHEDULE

KEY	QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
IG	6	ILEX VERTICILLATA "WINTERBERRY" WINTERBERRY HOLLY	1 GALLON	18" O.C.
IV	8	IRIS SIBERICA "BENNERUP BLUE" BENNERUP BLUE SIBERIAN IRIS	1 GALLON	18" O.C.
HQ	7	HEMEROCALIS "ROJO ALTO" ROJO ALTO DAYLILY	1 GALLON	30" O.C.
LR	8	LIRIOPE MUSCARI "BIG BLUE" BIG BLUE LILTURTUR	4" HT	18" O.C.
PV	6	CORNUS SIBERICA "FLAVIRAMEA" YELLOW TWIGGED DOGWOOD	18"-21" HT	18" O.C.

RAIN GARDEN PLANTING REQUIREMENTS

RAIN GARDEN #	AREA	STEMS REQUIRED (0.0229)	STEMS PROVIDED	PLANTINGS PROVIDED					PERENNIALS/GROUND COVER PROVIDED			
				IG	IV	HQ	LR	PV	REQUIRED	RH	PS	TOTAL
1A	127	3	7	1	1	2	2	1	4	9	9	18
1B	124	3	9	1	1	3	3	1	4	18	18	36
2A	254	6	16	2	2	5	5	2	8	36	36	72
2B	208	5	13	2	2	3	4	2	7	36	36	72
TOTALS:	713	17	45	6	6	13	14	6	23	99	99	198

RAIN GARDEN AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER PLANTED ACRE (0.0229 STEMS PER SQUARE FOOT).

PERENNIALS/GROUND COVER ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 0.07 STEMS PER SQUARE FOOT. PLANT IN GROUPS OF NO LESS THAN 9 PLANTS PER CLUMP.

SITE DEVELOPMENT PLAN
SITE AND MICRO-BIORETENTION LANDSCAPING
NOTES, SCHEDULES AND DETAILS
ANDERSON VILLAGE LOTS 13-15
LIBER 19678 / FOLIO 159

TAX MAP 38 BLOCK 14
1ST ELECTION DISTRICT

ZONED: R-12
PARCEL 649
HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

TIMMONS GROUP
PROFESSIONAL CERTIFICATE

DESIGN BY: GAH
DRAWN BY: GAH
CHECKED BY: RHY
DATE: OCTOBER 2021
SCALE: AS SHOWN
W.C. NO.: 04-33

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 09-27-2022.

7 SHEET OF 7