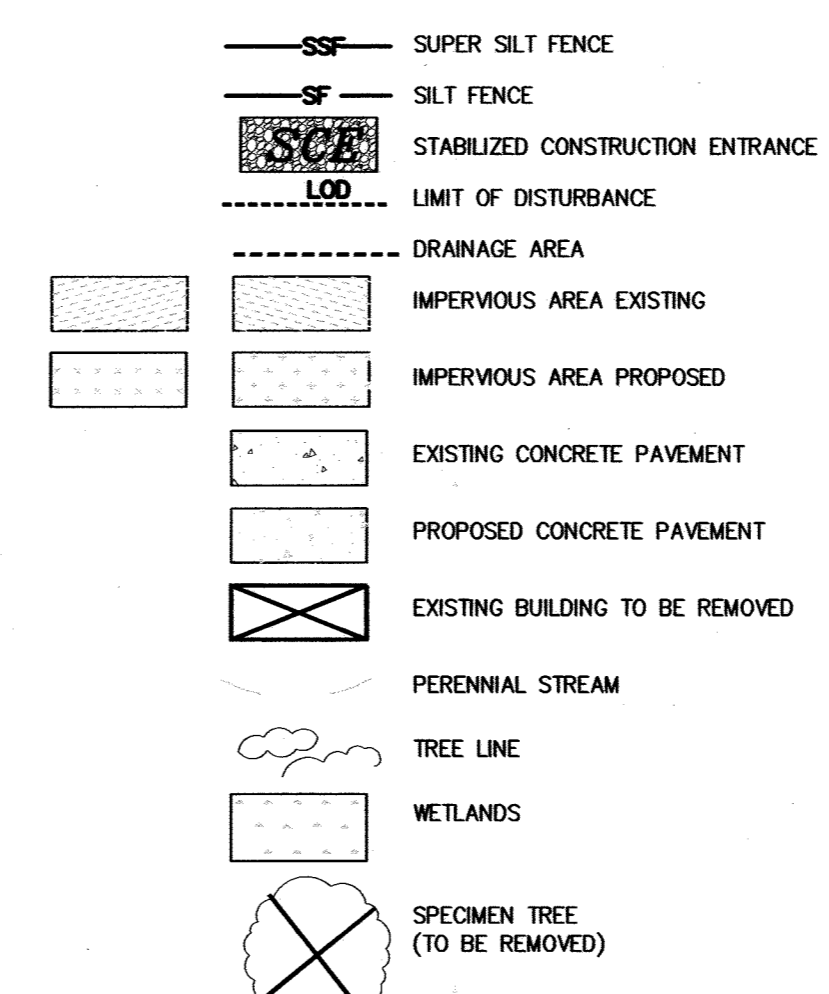


LEGEND



ESD NARRATIVE

1. THE PROPOSED LIMITS OF DISTURBANCE ARE WHOLLY LOCATED WITHIN THE PREVIOUSLY DEVELOPED PORTION OF THE PROPERTY.
2. THIS SITE QUALIFIES FOR REDEVELOPMENT. 50% OF THE EXISTING IMPERVIOUS WITHIN THE LOD NEEDS TO BE TREATED TO THE LEVEL OF WOODS IN GOOD CONDITION.
3. MICRO-BIORETENTION (M-6) WILL BE USED TO PROVIDE THE REQUIRED TREATMENT FOR BUILDING 1, 2 AND THE LOADING DOCK.
4. THE IMPROVEMENTS AND DEVELOPED AREA WILL MAINTAIN THE EXISTING DRAINAGE PATTERNS AS CLOSELY AS POSSIBLE. NO IMPACT IS PROPOSED THAT WOULD ALTER ANY NATURAL FLOW PATTERNS.
5. THE REQUIRED EROSION AND SEDIMENT CONTROL MEASURES WILL BE IN ACCORDANCE WITH THE LATEST MDE STANDARDS AND SPECIFICATIONS UTILIZING SUPER SILT FENCES. NO SEDIMENT TRAPS OR BASINS ARE REQUIRED.
6. TABLE S.2, SUMMARY OF SITE DEVELOPMENT STRATEGIES WAS UTILIZED TO THE EXTENT ALLOWABLE BY THE CURRENT HOWARD COUNTY ZONING AND LAND DEVELOPMENT REGULATIONS BY MINIMIZING EARTH DISTURBANCE.
7. IN DESIGNING THIS PROJECT, IT WAS PLANNED TO MINIMIZE IMPERVIOUS AREAS, REDUCE RUNOFF FROM THE SITE AND IMPROVE RECHARGE OF GROUNDWATER BY THE INSTALLATION OF ESD MEASURES LISTED IN THE SWM PRACTICES SCHEDULE.
8. THERE IS A GRAVEL AREA BETWEEN THE SLOPE AND THE CREEK IN THE NORTHWEST PORTION OF THE SITE. CURRENTLY THIS AREA, WHICH HAS BEEN REPAVED WITH GRAVEL AND CR-6 EVERY FEW YEARS WHICH APPEARS AS AN OVERGROWN LAWN DUE TO ACCUMULATION OF LEAF DETRITUS ON THE GRAVEL SURFACE. AS THE ESD GOALS MAY BE ACCOMPLISHED WITHOUT DISTURBING THIS AREA, IT WILL BE LEFT AS IS.
9. ESD PRACTICES MAY BE LOCATED INSIDE OR OUTSIDE OF THE LOD, ON-SITE OR OFF-SITE WHEN CONSIDERING REDEVELOPMENT. IN THIS CASE WE HAVE CHOSEN TO LOCATE ALL PRACTICES WITHIN ONE LOD, ENTIRELY ON-SITE. IF ADDITIONAL PRACTICES ARE REQUIRED THEY WILL FOLLOW THE LOCATION PARAMETERS SET FORTH BY MDE.
10. THERE ARE NO WETLANDS ON-SITE.
11. THE FORESTED PORTION OF THE SITE LIES ON THE STEEPLY SLOPED PORTION OF THE DEVELOPED AREA ADJACENT TO THE EXISTING PARKING AND OUTSIDE OF THE LOD.
12. THE FLOODPLAIN AND STREAM BUFFER ARE SHOWN AND LIE OUTSIDE OF THE LOD.
13. THE SITE SOILS ARE ERODIBLE AND SUPER SILT FENCE IS PROPOSED ADJACENT TO THE FLOODPLAIN AND STREAM BUFFER.
14. THERE ARE 18,281 S.F. OF STEEP SLOPE (>25%) ON THE PROPERTY, OF WHICH THE GREATEST CONTIGUOUS AREA IS 12,958 S.F.
15. FLOODPLAIN AREAS MAY NOT BE USED FOR THE STORAGE OF DEBRIS OR MATERIALS. MATERIALS STORED IN THE FLOODPLAIN MUST BE REMOVED.

SPECIMEN TREE CHART

KEY	SPECIES	SIZE (in. dbh)	CRZ (feet radius)	COMMENTS (good unless otherwise noted)	TO BE REMOVED
1	PIN OAK	33	50	POOR, DIEBACK IN CANOPY SOME ROT IN TRUNK	YES

POND DESIGN NOTES

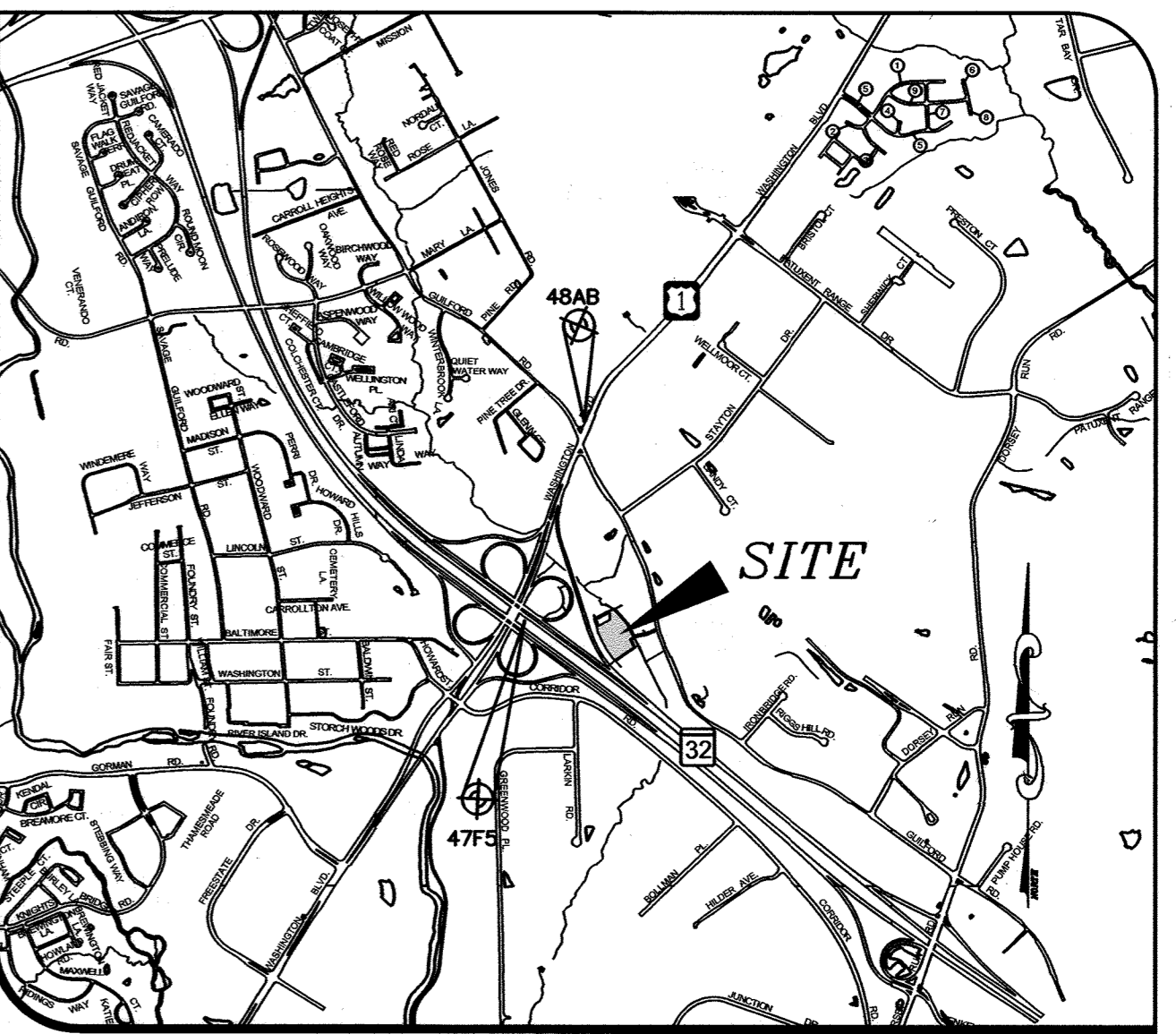
1. THE PONDS WILL UTILIZE VERTICAL WALLS (SPACE CONSTRAINED INDUSTRIAL SITE). THE WALLS ARE LESS THAN THREE (3) FEET IN HEIGHT, AS MEASURED FROM THE TOP OF WALL TO THE GROUND IN FRONT OF THE WALL. SLOPES ARE 2:1 OR LESS STEEP ABOVE AND BELOW THE WALLS. WALL THICKNESS IS 12".
2. WEIRS IN THE WALLS DRAIN TO EITHER ROCK OUTLET PROTECTED SLOPE ADJACENT TO THE POND, (MB-1) OR CONCRETE PAVEMENT, (MB-2). LOCATIONS ARE SHOWN ON THE PLANS.
3. AS SHOWN IN THE 1-YEAR FLOW CALCULATIONS IN THE REPORT, THE TWO MICRO-BIORETENTION PRACTICES ARE ABLE TO ACCOUNT FOR ALL THE IMPERVIOUS AREA THEY TREAT, WHETHER OR NOT THAT AREA ACTUALLY DRAINS TO THE PRACTICE. THIS IS 'AS PER THE MANUAL'.
4. ROOF DRAINS FROM THE PROPOSED BUILDINGS DRAIN TO THE NEAREST MICRO-BIORETENTION PRACTICES.

MICRO-BIORETENTION SCHEDULE

FACILITY	TOP EL. (SURFACE)	WEIR EL. (PONDING)	BERM EL.	UND.DRAIN INV. IN	UND.DRAIN INV. OUT	SURFACE AREA	PONDING AREA	PONDING DEPTH	GRAVEL DEPTH BELOW UNDERDRAIN
MB#1	167.00	168.00	168.50	164.08	162.19	1,080 S.F.	1,080 S.F.	12"	12"
MB#2	167.00	168.00	168.50	164.08	162.19	743 S.F.	743 S.F.	12"	12"

OUTLET STRUCTURE

PER. ASD, HDPE N = 0.015 @ 4", GRASS N = 0.15	V=1.49/(N*(AW/PW))^0.67*5^0.5
4" ROOF LEADER (TYP) 0.33 0.09	1.05 0.19
SLOPE	0.02
VELOCITY FPS	2.68
SHEAR	0.10



VICINITY MAP

1" = 2000'
ADC MAP 41 GRID A4

GENERAL NOTES:

1. SITE ANALYSIS DATA:
ADDRESS: 10480 GUILFORD ROAD, JESSUP, 20794
LOCATION: TAX MAP: 0048 - PARCEL: 13 - GRID 007
ELECTION DISTRICT: SIXTH
ZONING: M-2
EXISTING/PROPOSED USE: MANUFACTURING - HEAVY
TOTAL NUMBER OF LOTS: 01
DEED REFERENCE: LIBER 06096, FOLIO 00281
DPZ FILE REFERENCE: SDP-08-038, SDP-08-038POE, WP-08-073, WP-09-020 (SDP-08-038POE REFERS TO THE PLAT OF EASEMENT P.20566)
2. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 47F5 & 48A8 WERE USED FOR THIS PROJECT.
STATION NO. 47F5 N 535,985.011 E 1,365,653.538 EL. 235.032
STATION NO. 48A8 N 538,384.389 E 1,366,415.873 EL. 225.695
3. THIS SITE DEVELOPMENT PLAN IS EXEMPT FROM THE REQUIREMENTS OF FOREST CONSERVATION PER SECTION 16.1202.B.1 (xii) AN ACTIVITY ON A PREVIOUSLY DEVELOPED AREA COVERED BY AN IMPERVIOUS SURFACE AND LOCATED IN THE PRIORITY FUNDING AREA. THE FOLLOWING QUALIFY AS PRIORITY FUNDING AREAS: AREAS THAT HAVE BEEN DESIGNATED AS ENTERPRISE ZONES, NEIGHBORHOOD REVITALIZATION AREAS, HERITAGE AREAS AND EXISTING INDUSTRIAL LAND.
4. PROJECT BOUNDARY SHOWN HEREON IS BASED ON FIELD RUN SURVEY AUGUST 2020. (LIMITED BOUNDARY SURVEY) BY MILDBENBERG, BOENDER AND ASSOC., INC.
5. TOPOGRAPHY BASED ON HOWARD COUNTY GIS OFFSITE, AND FIELD RUN TOPOGRAPHIC SURVEY OF THE PROPERTY AUGUST 2020 BY MILDBENBERG, BOENDER AND ASSOC., INC.
6. THIS SITE IS NOT LOCATED IN AN HISTORIC DISTRICT AND THERE ARE NO BURIAL, CEMETERY OR HISTORICAL SITES LOCATED ON THIS PROPERTY.
7. WATER IS PUBLIC CONTRACT #652-W, SEWER IS PUBLIC CONTRACTS #321-S AND 235-S.
8. NEW BUILDINGS WILL TIE TO EXISTING CONNECTIONS FOR WATER AND SEWER.
9. STORMWATER MANAGEMENT IS PROVIDED BY PRIVATELY OWNED AND MAINTAINED MICRO-BIORETENTION (M-6). STORMWATER MANAGEMENT HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2000 MDE STORMWATER MANUAL (2007 REGULATIONS).
10. THE SITE CONTAINS STREAMS AND THEIR ASSOCIATED BUFFERS (DEFINED BY P.25066), & FLOOD PLAIN.
11. THE SITE CONTAINS STEEP SLOPES AS INDICATED BELOW.
12. SITE DEVELOPMENT PLAN APPROVAL IS REQUIRED BY THE DEPARTMENT OF PLANNING AND ZONING PRIOR TO BUILDING PERMITS BEING ISSUED FOR THE CONSTRUCTION OF CONTRACTOR STORAGE / GARAGES ON THESE LOTS.
13. LANDSCAPING AND PERIMETER LANDSCAPING REQUIREMENTS WILL BE ADDRESSED AT THE SDP STAGE OF THE PROJECT.
14. APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN AND/OR REDLINE REVISIONS. PLAN REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SHALL OCCUR AT THE PLANNING AND/OR SITE DEVELOPMENT PLAN AND/OR REDLINE REVISION PROCESS. COMMENTS MAY ALTER THE OVERALL SITE DESIGN AS THE PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.
15. ONE SPECIMEN TREE IS TO BE REMOVED. THIS ALTERNATIVE COMPLIANCE WILL BE ADDRESSED AT THE SDP STAGE.
16. AT THE NEXT PLAN STAGE, STRUCTURAL COMPUTATIONS, DETAILS, AND SECTIONS SHALL BE PROVIDED FOR THE RETAINING WALLS BEING UTILIZED FOR THE POND AND THE WALLS SHALL MEET THE REQUIREMENTS IN DMV III, CHAPTER 3 FOR WALLS WITHIN STORMWATER MANAGEMENT FACILITIES.

ECP SITE ANALYSIS DATA PARCEL 13:

1. AREA OF THE SITE	=	3,298	ACRES	(143,670 S.F.)
2. LIMIT OF DISTURBANCE AREA	=	0.673	ACRES	(29,302 S.F.)
3. AREA OF WETLANDS	=	0	ACRES	(0 S.F.)
4. AREA OF WETLANDS BUFFER	=	0	ACRES	(0 S.F.)
5. AREA OF FLOODPLAIN	=	0.754	ACRES	(32,843 S.F.)
6. AREA OF STREAM BUFFER	=	0.650	ACRES	(28,323 S.F.)
7. AREA OF STEEP SLOPES 15% OR GREATER	=	0.671	ACRES	(29,220 S.F.)
8. AREA OF STEEP SLOPES 25% OR GREATER	=	0.420	ACRES	(18,281 S.F.)
9. AREA OF EXISTING FOREST	=	0.260	ACRES	(11,317 S.F.)
10. AREA OF EX. FOREST CONSERVATION ESMT	=	0	ACRES	(0 S.F.)
11. AREA OF ERODIBLE SOILS	=	3,298	ACRES	(143,670 S.F.)
12. AREA OF PROPOSED GREEN OPEN SPACE	=	0.813	ACRES	(35,411 S.F.)
13. IMPERVIOUS AREA PROPOSED	=	2,485	ACRES	(108,259 S.F.)
14. IMPERVIOUS AREA EXISTING	=	2,361	ACRES	(102,824 S.F.)
15. PROPOSED IMPERVIOUS ADDITION	=	0.125	ACRES	(5,435 S.F.)

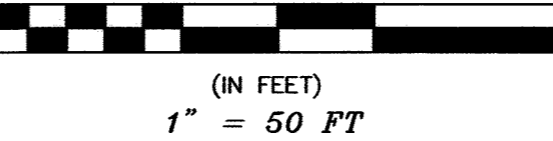
SWM PRACTICES SCHEDULE

FACILITY#	AREA	REQUIRED ESDv	PROVIDED ESDv
MB.1 (M-6)	DA-1 BLDG 1,	1,344 C.F.	1,512 C.F.
MB.2 (M-6)	DA-2 BLDG 2,	964 C.F.	1,040 C.F.
(M-6) TOTAL		2,308 C.F.	2,552 C.F.

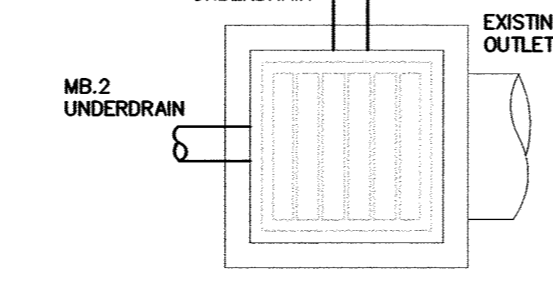
SHEET INDEX

- 1 ENVIRONMENTAL CONCEPT PLAN
- 2 ENVIRONMENTAL FEATURES AND IMPERVIOUS EXHIBIT

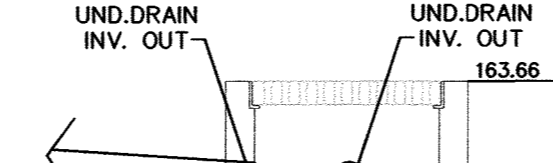
GRAPHIC SCALE



1" = 50 FT

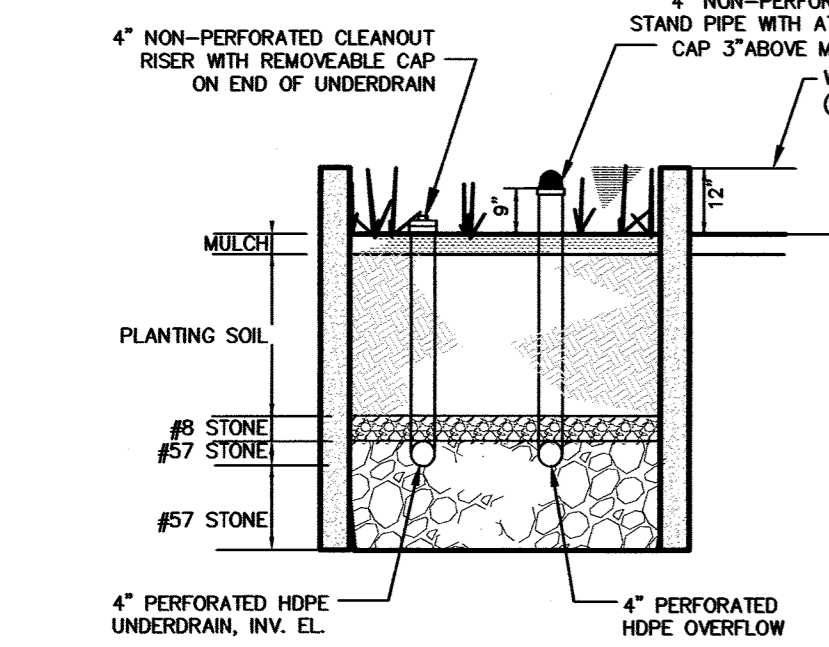


CONNECTION TO EXISTING INLET



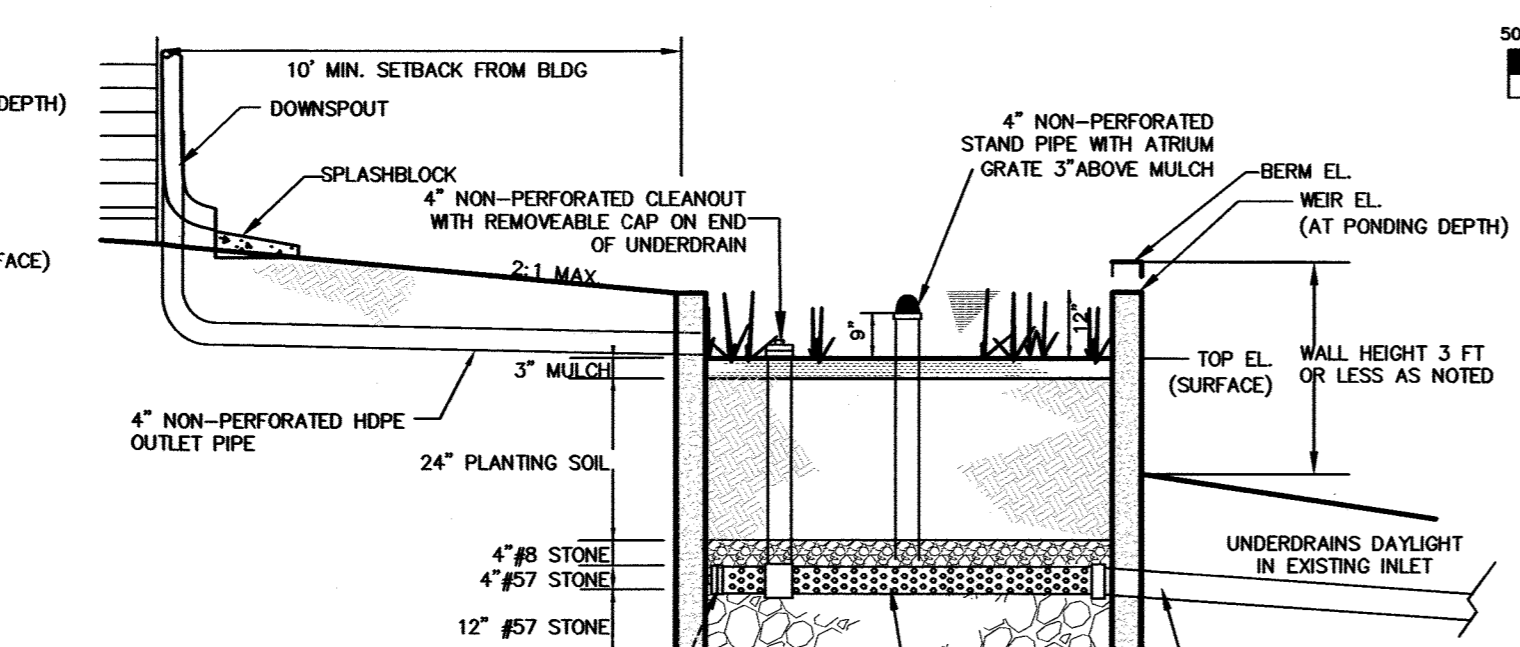
SOIL DESCRIPTION

SYMBOL	NAME	RATING	K FACTOR	MAP NO.	COMMENTS
Co	CODORUS AND HATBORO SILT LOAMS, 0 TO 3 PERCENT SLOPES	C	0.55	25	ONSITE
CrD	CROOM AND EYEBORO SOILS, 10 TO 15 PERCENT SLOPES	C	0.37	25	ONSITE
FoaA	FALLSINGTON SANDY LOAM, 0 TO 2 PERCENT SLOPES	C/D	0.24	25	OFFSITE
Uof	UDORTMENTS, HIGHWAY, 0 TO 65 PERCENT SLOPES	N/A	N/A	25	OFFSITE



TYPICAL MICRO-BIORETENTION SECTION

NTS



TYPICAL MICRO-BIORETENTION PROFILE

NOTE- THE ENTIRE DRAINAGE AREA MUST BE FULLY STABILIZED BEFORE RUNOFF CAN BE DIRECTED TO THE FACILITY.

NTS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

7-26-21 DATE
7/20/21 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION
CHIEF, DIVISION OF LAND DEVELOPMENT



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. 34027, EXP DATE 01/16/2023
MICHAEL KRETSCHE DATE: 7/15/2021

OWNER/DEVELOPER
DRENNER REAL ESTATE HOWARD COUNTY
DARREL DRENNER
10480 GUILFORD ROAD
JESSUP, MD 20794
410-792-2600

Project	date	engineering	approval
20-018	JUL 2021	MKG	SAA

Project	date	description	revisions
20-018	JUL 2021	illustration	MKG
		scale	MKG
		1"=50'	SAA

DRENNER CONCRETE
10480 GUILFORD ROAD
TAX MAP 48 GRID 07 PARCEL 13
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
ENVIRONMENTAL CONCEPT PLAN

MILDBENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296 Tel. (410) 997-0288 Fax

