	SHEET INDEX	
SHEET NO.	DESCRIPTION	
	TITLE SHEET	
2	EXISTING CONDITIONS AND DEMOLITION PLAN	
3	GLEN OAKS LANE WIDENING	
4	PRIVATE ROADS PLAN AND PROFILES	
5-6	LANDSCAPE PLAN	
7	SEDIMENT AND EROSION CONTROL PLAN	
8	SEDIMENT TRAP DETAILS AND NOTES	
9	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS	
10	STORM DRAIN PROFILES	
11	STORM DRAIN DRAINAGE AREA MAP	
12-13	STORMWATER MANAGEMENT NOTES AND DETAILS	
14	NOISE WALL PLAN AND ELEVATION	

	<b>STREET</b>	LIGHT	r chart
street name	STATION	OFF5ET	FIXTURE/POLE TYPE
BROAD OAKS LANE	0+30	31.'K	LED-100 COLONIAL POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE

	STREET	5IGN	CHART	
STREET NAME	STATION	OFF5ET	POSTED SIGN	SIGN CODE
BROAD OAKS LANE	0+37	18' L	STOP SIGN	R1-1
BROAD OAKS LANE	4+02	45' L	NO PARKING(PRIVATE)	R7-1(1)
BROAD OAKS LANE	4+07	15' L	NO PARKING(PRIVATE)	R7-1(1)
BROAD OAKS LANE	4+29	0,	NO PARKING(PRIVATE)	R7-1(1)

	PAVING TYPE	CHART
STREET NAME	STATION RANGE	PAVING TYPE
BROAD OAKS LANE	0+00 - 0+27.28 0+27.28 - 2+09.59 2+09.59 - 4+27.51	ASPHALT (P-2) PERMEABLE PAVING (A-2) ASPHALT (P-2)
ACORN COURT	0+00 - 1+81	ASPHALT (P-2)
GLEN OAKS LANE	WIDENING	ASPHALT (P-2)

STORMWATER MANAGEMENT INFORMATION							
AREA ID	DRAINAGE S	% IMPERVIOUS	ESDY REQUIRED Cuft.	ESDV PROVIDED CuFt.	TYPE		
A .	80,907	42%	3.856 (storage)	4.116 (storage)	F-6 (1)		
В	6,205	75%	570 (storage)	612 (storage)	M-6 (2)		
6	6,717	63%	379 (storage)	592 (storage)	M-6 (3)		
D	1,474	34%	72	272	A-2 (1)		
87 1. 1 V <b>E</b> 1	1,250	72%	128	201	A-2 (2)		

STORMWATER MANAGEMENT INFORMATION									
LOT	NUMBE			NAME MBER	PRACTICE TYPE (QUANTITY)	PUBLIC	PRIVATE	H.O.A. MAINTAINS	MISC
0.5.	LOT 20		-6	(1)	BIO-RETENTION (1)	N	Y	Y	), is in the case of the case
0.5.	LOT 20	1	-6	(2)	MICRO BIO-RETENTION (1)	N	Y	and the Year of the Control of the C	
0.5.	LOT 20	)   1	-6	(3)	MICRO BIO-RETENTION (1)	N	Y	Y	
0.5.	LOT 2		-2	(1)	PERMEABLE PAVING (1)	N	Y	Y	
0.5.	LOT 2		-2	(2)	PERMEABLE PAVING (1)	N	Y	Y	

#### FOREST CONSERVATION WORKSHEET

Net Tra	ct Area				
A.Total	(Gross)	Tract Are	.a	A = 2.4	8
			Floodplair	B =0.0	00
C.Other	Deduction ract Area	ons (Iden		) C =0.0 D =2.4	
LAND US	SE CATEGO	RY: (from	table 3.2.	1, page40,	Manua
ARA O	MDR	IDA O	HDR 1	MPD	CIA 0

Land Use Category: Institutional E.Afforestation Threshold (Net Tract Area x15%) E =0.40 F.Reforestation Threshold (Net Tract Area x20%) F =0.50

Existing Forest Cover G. Existing Forest Cover within the Net Tract Area G = 0.00 H.Area of Forest above Afforestation Threshold H = 0.00 I.Area of Forest above Reforestation Threshold I =0.00

Break Even Point J.Break Even Point J = 0.00K. Forest Clearing Permitted without Mitigation K = 0.00

Proposed Forest Clearing L.Total Area of Forest to be Cleared L = 0.00M = 0.00M. Total Area of Forest to be Retained Planting Requirements Inside Watershed

N.Reforestation for Clearing above the Reforestation Threshold P.Reforestation for Clearing below the Reforestation Threshold P = 0.00Q.Credit for Retention above the Reforestation Threshold Q = 0.00R = 0.00R.Total Reforestation Required 5. Total Afforestation Required 5 = 0.40T=0.40T. Total Reforestation and Afforestation Requirement U.75% of Total Obligation (Retention + Planting) U = 0.30V.Planting Required Onsite to meet 75% Obligation V = 0.30

Planting Requirements Outside Watershed W. Total Planting within Development Site Watershed W = 0.00X = 0.40X.Total Afforestation Required Y.Remaining Planting within Watershed for Reforestation Credit Y = 0.00Z.Reforestation for Clearing above the Reforestation Threshold AA. Reforestation for Clearing below the Reforestation Threshold AA=0.00 88. Credit for Retention above the Reforestation Threshold CC. Total Reforestation Required CC=0.00 DD = 0.00

DD.Total Afforestation and Reforestation Requirement FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS nnial square office park — 10272 baltimore national piki (410) 461 - 2055

PROVED:	HOWARD	COUNTY	DEPARTMENT OF	PLANNING AND	ZONING
	,				8/4/21 Date
rief, Divis	ion of La	and Deve	lopment		Dațe

# BINAL PLAN

# GIBN OAKS PLACE

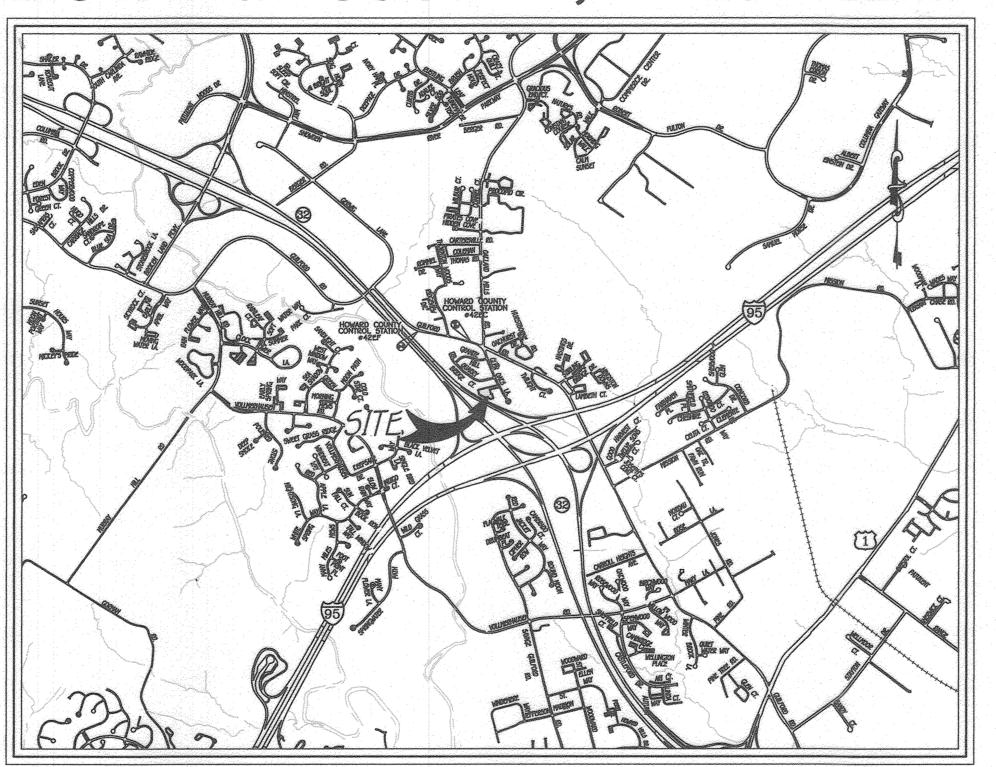
LOTS 1 THRU 18, PARCEL A' &

OPEN SPACE LOTS 20 thru 22 ZONING: R-SA-8 (HIGH DENSITY RESIDENTIAL) DISTRICT

TAX MAP No. 42 GRID No. 16 & 17 PARCEL Nos. 66, 353, 361

18 385 10. THERE ARE EXISTING DWELLINGS, SHEDS AND STRUCTURES ON TAX PARCELS 66, 353, 361
AND 365 TO BE REMOVED. THERE ARE NO HISTORIC STRUCTURES LOCATED ON THIS SITE.

18 11. SITE IS NOT ADJACENT TO A SCENIC ROAD. SIXTH DIECTION DISTRICT HOWARD COUNTY, MARYLAND



HOWARD COUNTY HOWARD COUNTY GEODETIC SURVEY CONTROL NO. 42EF GEODETIC SURVEY CONTROL NO. 42EC N 545,623.351 E 1,359,044.500 N 545,416,990 E 1,360,140,442 ELEVATION: 347.010' ELEVATION: 365,383'

F-18-121, 5-19-010, ECP-19-046, WP-19-116, P-20-005, WP-21-036

& WP-23-016

SCALE: 1" = 2,000"

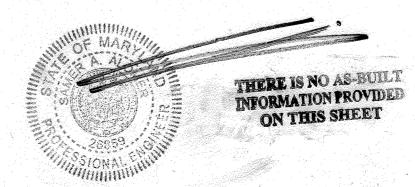
A. TOTAL SITE: TAX MAP 42 PARCELS 66, 353, 301, & 305 (Two Parcels) B. TOTAL SITE AREA: (0.50 + 0.51 + 0.82 + 0.65) = 2.48 Ac C. OPEN SPACE:

REFER TO HOWARD CO. ADC MAP 33-E8 & 40-E1

(1) REQUIRED OPEN SPACE = 2.40 Ac. x 25% = 0.62 Ac. (2) TOTAL OPEN SPACE PROVIDED = 1.57 Ac. (3) TOTAL CREDITED OPEN SPACE PROVIDED = 0.75 AC

(1) REQUIRED REC AREA = 7,600 Sq.FT 400 5q.Ft. / SFD x 19 SFA = 7,600 5q.Ft. (2) PROVIDED REC AREA = 9,160 Sq.Ft. E. DENSITY ALLOWED: 2.40 Ac x 8 UNITS/NET ACRE = 19.84 = 19 UNITS

F. DENSITY PROVIDED: 19 UNITS



#### GENERAL NOTES

1. TAX MAP 42, PARCEL 301 ZONED R-SA-0 PER 10/06/13 COMPREHENSIVE ZONING MAP. TAX MAP 42, PARCEL 353 ZONED R-SA-0 PER ADMINISTRATIVE ADJUSTMENT NO. 10-001 APPROVED BY THE PLANNING DIRECTOR ON APRIL 9, 2016. COORDINATES BASED ON NAD '83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD

COUNTY GEODETIC CONTROL STATIONS NO. 42EC AND NO. 42EF. STA. 42EC N 545,416.990 E 1,360,140.442 ELEV.= 365.383 STA. 42EF N 545,623.351 E 1,359,044.500 ELEV.= 347.010

THIS PLAN IS BASED ON FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT FEBRUARY, 2018 BY FISHER, COLLINS AND CARTER, INC. 4. B.R.L. DENOTES BUILDING RESTRICTION LINE

ALL AREAS ARE MORE OR LESS (+) DISTANCES SHOWN ARE BASED ON SURFACE MEASUREMENT AND NOT REDUCED TO NAD '83 DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR

ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM) REDUIREMENTS A) WINTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE). B). SURFACE - SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING.

C). GEOMETRY - MAXIMUM 15% GRADE. MAXIMUM 10% GRADE CHANGE AND 45-FOOT D), STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING): E). DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO DEPTH OVER SURFACE; F). STRUCTURE CLEARANCE - MINIMUM 12 FEET;

G). MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.

PROPERTY SUBJECT TO PRIOR DEPARTMENT OF PLANNING AND ZONING FILE NO'S: 5-19-010,

ECP-18-039, WP-19-012, ECP-19-046, WP-19-0W, P-20-005, F-18-121, WP-21-036 A-18-001,

NO CEMETERIES EXIST ON THE SUBJECT PROPERTY BASED ON VISUAL OBSERVATION OR LISTED IN AVAILABLE HOWARD COUNTY CEMETERY INVENTORY MAP.

12. 100 YEAR FLOODPLAIN, WETLANDS, STREAM(S) AND/OR THEIR BUFFERS. AND STEEP SLOPES

13. THIS SUBDIVISION IS SUBJECT TO SECTION 18.1228 OF THE HOWARD COUNTY CODE. PUBLIC WATER AND PUBLIC SEWER SERVICE HAS BEEN GRANTED UNDER THE TERMS AND PROVISIONS, WHIED IN DEVICEOPER AGREEMBLY 24-5019-0.

14. THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL NO. 45-2003 AND THE 10/06/13 COMPREHENSIVE ZONING PLAN. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION OR BUILDING/GRADING PERMIT.

15. THE 65 DBA NOISE CONTOUR LINE WAS OBTAINED FROM A NOISE STUDY PREPARED BY MARS GROUP, DATED APRIL, 2019 AND IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL, CHAPTER 5, REVISED FEBRUARY, 1992 AND CAN NOT BE CONSIDERED TO EXACTLY LOCATE THE 65 DBA NOISE EXPOSURE. THE 65 DBA NOISE CONTOUR LINE REQUIREMENT WAS ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS, BUILDERS AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT. NOISE MITIGATION WILL BE PROVIDED BY A NOISE WALL ALONG MARYLAND ROUTE 32. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.

. EXISTING PUBLIC WATER IS BASED ON CONTR. NO. 178-W, DRAINAGE AREA: LITTLE PATUXENT. 18. EXISTING PUBLIC SEWER IS BASED ON CONTR. NO. 609-5. DRAINAGE AREA: LITTLE PATUXENT. 19. THIS PROPERTY IS NOT LOCATED IN A HISTORIC DISTRICT AND THERE ARE NO HISTORIC

STRUCTURES WITHIN THE LIMIT OF THE PLAN. 20. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL, FINANCIAL SURETY IN THE AMOUNT OF \$17,700.00 FOR THE REQUIRED 48 SHADE TREES @ \$300/SHADE TREE AND 22 EVERGREEN TREES @ \$150/EVERGREEN TREE SHALL BE POSTED AS PART OF THE DEVELOPERS AGREEMENT FOR THIS PLAN (F-21-017).

21. THE LOTS CREATED BY THE FINAL RECORD SUBDIVISION PLAT ARE SUBJECT TO A FEE OR ASSESSMENT TO COVER OR DEFRAY ALL OR PART OF THE DEVELOPERS COST OF THE INSTALLATION OF THE WATER AND SEWER FACILITIES, PURSUANT TO THE HOWARD COUNTY CODE SECTION 18.112. THIS FEE OR ASSESSMENT, WHICH RUNS WITH THE LAND, IS A CONTRACTUAL OBLIGATION BETWEEN THE DEVELOPER AND EACH OWNER OF THIS PROPERTY AND IS NOT IN ANY WAY A FEE OR ASSESSMENT OF HOWARD COUNTY.

22. OPEN SPACE LOTS 20,21, \$ 22 ARE TO BE OWNED AND MAINTAINED BY THE GLEN OAKS PLACE HOMEOWNERS ASSOCIATION, INC. 23. A COMMUNITY MEETING WAS CONDUCTED ON MARCH 4, 2019 FOR THE PURPOSE OF THE DEVELOPER TO PROVIDE INFORMATION TO THE COMMUNITY REGARDING THE PROPOSED

RESIDENTIAL DEVELOPMENT AND TO ALLOW THE COMMUNITY TO ASK QUESTIONS AND TO MAKE

COMMENTS, PER SECTION 16.128(D) OF THE SUBDIVISION REGULATIONS. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP, DATED FEBRUARY 2018, AND WAS APPROVED ON JUNE 27, 2019. 25. SUBDIMISION IS SUBJECT TO SECTION 104.0.F. OF THE ZONING REGULATIONS. AT LEAST 10% OF THE DWELLING UNITS SHALL BE MODERATE INCOME HOUSING UNITS (M.I.H.U.) OR AN ALTERNATIVE COMPLIANCE WILL BE PROVIDED. THE DEVELOPER SHALL EXECUTE A M.I.H.U. AGREEMENT WITH THE DEPARTMENT OF HOUSING TO INDICATE HOW THE M.I.H.U. REQUIREMEN WILL BE MET. THE MIHUL AGREEMENT AND COVENANTS WILL BE RECORDED SIMULTANEOUSLY

WITH THE FINAL RECORD PLAT IN THE LAND RECORDS OFFICE OF HOWARD COUNTY. MARYLAND. THIS DEVELOPMENT WILL MEET M.I.H.U. ALTERNATIVE COMPLIANCE BY A PAYMENT OF A FEE-IN-LIEU TO THE DEPARTMENT OF HOUSING FOR EACH REQUIRED UNIT. MODERATE INCOME HOUSING UNIT (M.I.H.U.) TABULATION: M.I.H.U. REQUIRED = (19 LOTS X 10%) = 1.9 M.I.H.U.

M.I.H.U. PROPOSED = 2 M.I.H.U.AN EXECUTED MI.H.U. AGREEMENT & COVENANTS WITH THE HOWARD COLUMY HOUS DEPARTMENT HAS BEEN COMPLETED AND RECORDED SIMULTANEOUSLY WITH THE FINAL

26. THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS ALTERNATIVE COMPLIANCE HAS BEEN APPROVED. 27. APPROVAL OF A SITE DEVELOPMENT PLAN IS REQUIRED FOR THE DEVELOPMENT OF ALL RESIDENTIAL LOTS WITHIN THIS SUBDIVISION PRIOR TO ISSUANCE OF ANY GRADING OR BUILDING PERMITS FOR NEW HOUSE CONSTRUCTION IN ACCORDANCE WITH SECTION 16.155 OF

THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. 26. OPEN SPACE TABULATION: OPEN SPACE REQUIRED = 0.62 AC. (2.40 AC. X 25%) TOTAL OPEN SPACE PROVIDED = 1.57 AC. 1). TOTAL CREDITED OPEN SPACE = 0,75 AC TOTAL NON-CREDITED OPEN SPACE = 0.81 AC. 29. RECREATIONAL OPEN SPACE TABULATION: REQUIRED RECREATIONAL AREA = 7,600 50 FT

(400 SQ. FT./UNIT X 19 UNITS) PROVIDED RECREATIONAL AREA = 9.160 SQ. FT. 30. ARTICLES OF INCORPORATION FOR THE GLEN OAKS PLACE HOMEOWNERS ASSOCIATION, INC. WILL BE FILED WITH THE MARYLAND STATE DEPARTMENT OF ASSESSMENTS AND TAXATION. 31. THIS PROJECT IS SUBJECT TO A DESIGN MANUAL WAIVER TO DESIGN MANUAL, VOLUME IV, DETAIL R-9.02 WHICH SPECIFIES THE STANDARD DETAIL FOR A PRIVATE OFFSET TEE TURN AROUND AND A DESIGN MANUAL WAIVER TO DESIGN MANUAL WAIVER, VOLUME III, SECTION

2.3.(A)(3)(e) WHICH SPECIFIES THE REQUIREMENTS FOR A PERMANENT NON-THROUGH STREET, APPROVED ON APRIL 25, 2020, 32. THIS PROJECT IS SUBJECT TO WP-19-116. APPROVAL OF WP-19-116, AN ALTERNATIVE COMPLIANCE OF SECTION 16.1205(a)(7) ON-SITE FOREST RETENTION AND SECTION 16.120(c)(4) MINIMUM FRONTAGES BY THE PLANNING DIRECTOR, DATED JUNE 25, 2019 WAS SUBJECT TO THE FOLLOWING CONDITIONS:

a. SUBMISSION OF A PRELIMINARY PLAN TO CREATE THE NINETEEN (19) NEW SINGLE FAMILY ATTACHED FEE-SIMPLE LOTS FOR REVIEW BY THE SRC. b. A HOMEOWNERS ASSOCIATION (HOA) SHALL BE CREATED FOR THE SINGLE FAMILY ATTACHED (SFA) DEVELOPMENT IN ACCORDANCE WITH SECTION 16.121(c) OF THE

HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. . THE PRIVATE DRIVE WILL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED DESIGN MANUAL WAIVER REQUIREMENTS ISSUED BY DEVELOPMENT ENGINEERING DIVISION. FURTHERMORE THE DRIVE MST BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH ANY REQUIREMENTS PROVIDED BY THE DEVELOPMENT ENGINEERING DIVISION, DEPARTMENT OF PUBLIC WORKS AND THE DEPARTMENT OF FIRE AND RESCUE SERVICES AS PART OF THE PRELIMINARY AND FINAL PLAN

d. THE PRIVATE ROADS SHALL BE MAINTAINED AND REPAIRED BY THE HOA. e. A USE IN COMMON ACCESS EASEMENT, AND MAINTENANCE AGREEMENT MUST BE PREPARED AND RECORDED FOR LOTS 1-19, OPEN SPACE 20, AND EXISTING PARCEL 353 AT THE FINAL PLAN STAGE.

a. PROVIDE (12) NATIVE SPECIES REPLACEMENT TREES OF 2 ½" TO 3" CALIPER ON SITE IN PLACE OF THE REMOVED SPECIMEN TREES ST-1, ST-2, ST-6, ST-9, 5T10 AND 5T11 AS MITIGATION. THE MITIGATED PLANTINGS ARE TO BE PLACED ON HE PROPERTY TO ENHANCE THE LANDSCAPE SCREENING b. SPECIMEN TREE ST-3 SHOULD BE PRESERVED IF AT ALL POSSIBLE. PLEASE PROVIDE TREE PROTECTION MEASURES ON SUBSEQUENT PLAN SUBMISSION

INCLUDING TREE PROTECTION FENCE AND NOTES REGARDING THE USE OF SELECTIVE ROOT PRUNING FOR GRADING AND CONSTRUCTION WITH THE CRZ. . ADD THE ALTERNATIVE COMPLIANCE REQUEST NUMBER, PURPOSE, SECTION, DATE, AND CONDITIONS ON ALL SUBSEQUENT PLAN SUBMISSIONS

33. PLAN SUBJECT TO AN ADMINISTRATIVE ADJUSTMENT TO THE DISTRICT MAP FOR DRAFTING ERRORS AND OTHER CORRECTIONS (AA-18-001) WHICH THE PLANNING DIRECTOR ON APRIL 9, 2010 CORRECTED THE ZONING OF THE PROPERTY AT 9500 GLEN OAKS LANE FROM NT (NEW TOWN) TO R-5A-8 (RESIDENTIAL: SINGLE FAMILY ATTACHED)

34. A LETTER OF FINDINGS DATED JANUARY, 2010 PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DETERMINED THERE ARE NO WETLANDS, WETLAND BUFFERS, STREAM AND STREAM

BUFFERS LOCATED WITHIN THE LIMIT OF THIS SUBDIVISION. 35. FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL, AND ROAD MAINTENANCE are provided to the junction of the fubuc road RW une and broad oaks want,

36. DECLARATION OF COVENANTS AND RESTRICTIONS FOR GLEN GAKS PLACE HOMEOWNER

ASSOCIATION, INC. ARE RECORDED SIMULTANEOUSLY WITH THE FINAL RECORD PLAT 37. ANY EXISTING WELLS AND/OR SEPTIC SYSTEMS MUST BE PROPERLY ABANDONED AND NOTIFICATION OF SUCH SUBMITTED TO THE HOWARD COUNTY HEALTH DEPARTMENT. 38. ONLY PASSIVE RECREATION IS ALLOWED WITHIN THE PORTION OF THE RECREATIONAL AREA

SHOWN THAT FALLS WITHIN THE 20 FOOT STRUCTURE AND USE SETBACK. 39. THIS PROJECT IS SUBJECT TO WP-19-012, APPROVAL OF WP-19-012, AN ALTERNATIVE COMPLIANCE OF SECTION 16.146(A) SKETCH PLAN & PRELIMINARY FOUIVALENT SKETCH PLAN. SECTION 16.1205(A)(7) ON-SITE FOREST RETENTION, AND SECTION 16.120(C)(4) MINIMUM FRONTAGES IS SUBJECT TO THE FOLLOWING CONDITIONS:

a. SUBMISSION OF A SUBDIVISION PLAT TO CREATE THE EIGHT (8) NEW SINGLE FAMILY ATTACHED FEE-SIMPLE LOTS FOR REVIEW BY THE SRC AND RECORDED WITH HOWARD COUNTY LAND RECORDS.

b. A HOMEOWNERS ASSOCIATION (HOA) SHALL BE CREATED FOR THE SINGLE FAMILY ATTACHED (SFA) DEVELOPMENT IN ACCORDANCE WITH SECTION 16.121(C) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. THE PRIVATE DRIVE WILL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED DESIGN MANUAL REQUIREMENTS ISSUED BY THE DEVELOPMENT ENGINEERING

DIVISION, FURTHERMORE THE DRIVE MUST BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH ANY REQUIREMENTS PROVIDED BY THE DEVELOPMENT

ENGINEERING DIVISION, DEPARTMENT OF PUBLIC WORKS, AND THE DEPARTMENT O FIRE RESCUE SERVICES AS PART OF THE FINAL PLAN PROCESS. THE PRIVATE ROADS SHALL BE MAINTAINED AND REPAIRED BY THE HOA e. A USE IN COMMON ACCESS EASEMENT AND MAINTENANCE AGREEMENT E PREPARED AND RECORDED FOR PROPOSED LOTS 1-6, OPEN SPACE LOT 7, AND PROVIDE (6) REPLACEMENT TREES OF 2 1/2" TO 3" CALIPER ON SITE IN PLACE OF THE REMOVED SPECIMEN TREES 5T-1, ST-2, ST-6 AS MITIGATION. THE MITIGATED

PLANTINGS ARE TO BE PLACED ON THE PROPERTY TO ENHANCE THE LANDSCAPE SPECIMEN TREE ST-3 SHOULD BE PRESERVED IF AT ALL POSSIBLE. PLEASE PROVIDE TREE PROTECTION MEASURES ON SUBSEQUENT PLAN SUBMISSIONS INCLUDING THE PROTECTION FENCE AND NOTES RECARDING THE LISE OF SELECTIVE ROOT PRUNING FOR GRADING AND CONSTRUCTION WITHIN THE CRZ

AMEND THE EXHIBIT TO MARK ALL OF THE SPECIMEN TREES TO BE REMOVED. ADD THE ALTERNATIVE COMPLIANCE REQUEST NUMBER, PURPOSE, SECTION, DATE, AND CONDITIONS ON ALL SUBSEQUENT PLAN SUBMISSIONS.

40. DENSITY TABULATION: GROSS AREA OF SITE = 2.483 ACRES NET AREA OF SITE = 2.483 ACRES a. FLOODPLAIN AREA = 0.000 ACRES

b. STEEP SLOPES GREATER THAN 25% = 0.000 ACRES MAXIMUM UNITS ALLOWED = 19 UNITS (2.463 ACRES X & UNITS/NET ACRE)

TOTAL DENSITY UNITS PROPOSED = 19 UNITS 41. THE STORMWATER MANAGEMENT FACILITIES LOCATED ON OPEN SPACE LOTS 20 AND 21 ARE MAINTAINED BY THE GLEN OAKS PLACE HOMEOWNERS ASSOCIATION, INC. 42. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAMS OR THEIR BUFFERS, FOREST

CONSERVATION EASEMENT AREAS AND 100-YEAR FLOODPLAIN. 43. 50IL5 INFORMATION IS TAKEN FROM NRCS WEB SOIL SURVEY 44. TOPOGRAPHY INFORMATION IS BASED ON A FIELD RUN SURVEY PREFORMED BY FISHER. COLLINS AND CARTER, INC. DATED FEBRUARY, 2018. 45. STORMWATER MANAGEMENT WILL BE IN ACCORDANCE WITH THE MDE STORM DRAIN DESIGN

MANUAL, VOLUMES I & II, REVISED 2009. USE OF M-6 MICRO BIO-RETENTION AND A-2 PERMEABLE PAVING ARE PROPOSED FOR THIS PROJECT 46. THERE ARE NO CREDITED STEEP SLOPES OF 25% OR GREATER ON-SITE. THERE ARE NO NON-CREDITED STEEP SLOPES PER SECTION 16.116(b)(1)(i) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.

47. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-000-257-7777 AT LEAST 40 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE. 48. A PRIVATE STREET NAME SIGN(SNS) ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE, CONTACT

HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATES. 49. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARD AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF 50. TRAFFIC CONTROL DEVICES:

a) THE R1-1 ("STOP") SIGN AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED. b) THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF THE TRAFFIC CONTROL DEVICES. c) ALL TRAFFIC CONTROL DEVICES AND LOCATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" d) ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY

RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORMED ("QUICK PUNCH"), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL N EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL, A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST. e) STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME III (1993) AND AS

MODIFIED BY "CHIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS CHURE 1993) A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREETLIGHT AND ANY 51. THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT. TO FULFILL THE 0.40 ACRES (17,424 SQ. FT.) OF AFFORESTATION REQUIREMENT, THE DEVELOPER HAS PAID A FEE-IN-LIEU IN THE AMOUNT

52. THIS PROJECT IS SUBJECT TO WP-21-036, PURSUANT TO SECTION 16.1216, THE DIRECTOR OF THE DEPARTMENT OF PLANNING AND ZONING, DIRECTOR OF THE DEPARTMENT OF RECREATION AND PARKS AND ADMINISTER OF THE OFFICE OF COMMUNITY SUSTAINABILITY CONSIDERED AND APPROVED THE APPLICANTS REQUEST FOR A VARIANCE WITH RESPECT TO SECTION 16.1205(A)(3) OF THE HOWARD COUNTY FOREST CONSERVATION REGULATIONS. THE PURPOSE IS TO ALLOW THE REMOVAL OF SIX SPECIMEN TREES. THE DIRECTORS DELIBERATED

THE APPLICATION IN A MEETING ON OCTOBER 15, 2020. DIRECTORS ACTION: APPROVAL OF THIS ALTERNATIVE COMPLIANCE IS SUBJECT TO THE FOLLOWING CONDITIONS: a. PROVIDE (12) REPLACEMENT TREES OF 3' DBH ON SITE IN PLACE OF THE REMOVED SPECIMEN TREES ST-1, ST-2, ST-6, ST-10, AND ST-11 AS MITIGATION. THE MITIGATED PLANTINGS ARE TO BE PLACED ON THE PROPERTY TO ENHANCE THE LANDSCAPE SCREENING. ANOTHER ALTERNATIVE COMPLIANCE REQUEST MUST BE SUBMITTED TO PROPOSE THE REMOVAL OF ANY ADDITIONAL SPECIMEN TREES, IF AT ALL POSSIBLE THE SPECIMEN TREES SHOULD BE

PRESERVED, AND TREE PROTECTION MEASURES PROVIDED DURING CONSTRUCTION. b. SPECIMEN TREE ST-3 SHOULD BE PRESERVED AND APPROPRIATELY PROTECTED DURING CONSTRUCTION. PLEASE PROVIDE TREE PROTECTION MEASURES ON SUBSEQUENT PLAN SUBMISSIONS INCLUDING TREE PROTECTION FENCE AND NOTES REGARDING THE USE OF SELECTIVE ROOT PRUNING FOR GRADING AND CONSTRUCTION WITHIN THE CRZ. c. THE ALTERNATIVE COMPLIANCE FILE NUMBER, REQUESTED SECTIONS, DECISION DATE AND CONDITIONS OF APPROVAL SHALL BE INDICATED ON THE PLAT AS A

53. THE PRIVATE VARIABLE WIDTH USE-IN-COMMON ACCESS, DRIVEWAY EASEMENT AND MAINTENANCE AGREEMENT FOR THE USE AND BENEFIT OF LOTS I THRU 19 AND OPEN SPACE

LOTS TO THRU 22 IS RECORDED SIMULTANEOUSLY WITH THIS RAN. 54, SPEED STUDY DATED PEBRUARY, 2018 BY MARG GROUP AND APPROVED ON JUNE 2019 55. THIS SUBDIVISION IS SUBJECT TO SECTION 18.1228 OF THE HOWARD GOUNTY CODE.

PUBLIC WATER AND SEWER SCRVICE HAS BEEN GRANTED UNDER THE TERMS AND PROVISIONS, THEREOF, EFFECTIVE NOVEMBER 14, 2022, ON WHICH DATE DEVELOPER AGREEMENT 24-5009-D WAS FILED AND ACCEPTED.

WP-22-016 Which On October 12, 2022 The Department Of Planning mined That You Have Demonstrated 16.144(g) Would Result In An Unrenation Is Made With Consideration Of the Management of the Management of the Management of Address, with Conditions.

At 1 signation.

A Revision Plat To F-21-017 Must be Submitted To update Lot 19 To Parcel At.

A Redline Revision To SDP-21-046 Must be Completed To Update The Parcel Information, General Notes and Charts For The Additional Unit, and The Structure Information For The Units Being Constructed On Parcel At.

On All Future Plan Submissions, A Brief Description Of This Alternative Compliance Petition Shall be Included As A General Note To Include Request(s), Section(s) Of The Regulations, Action, and Date.

TITLE SHEET RESIDENTIAL SINGLE FAMILY ATTACHED GLEN OAKS PLACE

LOTS I THRU 18, PARCEL'A' & OPEN SPACE LOTS 20 thru 22

ZONED: R-SA-8 PREVIOUS HOWARD COUNTY FILES: ECP-18-039, F-18-121.

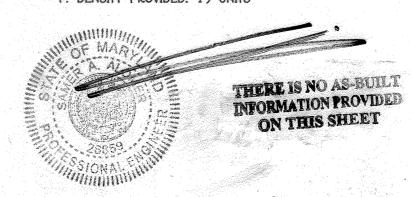
WP-19-012, & AA-18-001.

TAX MAP NO.: 42 GRID NO.: 16 & 17 PARCEL NO'S.: 66, 353, 381, & 385 HOWARD COUNTY, MARYLAND SIXTH ELECTION DISTRICT

SCALE: AS SHOWN DATE: JUNE, 2021 5HEET 10F 14 F-21-017

TABULATION SUMMARY

(4) TOTAL NON-CREDITED OPEN SPACE PROVIDED = 0.81 AC D. RECREATIONAL AREA





ADDRESS CHART

9570 GLEN OAKS LANE

9572 GLEN OAKS LANE

9574 GLEN OAKS LANE

9576 GLEN OAKS LANE

9578 GLEN OAKS LANE

9580 GLEN OAKS LANE

9610 ACORN COURT

9608 ACORN COURT

9606 ACORN COURT

9604 ACORN COURT

9602 ACORN COURT

9600 ACORN COURT

9501 BROAD OAKS LANE

9503 BROAD OAKS LANE

9505 BROAD OAKS LANE

9509 BROAD OAKS LANE

9511 BROAD OAKS LANE

9513 BROAD OAKS LANE

9515 BROAD OAKS LANE

9517 BROAD OAKS LANE

SITE ANALYSIS DATA CHART

A. TOTAL AREA OF THIS SUBMISSION = 2.48 AC. ±

PRESENT ZONING DESIGNATION = R-5A-6.

PROPOSED USE: SINGLE FAMILY ATTACHED HOUSING

OPEN SPACE TABULATION SEE TABULATION SUMMARY THIS SHEET.

RECREATIONAL OPEN SPACE SEE TABULATION SUMMARY THIS SHEET.

N. TOTAL AREA OF WETLANDS (INCLUDING BUFFER) LOCATED ON SITE = 0.0 AC. \*

HOWARD COUNTY FILES: ECP-18-039, WP-19-012, AA-18-001,

TOTAL NUMBER OF UNITS PROPOSED: 19 UNITS

BUILDING COVERAGE OF SITE: 0.38 AC+ OR 15%

 $(2.48 \text{ Ac} - (0.0 \text{ Ac} + 0.015 \text{ Ac})) = 2.465 \text{ AC} \pm 0.015 \text{ Ac}$ 

TOTAL AREA OF FLOODPLAIN LOCATED ON SITE 0.0 AC.

TOTAL AREA OF SLOPES IN EXCESS OF 15% = 0.041 AC\*

TOTAL AREA OF SLOPES IN EXCESS OF 25% = 0.015 AC+

(TOTAL SITE AREA - FLOODPLAIN - STEEP SLOPES AREA)

LIMIT OF DISTURBED AREA = 2.48 Ac. ±

M. NET TRACT AREA = 2.465 AC.

TOTAL FOREST 0.00 Ac. ±

TOTAL GREEN OPEN AREA = 1.39 Ac. ±

TOTAL IMPERVIOUS AREA = 1.07 Ac. ±

. AREA OF ERODIBLE SOILS = 0.056 Ac. ±

NUMBER | STREET ADDRESS

PROFESSIONAL CERTIFICATION HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/23.

SERE IS NO AS REPORT 2 REVISE TITLE & ADD NAIVER PETITION NOTE 1 REAGE GENERAL NOTES DATE

OWNERS GLEN OAKS DEVELOPMENT COMPANY, LLC 8318 FORREST STREET **SUITE 200** ELLICOTT CITY, MARYLAND 21043 ATTN: MR DONALD R. REUWER, JR 410-707-7054

DEVELOPER GLEN OAKS DEVELOPMENT COMPANY, LLC 8318 FORREST STREET **SUITE 200** ELLICOTT CITY, MARYLAND 21043 ATTN: MR DONALD R. REUWER, JR. 410-707-7054

M.I.H.U. Note: Parcel 'A' Is Subject To Providing

One (1) Moderate Income Housing Unit (M.I.H.U.)

And One (1) Low Income Housing Unit (L.I.H.U.)

	50ILS LEGEND		
50IL	NAME	CLA55	Kw
Fa	FALLSINGTON SANDY LOAM, O TO 2 PERCENT SLOPES	0	0.02
LoB	LEGORE-MONTALTO-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	В	0.02
UaF	UDORTHENTS, HIGHWAY, O TO 65 PERCENT SLOPES	X	

#### Specimen Tree Descriptions are as follows:

Key	Species,	Size	CRZ	Comments	Status
		(dBH)	(Ft		
			radius)		
ST-1	Silver Maple	46.5	69.75	Fair condition, some trunk rot. CRZ impacted by parking	TO BE REMOVED
ST-2	Silver Maple	47.5	71.25	Poor condition, trunk rot	TO BE REMOVED
ST-3	Silver Maple	38.5	57.75	Good Condition	To Remain
ST-4	Silver Maple	39	58.5	Good Condition	To Remain
ST-5	Silver Maple	35	52.5	Good Condition	To Remain
ST-6	Red Maple	30	45.0	Poor Condition, severe trunk rot	TO BE REMOVED
ST-7	Tulip Poplar	34.5	51.75	Good Condition Offsite	To Remain
ST-8	Sour Cherry	33.5	50.25	Poor condition, trunk rot and dieback Offsite	To Remain
ST-9	Norway Maple	34	51	Poor condition, notable rot, multi-stemmed	TO BE REMOVED
ST-10	Norway Maple	35.5	53.25	Fair condition, some rot noted	TO BE REMOVED
ST-11	Silver Maple	38	57	Fair condition, multi- stemmed, cabled	TO BE REMOVED

	LEGEND
SYMBOL	DESCRIPTION
342	EXISTING CONTOUR 2' INTERVAL
— 340 —	EXISTING CONTOUR 10' INTERVAL
-342-	PROPOSED CONTOUR 2' INTERVAL
-340	PROPOSED CONTOUR 10' INTERVAL
×362.2	SPOT ELEVATION
L00	LIMIT OF DISTURBANCE
	EXISTING WATER & SEWER UTILITY EASEMENT
	PROPOSED WATER & SEWER UTILITY EASEMENT
18" 5D	EXISTING STORM DRAIN
8"W	EXISITNG WATER
<u> </u>	EXISITNG SEWER
	BUILDING AND DRIVES TO BE RAZED
55F	SUPER SILT FENCE
	SILT FENCE
	DENOTES PERMEABLE PAVING
W X	DENOTES EXISTING TREES TO BE REMOVED
<b>第</b>	DENOTES EXISTING TREES TO REMAIN
/фанар масической рабопрости расстания оперативня станав.	DENOTES UNMITIGATED DBA NOISE LINE
	DENOTES MITIGATED DBA NOISE LINE

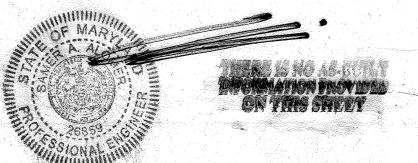
NO. REVISIO 1 REMOVED EX. 24 GENER 2 REMOVE TITLE BLOCK 1/17/23 revision

FISHER, COLLINS & CARTER, INC.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

8/9/21 Date 8/4/4

PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/23.



OWNERS GLEN OAKS DEVELOPMENT COMPANY, LLC

### 8310 FORREST STREET

SUITE 200

ELLICOTT CITY, MARYLAND 21043

ATTN: MR DONALD R. REUWER, JR.

### 410-707-7054

DEVELOPER GLEN OAKS DEVELOPMENT COMPANY, LLC
0310 FORREST STREET
SUITE 200
ELLICOTT CITY, MARYLAND 21043
ATTN: MR DONALD R. REUWER, JR.
410-707-7054 EXISTING CONDITIONS AND DEMOLITION PLAN RESIDENTIAL SINGLE FAMILY ATTACHED GLEN OAKS PLACE

5cale: 1" = 30'

LOTS 1 THRU 18, PARCEL'A' & OPEN SPACE LOTS 20 thru 22 ZONED: R-5A-8

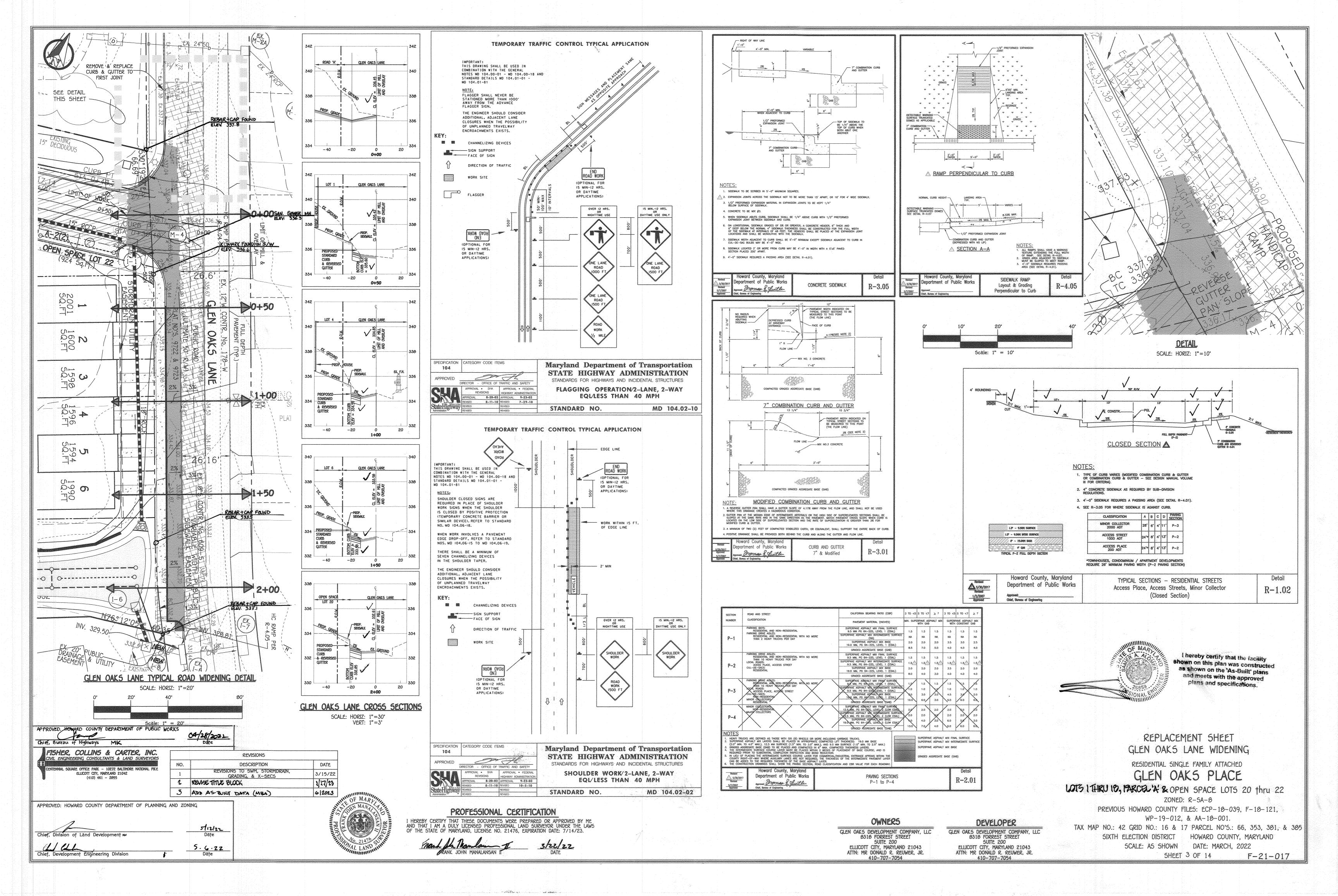
PREVIOUS HOWARD COUNTY FILES: ECP-18-039, F-18-121, WP-19-012, & AA-18-001.

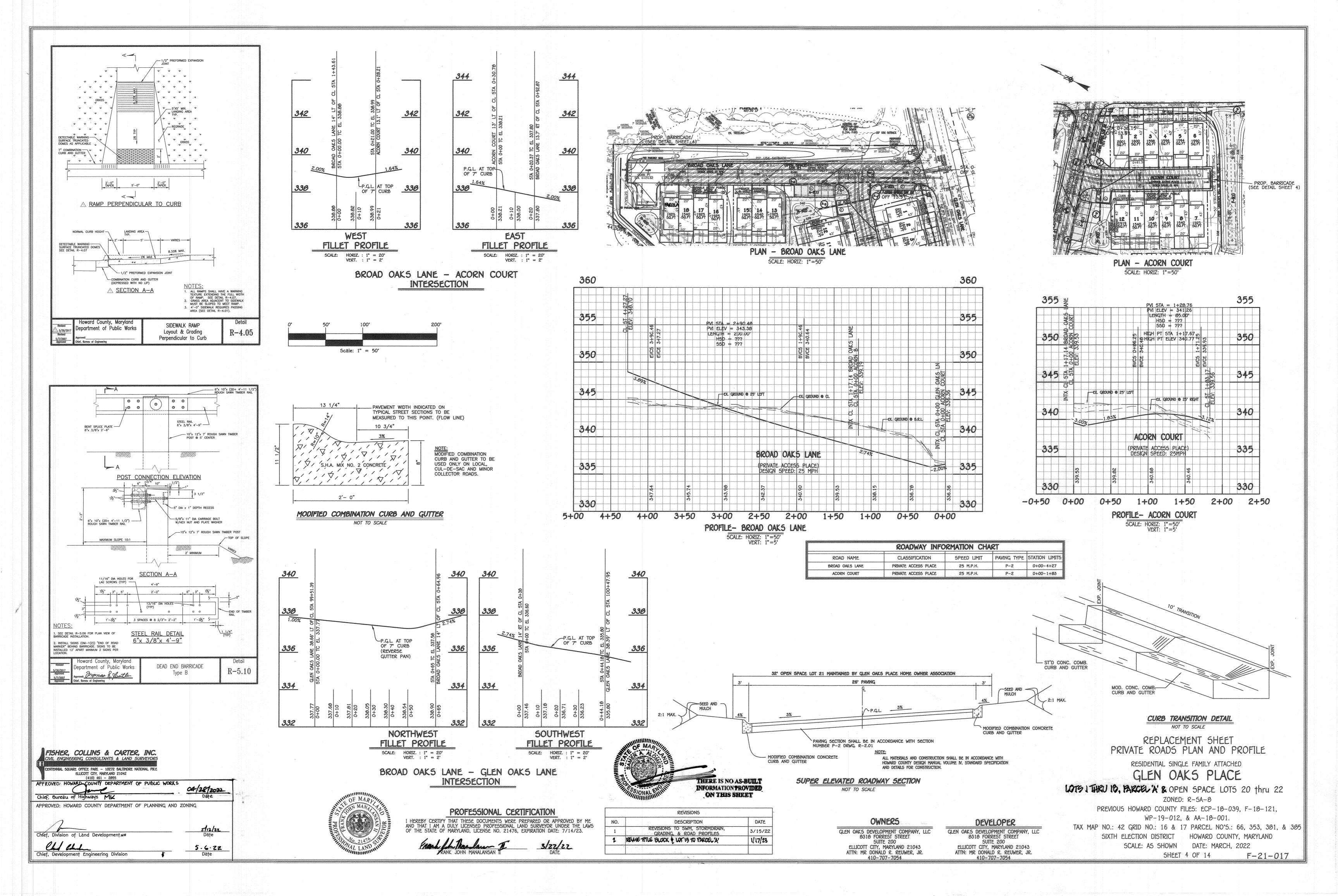
TAX MAP NO.: 42 GRID NO.: 16 & 17 PARCEL NO'S.: 66, 353, 381, & 385 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: JUNE, 2021

SHEET 2 OF 14

F-21-017

N 544,600

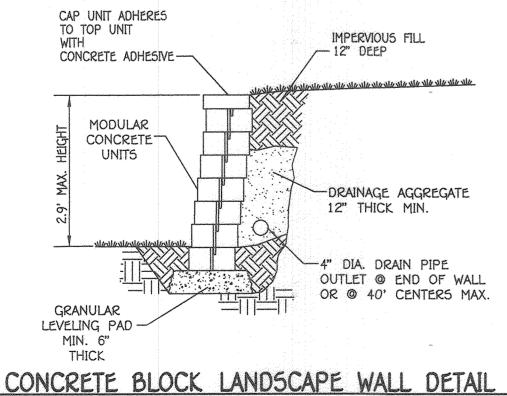




	501L5 LEGEND		
50IL	NAME	CLA55	Kw
Fa	FALLSINGTON SANDY LOAM, 0 TO 2 PERCENT SLOPES	D	0.02
LoB	LEGORE-MONTALTO-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	В	0.02
UaF	UDORTHENTS, HIGHWAY, O TO 65 PERCENT SLOPES	X	

SOIL TYPES TAKEN FROM MAP 28 OF THE SOIL SURVEY OF HOWARD COUNTY, MARYLAND FOUND ON THE HSCD WEBSITE.

	LEGEND
SYMBOL	DESCRIPTION
342	EXISTING CONTOUR 2' INTERVAL
<del>- 340 -</del>	EXISTING CONTOUR 10' INTERVAL
<del>-342</del>	PROPOSED CONTOUR 2' INTERVAL
<del>-340</del>	PROPOSED CONTOUR 10' INTERVAL
×362.2	SPOT ELEVATION
LOD	LIMIT OF DISTURBANCE
	EXISTING WATER & SEWER UTILITY EASEMENT
100 (0	PROPOSED WATER & SEWER UTILITY EASEMENT
<u>18" 50</u>	EXISTING STORM DRAIN
8"W	EXISITNG WATER
8"5	EXISITNG SEWER
	BUILDING AND DRIVES TO BE RAZED
55F	SUPER SILT FENCE
5F	SILT FENCE
	DENOTES PERMEABLE PAVING
XX *	DENOTES EXISTING TREES TO BE REMOVED
表 **	DENOTES EXISTING TREES TO REMAIN
лефия. Египпентий (философиями законнёния починающих метич	DENOTES UNMITIGATED DBA NOISE LINE
	DENOTES MITIGATED DBA NOISE LINE



**REVISIONS** DESCRIPTION 1 REVISIONS TO SWM, STORMDRAIN, GRADING, 3/15/22
2 REVISIONS TO SWM, STORMDRAIN, GRADING, 3/15/22
2 REVISE TITLE BLOCK, 90, LOT 19 TO PARCEL A 1/17/23

FISHER, COLLINS & CARTER, INC.

CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

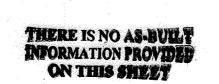
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 04/28/2022 Date Chief, Bureau of Highways MK APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief. Division of Land Development NH Chief, Development Engineering Division 5.6.22

LANDSCAPE DEVELOPER'S CERTIFICATE Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a certification of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

3-22-22 This plan has been prepared in accordance with the provision of Section 16.124 of the Howard County Code and Landscape Manual. Financial surety for the required landscaping will be posted as part of the developor's agreement.

PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/23.



OWNERS GLEN OAKS DEVELOPMENT COMPANY, LLC
0310 FORREST STREET
SUITE 200
ELLICOTT CITY, MARYLAND 21043
ATTN: MR DONALD R. REUWER, JR.
410-707-7054

DEVELOPER GLEN OAKS DEVELOPMENT COMPANY, LLC

8318 FORREST STREET

SUITE 200

ELLICOTT CITY, MARYLAND 21043

ATTN: MR DONALD R. REUWER, JR.

410-707-7054

RESIDENTIAL SINGLE FAMILY ATTACHED GLEN OAKS PLACE LOTS 1 THRU 18, FARCEL'A' & OPEN SPACE LOTS 20 thru 22

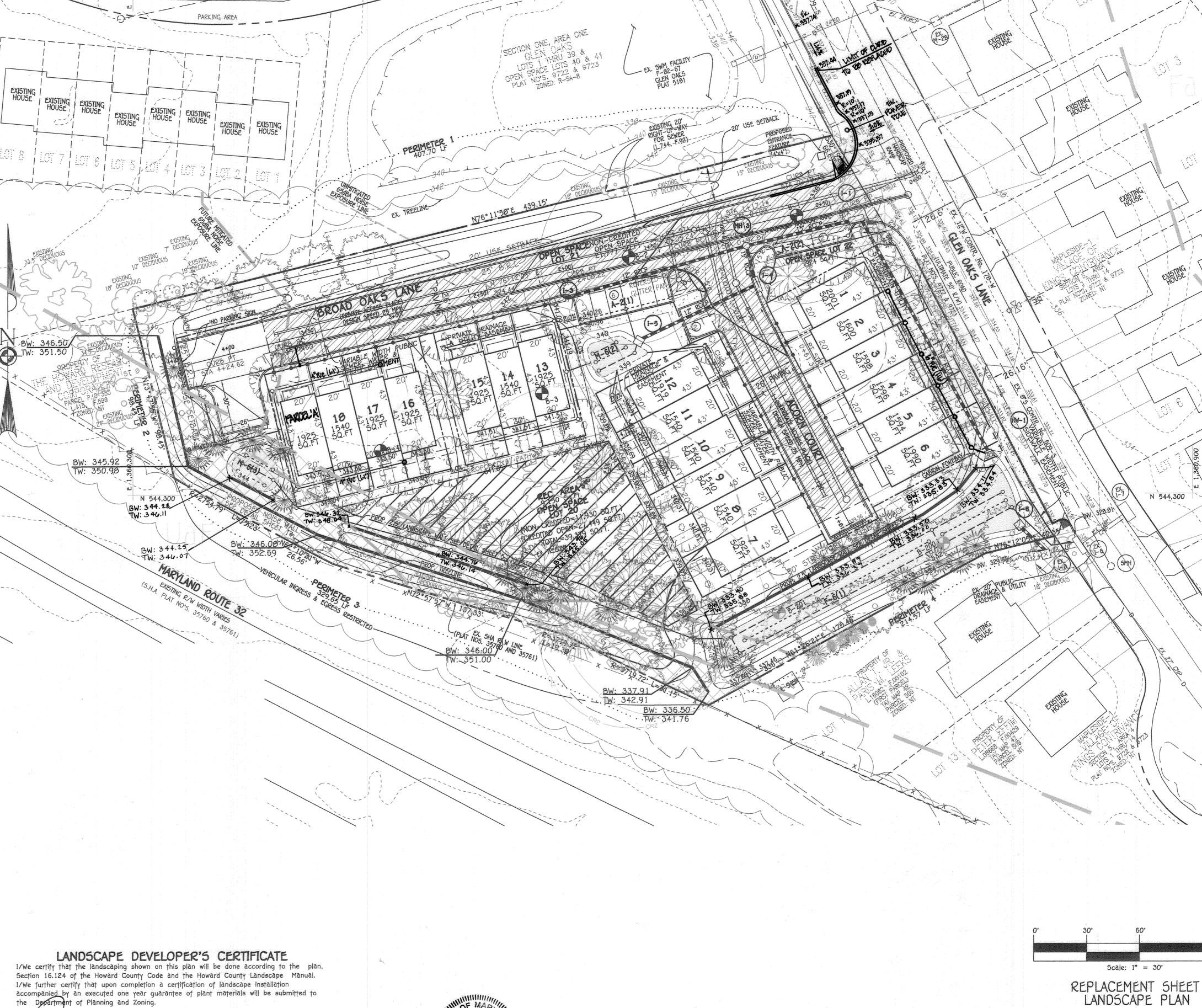
ZONED: R-SA-8

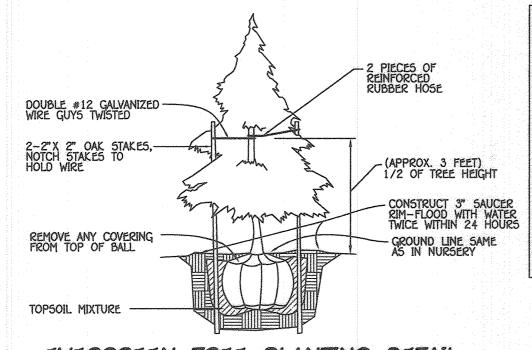
PREVIOUS HOWARD COUNTY FILES: ECP-18-039, F-18-121, WP-19-012, & AA-18-001.

TAX MAP NO.: 42 GRID NO.: 16 & 17 PARCEL NO'S.: 66, 353, 381, & 385 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: MARCH, 2022 SHEET 5 OF 14 F-21-017







	LAND	SCAPING PLANT L	<i>15T</i>
QTY.	KEY	NAME	SIZE
16	and of the second	ACER RUBRUM 'OCTOBER GLORY' (OCTOBER RED MAPLE)	2 1/2" - 3" CALIPER FULL CROWN, B&E
20	THE WAY	PRUNUS SARGENTII (SARGENT CHERRY)	2 1/2" - 3" CALIPER FULL CROWN, B&E
12		HEDGE MAPLE ACER CAMPESTRE	2 1/2" - 3" CALIPER FULL CROWN, B&B
22	***	THUJA STANDISHII X PLICATA (GREEN GIANT ARBORVITAE)	5'-6' HT. 8&8

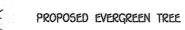
48 SHADE TREES (28 PERIMETER PLANTING, 20 INTERNAL PLANTING) 22 EVERGREEN TREES

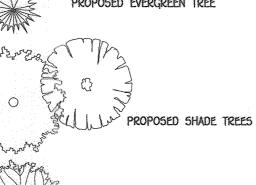
## EVERGREEN TREE PLANTING DETAIL

SCHEDU PARKING INTERNAL LA	G LOT
	SINGLE FAMILY ATTACHED
NUMBER OF PARKING SPACES	8
NUMBER OF TREES REQUIRED (1:10)	1

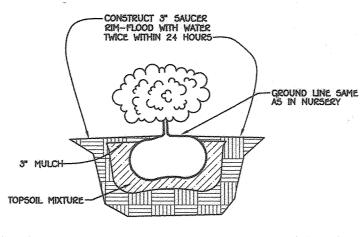
SCHEDULE C RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING						
	SINGLE FAMILY ATTACHED					
NUMBER OF DWELLING UNITS	19					
NUMBER OF TREES REQUIRED (1:DU 5FA) (1:3 DU APTS)	19					

TOTAL NUMBER OF INTERNAL TREES REQUIRED = 20 SCHEDULE 8 (1 TREE) + 5CHEDULE C (19 TREES) = 20





PROPOSED SHADE TREE FOR REPLACEMENT OF S SPECIMEN TREE REMOVAL



SHRUB PLANTING DETAIL

-THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY IN THE AMOUNT OF \$17,700.00 FOR THE REQUIRED 48 SHADE TREES @ \$300/SHADE TREE AND 22 EVERGREEN TREES @ \$150/EVERGREEN TREE SHALL BE POSTED AS PART OF THE DEVELOPERS AGREEMENT FOR THIS PLAN (F-21-017).

-THE OWNER, TENANT, AND THEIR RESPECTIVE AGENTS, IF ANY, SHALL JOINTLY AND SEVERALLY BE RESPONSIBLE FOR THE MAINTENANCE OF THE REQUIRED LANDSCAPING. ALL REQUIRED PLANTINGS SHALL BE MAINTAINED IN GOOD GROWING CONDITION AND, WHENEVER NECESSARY, REPLACED WITH COMPARABLE NEW PLANT MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS.

#### PLANTING SPECIFICATIONS

PLANTS, RELATED MATERIAL, AND OPERATIONS SHALL MEET THE DETAILED DESCRIPTION AS GIVEN ON THE PLANS AND AS DESCRIBED HEREIN.

ALL PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED, SHALL BE NURSERY GROWN, UNIFORMLY BRANCHED, HAVE A VIGOROUS ROOT SYSTEM, AND SHALL CONFORM TO THE SPECIES, SIZE, ROOT AND SHAPE SHOWN ON THE PLANT LIST AND THE AMERICAN ASSOCIATION OF NURSERYMEN (AAN) STANDARDS. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, FREE FROM DEFECTS, DECAY, DISFIGURING ROOTS, SUN SCALD INJURIES, ABRASIONS OF THE BARK, PLANT DISEASE, INSECT PEST EGGS, BORRES AND ALL FORMS OF INSECT INFESTATIONS OR OBJECTIONABLE DISFIGUREMENTS. PLANT MATERIAL THAT IS WEAK OR WHICH HAS BEEN CUT BACK FROM LARGER GRADES TO MEET SPECIFIED REQUIREMENTS WILL BE REJECTED. TREES WITH FORKED LEADERS WILL NOT BE ACCEPTED. ALL PLANTS SHALL BE FRESHLY DUG; NO HEALED—IN PLANTS FROM COLD STORAGE WILL BE ACCEPTED. UNLESS OTHERWISE SPECIFIED, ALL GENERAL CONDITIONS, PLANTING OPERATIONS, DETAILS AND PLANTING SPECIFICATION SHALL CONFORM TO "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS", (HEREINATER "LANDSCAPE GUIDELINES") APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE POTOMAC CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECT, LATEST EDITION, INCLUDING ALL AGENDA.

CONTRACTOR SHALL BE REQUIRED TO GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR AFTER DATE OF ACCEPTANCE IN ACCORDANCE WITH THE APPROPRIATE SECTION OF THE LANDSCAPE GUIDELINES. CONTRACTOR'S ATTENTION IS DIRECTED TO THE MAINTENANCE REQUIREMENTS FOUND WITHIN THE ONE YEAR SPECIFICATIONS INCLUDING WATERING AND REPLACEMENT OF SPECIFIED PLANT MATERIAL.

CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTILITY COMPANIES, UTILITY CONTRACTORS AND "MISS UTILITY" A MINIMUM OF 46 HOURS PRIOR TO BEGINNING ANY WORK.

CONTRACTOR MAY MAKE MINOR ADJUSTMENTS IN SPACING AND LOCATION OF PLANT MATERIAL TO AVOID CONFLICTS WITH UTILITIES. DAMAGE TO EXISTING STRUCTURE AND UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.

PROTECTION OF EXISTING VEGETATION TO REMAIN SHALL BE ACCOMPLISHED BY THE TEMPORARY INSTALLATION OF 4 FOOT HIGH SNOW FENCE OR BLAZE ORANGE SAFETY FENCE AT THE DRIP LINE.

CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL MATERIAL IN THE PROPER PLANTING SEASON FOR EACH PLANT TYPE. ALL PLANTING IS TO BE COMPLETED WITHIN THE GROWING SEASON OF COMPLETION OF SITE CONSTRUCTION. BID SHALL BE BASE ON ACTUAL SITE CONDITIONS. NO EXTRA PAYMENT SHALL BE MADE FOR WORK ARISING FROM SITE CONDITIONS DIFFERING FROM THOSE INDICATED ON DRAWINGS AND SPECIFICATIONS

PLANT QUANTITIES ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. IF DISCREPANCIES EXIST BETWEEN QUANTITIES SHOWN ON PLAN AND THOSE SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE PLAN TAKE PRECEDENCE ALL SHRUBS SHALL BE PLANTED IN CONTINUOUS TRENCHES OR PREPARED PLANTING BEDS AND MULCHED WITH COMPOSTED HARDWOOD MULCH AS DETAILS AND SPECIFIED EXCEPT WHERE NOTED ON PLANS.

POSITIVE DRAINAGE SHALL BE MAINTAINED IN PLANTING BEDS 2 PERCENT SLOPE). PLANTING MIX SHALL BE AS FOLLOWS: DECIDIOUS PLANTS - TWO PARTS TOPSOIL, ONE PART WELL-ROTTED COW OR HORSE MANURE. ADD 3 LBS. OF STANDARD FERTILIZER PER CUBIC YARD OF PLANTING MIX. EVERGREEN PLANTS - TWO PARTS TOPSOIL, ONE PART HUMUS OR OTHER APPROVED ORGANIC MATERIAL. ADD 3 LBS. OF EVERGREEN (ACIDIC) FERTILIZER PER CUBIC YARD OF PLANTING MIX. TOPSOIL SHALL CONFORM TO THE LANDSCAPE GUIDELINES.

WEED CONTROL: INCORPORATE A PRE-EMERGENT HERBICIDE INTO THE PLANTING BED FOLLOWING RECOMMENDED RATES ON THE LABEL. CAUTION: BE SURE TO CAREFULLY CHECK THE CHEMICAL USED TO ASSURE ITS ADAPTABILITY TO THE SPECIFIC GROUND COVER TO BE TREATED. ALL AREAS WITHIN CONTRACT LIMITS DISTURBED DURING OR PRIOR TO CONSTRUCTION NOT DESIGNATED TO RECEIVE PLANTS AND MULCH SHALL BE FINE GRADED AND SEEDED. THIS PLAN IS INTENDED FOR LANDSCAPE USE ONLY. SEE OTHER PLAN SHEETS FOR MORE INFORMATION ON GRADING, SEDIMENT CONTROL, LAYOUT, ETC.

THERE IS NO AS-BUILT **INFORMATION PROVIDED** ON THIS SHEET

OWNERS GLEN OAKS DEVELOPMENT COMPANY, LL 8318 FORREST STREET SUITE 200 ELLICOTT CITY, MARYLAND 21043

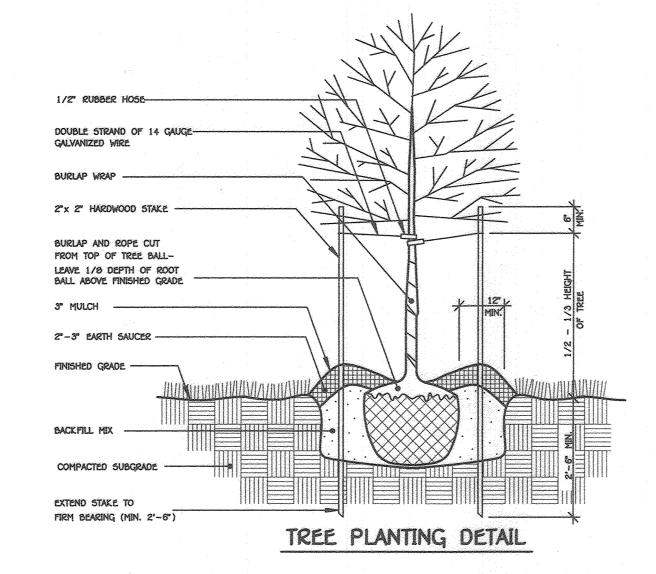
ATTN: MR DONALD R. REUWER, JR.

410-707-7054

DEVELOPER GLEN OAKS DEVELOPMENT COMPANY, LLC 8318 FORREST STREET SUITE 200 ELLICOTT CITY, MARYLAND 21043 ATTN: MR DONALD R. REUWER, JR. 410-707-7054

SCHEDULE A PERIMETER LANDSCAPE EDGE PERIMETER P4 TOTAL5 REPLACEMENT SINGLE FAMILY ATTACHED TO SINGLE FAMILY ATTACHED SINGLE FAMILY ATTACHED FRONT TO ROADWAY SINGLE FAMILY ATTACHED TO SINGLE FAMILY DETACHED SINGLE FAMILY ATTACHED TO OTHER FOR THE REMOVAL OF 6 SPECIMEN TREES LANDSCAPE TYPE LINEAR FEET OF PERIMETER 407.70 98.45" 329.65' 214.57 CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) NO (DESCRIBE BELOW IF NEEDED)
CREDIT FOR WALL, FENCE OR BERM YES (80.48') NO NO (YES, NO, LINEAR FEET) (DESCRIBE IF NEEDED) NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES 5HRUBS NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION)
SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)

\* Transferring trees required for P1 to P-2 and P-3 due to lack of space.



1/17/23 1 REVISE TITLE BLOCK DATE REVISION

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS VIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21042

(410) 461 - 2055

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

LANDSCAPE DEVELOPER'S CERTIFICATE Section 16.124 Howard County Code and the Howard County Landscape Manual. upon completion a certification of landscape installation uted one year guarantee of plant materials will be submitted to accompanie

This plan has been preparation accordance with the provision of Section 16.124 of the Howard County Code and Landscape Manual. Financial surety for the required landscaping will be posted as part of the developor's agreement.

PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/23.

LOTS 1 THRU 10, PARCEL 'A' & OPEN SPACE LOTS 20 thru 22 ZONED: R-5A-8 PREVIOUS HOWARD COUNTY FILES: ECP-18-039, F-18-121. WP-19-012, & AA-18-001.

TAX MAP NO.: 42 GRID NO.: 16 & 17 PARCEL NO'5.: 66, 353, 381, & 385 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: JUNE, 2021

SHEET 6 OF 14

F-21-017

5cale: 1'' = 30'

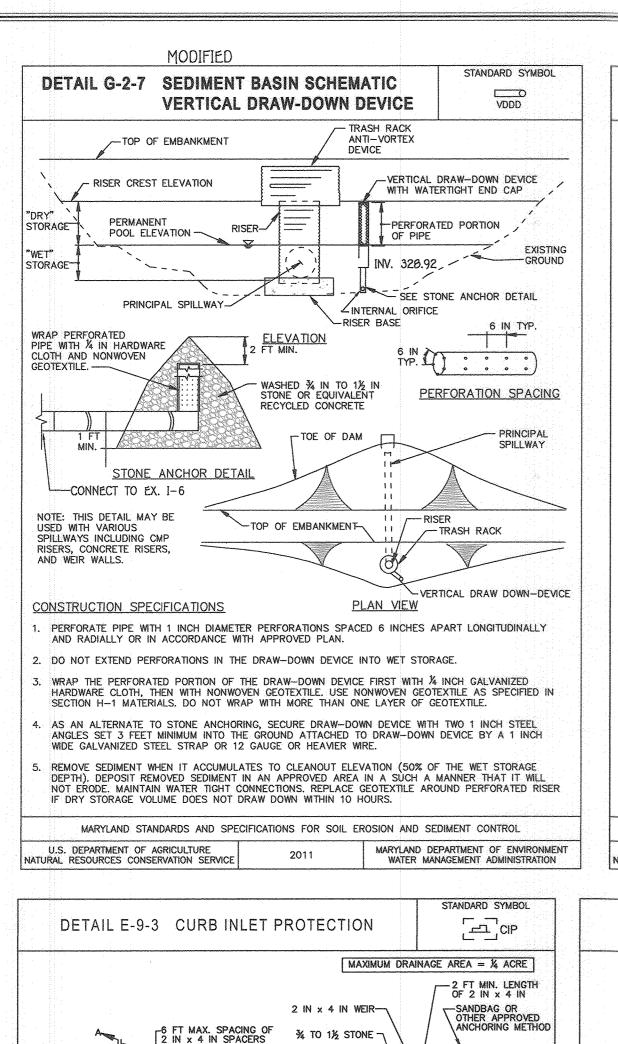
LANDSCAPE PLAN

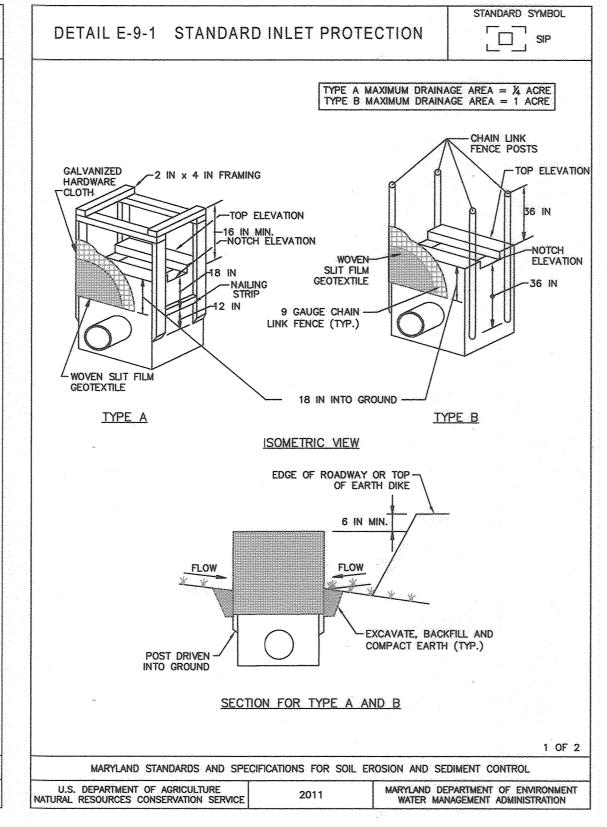
RESIDENTIAL SINGLE FAMILY ATTACHED

GLEN OAKS PLACE

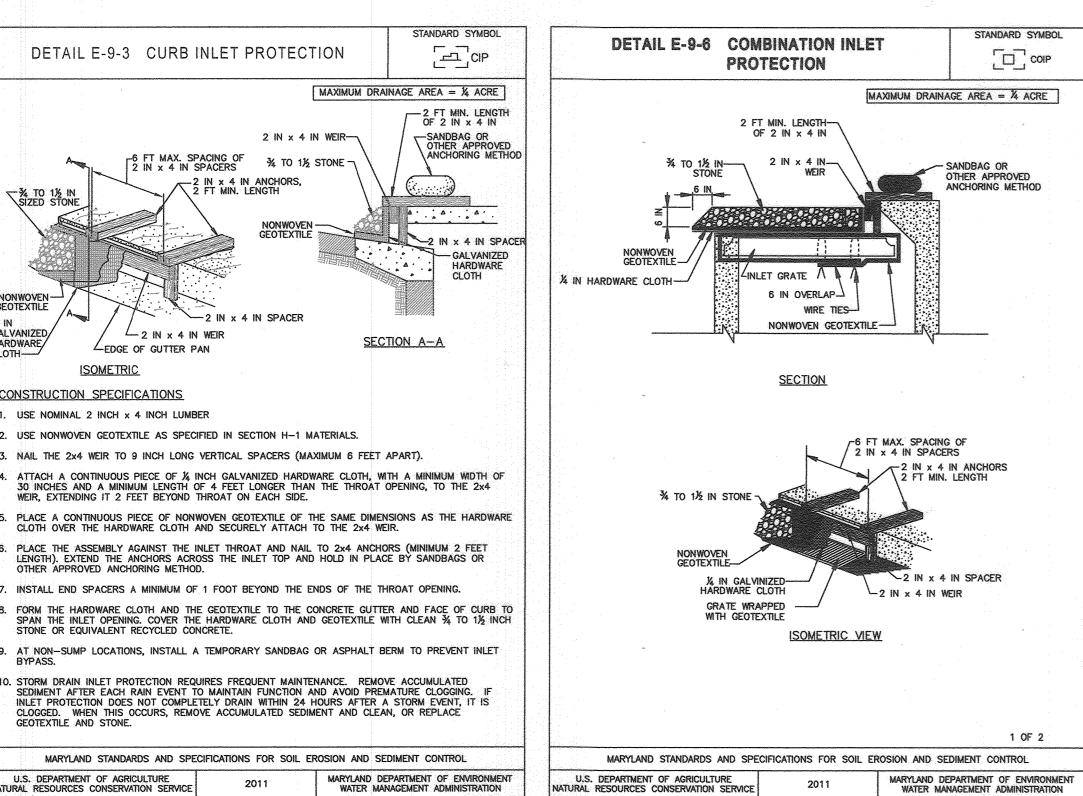


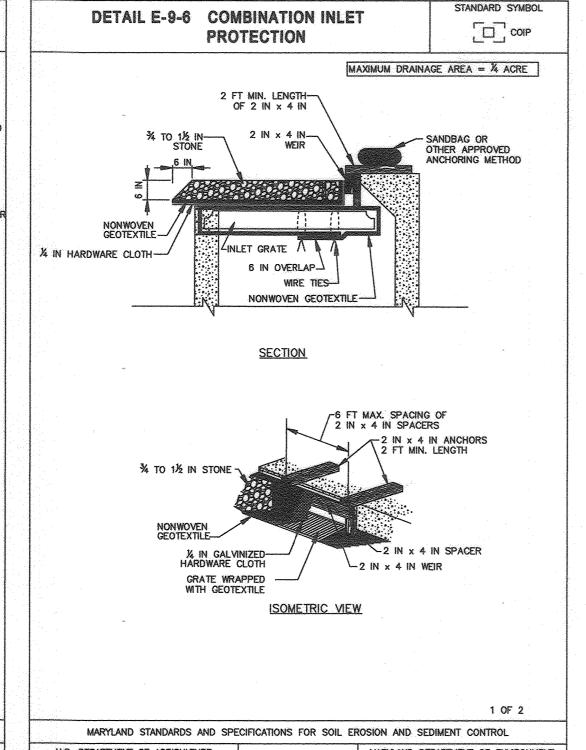




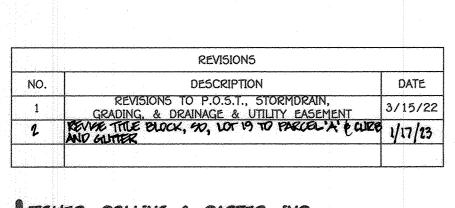


N 544,600





E.30



FISHER, COLLINS & CARTER, INC IVIL ENGINEERING CONSULTANTS & LAND SURVEYORS ennial square office park — 10272 Baltimore national pike

Chief, Development Engineering Division

ISOMETRIC

CONSTRUCTION SPECIFICATIONS 1. USE NOMINAL 2 INCH x 4 INCH LUMBER

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

(410) 461 - 2055

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 04/28/2031\_ APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

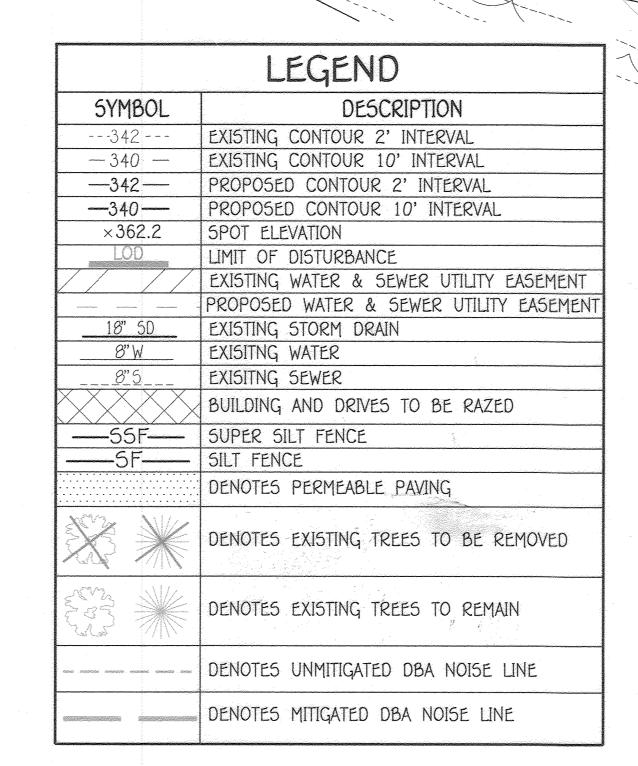
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY 04/11/22

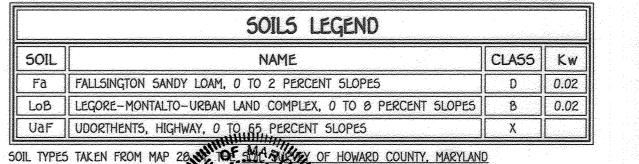
PROFESSIONAL CERTIFICATE "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

BUILDER/DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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

3-22-22





INFORMATION PROVIDED ON THIS SHEET

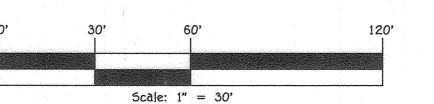
OWNERS

GLEN OAKS DEVELOPMENT COMPANY, LLC 8318 FORREST STREET ELLICOTT CITY, MARYLAND 21043 ATTN: MR DONALD R. REUWER, JR

FOUND ON THE HSCD WEBSITE.

DEVELOPER

GLEN OAKS DEVELOPMENT COMPANY, LLC 8318 FORREST STREET SUITE 200 ELLICOTT CITY, MARYLAND 21043 ATTN: MR DONALD R. REUWER, JR.



REPLACEMENT SHEET SEDIMENT AND EROSION CONTROL PLAN RESIDENTIAL SINGLE FAMILY ATTACHED GLEN OAKS PLACE

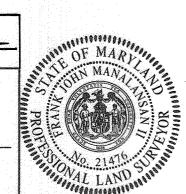
LOTS ITHRU 10, PARCEL'A & OPEN SPACE LOTS 20 thru 22

ZONED: R-5A-8 PREVIOUS HOWARD COUNTY FILES: ECP-18-039, F-18-121,

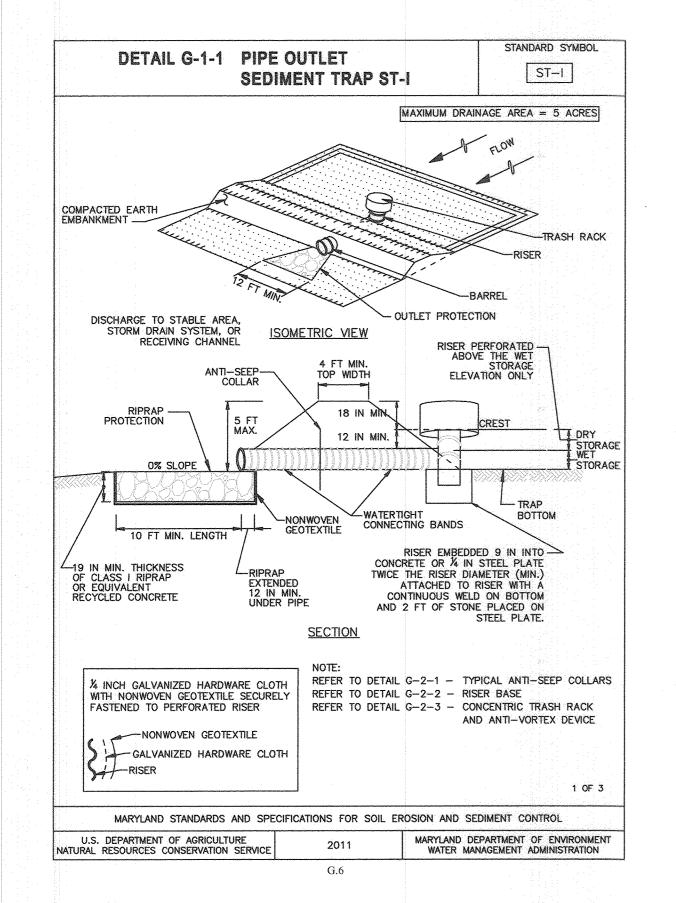
WP-19-012, & AA-18-001. TAX MAP NO.: 42 GRID NO.: 16 & 17 PARCEL NO'5.: 66, 353, 381, & 385 HOWARD COUNTY, MARYLAND SIXTH ELECTION DISTRICT SCALE: AS SHOWN DATE: MARCH, 2022

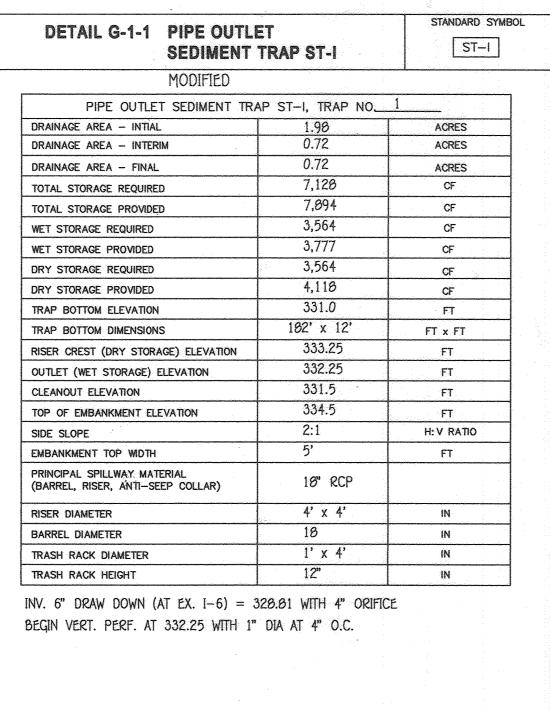
5HEET 7 OF 14

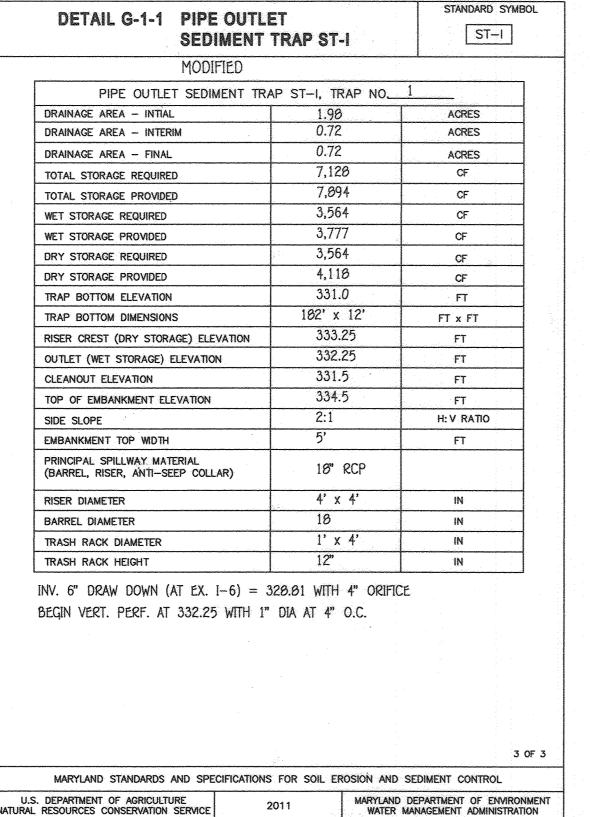
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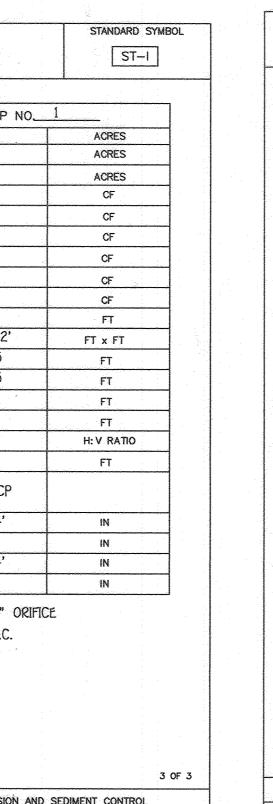


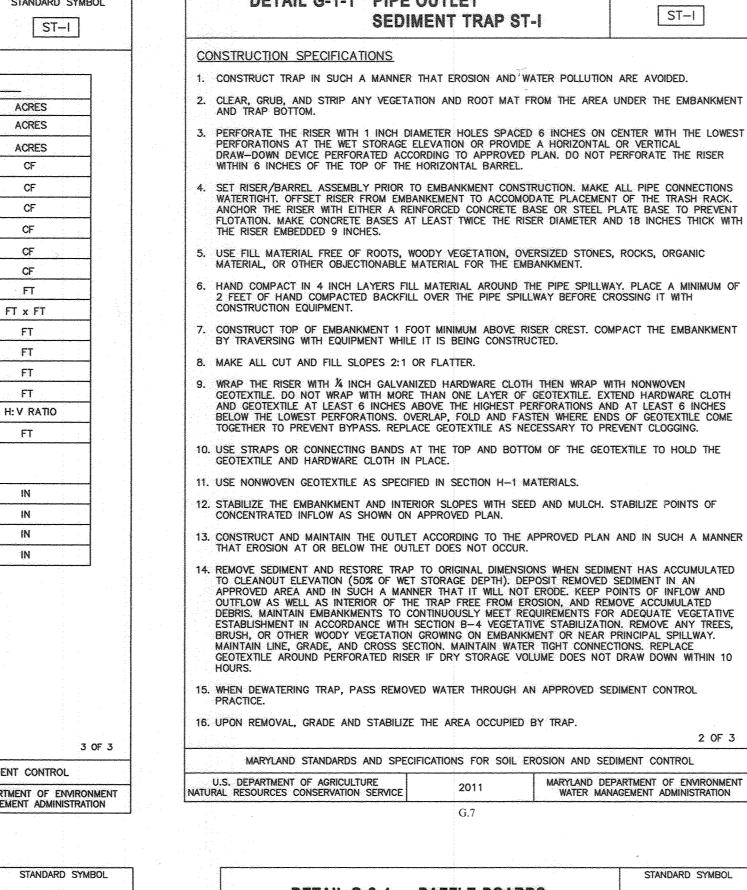
5.6.22 Date

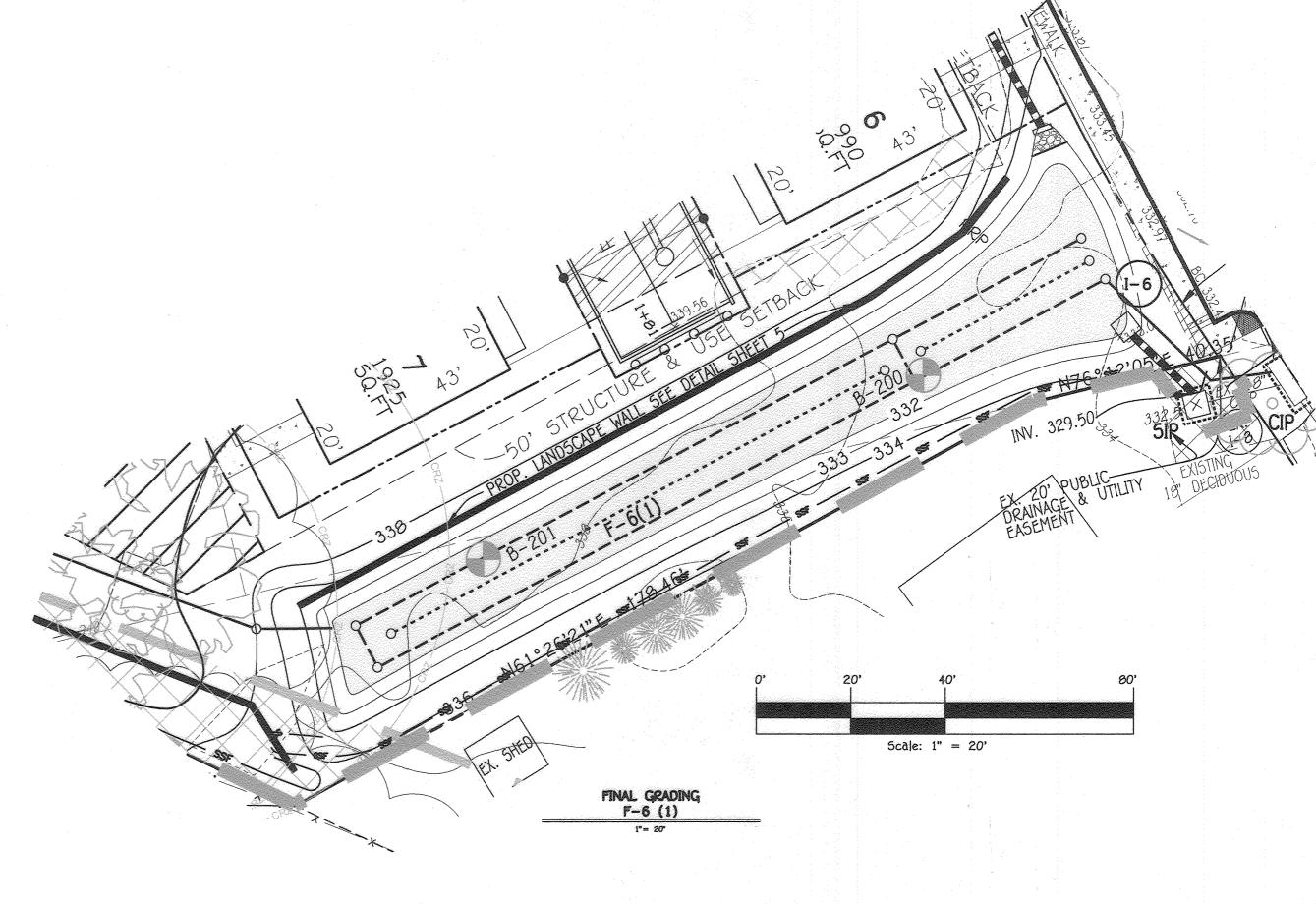


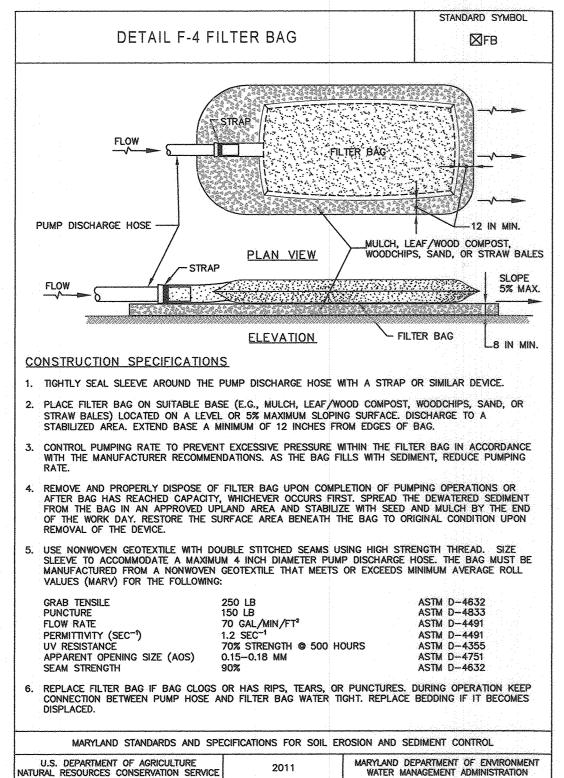




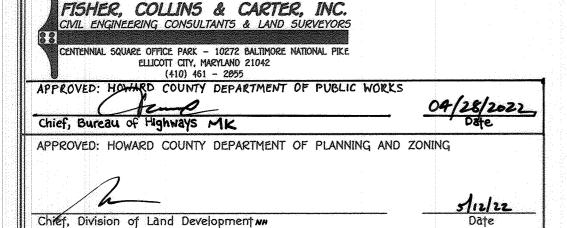








		REVISIONS	
NO	.	DESCRIPTION	DATE
1		REVISIONS TO P.O.S.T., STORMDRAIN, GRADING, & DRAINAGE & UTILITY EASEMENT	3/15/22
2	K	evige the block	1/17/23

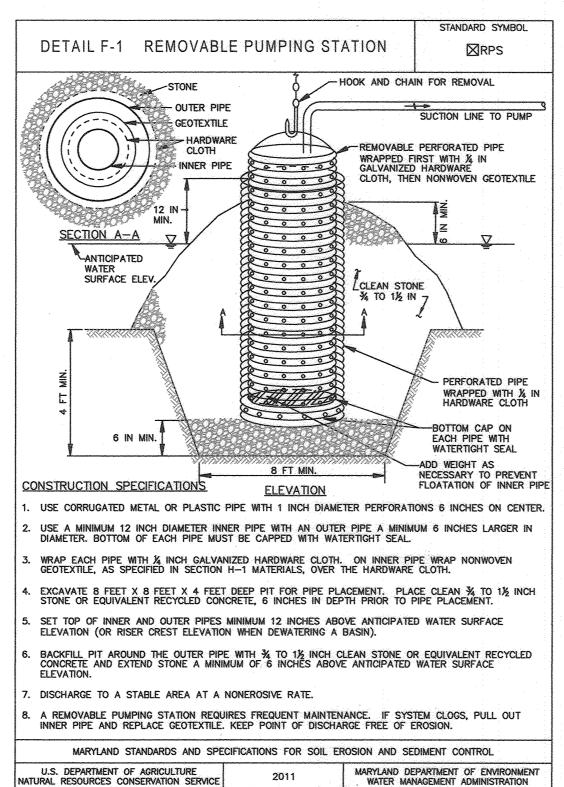


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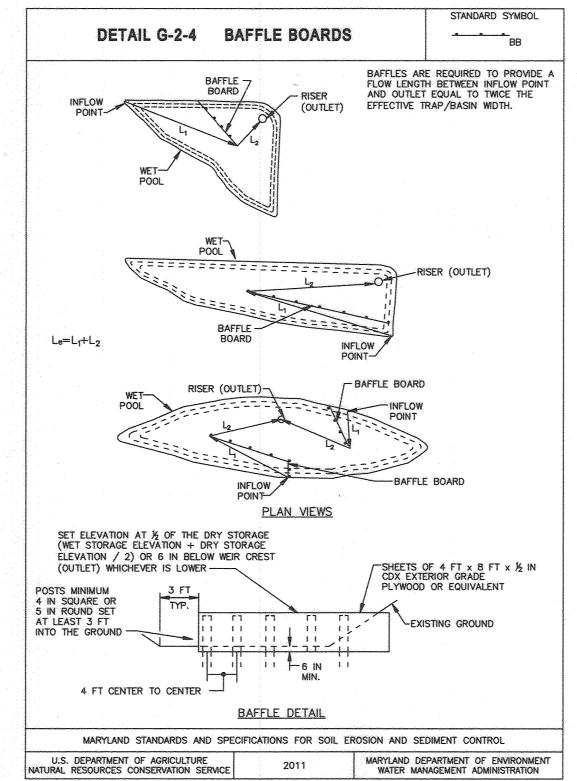
Chief, Development Engineering Division



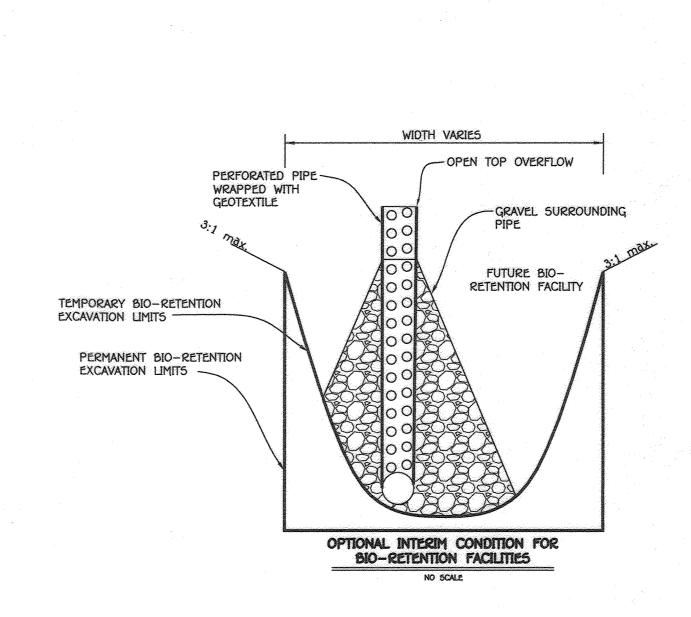
5-6.22

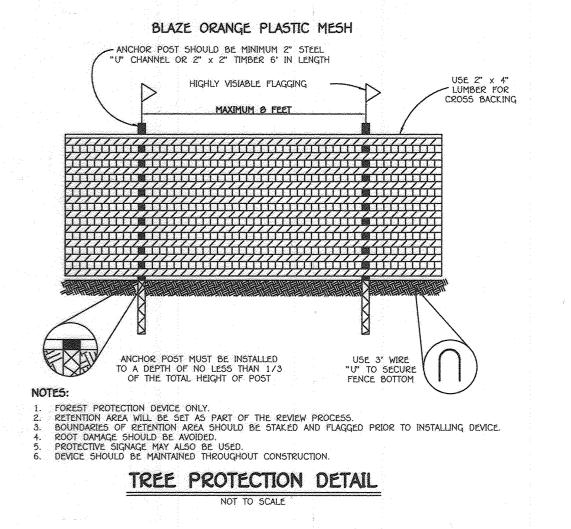


G.8



G.46





THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

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

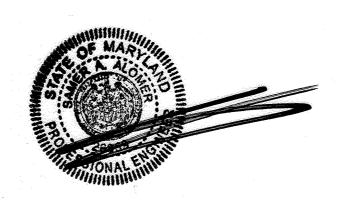
FRANK JOHN MANALANSAN I

BUILDER/DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, FOR SEDIMENT AND EROSION CONTROL AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL

3-22-22

3/22/22



STANDARD SYMBOL

ST-I

2 OF 3

MARYLAND DEPARTMENT OF ENVIRONMEN

WATER MANAGEMENT ADMINISTRATION

DETAIL G-1-1 PIPE OUTLET

SEDIMENT TRAP ST-I

FLOTATION. MAKE CONCRETE BASES AT LEAST TWICE THE RISER DIAMETER AND 18 INCHES THICK WITH

2 FEET OF HAND COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH

GEOTEXTILE. DO NOT WRAP WITH MORE THAN ONE LAYER OF GEOTEXTILE. EXTEND HARDWARE CLOTH AND GEOTEXTILE AT LEAST 6 INCHES ABOVE THE HIGHEST PERFORATIONS AND AT LEAST 6 INCHES BELOW THE LOWEST PERFORATIONS. OVERLAP, FOLD AND FASTEN WHERE ENDS OF GEOTEXTILE COME

APPROVED AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE. KEEP POINTS OF INFLOW AND OUTFLOW AS WELL AS INTERIOR OF THE TRAP FREE FROM EROSION, AND REMOVE ACCUMULATED

DEBRIS, MAINTAIN EMBANKMENTS TO CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION, REMOVE ANY TREES.

BRUSH, OR OTHER WOODY VEGETATION GROWING ON EMBANKMENT OR NEAR PRINCIPAL SPILLWAY.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

G.7

MAINTAIN LINE, GRADE, AND CROSS SECTION, MAINTAIN WATER TIGHT CONNECTIONS, REPLACE

TOGETHER TO PREVENT BYPASS. REPLACE GEOTEXTILE AS NECESSARY TO PREVENT CLOGGING.

THAT EROSION AT OR BELOW THE OUTLET DOES NOT OCCUR.

THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

OWNERS

GLEN OAKS DEVELOPMENT COMPANY, LLC 8318 FORREST STREET SUITE 200

DEVELOPER GLEN OAKS DEVELOPMENT COMPANY, LLC **8318 FORREST STREET** SUITE 200 ELLICOTT CITY, MARYLAND 21043

REPLACEMENT SHEET SEDIMENT TRAP DETAILS AND NOTES RESIDENTIAL SINGLE FAMILY ATTACHED GLEN OAKS PLACE

LOTS 1 THRU 18, PARCEL'A' & OPEN SPACE LOTS 20 thru 22 ZONED: R-SA-8

PREVIOUS HOWARD COUNTY FILES: ECP-18-039, F-18-121,

WP-19-012, & AA-18-001. TAX MAP NO.: 42 GRID NO.: 16 & 17 PARCEL NO'S.: 66, 353, 361, & 385 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: MARCH, 2022

> SHEET 8 OF 14 F-21-017

ELLICOTT CITY, MARYLAND 21043 ATTN: MR DONALD R. REUWER, JR 410-707-7054

ATTN: MR DONALD R. REUWER, JR

410-707-7054

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

A. SOIL PREPARATION

. TEMPORARY STABILIZATION A SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE ACRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION FOUIPMENT. 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

B. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS. . 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

L SOIL PH BETWEEN 6.0 AND 7.0. IL SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM II. 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

loyegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be 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 TH 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.

A THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH. 8. 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:

3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:

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 OF OTHER MATERIALS LANCED 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

CRASS NUT SENCE POISON MY 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 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

C. SOIL AMENDMENTS (FERTILIZER & 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 FERTILIZES MUST BE UNIFORM IN COMPOSITION. FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE FOURMENT. 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 OF

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 SIEVI 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

DUST CONTROL

DEFINITION CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

PURPOSE TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS AND IMPROVE TRAFFIC SAFETY.

CONDITIONS WHERE PRACTICE APPLIES THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT

PROPOSED HOUSES CANNOT BE CONSTRUCTED UNDER THIS PLAN.

**SPECIFICATIONS** TEMPORARY METHODS

3. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING 2. Vegetative cover – see standards for temporary vegetative cover

3. TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED REFORE SOIL BLOWING STARTS, BEGIN PLOWING ON WINDWARD SIDE OF THE SITE, CHISEL-TYPE PLOWS SPACED ABOUT 12" APART, SPRING-TOOTHED HARROWS AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT. IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT, SITE IS SPRINKLED WITH WATER UNTIL

THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW. 6. BARRIERS — SOLID BOARD FENCES SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALE DIKES AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CONTROLLING SOIL BLOWING. CURRENTS AND SOIL BLOWING. CURRENTS AND SOIL BLOWING, BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS

OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN 6. CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT. PERMANENT METHODS . PERMENENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.

TOPSOILING - COVERING WITH LESS EROSIVE SOIL MATERIALS, SEE STANDARDS FOR TOPSOILING.

1/17/23 2 REASE TITLE BLOCK 7/1/22 MANGE SEQ. OF CONSTRUCTION DATE NO. revisions

FISHER. COLLINS & CARTER, INC. VIL ENGINEERING CONSULTANTS & LAND SURVEYORS inial square office park – 10272 baltimore national pike

> ELLICOTT CITY, MARYLAND 2104 (410) 461 - 2055

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

8/9/21

#### TEMPORARY SEEDING NOTES (B-4-4) DEFINITION

TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS. CONDITIONS WHERE PRACTICE APPLIES EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS.

FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA . SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE IPPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE 8.3), AND ENTER THEM IN THE TEMPORAR 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 FERTILIZES AND LIME RATES MUST BE PUT ON THE PLAN.

2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE ESTING 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 8-4-3.A.1.8 AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

ardiness Eed mixtu	ZONE (FROM FIGURE RE (FROM TABLE B.1	8.3): <u>68</u> ):	•	FERTILIZER RATE (10-20-20)	LIME RATE
SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS		-
BARLEY	96		1"	100 10 110	0 TONE (10
OAT5	72	3/1 - 5/15, 8/15 - 10/15	i*	436 LB/AC (10 LB/ 1000 SF)	2 TON5/AC (90 LB/ 1000 SF)
RYE	112		1*	1000 36)	1000 30)

#### 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 8.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE 8.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE 8.2. enter selected mixture(5), application rates, and seeding dates in the permanent seeding summary. THE SUMMARY IS TO BE PLACED ON THE PLAN. 8. 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 QUIDE, 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 AMENOMENTS 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 SPEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN . KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE, RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.

II. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPIN ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 Pounds XTURE 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 MOXTURE: 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.

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 I IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 OCTOBER 1 (HARDINESS ZONES: 58, 6A) CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 1 (HARDINESS ZONE: 68) SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15

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 ICHES IN DIAMETER THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOVING OF 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 SEA	usons, or on advi	erse sites.						
			PERMANENT	SEEDING	SUMMAR	2Y			
		ONE (FROM FIGURE E (FROM TABLE B.:		-	FERTILIZE	R RATE (10	-20-20)	LIME RATE	- Constitution of the Cons
NO.	5PECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	N	P <sub>2</sub> 0 <sub>5</sub>	K <sub>2</sub> 0		
8	TALL FESCUE	100	Mar. 1-May 15 Aug. 15-Oct. 15	1/4-1/2 IN.	45 LBS. PER ACRE (1.0 LB/ 1000 SF)	1000 SF)	90 LB/AC (2 LB/ 1000 SF)	2 TONS/AC (90 LB/ 1000 SF)	

#### B. 50D: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER)

1. GENERAL SPECIFICATIONS A CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE

8. 500 MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS TO 3/4 INCH. PLUS OR MINUS 1/4 INCH. AT THE TIME OF CUTTING, MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH, BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE. C. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION. D. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OF WET) MAY

ADVERSELY AFFECT ITS SURVIVAL E. 500 MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. 50D NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION. 2. 50D INSTALLATION

A. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE 50D. 8. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT 500 IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO

PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS. C. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE. D. WATER THE 500 IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW 500 PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING, AND

IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS. 3. 500 MAINTENANCE A. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING B. AFTER THE FIRST WEEK, SOO WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.

THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS

STANDARD STABILIZATION NOTE

C. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED, NO MORE THAN 1/3 OF THE GRASS LEAF MUST BE REMOVED BY

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

#### 8-4-8 STANDARDS AND SPECIFICATIONS for stockpile area

A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

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.

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.

2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section 8-3 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

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

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

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.

A. SEEDING CRITERIA 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 THI DATE OF SOMING SUCH MATERIAL ON ANY PROJECT PEFER TO TABLE 8.4 PEGARDING THE QUALITY OF SEED SEED TACS 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 COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 7 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 WEEDCONTROL 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. 1. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1.

PERMANENT SEEDING TABLE 8.3. 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 SEPTED AREA WITH WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT. 8. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL

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

1. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT

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; K20 (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 FIRROUS PHYSICAL STATE

I. WCFM 15 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. WOFM, 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 MUICH 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 6.5, 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. 8. 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.

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 OF5THE AREA AND EROSION HAZARD: 1. 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

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. HOWARD SOIL CONSERVATION DISTRICT (HSCD)

STANDARD SEDIMENT CONTROL NOTES

(CID), 410-313-1855 after the future LOD and protected areas are marked clearly in the field. A minimum of 40 hour notice to CID must be given at the following stages: a. Prior to the start of earth disturbance.

1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division

b. Upon completion of the installation of perimeter erosion and sediment controls, but any other before proceeding 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

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

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. 8-4-2), 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 ft. must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization matting (Sec. 8-4-6).

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 For Total Site Area: Total Area of Site: 2.48+/- Acres LOD Total Area Disturbed: 2.48+/- Acres Area to be roofed or paved: 1.07+/- Acres Area to be vegetatively stabilized: 1.41+/- Acres Total Cut: 2,306 Cu.Yds. 2,306 Cu. Yds. Total Fill: N/A Offsite waste/borrow area location:

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

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 fitle 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,

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 H5CD prior to

proceeding with construction. Minor revisions may allowed by the CID per the list of H5CD-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

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):

specified and approved by the HSCO, no more than 30 acres cumulatively may be disturbed at a given time.

• Use I and IP March 1 - June 15

• Use III and IIIP October 1 - April 30 Use IV March 1 - May 31

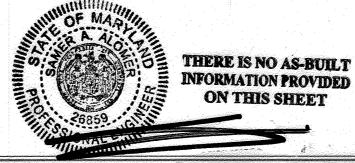
16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and associated permits shall be on-site and available when the site is active.

#### TABLE B.1 TEMPORARY SEEDING FOR SITE STABILIZATION

01.017.0000	SEEC	DING RATE 1/	SEEDING	DING RECOMMENDED SEEDING DATES BY PLANT HARDINESS ZONE 3/					
PLANT SPECS	LB./AC.	LB./1000 FT. <sup>2</sup>	DEPTH 2/ (INCHES)	5b AND 6a	6b	7a AND 7b			
COOL-SEASON GRASSES				Kina da					
ANNUAL RYEGRASS (LOLIUM PERENNE SSP. MUTIFLORUM)	40	1.0	0.5	MAR. 15 TO MAY 31; AUG. 1 TO SEPT. 30	MAR. 1 TO MAY 15; AUG. 1 TO OCT. 15	FEB. 15 TO APR. 30; AUG. 15 TO NOV. 30			
BARLEY (HORDEUM VULGARE)	96	2.2	1.0	MAR. 15 TO MAY 31; AUG. 1 TO SEPT. 30	MAR. 1 TO MAY 15; AUG. 1 TO OCT. 15	FEB. 15 TO APR. 30; AUG. 15 TO NOV. 30			
OATS (AVENA SATIVA)	72	1.7	1.0	MAR. 15 TO MAY 31; AUG. 1 TO SEPT. 30	MAR. 1 TO MAY 15; AUG. 1 TO OCT. 15	FEB. 15 TO APR. 30; AUG. 15 TO NOV. 30			
WHEAT (TRITICUM AESTIVUM)	120	2.9	1.0	MAR. 15 TO MAY 31; AUG. 1 TO SEPT. 30	MAR. 1 TO MAY 15; AUG. 1 TO OCT. 15	FEB. 15 TO APR. 30; AUG. 15 TO NOV. 30			
CEREAL RYE (SECALE CEREALE)	112	2.8	1.0	MAR. 15 TO MAY 31; AUG. 31 TO OCT. 31	MAR. 1 TO MAY 15; AUG. 1 TO NOV. 15	FEB. 15 TO APR. 30; AUG. 15 TO DEC. 15			
WARM-SEASON GRASSES		Accession to the second se							
FOXTAIL MILLET (SETARIA ITALICA)	30	0.7	0.5	JUNE 1 TO JULY 31	MAY 16 TO JULY 31	MAY 1 TO AUGUST 14			
PEARL MILLET (PENNISETUM GLAUCUM)	20	0.5	0.5	JUNE 1 TO JULY 31	MAY 16 TO JULY 31	MAY 1 TO AUGUST 14			

NOTES: 1. SEEDING RATES FOR THE WARM-SEASON GRASSES ARE IN POUNDS OF PURE LIVE SEED (PLS). ACTUAL PLANTING RATES SHALL BE ADJUSTED TO REFLECT PERCENT SEED GERMINATION AND PURITY, AS TESTED. ADJUSTMENTS ARE USUALLY NOT NEEDED FOR THE COOL-SEASON GRASSES.

SEEDING RATES LISTED ABOVE ARE FOR TEMPORARY SEEDINGS, WHEN PLANTED ALONE, WHEN PLANTED AS A NURSE CROP WITH PERMANENT SEED MIXES, USE 1/3 OF THE SEEDING RATE LISTED ABOVE FOR BARLEY, OATS AND WHEAT, FOR SMALLER-SEEDED GRASSES (ANNUAL RYEGRASS, PEARL MILLET, FOXTAIL MILLET), DO NOT EXCEED MORE THAN 5% (BY WEIGHT) OF THE OVERALL PERMANENT SEEDING MIX, CEREAL RYE GENERALLY SHOULD NOT BE USED AS A NURSE CROP, UNLESS PLANTING WILL OCCUR IN VERY LATE FALL BEYOND THE SEEDING DATES FOR OTHER TEMPORARY SEEDINGS. CEREAL RYE HAS ALLELOPATHIC PROPERTIES that inhibit the germination and growth of other plants. If it must be used as a nurse crop, seed at 1/3 of the rate listed above. OATS ARE THE RECOMMENDED NURSE CROP FOR WARM-SEASON GRASSES.



0310 FORREST STREET **SUITE 200** 

DEVELOPER 8318 FORREST STREET **SUITE 200** 410-707-7054

DETAIL E-2 SILT FENCE ON PAVEMENT H---55F--------SFOP----I ISOMETRIC VIEW -woven slit STAPLE JOINING ADJACENT SECTIONS
OF GEOTEXTILE SECTION A-A CONSTRUCTION SPECIFICATIONS I. USE NOMINAL 2 INCH X 4 INCH LUMBER. 2. Use woven slit film geotextile, as specified in Section H-1 materials.

PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.

SPACE UPRIGHT SUPPORTS NO MORE THAN 10 FEET APART.

5. PROVIDE A TWO FOOT OPENING BETWEEN EVERY SET OF SUPPORTS AND PLACE STONE IN THE OPENING OVER GEOTEXTILE.

KEEP SILT FENCE TAUT AND SECURELY STAPLE TO THE UPSLOPE SIDE OF UPRIGHT SUPPORTS. EXTEND GEOTEXTILE UNDER 2x4. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, FOLD, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL ATTACH LATHE.

A. PROVIDE A MASTIC SEAL BETWEEN PAVEMENT, GEOTEXTILE, AND 2x4 TO PREVENT SEDIMENT-LADEN WATER FROM ESCAPING BENEATH SILT FENCE INSTALLATION.

. SECURE BOARDS TO PAVEMENT WITH 400 5 INCH MINIMUM LENGTH NAILS. O. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, MAINTAIN WATER TIGHT SEAL ALONG BOTTOM. REPLACE STONE IF DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

DETAIL B-1 STABILIZED SCE CONSTRUCTION ENTRANCE -PIPE (SEE NOTE 6 PROFILE LENGTH 4 PLAN VIEW CONSTRUCTION SPECIFICATIONS

PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES

. 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

PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS. . PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.

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

SEQUENCE OF CONSTRUCTION

1. OBTAIN A GRADING PERMIT. (2 WEEKS) 2. NOTIFY "MISS UTILITY" AT LEAST 40 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 AT LEAST 24 HOURS BEFORE STARTING WORK. 3. REQUEST A PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AUTHORITY.

4. CLEAR AND GRUB AS NECESSARY FOR THE INSTALLATION OF PERIMETER CONTROLS. (2 DAYS) 5. COMMENCE INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE AND PERIMETER CONTROLS. () COMMENCE INSTALLATION OF THE P.O.S.T. WITH BAFFLES. (1 WEEK)

7. Install stormdrain outfall 1–6 to the existing inlet, with accompanying draw-down device.

8. WITH INSPECTORS FERMINATION.
COMMENCE SITE GRADING TO PROPOSED SUB-GRADE, INSTALLATION OF REMAINDER OF STORMDRAIN, WATER, SANITARY SEWER, LANDSCAPE WALLS AND INSTALLATION OF BIO-RETENTION FACILITIES TO Interim condition. (1 month) 9. COMMENCE INSTALLATION OF NOISE MITIGATION WALL STABILIZE AREA BETWEEN WALL AND PERIMETER . Perimeter 55F may be hooked into wall, with permission of the sediment erosion

CONTROL INSPECTOR 55F BEHIND WALL MAY BE REMOVED. (2 WEEK) 10, COMMENCE INSTALLATION OF PAVING BASE COURSE STABILIZE ALL SURROUNDING AREAS. (3 WEEKS) INSTALL WIDENING OF GLENN OAKS LANE AND OFF-SITE SIDEWALK (1 WEEK) 2. COMMENCE INSTALLATION OF FINAL PAVING COURSE AND INSTALLATION OF LANDSCAPING. (2 WEEK) 13, AT COMPLETION OF PAVING EFFORTS, CONTRACTOR SHALL PERMANENTLY SEED ANY DISTURBANCE.

14, WITH THE SITE FULLY STABILIZED AND THE INSPECTORS PERMISSION BEGIN CONVERSION OF P.O.S.T. and interin condition Micro Bio-Retention facilities to permanent facilities as final DESIGNED (3 WEEKS). 15, OBTAIN APPROVAL OF SEDIMENT CONTROL INSPECTOR PRIOR FOR THE REMOVAL OF PERIMETER SEDIMENT CONTROLS. (3 DAYS)

16, NOTE: THE CONTRACTOR SHALL ROUTINELY INSPECT WHILE THE SITE IS UNDER CONSTRUCTION AND PROVIDE NECESSARY MAINTENANCE AS NECESSARY AND SPECIFICALLY AFTER EACH RAINFALL. 17, PROPOSED HOUSES CANNOT BE CONSTRUCTED UNDER THIS PLAN.

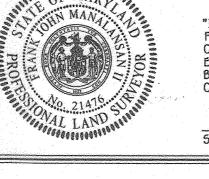
SEDIMENT AND EROSION CONTROL NOTES AND DETAILS RESIDENTIAL SINGLE FAMILY ATTACHED

GLEN OAKS PLACE

LOTS 1 THRU 18, FARCEL'A' & OPEN SPACE LOTS 20 thru 22 ZONED: R-5A-8 PREVIOUS HOWARD COUNTY FILES: ECP-18-039, F-18-121,

WP-19-012, & AA-18-001. TAX MAP NO.: 42 GRID NO.: 16 & 17 PARCEL NO'5.: 66, 353, 381, & 385 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

> SCALE: AS SHOWN DATE: JUNE, 2021 SHEET 9 OF 14 F-21-017



THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE\_HOWARD SOIL CONSERVATION DISTRICT.

PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

PROFESSIONAL CERTIFICATE "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS

LICENSED PROFESSIONAL FRANK JOHN MANALANSAN I

BUILDER/DEVELOPER'S CERTIFICATE "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN. FOR SEDIMENT AND EROSION CONTROL AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PECJECY I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

OWNERS GLEN OAKS DEVELOPMENT COMPANY, LLC

ELLICOTT CITY, MARYLAND 21043 ATTN: MR DONALD R. REUWER, JR. 410-707-7054

GLEN OAKS DEVELOPMENT COMPANY, LLC ELLICOTT CITY, MARYLAND 21043 ATTN: MR DONALD R. REUWER, JR

DETAIL E-3 SUPER SILT FENCE

WOVEN SLIT FILM GEOTEXTILE-

EMBED GEOTEXTI

FLOW \_\_\_\_

CONSTRUCTION SPECIFICATIONS

DETAIL D-3-2

GALVANIZED CHAIN LINK FENCE WITH WOVEN SLIT FILM GEOTEXTILE

ELEVATION

CROSS SECTION

. Fasten woven suit 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.

. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.

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

**GABION INFLOW** 

PROTECTION

ISOMETRIC VIEW

PROFILE ALONG CENTERLINE

BLEND GABIONS INTO EXISTING GROUND.

USE BASKETS MADE OF MINIMUM 11 GAUGE WIRE.

INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE

INSTALL GABIONS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS

CONSTRUCTION SPECIFICATIONS

ENTRANCE SECTION

16 FT 1

PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL GABION BASKETS.

CONSTRUCT GABION INFLOW PROTECTION BY ARRANGING 9 X 3 X 1 FOOT GABION BASKETS TO FORM A TRAPEZOIDAL SECTION WITH A 3 FOOT BOTTOM WIDTH, 1 FOOT MINIMUM DEPTH, 3 FOOT SIDE WALLS, AND 2:1 OR FLATTER SIDE SLOPES. FILL GABION BASKETS WITH 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE WITHOUT REBAR OR WEIR MESH.

maintain line, grade, and cross section. Remove accumulated sediment and debris. Keep points of inflow and outflow free of erosion  $\,$ 

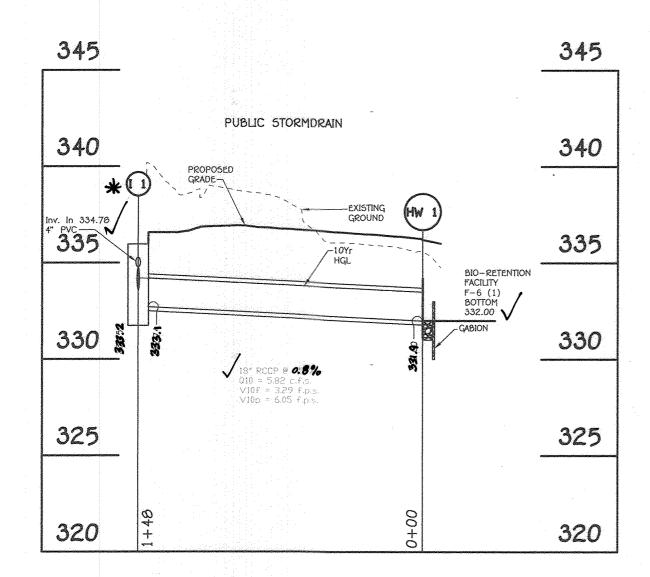
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

2011

MARYLAND DEPARTMENT OF ENVIRONMEN
WATER MANAGEMENT ADMINISTRATION

CROSS SECTION

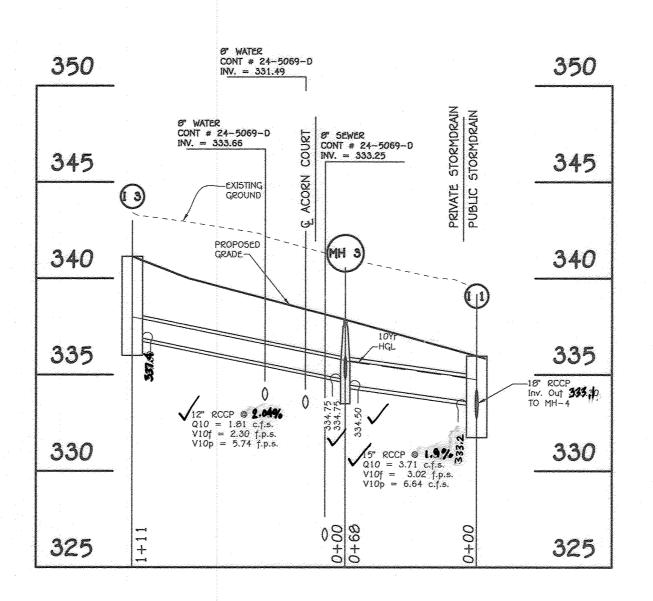
GP



PROFILE STORMDRAIN

SCALE HORZ. 1" = 50'

VERT. 1" = 5'



PROFILE STORMDRAIN 2 SCALE HORZ. 1" = 50' VERT. 1" = 5'

350	8" WATER CONT # 24-5069-D INV. = 333.25	350
345	ACORN COURT	345
340 Inv. In 335.92 6" PVC BIO-RETENTION	GROUND GJ  PROPOSED GRADE—  MH 3	340
7ACILITY M-6 (2) 335	10Yr HGL 22'9	335
330	12" RCCP @ 0.80%	330
325	4 8 SEWER CONT * 24-5069-D H INV. = 326.01	325

PROFILE STORMDRAIN 3
SCALE HORZ. 1" = 50'
VERT. 1" = 5'

345	345
340	340
335 ⊕€	335
TEMPORARY WEIR ELEVATION FOR P.O.S.T. 333.25 BIO-RETENTION FACILITY F-6 (1) BOTTOM 332.00	EXISTING GROUND PROPOSED GRADE
325	325
	15" RCCP @ <b>2.6%</b> Q10 = 10.05 c.f.s. V10f = 5.69 f.p.s. V10p = 10.29 f.p.s.
320	320

PROFILE STORMDRAIN 4

SCALE HORZ. 1" = 50'

VERT. 1" = 5'

					STR	CUCTURE 5	CHEDULE			
STRUCTURE NO.	TOP ELEVATION	INV IN	INV OUT	ROAD NAME	STRUCTURE LOCATION	ROAD STA	OFFSET	TYPE	REMARK5	OWNERSHIP AND MAINTENANCE
I-1	335.97 🗸	<b>333.2</b> 3 (MH-3)	333.1	BROAD OAKS LANE		0+39.03 <b>*</b>	/-11.4' L	TYPE DOUBLE '5' INLET  W/ WR FRAME  ✓	D-4.24/ D-4.95	PRIVATE
I-3	341.34		337.4	BROAD OAKS LANE		2+08.6	/-14.72' L	TYPE 'A-5' INLET	D-4.02	PRIVATE
I-4	339.67	335.25√(I−5)	335.00	BROAD OAKS COURT		0+30.69 <b>V</b>	/-14.82' L	TYPE 'A-5' INLET	D-4.02	PRIVATE
I-5	<b>*34</b> 0.3	335.92√M−6 (2)	335.90	BROAD OAKS LANE		1+71.24 🗸	-47.5' L	TYPE 'D' INLET	D-4.10	PRIVATE
1-6	*333.00 √		330.42	AT F-6(1)	N 544276.29 E 1360770.28	<b>/</b>		TYPE 'D' INLET 🗸	D-4.10	PRIVATE
MH-3	338.5	334.75 (I-3) 334.75 (I-4)		GLEN OAKS LANE	N 544440.05 E 1360647.36	/		4' DIA. MANHOLE 🗸	G-5.12	PRIVATE
HW-1	334.20 🗸	332.00 (MH-4)	331.9	GLEN OAKS LANE	N 544326.31 E 1360786.28	/		TYPE 'C' ENDWALL	0-5.21	PRIVATE

"\*" DENOTES THROAT OPENING

# LOCATE TO AVOID ADA RAMP

	PIPE SCHEDUL	E
SIZE	CLA55	LENGTH
12"	RCCP, CL. IV	105 LF.
15"	RCCP, CL. IV	125 L.F.
1 <i>8</i> "	RCCP, CL. IV	148 L.F.

NOTE: RCCP, CL. IV MAY BE SUBSTITUTED WITH HDPE PIPE MATERIAL WHERE DEPTH OF COVER PERMITS.

**REVISIONS** DESCRIPTION DATE STORMDRAIN PROFILE REVISIONS 3/15/22 1/17/23 2 REVISE TITLE BLOCK

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

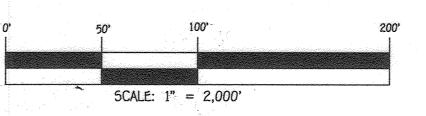
ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2055 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS Chief, Bureau of Highways MK APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Strztzz Dațe 5 · 6 · 22 Date

I hereby certify that the facility shown on this plan was constructed as shown on the 'As-Built' plans and meets with the approved plans and specifications.

PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/23. FRANK JOHN MANALANSAN II

3/22/22



OWNERS

GLEN OAKS DEVELOPMENT COMPANY, LLC
8318 FORREST STREET
SUITE 200
ELLICOTT CITY, MARYLAND 21043
ATTN: MR DONALD R. REUWER, JR.
410-707-7054

DEVELOPER GLEN OAKS DEVELOPMENT COMPANY, LLC
0310 FORREST STREET
SUITE 200
ELLICOTT CITY, MARYLAND 21043
ATTN: MR DONALD R. REUWER, JR.
410-707-7054

REPLACEMENT SHEET STORMDRAIN PROFILES RESIDENTIAL SINGLE FAMILY ATTACHED GLEN OAKS PLACE

LOTS 1 THRU 18, PARCEL'A' & OPEN SPACE LOTS 20 thru 22

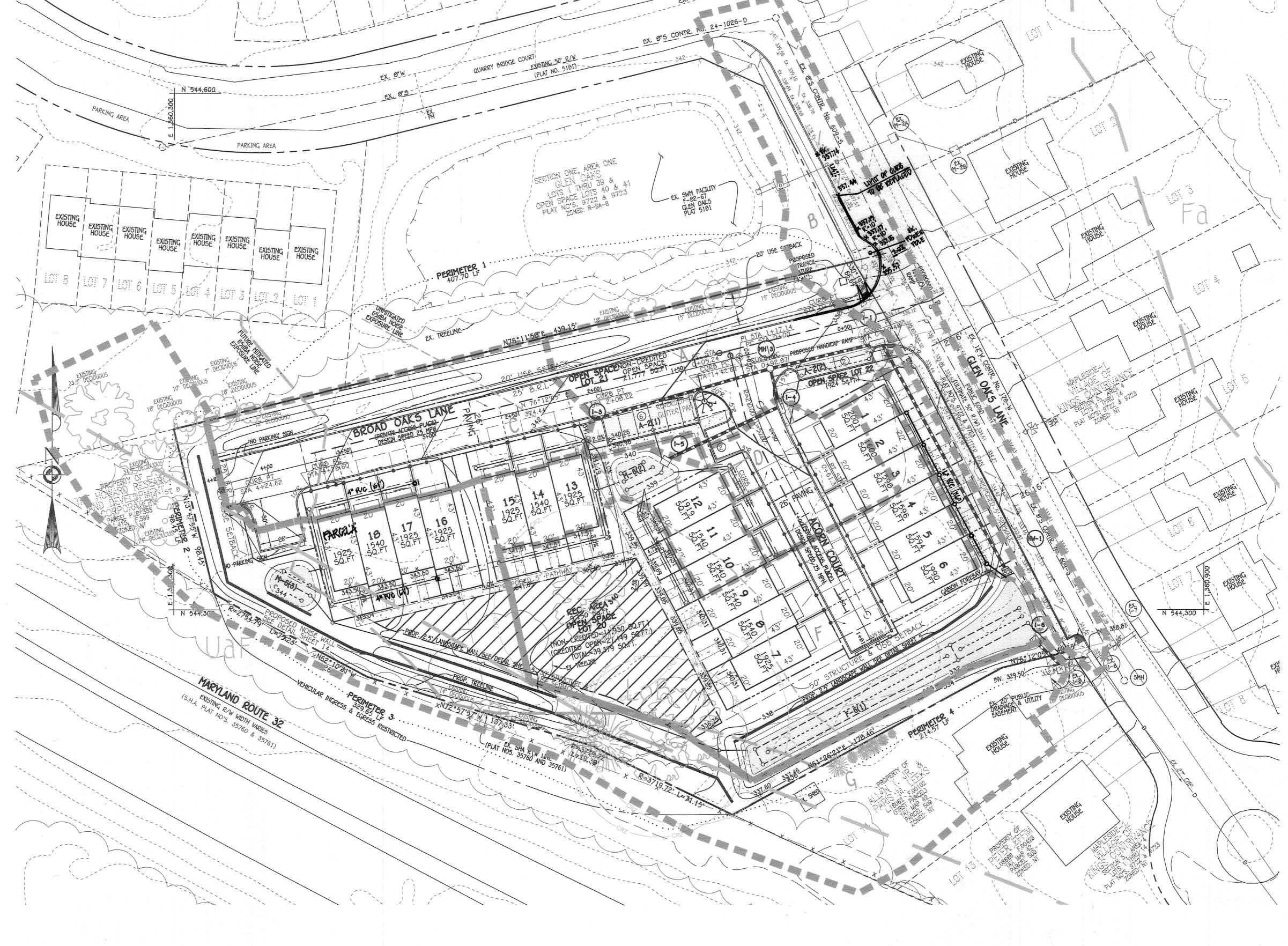
ZONED: R-5A-8 PREVIOUS HOWARD COUNTY FILES: ECP-18-039, F-18-121, WP-19-012, & AA-18-001.

TAX MAP NO.: 42 GRID NO.: 16 & 17 PARCEL NO'S.: 66, 353, 381, & 385 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: MARCH, 2022

SHEET 10 OF 14

F-21-017

	DR	PAINAG	E ARI	EA DATA	
AREA ID	STRUCTURE NO.	AREA	"C"	ZONED	% IMP.
Α .	1-1	0.30 AC.	0.62	R-5A-0	59%
В	Ex. I-6	0.38 AC.	0.64	R-5A-8	79%
С	l-3	0.33 AC.	0.65	R-5A-8	62%
D	I-4	0.15 AC.	0.89	R-5A-6	93%
£	I-5	0.16 AC.	0.76	R-5A-6	76%
F	I-6	1.67 AC.	0.71	R-5A-0	70%
G.	Ex. I-8	1.13 AC.	0.19	R-5A-8	5%



REVISIONS DESCRIPTION

FISHER, COLLINS & CARTER, INC.

CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS Chief, Bureau of Highways MK APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division 5-6-22 Date



PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/23.



THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

OWNERS GLEN OAKS DEVELOPMENT COMPANY, LLC

0310 FORREST STREET

SUITE 200

ELLICOTT CITY, MARYLAND 21043

ATTN: MR DONALD R. REUWER, JR.

410-707-7054

DEVELOPER GLEN OAKS DEVELOPMENT COMPANY, LLC 8318 FORREST STREET SUITE 200
ELLICOTT CITY, MARYLAND 21043
ATTN: MR DONALD R. REUWER, JR. 410-707-7054 REPLACEMENT SHEET STORM DRAIN DRAINAGE AREA MAP

RESIDENTIAL SINGLE FAMILY ATTACHED GLEN OAKS PLACE

LOTS ITHRU 18, PARCEL'A' & OPEN SPACE LOTS 20 thru 22

ZONED: R-5A-8 PREVIOUS HOWARD COUNTY FILES: ECP-18-039, F-18-121,

WP-19-012, & AA-18-001. TAX MAP NO.: 42 GRID NO.: 16 & 17 PARCEL NO'S.: 66, 353, 381, & 385

SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: MARCH, 2022 SHEET 11 OF 14 F-21-017

B.4.C Specifications for Micro-Bioretention, Rain Gardens, Landscape Infiltration & Infiltration

#### 1. Material Specifications

The allowable materials to be used in these practices are detailed in Table 8.4.1.

#### 2. Filter 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 tree 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

#### · 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 pt

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 hose 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

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 refracture 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.

Rojotill 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

When backfilling the bioretention facility, place soil in lifts 12" to 16". 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 bioretention areas 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 1/0th 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 ured 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 750, 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 - It perforated pipe is used, perforations should be 3" diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with a "" (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

The main collector pipe shall be at a minimum 0.5% slope

A rigid, non-perforated observation well must be provided (one per every 1,0000 square feet) to provide a clean-out port and monitor performance of the filter

A 4"layer of pea gravel (5" to 5" 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).

**REVISIONS** 

DESCRIPTION

REVISIONS TO SWM, STORMDRAIN, & GRADING

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

7. Miscellaneous

2 Kevise title block

les chim

Chief, Development Engineering Division

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

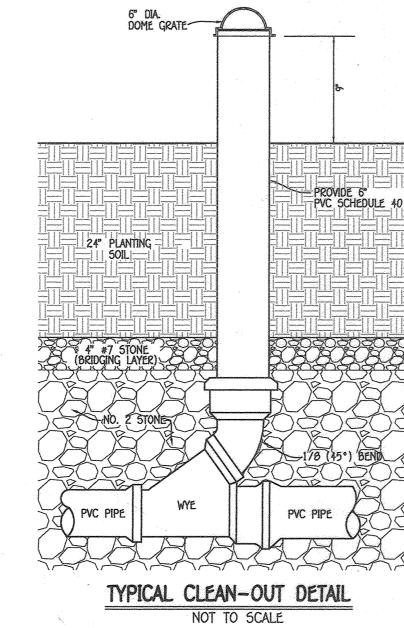


Table B.4 Materials Specifications for Bioretention

NO. 8 or NO. 9 (1/8" TO 3/8")

NO. 57 or NO. 6

aggregate (3/8" to 3/4")

0.02" to 0.04"

n/a

Plantings are site-specific

PE Type 1 nonwoven

potential cracking

Specification

compost (40%)

(A5TM D 2974)

Shredded hardwood

see Appendix A: Table A.4

(30%), coarse sand (30%) &

compost (35-40%) or sandy loam

Ornamental stone: washed cobbles 5tone: 2" to 5

Loamy sand (35-65%) &

Min. 10% by dry weight

Pea gravel: ASTM-D-448

F 750, Type P5 20 or AASHTO M-270

M5HA Mix NO. 3; f'c=3500 psi @ 28

AA5HTO-M-6 or A5TM-C-33

days, normal wight, air-entrained; n/a reinforcing to meet ASTM-615-60

Plantings

Organic content

Pea gravel diaphragm

Jnderdrain piping

Poured in place concrete

Gravel (underdrains and infiltration

Planting soil [2' to 4' deep]

FISHER, COLLINS & CARTER, INC. IVIL ENGINEERING CONSULTANTS & LAND SURVEYORS I hereby certify that the facility a this plan was constructed ennial square office park – 10272 baltimore national pik as shown on the 'As-Built' plans ELLICOTT CITY, MARYLAND 21042 and meets with the approved (410) 461 - 2055

DATE

3/15/22

1/17/23

Chief, Bureau of Highways MK APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 571422 Chief, Division of Land Development NA

5. 6. 22

PROFESSIONAL CERTIFICATION HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY MI AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/23.

USDA soil types loamy sand or sandy loam; clay content <5% Aged 6 months, minimum; no pine or wood chips Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per 4" to 6" rigid schedule 40 row; minimum of 3" of gravel over pipes; note necessary underneath PVC or 50R35 pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized On-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 350.R/89; vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressures); and analysis of Sand substitutions such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

RED MAPLE RIVER BIRCH

BLACK GUM PERSIMMON SYCAMORE PIN OAK BLACK WILLOW

SHRUB5

INKBERRY

WITCH HAZEL BUTTONBRUSH BUCKEYE

BOTTLEBRUSH BUCKEYE

SWITCHGRASS L HEAVY METAL SWITCHGRASS

BIO-RETENTION FACILITY (M-6)

5CALE: 1"=20"

M-6 (2)

(MICRO BIO-RETENTION FACILITY

DRAINAGE AREA: 6,205 SQFT.

FILTER AREA: 481 SOFT

BOTTOM ELEVATION 3395

PERIMETER 137

TOP OF DAM ELEVATION 340.5

BIO-RETENTION FACILITY (M-6)

5CALE: 1"=20" M-6 (3)

(MICRO BIO-RETENTION FACILITY) DRAINAGE AREA: 6,717 SqFt.

FILTER AREA: 438 50F

BOTTOM ELEVATION 344.3

TOP OF DAM ELEVATION 345.3

Scale: 1" = 20'

PERIMETER 87'

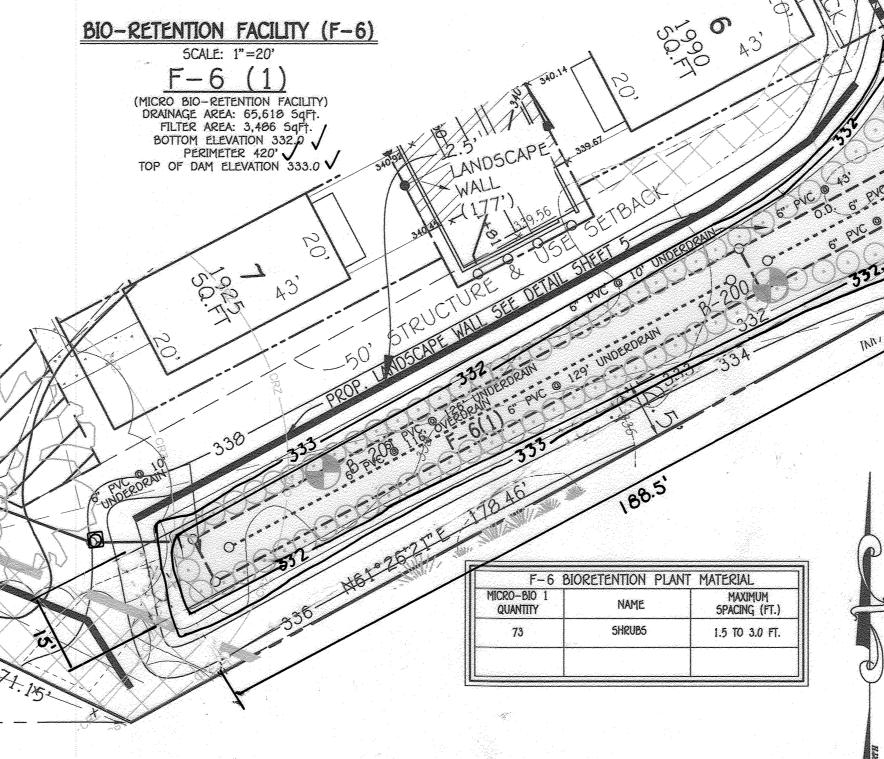
EASTERN RED CEDAR FRINGE TREE

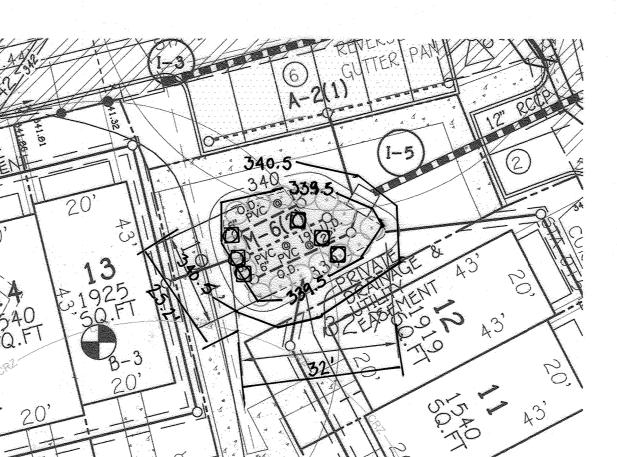
ANY OF THE TREES LISTED MAY BE USED

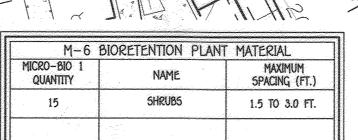
ANY OF THE SHRUBS LISTED MAY BE USED

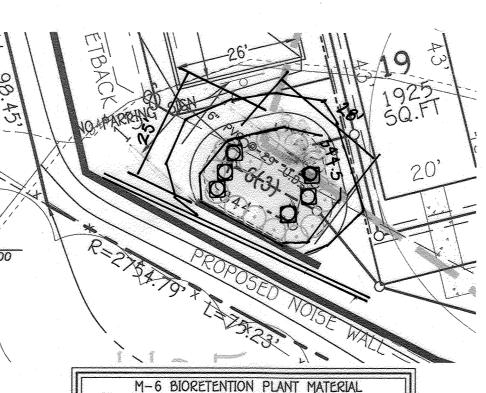
ANY OF THE GRASS LISTED MAY BE USED

BIO-RETENTION FACILITY (F-6) SCALE: 1"=20' F-6 (1) (MICRO BIO-RETENTION FACILITY) DRAINAGE AREA: 65,610 54Ft. FILTER AREA: 3,486 54Ft. BOTTOM ELEVATION 332,0 PERIMETER 420' V F-6 BIORETENTION PLANT MATERIAL QUANTITY 73

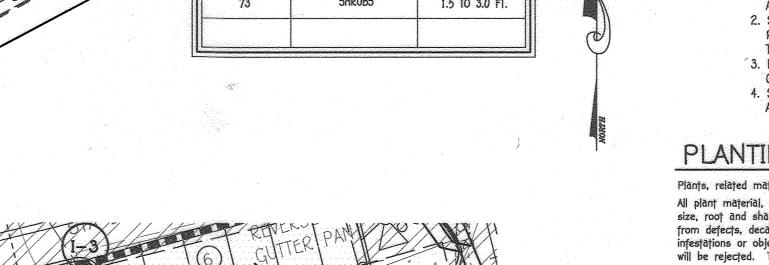


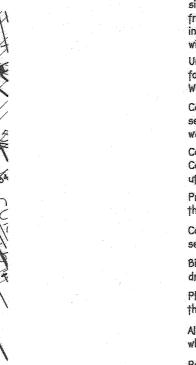


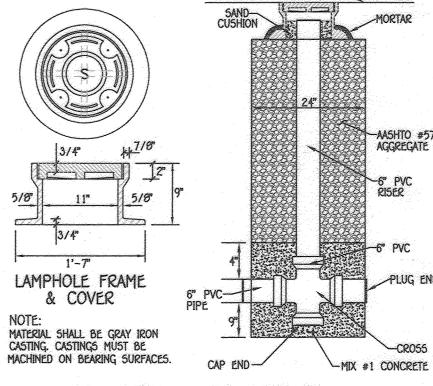




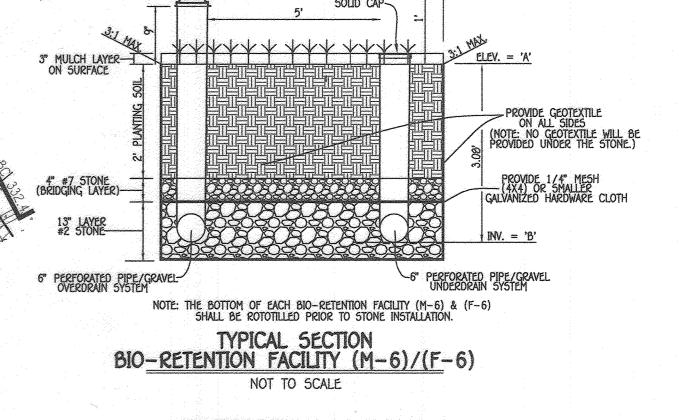
	BIORETENTION PLANT	
MICRO-BIO 1 QUANTITY	NAME	MAXIMUM SPACING (FT.)
13	5HRUB5	1.5 TO 3.0 FT.







CLEANOUT/ WATER QUALITY NOT TO SCALE



FACILITY NO. AB √332.00 328.92V 339.5 336.4 M-6 (2) 344.3 341.2 M-6 (3)

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

1 ANNUAL MAINTENANCE OF PLANT MATERIAL MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF 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.

2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDER BEYOND TREATMENT. TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.

3. MULCH SHALL BE INSPECTED EACH SPRING, REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS. 4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS. WITH A MINIMUM OF ONCE PER MONTH AND

AFTER HEAVY STORM EVENTS.

# PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein.

All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to the species, size, root and shape shown on the plant list and the American Association of Nurserymen (AAN) Standards. Plant material shall be healthy, vigorous, free from defects, decay, disfiguring roots, sun scald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug; no healed-in plants from cold storage will be accepted. Unless otherwise specified, all general conditions, planting operations, details and planting specification shall conform to "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Areas", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all agenda.

Contractor shall be required to quarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section of the Landscape Guidelines Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

Contractor shall be responsible for notifying utility companies, utility contractors and "Miss Utility" a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the Contractor. Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at

the drip line. Contractor id responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of completion of site construction.

Bid shall be base on actual site conditions. No extra payment shall be made for work arising from site conditions differing from those indicated on drawings and specifications

Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on

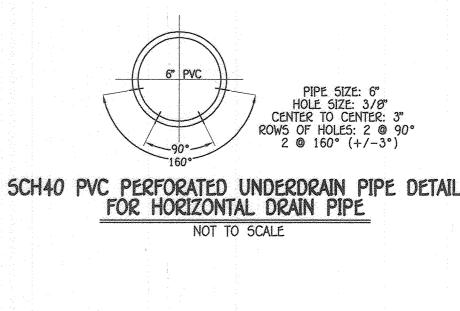
All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where noted on plans. Positive drainage shall be maintained in planting beds 2 percent slope)

Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per

cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or other approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines.

Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific ground cover to be treated.

All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded. This plan is intended for landscape use only. see other plan sheets for more information on grading, sediment control, layout, etc.



REPLACEMENT SHEET STORMWATER MANAGEMENT NOTES AND DETAILS RESIDENTIAL SINGLE FAMILY ATTACHED GLEN OAKS PLACE

LOTS 1 THRU 18, PARCELA' & OPEN SPACE LOTS 20 thru 22

ZONED: R-5A-8 PREVIOUS HOWARD COUNTY FILES: ECP-18-039, F-18-121,

WP-19-012. & AA-18-001.

TAX MAP NO.: 42 GRID NO.: 16 & 17 PARCEL NO'5.: 66, 353, 381, & 385 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: MARCH, 2022

F-21-017

DEVELOPER GLEN OAKS DEVELOPMENT COMPANY, LLI 8318 FORREST STREET SUITE 200 ELLICOTT CITY, MARYLAND 21043

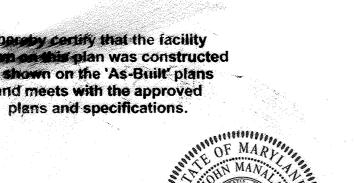
OWNERS

ATTN: MR DONALD R. REUWER, JR.

410-707-7054

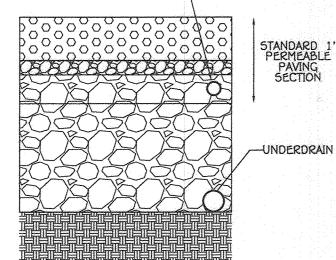
GLEN OAKS DEVELOPMENT COMPANY, LLC **6318 FORREST STREET** SUITE 200 ELLICOTT CITY, MARYLAND 21043 ATTN: MR DONALD R. REUWER, JR 410-707-7054

SHEET 12 OF 14



2" (No. 57 STONE) 4" (No. 2 STONE)

1'-3" (No. 2 5TONE)



TYPICAL SECTION - A-2 PERMEABLE SECTION w/ OVERDRAIN & UNDERDRAIN

> NO SCALE (SEE CHART BELOW FOR PAVEMENT THICKNESS)

PERMEABLE P	PAVING	CHART
PERM. PAV. AREA NO.	DE	PTH
A-2(1)	1.	25' 🗸
A-2(2)	1.	25' 🗸

### OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED PERMEABLE PAVEMENT (A-2)

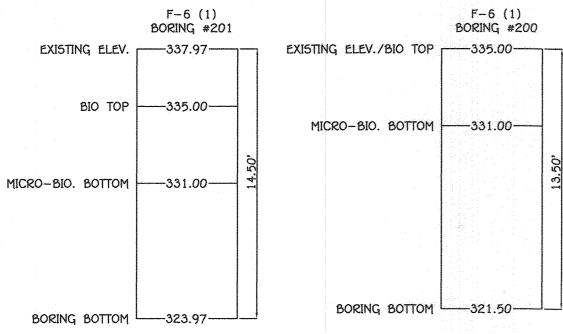
a. The owner shall periodically sweep (or vacuum porous concrete pavement) the pavement surfaces to reduce sediment accumulation and insure continued surface porosity. Sweeping should be performed at least twice annually with a commercial cleaning unit. Washing or compressed air units should not be used to perform surface cleaning.

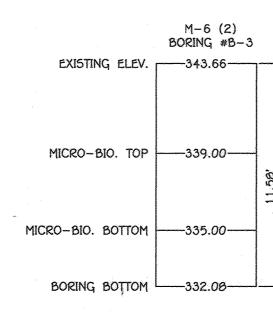
b. The owner shall periodically clean drainage pipes, inlets, stone edge drains and other structures within or draining to the subbase.

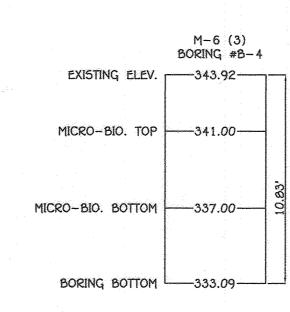
c. The owner shall use deicers in moderation. Deicers should be non-toxic and be applied either as calcium magnesium acetate or as pretreated salt.

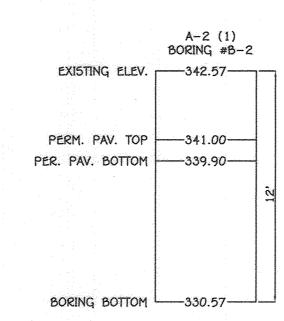
d. The owner shall ensure snow plowing is performed carefully with blades set one inch above the surface. Plowed snow piles and snowmelt should not be directed to permeable pavement.

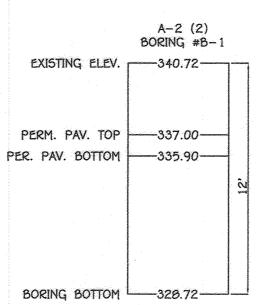
> BORING LOGS 5CALE: 1"=50'

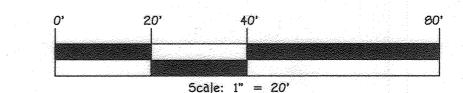




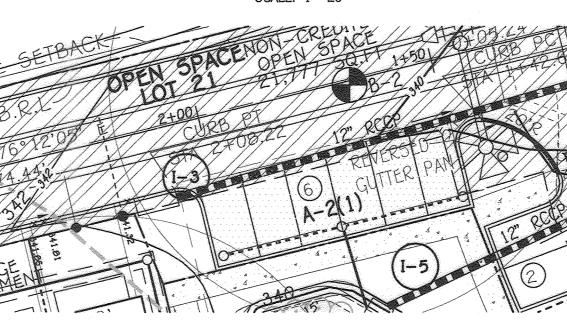




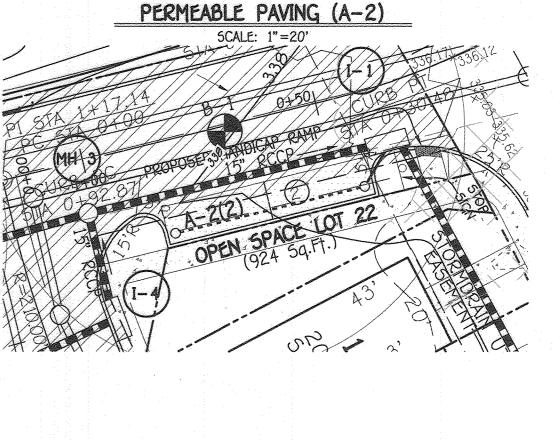




PERMEABLE PAVING (A-2) SCALE: 1"=20'

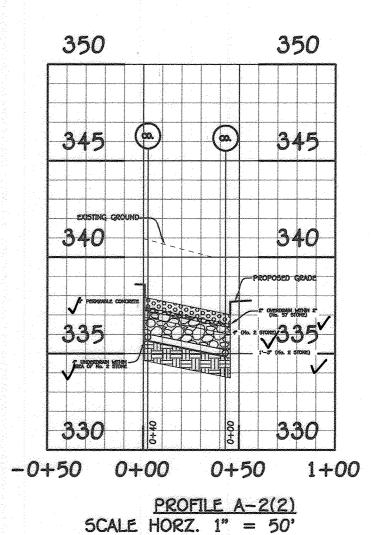






PROFILE A-2(1) SCALE HORZ. 1" = 50"

VERT. 1" = 5"



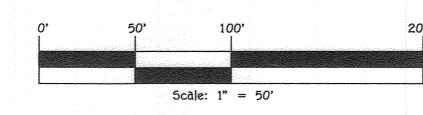
VERT. 1" = 5'

Γ		REVISIONS	
T	NO.	DESCRIPTION	DATE
ľ	1	REVISIONS TO SWM, STORMDRAIN, GRADING, & PERMEABLE PAVING PROFILE	3/15/22
Γ	2	2 REVISETITLE BLOCK	
T			

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS NNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE

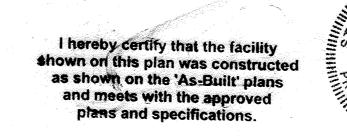
ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2055 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 04/28/2022 Date Chief, Bureau of Highways MK APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

5/12/22





PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/23.



OWNERS

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DEVELOPER GLEN OAKS DEVELOPMENT COMPANY, LLC 8318 FORREST STREET SUITE 200 ELLICOTT CITY, MARYLAND 21043 ATTN: MR DONALD R. REUWER, JR. 410-707-7054

REPLACEMENT SHEET STORMWATER MANAGEMENT NOTES AND DETAILS RESIDENTIAL SINGLE FAMILY ATTACHED GLEN OAKS PLACE

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TAX MAP NO.: 42 GRID NO.: 16 & 17 PARCEL NO'S.: 66, 353, 381, & 385 HOWARD COUNTY, MARYLAND SIXTH ELECTION DISTRICT SCALE: AS SHOWN DATE: MARCH, 2022 SHEET 13 OF 14 F-21-017

