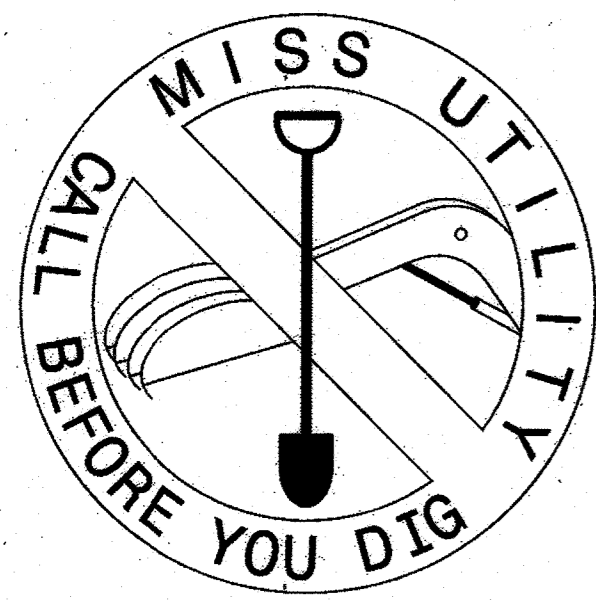


BEFORE YOU DIG CALL
1-800-257-7777 OR DIAL 811



SITE DEVELOPMENT PLAN

VILLAGE OF KINGS CONTRIVANCE SECTION 3 AREA 2, OPEN SPACE LOT #152 LAKE SEDIMENT PLACEMENT SITE

TAX MAP NO. 42 GRID NO.21 PARCEL NO. 442 LOT NO. 152



HOWARD COUNTY
ADC MAP COORDINATES:
MAP 19 GRID H-3

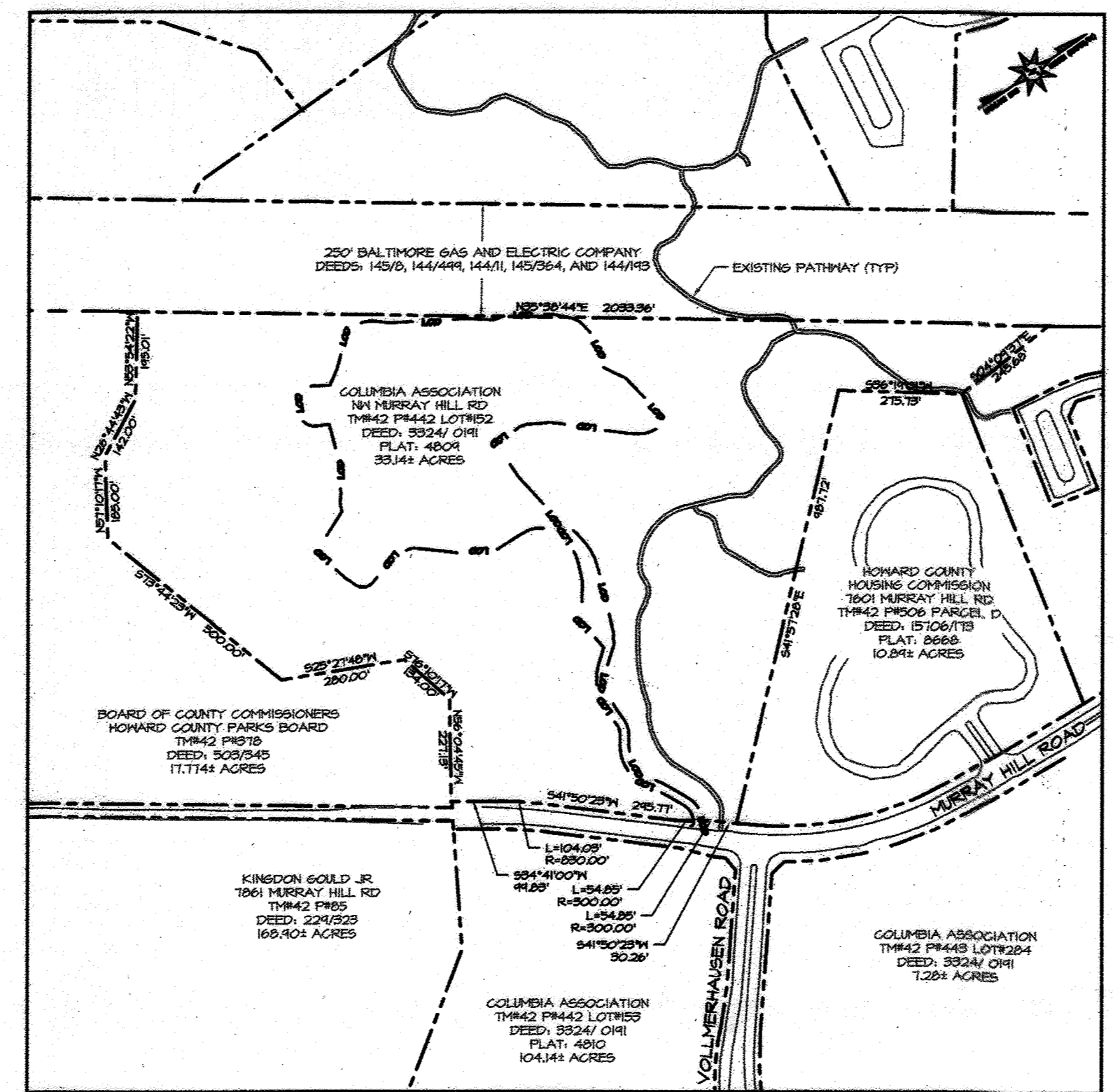
MAP COPYRIGHT UNIVERSAL MAP GROUP LLC.
PERMITTED USE NUMBER 20911186

VICINITY MAP
SCALE: 1"=2000'

6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST 48 HOURS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF UTILITIES AT (410)313-4900 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- EXISTING TOPOGRAPHY IS LATEST HOWARD COUNTY GIS DATED SPRING 2011 SUPPLEMENTED WITH FIELD SURVEYS BY NJR & ASSOCIATES DATED SEPTEMBER 25, 2014 AND BAYLAND CONSULTANTS & DESIGNERS INC., DATED NOVEMBER 2015.
- THE EXISTING UTILITIES, GRADES, AND OBSTRUCTIONS SHOWN ARE FROM THE BEST AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO HIS SATISFACTION PRIOR TO CONSTRUCTION. NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING SERVICES AND MAINS AND ANY DAMAGE TO THEM SHALL BE REPAIRED IMMEDIATELY AT HIS OWN EXPENSE.
- CONTOURS & PLANIMETRICS SHOWN OUTSIDE OF LIMIT OF WORK ARE BASED ON THE LATEST HOWARD COUNTY GIS DATA.
- PROPERTY BOUNDARY SHOWN HEREIN IS TAKEN FROM PLAT NO. 4809.
- THERE ARE NO NON-TIDAL WETLANDS OR ASSOCIATED BUFFERS WITHIN THE PROJECT LIMITS.
- FEMA FIRM #24027C0165D EFFECTIVE NOVEMBER 6, 2013 SHOWS THAT THE PROJECT AREA IS NOT WITHIN FEMA FLOODPLAIN LIMITS.
- RIPRAP SHOWN IN PLAN VIEW IS SYMBOLIC AND DOES NOT REPRESENT INDIVIDUAL STONES.
- THIS PLAN IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS UNDER 16.1202(b)(1)(i) SINCE IT IS PART OF A PLANNED UNIT DEVELOPMENT WHICH HAD PRELIMINARY PLAN APPROVAL AND 50% OR MORE OF THE LAND WAS RECORDED AND SUBSTANTIALLY DEVELOPED BEFORE DECEMBER 31, 1992, IF THE HOMEOWNERS ASSOCIATION HAS FOREST STEWARDSHIP PLAN DRAFTED BY THE MARYLAND DEPARTMENT OF NATURAL RESOURCES.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL NPDES PERMIT REQUIREMENTS.
- A TRAFFIC STUDY IS NOT REQUIRED BECAUSE THE PROPOSED WORK DOES NOT GENERATE ANY TRAFFIC.
- STORMWATER MANAGEMENT FOR THIS PROJECT IS ADDRESSED BY RETURNING THE DISTURBED AREA AND THE ADJACENT MOUND TO FOREST IN GOOD CONDITION. TEMPORARY STORMWATER-MANAGEMENT DURING CONSTRUCTION IS ADDRESSED BY OVERSIZING THE SEDIMENT TRAPS AS DIRECTED BY THE HOWARD SOIL CONSERVATION DISTRICT.
- SEE ALSO DPZ FILES: P-80-003, F-80-087, SDP-93-123, FDP-169-A-2 PART 2, WP-16-074, GP-16-030, AND ECP-17-011.
- AN AMENDMENT TO FDP-169-A-II PART II IS REQUIRED IN ACCORDANCE WITH SECTION 125.0.D & 125.0.F OF THE ZONING REGULATIONS TO REVISE THE FDP CRITERIA TO ALLOW THE PROPOSED USE AS A "PERMITTED USE" IN THE OPEN SPACE LAND USE AREA. PLANNING BOARD APPROVAL OF THIS SITE DEVELOPMENT PLAN IS ALSO REQUIRED IN ACCORDANCE WITH SECTION 125.0.G OF THE ZONING REGULATIONS.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1983) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREETLIGHT AND ANY TREE.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (1 1/2 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 42DB AND 42R2 WERE USED FOR THIS PROJECT.
- WATER IS PUBLIC. CONTRACT 549-W, MIDDLE PATUXENT RIVER DRAINAGE AREA.
- SEWER IS PUBLIC. CONTRACTS 722-S, 30-973-D, 34-3076-D.
- THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY BAYLAND CONSULTANTS & DESIGNERS, DATED FEBRUARY 10, 2016; AND THE ECP WAS APPROVED ON SEPTEMBER 12, 2016. THERE ARE NO WETLANDS WITHIN THE PROJECT AREA.
- THERE ARE NO CEMETERIES OR GRAVESITES ON THE PROPERTY.
- COMMUNITY MEETINGS WERE HELD ON OCTOBER 17, 2016, 6:00 PM, AT 7251 EDEN BROOK DRIVE IN COLUMBIA, MD.; AND ON JANUARY 23, 2017, 6:00 PM, AT 9450 GERWIG LANE IN COLUMBIA, MD.
- THE SUBJECT PROPERTY IS ZONED "NEW TOWN - OPEN SPACE" IN ACCORDANCE WITH THE OCTOBER 6, 2013 COMPREHENSIVE ZONING REGULATIONS.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS, OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS.
- FDP-169-A-II PART II WAS AMENDED TO PERMIT THE PROPOSED USE AND RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY AS FDP-169-A-III PART II, ON PLAT NUMBERS 20911185, THROUGH 20911188.
- THE DEPARTMENT OF PLANNING AND ZONING HAS ALLOWED THE TEMPORARY ACCESS ONTO MURRAY HILL ROAD FOR THIS PROJECT.
- THE PLANNING BOARD APPROVED THIS PLAN AT ITS MEETING ON APRIL 20, 2017 SUBJECT TO COMPLIANCE WITH ALL APPLICABLE ENVIRONMENTAL REGULATIONS.



HOWARD COUNTY ADC MAP COORDINATES:
MAP 19 GRID H-3

MAP COPYRIGHT UNIVERSAL MAP GROUP LLC.
PERMITTED USE NUMBER 20911186

LOCATION MAP
SCALE: 1"=500'

SEQUENCE OF CONSTRUCTION

- PRE-CONSTRUCTION**
- OBTAIN A GRADING PERMIT FROM HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS.
 - THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID) AT 410-313-1880 AT LEAST 48 HOURS BEFORE COMMENCING WORK. EARTH DISTURBANCE MAY NOT COMMENCE UNTIL THE PERMITTEE OR THE RESPONSIBLE PERSONNEL HAVE MET ON SITE WITH THE SEDIMENT AND EROSION CONTROL INSPECTOR TO REVIEW THE APPROVED PLANS.
 - NOTIFY "MISS UTILITY" AT (410)792-2401 OR 1-800-257-7777 AT LEAST 48 HOURS BEFORE BEGINNING THE CONSTRUCTION.
 - INSTALL TRUCK CROSSING SIGNS AS SHOWN ON THE PLANS WHENEVER WORK IS BEING PERFORMED.
- PHASE I - CREATE PAD SITE FOR PLACEMENT OF DREDGED MATERIAL**
- CLEAR AND GRUB FOR THE INSTALLATION OF THE SEDIMENT AND EROSION CONTROL DEVICES.
 - INSTALL THE STABILIZED CONSTRUCTION ENTRANCE, TEMPORARY CONSTRUCTION ACCESS ROAD, CURB INLET PROTECTION, SILT FENCE ALONG ACCESS ROAD, MOUNTABLE BERM.
 - INSTALL SILT FENCE FOR INSTALLATION OF SEDIMENT TRAPS. INSTALL AND STABILIZE SEDIMENT TRAPS, INCLUDING GABION INFLOW PROTECTIONS. INSTALL AND STABILIZE PERIMETER EARTH DIKES TO SEDIMENT TRAP.
 - WITH THE PERMISSION OF THE SEDIMENT AND EROSION CONTROL INSPECTOR, CLEAR AND GRUB THE REMAINDER OF THE SITE. CONTRACTOR SHALL STOCKPILE ENOUGH TOPSOIL TO RE-SPREAD ON PERMANENT SLOPES. THE REMAINING TOPSOIL SHALL BE BLENDED PER THE GEOTECHNICAL REQUIREMENTS AND PLACED AS FILL.
 - BEGIN GRADING OPERATIONS. AS GRADING PROGRESSES, CONTRACTOR SHALL MAINTAIN THE A-1 EARTH DIKE TO TRAP #1 TO ENSURE POSITIVE DRAINAGE TO THE TRAP. THIS WILL REQUIRE RECONSTRUCTION OF THE DIKE AT THE TOP OF SLOPE AS THE GRADE IS RAISED. SILT FENCE AT THE TOE OF SLOPE IS INTENDED TO FILTER RUNOFF FROM SLOPE ONLY.
 - COMPLETE GRADING OPERATIONS AND PERMANENTLY STABILIZE ALL DISTURBED AREAS.
 - INSTALL DRIVEWAY APRON AND GATE AT MURRAY HILL ROAD.
 - WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE TRAPS #2 AND #3, INCLUDING THE EARTH DIKES AND GABION INFLOW PROTECTIONS. THE CONTRACTOR SHALL IMMEDIATELY STABILIZE ANY DISTURBED AREAS FOR THE TRAP AND DIKE REMOVAL.
 - PERFORM TREE AND SHRUB PLANTING AS SHOWN ON PLANTING PLAN WITHIN 2 MONTHS OF REMOVING SEDIMENT TRAPS.
 - ALL REMAINING SEDIMENT CONTROLS SHALL REMAIN IN PLACE FOR PHASE II OPERATIONS.
- PHASE II - PLACEMENT OF DREDGED MATERIAL**
- PRIOR TO THE START OF PHASE II, THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID) AT 410-313-1880 AT LEAST 48 HOURS BEFORE COMMENCING WORK. THE CONTRACTOR SHALL INSPECT ALL EXISTING SEDIMENT CONTROLS TO ENSURE THEY ARE IN WORKING CONDITION AND REPAIR/REPLACE SEDIMENT CONTROLS AS REQUIRED BY THE SEDIMENT CONTROL INSPECTOR.
 - INSTALL PERIMETER SUPER SILT FENCE AND EXTEND A-1 AND A-2 EARTH DIKES AS SHOWN ON THE PHASE II PLAN. CONTRACTOR SHALL CONSTRUCT, EXTEND, AND MAINTAIN DIKES AS REQUIRED THROUGHOUT PROJECT TO ENSURE POSITIVE DRAINAGE TO TRAP #1.
 - PERFORM DREDGING OPERATIONS AND PLACE & WORK DREDGED MATERIAL AS REQUIRED TO ACCOMMODATE DRYING AND DRAINING OF THE MATERIAL.
 - WITHIN SIX MONTHS AFTER DREDGING OPERATIONS ARE COMPLETE, FINE GRADE SITE, MIX LIME (14 TONS/ACRE) WITH DREDGED MATERIAL AND PERMANENTLY STABILIZE ALL DISTURBED AREAS. PLANT OR REPLACE ANY TREES REQUIRED TO COMPLETE THE PLANTING PLAN (SHEET 5).
 - ONCE ALL AREAS HAVE BEEN PERMANENTLY STABILIZED, AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL MEASURES, INCLUDING PHASE I SEDIMENT CONTROLS. IMMEDIATELY STABILIZE ANY AREAS DISTURBED DUE TO THE REMOVAL OF THE SEDIMENT CONTROL MEASURES.

DEVELOPER'S CERTIFICATE

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

SIGNATURE OF DEVELOPER

DATE

ALBERT F. EDWARDS, P.E. *P.E. & Construction*
PRINTED NAME

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER

DATE

HOWARD SOIL CONSERVATION DISTRICT

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

HOWARD SOIL CONSERVATION DISTRICT

DATE

SITE ANALYSIS

1. TOTAL SITE AREA:	33.14 AC.
1.1. PROPOSED DISTURBED AREA:	7.00 AC. (329,180 S.F.)
2. TOTAL AREA TO BE STABILIZED:	7.00 AC. - 7.55 AC. (A)
2.1. TOTAL EX. IMP. AREA:	0.10 AC.
2.2. TOTAL EX. IMP. AREA TO REMAIN:	0.10 AC.
2.3. TOTAL PR. IMPERVIOUS AREA:	0.00 AC.
2.4. TOTAL TO BE STABILIZED WITH VEGETATION:	6.90 AC. - 7.45 AC. (A)
3. PROPOSED IMPERVIOUS AREA:	0.00 AC.
4. ESTIMATED CUT:	16,250 CY (PHASE I) 67.0 CY (PHASE II) (A)
5. ESTIMATED FILL:	111,003 46,256 CY (PHASE I) 34,949 CY (PHASE II)
6. CUMULATIVE CONTIGUOUS AREA WITH 25%+ SLOPE:	4.00 AC.

NOTE: THE EARTHWORK QUANTITIES SHOWN HEREON ARE FOR INFORMATION PURPOSES ONLY. BAYLAND MAKES NO GUARANTEE OF ACCURACY OF QUANTITIES OR BALANCE OF SITE. THE DEVELOPER AND CONTRACTOR SHALL TAKE FULL RESPONSIBILITY OF ACTUAL EARTHWORK QUANTITIES ENCOUNTERED DURING CONSTRUCTION.

HOWARD COUNTY GEODETIC MONUMENTS

NO.	NORTHING	EASTING	ELEVATION
42DB	546638.826	1353431.523	310.776
42R2	546949.791	1352118.600	331.463

ADDRESS CHART	
LOT/PARCEL #	STREET ADDRESS
LOT 152 / PARCEL 442	7640 MURRAY HILL ROAD

PERMIT INFORMATION CHART			
SUBDIVISION NAME:	SECTION/AREA:	LOT/PARCEL NO.	
VILLAGE OF KINGS CONTRIVANCE	SECTION 3 / AREA 2	LOT 152 / PARCEL 442	
PLAT#:	GRID#:	ZONING:	TAX MAP NO.
4809	21	NEW TOWN	42
DISTRICT:	BTH	CENSUS TRACT:	
		608003	
WATER CODE:	SEWER CODE:		
N/A	N/A		

APPROVED
PLANNING BOARD OF HOWARD COUNTY

DATE APRIL 20, 2017

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT

DIRECTOR

SHEET LIST TABLE

SHEET DESCRIPTION	
1 COVER SHEET	
2 EXISTING CONDITIONS AND ENVIRONMENTAL CONSTRAINTS PLAN	
3 EROSION AND SEDIMENT CONTROL PLAN - PHASE I	
4 DRAINAGE AREA MAPS	
5 EROSION AND SEDIMENT CONTROL PLAN - PHASE II	
6 DETAILS	
7 NOTES & DETAILS	
8 PLANTING PLAN	

LEGEND

EX. PROPERTY LINE/RIGHT-OF-WAY	---	PR. MAJOR CONTOUR	—270—
EX. MAJOR CONTOUR	---270---	PR. MINOR CONTOUR	---260---
EX. MINOR CONTOUR	---260---	PR. DRAINAGE AREA	-----
EX. ROAD	=====	PR. RIPRAP OUTLET/GABION INFLOW PROTECTION	-----
EX. STREAM C/L	~~~~~	PR. LIMIT OF CLEARING	~~~~~
EX. TREELINE	~~~~~	100-YR FEMA FLOODPLAIN	-----
EX. DRAINAGE AREA	-----	WETLAND BUFFER	-----
EX. SOIL	-----	NON-TIDAL WETLANDS	-----
EX. 100' STREAM BUFFER	-----		
EX. STEEP SLOPES (>25%)	-----		
EX. STORM DRAIN (SD) INLET	-----		
EX. LIGHT POLE	-----		
EX. TREE	-----		
EX. TREE TO REMAIN	-----		

OWNER/PREPARED FOR:

Columbia Association

THE COLUMBIA ASSOCIATION
9450 GERWIG LANE
COLUMBIA, MD 21046
ATTN: ALBERT F. EDWARDS, P.E.
410-381-3551

BayLand Consultants & Designers, Inc.
"Integrating Engineering and Environment"

7455 New Ridge Road, Suite T Phone: (410) 694-9401
Hanover, Maryland 21076 Fax: (410) 694-9405
Website: www.baylandinc.com
BAYLAND JOB NO. 8-17107 & 8-17111

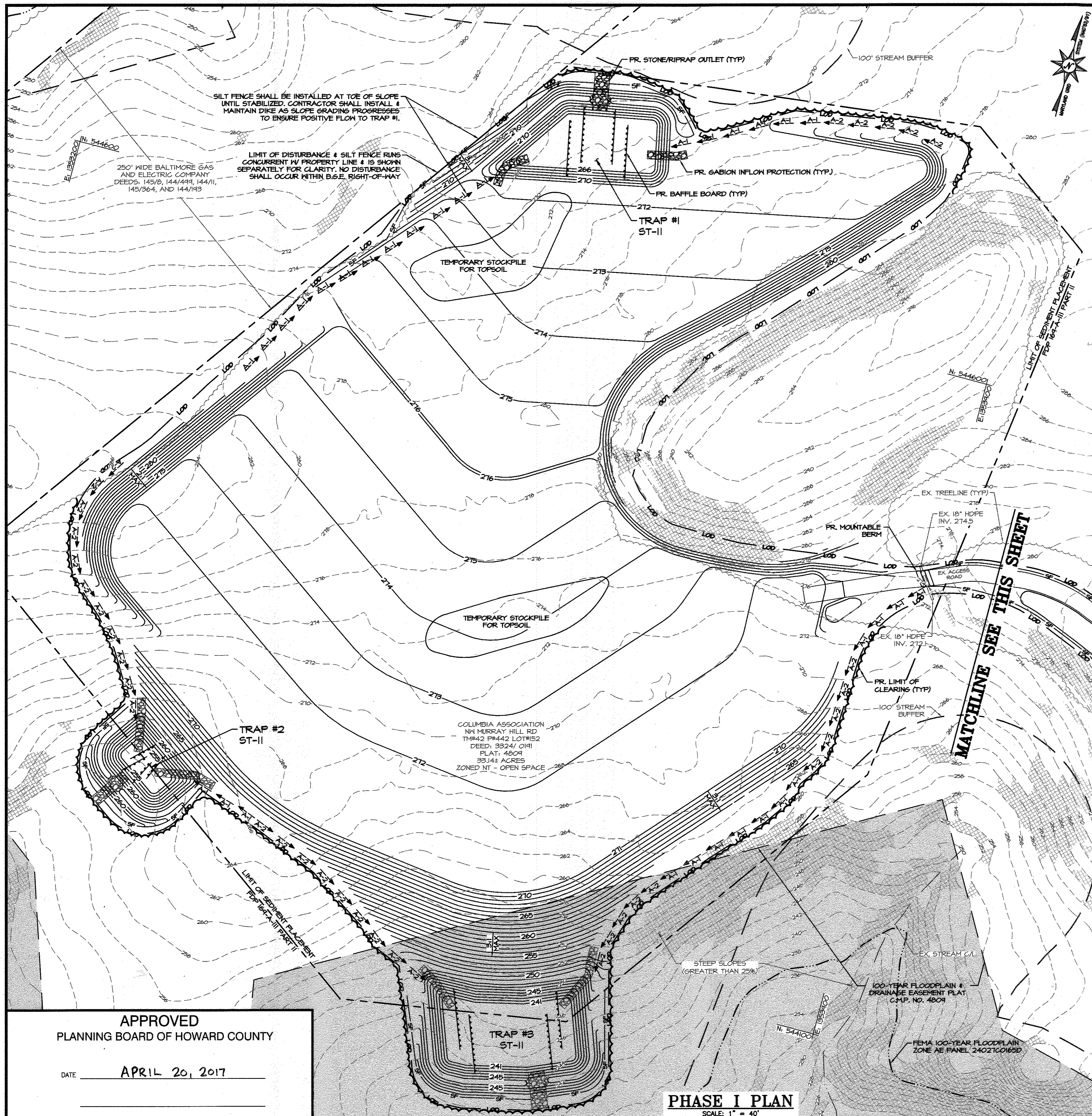
VILLAGE OF KINGS CONTRIVANCE SECTION 3 AREA 2, OPEN SPACE LOT #152
LAKE SEDIMENT PLACEMENT SITE - COLUMBIA ASSOCIATION
COVER SHEET

6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TAX MAP: 42 GRID: 21 PARCEL NO. 442 PLAT NO. 4809 LIBER: 1738 FOLIO: 0003 ZONING: NT - NEW TOWN

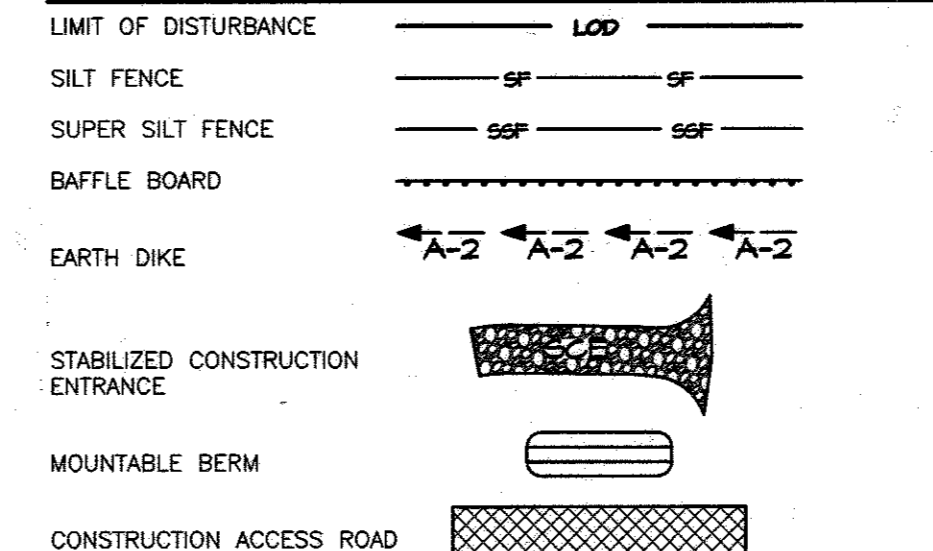
DATE	BY	DESCRIPTION	SCALE: AS SHOWN
10/10/23	JRH	UPDATE EXISTING TOPOGRAPHY & RAISE FILL	

DRAWN BY: VG/KN/MB DATE: 04/25/17
CHECKED BY: SB/JH DATE: 04/25/17
DESIGNED BY: JH/MB DATE: 04/25/17

SHEET NO. 1 OF 8



SEDIMENT CONTROL LEGEND



SUMMARY OF ESC QUANTITIES

PHASE I

STABILIZED CONSTRUCTION ENTRANCE:	1 EA
CONSTRUCTION ACCESS ROAD:	475 LF
MOUNTABLE BERM:	1 EA
SILT FENCE:	1,874 LF
A-1 EARTH DIKE:	526 LF
A-2 EARTH DIKE:	699 LF
GABION INFLOW PROTECTION:	6 EA
ST-II SEDIMENT TRAP:	3 EA

NOTE: THIS SUMMARY OF SEDIMENT CONTROL QUANTITIES IS FOR USE BY THE HOWARD SOIL CONSERVATION DISTRICT ONLY. THIS SUMMARY IS NOT INTENDED TO BE USED BY THE CONTRACTOR FOR ESTIMATING AND BIDDING PURPOSES.

SITE ANALYSIS - PHASE I

1. TOTAL SITE AREA:	33.14 AC.
1.1. PROPOSED DISTURBED AREA:	7.00 AC. (304,958 S.F.)
2. TOTAL AREA TO BE STABILIZED:	7.00 AC.
2.1. TOTAL EX. IMP. AREA:	0.10 AC.
2.2. TOTAL EX. IMP. AREA TO REMAIN:	0.10 AC.
2.3. TOTAL PR. IMPERVIOUS AREA:	0.00 AC.
2.4. TOTAL TO BE STABILIZED WITH VEGETATION:	6.90 AC.
3. PROPOSED IMPERVIOUS AREA:	0.00 AC.
4. ESTIMATED CUT:	16,250 CY
5. ESTIMATED FILL:	16,250 CY

NOTE: THE EARTHWORK QUANTITIES SHOWN HEREON ARE FOR INFORMATION PURPOSES ONLY. BAYLAND MAKES NO GUARANTEES OF ACCURACY OF QUANTITIES OR BALANCE OF SITE. THE DEVELOPER AND CONTRACTOR SHALL TAKE FULL RESPONSIBILITY OF ACTUAL EARTHWORK QUANTITIES ENCOUNTERED DURING CONSTRUCTION.

ST-II SEDIMENT TRAP TABLE

	TRAP #1	TRAP #2	TRAP #3
DRAINAGE AREA - INITIAL (AC.)	2.5	1.1	3.3
DRAINAGE AREA - INTERIM (AC.) PHASE I	2.24	1.7	3.0
DRAINAGE AREA - FINAL (AC.) PHASE II	2.4	-	-
TOTAL STORAGE REQ'D (CF)	16,530	6,120	21,820
TOTAL STORAGE PROV'D (CF)	18,752	7,451	23,211
WET STORAGE REQ'D (CF)	4,500	3,060	5,940
WET STORAGE PROV'D (CF)	4,819	3,148	6,168
DRY STORAGE REQ'D (CF)	12,030 (1-YR STORM)	3,060 (1-YR STORM)	15,880 (1-YR STORM)
DRY STORAGE PROV'D (CF)	13,932	4,302	17,044
EX. GROUND ELEV. AT OUTLET (WET STORAGE ELEV.)	267.25	257.75	242.25
TRAP BOTTOM ELEV. (FT)	266.0	255.0	241.0
TRAP BOTTOM DIMENSIONS (FT X FT)	90 X 40 (APPROX.)	40 X 20	96 X 46
WEIR LENGTH (FT)	11.0	8.0	14.0
WEIR CREST (DRY STORAGE ELEV.)	270	260	245
CLEANOUT ELEV. (FT)	266.63	256.38	241.63
TOP OF EMBANKMENT ELEV. (FT)	271	261	246
SIDE SLOPE (H:V RATIO)	2:1	2:1	2:1
EMBANKMENT TOP WIDTH (FT)	4.0	4.0	4.0
OUTLET PROTECTION - LENGTH (FT)	10.0	10.0	10.0
OUTLET PROTECTION DEPTH (IN)	19	19	19

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER: *[Signature]* DATE: 4/25/17

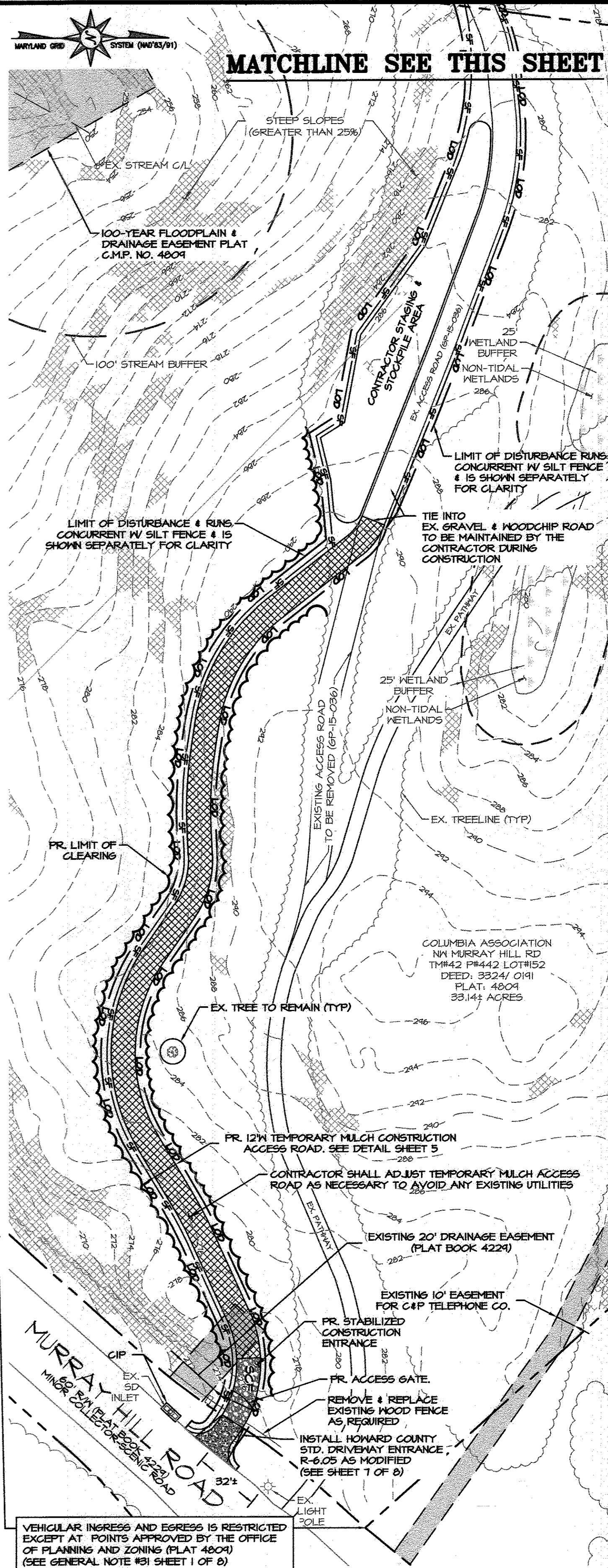
JOHN HEINRICH, P.E.
PRINTED NAME

HOWARD SCD

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

SIGNATURE: *[Signature]* DATE: 4/11/17

HOWARD SOIL CONSERVATION DISTRICT



APPROVED
PLANNING BOARD OF HOWARD COUNTY

DATE: APRIL 20, 2017

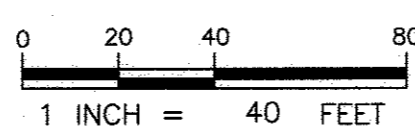
DEVELOPER'S CERTIFICATE

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

SIGNATURE OF DEVELOPER: *[Signature]* DATE: 4/26/2017
ALBERT F. EDWARDS, P.E. Director of Construction

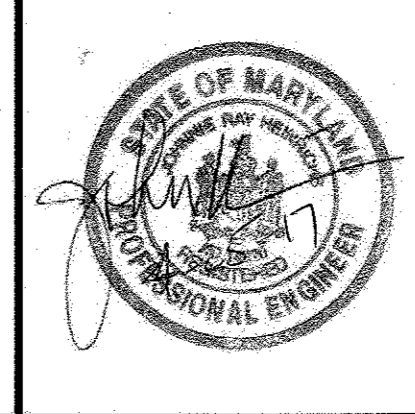
APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* DATE: 5-8-17
CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: 5-11-17
DIRECTOR: *[Signature]* DATE: 5-11-17

PHASE I PLAN
SCALE: 1" = 40'



OWNER/PREPARED FOR:
Columbia Association
THE COLUMBIA ASSOCIATION
9450 GERWIG LANE
COLUMBIA, MD 21046
ATTN: ALBERT F. EDWARDS, P.E.
410-381-3551

BayLand Consultants & Designers, Inc.
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7455 New Ridge Road, Suite T Phone: (410) 694-9401
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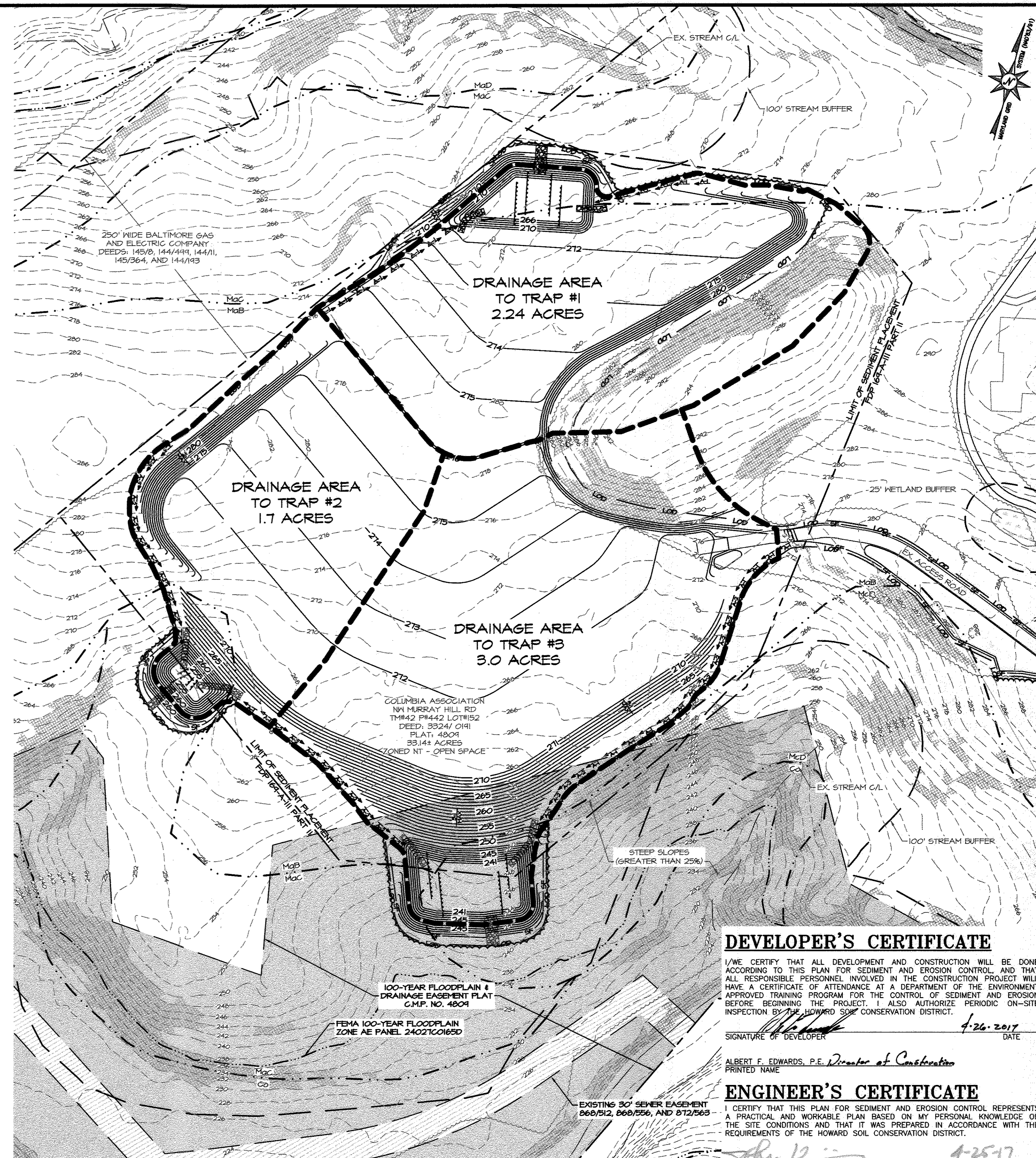
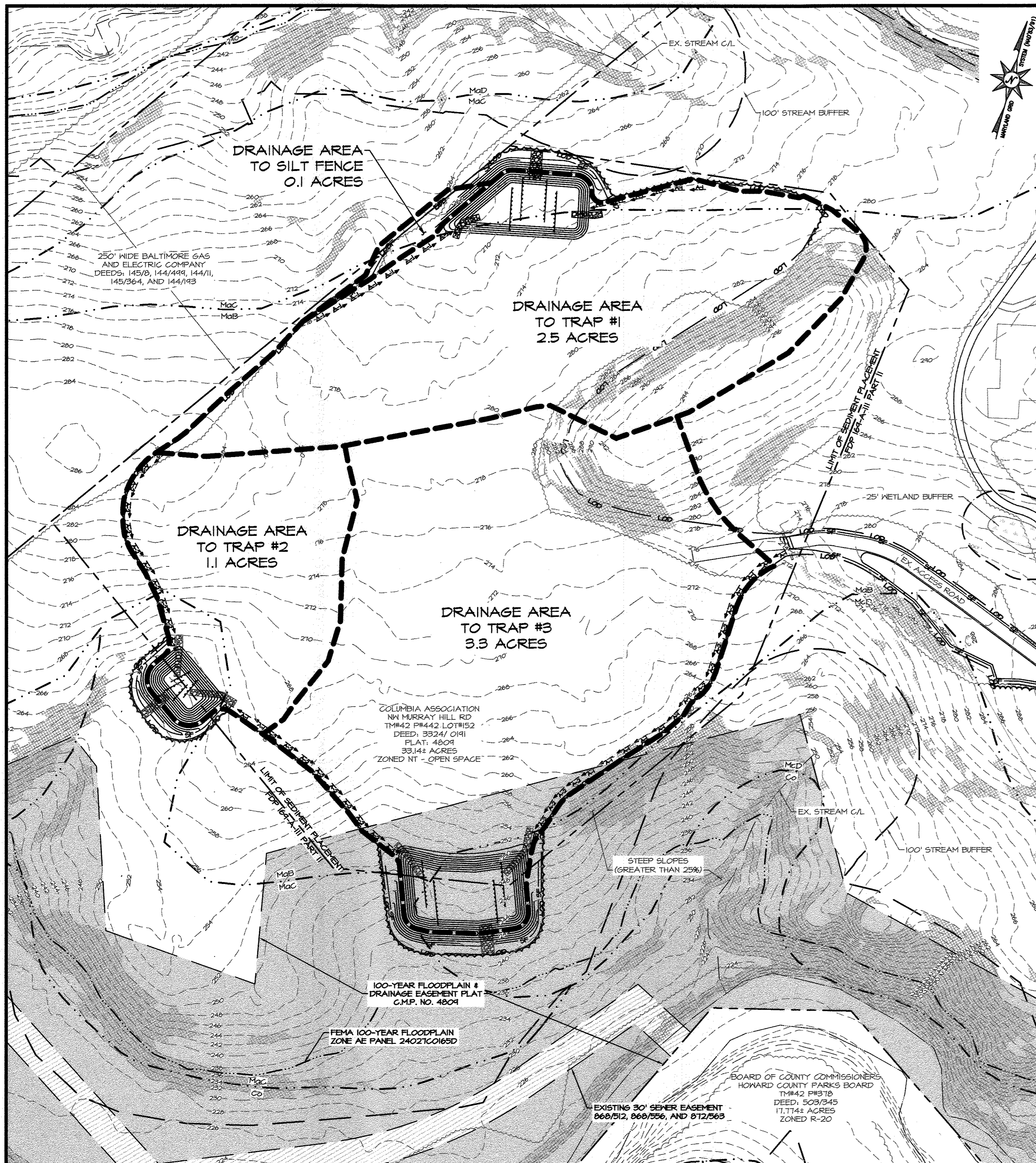
ACCESS ROAD PLAN - PHASES I & II
SCALE: 1" = 40'

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14920, EXPIRATION DATE: 05/12/2018.

VILLAGE OF KINGS CONTRIVANCE SECTION 3 AREA 2, OPEN SPACE LOT #152
LAKE SEDIMENT PLACEMENT SITE - COLUMBIA ASSOCIATION
EROSION AND SEDIMENT CONTROL PLAN - PHASE I

DATE	BY	REVISIONS	DESCRIPTION

DRAWN BY: VG/KN/MB DATE: 04/25/17
CHECKED BY: SB/JH DATE: 04/25/17
DESIGNED BY: JH/MB DATE: 04/25/17
SHEET NO. 3 OF 8



DEVELOPER'S CERTIFICATE

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

SIGNATURE OF DEVELOPER: *[Signature]* DATE: 4-26-2017

ALBERT F. EDWARDS, P.E. Director of Construction
PRINTED NAME

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER: *[Signature]* DATE: 4-25-17

JOHN HENRICHS, P.E.
PRINTED NAME

HOWARD SCD

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

[Signature] DATE: 5/9/17

HOWARD SOIL CONSERVATION DISTRICT

APPROVED
PLANNING BOARD OF HOWARD COUNTY

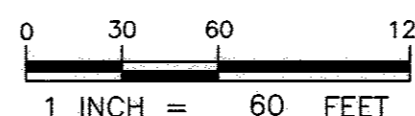
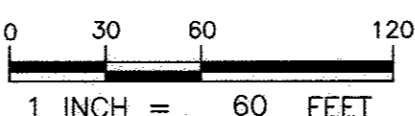
DATE: APRIL 20, 2017

**DRAINAGE AREA MAP
INITIAL CONDITIONS**

SCALE: 1" = 60'

SOIL LABEL	SOIL SERIES	SLOPES	HSG	HYDRIC RATING (%)	K FACTOR RATING
McB	MANOR LOAM	3-8%	B	0%	0.28
McC	MANOR LOAM	8-15%	B	0%	0.32
McD	MANOR LOAM	15-25%	B	0%	0.28
Co	CODORUS AND HATEGRO SILT LOAM	0-3%	C	35%	0.55

NOTES: 1. SOIL DATA WAS DERIVED FROM THE USDA WEB SOIL SURVEY IN NOVEMBER 2016

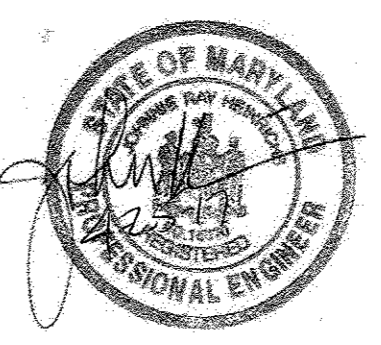


APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *[Signature]* DATE: 5-8-17
 Chief, Division of Land Development: *[Signature]* DATE: 5-11-17
 Director: *[Signature]* DATE: 5/11-17

OWNER/PREPARED FOR:
Columbia Association
 THE COLUMBIA ASSOCIATION
 9450 GERWIG LANE
 COLUMBIA, MD 21046
 ATTN: ALBERT F. EDWARDS, P.E.
 410-381-3551

BayLand Consultants & Designers, Inc.
 "Integrating Engineering and Environment"
 7455 New Ridge Road, Suite T Phone: (410) 694-9401
 Hanover, Maryland 21076 Fax: (410) 694-9405
 Website: www.baylandinc.com
 BAYLAND JOB NO. 8_17107 & 8_17111



VILLAGE OF KINGS CONTRIVANCE SECTION 3 AREA 2, OPEN SPACE LOT #152
LAKE SEDIMENT PLACEMENT SITE - COLUMBIA ASSOCIATION
DRAINAGE AREA MAPS

DATE	BY	REVISIONS	DESCRIPTION

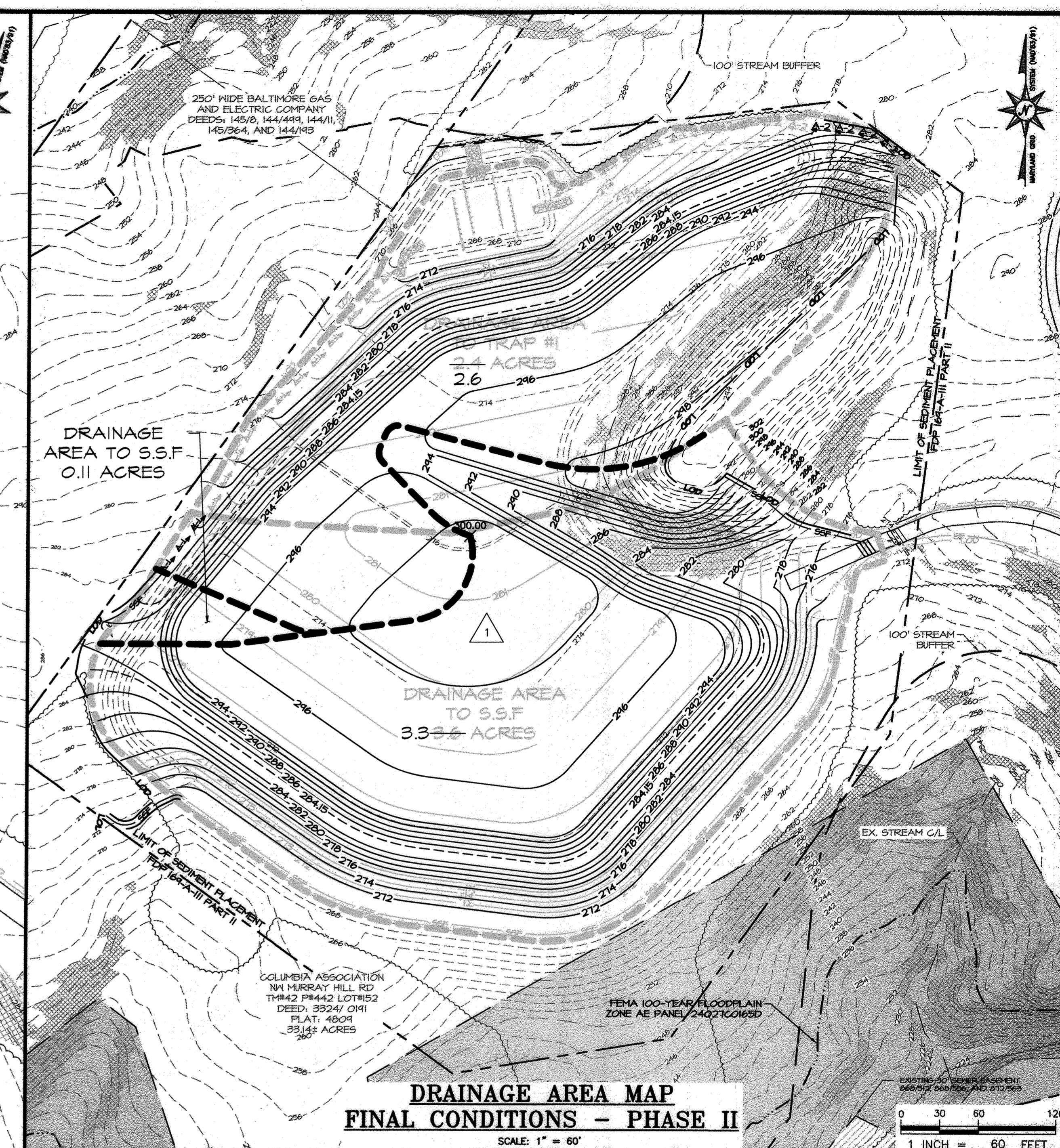
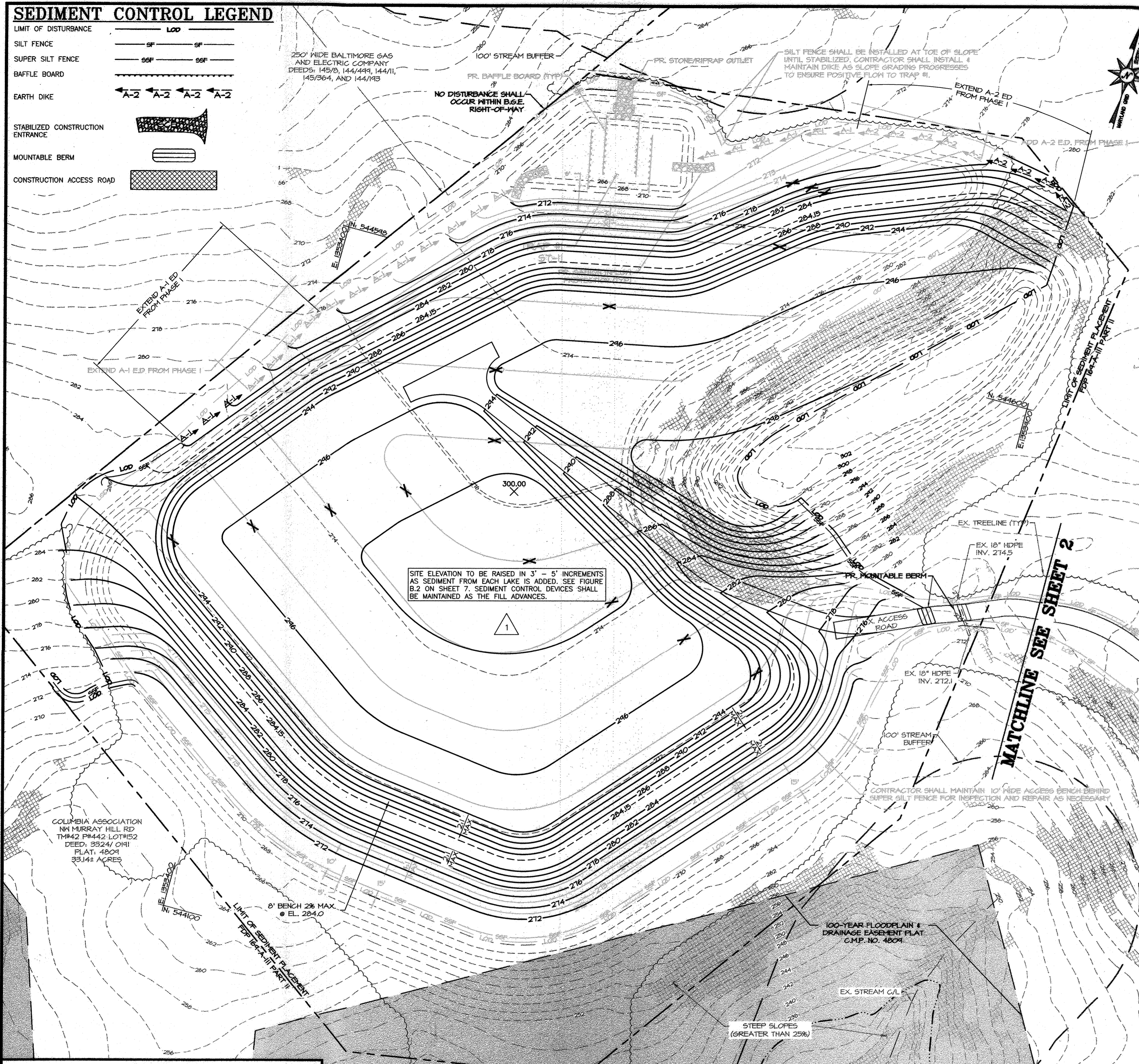
SCALE: 1" = 60'

DRAWN BY: VG/RN/MB DATE: 04/25/17
 CHECKED BY: SB/JH DATE: 04/25/17
 DESIGNED BY: JH/MB DATE: 04/25/17

SHEET NO. 4 OF 8

SEDIMENT CONTROL LEGEND

- LIMIT OF DISTURBANCE
- SILT FENCE
- SUPER SILT FENCE
- BAFFLE BOARD
- EARTH DIKE
- STABILIZED CONSTRUCTION ENTRANCE
- MOUNTABLE BERM
- CONSTRUCTION ACCESS ROAD



SUMMARY OF ESC QUANTITIES - PHASE II

STABILIZED CONSTRUCTION ENTRANCE:	1 EA
CONSTRUCTION ACCESS ROAD:	475 LF
MOUNTABLE BERM:	1 EA
SILT FENCE:	136 LF
SUPER SILT FENCE:	795-LF 1,043 LF
A-1 EARTH DIKE:	349-LF 412 LF
A-2 EARTH DIKE:	94-LF 164 LF
GABION INFLOW PROTECTION:	2 EA
ST-II SEDIMENT TRAP:	1 EA

SITE ANALYSIS - PHASE II

- TOTAL SITE AREA: 33.14 AC.
- PROPOSED DISTURBED AREA: 6.80 AC. (252,989-S.F.) 6.42 AC. (279,696 SF)
- TOTAL AREA TO BE STABILIZED: 6.80 AC. 6.42 AC.
- TOTAL EX. IMP. AREA: 0.10 AC.
- TOTAL EX. IMP. AREA TO REMAIN: 0.10 AC.
- TOTAL PR. IMPERVIOUS AREA: 0.00 AC.
- TOTAL TO BE STABILIZED WITH VEGETATION: 5.70 AC.
- PROPOSED IMPERVIOUS AREA: 0.00 AC.
- ESTIMATED CUT: 0-CY 67 CY
- ESTIMATED FILL: 34,979-CY 111,003 CY

SEDIMENT TRAP TABLE

DRAINAGE AREA - INITIAL (AC.)	TRAP #1
DRAINAGE AREA - INTERIM (AC.) PHASE I	2.24
DRAINAGE AREA - FINAL (AC.) PHASE II	2.4-2.6
TOTAL STORAGE REQ'D (CF)	16,530
TOTAL STORAGE PROV'D (CF)	18,752
WET STORAGE REQ'D (CF)	4,819
WET STORAGE PROV'D (CF)	4,819
DRY STORAGE REQ'D (CF)	11,711
DRY STORAGE PROV'D (CF)	13,932
EX. GROUND ELEV. AT OUTLET (WET STORAGE ELEV.)	267.25
TRAP BOTTOM ELEV. (FT)	266.0
TRAP BOTTOM DIMENSIONS (FT X FT)	90 X 40 APPROX.
WEIR LENGTH (FT)	11.0
WEIR CREST (DRY STORAGE ELEV.)	270
CLEANOUT ELEV. (FT)	266.63
TOP OF EMBANKMENT ELEV. (FT)	270
SIDE SLOPE (H:V RATIO)	2:1
EMBANKMENT TOP WIDTH (FT)	4.0
OUTLET PROTECTION - LENGTH (FT)	10.0
OUTLET PROTECTION DEPTH (IN)	19

APPROVED
PLANNING BOARD OF HOWARD COUNTY

DATE: APRIL 20, 2017

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: 5-8-17
 CHIEF, DIVISION OF LAND DEVELOPMENT: 5-11-17
 DIRECTOR: 5-11-17

DEVELOPER'S CERTIFICATE

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

SIGNATURE OF DEVELOPER: ALBERT F. EDWARDS, P.E. Director of Construction
 DATE: 4-26-2017

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER: JOHN HEINRICH, P.E.
 DATE: 4-25-17

HOWARD SCD
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 SIGNATURE OF DISTRICT: [Signature]
 DATE: 5/14/17

OWNER/PREPARED FOR:

Columbia Association
 THE COLUMBIA ASSOCIATION
 9450 GERWIG LANE
 COLUMBIA, MD 21046
 ATTN: ALBERT F. EDWARDS, P.E.
 410-381-3551

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VILLAGE OF KINGS CONTRIVANCE SECTION 3 AREA 2, OPEN SPACE LOT #152 LAKE SEDIMENT PLACEMENT SITE - COLUMBIA ASSOCIATION EROSION AND SEDIMENT CONTROL PLAN - PHASE II

6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 TAX MAP: 42|GRID: 21|PARCEL NO. 442|PLAT NO. 4809|LIBER: 1738|FOLIO: 0003|ZONING: NT - NEW TOWN

DATE	BY	REVISIONS	DESCRIPTION	SCALE: 1" = 40'
10/10/23	JRH	△	UPDATE EXISTING TOPOGRAPHY & BASE FILL	DRAWN BY: VG/KJM/MB DATE: 04/25/17
				CHECKED BY: SB/JH DATE: 04/25/17
				DESIGNED BY: JH/MB DATE: 04/25/17

SHEET NO. 5 OF 8

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION: USING VEGETATION AS COVER TO PROTECT EXPOSED SOIL FROM EROSION.
PURPOSE: TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL.
CONDITIONS WHERE PRACTICE APPLIES: ON ALL DISTURBED AREAS NOT STABILIZED BY OTHER METHODS...

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

DEFINITION: THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.
PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATION GROWTH.
CONDITIONS WHERE PRACTICE APPLIES: WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

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

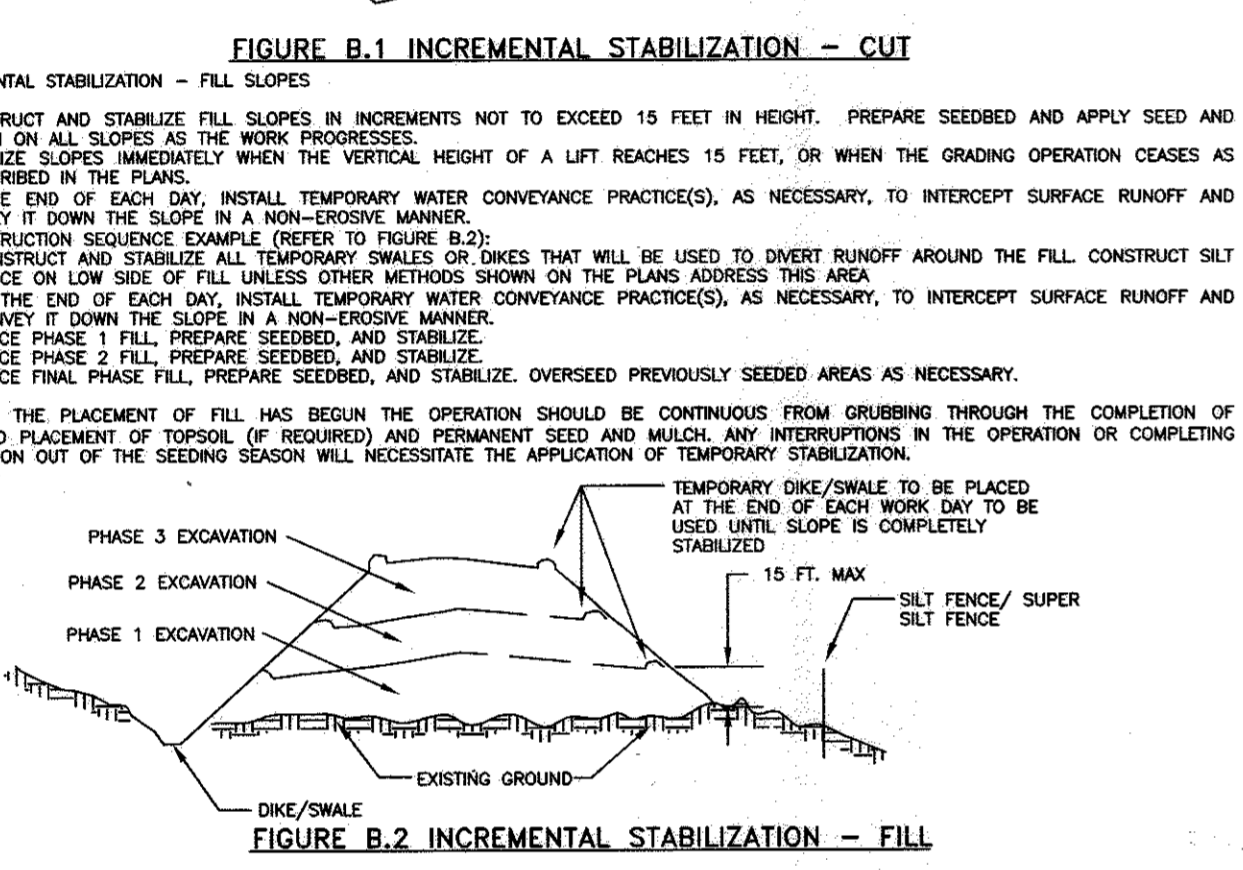
DEFINITION: THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATION COVER.
PURPOSE: TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.
CONDITIONS WHERE PRACTICE APPLIES: TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.
PURPOSE: TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.
CONDITIONS WHERE PRACTICE APPLIES: EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

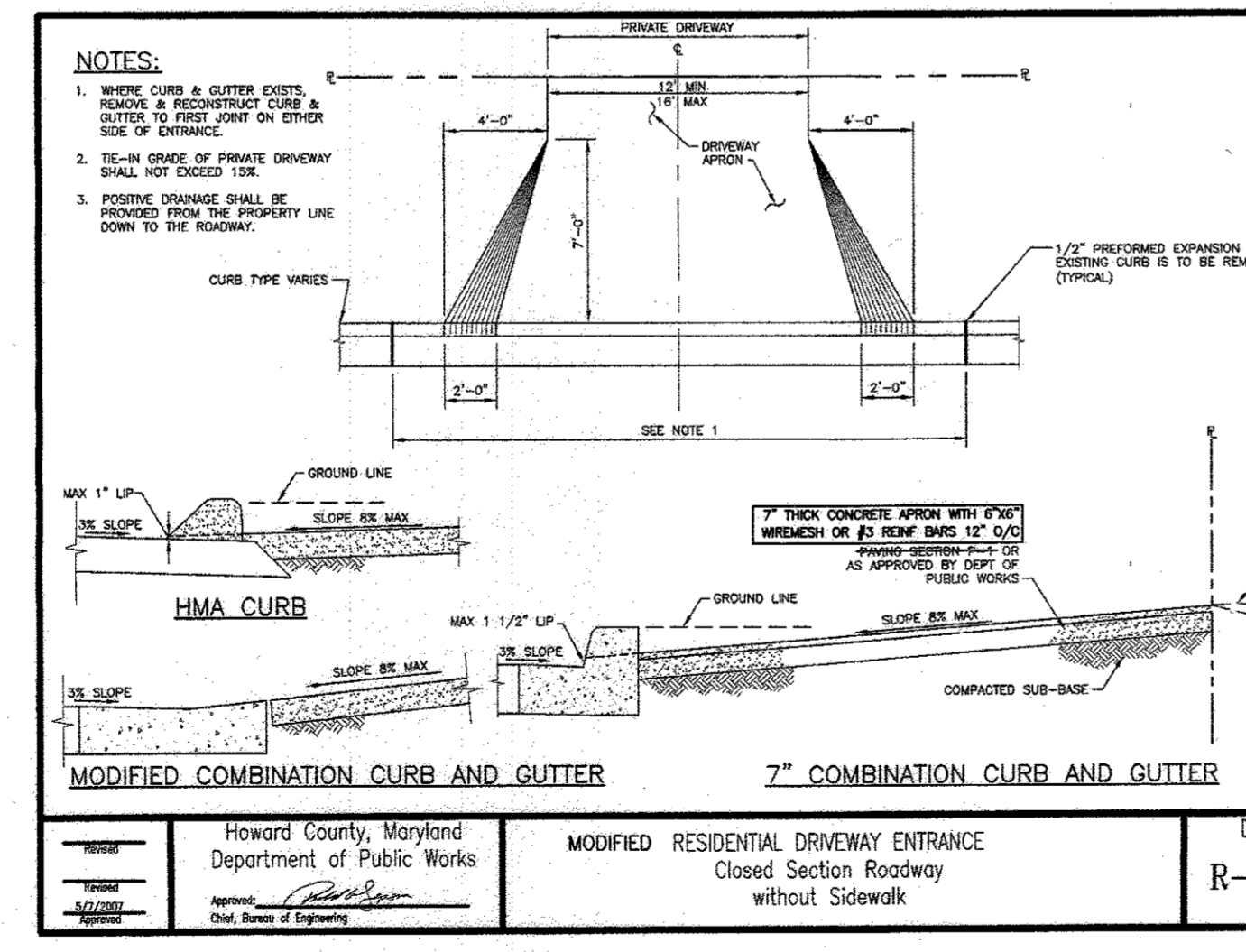
B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

DEFINITION: ESTABLISHMENT OF VEGETATIVE COVER ON CUT AND FILL SLOPES.
PURPOSE: TO PROVIDE TIMELY VEGETATIVE COVER ON CUT AND FILL SLOPES AS WORK PROGRESSES.
CONDITIONS WHERE PRACTICE APPLIES: ANY CUT OR CUT AND FILL SLOPE GREATER THAN 15 FEET IN HEIGHT.



B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

DEFINITION: A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.
PURPOSE: TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

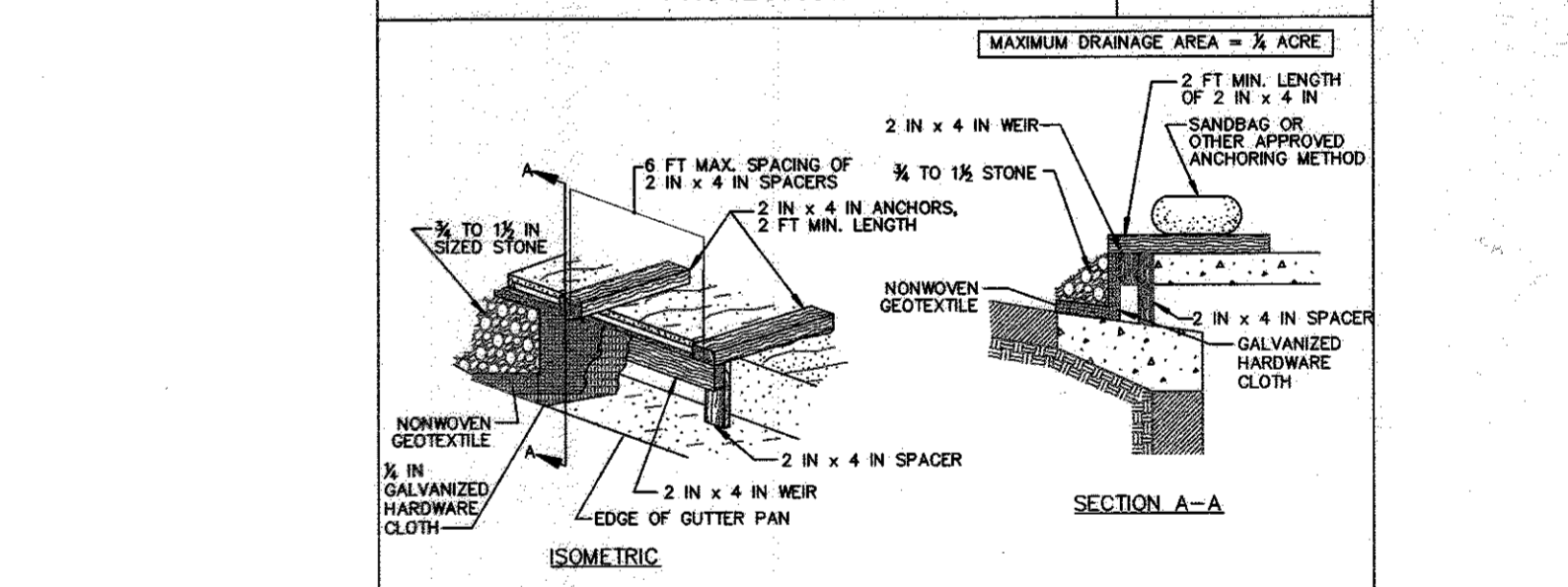


B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

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

TABLE B.1: TEMPORARY SEEDING SUMMARY. Table with columns: No., Species, Application Rate (lb/1000 sq ft), Seeding Dates, Seeding Depths, Fertilizer Rate, and Lime Rate.

DETAIL E-9-3 CURB INLET PROTECTION



CONSTRUCTION SPECIFICATIONS. List of 10 numbered items detailing the materials and assembly for the curb inlet protection.

PERMANENT SEEDING SUMMARY. Table with columns: No., Species, Application Rate, Seeding Dates, Seeding Depths, Fertilizer Rate, and Lime Rate.

APPROVED PLANNING BOARD OF HOWARD COUNTY. Includes date APRIL 20, 2017 and sections for DEVELOPER'S CERTIFICATE and APPROVED: DEPARTMENT OF PLANNING AND ZONING.

ENGINEER'S CERTIFICATE. Includes date 4-25-17 and signature of JOHN HEINRICH, P.E.

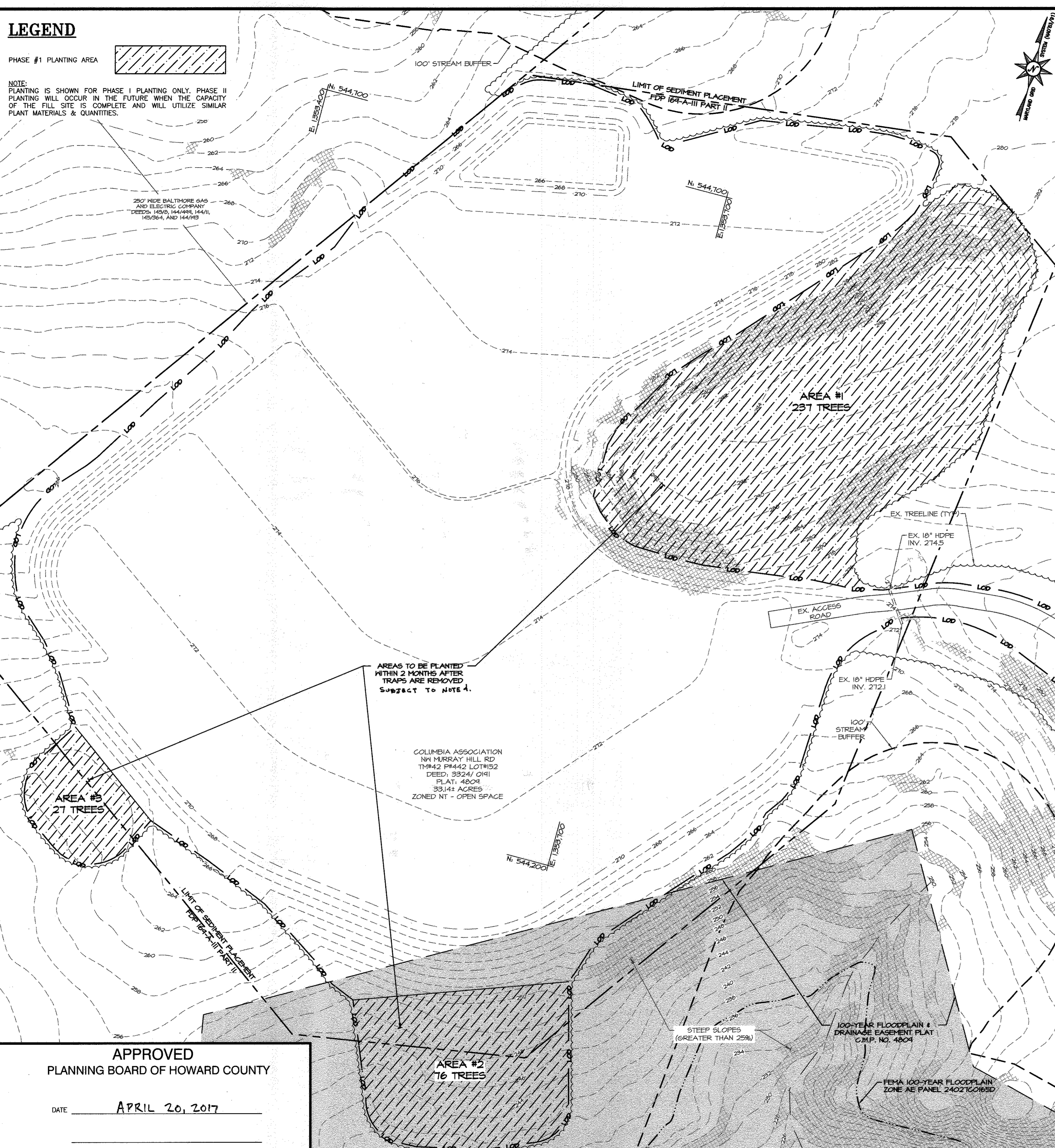
OWNER/PREPARED FOR: Columbia Association. Includes logo and contact information for consultants and designers.

VILLAGE OF KINGS CONTRIVANCE SECTION 3 AREA 2, OPEN SPACE LOT #152. Includes notes and details for the lake sediment placement site.

LEGEND

PHASE #1 PLANTING AREA

NOTE: PLANTING IS SHOWN FOR PHASE I PLANTING ONLY. PHASE II PLANTING WILL OCCUR IN THE FUTURE WHEN THE CAPACITY OF THE FILL SITE IS COMPLETE AND WILL UTILIZE SIMILAR PLANT MATERIALS & QUANTITIES.



PLANTING SCHEDULE

SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	QUANTITY
CANOPY TREES				
ACER RUBRUM	RED MAPLE	1" CAL	15' X 15'	25
LIRIODENDRON TULIPIFERA	TULIP POPLAR	1" CAL	15' X 15'	25
NYSSA SYLVATICA	BLACK GUM	1" CAL	11' X 11'	25
QUERCUS RUBRA	NORTHERN RED OAK	1" CAL	15' X 15'	45
QUERCUS VELUTINA	BLACK OAK	1" CAL	15' X 15'	25
ROBINIA PSEUDOACACIA	BLACK LOCUST	1" CAL	15' X 15'	25
EVERGREEN TREES				
JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	7 GAL	15' X 15'	40
PINUS VIRGINIANA	VIRGINIA PINE	7 GAL	15' X 15'	25
UNDERSTORY TREES				
AMELANCHIER CANADENSIS	SERVICEBERRY	1" CAL	15' X 15'	25
CORNUS FLORIDA	FLOWERING DOGWOOD	1" CAL	15' X 15'	40
ILEX OPACA	AMERICAN HOLLY	7 GAL	15' X 15'	40

PLANT MATERIALS AND PLANTING METHODS

A. PLANT MATERIALS

THE LANDSCAPE CONTRACTOR SHALL FURNISH AND INSTALL AND/OR DIG, BALL, BURLAP, AND TRANSPANT ALL OF THE PLANT MATERIALS CALLED FOR ON DRAWINGS AND/OR LISTED IN THE PLANT SCHEDULE.

1. PLANT NAMES

PLANT NAMES USED IN THE PLANT SCHEDULE SHALL CONFORM TO "STANDARDIZED PLANT NAMES", LATEST EDITION.

2. PLANT STANDARDS

ALL PLANT MATERIAL SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE "USA STANDARD FOR NURSERY STOCK", LATEST EDITION, AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERMEN (HEREAFTER REFERRED TO AS AAN STANDARDS). ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE FIRST QUALITY, SOUND, VIGOROUS, WELL BRANCHED AND WITH HEALTHY, WELL FURNISHED ROOT SYSTEMS. THEY SHALL BE FREE OF DISEASE, INSECT PESTS AND MECHANICAL INJURIES.

A. ALL PLANTS SHALL BE NURSERY GROWN AND SHALL HAVE BEEN GROWN UNDER THE SAME CLIMATE AS THE LOCATION OF THIS PROJECT FOR AT LEAST TWO YEARS BEFORE PLANTING. NEITHER HELED IN PLANTS NOR PLANTS FROM COLD STORAGE WILL BE ACCEPTED.

B. OWNER SHALL HAVE THE OPPORTUNITY TO INSPECT ALL PLANTS ON SITE BEFORE INSTALLATION, AND MAY MAKE PLANT SELECTIONS.

3. PLANT MEASUREMENTS

ALL PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED IN THE PLANT SCHEDULE AS APPROVED BY THE DEPARTMENT OF PLANNING AND CODE ENFORCEMENT REVIEWING OFFICIAL.

A. CALIPER MEASUREMENTS SHALL BE TAKEN SIX INCHES (6") ABOVE GRADE FOR TREES UNDER FOUR INCHES (4") CALIPER AND TWELVE INCHES (12") ABOVE GRADE FOR TREES FOUR INCHES (4") IN CALIPER AND OVER.

B. MINIMUM BRANCHING HEIGHT FOR ALL TREES SHALL BE SIX FEET (6'), MAXIMUM EIGHT FEET (8').

4. PLANT IDENTIFICATION

LEGIBLE LABELS SHALL BE ATTACHED TO ALL SHADE TREES, MINOR TREES, SPECIMEN SHRUBS AND BUNDLES OR BOXES OF OTHER PLANT MATERIAL GIVING THE BOTANICAL AND COMMON NAMES, SIZE AND QUANTITY OF EACH. EACH SHIPMENT OF PLANTS SHALL BEAR CERTIFICATES OF INSPECTION AS REQUIRED BY FEDERAL, STATE AND COUNTY AUTHORITIES. ALL LABELS SHALL BE REMOVED AT PLANTING.

5. PLANT INSPECTION

THE DEPARTMENT OF PLANNING AND CODE ENFORCEMENT REVIEWING OFFICIAL MAY, UPON REQUEST BY THE BUILDER OR DEVELOPER, AT LEAST TEN (10) DAYS PRIOR TO THE INSTALLATION OF ANY PROPOSED PLANT MATERIAL, INSPECT ALL PROPOSED PLANT MATERIAL AT THE SOURCE OF ORIGIN.

B. PLANTING METHODS

PLANTING SEASONS ARE DESCRIBED AS FOLLOWS:

ALL PROPOSED PLANT MATERIAL THAT MEET THE SPECIFICATIONS IN SECTION A (PRECEDING PAGE) ARE TO BE PLANTED IN ACCORDANCE WITH THE FOLLOWING PLANTING METHODS DURING THE PROPER PLANTING SEASONS AS DESCRIBED IN THE FOLLOWING:

1. PLANTING SEASONS THE PLANTING OF DECIDUOUS TREES, SHRUBS AND VINES SHALL BE FROM MARCH 1ST TO JUNE 15TH AND FROM SEPTEMBER 15TH TO DECEMBER 15TH. PLANTING OF DECIDUOUS MATERIAL MAY BE CONTINUED DURING THE WINTER MONTHS PROVIDING THERE IS NO FROST IN THE GROUND AND FROST FREE TOPOIL PLANTING MIXTURES ARE USED. THE PLANTING OF EVERGREEN MATERIAL SHALL BE FROM MARCH 15TH TO JUNE 15TH AND FROM AUGUST 15TH TO DECEMBER 15TH. NO PLANTING SHALL BE DONE WHEN GROUND IS FROZEN OR EXCESSIVELY MOIST. NO FROZEN OR WET TOLCOOL SHALL BE USED AT ANY TIME.

2. DIGGING

ALL PLANT MATERIAL SHALL BE DUG, BALLED AND BUR LAPPED (B+L) IN ACCORDANCE WITH THE "AAN STANDARDS."

3. EXCAVATION OF PLANT PITS

THE LANDSCAPING CONTRACTOR SHALL EXCAVATE ALL PLANT PITS, VINE PITS, HEDGE TRENCHES AND SHRUB BEDS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

A. LOCATIONS OF ALL PROPOSED PLANT MATERIAL SHALL BE STAKED AND APPROVED IN THE FIELD BY THE LANDSCAPE ARCHITECT BEFORE ANY OF THE PROPOSED PLANT MATERIAL IS INSTALLED BY THE LANDSCAPE CONTRACTOR.

B. BALL PITS SHALL BE GENERALLY CIRCULAR IN OUTLINE, VERTICAL SIDES; DEPTH SHALL NOT BE LESS THAN 6" DEEPER THAN THE ROOT BALL. DIAMETER SHALL NOT BE LESS THAN TWO TIMES THE DIAMETER OF THE ROOT BALL AS SET FORTH IN THE FOLLOWING SCHEDULE.

C. IF AREAS ARE DESIGNATED AS SHRUB BEDS OR HEDGE TRENCHES, THEY SHALL BE EXCAVATED TO AT LEAST 18" DEPTH MINIMUM. AREAS DESIGNATED FOR GROUND COVERS AND VINES SHALL BE EXCAVATED TO AT LEAST 12" IN DIAMETER MINIMUM.

D. DIAMETER AND DEPTH OF TREE PITS SHALL GENERALLY BE AS FOLLOWS:

ROOT BALL SIZE	ROOT BALL DIAMETER	DEPTH
2 1/2" - 3" CAL	28"	24"
3" - 3 1/2" CAL	32"	28"
3 1/2" - 4" CAL	36"	32"
4" - 4 1/2" CAL	40"	36"
4 1/2" - 5" CAL	44"	40"
5" - 5 1/2" CAL	48"	44"
5 1/2" - 6" CAL	52"	48"

A 20% COMPACTING FIGURE OF THE SOIL TO BE REMOVED IS ASSUMED AND WILL BE ALLOWED IN CALCULATION. EXTRA TOLCOOL - THE TABULATED PIT SIZES ARE FOR PURPOSES OF UNIFORM CALCULATION AND SHALL NOT OVERRIDE THE SPECIFIED DEPTHS BELOW THE BOTTOMS OF THE ROOT BALLS.

4. STAKING, GUYING AND WRAPPING

ALL PLANT MATERIAL SHALL BE STAKED OR GUYED, AND WRAPPED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

E. STAKES: SHALL BE SOUND WOOD 2" X 2" ROUGH SAWN OAK OR SIMILAR DURABLE WOODS, OR LENGTHS, MINIMUM 7' - 0" FOR MAJOR TREES AND 5' - 0" MINIMUM FOR MINOR TREES.

F. WIRE AND CABLE: WIRE SHALL BE #10 GA. GALVANIZED OR BETHANIZED ANNEALED STEEL. WIRE, FOR TREES OVER 3" CALIPER, PROVIDE 5/16" TURN BUCKLES, EYE AND EYE WITH 4" TAKEUP. FOR TREES OVER 5" CALIPER, PROVIDE 3/16" 7 STRAND CABLE CADMIUM PLATED STEEL WITH GALVANIZED "EYE" THIMBLES OF WIRE AND HOSE ON TREES UP TO 3" IN CALIPER.

G. HOSE SHALL BE NEW, 2 PLY REINFORCED RUBBER HOSE, MINIMUM 3/4" I.D. "PLASTIC LOCK TIES" OR "PAUL'S TREE BRACES" MAY BE USED IN PLACE OF WIRE AND HOSE ON TREES UP TO 3" IN CALIPER.

H. ALL TREES UNDER 3" IN CALIPER ARE TO BE PLANTED AND STAKED IN ACCORDANCE WITH THE "TYPICAL TREE STAKING DETAIL". ALL TREES OVER 3" IN CALIPER ARE TO BE PLANTED AND GUYED IN ACCORDANCE WITH THE "TYPICAL TREE GUYING DETAIL".

5. PLANT PRUNING, EDGING AND MULCHING

I. EACH TREE, SHRUB OR VINE SHALL BE PRUNED IN AN APPROPRIATE MANNER TO ITS PARTICULAR REQUIREMENTS, IN ACCORDANCE WITH ACCEPTED STANDARD PRACTICE. BROKEN OR BRUISED BRANCHES SHALL BE REMOVED WITH CLEAN CUTS FLUSH WITH THE ADJACENT TRUNK OR BRANCHES.

J. TRENCHES AND SHRUB BEDS SHALL BE EDGED AND CULTIVATED TO THE LINES SHOWN ON THE DRAWING. THE AREAS AROUND ISOLATED PLANTS SHALL BE EDGED AND CULTIVATED TO THE FULL DIAMETER OF THE PIT, SOD WHICH HAS BEEN REMOVED AND STACKED SHALL BE USED TO TRIM THE EDGES OF ALL EXCAVATED AREAS TO THE NEAT LINES OF THE PLANT PIT SAUCERS, THE EDGES OF SHRUB AREAS, HEDGE TRENCHES AND VINE POCKETS.

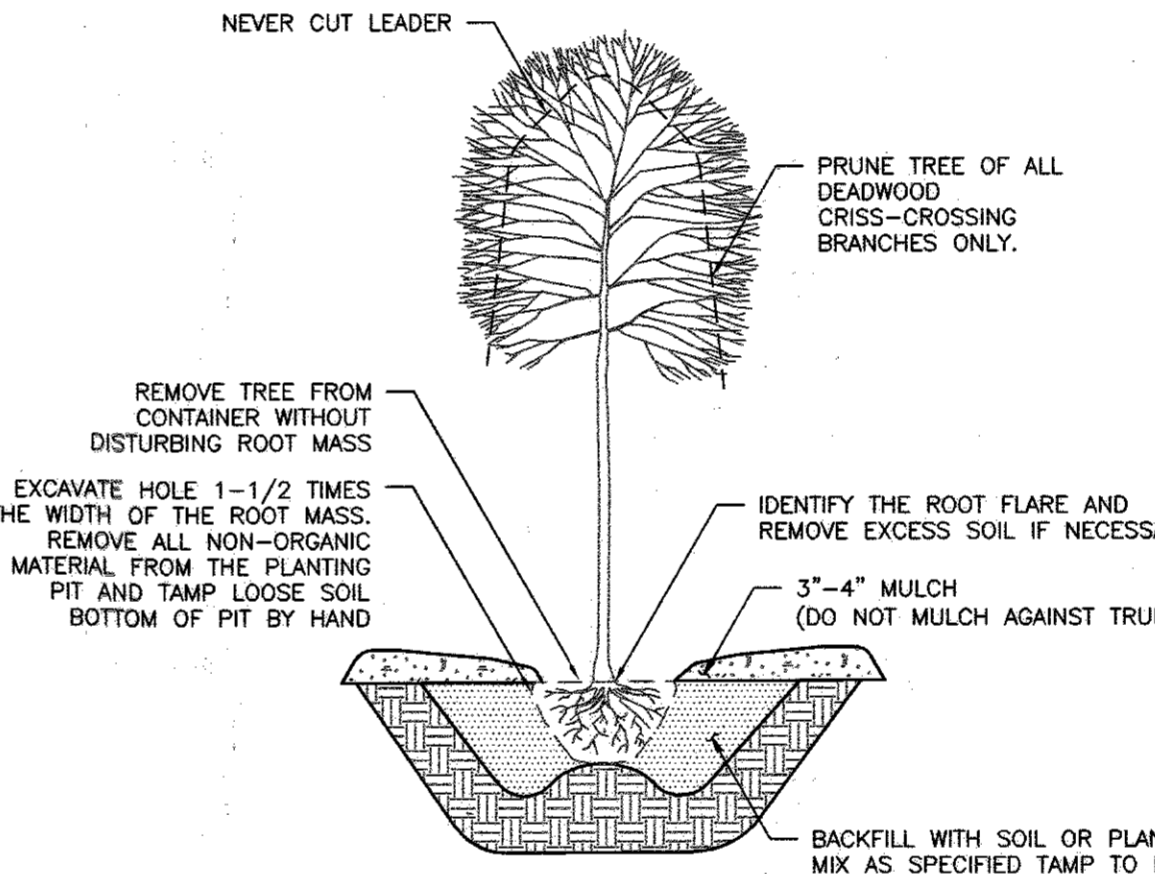
K. AFTER CULTIVATION, ALL PLANT MATERIALS SHALL BE MULCHED WITH 3-4 INCHES OF SHREDDED HARDWOOD MULCH OR APPROVED EQUAL. THE MULCH MAY NOT BE PLACED AGAINST THE TRUNK, OVER THE ENTIRE AREA OF THE BED OR SAUCER.

SEEDING AND SODDING

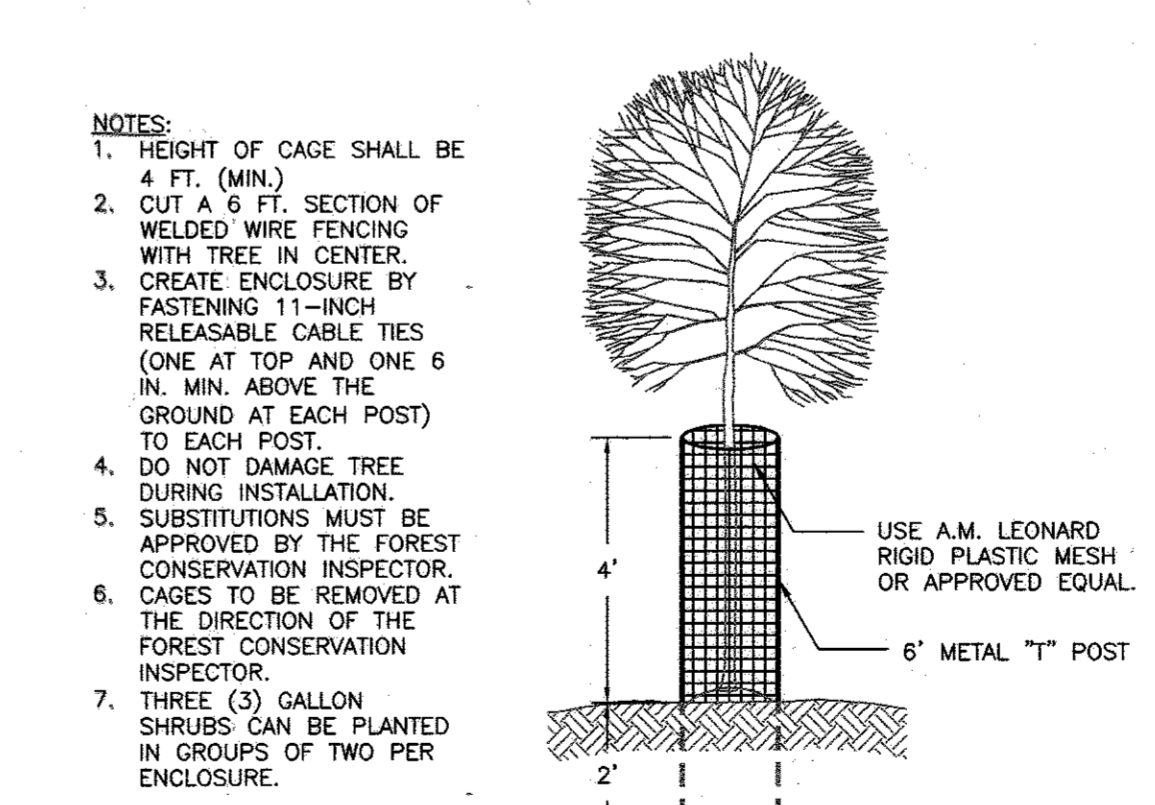
ALL SEEDING AND SODDING SHALL BE AS PER "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN URBANIZED AREAS" AS PUBLISHED BY THE DEPARTMENT OF NATURAL RESOURCES.

GENERAL PLANTING NOTES

- ALL PLANT MATERIALS SHALL BE NURSERY GROWN AND SHALL CONFORM TO AMERICAN ASSOCIATION OF NURSERMEN, INC. STANDARDS.
- CONTRACTOR IS RESPONSIBLE TO VERIFY ALL UTILITY LOCATIONS PRIOR TO PLANTING MATERIAL. IF CONFLICTS ARISE, BAYLAND, INC. MUST BE NOTIFIED PRIOR TO ANY GROUND BREAKING.
- WETLAND PLANTING WILL BE ACCOMPLISHED BETWEEN MARCH 15TH AND MAY 15TH (SPRING PLANTING SEASON) OR SEPTEMBER 15TH AND NOVEMBER 15TH (FALL PLANTING SEASON).
- TREES AND SHRUBS SHALL BE PLANTED FROM MARCH 1 TO JUNE 15 AND FROM SEPTEMBER 15 TO DECEMBER 15. PLANTING MAY BE CONTINUED DURING THE WINTER MONTHS PROVIDING THERE IS NO FROST IN THE GROUND AND FROST FREE TOPSOIL PLANTING MIXTURES ARE USED.
- NO CONTAINER-GROWN MATERIAL SHALL BE PLANTED IF NOT ACCLIMATED TO THE CURRENT WEATHER CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR GENERAL MAINTENANCE INCLUDING WATERING.
- ALL PLANTING MATERIAL AND PLANTING METHODS SHALL CONFORM TO CONSTRUCTION SPECIFICATIONS.
- DISTURBED AREAS WITHIN THE LIMITS OF DISTURBANCE SHALL BE STABILIZED PER THE DETAILS AND SPECIFICATIONS FOR VEGETATIVE ESTABLISHMENT (THIS SHEET).
- ALL PLANT MATERIALS SHALL BE WARRANTED FOR A PERIOD OF 1 YEAR WITH 85% SURVIVAL AT THE END OF THE 1 YEAR WARRANTY PERIOD. ANY PLANT THAT IS 25% DEAD OR MORE SHALL BE CONSIDERED DEAD. CONTRACTOR SHALL BE RESPONSIBLE FOR ONE-TIME REPLACEMENT ONLY. REPLACEMENT SHALL BE MADE DURING NORMAL PLANTING SEASONS.



TREE PLANTING - CONTAINER GROWN



TREE/SHRUB PLANTING DEER PROTECTION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14920, EXPIRATION DATE: 05/12/2018.

APPROVED
PLANNING BOARD OF HOWARD COUNTY

DATE: APRIL 20, 2017

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: 5-8-17
 Chief, Division of Land Development: 5-4-17
 Director: 5-11-17

OWNER/PREPARED FOR:
Columbia Association

THE COLUMBIA ASSOCIATION
 9450 GERWIG LANE
 COLUMBIA, MD 21046
 ATTN: ALBERT F. EDWARDS, P.E.
 410-381-3551

BayLand
 Consultants & Designers, Inc.

"Integrating Engineering and Environment"

7455 New Ridge Road, Suite T Phone: (410) 694-9401
 Hanover, Maryland 21076 Fax: (410) 694-9405

Website: www.baylandinc.com
 BAYLAND JOB NO. 8-17107 & 8-17111

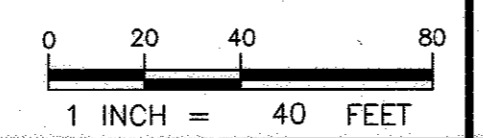
VILLAGE OF KINGS CONTRIVANCE SECTION 3 AREA 2, OPEN SPACE LOT #152
 LAKE SEDIMENT PLACEMENT SITE - COLUMBIA ASSOCIATION
 PLANTING PLAN

6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 TAX MAP: 42 GRD: 211 PARCEL NO. 442 [PLAT NO. 4809] LIBER: 1738 FOLIO: 0003 ZONING: NT - NEW TOWN

DATE BY REVISIONS DESCRIPTION SCALE: 1" = 40'

DRAWN BY: VG/KN/MB DATE: 04/25/17
 CHECKED BY: SB/JH DATE: 04/25/17
 DESIGNED BY: JH/MB DATE: 04/25/17

SHEET NO. 8 OF 8



SDP-17-025