

**GENERAL NOTES**

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE, UNLESS WAIVERS HAVE BEEN APPROVED.
- THE PROJECT BOUNDARY SHOWN HEREON IS BASED ON A BOUNDARY SURVEY PREPARED BY FISHER, COLLINS & CARTER, INC. DATED FEBRUARY 14, 2000, WHICH WAS VERIFIED AS CORRECT BY ROBERT H. VOGEL ENGINEERING, INC. IN MARCH 2010.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM AN AERIAL TOPOGRAPHIC SURVEY WITH 2 FOOT CONTOUR INTERVALS PREPARED BY WINGS AERIAL MAPPING COMPANY, INC. DATED MARCH 1995.
- FOREST STAND DELINEATION PLAN PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. DATED FEBRUARY 2011.
- THE FOREST CONSERVATION OBLIGATION FOR THE REQUIRED 0.21 ACRES OF AFFORESTATION WILL BE MET BY A FOREST BANK; COLLEGE AVENUE PUMP STATION, AUTUMN RIVER BULK PARCEL 'B', SDP-10-081.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO CEMETERIES OR GRAVE SITES LOCATED ON THE SUBJECT PROPERTY.
- THERE ARE NO FLOODPLAIN, WETLANDS, STREAMS OR STEEP SLOPES WITHIN PARCEL 159.
- THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. DEVELOPMENT OR CONSTRUCTION OF THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION, OR BUILDING AND GRADING PERMITS.
- THE SUBJECT PROPERTY IS ZONED "R-ED" IN ACCORDANCE WITH THE 2/2/04 COMPREHENSIVE ZONING PLAN AND THE COMP. LITE ZONING REGULATIONS EFFECTIVE ON 7/28/06.
- A TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, INC., DATED JULY 2010.
- ALL DRIVEWAY ENTRANCES SHALL UTILIZE HOWARD COUNTY STANDARD DETAIL NO. R-6.03 MODIFIED FOR SIDEWALK ADJACENT TO CURB.
- ALL CURB AND GUTTER TO BE HOWARD COUNTY MODIFIED DETAIL R-3.01 UNLESS OTHERWISE NOTED.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$17,700.00 FOR THE 39 SHADE TREES AND 40 EVERGREEN TREES SHALL BE POSTED WITH THE BUILDER'S GRADING PERMIT FOR THIS PLAN.
- EXISTING UTILITIES ARE BASED ON HOWARD COUNTY RECORDS, FIELD SURVEY, AND PREVIOUSLY SUBMITTED PLANS.
- ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 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 THE TOP OF EACH POST.
- NO GRADING, REMOVAL OF VEGETATION, COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAM(S), OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS.
- WATER AND SEWER FOR THIS PROJECT WILL BE PUBLIC THROUGH CONTRACT 14-4463-D.
- STORM WATER MANAGEMENT TO BE PROVIDED FOR THIS DEVELOPMENT BY ENVIRONMENTAL SITE DESIGN UTILIZING 2 MICRO BIO-RETENTION FACILITIES AND ROOFTOP DISCONNECTS FOR THE PARCEL 159 DEVELOPMENT. STORMWATER MANAGEMENT FOR THE ADDITIONAL UNITS LOCATED ON PHASE II IS PROVIDED UNDER F-09-021. THE 2 MICRO BIO-RETENTION FACILITIES LOCATED ON OPEN SPACE LOT 120 WILL BE OWNED AND MAINTAINED BY THE HOA.
- SEDIMENT AND EROSION CONTROL WILL BE PROVIDED FOR THIS SITE.
- A NOISE STUDY IS NOT REQUIRED FOR THIS SUBDIVISION.
- THE EXISTING STRUCTURES LOCATED ON PARCEL 159 AND SHALL BE REMOVED PRIOR TO RECORDATION OF THE PLAT.
- COLLEGE AVENUE IS A SCENIC ROAD.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
  - WIDTH - 12 FEET (16 FEET IF SERVING MORE THAN ONE RESIDENCE)
  - SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN.)
  - GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE, AND MINIMUM 45 FOOT TURNING RADIUS
  - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING)
  - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
  - STRUCTURE CLEARANCES - MINIMUM 12 FEET
  - MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE
- 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. 3044005R AND 3044004R WERE USED FOR THIS PROJECT.
- THIS PLAN IS SUBJECT TO WP-11-206 TO SECTION 16.120(c)(4) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATION TO EXTEND THE DISTANCE ALONG A PRIVATE ROAD FROM 200' TO 247' AND TO SECTION 16.120(d)(7) FOR THE REMOVAL OF THE EXISTING 32' SILVER MAPLE SPECIMEN TREE. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
  - ON THE PRELIMINARY EQUIVALENT SKETCH PLAN AND ALL FUTURE SUBDIVISION PLANS AND SITE DEVELOPMENT PLANS, PROVIDE A BRIEF DESCRIPTION OF WAIVER PETITION, WP-11-206, AS A GENERAL NOTE TO INCLUDE REQUEST, SECTIONS OF THE REGULATIONS, ACTION AND DATE.
  - THE PRIVATE ROAD MUST BE CONSTRUCTED TO PUBLIC ROAD STANDARDS IN ACCORDANCE WITH THE COMMENTS FROM THE DEVELOPMENT ENGINEERING DIVISION DATED JULY 8, 2011.
  - PROVIDE A TYPE 'C' BUFFER ALONG THE COLLEGE AVENUE (SCENIC ROAD) PROPERTY BOUNDARY. THESE TREES MUST BE A MINIMUM 2-1/2" TO 3" CALIPER SHADES TREES AND 8'-8" IN HEIGHT EVERGREENS.
  - WATER APPROVAL IS LIMITED TO THE REMOVAL OF THE ONE 32' SILVER MAPLE TREE AS SHOWN ON THE WAIVER EXHIBIT.
  - THE DEVELOPER SHALL DESIGN THIS SUBDIVISION PROPOSAL TO BE IN ACCORDANCE WITH THE SCENIC ROAD PROTECTION REQUIREMENTS OF SECTION 16.125 OF THE SUBDIVISION REGULATIONS.
- STORMWATER MANAGEMENT TEST PITS #1 & #2 WITHIN THE PROPOSED MICRO BIORETENTION AREAS TO DETERMINE THE DEPTH OF ROCK AND WATER WERE DONE JULY 2011. AS A RESULT NO ROCK OR WATER ARE WITHIN 4' OF THE BOTTOM OF THE FACILITIES.
- PLANNING BOARD CASE NO. 393 APPROVED BY PLANNING BOARD ON JUNE 21 2012.
- IN ACCORDANCE WITH SECTION 107.D.1.b OF THE HOWARD COUNTY ZONING REGULATIONS, LOT COVERAGE FOR ALL SINGLE FAMILY ATTACHED UNITS WITHIN THE ENTIRE AUTUMN RIVER SUBDIVISION WILL NOT EXCEED 60% OF THE GROSS ACREAGE OF EACH SINGLE FAMILY ATTACHED LOT.
- A PRIVATE ROAD STREET NAME SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-343-2430 FOR DETAILS AND COST ESTIMATES.
- BO&E APPROVAL WILL BE PROVIDED AT THE FINAL PLAN PHASE FOR PHASE IV.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- 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.
- WATER AND SEWER SERVICE TO THESE LOTS WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 18.122.B OF THE HOWARD COUNTY CODE.
- PUBLIC WATER AND SEWERAGE ALLOCATION WILL BE GRANTED AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.
- THE DEPARTMENT OF PUBLIC WORKS IS NOT REQUIRING A REFUSE PAD FOR THE DWELLING ALONG AUTUMN CREST WAY; HOWEVER TRASH COLLECTION MUST BE WITHIN 5 FEET OF THE COUNTY ROADWAY.

**MILESTONES CHART**

THE PROJECT IS LOCATED IN THE WORTHINGTON ELEMENTARY SCHOOL DISTRICT, THE NORTH EAST SCHOOL REGION AND THE ELLICOTT MILLS MIDDLE SCHOOL DISTRICT AND HAS PASSED THE OPEN/CLOSED SCHOOLS TEST WHEN ALL AREAS ARE OPEN. THE NEW ALLOCATION YEARS AND MILESTONE DATES FOR SUBMISSION OF THE PRELIMINARY PLANS BASED ON THE PHASING, IF THE MILESTONE DATES ARE NOT MET S-98-016 WILL BE VOIDED.

PHASE	NO. TENTATIVE ALLOCATIONS	ALLOCATION YEAR	PRELIMINARY PLAN SUBMISSION MILESTONES
PHASE II	58	2009	BETWEEN JULY 1, 2008 AND JAN. 1, 2007
PHASE III	37	2010	BETWEEN JULY 1, 2007 AND NOV. 1, 2007

NOTE: REFERENCE S-98-016 LETTER DATED OCTOBER 12, 2005.

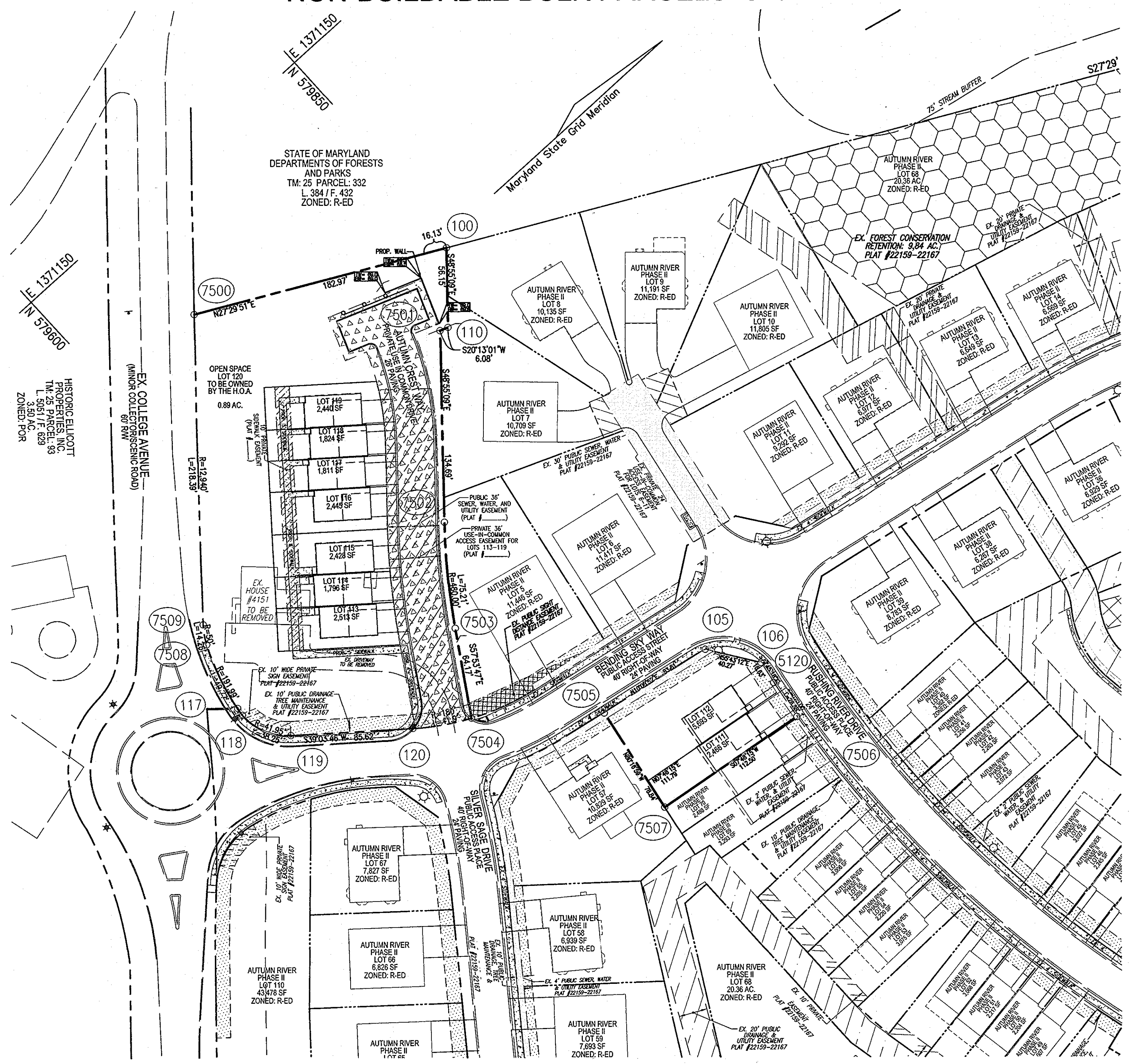
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Robert H. Vogel*  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 6/23/13

*Robert H. Vogel*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 5/10/13

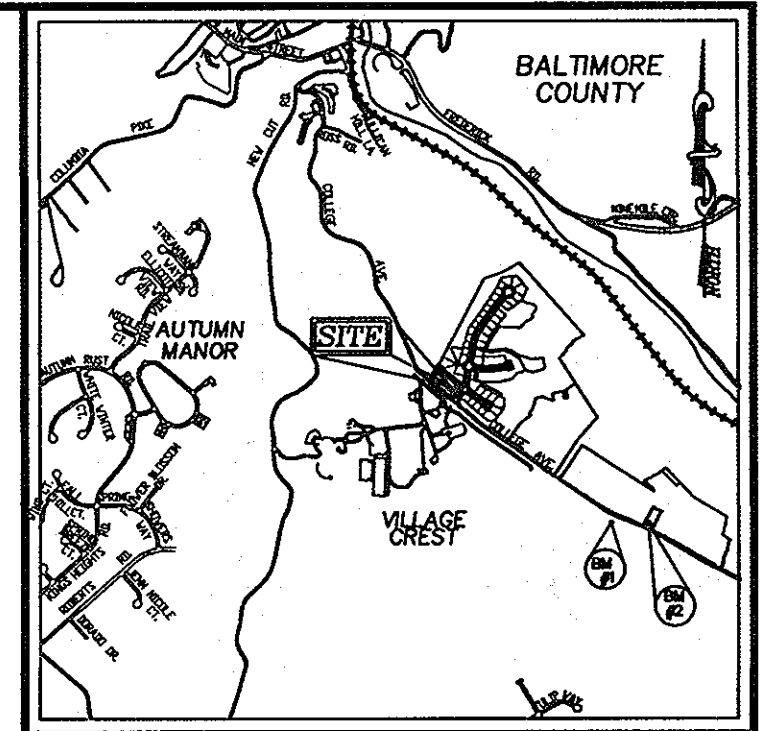
# SUPPLEMENTAL PLAN AUTUMN RIVER - PHASE IV

## LOTS 111-119 AND OPEN SPACE LOT 120 A SUBDIVISION OF PARCEL 159 AND A RE-SUBDIVISION OF AUTUMN RIVER - PHASE II NON-BUILDABLE BULK PARCELS 'C' & 'F'



**LEGEND**

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- CENTERLINE OF EXISTING STREAM
- EX. FOREST CONSERVATION EASEMENT (PLAT #14514)
- EX. FOREST CONSERVATION EASEMENT (PLAT #22159-22167)
- EX. PRIVATE 24' USE-IN-COMMON ACCESS EASEMENT FOR LOTS 6-11 (PLAT #22159-22167)
- EX. PUBLIC SEWER, WATER, UTILITY EASEMENT (PLAT #22159-22167)
- EX. PRIVATE DRAINAGE & UTILITY EASEMENT (PLAT #22159-22167)
- EX. PUBLIC DRAINAGE, TREE MAINTENANCE, & UTILITY EASEMENT (PLAT #22159-22167)
- EX. PUBLIC DRAINAGE & UTILITY EASEMENT (PLAT #22159-22167)
- EX. PUBLIC SIGHT DISTANCE EASEMENT (PLAT #22159-22167)
- EX. PRIVATE SIGN EASEMENT (PLAT #22159-22167)
- PUBLIC 36" SEWER, WATER AND UTILITY EASEMENT
- PRIVATE 36" USE-IN-COMMON ACCESS EASEMENT FOR LOTS 113-119
- 10' PRIVATE SIDEWALK EASEMENT



**BENCHMARKS**

- BENCHMARK NO. 1: COUNTY CONTROL #3044005R  
 3/4" REBAR 0.8' BELOW SURFACE  
 N. 578233.92, E. 1473142.33  
 ELEV. = 374.359
- BENCHMARK NO. 2: COUNTY CONTROL #3044004R  
 3/4" REBAR 0.6' BELOW SURFACE  
 N. 578128.03, E. 1473460.71  
 ELEV. = 362.575

**GENERAL SITE DATA**

PRESENT ZONING: R-ED  
 LOCATION: EAST SIDE OF COLLEGE AVENUE, APPROX. 1.5 MILES SOUTH OF HISTORIC ELLICOTT CITY  
 ELECTION DISTRICT: 2ND  
 TAX MAP: 25, PARCELS 159, 172, & 279  
 DEED REFERENCE: LIBER 5546 AT FOLIO 30  
 APPLICABLE DPZ FILE REFERENCE: S-98-16, P-99-16, F-00-131 F-01-08, P.B. 325, P.B. 148, PLAT # 15794, & 15795 PLAT # 14513 TO 14515, P-07-016, P-08-006, WP-09-063, F-09-021, F-10-081, ECP-11-054, WP-11-206 SP-12-001, W-4-S CONTRACT #14-4463, PLAT #22159-22167

PROPOSED WATER SYSTEM: PUBLIC  
 PROPOSED SEWER SYSTEM: PUBLIC  
 GROSS AREA: N/A  
 AREA OF 100 YEAR FLOODPLAIN: N/A  
 AREA OF STEEP SLOPES: N/A  
 NET AREA: 1.43 AC  
 BASE DENSITY: 2 LOTS PER NET ACRE (2 X 1.09): 2 LOTS  
 LIMIT OF DISTURBANCE: 1.43 AC

**PARKING TABULATION:**

TOTAL NUMBER OF UNITS PROPOSED: 9  
 PARKING SPACES REQUIRED: 2 SPACES PER UNIT = 18 SPACES  
 0.3 SPACES PER UNIT FOR GUEST/OVERFLOW PARKING = 3 SPACES  
 TOTAL PARKING SPACES REQUIRED: = 21 SPACES

PARKING SPACES PROVIDED:  
 2 SPACES IN GARAGE = 18 SPACES (FOR 9 UNITS)  
 1 SPACE ON DRIVEWAY = 9 SPACES (FOR 9 UNITS)

TOTAL PARKING SPACES PROVIDED: = 27 SPACES

**SHEET INDEX**

DESCRIPTION	SHEET NO.
COVER SHEET	1 OF 7
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ROAD PROFILES AND PLAN DETAILS	3 OF 7
SOILS, GRADING, SEDIMENT, AND EROSION CONTROL PLAN	4 OF 7
GRADING, SEDIMENT, EROSION CONTROL, AND BIO-RETENTION NOTES AND DETAILS	5 OF 7
LANDSCAPE PLAN	6 OF 7
LANDSCAPE NOTES AND DETAILS	7 OF 7

**COORDINATE LIST**

NO.	NORTHING	EASTING
100	579840.9292	1371318.0145
105	579784.6276	1371649.3129
106	579807.3069	1371662.5643
110	579818.8938	1371343.2912
117	579514.4754	1371458.6404
118	579513.6237	1371464.5759
119	579529.1394	1371468.0950
120	579595.6209	1371552.0513
5120	579804.3500	1371698.9443
7500	579678.6312	1371233.5369
7501	579798.3254	1371358.2393
7502	579709.8144	1371459.7698
7503	579665.0282	1371500.0913
7504	579630.9242	1371574.4499
7505	579702.1243	1371634.5456
7506	579800.2752	1371727.5371
7507	579688.8165	1371712.2608
7508	579558.5598	1371411.0535
7509	579536.1088	1371399.0119

**OWNERS**  
 HISTORIC ELLICOTT PROPERTIES, INC.  
 4100 COLLEGE AVE.  
 ELLICOTT CITY, MD 21042-7819  
 21043-5506  
 (410) 465-3500

**DEVELOPER**  
 AUTUMN DEVELOPMENT CORPORATION  
 C/O LAND DESIGN & DEVELOPMENT, INC.  
 5300 DORSEY HALL DR, STE 102  
 ELLICOTT CITY, MARYLAND 21042-7819  
 ATTN: MR. RONALD L. SPANH, PRESIDENT  
 443-367-0422

**SUPPLEMENTAL PLAN  
 AUTUMN RIVER - PHASE IV  
 COVER SHEET**

LOTS 111-119 AND OPEN SPACE LOT 120  
 A SUBDIVISION OF PARCEL 159 AND A  
 RE-SUBDIVISION OF AUTUMN RIVER - PHASE II  
 NON-BUILDABLE BULK PARCELS 'C' & 'F'

ZONING: R-ED  
 PARCELS: 159, 172, & 279  
 HOWARD COUNTY, MARYLAND

2ND ELECTION DISTRICT  
 TAX MAP: 25 GRID: 14 & 21

**ROBERT H. VOGEL ENGINEERING, INC.**  
 ENGINEERS • SURVEYORS • PLANNERS  
 8407 MAIN STREET  
 ELLICOTT CITY, MD 21043  
 TEL: 410.461.7666  
 FAX: 410.461.8961

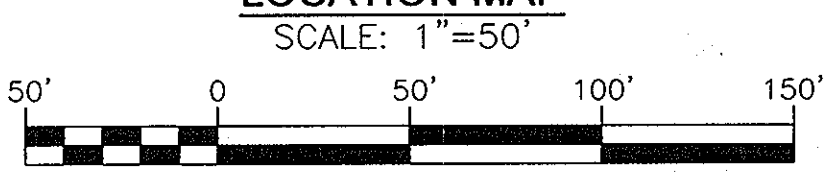
**PROFESSIONAL CERTIFICATE**

DESIGN BY: JBS  
 DRAWN BY: JMR  
 CHECKED BY: JBS  
 DATE: APRIL 2013  
 SCALE: AS SHOWN  
 W.D. NO.: 04-145

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. 21438, EXPIRATION DATE: 12-16-2014

1 SHEET OF 7

**LOCATION MAP**



**AUTUMN RIVER PHASE IV**

TOTAL AREA OF SUBMISSION: 1.43 AC  
 TOTAL NUMBER OF ATTACHED LOTS: 9  
 TOTAL AREA OF ATTACHED LOTS: 0.54 AC  
 TOTAL NUMBER OF OPEN SPACE LOTS: 1  
 TOTAL AREA OF OPEN SPACE LOTS: 0.89 AC

**LOT TABULATION**

NO. OF PROPOSED LOTS:	10
TOTAL NO. OF DWELLING UNITS:	9
NO. OF SINGLE FAMILY DETACHED UNITS:	9
NO. OF OPEN SPACE LOTS:	1

**OPEN SPACE TABULATION:**

\*AUTUMN RIVER PHASE I, II, III REQUIRED OPEN SPACE (25%) = 17.70 AC.  
 \*AUTUMN RIVER PHASE IV (PARCEL 159) REQUIRED OPEN SPACE (50%) = 0.55 AC. (1.09 AC x 50%)  
 GROSS OPEN SPACE THIS SUBMISSION = 2.34 AC.  
 NON-CREDIT OPEN SPACE THIS SUBMISSION = 0.17 AC.  
 NET OPEN SPACE THIS SUBMISSION = 2.17 AC.  
 AUTUMN RIVER PHASE I, II, III AND IV REQUIRED OPEN SPACE = 18.25 AC.  
 TOTAL CREDITED OPEN SPACE FOR AUTUMN RIVER PHASE I, II, III AND IV = 47.71 AC.  
 TOTAL RECREATION OPEN SPACE REQUIRED FOR AUTUMN RIVER = 26,260 SF  
 TOWNHOUSE (PARCEL 159) 400SF/UNIT 7 UNITS = 2,800 SF  
 TOWNHOUSE (PHASE II ADDITIONAL UNITS) 400SF/UNIT 3 UNITS = 1,200 SF  
 PHASE II & III SINGLE FAMILY DETACHED UNITS = 77 x 250 SF/UNITS = 19,250 SF  
 PHASE II TOWNHOUSE UNITS = 17 x 200 SF/UNITS = 3,400 SF  
 TOTAL RECREATION OPEN SPACE PROVIDED FOR AUTUMN RIVER = 29,324 SF.

\* EXISTING FINALS (F-09-021 & F-10-061) ARE SUBJECT TO THE AMENDED FOURTH EDITION OF THE SUBDIVISION REGULATIONS. UNDER THESE REGULATIONS 25% OF THE GROSS ACREAGE WAS REQUIRED FOR OPEN SPACE. THE CURRENT REGULATIONS REQUIRE 50% OF THE GROSS ACREAGE FOR OPEN SPACE.

**PREVIOUS AUTUMN RIVER DENSITY TABULATION**

PHASE	TOTAL SUBDIVISION AREA (GROSS AREA)	PREVIOUSLY RECORDED PLATS	FLOODPLAIN	STEEP SLOPES	NET AREA	UNITS PERMITTED BY NET AREA	UNITS PROPOSED	TOTAL UNITS REMAINING
I (F-00-131)	48,229 AC.	(# 14513)	-	-	-	-	02	102
II (F-09-021)	37,344 AC.	(# 14513)	0.86	5,786 AC.	30.70 AC.	61.40	60*	44
III (F-10-067)	10,885 AC. 20,297 AC.	(# 14513) (# 15794)	0.76	9,964 AC.	20.46 AC.	40.92	35**	9
IV (SP-12-001)	1.09 AC. (PARCEL 159) INCLUDES 2.84 AC FROM PHASE II		-	-	1.09 AC.	2.18	27***	0
TOTAL	69.62 AC.		1.62	15.75 AC.	52.25 AC.	104.50	104	0

SKETCH PLAN S-98-016 APPROVED 95 UNITS PLUS 2 EXISTING UNITS TOTALING 97 UNITS ( LETTER DATED OCTOBER 15, 2005 )

- \* PHASE II PLAN PROPOSED 58 UNITS PLUS 2 EXISTING UNITS FOR A TOTAL OF 60 UNITS
- \*\* THIS PLAN PROPOSES 33 UNITS PLUS 2 UNITS FROM THE RESUBDIVISION OF PHASE II NON BUILDABLE BULK PARCEL D INTO 2 LOTS FOR A TOTAL OF 35 UNITS
- \*\*\* THERE ARE 18 UNITS RESUBDIVIDED (17 TOWNHOUSE AND 1 SINGLE FAMILY) FROM PHASE II TO BE RECONFIGURED. THERE ARE 27 UNITS PROPOSED UNDER PHASE IV NETTING THE 9 ADDITIONAL UNITS ALLOWED.

STATE OF MARYLAND  
DEPARTMENTS OF FORESTS  
AND PARKS  
TM: 25 PARCEL: 332  
L. 384 / F. 432  
ZONED: R-ED

HISTORIC ELLICOTT  
PROPERTIES, INC.  
TM: 25 PARCEL:  
L. 5051 / F. 629  
ZONED: POB

- LEGEND:**
- PROPERTY LINE
  - RIGHT-OF-WAY LINE
  - ADJACENT PROPERTY LINE
  - EXISTING CURB AND GUTTER
  - EXISTING UTILITY POLE
  - EXISTING LIGHT POLE
  - EXISTING MAILBOX
  - EXISTING SIGN
  - EXISTING SANITARY MANHOLE
  - EXISTING SANITARY LINE
  - EXISTING CLEANOUT
  - EXISTING FIRE HYDRANT
  - EXISTING WATER LINE
  - EXISTING TREE LINE (FIELD LOCATED)
  - EXISTING TREES (FIELD LOCATED)
  - EXISTING FENCE
  - CENTERLINE OF EXISTING STREAM
  - PROPOSED SIDEWALK
  - PROPOSED TREE LINE
  - PROPOSED CURB
  - PROPOSED STREET LIGHT
  - EX. FOREST CONSERVATION EASEMENT (PLAT #14514)
  - EX. FOREST CONSERVATION EASEMENT (PLAT #22159-22167)
  - EX. PRIVATE 24' USE-IN-COMMON ACCESS EASEMENT FOR LOTS 6-11 (PLAT #22159-22167)
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  - 10' PRIVATE SIDEWALK EASEMENT

**OWNERS**  
HISTORIC ELLICOTT PROPERTIES, INC.  
1100 COLLEGE AVE.  
ELLICOTT CITY, MD 21042-7819  
21043-5506  
(410) 465-3500

**DEVELOPER**  
AUTUMN DEVELOPMENT CORPORATION  
C/O LAND DESIGN & DEVELOPMENT, INC.  
5300 DORSETT HALL, STE. 102  
ELLICOTT CITY, MARYLAND 21042-7819  
ATTN: MR. DONALD R. REUWER  
443-367-0422

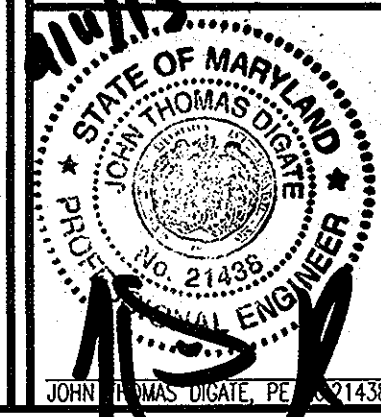
NO.	REVISION	DATE

**SUPPLEMENTAL PLAN  
AUTUMN RIVER - PHASE IV  
SITE LAYOUT**

LOTS 111-119 AND OPEN SPACE LOT 120  
A SUBDIVISION OF PARCEL 159 AND A  
RE-SUBDIVISION OF AUTUMN RIVER - PHASE II  
NON-BUILDABLE BULK PARCELS 'C' & 'F'

ZONING: R-ED  
PARCELS: 159, 172, & 279  
HOWARD COUNTY, MARYLAND

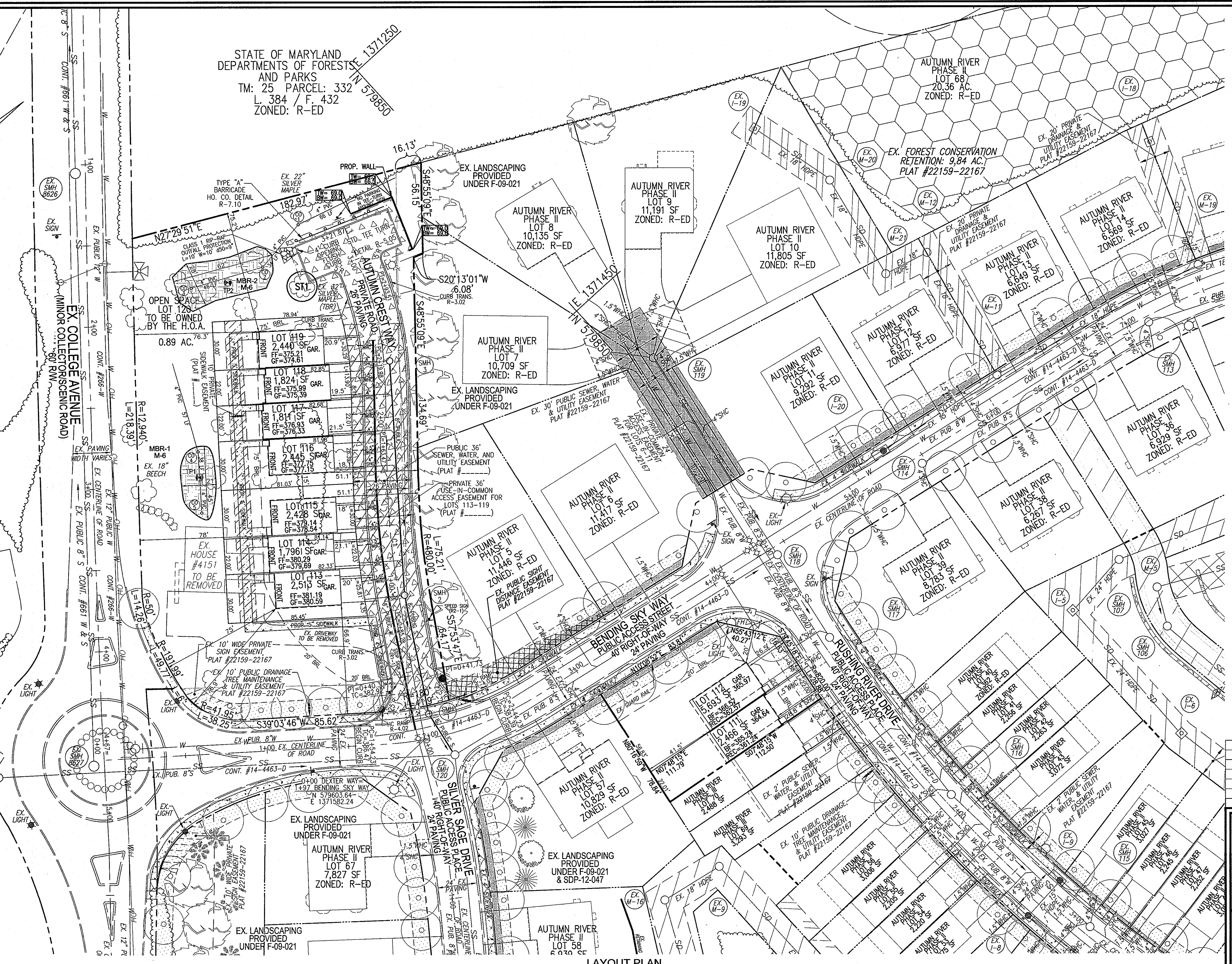
**ROBERT H. VOGEL  
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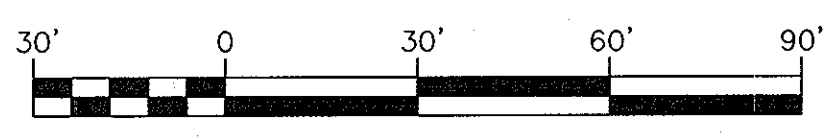
**PROFESSIONAL CERTIFICATE**  
I HEREBY CERTIFY THAT THESE DOCUMENTS  
WERE PREPARED OR APPROVED BY ME, AND  
THAT I AM A DULY LICENSED PROFESSIONAL  
ENGINEER UNDER THE LAWS OF THE STATE  
OF MARYLAND, LICENSE NO. 21438  
EXPIRATION DATE: 12-16-2014

DESIGN BY: JBS  
DRAWN BY: JMR  
CHECKED BY: JBS  
DATE: APRIL 2013  
SCALE: AS SHOWN  
W.O. NO.: 04-145

2 SHEET OF 7



LAYOUT PLAN  
SCALE: 1"=30'



**STREET SIGN LOCATION CHART**

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
AUTUMN CREST WAY	0+32	16' LT.	STOP SIGN (R1-1) STREET SIGN (D3-1)
AUTUMN CREST WAY	0+72	16' RT.	SPEED LIMIT SIGN (R2-1) NO PARKING IN TEE-TURNAROUND (DOUBLE ARROW SYMBOL)
AUTUMN CREST WAY	3+28	N/A	

**CURVE DATA TABLE**

CURVE	LENGTH	RADIUS	TANGENT	DELTA	CHORD BEARING	CHORD LENGTH
C1	78.18'	499.00'	39.17'	8°58'38"	N53°24'28"W	78.10'
C2	73.54'	201.00'	37.18'	20°57'42"	S59°24'00"E	73.13'

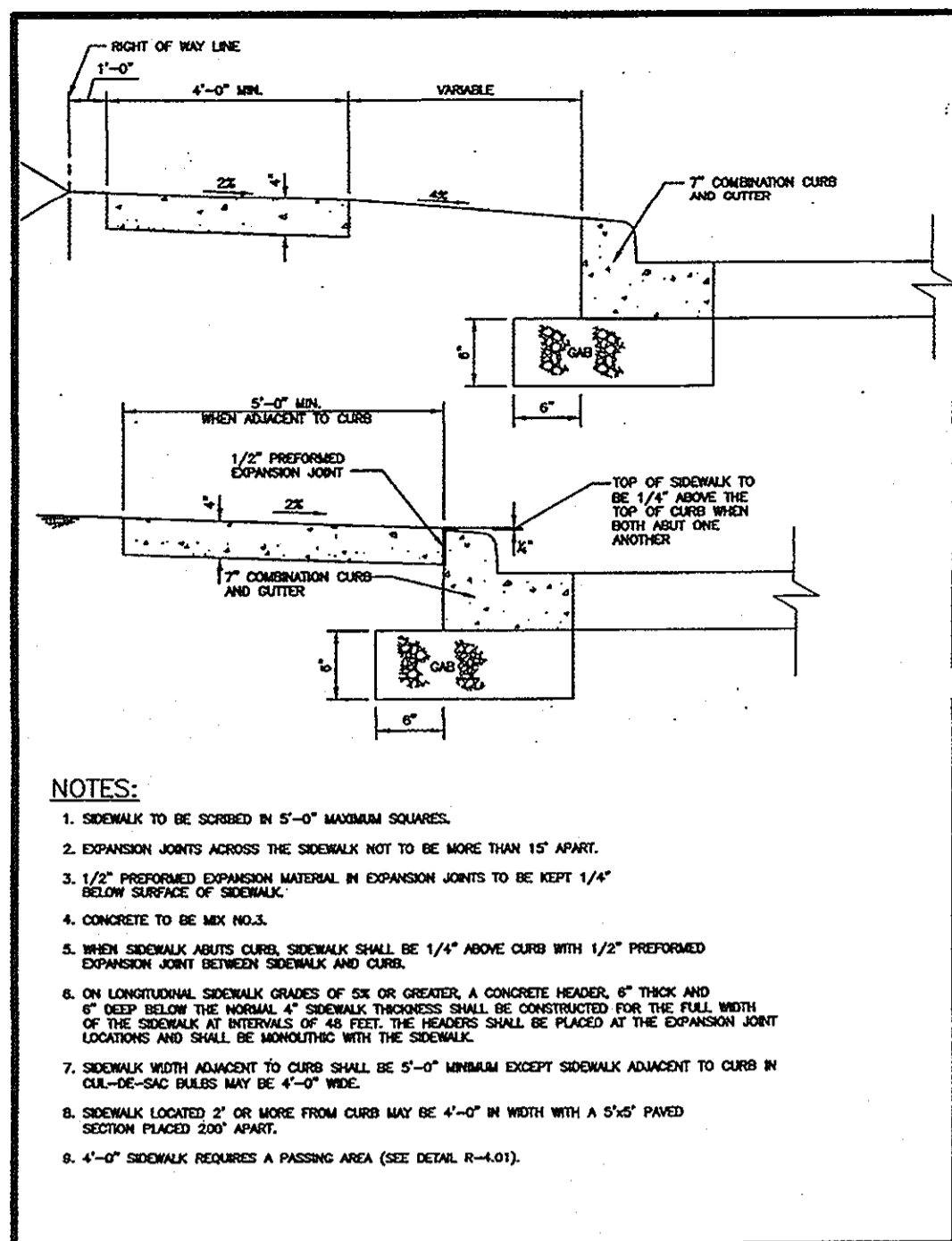
**LINE DATA TABLE**

LINE	BEARING	DISTANCE
L1	N57°53'47"W	85.28'
L2	N48°55'09"W	56.51'
L3	N69°48'59"W	28.36'

**PRIVATE STREET LIGHT LOCATION CHART**

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
AUTUMN CREST WAY	0+35	17.5' RT.	150 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE
AUTUMN CREST WAY	2+89	19' RT.	100 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
6/03/13  
DATE  
5/10/13  
DATE



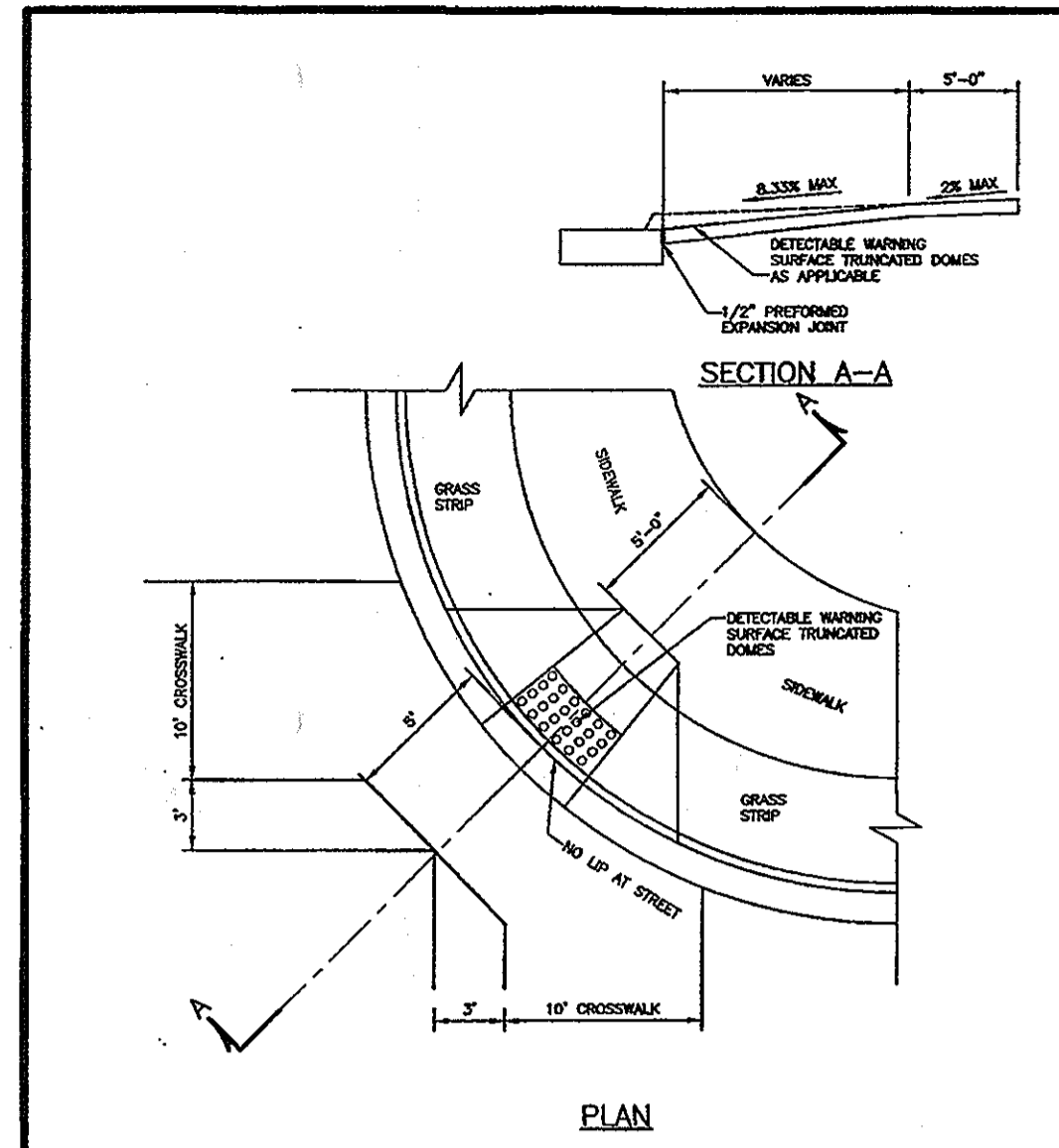
Howard County, Maryland Department of Public Works	Concrete Sidewalk	Detail R-3.05
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SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)						
		3 TO <5	5 TO <7	7 TO <10	10 TO <15	15 TO <20	20 TO <30	
P-1	URBAN DRAINAGE PARKING DRIVE ADJACENT TO RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	HMA SUPERPAVE FINAL SURFACE 9.5 MM PG 64-22, LEVEL 1 (ESAL)	1.5	2.0	2.5	3.0	3.5	4.0
		HMA SUPERPAVE INTERMEDIATE SURFACE 19.0 MM PG 64-22, LEVEL 1 (ESAL)	8.5	7.0	3.0	4.0	4.0	4.0
P-2	PARKING DRIVE ADJACENT TO RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROADS ACCESS PLACE, ACCESS STREET CUL-DE-SACS	HMA SUPERPAVE FINAL SURFACE 9.5 MM PG 64-22, LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5
		HMA SUPERPAVE INTERMEDIATE SURFACE 19.0 MM PG 64-22, LEVEL 1 (ESAL)	1.0	1.0	1.0	1.0	1.0	1.0
P-3	PARKING DRIVE ADJACENT TO RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROADS ACCESS PLACE, ACCESS STREET CUL-DE-SACS MINOR COLLECTORS	HMA SUPERPAVE FINAL SURFACE 9.5 MM PG 64-22, LEVEL 1 (ESAL)	1.0	1.0	1.0	1.0	1.0	1.0
		HMA SUPERPAVE INTERMEDIATE SURFACE 19.0 MM PG 64-22, LEVEL 1 (ESAL)	3.0	3.0	3.0	4.5	3.0	2.0
P-4	MINOR COLLECTORS MAJOR COLLECTORS	HMA SUPERPAVE FINAL SURFACE 12.5 MM PG 64-22, LEVEL 2 (ESAL)	2.0	2.0	2.0	2.0	2.0	2.0
		HMA SUPERPAVE INTERMEDIATE SURFACE 19.0 MM PG 64-22, LEVEL 2 (ESAL)	4.0	4.0	3.0	6.0	6.0	3.0

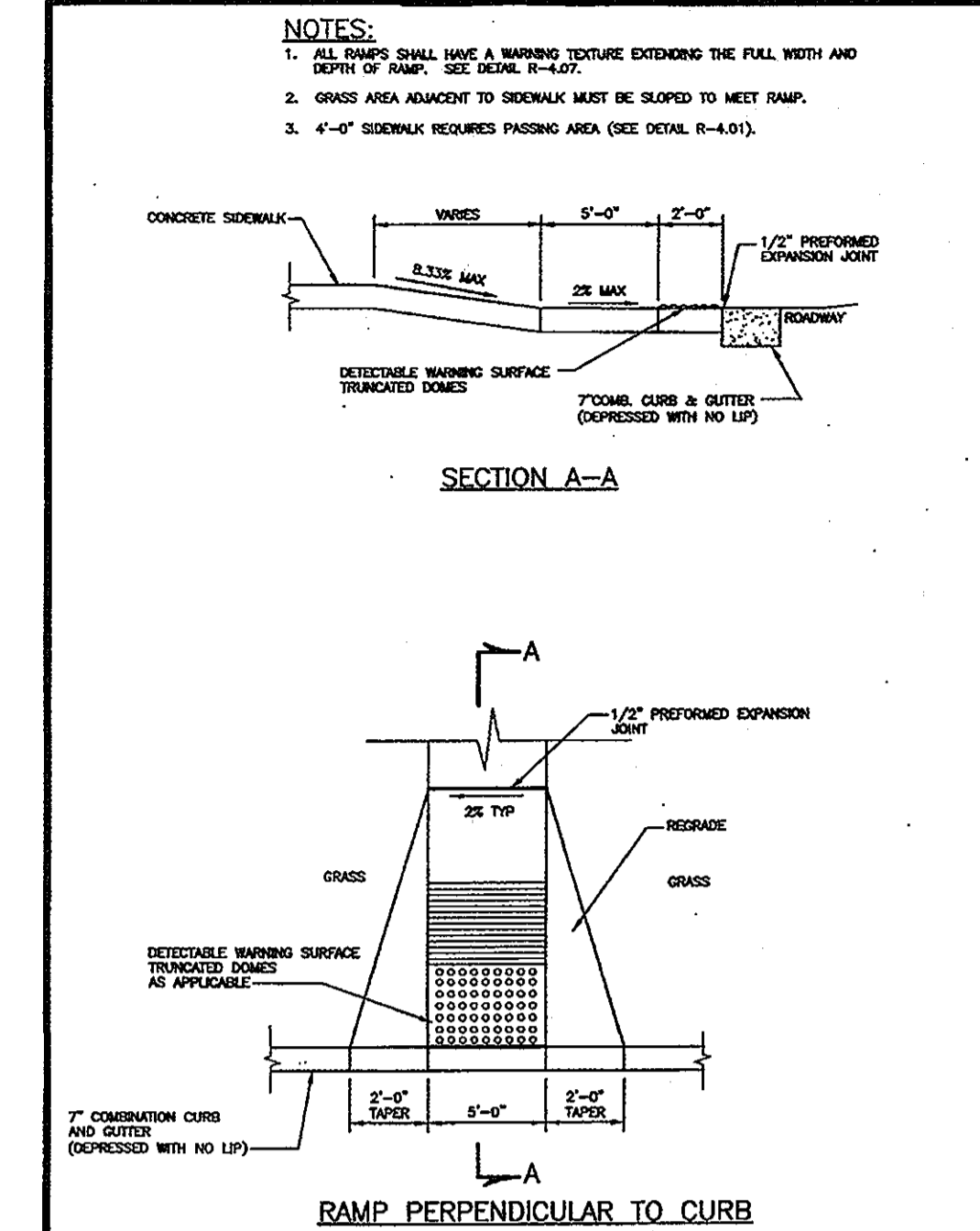
**Notes:**

- HEAVY TRUCKS ARE DEFINED AS THOSE WITH SIX (6) WHEELS OR MORE INCLUDING GARAGE TRUCKS.
- HMA SUPERPAVE LAYERS SHALL BE PLACED IN APPROPRIATE COMPACTED LIFT THICKNESS: 19.0 MM BASE (2.0" MIN TO 4.0" MAX), 12.5 MM SURFACE (1.5" MIN TO 3.0" MAX), AND 9.5 MM SURFACE (1.0" MIN TO 2.0" MAX).
- GRADED AGGREGATE BASE (GAB) TO BE PLACED AND COMPACTED IN 6" MAX COMPACTED THICKNESS LAYERS.
- THE INTERMEDIATE SURFACE COURSE LAYER MUST BE PLACED WITHIN 2 WEEKS OF PLACEMENT OF BASE COURSE, AND IS REQUIRED PRIOR TO SUBSTANTIAL COMPLETION INSPECTION AND ROAD RESECTION.
- IN LIEU OF PLACING THE INTERMEDIATE SURFACE COURSE LAYER FOR COMMERCIAL/INDUSTRIAL ENTRANCE AREAS WITHIN THE COUNTY BOUNDARY, WINDY ALTERNATE LAYERS ARE NOT REQUIRED. THE THICKNESS OF THE INTERMEDIATE SURFACE LAYER CAN BE ADDED TO THE REQUIRED THICKNESS OF THE BASE ASPHALT LAYER.
- THE CONSTRUCTION DRAWINGS SHALL SHOW THE PAVING SECTION, ROAD CLASSIFICATION AND CBR VALUE FOR EACH ROADWAY.

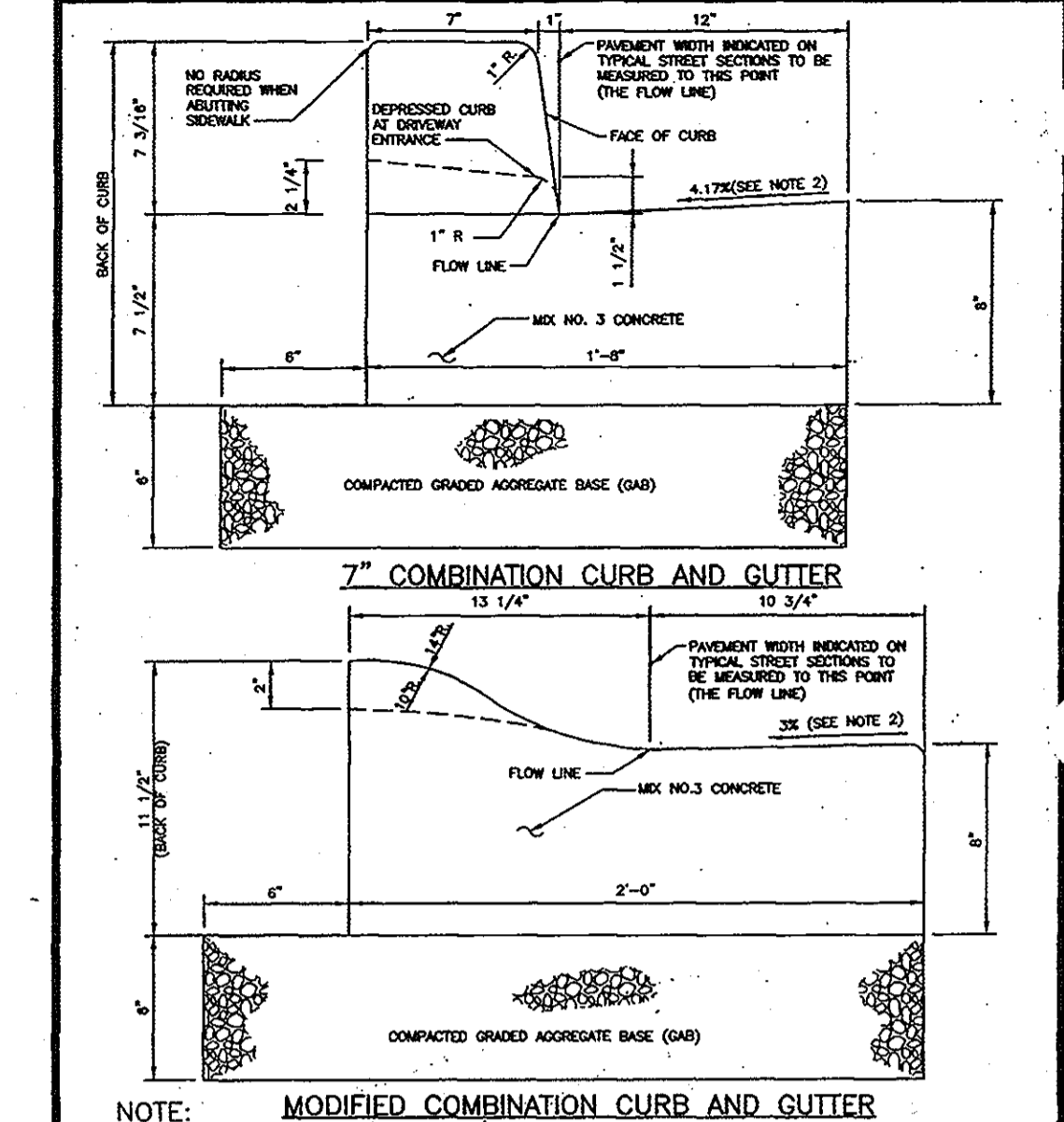
Howard County, Maryland Department of Public Works	Paving Sections P-1 to P-4	Detail R-2.01
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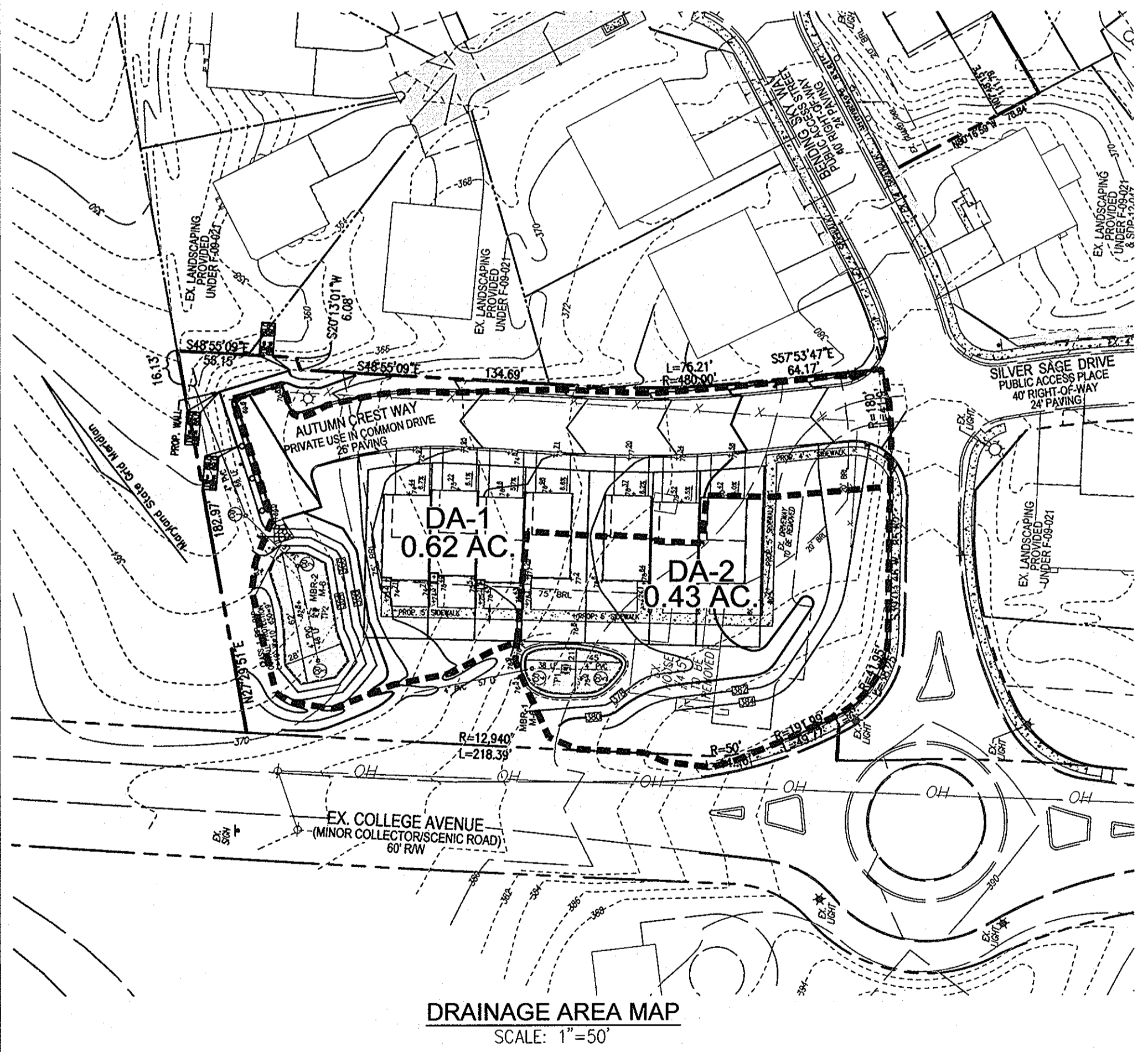
Howard County, Maryland Department of Public Works	Sidewalk Ramp Type B Single Ramp	Detail R-4.02
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Howard County, Maryland Department of Public Works	Sidewalk Ramp Layout & Grading Perpendicular to Curb	Detail R-4.05
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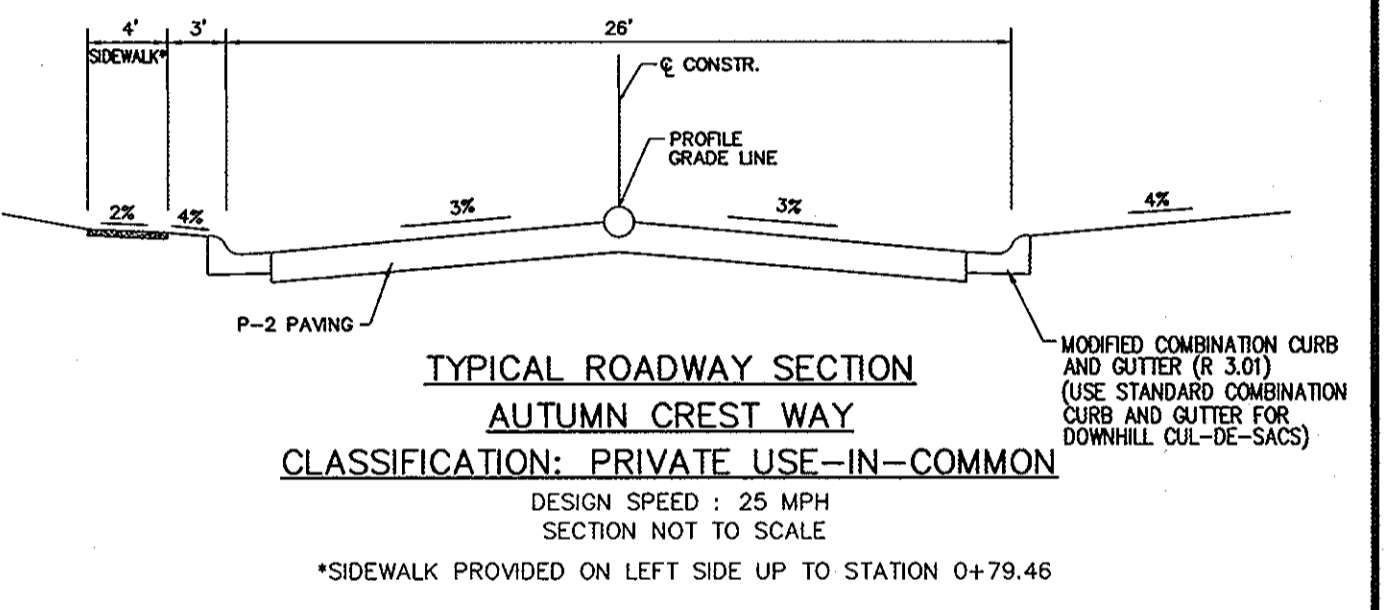
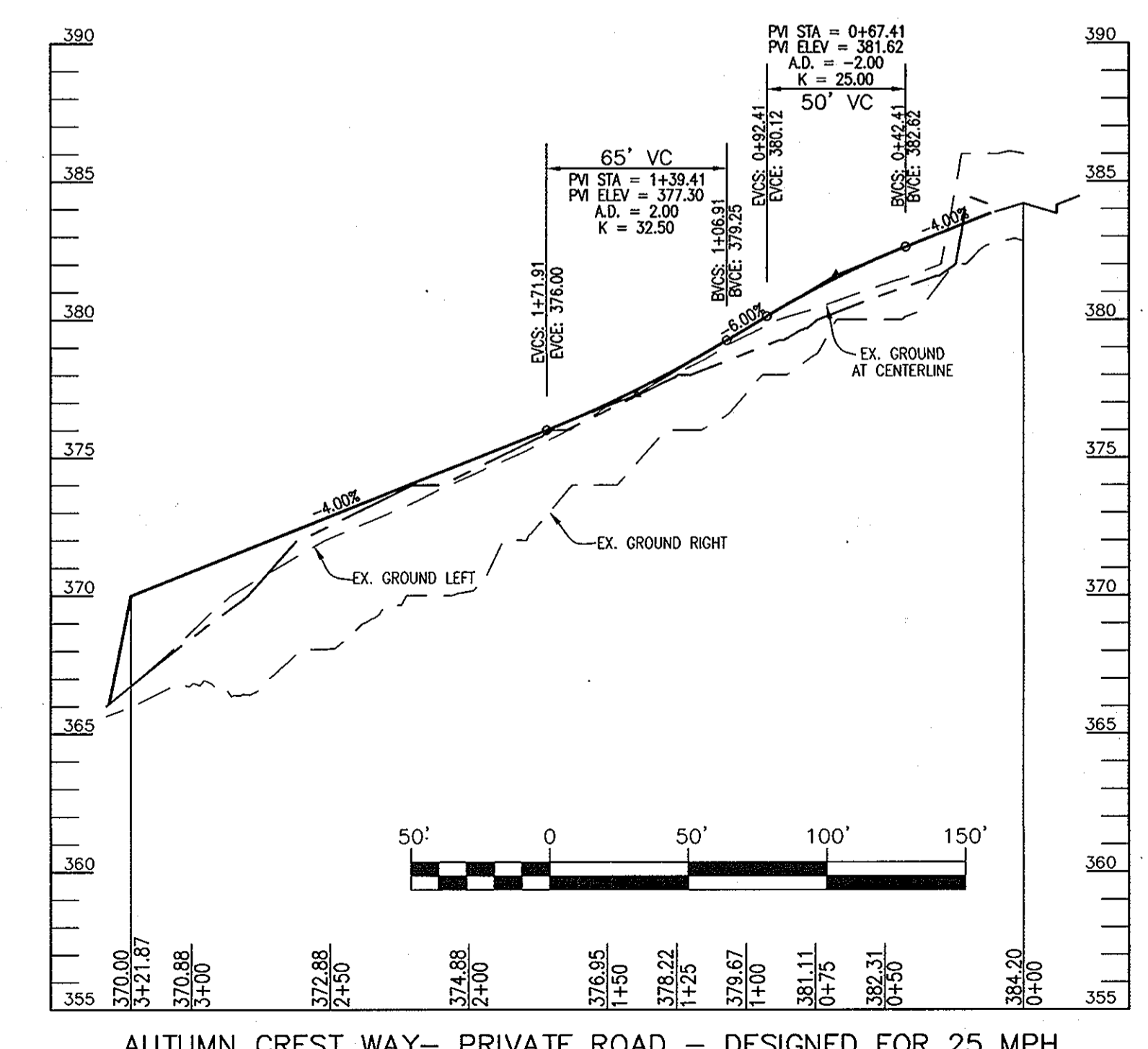
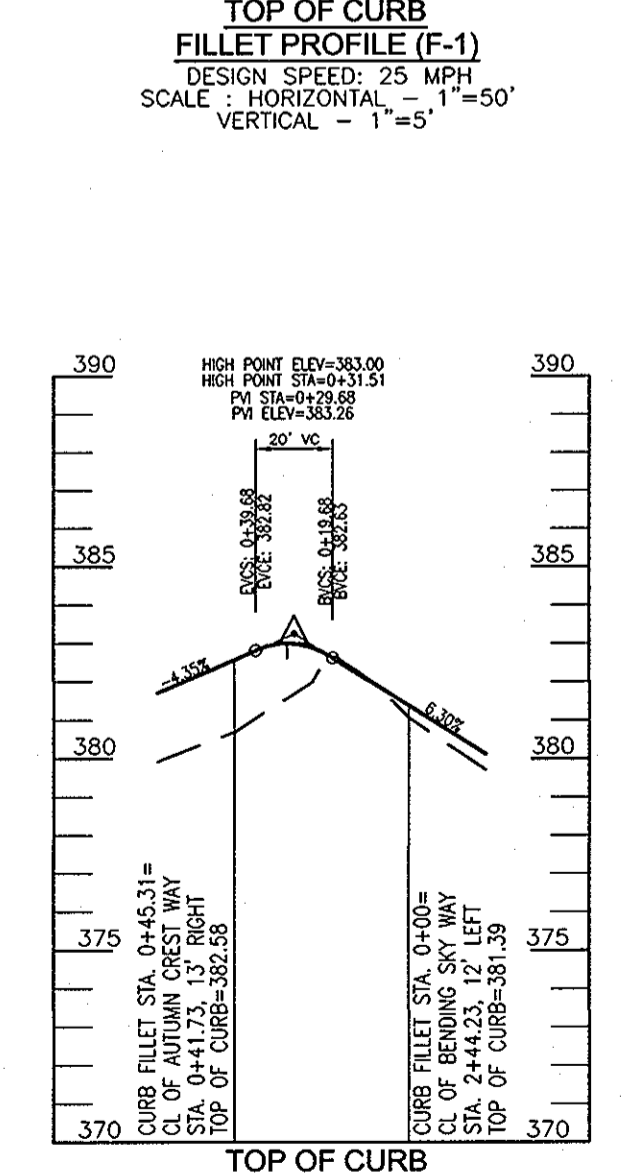
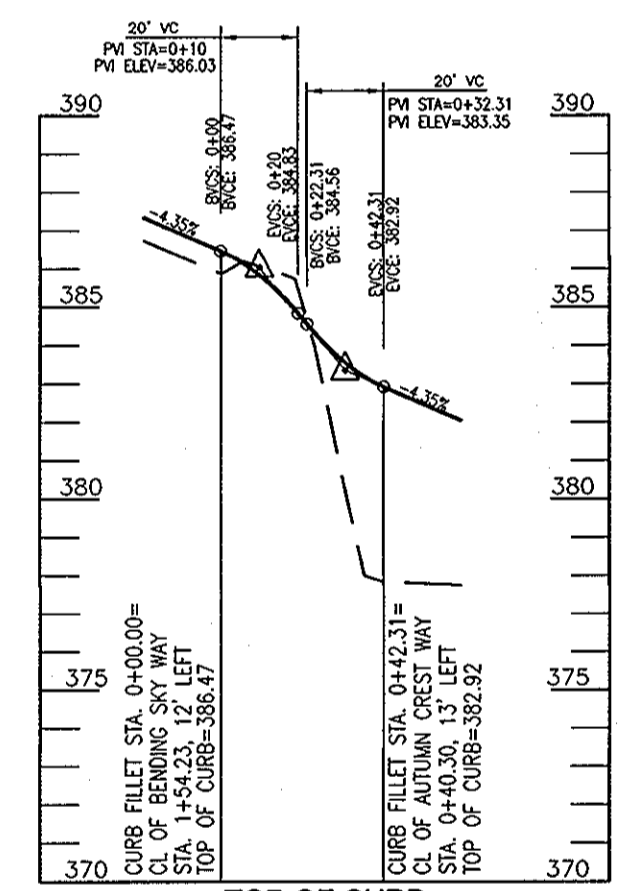
Howard County, Maryland Department of Public Works	Curb and Gutter 7" & Modified	Detail R-3.01
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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*K. J. Seidman* 5/6/13  
CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 5/10/13  
CHIEF, DEVELOPMENT ENGINEERING DIVISION



NO.	REVISION	DATE

**OWNERS**  
HISTORIC ELLICOTT PROPERTIES, INC.  
4100 COLLEGE AVE.  
ELLICOTT CITY, MD 21042-7819  
21043-5506  
(410) 465-3500

**DEVELOPER**  
AUTUMN DEVELOPMENT CORPORATION  
C/O LAND DESIGN & DEVELOPMENT, INC.  
5300 DORSEY HALL DR., SUITE 102  
ELLICOTT CITY, MARYLAND 21042-7819  
ATTN: MR. DONALD R. REUWER  
443-367-0422

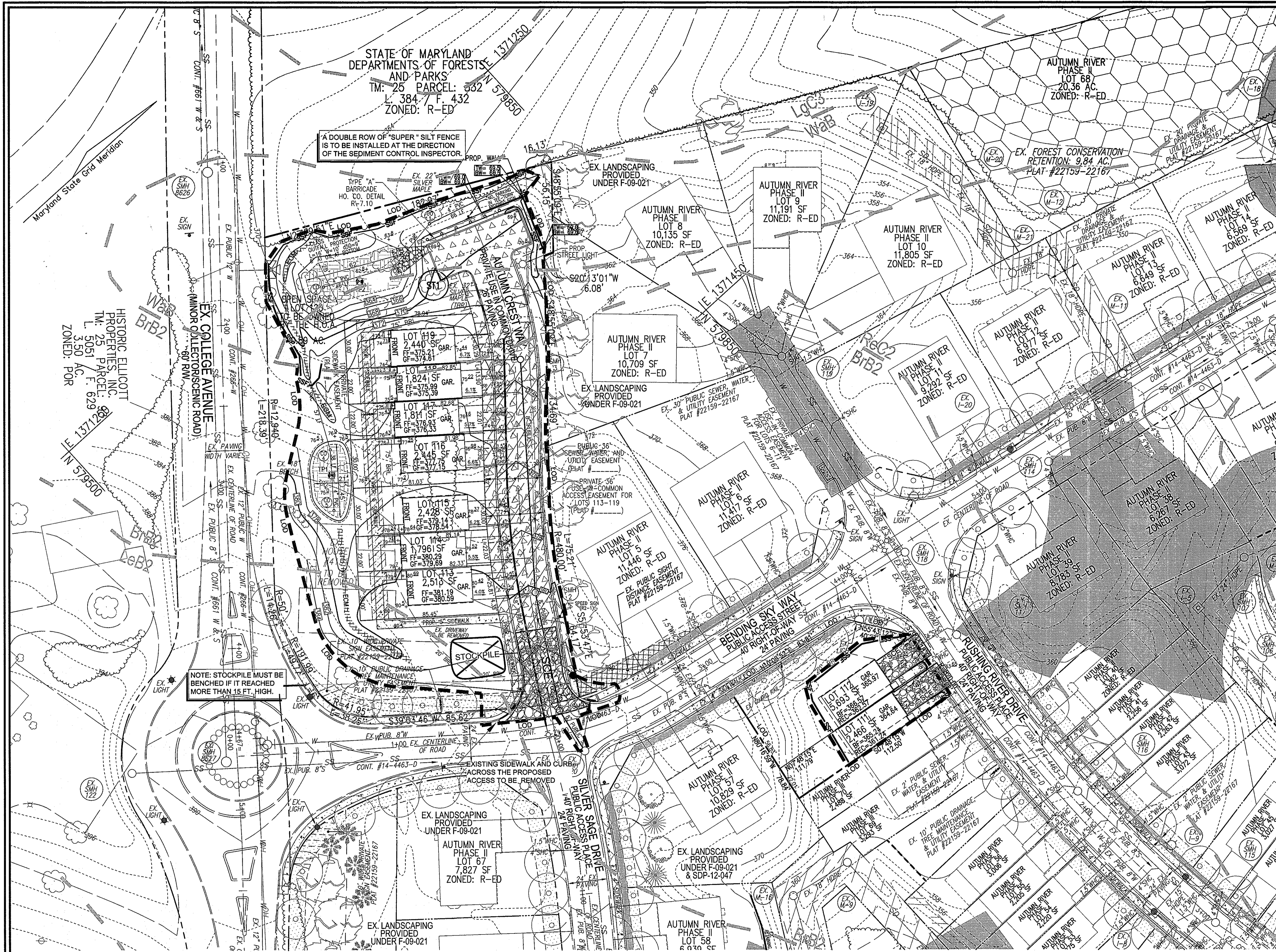
**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET  
ELLICOTT CITY, MD 21043  
TEL: 410.461.7666  
FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A duly LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21438, EXPIRATION DATE: 12-18-2014.

DESIGN BY: JBS  
DRAWN BY: JMR  
CHECKED BY: JBS  
DATE: APRIL 2013  
SCALE: AS SHOWN  
W.O. NO.: 04-145

3 SHEET OF 7



**B-4.3 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS**

**DEFINITION**  
THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

**PURPOSE**  
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

**CONDITIONS WHERE PRACTICE APPLIES**  
WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

**CRITERIA**

**A. SOIL PREPARATION**

1. SOIL PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISKHOVERS OR CHISEL PLOWS. SOILS TO BE PREPARED SHALL BE TESTED FOR PHOSPHORUS AND POTASSIUM. IF NECESSARY, IT MUST NOT BE ROLLED OR GROOMED SOONER THAN 48 HOURS AFTER THE SOIL IS LOOSENED. CONDITIONAL SOILS 21 OR FLATTER ARE TO BE TRACKED WITH ROVERS RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
2. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
3. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR CHISEL PLOWING MEANS.

**B. PERMANENT STABILIZATION**

1. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:  
 A. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT EXCEEDS THE GRANDED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE, AN EXCEPTION IF LONGER THAN 100 FEET.  
 B. SOILABLE SALTS LESS THAN 200 PPM PER MILLION (PPM).  
 C. SOIL PH BETWEEN 6.0 AND 7.5.
2. SOIL CONTAINS SUFFICIENT PPM MINIMUM ORGANIC MATTER BY WEIGHT.
3. SOIL CONTAINS SUFFICIENT PPM MINIMUM PERMANENT PORE FILLATION.
4. APPLICATION OF AMENDMENTS OR SOIL IS REQUIRED IN ORDER TO MEET THE ABOVE CONDITIONS.
5. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARPED OR OTHERWISE LOGGED TO A DEPTH OF 3 TO 5 INCHES.
6. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
7. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LIME AND READY TO USE FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LIME AND READY TO USE FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LIME AND READY TO USE FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LIME AND READY TO USE FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

**B-4.4 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING**

**DEFINITION**  
THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

**PURPOSE**  
TO STABILIZE DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

**CONDITIONS WHERE PRACTICE APPLIES**  
TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

**CRITERIA**

**A. SEEDING**

1. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO TESTING BY A LICENSED LABORATORY. ALL SEED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SEEDING. SEED MUST BE TESTED FOR PURITY, GERMINATION, AND MOISTURE. SEED MUST BE TESTED FOR PURITY, GERMINATION, AND MOISTURE. SEED MUST BE TESTED FOR PURITY, GERMINATION, AND MOISTURE.
2. MULCH ALONE WILL BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING METHOD MUST BE USED WHEN THE GROUND IS FROZEN.
3. INCULCATE THE MULCH FOR TREATING LEGUME SEEDS IN THE SEED MIXTURES. MULCH MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA SPECIFICALLY FOR LEGUMES. MULCH MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER, AND FRESH INCULCANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDATION RATE. NOTE: IT IS VERY IMPORTANT TO KEEP INCULCANT AS COOL AS POSSIBLE UNTIL USE. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN KILL BACTERIA AND MAKE THE INCULCANT LESS EFFECTIVE.
4. SOO OR SOO MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL. SUFFICIENT TIME (EIGHT TO TEN DAYS) MUST BE ALLOWED FOR DISPERSION OF PHYTO-TOXIC MATERIALS.

**B. APPLICATION**

1. APPLY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.  
 A. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1.  
 B. PERMANENT SEEDING TABLE B.1, OR SITE-SPECIFIC SEEDING SUMMARIES.  
 C. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDING AREA WITH A WHEGGEED ROLLER TO PROVIDE GOOD SOIL CONTACT.
2. DRILL OF CULTIVATED SEEDING: MECHANIZED SEEDING THAT APPLY AND COVER SEED WITH SOIL.  
 A. OUTRIGGER SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A MANNER AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVER. SEEDING MUST BE FROM AFTER PLANTING.  
 B. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
3. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).  
 A. SEEDING SLURRY IS APPLIED AT THE TIME OF SEEDING. THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: 100 POUNDS PER ACRE TOTAL OF SOULBLE NITROGEN; 200 POUNDS PER ACRE TOTAL OF PHOSPHORUS; 100 POUNDS PER ACRE TOTAL OF POTASSIUM.  
 B. 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.  
 C. MULCH AND FERTILIZER TO BE USED WITH HYDROSEEDING AND WITHOUT INTERRUPTION.  
 D. WHEN HYDROSEEDING IS USED, MULCH SHOULD BE APPLIED TO THE SEEDING AREA.

**B-4.5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION**

**DEFINITION**  
TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

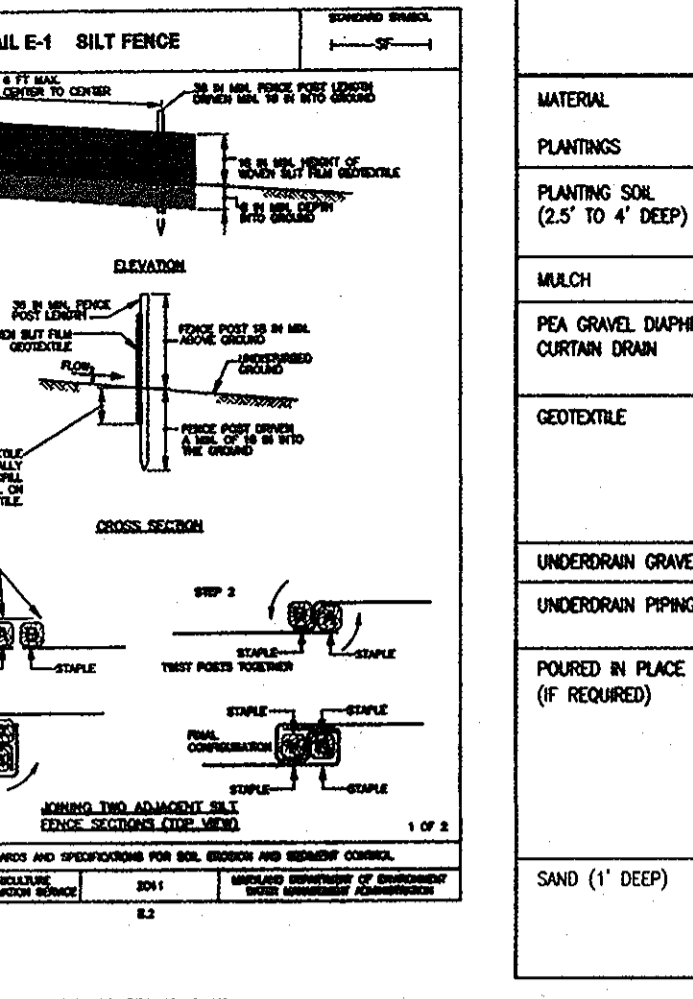
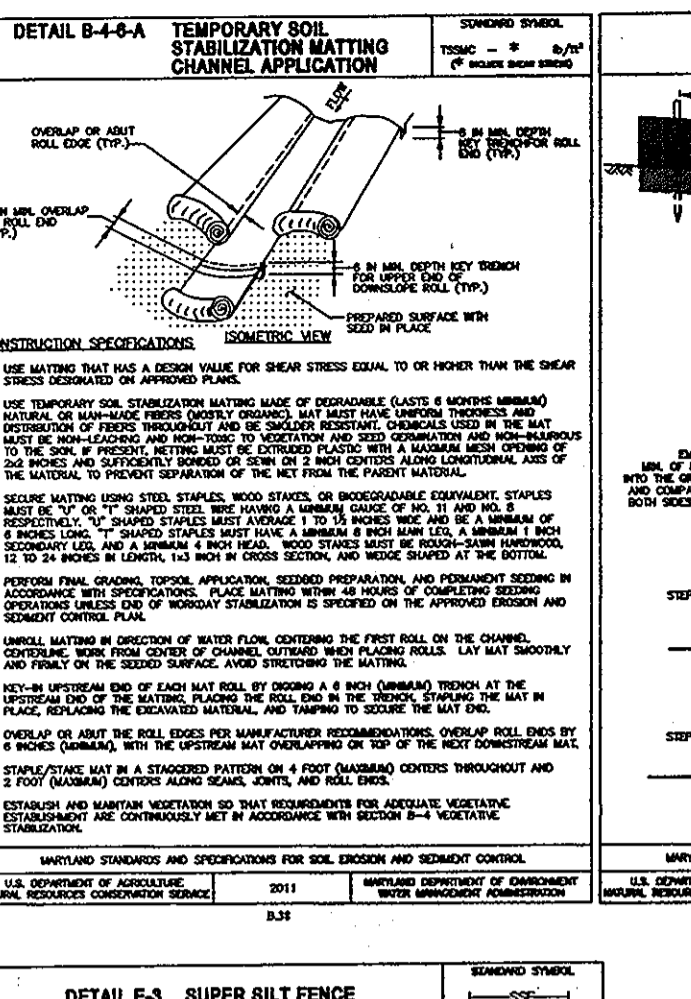
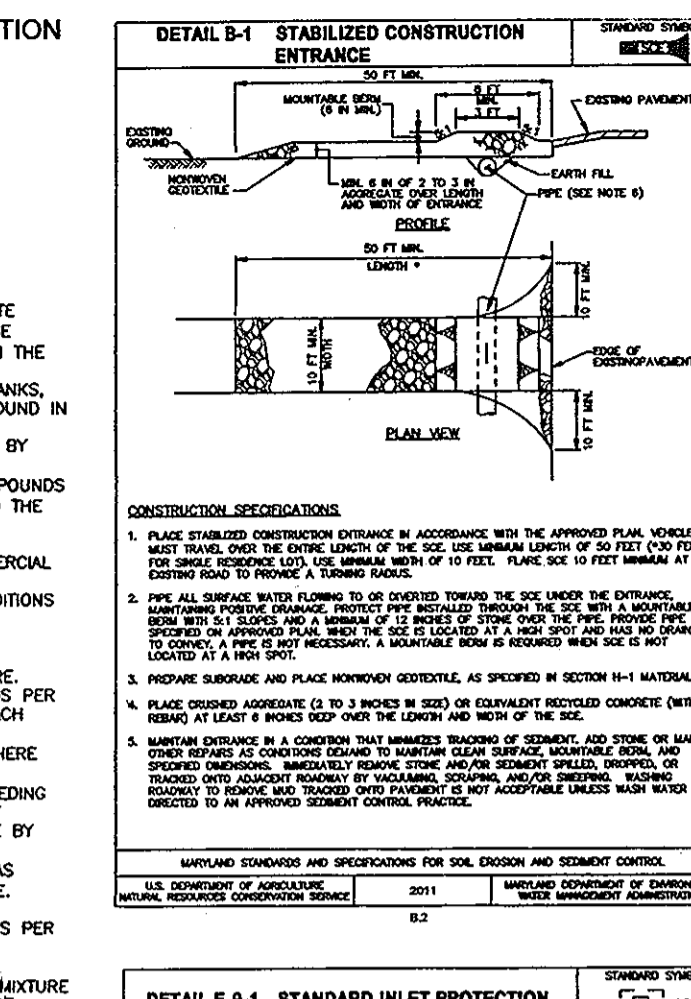
**PURPOSE**  
TO ESTABLISH LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

**CONDITIONS WHERE PRACTICE APPLIES**  
EROSION SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

**CRITERIA**

**A. SEED MIXTURES**

1. GENERAL USE  
 A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE. FURNISH SEED MIXTURES TO BE TESTED FOR PURITY, GERMINATION, AND MOISTURE. SEED MIXTURES TO BE TESTED FOR PURITY, GERMINATION, AND MOISTURE. SEED MIXTURES TO BE TESTED FOR PURITY, GERMINATION, AND MOISTURE.
2. TURFGRASS MIXTURES  
 A. SEED MIXTURES MUST BE DESIRED INCLUDING LAMN, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH REQUIRE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.  
 B. STRAWM ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
3. KENTUCKY BLUEGRASS: FULL SUN MIXTURE FOR USE IN AREAS THAT RECEIVE INTENSIVE MAINTENANCE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS ARE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET (1000 SF) OF SOIL. SEEDING RATES: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET (1000 SF) OF SOIL. SEEDING RATES: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET (1000 SF) OF SOIL.

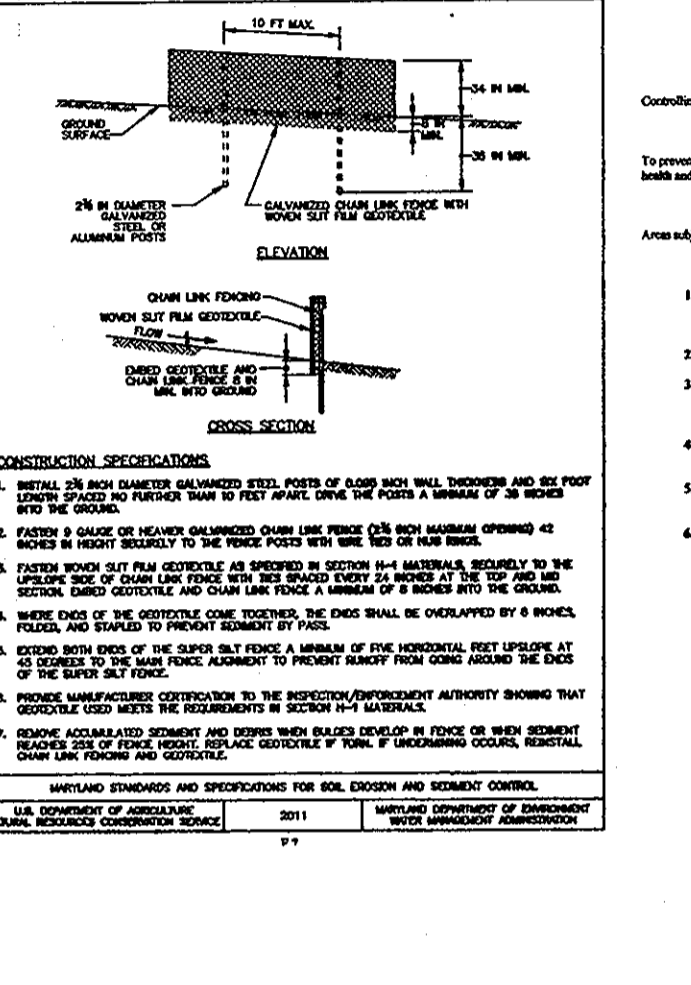
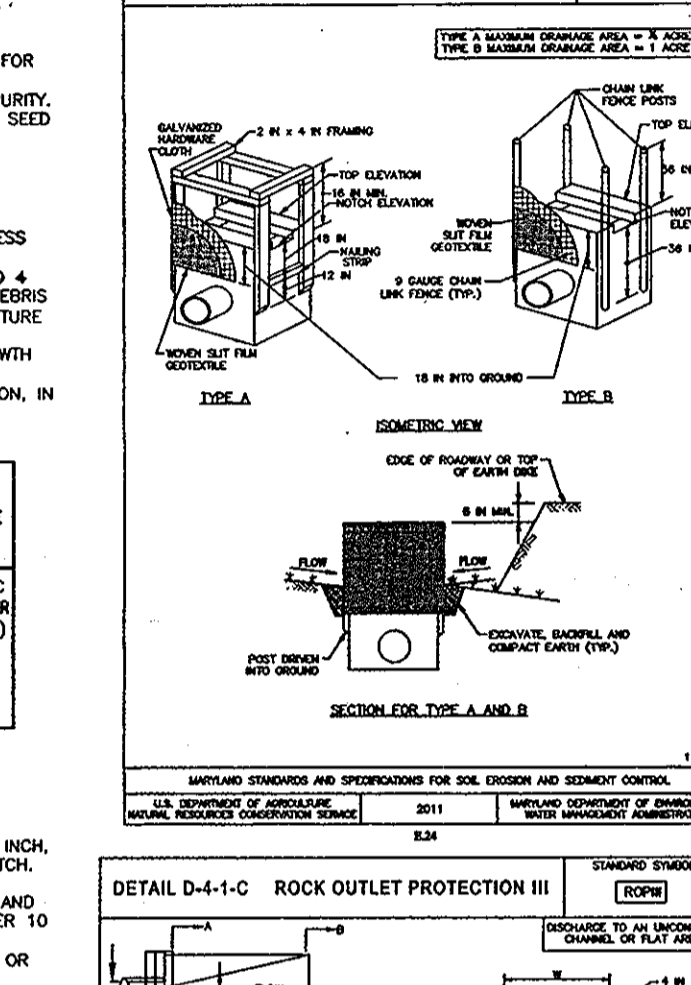
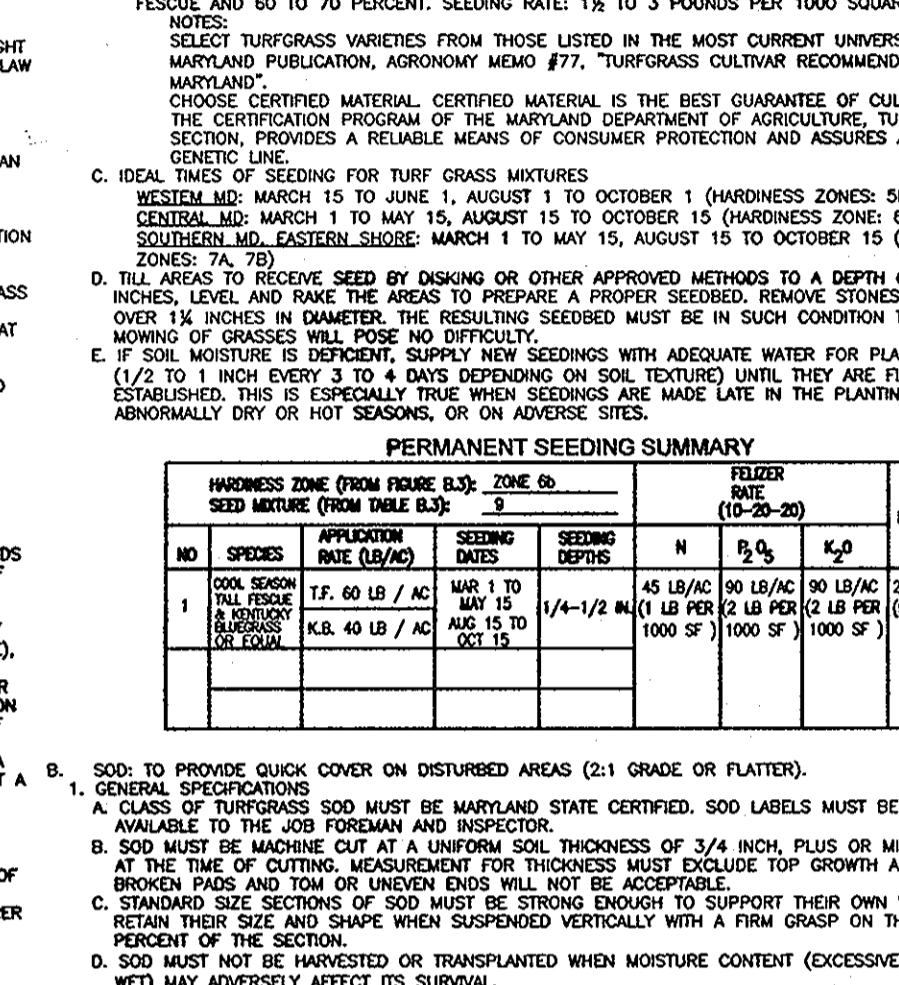


**B. TOPSOILING**

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 TO BE TOPSOILED SHALL BE TESTED FOR PHOSPHORUS AND POTASSIUM. IF NECESSARY, IT MUST NOT BE ROLLED OR GROOMED SOONER THAN 48 HOURS AFTER THE SOIL IS LOOSENED. CONDITIONAL SOILS 21 OR FLATTER ARE TO BE TRACKED WITH ROVERS RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
2. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
3. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR CHISEL PLOWING MEANS.
4. SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:  
 A. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT EXCEEDS THE GRANDED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE, AN EXCEPTION IF LONGER THAN 100 FEET.  
 B. SOILABLE SALTS LESS THAN 200 PPM PER MILLION (PPM).  
 C. SOIL PH BETWEEN 6.0 AND 7.5.
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10. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LIME AND READY TO USE FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LIME AND READY TO USE FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

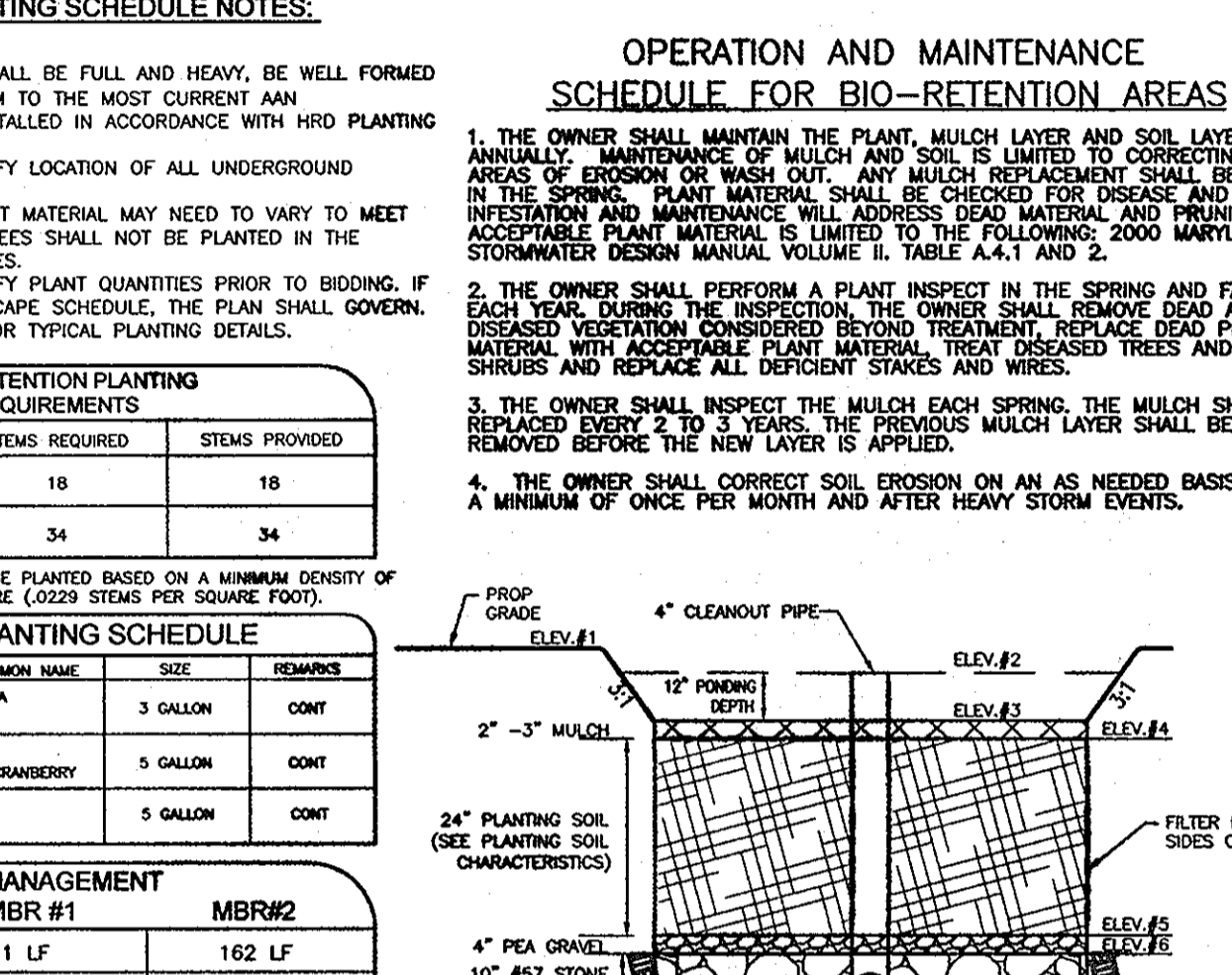
**MULCHING**

1. MULCH MATERIALS (IN ORDER OF PREFERENCE)  
 A. STRAW CONSISTING OF THRESHED WHEAT, LIME, 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 MUST BE MOIST, UNMOLDY, OR EXCESSIVELY DRY.  
 B. MULCH MUST BE APPLIED TO THE SURFACE OF ALL DISTURBED AREAS AS SPECIFIED ON THE APPROVED PLAN. MULCH MUST BE APPLIED TO THE SURFACE OF ALL DISTURBED AREAS AS SPECIFIED ON THE APPROVED PLAN. MULCH MUST BE APPLIED TO THE SURFACE OF ALL DISTURBED AREAS AS SPECIFIED ON THE APPROVED PLAN.
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**MATERIALS SPECIFICATIONS FOR BIO-RETENTION**

MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTING SOIL	SAND 35-60% SILT 30-40% CLAY 0-5%	N/A	PLANTING AREAS ARE SITE-SPECIFIC USDA SOIL TYPES LOAMY SAND, SANDY LOAM OR LOAM
MULCH	SHREDDED HARDWOOD	AGED 6 MONTHS, MINIMUM	
PEA GRAVEL, DRAINAGE AND CURB DRAIN	PEA GRAVEL ASTM-D-48 ORNAMENTAL STONE, WASHED COBBLES	PEA GRAVEL NO. 6 STONE: 2" TO 3"	
GEOTEXTILE	CLASS "C" APPROPRIATE OPENING SIZE (ASTM-D-4751), GRADE DENSE SYNTHETIC (ASTM-D-4632), FIBRE RESISTANCE (ASTM-D-4833)	N/A	FOR USE AS NECESSARY BENEATH UNDERDRAINS ONLY
UNDERDRAIN GRAVEL	ASTM-D-443	0.375" TO 0.75"	
UNDERDRAIN PIPING	F 75A TYPE PS 28 OOR ASTH-D-278	4" TO 6" RIGID SCHEDULE 40 PVC OR 303SS	3/4" PER 6" O.D., 4 HOLES PER ROW; MIN. OF 3' OF COVER OVER PIPES; NOT NECESSARY UNDERNEATH PIPES
POURED IN PLACE CONCRETE (IF REQUIRED)	MSHA MIX NO. 3; (c=3000) PS# 8 28 DAYS, NORMAL WEIGHT, AIR-ENTRAINED, REINFORCING TO MEET ASTM-615-60	N/A	ON-SITE TESTING OF POURED-IN-PLACE CONCRETE REQUIRED: 28 DAY STRENGTH AND SLUMP TEST. ALL CONCRETE STRUCTURE (CAST-IN-PLACE OR PRE-CAST) NOT BEING 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 TESTING TO EXCEED 50% OF DESIGN; VERTICAL LOADING (H=10 OR H=20); ALLOWABLE HORIZONTAL LOADING (BASED ON SOIL PRESSURES); AND ANALYSIS OF TENSILE CRACKING
SAND (1" DEEP)	ASTM-D-6 OR ASTM-C-33	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DABASE AND ORGANIC FIBRO ARE NOT ACCEPTABLE. NO CALCIUM CHLORIDE OR CALCIUM SOIL STABILIZERS ARE ACCEPTABLE. NO TRUCK DUST CAN BE USED FOR SAND

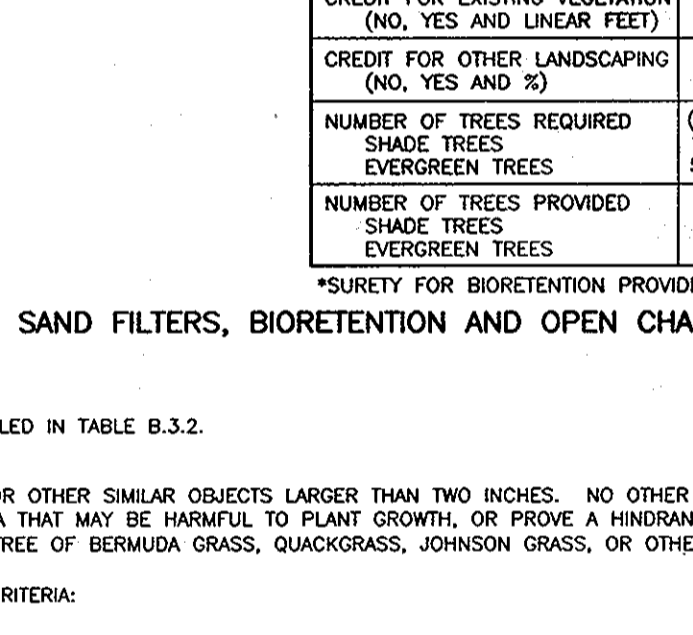
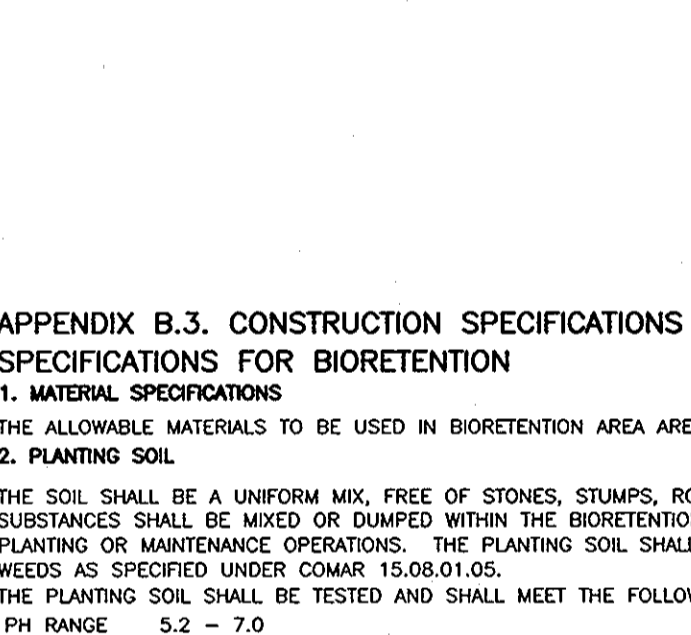
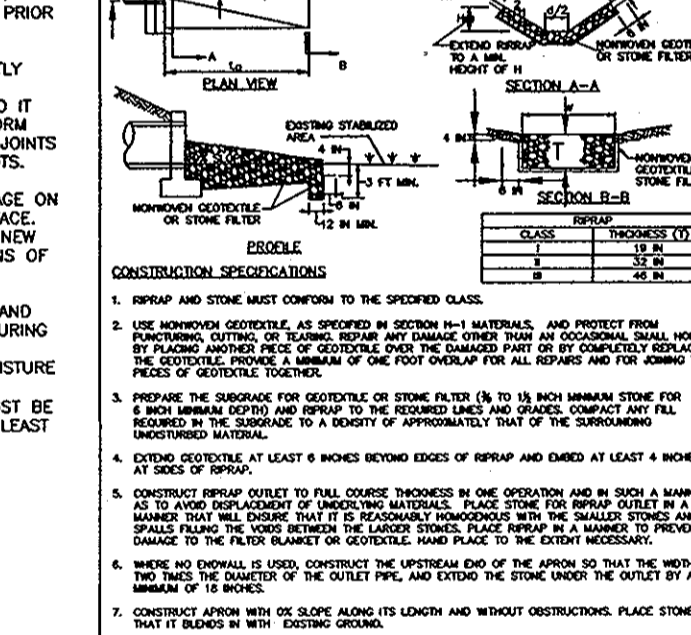
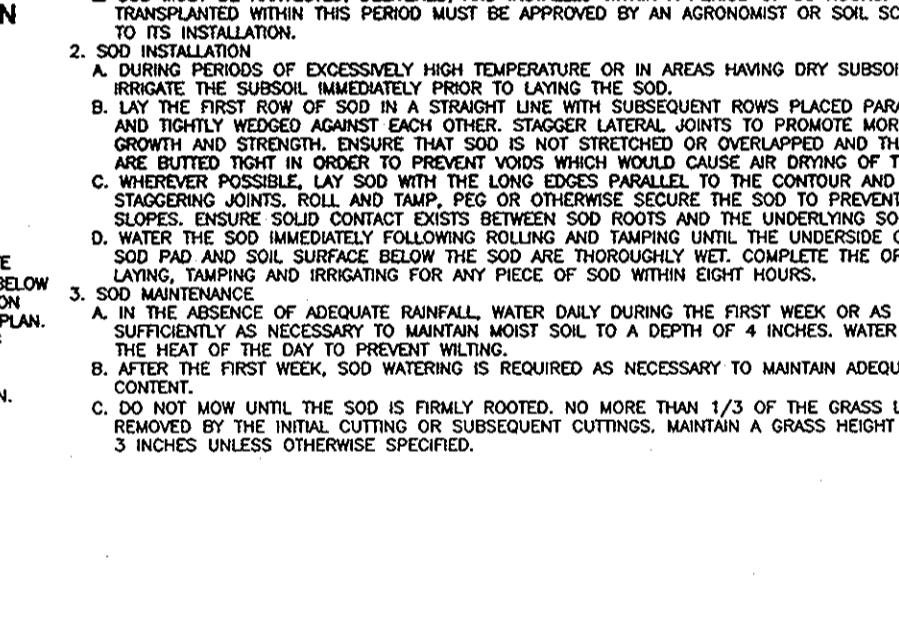


**TEMPORARY SEEDING SUMMARY**

NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER (20-20-20)		LIME RATE
					N	P <sub>2</sub> O <sub>5</sub>	
1	SOO	40 LB / AC	MAY 15 TO OCT 15	1/2 IN.	438 LB/AC	2 TONS/AC	2 TONS/AC
2	WORM SEED	30 LB / AC	MAY 16 TO JUL 31	1/2 IN.	110 LB PER 1000 SF	1000 SF	1000 SF

**TEMPORARY SEEDING SUMMARY**

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**RAIN GARDEN ELEVATIONS**

RAIN GARDEN	1	2	3	4	5	6	7	4" INV.	6" INV.
#1	376.5	376.0	375.0	374.75	372.75	372.42	371.59	371.92	371.10
#2	364.0	363.8	362.8	362.55	360.55	360.22	359.39	359.72	359.00

**SWM CHART**

SITE	ESDV REQUIRED	MICRO-BIORETENTION VOLUME PROVIDED	TOTAL PROVIDED
2,241 CF	MBR-1 = 788 CF	MBR-2 = 1,488 CF	2,276 CF

\* 2,989 x 75% = 2,241 CF

**SEQUENCE OF CONSTRUCTION**

1. OBTAIN GRADING PERMIT. NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (313-1880) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
2. BEFORE STARTING ANY WORK, CONSTRUCTION STABILIZED.
3. CONSTRUCTION ENTRANCE.
4. INSTALL PERIMETER SUPER SILT FENCE.
5. WITH PERMISSION FROM SEDIMENT CONTROL INSPECTOR BEGIN MASS GRADING OF SITE.
6. GRADE ROAD TO SUB-BASE AND APPLY DUST CONTROL SPECIFICATIONS.
7. WITH ROAD GRADED-BASE, BEGIN CURB AND CUTTER CONSTRUCTION AND ROAD PAVING, INSTALL SIDEWALKS.
8. WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR, AND FINAL ROAD PAVING COMPLETE, STABILIZE ANY REMAINING DISTURBED AREAS, AND FLUSH STORM DRAIN SYSTEM.
9. CONSTRUCT MICRO-BIORETENTION FACILITIES AND STABILIZE IMMEDIATELY.
10. WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR AND WITH SITE STABILIZED REMOVE REMAINING SEDIMENT CONTROL DEVICES.
11. INSTALL PERIMETER LANDSCAPING AS WELL AS MICRO-BIORETENTION PLANTINGS.

**NOTES:**

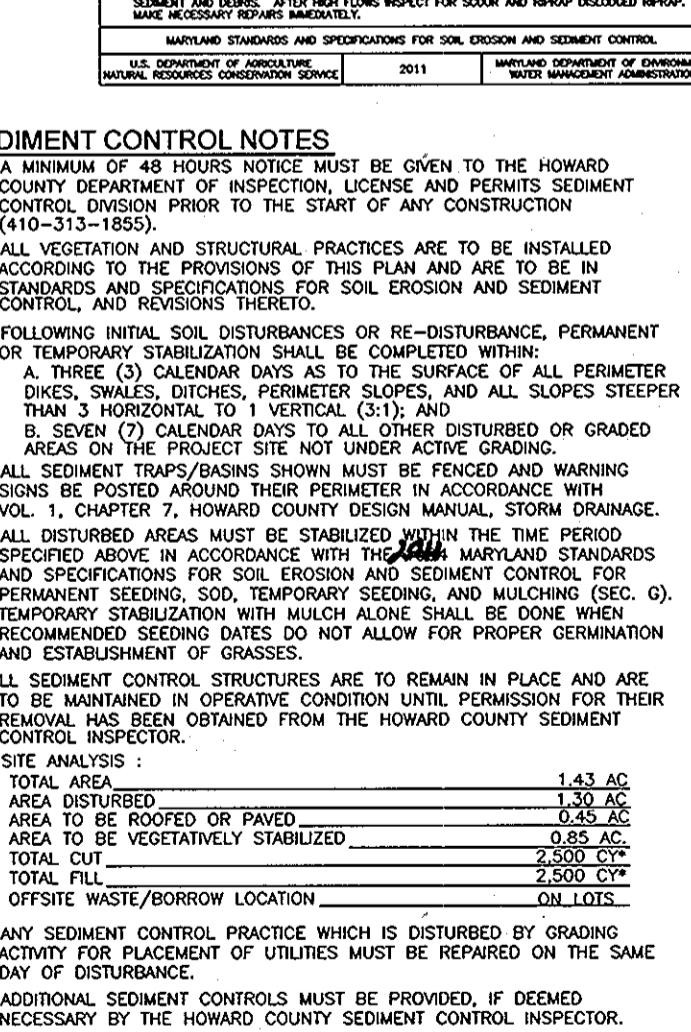
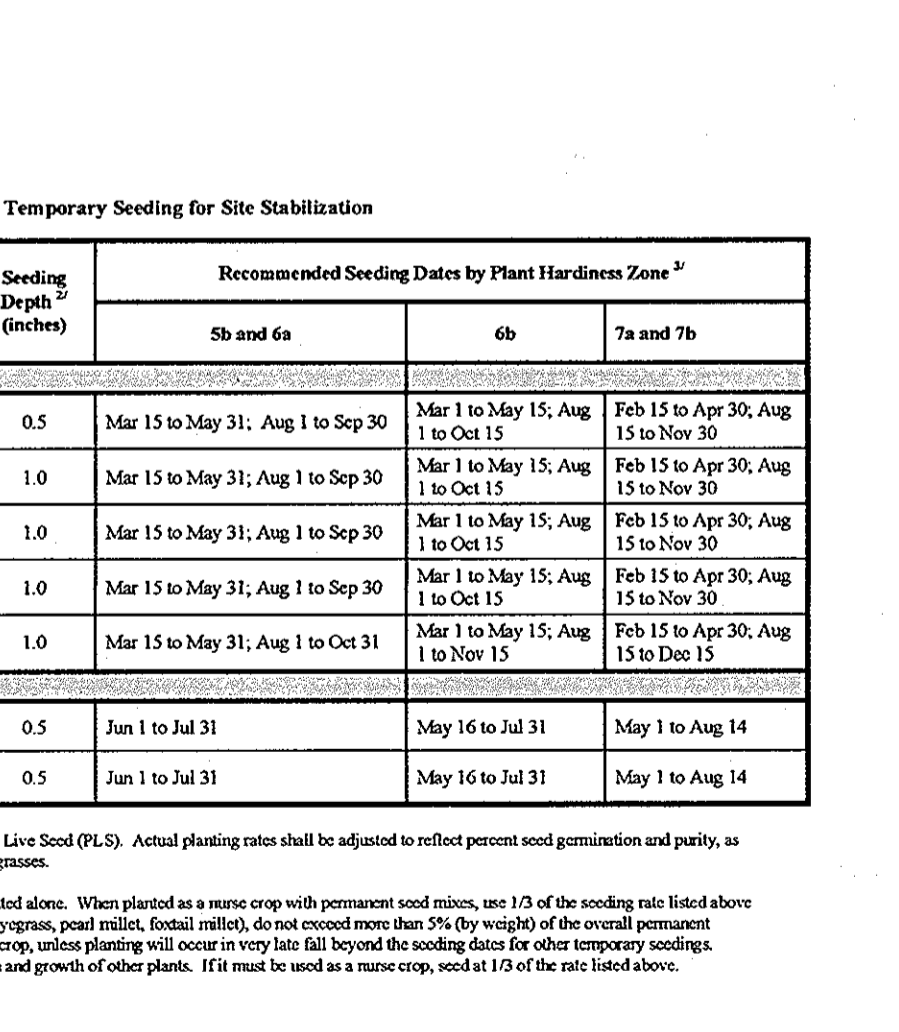
1. DURING GRADING AND AFTER EACH RAINFALL, CONTRACTOR WILL INSPECT AND PROVIDE NECESSARY MAINTENANCE TO THE SEDIMENT CONTROL MEASURES ON THIS PLAN.
2. FOLLOWING INITIAL SOIL DISTURBANCES OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:  
 A. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND  
 B. SEVEN (7) CALENDAR DAYS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
3. IT WILL BE THE DECISION OF THE SITE SEDIMENT CONTROL INSPECTOR WHETHER TO LEAVE OR REMOVE THE EXISTING CURB INLET PROTECTIONS LEFT OVER FROM THE ROAD CONTRACT F-09-021. IF THE C.I.P. ON THE ROAD HAS ALREADY BEEN REMOVED, THE INSPECTOR HAS THE DISCRETION TO HAVE IT RE-INSTALLED.

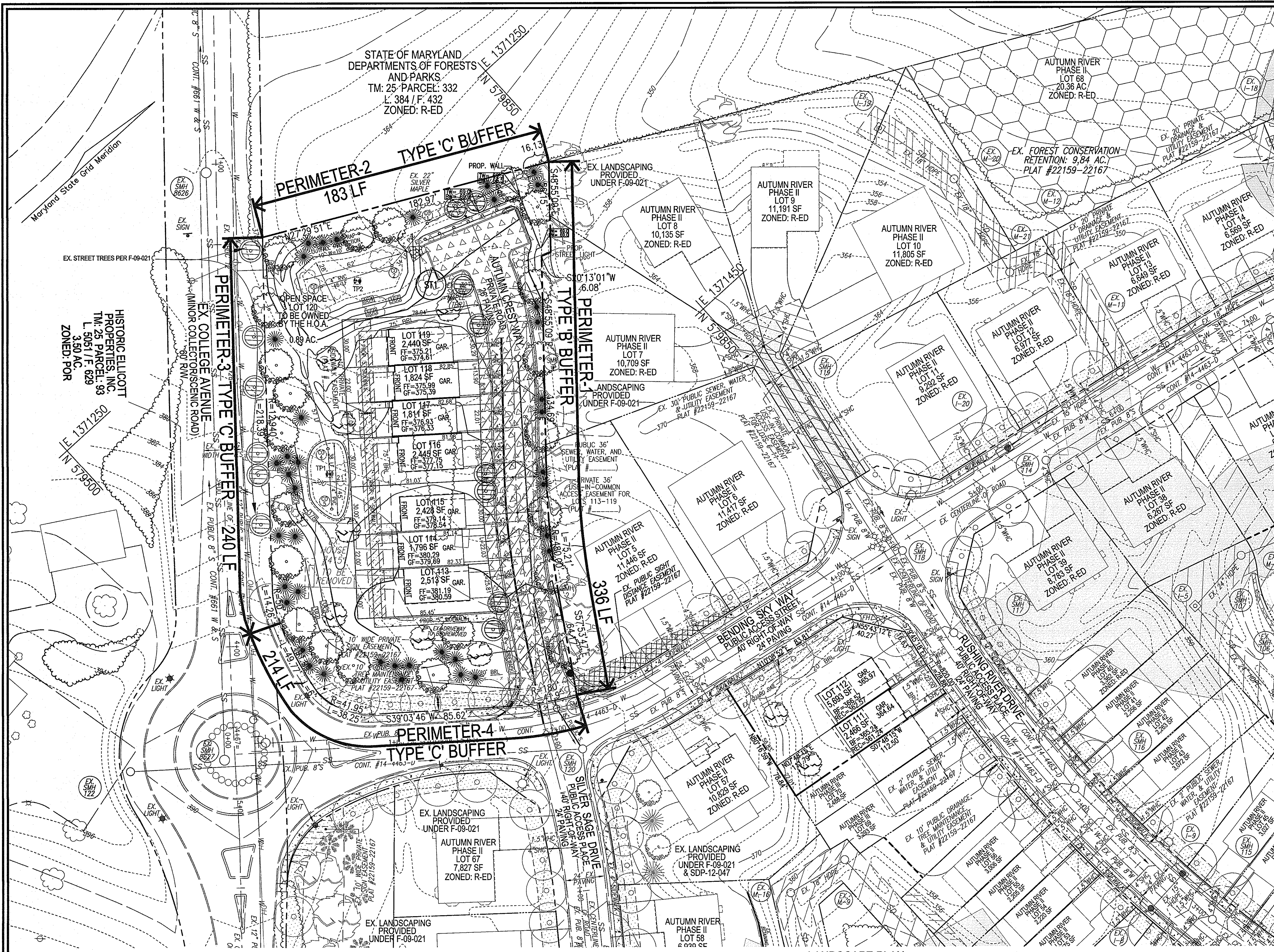
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**LEGEND:**

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING TREETRUE (FIELD LOCATED)
- EXISTING TREES (FIELD LOCATED)
- EXISTING FENCE
- CENTERLINE OF EXISTING STREAM
- PROPOSED SIDEWALK
- PROPOSED TREETRUE
- PROPOSED CURB
- PROPOSED STREET LIGHT
- EX. FOREST CONSERVATION EASEMENT (PLAT #14514)
- EX. FOREST CONSERVATION EASEMENT (PLAT #22159-22167)
- EX. PRIVATE 24' USE-IN-COMMON ACCESS EASEMENT FOR LOTS 6-11 (PLAT #22159-22167)
- EX. PUBLIC SEWER, WATER, & UTILITY EASEMENT (PLAT #22159-22167)
- EX. PRIVATE DRAINAGE & UTILITY EASEMENT (PLAT #22159-22167)
- EX. PUBLIC DRAINAGE, TREE MAINTENANCE, & UTILITY EASEMENT (PLAT #22159-22167)
- EX. PUBLIC DRAINAGE & UTILITY EASEMENT (PLAT #22159-22167)
- EX. PRIVATE SIGHT DISTANCE EASEMENT (PLAT #22159-22167)
- EX. PRIVATE SIGN EASEMENT (PLAT #22159-22167)
- PUBLIC 36' SEWER, WATER AND UTILITY EASEMENT
- PRIVATE 36' USE-IN-COMMON ACCESS EASEMENT FOR LOTS 113-119
- 10' PRIVATE SIDEWALK EASEMENT
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SHRUBS
- PROPOSED SHADE TREES
- PROPOSED EVERGREEN TREES
- PROPOSED LANDSCAPE BUFFER
- FOREST CONSERVATION SIGNS

**OWNERS**  
HISTORIC ELLICOTT PROPERTIES, INC.  
4100 COLLEGE AVE  
ELLICOTT CITY, MD 21042-7819  
21043-5506  
(410) 465-3500

**DEVELOPER**  
AUTUMN DEVELOPMENT CORPORATION  
C/O LAND DESIGN & DEVELOPMENT, INC.  
5300 DORSEY HALL DR. STE 102  
ELLICOTT CITY, MARYLAND 21042-7819  
ATTN: DONALD R. REUWER  
443-367-0422

NO.	REVISION	DATE

**SUPPLEMENTAL PLAN  
AUTUMN RIVER - PHASE IV  
LANDSCAPE PLAN**

LOTS 111-119 AND OPEN SPACE LOT 120  
A SUBDIVISION OF PARCEL 159 AND A  
RE-SUBDIVISION OF AUTUMN RIVER - PHASE II  
NON-BUILDABLE BULK PARCELS 'C' & 'F'

ZONING: R-ED  
PARCELS: 159, 172, & 279  
HOWARD COUNTY, MARYLAND

2ND ELECTION DISTRICT  
TAX MAP: 25 GRID: 14 & 21

**ROBERT H. VOGEL  
ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET  
ELLICOTT CITY, MD 21043

TEL: 410.461.7666  
FAX: 410.461.8961

**PROFESSIONAL CERTIFICATE**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21439, EXPIRATION DATE: 12-16-2014.

DESIGN BY: JBS  
DRAWN BY: JMR  
CHECKED BY: JBS  
DATE: APRIL 2013  
SCALE: AS SHOWN  
W.O. NO.: 04-145

6 SHEET OF 7

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

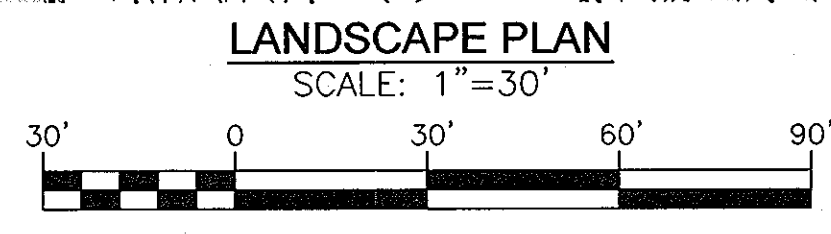
*Robert H. Vogel* 6/03/13  
CHIEF, DIVISION OF LAND DEVELOPMENT/PL DATE

*John Thomas* 5/10/13  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**DEVELOPER'S/BUILDER'S CERTIFICATE**

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

SIGNATURE OF DEVELOPER: *John Thomas* DATE: 4/11/13



**GENERAL NOTES:**

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$17,700.00 FOR THE REQUIRED 39 SHADE TREES AND 40 EVERGREEN TREES SHALL BE POSTED WITH THE DEVELOPERS AGREEMENT FOR THIS PLAN.
- THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, PLANT MATERIALS, BERMS, FENCES AND WALLS. PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- AT THE TIME OF INSTALLATION, ALL SHRUBS AND OTHER PLANTINGS LISTED HEREBY AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY. UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.
- THERE ARE NO FLOODPLAIN, WETLANDS, STREAMS, OR STEEP SLOPES WITHIN PARCEL 159.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE WETLANDS, WETLANDS BUFFER, STREAM BANK BUFFER OR FOREST CONSERVATION EASEMENTS.
- THE SUBJECT PROPERTY IS ZONED "R-ED" IN ACCORDANCE WITH THE 2/2/04 COMPREHENSIVE ZONING PLAN AND THE COMP. LITE ZONING REGULATIONS EFFECTIVE ON 7/28/06, AND IS SUBJECT TO THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE 10/2/03 PER COUNCIL BILL 75-2003.
- THE PROJECT BOUNDARY IS BASED ON A BOUNDARY SURVEY PREPARED BY FISHER, COLLINS, & CARTER, INC., DATED FEBRUARY 14, 2000, VERIFIED AS CORRECT BY ROBERT H. VOGEL ENGINEERING, INC. IN MARCH 2010.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM AN AERIAL TOPOGRAPHIC SURVEY WITH 2-FOOT CONTOUR INTERVALS PREPARED BY WINGS AERIAL MAPPING COMPANY, INC., DATED MARCH 1995.
- THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO GRAVE SITES, OR CEMETERIES LOCATED ON THE SUBJECT PROPERTY.
- THE REMOVAL OF TREES 30" OR GREAT DBH IS PROHIBITED WITH OUT COUNTY APPROVAL.
- THIS PLAN IS SUBJECT TO A WAIVER TO SECTION 16.1205(c)(7) OF THE SUBDIVISION REGULATIONS FOR THE REMOVAL OF THE 39" SILVER MAPLE SPECIMEN TREE, APPROVED SEPTEMBER 14, 2010.

**LANDSCAPE NOTES**

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

**LANDSCAPE SCHEDULE NOTE:**

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

**B G & E NOTES:**

- THE LANDSCAPING ON WIREZONE (40' FROM BGE POLES) IS IN ACCORDANCE WITH BGE LIST OF TREES AND PLANTS.
- BGE RESERVES THE RIGHT TO TRIM, TOP OR CUT DOWN ANY TREE IN PROXIMITY TO THE LINE THAT IN THE OPINION OF BGE SHALL BE DEEMED A HAZARD TO THE SAFE AND RELIABLE DELIVERY OF ELECTRICITY.
- THE DEPARTMENT OF PLANNING AND ZONING MAY AUTHORIZE THE TRIMMING OR REMOVAL OF TREES OR VEGETATION IMMEDIATELY ADJACENT TO THE BGE R/W OR EASEMENT. IF BGE DETERMINES THE TREES ARE COMPROMISING THE SAFETY OF A TRANSMISSION LINE LOCATED WITHIN THEIR UTILITY R/W OR EASEMENT, IF BGE INTENDS TO TRIM OR REMOVE TREES WITHIN A FOREST CONSERVATION EASEMENT, A LETTER SPECIFYING THE LOCATION AND SCOPE OF WORK NEEDS TO BE SENT TO DPZ AT LEAST 30 DAYS IN ADVANCE OF UNDERTAKING THE WORK. DPZ UNDERSTANDS CONSTELLATION ENERGY'S NEED TO PROTECT ITS TRANSMISSION LINES AND WILL NOT UNREASONABLY WITHHOLD PERMISSION.

**Forest Conservation Worksheet 2.2**

<b>Net Tract Area</b>			
A. Total Tract Area		A =	1.09
B. Deductions		B =	0.00
C. Net Tract Area		C =	1.09
<b>Land Use Category</b>			
Input the number "1" under the appropriate land use zoning, and limit to only one entry			
ARA	MDR	IDA	HDR
0	0	1	0
D. Afforestation Threshold ( Net Tract Area x 15% )		D =	0.16
E. Conservation Threshold ( Net Tract Area x 20% )		E =	0.22
<b>Existing Forest Cover</b>			
F. Existing Forest Cover within the Net Tract Area		F =	0.05
G. Area of Forest Above Conservation Threshold		G =	0.00
<b>Break Even Point</b>			
H. Break Even Point		H =	0.05
I. Forest Clearing Permitted Without Mitigation		I =	0.00
<b>Proposed Forest Clearing</b>			
J. Total Area of Forest to be Cleared		J =	0.05
K. Total Area of Forest to be Retained		K =	0.00
<b>Planting Requirements</b>			
L. Reforestation for Clearing Above the Conservation Threshold		L =	0.00
M. Reforestation for Clearing Below the Conservation Threshold		M =	0.10
N. Credit for Retention above the Conservation Threshold		N =	0.00
P. Total Reforestation Required		P =	0.10
Q. Total Afforestation Required		Q =	0.11
R. Total Planting Requirement		R =	0.21

THE FOREST CONSERVATION OBLIGATION FOR THE REQUIRED 0.21 ACRES OF AFFORESTATION WILL BE MET BY A FOREST BANK; COLLEGE AVENUE PUMP STATION, AUTUMN RIVER BULK PARCEL 'B', SDP-10-081.

**SCHEDULE A: PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO PERIMETER PROPERTIES/ROADWAYS				TOTAL
	1	2	3	4	
PERIMETER/FRONTAGE DESIGNATION	B	C	C	C	
LANDSCAPE TYPE					
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	336'	183'	240'	214'	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	YES 1 EX. 22" MAPLE	NO	NO	
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	
NUMBER OF PLANTS REQUIRED (LF REMAINING)					
SHADE TREES	1:50 7	1:40 5	1:40 6	1:40 5	23
EVERGREEN TREES	1:40 8	1:20 9	1:20 12	1:20 11	40
SHRUBS	-	-	-	-	-
NUMBER OF PLANTS PROVIDED					
SHADE TREES	7	4*	6	5	22
EVERGREEN TREES	8	9	12	11	40
OTHER TREES (2:1 SUBSTITUTION)	-	-	-	-	-
SHRUBS (10:1 SUBSTITUTION)	-	-	-	-	-
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED					

\* CREDIT TAKEN FOR EXISTING 22" MAPLE TREE

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$17,700.00 FOR THE REQUIRED 39 SHADE TREES AND 40 EVERGREEN TREES SHALL BE POSTED WITH THE BUILDER'S GRADING PERMIT FOR THIS PLAN.

**STREET TREE CALCULATIONS**

STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED
AUTUMN CREST WAY (PRIVATE ROAD)	322/40	8	8

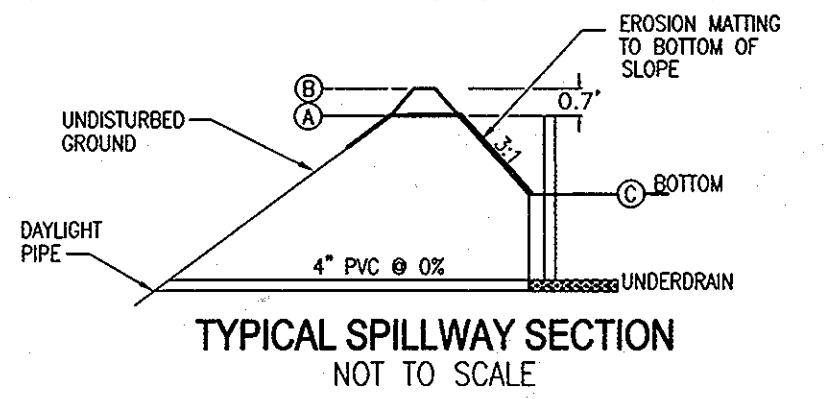
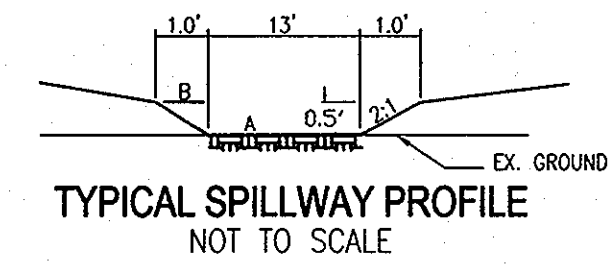
**SCHEDULE C RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING**

NUMBER OF DWELLING UNITS (SFA)	9
NUMBER OF TREES REQUIRED (1:1 DU SFA)	9
NUMBER OF TREES PROVIDED	9
SHADE TREES	9
OTHER TREES (2:1 SUBSTITUTION)	-

**LANDSCAPE SCHEDULE**

KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
22		ACER BUERGERIANUM TRIDENT MAPLE	2 1/2"-3" CAL.	B & B
9		CERCIS CANEDENSIS EASTERN REDBUD (INTERNAL LANDSCAPING)	2 1/2"-3" CAL.	B & B
40		ILLEX 'NELLIE R. STEVENS' NELLIE R. STEVENS HOLLY	6'-8" HT.	B & B
8		ACER GINNALA AMUR MAPLE (STREET TREE)	2 1/2"-3" CAL.	B & B

MER FACILITY	A	B	C
MBR #1	376.0	376.5	375.0
MBR #2	363.8	364.0	362.8



**OWNERS:** HISTORIC ELLICOTT PROPERTIES, INC. 4100 COLLEGE AVE. ELLICOTT CITY, MD 21042-7819 21043-5506 (410) 465-3500

**DEVELOPER:** AUTUMN DEVELOPMENT CORPORATION C/O LAND DESIGN & DEVELOPMENT, INC. 5300 DORSEY HALL DR. STE 102 ELLICOTT CITY, MARYLAND 21042-7819 ATTN: MR. DONALD R. REUWER 443-367-0422

NO.	REVISION	DATE

**SUPPLEMENTAL PLAN AUTUMN RIVER - PHASE IV LANDSCAPE NOTES AND DETAILS**

LOTS 111-119 AND OPEN SPACE LOT 120 A SUBDIVISION OF PARCEL 159 AND A RE-SUBDIVISION OF AUTUMN RIVER - PHASE II NON-BUILDABLE BULK PARCELS 'C' & 'F'

2ND ELECTION DISTRICT TAX MAP: 25 GRID: 14 & 21

ZONING: R-ED PARCELS: 159, 172, & 279 HOWARD COUNTY, MARYLAND

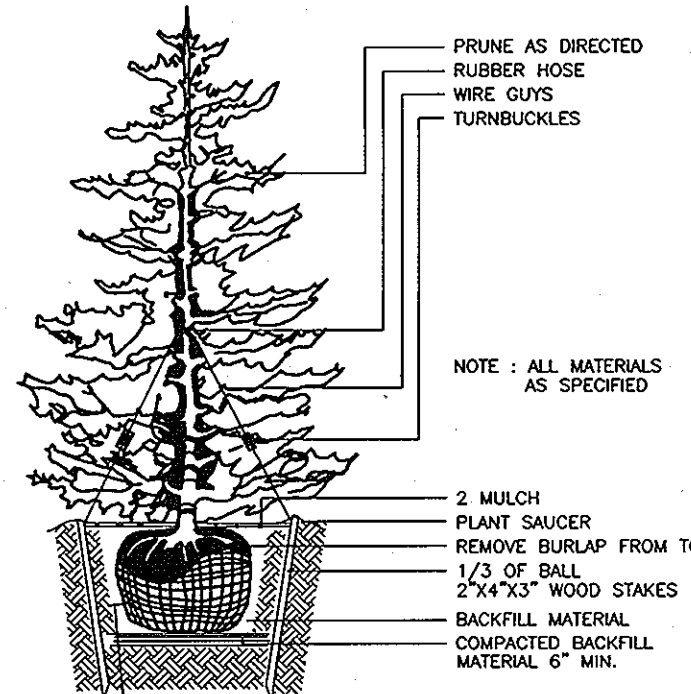
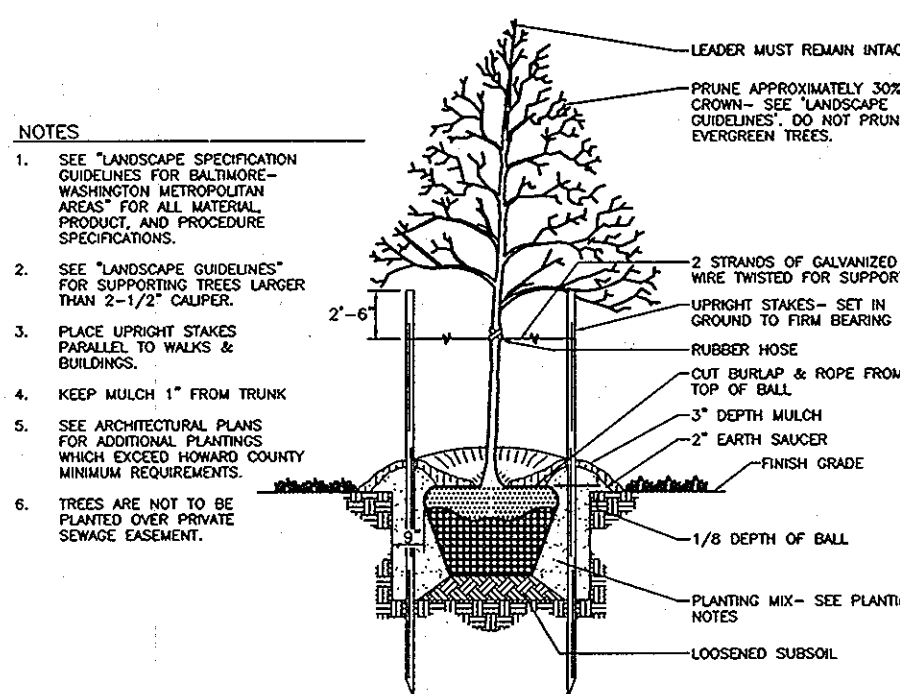
**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

DESIGN BY: JBS.  
DRAWN BY: JMR.  
CHECKED BY: JBS.  
DATE: APRIL 2013.  
SCALE: AS SHOWN.  
W.O. NO.: 04-145.

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. 21488 EXPIRATION DATE: 12-16-2014

7 SHEET OF 7



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development: 5/6/13

Chief, Development Engineering Division: 5/10/13

**DEVELOPER'S/BUILDER'S CERTIFICATE**

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

SIGNATURE OF DEVELOPER: [Signature] DATE: 4/11/13