SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT & LANDSCAPE PLAN
3	GRADING AND SEDIMENT & EROSION CONTROL PLAN
4	SEDIMENT AND EROSION CONTROL DETAILS
5	STORM DRAIN PROFILES & STRUCTURE SCHEDULE
6	SWM DETAILS
7	SWM DRAINAGE AREA MAP
8	SEDIMENT AND EROSION CONTROL NOTES

SITE DEVELOPMENT PLAN

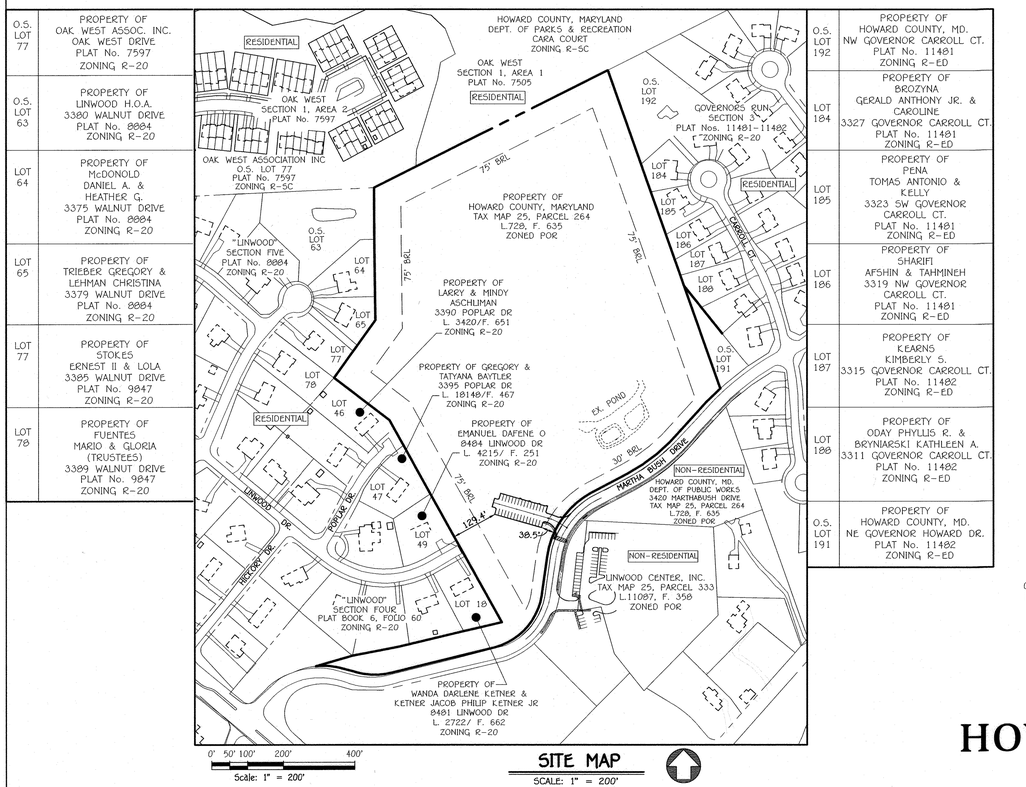
CAPITAL PROJECT No. C-0363

LINWOOD CENTER PARKING LOT

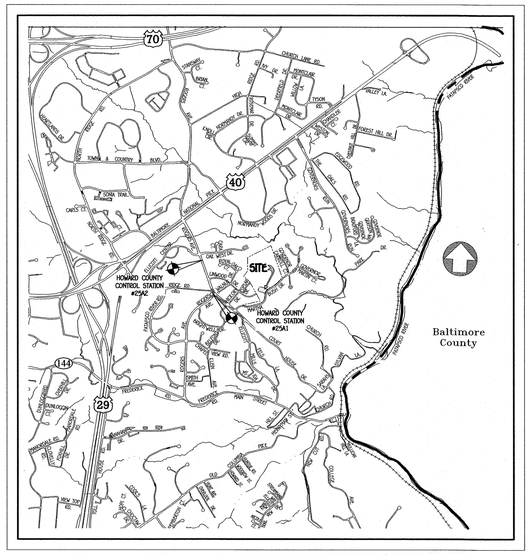
ZONED: POR (Planned Office Research) District

TAX MAP No. 25 GRID No. 01 PARCEL No. 264

STREET SIGN CHART				
STREET NAME	NORTH	EAST	POSTED SIGN	SIGN CODE
PARKING LOT	586625.57	1368314.97	STOP	R1-1
MARTHA BUSH DRIVE	586730.41	1368431.22	PEDESTRIAN CROSSING w/ "ARROW" & "AHEAD" PANELS	W11-2 w/ W16-7P & W16-9P
MARTHA BUSH DRIVE	586523.42	1368329.84	PEDESTRIAN CROSSING w/ "ARROW" & "AHEAD" PANELS	W11-2 w/ W16-7P & W16-9P



SITE MAP
SCALE: 1" = 200'



VICINITY MAP
SCALE: 1" = 2,000'
REFER TO HOWARD CO. ADC MAP 21-B7

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 10-06-13 ZONING REGULATIONS PER COUNCIL BILL NO. 32-2013. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH SETBACKS AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF A BUILDING OR GRADING PERMIT APPLICATION.
5. COORDINATES BASED ON NAD '83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NOS: 25A1(8M#1) & 25A2(8M#2)
   CONTROL STATION NO. 25A1 N 586,557 ELEV. = 396.349
   E 1,366,847
   CONTROL STATION NO. 25A2 N 587,503 ELEV. = 348.098
   E 1,366,556
6. PROPERTY IS ZONED POR PER 10/06/13 COMPREHENSIVE ZONING PLAN.
7. BACKGROUND INFORMATION:
   a. SUBDIVISION NAME: LINWOOD CENTER PARKING LOT
   b. TAX MAP NO.: 25
   c. PARCEL Nos.: 264
   d. ZONING: POR
   e. ELECTION DISTRICT: 2nd
   f. PROPOSED USE: PARKING LOT
   g. GROSS AREA OF THIS SUBMISSION = 26.230 AC.±
   h. NUMBER OF PARCELS: 0
   i. NUMBER OF OPEN SPACE LOTS: 0
   j. AREA OF PROPOSED PARKING LOT: 0.31 AC.±
   k. AREA OF PARCELS: 0.00 ACRES
   l. AREA OF OPEN SPACE LOTS = 0.00 ACRES
   m. AREA OF PUBLIC ROADWAY TO BE DEDICATED: 0.00 ACRES
   n. PREVIOUS FILE NUMBERS: ECP-19-057
   o. AREA OF EXISTING FLOODPLAIN = 0.00 AC.±
   p. AREA OF 25% OR GREATER SLOPES = 0.04 AC.±
8. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-180.
9. SOILS INFORMATION TAKEN FROM (NRCS) HOWARD COUNTY SOIL SURVEY. SOILS MAP NUMBER 16.
10. FOREST STAND & WETLANDS DELINEATION REPORT DATED MAY 14, 2019 WAS PREPARED BY ECO-SCIENCE PROFESSIONAL, INC.
11. THERE ARE STEEP SLOPES OF 25% OR GREATER ON SITE OF 0.04 ACRES WITHIN LOD.
12. NO CEMETERIES EXIST ON SITE BY VISUAL OBSERVATION OR LISTED IN AVAILABLE HOWARD COUNTY CEMETERY INVENTORY MAP.
13. THERE ARE NO HISTORIC HOUSE STRUCTURES ON-SITE.
14. SITE IS ADJACENT TO MARTHA BUSH DRIVE.
15. A TRAFFIC STUDY IS NOT NEEDED FOR THIS PROJECT.
16. A PRE-SUBMISSION COMMUNITY MEETING WAS HELD FOR THIS PROJECT ON MARCH 29, 2018 AT THE LINWOOD SCHOOL.
17. THERE ARE NO 100-YEAR FLOODPLAIN DELINEATIONS, WETLANDS OR STREAM BUFFERS WITHIN THE LIMIT OF DISTURBANCE ON THIS PLAN.
18. THIS PROJECT IS EXEMPT FROM SUBTITLE 12 OF THE SUBDIVISION REGULATIONS PER SECTION 16.1202(b)(1)(vii), CLEARING LESS THAN 20,000 SQ.FT. OF FOREST. (PROPOSED CLEARING = 15,428 SQ.FT.).
19. THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
20. THE EXISTING TOPOGRAPHY INFORMATION SHOWN IS BASED ON HOWARD COUNTY AERIAL CONTOURS AND SUPPLEMENTED WITH A FIELD RUN TOPOGRAPHIC 2/01/19 BY FISHER, COLLINS & CARTER, INC.
21. BOUNDARY INFORMATION IS BASED ON A SURVEY PERFORMED ON OR ABOUT FEBRUARY 1, 2019 BY FISHER, COLLINS & CARTER, INC.
22. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
23. STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. STORM WATER MANAGEMENT IS PROVIDED BY THE USE OF ONE (1) MICRO BIO-RETENTION FACILITY (M-6) TO PROVIDE AN AREA OF TREATMENT FOR THE ENTIRE PARKING AREA FOR THE ESDV REQUIRED.
24. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
25. IN ACCORDANCE WITH A LETTER DATED FEBRUARY 18, 2020, THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING HAS CEASED PROCESSING AND WITHDRAWN ALTERNATIVE COMPLIANCE APPLICATION WP-20-041 IN ACCORDANCE WITH THE FOLLOWING:
   ACCORDING TO SECTION 16.1202(b)(1)(vii), CAPITAL PROJECTS THAT CLEAR LESS THAN 20,000 SQUARE FEET OF FOREST ON A SINGLE LOT OR PARCEL IS EXEMPT FROM SUBTITLE 12. THE EXHIBIT PROVIDED BY YOUR CONSULTANT ON FEBRUARY 11, 2020 DEMONSTRATES THAT THE FOREST CLEARED ON TAX MAP 25, PARCEL 254 IS 15,428 SQUARE FEET. CAPITAL PROJECT NO. C-0363 MEETS THE CRITERIA IN THE CITED SECTION 16.1202(b)(1)(vii), AND IS EXEMPT FROM SUBTITLE 12.
26. LANDSCAPING FOR THIS DEVELOPMENT SHALL BE IN ACCORDANCE WITH SECTION 16.124 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND LANDSCAPE MANUAL.
27. THE ORIGINAL LINWOOD CENTER SDP (SDP-11-041) PROVIDED 4 HDCP SPACES (INCLUDING 2 VAN ACCESSIBLE). 70 SPACES WERE PROVIDED WITH SDP-11-041, REQUIRING 3 HDCP SPACES. THIS SDP PROVIDES 30 SPACES, MAKING A TOTAL NUMBER OF 100 SPACES PROVIDED. SINCE 4 HDCP WERE PROVIDED WITH SDP-11-041, NO HDCP SPACES ARE REQUIRED WITH THIS SDP.
28. THIS SITE DRAINS TO THE SUCCASE BRANCH.
29. B.G.&E. HAS REVIEWED THIS PLAN AND ISSUED AN APPROVAL ON 2/17/22.

SITE ANALYSIS DATA CHART

A. TOTAL AREA OF PARCEL No. 264 = 26.23 ac.±. (ENTIRE PARCEL) PARKING LOT AREA = 0.31 ac.±. (NEW PARKING AREA)
B. LIMIT OF DEVELOPABLE AREA = 0.65 AC.± (LOD) (PARKING AREA)
C. LIMIT OF DISTURBED AREA = 28,314 Sq. Ft. or 0.65 Ac.± (PARKING AREA)
D. PRESENT ZONING DESIGNATION = POR (PER 10/06/13 COMPREHENSIVE ZONING PLAN). (ENTIRE PARCEL)
E. PROPOSED USE: PUBLIC PARKING LOT (PARKING AREA)
F. OPEN SPACE ON SITE: N/A (PARKING AREA)
G. RECREATIONAL AREA PROVIDED: N/A (PARKING AREA)
H. BUILDING COVERAGE OF SITE: N/A (PARKING AREA)
I. PREVIOUS HOWARD COUNTY FILES: SDP 78-103 HOWARD COUNTY DETENTION CENTER, ECP-19-057
J. TOTAL AREA OF FLOODPLAIN: 0.00 Ac. (PARKING AREA)
K. TOTAL AREA OF SLOPES: 25% or GREATER = 0.09 Ac.
   15%-24.99% = 0.04 Ac.
L. NET TRACT AREA = 26.10 Ac± (ENTIRE PARCEL)
   (TOTAL SITE AREA - FLOODPLAIN - STEEP SLOPES AREA)
M. TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 Ac± (ENTIRE PARCEL)
N. TOTAL AREA OF STREAMS (INCLUDING BUFFER) = 0.00 Ac± (ENTIRE PARCEL)
O. TOTAL AREA OF FOREST WITHIN L.O.D. = 0.39 Ac.± (PARKING AREA)
P. TOTAL GREEN OPEN AREA WITHIN L.O.D. = 0.33 Ac.± (PARKING AREA)
Q. TOTAL IMPERVIOUS AREA WITHIN L.O.D. = 0.31 Ac.± (PARKING AREA)
R. AREA OF ERODIBLE SOILS = 0.00 Ac.± (WITHIN AREA OF DEVELOPMENT) (ENTIRE PARCEL)

STORMWATER MANAGEMENT INFORMATION							
Address	Facility Name & Number	Practice Type (Quantity)	Public	Private	HOA Maintained	Jointly Maintained (HOA & HO. CO.)
3420 MARTHA BUSH DRIVE	MICRO BIO-RETENTION ESD #1	M-6 (1)	X	-	-	--

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
PARKING LOT	3420 MARTHA BUSH DRIVE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 3/10/22

Chief, Development Engineering Division — Date 3.10.22

Director - Department of Planning and Zoning — Date 3-10-22

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

STATE OF MARYLAND — ALDO MATTHEW VITUCCI — No. 20724 — PROFESSIONAL ENGINEER — 3/4/22

ALDO M. VITUCCI, P.E.

OWNER/DEVELOPER
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
c/o THOMAS MEUNIER, P.E., (DIRECTOR)
3430 COURT HOUSE DRIVE
ELLICOTT CITY, MARYLAND 21043

NO.	REVISION	DATE

PROJECT		SECTION	PARCEL NO.
CAPITAL PROJECT No. C-0363 LINWOOD CENTER PARKING LOT		N/A	264

DEED	GRID NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
728 / 635	1	POR	25	2	6029

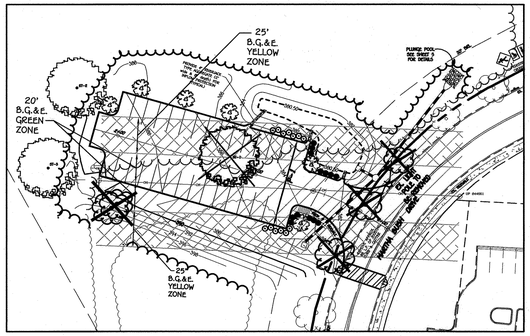
WATER CODE	SEWER CODE
N/A	N/A

TITLE SHEET

SITE DEVELOPMENT PLAN
CAPITAL PROJECT No. C-0363
LINWOOD CENTER PARKING LOT
ZONED: POR TAX MAP NO.: 25 GRID NO.: 01 PARCEL NO.: 264
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: FEB. 15, 2022
SHEET 1 OF 8

SDP-20-066

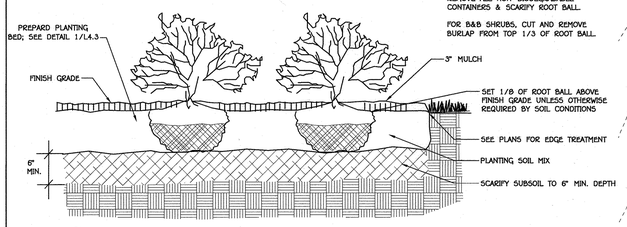
I:\2018\18006\Engineering\Dwgs\SDP 2019\Revised SDP - 06-23-20\18006 SDP 01.dwg 3/4/2022 1:30:35 PM, Downstairs T1500 (temporary).pc3, 1:1



B.G.&E. PLANTING ZONE & TREE REMOVAL PLAN

0' 50' 100' 200'

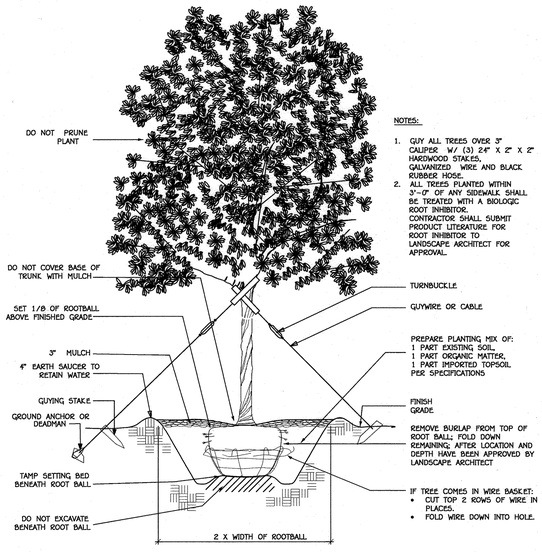
SCALE: 1" = 50'



NOTE:
FOR CONTAINER SHRUBS, COMPLETELY REMOVE ALL NON-BIODEGRADABLE CONTAINERS & SCARIFY ROOT BALL.

FOR B&B SHRUBS, CUT AND REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL.

2 | SHRUB PLANTING - TYPICAL



NOTES:
1. GUY ALL TREES OVER 3" CALIPER W/ (3) 24" X 2" X 2" HARDWOOD STAKES, GALVANIZED WIRE AND BLACK RUBBER HOSE.
2. ALL TREES PLANTED WITHIN 3'-0" OF ANY SIDEWALK SHALL BE TREATED WITH A BIOLOGIC ROOT INHIBITOR. CONTRACTOR SHALL SUBMIT PRODUCT LITERATURE FOR ROOT INHIBITOR TO LANDSCAPE ARCHITECT FOR APPROVAL.

3 | DECIDUOUS TREE PLANTING - TYPICAL

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING	
NUMBER OF PARKING SPACES	30
NUMBER OF TREES REQUIRED (1:10)	3
NUMBER OF TREES PROVIDED	
SHADE TREES	3
OTHER TREES (2:1 SUBSTITUTION)	–

LANDSCAPING PLANT LIST

QTY.	KEY	NAME	SIZE
6**		* ACER CAMPESTRE HEDGE MAPLE	2 1/2"-3" CAL
13		Clethra alnifolia 'Pink Spire' Pink Spire Summersweet	24"-30" ht. Cont. 36" O.C.
13		Itea virginica 'Henry's Garnet' Sweetspire	

* APPROVED B.G.&E. YELLOW ZONE SHADE TREE

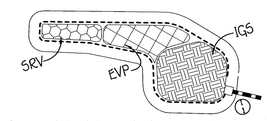
** 3 PROPOSED TREES INCLUDED TO REPLACE THE 3 EXISTING STREET TREES REMOVED FOR PARKING LOT ENTRANCE.

SCHEDULE A PERIMETER LANDSCAPE EDGE	
PERIMETER	P-1
CATEGORY	Parking to Roadway
LANDSCAPE TYPE	E
LINEAR FEET OF PERIMETER	65'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	–
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE IF NEEDED)	–
NUMBER OF PLANTS REQUIRED	
SHADE TREES	1
EVERGREEN TREES	0
SHRUBS	16
NUMBER OF PLANTS PROVIDED	
SHADE TREES	0
EVERGREEN TREES	0
OTHER TREES (2:1 SUBSTITUTION)	–
SHRUBS (10:1 SUBSTITUTION)	26
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	–

LEGEND

SYMBOL	DESCRIPTION
	EXISTING CONTOUR 2' INTERVAL
	EXISTING CONTOUR 10' INTERVAL
	EXISTING TREELINE
MaD / MaC	SOILS
	MICRO-BIORETENTION (M-6)
	EROSION CONTROL MATTING
SCE	STABILIZED CONSTRUCTION ENTRANCE
SSF	SUPER SILT FENCE
	DRAINAGE AREA
	LIMIT OF DISTURBANCE
	PROPOSED STORM DRAIN
	EXISTING TREES TO BE REMOVED (SEE B.G.&E. PLANTING ZONE & TREE REMOVAL PLAN, THIS SHEET)
	EXISTING TREES TO REMAIN
OH	OVERHEAD ELECTRIC LINE
	BOUNDARY LINE
	PROPOSED TREELINE

ESD PLANTS					
75	IGS	Ilex glabra 'Shamrock' Inkberry	24"-30" Ht.	Cont.	40" o.c./Male Cultivar
60	EVP	Eupatorium dubium 'Little Joe' Dwarf Joe-Pye Weed	# 1	Cont.	24" O.C.
45	SRV	Solidago Rugosa Goldenrod	#1	Cont.	18" O.C.



MICRO BIO-RETENTION PLANTING DETAIL

NOT TO SCALE

DEVELOPER'S / BUILDER'S CERTIFICATE

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

NAME — DATE 2/16/2021

0' 20' 40' 80'

SCALE: 1" = 20'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 3/10/22

Chief, Development Engineering Division — Date 6.17.21

Director - Department of Planning and Zoning — Date 3-10-22

STATE OF MARYLAND ALDO MICHAEL VITUCCI No. 20724 PROFESSIONAL ENGINEER — 1/5/21

ALDO M. VITUCCI, P.E.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

OWNER/DEVELOPER

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
c/o THOMAS MEUNIER, P.E., (~~ACTING~~ DIRECTOR)
3430 COURT HOUSE DRIVE
ELLICOTT CITY, MARYLAND 21043

NO.	REVISION	DATE

PROJECT	SECTION	PARCEL NO.
CAPITAL PROJECT No. C-0363 LINWOOD CENTER PARKING LOT	N/A	264

DEED	GRID NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
728 / 635	1	POR	25	2	6029

WATER CODE	SEWER CODE
N/A	N/A

SITE DEVELOPMENT & LANDSCAPE PLAN

SITE DEVELOPMENT PLAN
CAPITAL PROJECT No. C-0363
LINWOOD CENTER PARKING LOT

ZONED: POR TAX MAP NO.: 25 GRID NO.: 01 PARCEL NO.: 264
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: FEB. 15, 2022
SHEET 2 OF 8

SDP-20-066

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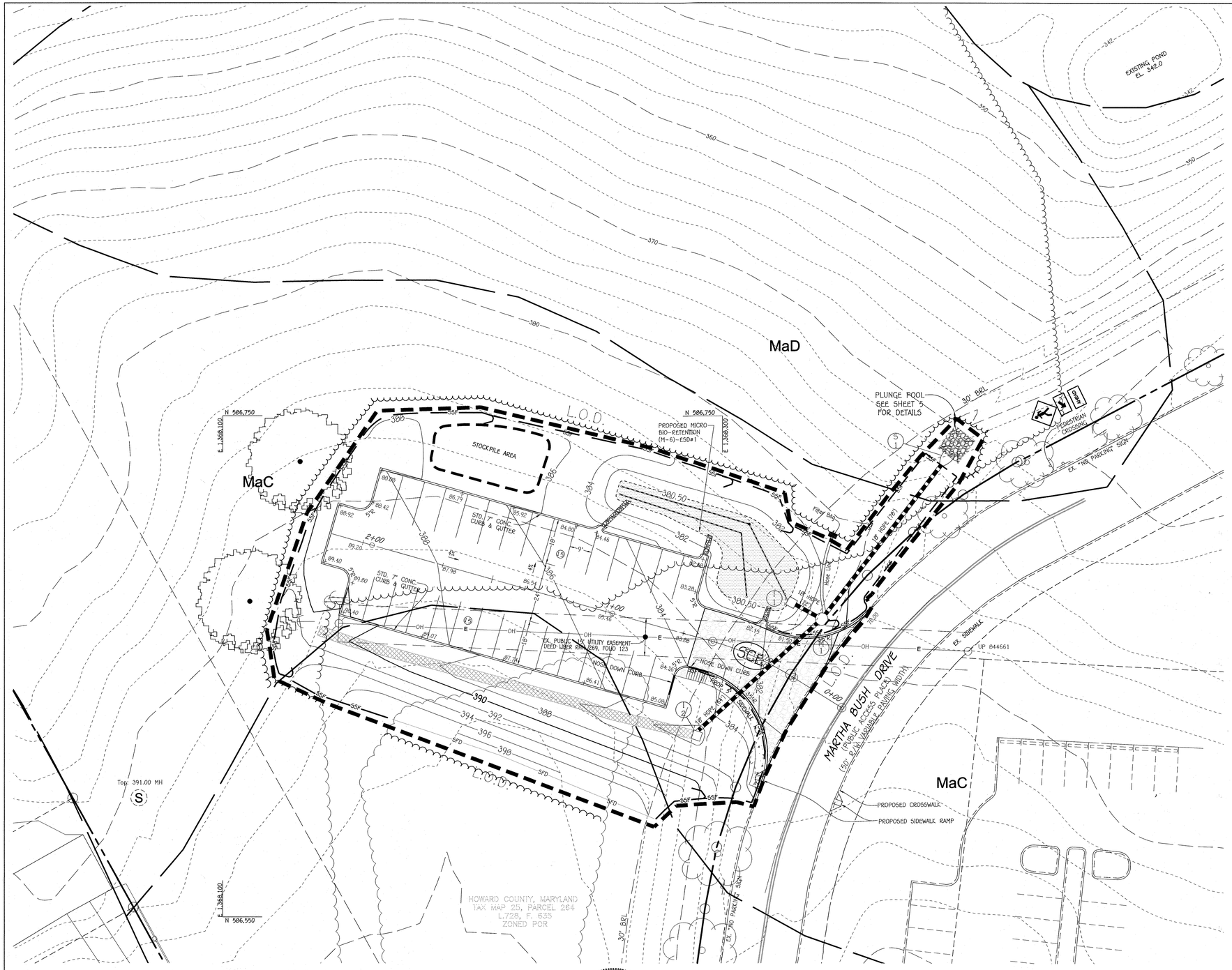

EXISTING CONDITION PLAN

SCALE: 1" = 50'

SCALE: 1" = 20'

LEGEND

SYMBOL	DESCRIPTION
	EXISTING CONTOUR 2' INTERVAL
	EXISTING CONTOUR 10' INTERVAL
	EXISTING TREELINE
MaD / MaC	SOILS
	MICRO-BIORETENTION (M-6)
	EROSION CONTROL MATTING
SCE	STABILIZED CONSTRUCTION ENTRANCE
SSF	SUPER SILT FENCE
	DRAINAGE AREA
	LIMIT OF DISTURBANCE
	PROPOSED STORM DRAIN
	EXISTING TREES TO BE REMOVED
	EXISTING TREES TO REMAIN
OH	OVERHEAD ELECTRIC LINE
	BOUNDARY LINE
	PROPOSED TREELINE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 3/10/22

Chief, Development Engineering Division — Date 6.17.21

Director - Department of Planning and Zoning — Date 3-10-22

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — NO. 20728 — PROFESSIONAL ENGINEER

ALDO M. VITUCCI, P.E.

ENGINEER'S CERTIFICATE

"I certify that the design 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 (print name below signature) — Date 11/5/21

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 all 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 (print name below signature) — Date 2/16/2021

Thomas J Meunier

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

Howard SCD — Date 6/4/21

OWNER/DEVELOPER

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
c/o THOMAS MEUNIER, P.E., (~~ACTING~~ DIRECTOR)
3430 COURT HOUSE DRIVE
ELLICOTT CITY, MARYLAND 21043

NO.	REVISION	DATE

PROJECT	SECTION	PARCEL NO.
CAPITAL PROJECT No. C-0363 LINWOOD CENTER PARKING LOT	N/A	264

DEED	GRID NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
728 / 635	1	POR	25	2	6029

WATER CODE	SEWER CODE
N/A	N/A

GRADING AND SEDIMENT & EROSION CONTROL PLAN

SITE DEVELOPMENT PLAN
CAPITAL PROJECT No. C-0363
LINWOOD CENTER PARKING LOT

ZONED: POR TAX MAP NO.: 25 GRID NO.: 01 PARCEL NO.: 264
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: FEB. 15, 2022
SHEET 3 OF 8

SDP-20-066

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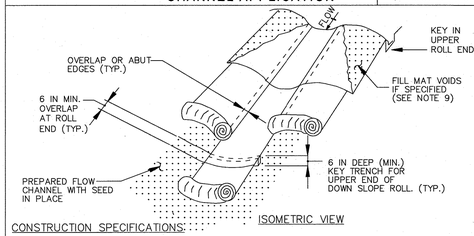
DETAIL B-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL

PSSMC – * lb/ft²
(* INCLUDE SHEAR STRESS)



ISOMETRIC VIEW

CONSTRUCTION SPECIFICATIONS:

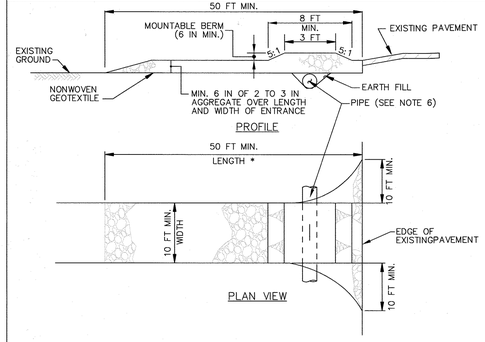
1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "I" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 ½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "I" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL SCE



CONSTRUCTION SPECIFICATIONS

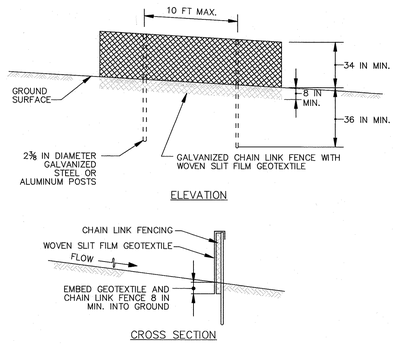
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL SSF



CONSTRUCTION SPECIFICATIONS

1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

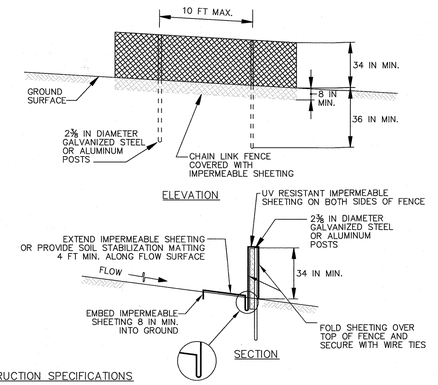
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL C-9 DIVERSION FENCE

STANDARD SYMBOL SFD

MAXIMUM DRAINAGE AREA = 2 ACRES

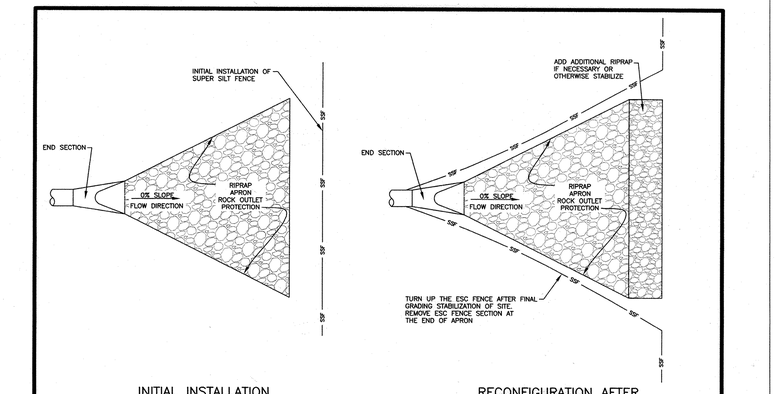


CONSTRUCTION SPECIFICATIONS

1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2⅜ INCH MAXIMUM OPENING).
2. USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



Revised / Revised 5/31/2017 / Approved	Howard County, Maryland Department of Public Works Approved: Thomas E. Hunter Chief, Bureau of Engineering	SEDIMENT CONTROL FENCE RECONFIGURATION After Stabilization	Detail D-5.53

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 3/26/21

Chief, Development Engineering Division — Date 6.17.21

Director – Department of Planning and Zoning — Date 3-25-22

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

ALDO M. VITUCCI, P.E.

ENGINEER'S CERTIFICATE

"I certify that the design for erosion and erosion control represents a practical and workable plan based on knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer (print name below signature) — Date 11/5/21

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 all 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 (print name below signature) — Date 2/16/2021

Thomas J. Meunier

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

Howard SCD — Date 6/4/21

OWNER/DEVELOPER

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
c/o THOMAS MEUNIER, P.E., (~~ACTING~~ DIRECTOR)
3430 COURT HOUSE DRIVE
ELLICOTT CITY, MARYLAND 21043

NO.	REVISION	DATE

PROJECT	SECTION	PARCEL NO.
CAPITAL PROJECT No. C-0363 LINWOOD CENTER PARKING LOT	N/A	264

DEED	GRID NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
728 / 635	1	POR	25	2	6029

WATER CODE	SEWER CODE
N/A	N/A

SEDIMENT AND EROSION CONTROL DETAILS

SITE DEVELOPMENT PLAN
CAPITAL PROJECT No. C-0363
LINWOOD CENTER PARKING LOT

ZONED: POR TAX MAP NO.: 25 GRID NO.: 01 PARCEL NO.: 264
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: FEB. 15, 2022
SHEET 4 OF 8

SDP-20-066

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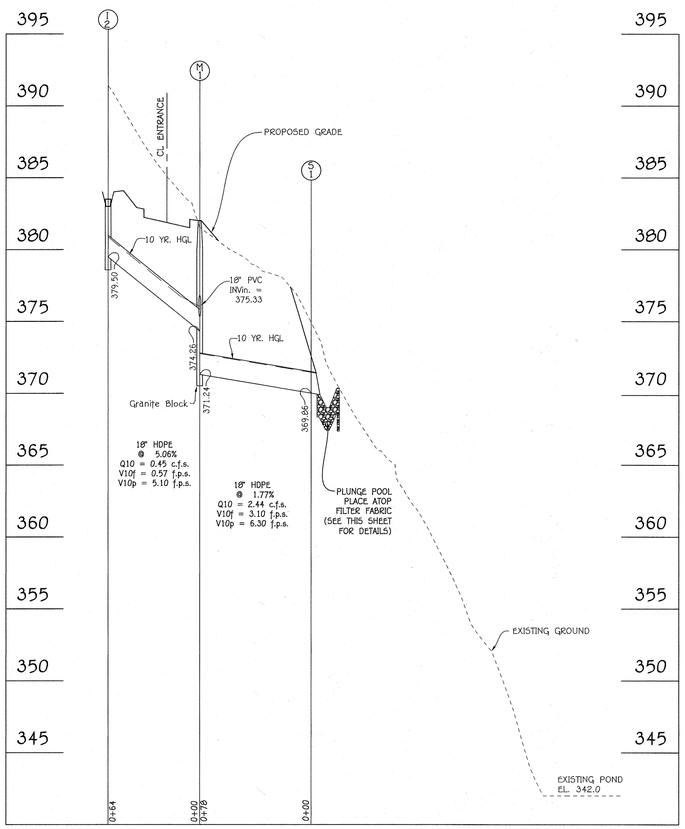
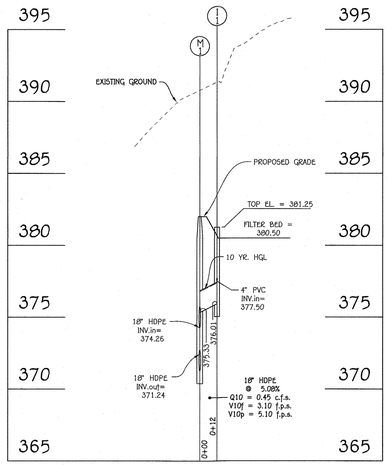


PROFILE

SCALE: HOR. : 1" = 50'
VER. : 1" = 5'



PROFILE

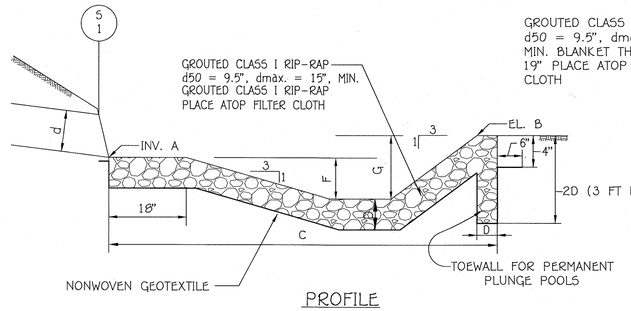
SCALE: HOR. : 1" = 50'
VER. : 1" = 5'

PIPE SCHEDULE		
SIZE	CLASS	LENGTH
4" PERF.	PVC	152'
18"	HDPE	154'

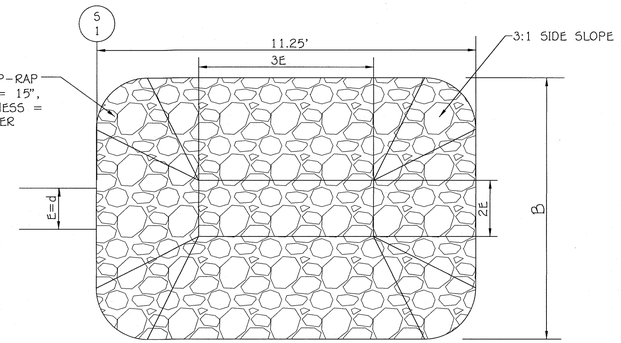
STRUCTURE SCHEDULE

STRUCTURE NO.	TOP ELEVATION	INV.IN	INV.OUT	LOCATION	ROAD STA.	OFFSET	TYPE AND WIDTH	REMARKS
I-1	381.25**	377.50 (4")	376.01 (18")	N 586,677.11 E 1,368,324.84	----	----	"D" INLET	D=4.39
I-2	383.00*	-----	379.50 (18")	N 586,622.37 E 1,368,289.77	----	----	"D" INLET	D=4.39
M-1	382.00	375.33 (18"), 374.26 (18")	371.24 (18")	N 586,669.00 E 1,368,339.76	----	----	5' DIA. MANHOLE	G = 5.13
S-1	371.36	369.86 (18")	369.75 (18")	N 586,730.84 E 1,368,373.15	----	----	18" END SECTION	D = 5.51

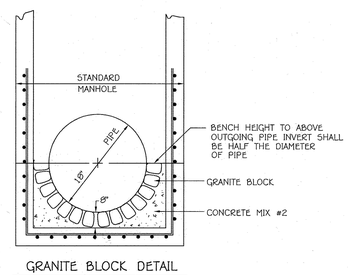
* - THESE ELEVATIONS DENOTE THE THROAT ELEVATION OF THE INLET.
** - TOP ELEVATION OF THE INLET (NO THROAT).



PROFILE



PLAN



GRANITE BLOCK DETAIL

NOT TO SCALE

STILLING BASIN DATA

STRUCTURE NO.	INV. A	EL. B	C	D	3E	F	B	d	G
S-1	369.75	370.50	11.25'	19"	4.50'	0.75'	12.00'	1.50'	1.50'

TYP. TYPE 1 STILLING BASIN OUTFALL DETAIL

NO SCALE

CONSTRUCTION SPECIFICATIONS:

1. USE SPECIFIED CLASS OF RIP-RAP.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION M-1 MATERIALS, AND PROTECT FROM PUNCHING, CUTTING OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE.
3. PREPARE THE SUBGRADE FOR THE PLUNGE POOL TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EMBED THE GEOTEXTILE A MINIMUM OF 4 INCHES AND EXTEND THE GEOTEXTILE A MINIMUM OF 6 INCHES BEYOND THE EDGE OF THE SCOUR HOLE.
5. STONE FOR THE PLUNGE POOL MAY BE PLACED BY EQUIPMENT. CONSTRUCT TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. DELIVER AND PLACE THE STONE FOR THE PLUNGE POOL IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE STONE FOR THE PLUNGE POOL IN A MANNER TO PREVENT DAMAGE TO THE GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. AT THE PLUNGES POOL OUTLET, PLACE THE STONE SO THAT IT MEETS THE EXISTING GRADE.
7. MAINTAIN LINE, GRADE, AND CROSS SECTION, KEEP OUTLET FREE OF EROSION, REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

MAINTENANCE:

MAINTENANCE NEEDS ARE GENERALLY LOW FOR PLUNGE POOLS. THE LINE, GRADE, AND CROSS SECTION MUST BE MAINTAINED, AND THE OUTLET MUST BE KEPT FREE OF EROSION. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIP-RAP. REPAIRS MUST BE MADE IMMEDIATELY. ACCUMULATED SEDIMENT AND DEBRIS MUST BE REMOVED.

FISHER, COLLINS & CARTER, INC.
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(410) 461 - 2855

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 3/16/22

Chief, Development Engineering Division — Date 6.17.21

Director - Department of Planning and Zoning — Date 3-16-22

STATE OF MARYLAND
ALDO MICHAEL VITUCCI
No. 20738
PROFESSIONAL ENGINEER
1-5-21

ALDO M. VITUCCI, P.E.

OWNER/DEVELOPER

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
c/o THOMAS MEUNIER, P.E., (ACTING DIRECTOR)
3430 COURT HOUSE DRIVE
ELLICOTT CITY, MARYLAND 21043

NO.	REVISION	DATE

PROJECT	SECTION	PARCEL NO.
CAPITAL PROJECT No. C-0363 LINWOOD CENTER PARKING LOT	N/A	264

DEED	GRID NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
728 / 635	1	POR	25	2	6029

WATER CODE	SEWER CODE
N/A	N/A

STORM DRAIN PROFILES & STRUCTURE SCHEDULE

SITE DEVELOPMENT PLAN
CAPITAL PROJECT No. C-0363
LINWOOD CENTER PARKING LOT

ZONED: POR TAX MAP NO.: 25 GRID NO.: 01 PARCEL NO.: 264
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: FEB. 15, 2022
SHEET 5 OF 8

SDP-20-066

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Infiltration and Filter System Construction Specifications

Infiltration and filter systems either take advantage of existing permeable soils or create a permeable medium such as sand for WC), and Re v. In some instances where permeability is great, these facilities may be used for Qp as well. The most common systems include infiltration trenches, infiltration basins, sand filters, and organic filters.

When properly planted, vegetation will thrive and enhance the functioning of these systems. For example, pre-treatment buffers will trap sediments that often are bound with phosphorous and metals. Vegetation planted in the facility will aid in nutrient uptake and water storage. Additionally, plant roots will provide arteries for stormwater to permeate soil for groundwater recharge. Finally, successful plantings provide aesthetic value and wildlife habitat making these facilities more desirable to the public.

Design Constraints:

> Planting buffer strips of at least 20 feet will cause sediments to settle out before reaching the facility, thereby reducing the possibility of clogging.
> Determine areas that will be saturated with water and water table depth so that appropriate plants may be selected (hydrology will be similar to bioretention facilities, see figure A.5 and Table A.4 for planting material guidance).
> Plants known to send down deep taproots should be avoided in systems where filter fabric is used as part of facility design.
> Test soil conditions to determine if soil amendments are necessary.
> Plants shall be located so that access is possible for structure maintenance.
> Stabilize heavy flow areas with erosion control mats or sod.
> Temporarily divert flows from seeded areas until vegetation is established.
> See Table A.5 for additional design considerations.

Bio-retention

Soil Bed Characteristics

The characteristics of the soil for the bioretention facility are perhaps as important as the facility location, size, and treatment volume. The soil must be permeable enough to allow runoff to filter through the media, while having characteristics suitable to promote and sustain a robust vegetative cover crop. In addition, much of the nutrient pollutant uptake (nitrogen and phosphorus) is accomplished through absorption and microbial activity within the soil profile. Therefore, soils must balance their chemical and physical properties to support biotic communities above and below ground.

The planting soil should be a sandy loam, loamy sand, loam (USDA), or a loam/sand mix (should contain a minimum 35 to 60% sand, by volume). The clay content for these soils should be less than 25% by volume (Environmental Quality Resources (EQR), 1996; Engineering Technology Inc. and Biohabitats, Inc. (ETAB), 1993). Soils should fall within the SM, ML, SC classifications or the Unified Soil Classification System (USCS). A permeability of at least 1.0 feet per day (0.5"/hr) is required (a conservative value of 0.5 feet per day is used for design). The soil should be free of stones, stumps, roots, or other woody material over 1" in diameter. Brush or seeds from noxious weeds (e.g., Johnson Grass, Mugwort, Nutsedge, and Canada Thistle or other noxious weeds as specified under COMAR 15.08.01.05.) should not be present in the soils. Placement of the planting soil should be in 12 to 18 lifts that are loosely compacted (tamped lightly with a backhoe bucket or traversed by dozer tracks). The specific characteristics are presented in Table A.3.

Table A.3 Planting Soil Characteristics

Parameter	Value
pH range	5.2 to 7.00
Organic matter	1.5 to 4.0% (by weight)
Magnesium	35 lbs. per acre, minimum
Phosphorus (phosphate - P2O5)	75 lbs. per acre, minimum
Potassium (potash -1(K2O)	85 lbs. per acre, minimum
Soluble salts	500 ppm
Clay	0 to 5%
Silt	30 to 55%
Sand	35 to 60%

Mulch Layer

The mulch layer plays an important role in the performance of the bioretention system. The mulch layer helps maintain soil moisture and avoids surface sealing, which reduces permeability. Mulch helps prevent erosion, and provides a microenvironment suitable for soil biota at the mulch/soil interface. It also serves as a pretreatment layer, trapping the finer sediments, which remain suspended after the primary pretreatment.

The mulch layer should be standard landscape style, single or double shredded hardwood mulch or chips. The mulch layer should be well aged (stockpiled or stored for at least 12 months), uniform in color, and free of other materials, such as weed seeds, soil, roots, etc. The mulch should be applied to a maximum depth of three inches. Grass clippings should not be used as a mulch material.

Planting Guidance

Plant material selection should be based on the goal of simulating a terrestrial forested community of native species. Bioretention simulates an upland-species ecosystem. The community should be dominated by trees, but have a distinct community of understory trees, shrubs and herbaceous materials. By creating a diverse, dense plant cover, a bioretention facility will be able to treat stormwater runoff and withstand urban stresses from insects, disease, drought, temperature, wind, and exposure.
The proper selection and installation of plant materials is key to a successful system. There are essentially three zones within a bioretention facility (Figure A.5). The lowest elevation supports plant species adapted to standing and fluctuating water levels. The middle elevation supports plants that like drier soil conditions, but can still tolerate occasional inundation by water. The outer edge
is the highest elevation and generally supports plants adapted to dryer conditions. A sample of appropriate plant materials for bioretention facilities are included in Table A.4. The layout of plant material should be flexible, but should follow the general principals described in Table A.5. The objective is to have a system, which resembles a random, and natural plant layout, while maintaining optimal conditions for plant establishment and growth. For a more extensive bioretention plan, consult ETAB, 1993 or Claytor and Schueler, 1997.

B.4.C Specifications for Micro-Bioretention. Rain Gardens, 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 prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda 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 (60%-65%) and compost (35% to 40%) or sandy loam (30%), coarse sand (30%), and compost (40%).

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, iron sulfate plus sulfur) may be mixed into 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 excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type 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 alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to restructure the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling the optional sand layer. Pump any ponded water before preparing (rototilling) base.

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When backfilling the bioretention facility, place soil in lifts 12"to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

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". Shredded or chipped 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. Shredded mulch must be well aged (6 to 12 months) for acceptance.

Rootstock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted so 1/8 th of the ball is above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced 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 drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications.

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

6. Underdrains

Underdrains should meet the following criteria:

Pipe- Should be 4"to 6"diameter, slotted or perforated rigid plastic pipe (ASTMF 758, Type PS 28, or AASHTO-M-278) in a gravel layer. The preferred material is slotted, 4" rigid pipe (e.g., PVC or HDPE).

Perforations - If perforated pipe is used, perforations should be 3/8" diameter located 6 center with a minimum of four holes per row. Pipe shall be wrapped with a 1/4" (No. 4 or 4x4) 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.

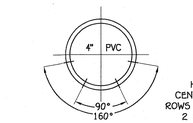
A rigid, non-perforated observation well must be provided (one per every 1,000 squire feet) to provide a clean-out port and monitor performance of the filter.

A 4" layer of pea gravel (1/4" 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".

The 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

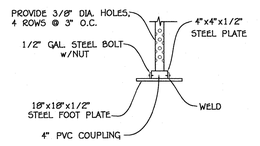
These practices may not be constructed until all contributing drainage area has been stabilized



PIPE SIZE: 4"
HOLE SIZE: 3/8"
CENTER TO CENTER: 3"
ROWS OF HOLES: 2 @ 90°
2 @ 160° (+/-3°)

Sch 40 Pvc Perforated Underdrain Pipe Detail For Horizontal Drain Pipe

NO SCALE



NOTE: ANCHOR MAY BE SUBSTITUTED WITH ANOTHER METHOD. (MUST BY APPROVED BY INSPECTOR)

Anchor Detail

NO SCALE

NOTES:
UNDERDRAIN PIPE SHALL BE 4" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTMF 758, TYPE PS 28 OR AASHTO-M- 278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED 4" RIGID PIPE (e.g., PVC OR HDPE).

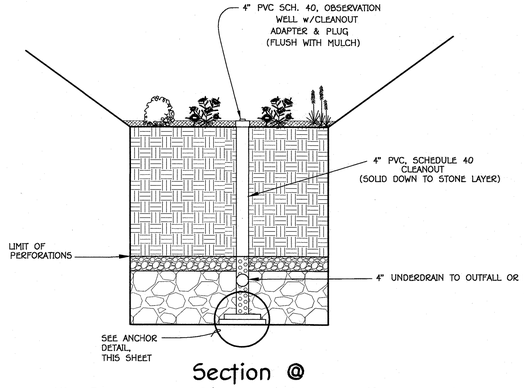
PERFORATIONS SHALL BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (No. 4 OR 4 x 4) GALVANIZED HARDWARE CLOTH.

GRAVEL LAYER SHALL BE (No. 57 STONE PREFERRED) AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.

THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.

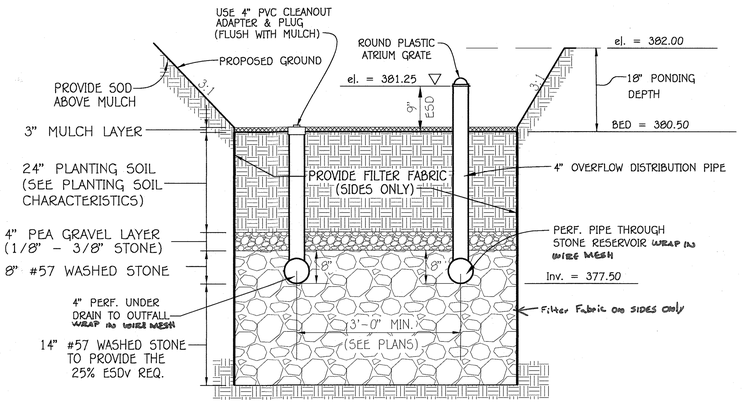
A RIGID, NON PERFORATED OBERSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQ.FT.) TO PROVIDE A CLEANOUT PORT AND MONITOR PERFORMANCE OF THE FILTER.

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".



Section @ 4" Cleanout/Observation Well Location

NO SCALE



MICRO BIO-RETENTION SECTION WITH 6" OVERFLOW DISTRIBUTION PIPE

NO SCALE

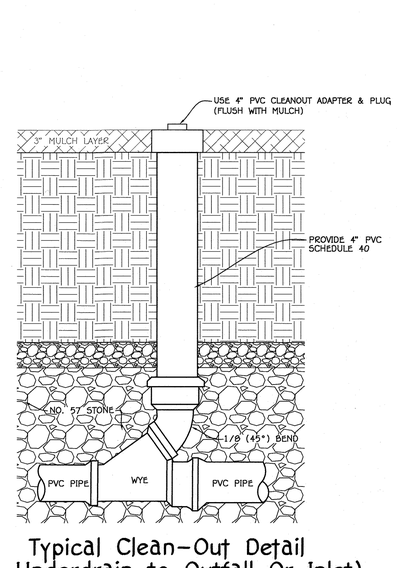
OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS (M-6)

1. 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.

2. The owner shall perform a plant in the spring and in the fall 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 ans shrubs and replace all deficient stakes and wires.

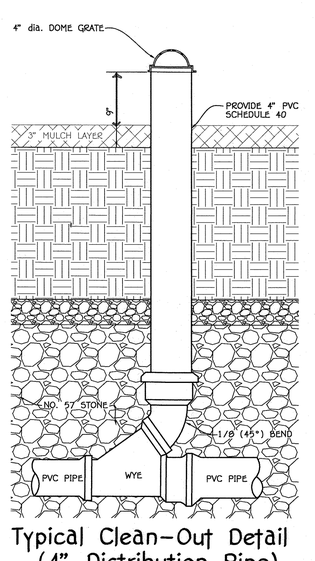
3. The owner shall inspect the mulch each spring. The mulch shall be replaced every two to three years, The previous mulch layer shall be removed before the new layer is applied.

4. The owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.



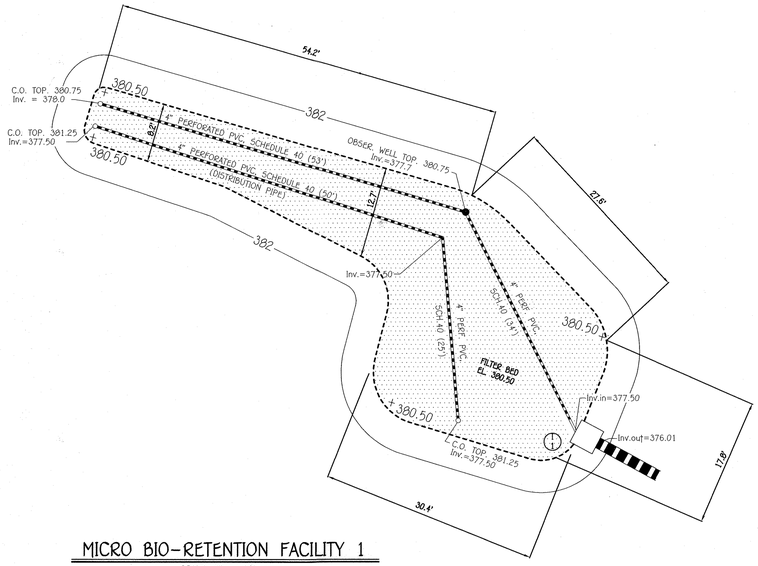
Typical Clean-Out Detail (4" Underdrain to Outfall Or Inlet)

NO SCALE



Typical Clean-Out Detail (4" Distribution Pipe)

NO SCALE



MICRO BIO-RETENTION FACILITY 1

SCALE: 1" = 10'

0' 10' 20' 40'

SCALE: 1" = 10'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 3/10/22

Chief, Development Engineering Division — Date 6.17.21

Director - Department of Planning and Zoning — Date 3-10-22

STATE OF MARYLAND — ALDO M. VITUCCI — No. 20739 — PROFESSIONAL ENGINEER — 7-5-21

ALDO M. VITUCCI, P.E.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

OWNER/DEVELOPER

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
c/o THOMAS MEUNIER, P.E., (~~ACTING~~ DIRECTOR)
3430 COURT HOUSE DRIVE
ELLICOTT CITY, MARYLAND 21043

NO.	REVISION	DATE

PROJECT			SECTION		PARCEL NO.
CAPITAL PROJECT No. C-0363 LINWOOD CENTER PARKING LOT			N/A		264
DEED	GRID NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
720 / 635	1	POR	25	2	6029
WATER CODE		SEWER CODE			
N/A		N/A			

SWM DETAIL SHEET

SITE DEVELOPMENT PLAN
CAPITAL PROJECT No. C-0363
LINWOOD CENTER PARKING LOT

ZONED: POR TAX MAP NO.: 25 GRID NO.: 01 PARCEL NO.: 264
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: FEB. 15, 2022
SHEET 6 OF 8

SDP-20-066

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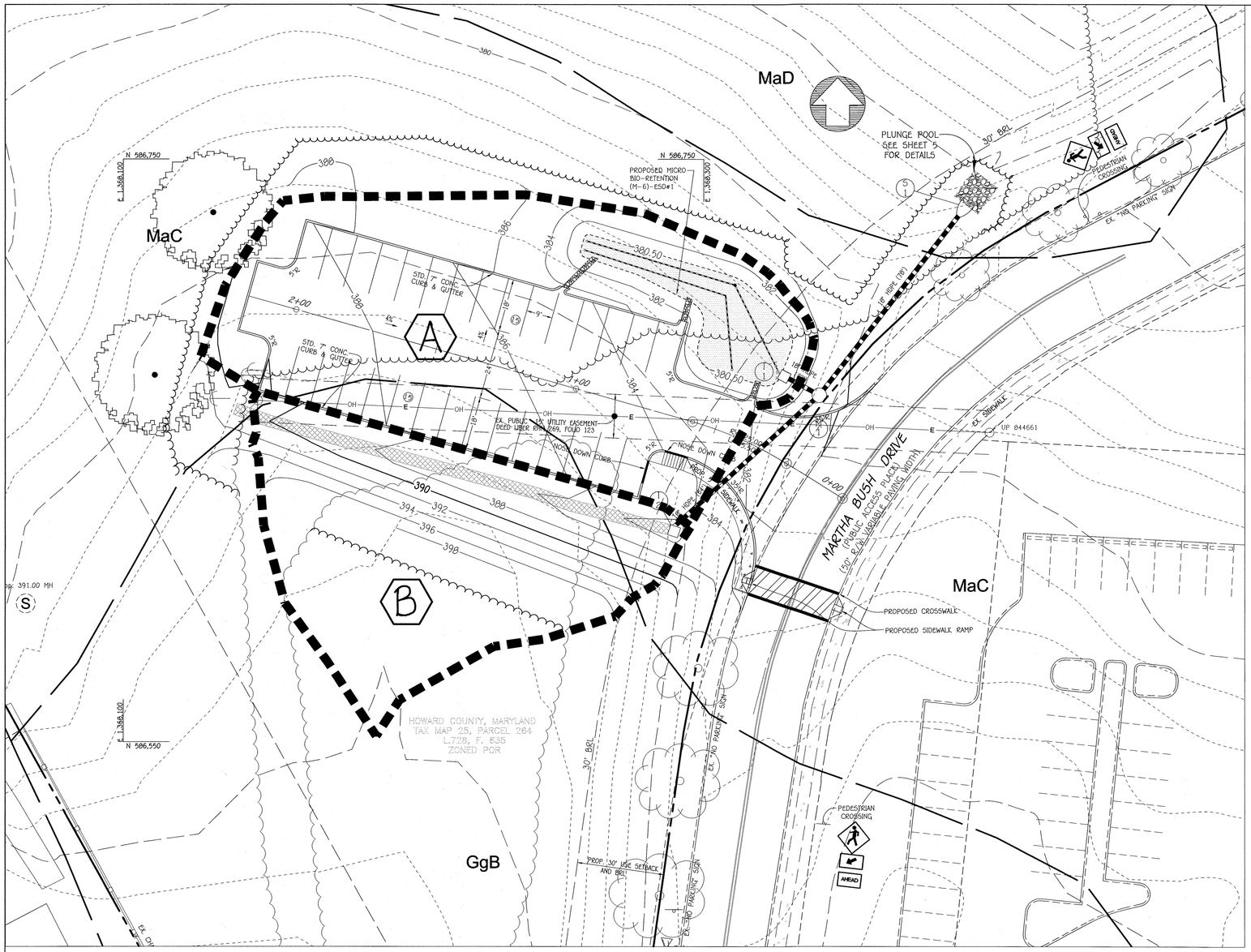

LEGEND

SYMBOL	DESCRIPTION
	EXISTING CONTOUR 2' INTERVAL
	EXISTING CONTOUR 10' INTERVAL
	EXISTING TREELINE
MaD / MaC	SOILS
	MICRO-BIORETENTION (M-6)
	EROSION CONTROL MATTING
5CE	STABILIZED CONSTRUCTION ENTRANCE
55F	SUPER SILT FENCE
	DRAINAGE AREA
	LIMIT OF DISTURBANCE
	PROPOSED STORM DRAIN
	EXISTING TREES TO BE REMOVED (See Sheet 2)
	EXISTING TREES TO REMAIN
OH	OVERHEAD ELECTRIC LINE
	BOUNDARY LINE

DRAINAGE AREA DATA

STRUCTURE NO.	AREA	"C FACTOR"	ZONED	% IMP.	REMARKS
A	0.31 AC	0.70	POR	38%	ESD #1
B	0.18 AC	0.26	POR	0%	-----

SOILS LEGEND

SOIL	NAME	CLASS	K.w
GgB	Glenelg loam, 3 to 8 percent slopes	B	0.20
MaC	Manor loam, 8 to 15 percent slopes	B	0.24
MaD	Manor loam, 15 to 25 percent slopes	B	0.24

NOTES:
- * Hydric soils and/or contains hydric inclusions
- ** May contain hydric inclusions
- † Generally only within 100-year floodplain areas

FISHER, COLLINS & CARTER, INC.
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CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 3/22/22

Chief, Development Engineering Division — Date 6.17.21

Director - Department of Planning and Zoning — Date 3-18-22

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20158 — PROFESSIONAL ENGINEER — 1-5-21

ALDO M. VITUCCI, P.E.

OWNER/DEVELOPER

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
c/o THOMAS MEUNIER, P.E., ~~MASTER~~ DIRECTOR)
3430 COURT HOUSE DRIVE
ELLICOTT CITY, MARYLAND 21043

NO.	REVISION	DATE

PROJECT	SECTION	PARCEL NO.
CAPITAL PROJECT No. C-0363 LINWOOD CENTER PARKING LOT	N/A	264

DEED	GRID NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
728 / 635	1	POR	25	2	6029

WATER CODE	SEWER CODE
N/A	N/A

SWM DRAINAGE AREA MAP

SITE DEVELOPMENT PLAN
CAPITAL PROJECT No. C-0363
LINWOOD CENTER PARKING LOT

ZONED: POR TAX MAP NO.: 25 GRID NO.: 01 PARCEL NO.: 264
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: FEB. 15, 2022
SHEET 7 OF 8

SDP-20-066

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

A. Soil Preparation

1. Temporary Stabilization

a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.

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 disking or other suitable means. Permanent Stabilization

a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:

i. Soil pH between 6.0 and 7.0.
ii. Soluble salts less than 500 parts per million (ppm).
iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
iv. Soil contains 1.5 percent minimum organic matter by weight.
v. Soil contains sufficient pore space to permit adequate root penetration.

b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.

c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.

e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.

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.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible.

4. Areas having slopes steeper than 2:1 require special consideration and design.

5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:

a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter.

b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.

c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

6. Topsoil Application

a. Erosion and sediment control practices must be maintained when applying topsoil.

b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and fillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.

c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.

2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.

3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.

4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.

5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

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 5 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.

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 and maintain until the next seeding season.

Temporary Seeding Summary

Hardiness Zone (from Figure B.3): 6b
Seed Mixture (from Table B.1):

Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20)	Lime Rate
BARLEY	96	3/1 - 5/15, 8/15 - 10/15	1"	436 lb/ac (10 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
OATS	72	3/1 - 5/15, 8/15 - 10/15	1"		
RYE	112	3/1 - 5/15, 8/15 - 10/15	1"		
WHEAT	120	3/15 - 5/31, 8/1 - 9/30	1"	436 lb/ac (10 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)

PERMANENT SEEDING NOTES (B-4-5)

A. Seed Mixtures

1. General Use

a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.

b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.

c. For sites having disturbed area over 5 Acres, use and show the rates recommended by the soil testing Agency. d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary .

2. Turfgrass Mixtures

a. Areas where turfgrass 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. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.

i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.

iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.

Notes:
Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland"

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

c. Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a) Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 1/2 inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.

e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): 6b
Seed Mixture (from Table B.3):

No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20) N	Fertilizer Rate (10-20-20) P_2O_5	Fertilizer Rate (10-20-20) K_2O	Lime Rate
2	TALL FESCUE	100	Mar. 1-May 15 Aug. 1-Oct. 15	1/4-1/2 in.	45 lbs. per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
3	SHEEP FESCUE	20	Mar. 1-May 15 [&] Sep. 15-Nov. 30	1/4-1/2 in.				
3	CANADA WILD RYE	20	Mar. 1-May 15 [&] Sep. 15-Nov. 30	1/4-1/2 in.				
3	REDTOP	1	Mar. 1-May 15 [&] Sep. 15-Nov. 30	1/4-1/2 in.				

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

a.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND

b.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA (B-4-8)

Definition

The 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 controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Criteria

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 tha 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
3. Runoff from the stockpile area must drain to a suitable sediment control practice.
4. Access the stockpile area from the upgrade side.
5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

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

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.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

A. Seeding
1. Specifications
   a. All seed must meet the requirement of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
   b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
   c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cook as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
   d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.
2. Application
   a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
      i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with weighted roller to provide good seed to soil contact.
   b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
      i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
   c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
      i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P O (phosphorus), 200 pounds per acre; K 0 (potassium), 200 pounds per acre.
      ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
      iii. Mix seed and fertilizer on site and seed immediately and without interruption.
      iv. When hydroseeding do not incorporate seed into the soil.

B. Mulching
1. Mulch Materials (in order of preference)
   a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
   b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into uniform fibrous physical state.
      i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate colot to facilitate visual inspection of the uniformly spread slurry.
      ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
      iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
      iv. WCFM material must not contain elements or compounds at concentration levels that will by phyto-toxic.
      v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.
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. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
   c. Wood cellulose fiber used as mulch must be applied to a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
3. Anchoring
   a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
      i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
      ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
      iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
      iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4-15 feet wide and 300 to 3,000 feet long.

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

Definition

Establishment of vegetative cover on cut and fill slopes.

Purpose

To provide timely vegetative cover on cut and fill slopes as work progresses.

Conditions Where Practice Applies

Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

Criteria

A. Incremental Stabilization - Cut Slopes
1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
2. Construction sequence example (Refer to Figure B.1):
a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.
b. Perform Phase 1 excavation, prepare seedbed, and stabilize.
c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

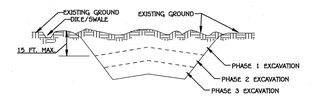

Figure B.1: Incremental Stabilization - Cut

B. Incremental Stabilization - Fill Slopes
1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses.
2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
4. Construction sequence example (Refer to Figure B.2):
a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct silt fence on low side of fill unless other methods shown on the plans address this area.
b. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
c. Place Phase 1 fill, prepare seedbed, and stabilize.
d. Place Phase 2 fill, prepare seedbed, and stabilize.
e. Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

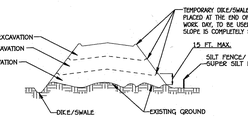

Figure B.2: Incremental Stabilization - Fill

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1855 after the future LOD and protected areas are marked clearly in the field. A minimum of 48 hour notice to CID must be given at the following stages: a. Prior to the start of earth disturbance,

b. Upon completion of the installation of perimeter erosion and sediment controls, but any other before proceeding with earth disturbance or grading,

c. Prior to the start of another phase of construction or opening of another grading unit, d. Prior to the removal or modification of sediment control practices.

Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to avoid conflicts with this plan.

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.

3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.

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 for topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the ground is frozen. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15' of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 yd. must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization matting (Sec. B-4-6).

5. All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CID.

6. Site Analysis:

Total Area of Site:	0.93 Acres
Area Disturbed:	0.62 Acres
Area to be roofed or paved:	0.23 Acres
Area to be vegetatively stabilized:	0.39 Acres
Total Cut:	2,000 Cu. Yds.
Total Fill:	2,000 Cu. Yds.
waste/borrow area location:	ON-SITE

7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

8. Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly and the next day after each rain event. A written report by the contractor, made available upon request, is part of every inspection and should include:

- Inspection date
- Inspection type (routine, pre-storm event, during rain event)
- Name and title of inspector
- Weather information (current conditions as well as time and amount of last recorded precipitation)
- Brief description of project's status (e.g., percent complete) and/or current activities
- Evidence of sediment discharges
- Identification of plan deficiencies
- Identification of sediment controls that require maintenance
- Identification of missing or improperly installed sediment controls
- Compliance status regarding the sequence of construction and stabilization requirements
- Photographs
- Monitoring/sampling
- Maintenance and/or corrective action performed
- Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE).

9. Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of each workday, whichever is shorter.

10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may allowed by the CID per the list of HSCD-approved field changes.

11. Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the HSCD. Unless otherwise specified and approved by the HSCD, no more than 30 acres cumulatively may be disturbed at a given time.

12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure.

13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.

14. All Silt Fence and Super Silt Fence shall be placed on-the-contour, and be imbricated at 25' minimum intervals, with lower ends curled uphill by 2' in elevation.

15. Stream channels must not be disturbed during the following restricted time periods (inclusive):

- Use I and IP March 1 - June 15
- Use III and IIIP October 1 - April 30
- Use IV March 1 - May 31

16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and associated permits shall be on-site and available when the site is active.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMITS. (2 WEEKS)
2. NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE ANY WORK AT 1-800-257-7777. NOTIFY HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION DIVISION AT 410-313-1870 AT LEAST 24-HOURS BEFORE STARTING ANY WORK.
3. CLEAR AND GRUB THE WOODED AREA LOCATED FOR SEDIMENT CONTROL FACILITIES ONLY. INSTALL THE STABILIZED CONSTRUCTION ENTRANCES, PERIMETER SUPER SILT FENCE. (2 WEEKS)
4. FINISH ANY CLEARING AND GRUBBING NECESSARY BEFORE PROCEEDING. INSTALL STORM DRAINS. INSTALL INLET PROTECTION. OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR. (1 WEEK)
5. GRADE PARKING SITE TO SUBGRADE. INSTALL THE MICRO BIO-RETENTION FACILITY AND THE ASSOCIATED WEIR. DO NOT INSTALL THE FILTER MEDIA OR LANDSCAPING INSIDE THE MICRO BIO-RETENTION FACILITY UNTIL AFTER THE UPSTREAM AREAS ARE STABILIZED. BLOCK OFF THE EXIT PIPE FROM M-1 OUT TO S-1. (3 WEEKS)
6. UPON PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO PROCEED, INSTALL CONCRETE CURB AND GUTTER, BASE & INTERMEDIATE PAVING COURSES. (1 MONTH)
7. INSTALL FINAL SURFACE COURSE FOR ROADWAYS. STABILIZE ALL REMAINING AREAS OF DISTURBANCE WITH PERMANENT SEEDING. (1 MONTH)
8. AFTER ALL AREAS ARE STABILIZED, OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR. INSTALL THE MICRO BIO-RETENTION UNDER DRAIN SYSTEMS, FILTER MEDIA AND STABILIZE ANY DISTURBANCE WITH PERMANENT SEEDING. REMOVE BLOCKING AND CONSTRUCT REMAINING OUTFALL PIPE FROM M-1 TO S-1. REMOVE ANY REMAINING SEDIMENT CONTROL FEATURES THAT ARE PRESENT. (3 WEEKS)

NOTE: THE CONTRACTOR SHALL COORDINATE WITH THE INSPECTOR IN REGARDS TO THE REQUIREMENT THAT NO MORE THAN 20-ACRES OF "OPEN" GROUND SHALL BE DISTURBED AT ANY GIVEN TIME, IF REQUIRED. THE PARKING AREA AND ASSOCIATED L.O.D. IS LESS THAN 20-AC. IN SIZE.

NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 3/10/22

Chief, Development Engineering Division — Date 6.17.21

Director - Department of Planning and Zoning — Date 3-10-22

STATE OF MARYLAND ALDO MICHAEL PITUCCI No. 20728 PROFESSIONAL ENGINEER

ALDO M. VITUCCI, P.E.

ENGINEER'S CERTIFICATE

"I certify that these construction, 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 (print name below signature) — Date 11/5/21

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 all 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 (print name below signature) — Date 2/16/2021

Thomas J Meunier

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

Howard SCD — Date 6/4/21

OWNER/DEVELOPER

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
c/o THOMAS MEUNIER, P.E., (ACTING DIRECTOR)
3430 COURT HOUSE DRIVE
ELLICOTT CITY, MARYLAND 21043

NO.	REVISION	DATE

PROJECT	SECTION	PARCEL NO.
CAPITAL PROJECT No. C-0363 LINWOOD CENTER PARKING LOT	N/A	264

DEED	GRID NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
728 / 635	1	POR	25	2	6029

WATER CODE	SEWER CODE
N/A	N/A

SEDIMENT AND EROSION CONTROL NOTES

SITE DEVELOPMENT PLAN
CAPITAL PROJECT No. C-0363
LINWOOD CENTER PARKING LOT

ZONED: POR TAX MAP NO.: 25 GRID NO.: 01 PARCEL NO.: 264
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: FEB. 15, 2022
SHEET 8 OF 8

SDP-20-066

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