

GENERAL NOTES

- 1. PROJECT BACKGROUND: SUBDIVISION NAME: FALCON PLACE... 2. THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS OTHERWISE NOTED... 3. THE EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD RUN TOPOGRAPHIC SURVEY WITH 2-FOOT CONTOUR INTERVALS... 4. THE PROJECT BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN BOUNDARY SURVEY COMPLETED BY ROBERT H. VOGEL ENGINEERING, INC., OCTOBER 2017... 5. TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO CEMETERIES OR GRAVE SITES LOCATED ON THE SUBJECT PROPERTY OR THE COUNTY'S CEMETERY SITE MAP... 6. THIS SITE IS NOT LOCATED IN A HISTORIC DISTRICT... 7. STORM WATER MANAGEMENT TO BE PROVIDED FOR THIS DEVELOPMENT BY ENVIRONMENTAL SITE DESIGN UTILIZING MICRO BIO-RETENTION FACILITIES (M-B) AND A BIO-SWALE (M-S)... 8. WATER PROVIDED FOR THIS PROJECT IS A PUBLIC EXTENSION OF CONTRACT NUMBER 1-W... 9. SEWER PROVIDED FOR THIS PROJECT IS A PUBLIC EXTENSION OF CONTRACT NUMBER 30-S... 10. THE SUBJECT PROPERTY IS ZONED R-SC IN ACCORDANCE WITH THE 10/08/2013 COMPREHENSIVE ZONING PLAN... 11. EXISTING UTILITIES ARE BASED ON ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER EXTENSION PLANS... 12. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL... 13. NO RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THE PROPERTY... 14. THERE IS NO 100-YR FLOODPLAIN LOCATED WITHIN THE LIMITS OF THIS SITE... 15. 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... 16. WETLANDS AND THEIR BUFFERS WILL NOT BE IMPACTED BY THE CONSTRUCTION OF THE SITE... 17. A NOISE STUDY IS NOT REQUIRED... 18. FOREST CONSERVATION OBLIGATIONS FOR THIS PROJECT HAVE BEEN PROVIDED FOR THIS PROJECT... 19. FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL A PORTION OF THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION MANUAL... 20. A SIMPLIFIED FOREST STAND DELINEATION AND ENVIRONMENTAL RESOURCES ASSESSMENT WAS PERFORMED BY JOHN CANOLES OF ECO-SCIENCE PROFESSIONALS, INC., DATED MARCH 31, 2016... 21. IN ACCORDANCE WITH SECTION 16.121(A)(2) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS... 22. DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES... 23. THE PRE-SUBMISSION COMMUNITY MEETING WAS HELD FOR THIS PROJECT ON SEPTEMBER 27, 2016 AT 6:00 PM AT THE NORTH LAUREL COMMUNITY CENTER... 24. OLD SCAGGSVILLE ROAD IS CLASSIFIED AS A PUBLIC MINOR COLLECTOR ROAD... 25. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, INC., DATED SEPTEMBER 07, 2016... 26. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT... 27. THE PROPOSED UNITS SHALL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM... 28. GEOTECHNICAL INVESTIGATIONS SHALL BE COMPLETED AS PART OF THE PRELIMINARY PLAN SUBMISSION PACKAGE... 29. THE ENVIRONMENTAL CONCEPT PLAN (ECP-17-015) WAS APPROVED ON FEBRUARY 08, 2017... 30. TRASH AND RECYCLING COLLECTION TO BE PUBLIC AND MUST BE GROUPED AT THE CURB AT THE END OF GRASSY ISLANDS... 31. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE... 32. PUBLIC STREET TREES ARE PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124(E)(1) OF THE SUBDIVISION REGULATIONS... 33. IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL - VOLUME II, CHAPTER 2.9.B AND THE HOWARD COUNTY ZONING REGULATIONS SECTION 13.0.2.2, OFF-STREET PARKING IS REQUIRED AT 2.0 SPACES PER UNIT... 34. STREET LIGHTING IS REQUIRED FOR THIS SITE IN ACCORDANCE WITH SECTION 16.135 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS... 35. IN ACCORDANCE WITH SECTION 11.0.0.6 OF THE 10/08/2013 COMPREHENSIVE ZONING REGULATIONS... 36. TRAFFIC CONTROL DEVICES: A. THE R-1 (STOP) SIGN AND STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETE... 37. ALL WATER CONNECTIONS SHALL BE 1.5" WITH 1" OUTSIDE METER SETTINGS... 38. IF ANY WELL OR SEPTIC SYSTEM COMPONENTS ARE DISCOVERED DURING DEMOLITION PHASE... 39. THIS PROJECT IS SUBJECT TO WP-17-067, ON FEBRUARY 28, 2017, THE PLANNING DIRECTOR APPROVED THE REQUEST FOR AN ALTERNATIVE COMPLIANCE OF SECTION 16.1200(A)(7) WHICH REQUIRES RETENTION AND PROTECTION OF STATE CHAMPION TREES... 40. THIS PROJECT IS SUBJECT TO AA CASE NO. 18-002: THE DIRECTOR OF THE DEPARTMENT OF PLANNING AND ZONING SKIPPED THE DECISION AND ORDER ON APRIL 30, 2018 GRANTING AN ADMINISTRATIVE ADJUSTMENT FROM 1. SECTION 110.0.0.4.c(1)(b) - REDUCE THE REQUIRED 50' OTHER USE SETBACK FROM 50 FEET TO 40 FEET... 41. THIS PROJECT IS SUBJECT TO A DESIGN MANUAL WAIVER, ON FEBRUARY 27, 2018, THE CHIEF OF THE DEVELOPMENT ENGINEERING DIVISION APPROVED THE REQUEST TO WAIVE THE REQUIREMENTS OF DESIGN MANUAL VOLUME II, APPENDIX "PUBLIC ROADWAY DESIGN CRITERIA" ALLOWING A REDUCTION TO THE MINIMUM CURVE RADII OF 210 FEET TO 70.00, 110.00 AND 153.96 FEET ALONG THE PRIVATE ROAD CLOVIS PLACE... 42. THIS PROJECT IS SUBJECT TO A DESIGN MANUAL WAIVER, ON MARCH 5, 2018, THE DEPUTY DIRECTOR OF THE DEPARTMENT OF PUBLIC WORKS DENIED THE REQUEST TO WAIVE THE REQUIREMENTS OF DESIGN MANUAL VOLUME II, - SECTION 4.3.B.8 TO ONLY PROVIDE FIRST FLOOR SEWER SERVICE AND FOR A REDUCTION IN THE PUBLIC EASEMENT STRUCTURE SETBACK.

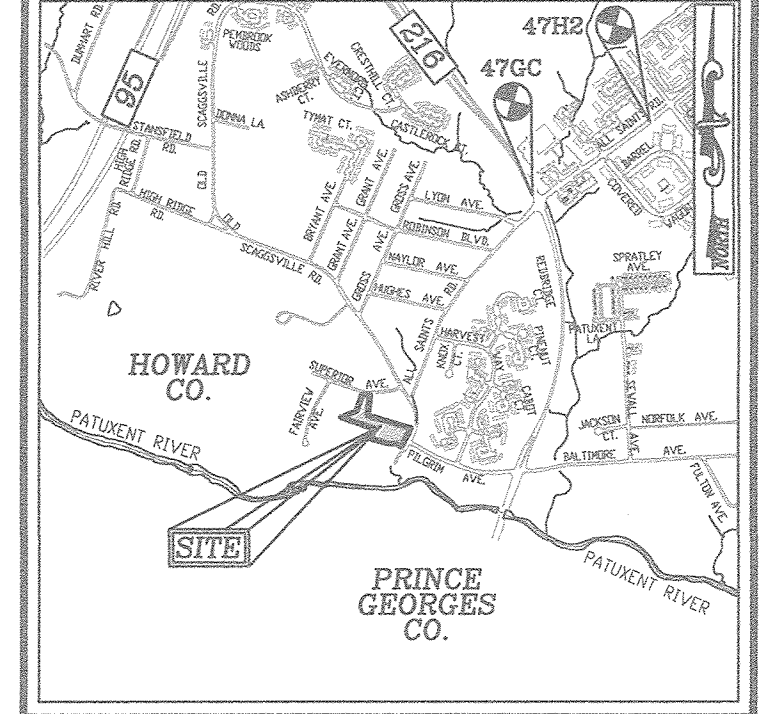
NOTES:

- 1. ALL WATER CONNECTIONS, NOTED AS 1.5" WHC, SHALL BE 1-1/2" WITH 1" OUTSIDE METER SETTINGS, UNLESS OTHERWISE NOTED. REFER TO HOWARD COUNTY DETAIL W-3.28 OUTSIDE METER SETTINGS.
- 2. ALL WATER CONNECTIONS, NOTED AS 1.5" TWHC, SHALL BE 1-1/2" WITH 1" OUTSIDE METER SETTINGS, UNLESS OTHERWISE NOTED. REFER TO HOWARD COUNTY DETAIL W-3.32 OUTSIDE METER SETTINGS.

PRELIMINARY PLAN FALCON PLACE LOTS 1-10 & OPEN SPACE LOTS 11-12 A SUBDIVISION OF TAX MAP 50 - PARCELS 100 & 428 PARCEL 100: L. 16697 / F. 114 PARCEL 428: L. 973 / F. 467

BENCHMARKS

HOWARD COUNTY BENCHMARK 47GC (CONC. MON.) N 528939.75 E 1354223.59 ELEV. 256.32 LOCATION: ISLE AT INTERSECTION OF RT. 216 AND ALL SAINTS RD.



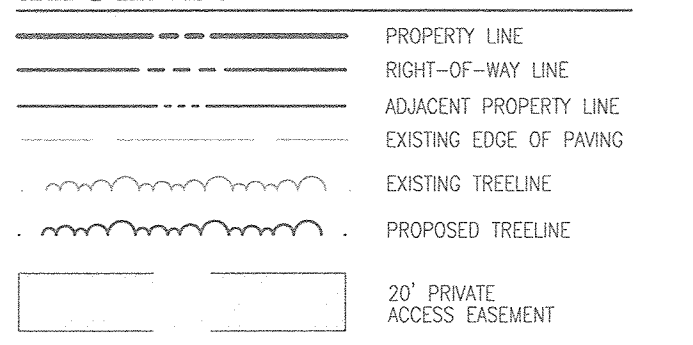
SITE ANALYSIS DATA CHART

Table with 2 columns: Description and Value. Includes items like Total Project Area (2.97 AC +/-), Area of Wetlands and Buffers (0.00 AC +/-), Area of Floodplain (0.00 AC +/-), etc.

PARKING TABULATION:

TOTAL NUMBER OF DWELLING UNITS PROPOSED: 10 SINGLE FAMILY ATTACHED (SFA) = 10 LOTS 1. OFF-STREET PARKING SPACES REQUIRED: 2 SPACES PER UNIT 10 x 2 = 20 SPACES REQUIRED 2. VISITOR PARKING REQUIRED: 0.5 SPACES PER UNIT 10 x 0.5 = 5 SPACES REQUIRED TOTAL PARKING SPACES REQUIRED: 25 TOTAL PARKING SPACES PROVIDED: 30

LEGEND:



RECREATION OPEN SPACE TABULATION:

IN ACCORDANCE WITH SECTION 16.121(A)(4) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS RECREATION OPEN SPACE IS NOT REQUIRED FOR PROJECTS WITH 10 DWELLING UNITS. TOTAL RECREATION OPEN SPACE REQUIRED FOR "FALCON PLACE" - SINGLE FAMILY ATTACHED (SFA) = 4000 SF/UNIT X 10 UNITS = 40,000 SF TOTAL RECREATION OPEN SPACE PROVIDED FOR "FALCON PLACE" THE OVERALL REQUIREMENT SHALL BE MET IN COMPLIANCE WITH THE JUNE 2012 POLICY REGARDING THE ALLOWANCE OF A MAXIMUM 50% CREDIT FOR RECREATIONAL OPEN SPACE IN LIEU OF LAND AREA. RECREATION OPEN SPACE AREAS: 1. P/O OPEN SPACE 11 = 2,214 SF AMENITIES: PRIVATE PARK: -2 BENCHES (200sqf ea), -PLAY EQUIPMENT (2,000sqf ea = 4,000sqf) TOTAL CREDIT = 4,000 + 400 = 4,400sf TOTAL = 2,214 SF LAND AREA TOTAL CREDIT = 4,400 SF OF AMENITY CREDITS TOTAL RECREATION OPEN SPACE PROVIDED = 6,614 SF

GENERAL NOTES (CONTD)

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OWNER: MAGNOLIA MANOR, LLC 3675 PARK AVE., SUITE 301 ELLICOTT CITY, MD 21043 (410) 480-0023 DEVELOPER: TRINITY HOMES MARY LAND, LLC 3675 PARK AVE., SUITE 301 ELLICOTT CITY, MD 21043 (410) 480-0023

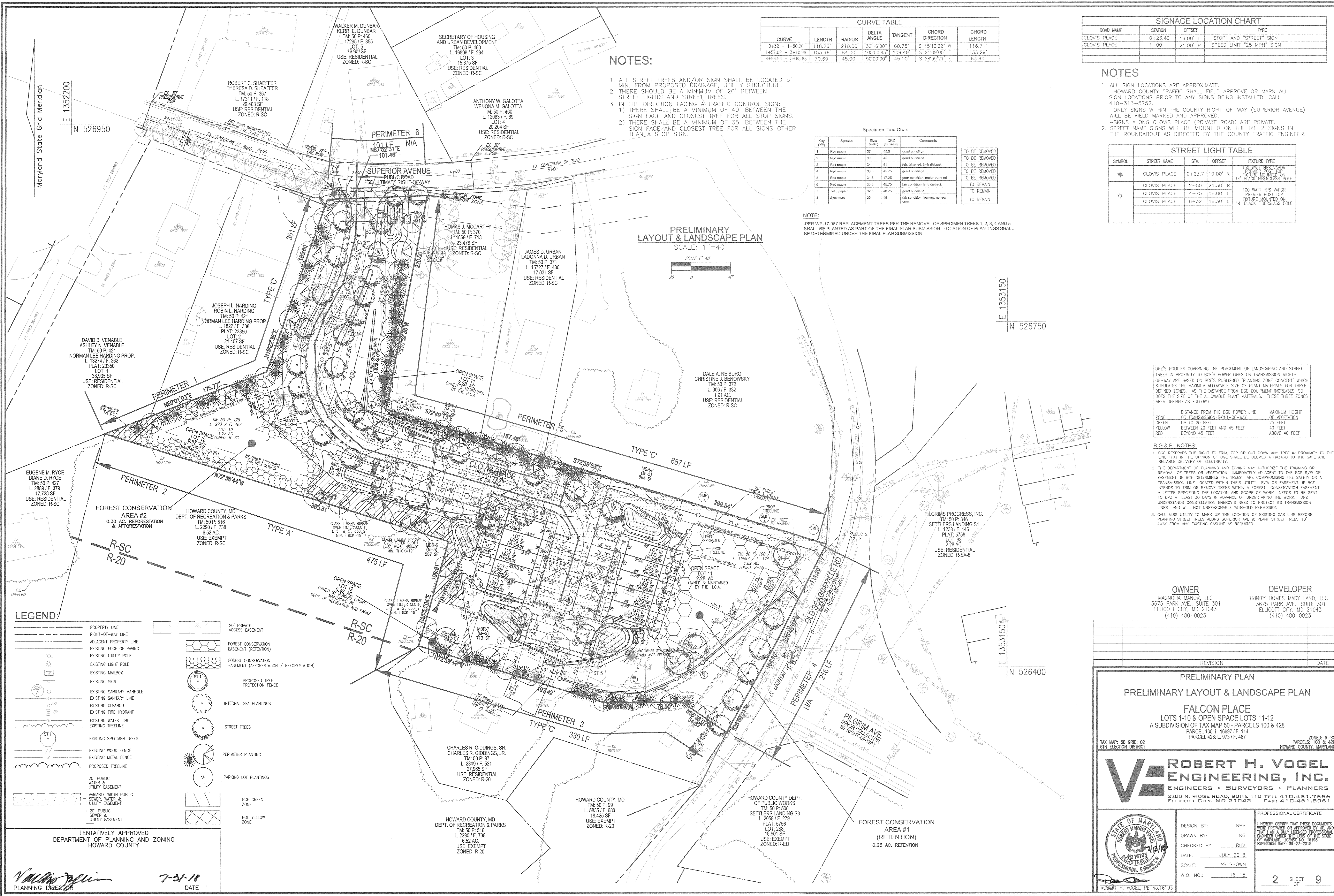
Table with 2 columns: REVISION and DATE. Includes revision 1: PRELIMINARY PLAN COVER SHEET.

PRELIMINARY PLAN COVER SHEET FALCON PLACE LOTS 1-10 & OPEN SPACE LOTS 11-12 A SUBDIVISION OF TAX MAP 50 - PARCELS 100 & 428 PARCEL 100: L. 16697 / F. 114 PARCEL 428: L. 973 / F. 467

ROBERT H. VOGEL ENGINEERING, INC. ENGINEERS • SURVEYORS • PLANNERS 3300 N. RIDGE ROAD, SUITE 110 TEL: 410-461-7666 ELLICOTT CITY, MD 21043 FAX: 410-461-1861

Professional Engineer seal for Robert H. Vogel, PE No. 16193, State of Maryland, License No. 16193, expires 09-27-2019. Includes design by, drawn by, checked by, date, scale, and sheet number (1 of 9).

TENTATIVELY APPROVED DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY. Signature of William Ali, Planning Director, dated 7-31-18.



CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA ANGLE	TANGENT	CHORD DIRECTION	CHORD LENGTH
0+32 - 1+50.26	118.26'	210.00'	32°16'00"	60.75'	S 15°13'22" W	116.71'
1+57.02 - 3+10.98	153.96'	84.00'	108°00'43"	109.49'	S 21°09'00" E	133.29'
4+94.94 - 5+65.63	70.69'	45.00'	90°00'00"	45.00'	S 28°39'21" E	63.64'

SIGNAGE LOCATION CHART

ROAD NAME	STATION	OFFSET	TYPE
CLOVIS PLACE	0+23.40	19.00' L	"STOP" AND "STREET" SIGN
CLOVIS PLACE	1+00	21.00' R	SPEED LIMIT "25 MPH" SIGN

- NOTES:**
- ALL STREET TREES AND/OR SIGN SHALL BE LOCATED 5' MIN. FROM PROPOSED DRAINAGE, UTILITY STRUCTURE.
 - THERE SHOULD BE A MINIMUM OF 20' BETWEEN STREET LIGHTS AND STREET TREES.
 - IN THE DIRECTION FACING A TRAFFIC CONTROL SIGN:
 - THERE SHALL BE A MINIMUM OF 40' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL STOP SIGNS.
 - THERE SHALL BE A MINIMUM OF 35' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL SIGNS OTHER THAN A STOP SIGN.

Specimen Tree Chart

Key (Key)	Species	Size (inches)	CRZ (feet)	Comments	TO BE REMOVED
1	Red maple	37	55.5	great condition	TO BE REMOVED
2	Red maple	30	45	great condition	TO BE REMOVED
3	Red maple	34	51	fair, limbed limb dieback	TO BE REMOVED
4	Red maple	30.5	45.75	great condition	TO BE REMOVED
5	Red maple	31.5	47.25	poor condition, major trunk rot	TO BE REMOVED
6	Red maple	30.5	45.75	fair condition, limb dieback	TO REMAIN
7	Trump poplar	32.5	48.75	great condition	TO REMAIN
8	Sycamore	30	45	fair condition, leaning, corner crown	TO REMAIN

STREET LIGHT TABLE

SYMBOL	STREET NAME	STA.	OFFSET	FIXTURE TYPE
★	CLOVIS PLACE	0+23.7	19.00' R	150 WATT HPS VAPOR PREMIER POST TOP FIXTURE MOUNTED ON 14' BLACK FIBERGLASS POLE
★	CLOVIS PLACE	2+50	21.30' R	150 WATT HPS VAPOR PREMIER POST TOP FIXTURE MOUNTED ON 14' BLACK FIBERGLASS POLE
★	CLOVIS PLACE	4+75	18.00' L	100 WATT HPS VAPOR PREMIER POST TOP FIXTURE MOUNTED ON 14' BLACK FIBERGLASS POLE
★	CLOVIS PLACE	6+32	18.30' L	100 WATT HPS VAPOR PREMIER POST TOP FIXTURE MOUNTED ON 14' BLACK FIBERGLASS POLE

NOTE:
 PER WP-17-067 REPLACEMENT TREES PER THE REMOVAL OF SPECIMEN TREES 1, 2, 3, 4 AND 5 SHALL BE PLANTED AS PART OF THE FINAL PLAN SUBMISSION. LOCATION OF PLANTINGS SHALL BE DETERMINED UNDER THE FINAL PLAN SUBMISSION.

PRELIMINARY LAYOUT & LANDSCAPE PLAN
 SCALE: 1" = 40'

BGE'S POLICES GOVERNING THE PLACEMENT OF LANDSCAPING AND STREET TREES IN PROXIMITY TO BGE'S POWER LINES OR TRANSMISSION RIGHT-OF-WAY ARE BASED ON BGE'S PUBLISHED "PLANTING ZONE CONCEPT" WHICH STIPULATES THE MAXIMUM ALLOWABLE SIZE OF PLANT MATERIALS FOR THREE DEFINED ZONES, AS THE DISTANCE FROM BGE EQUIPMENT INCREASES, SO DOES THE SIZE OF THE ALLOWABLE PLANT MATERIALS. THESE THREE ZONES ARE DEFINED AS FOLLOWS:

ZONE	DISTANCE FROM THE BGE POWER LINE OR TRANSMISSION RIGHT-OF-WAY	MAXIMUM HEIGHT OF VEGETATION
GREEN	UP TO 20 FEET	25 FEET
YELLOW	BETWEEN 20 FEET AND 45 FEET	40 FEET
RED	BEYOND 45 FEET	ABOVE 40 FEET

- B.G. & E. NOTES:**
- 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 CONSTITUTIONAL ENERGY'S NEED TO PROTECT ITS TRANSMISSION LINES AND WILL NOT UNREASONABLY WITHHOLD PERMISSION.
 - CALL PLANT UTILITY TO MARK UP THE LOCATION OF EXISTING GAS LINE BEFORE PLANTING STREET TREES ALONG SUPERIOR AVE & PLANT STREET TREES 10' AWAY FROM ANY EXISTING GASLINE AS REQUIRED.

OWNER
 MAGNOLIA MANOR, LLC
 3675 PARK AVE., SUITE 301
 ELLICOTT CITY, MD 21043
 (410) 480-0023

DEVELOPER
 TRINITY HOMES MARYLAND, LLC
 3675 PARK AVE., SUITE 301
 ELLICOTT CITY, MD 21043
 (410) 480-0023

LEGEND:

	PROPERTY LINE		20' PRIVATE ACCESS EASEMENT
	RIGHT-OF-WAY LINE		FOREST CONSERVATION EASEMENT (RETENTION)
	ADJACENT PROPERTY LINE		FOREST CONSERVATION EASEMENT (AFFORESTATION / REFORESTATION)
	EXISTING EDGE OF PAVING		PROPOSED TREE PROTECTION FENCE
	EXISTING UTILITY POLE		INTERNAL SFA PLANTINGS
	EXISTING LIGHT POLE		STREET TREES
	EXISTING MAILBOX		PERIMETER PLANTING
	EXISTING SIGN		PARKING LOT PLANTINGS
	EXISTING SANITARY MANHOLE		BGE GREEN ZONE
	EXISTING SANITARY LINE		BGE YELLOW ZONE
	EXISTING CLEANOUT		
	EXISTING FIRE HYDRANT		
	EXISTING WATER LINE		
	EXISTING TREELINE		
	EXISTING SPECIMEN TREES		
	EXISTING WOOD FENCE		
	EXISTING METAL FENCE		
	PROPOSED TREELINE		
	20' PUBLIC WATER & UTILITY EASEMENT		
	VARIABLE WIDTH PUBLIC SEWER, WATER & UTILITY EASEMENT		
	20' PUBLIC SEWER & UTILITY EASEMENT		

TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY

William J. Bell
 PLANNING DIRECTOR

7-31-18
 DATE

REVISION _____ DATE _____

PRELIMINARY PLAN
PRELIMINARY LAYOUT & LANDSCAPE PLAN
FALCON PLACE
 LOTS 1-10 & OPEN SPACE LOTS 11-12
 A SUBDIVISION OF TAX MAP 50 - PARCELS 100 & 428
 PARCEL 100, L. 16897 / F. 114
 PARCEL 428, L. 973 / F. 467

TAX MAP: 50 GRID: 02
 8TH ELECTION DISTRICT

ZONED: R-SC
 PARCELS: 100 & 428
 HOWARD COUNTY, MARYLAND

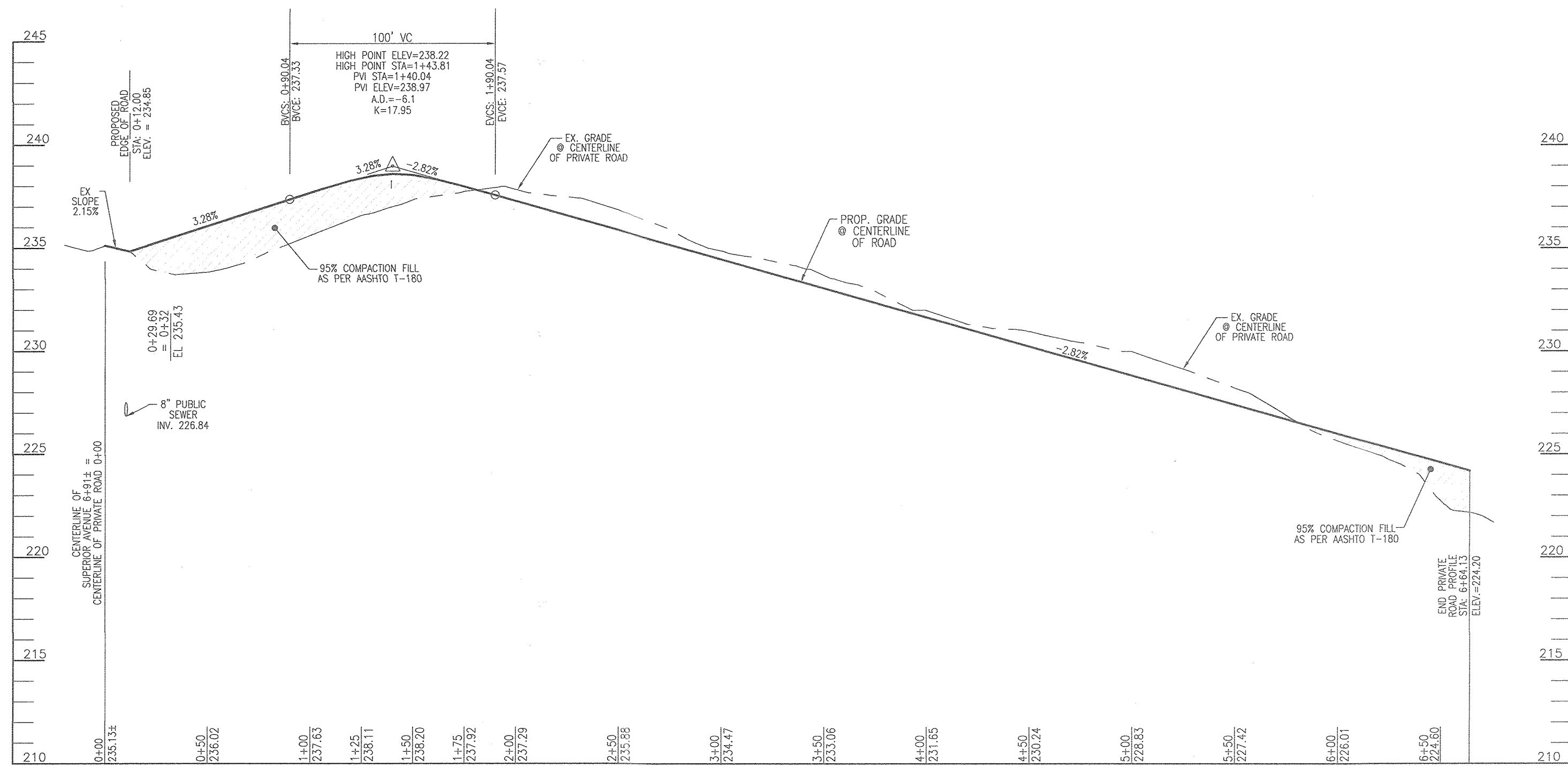
ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 3300 N. RIDGE ROAD, SUITE 110 TEL: 410-461-7666
 ELLICOTT CITY, MD 21043 FAX: 410-461-8961

PROFESSIONAL CERTIFICATE

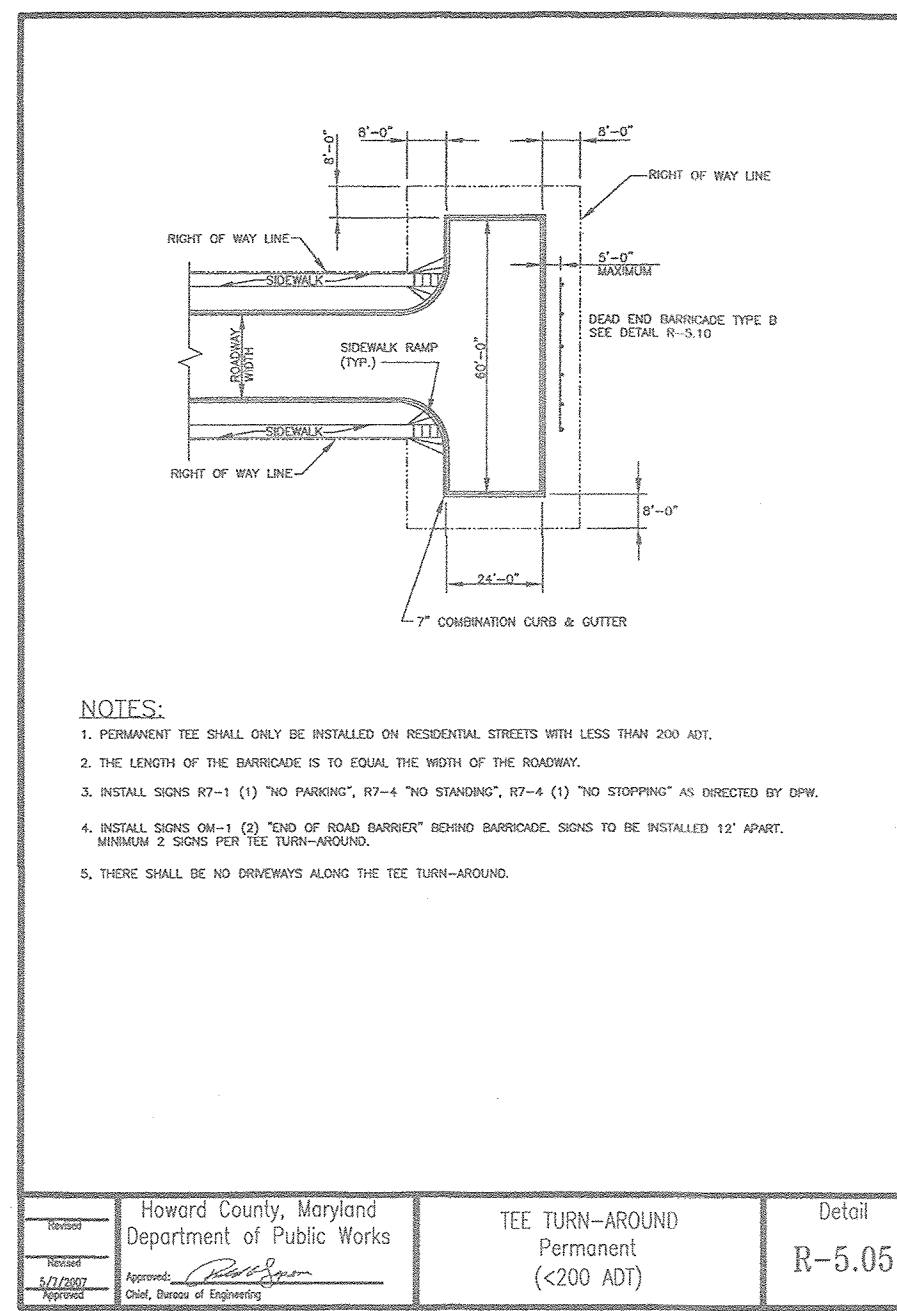
DESIGN BY: RHV
 DRAWN BY: KG
 CHECKED BY: RHV
 DATE: JULY 2018
 SCALE: AS SHOWN
 W.D. NO.: 16-15

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. 18183 EXPIRATION DATE 09-27-2018

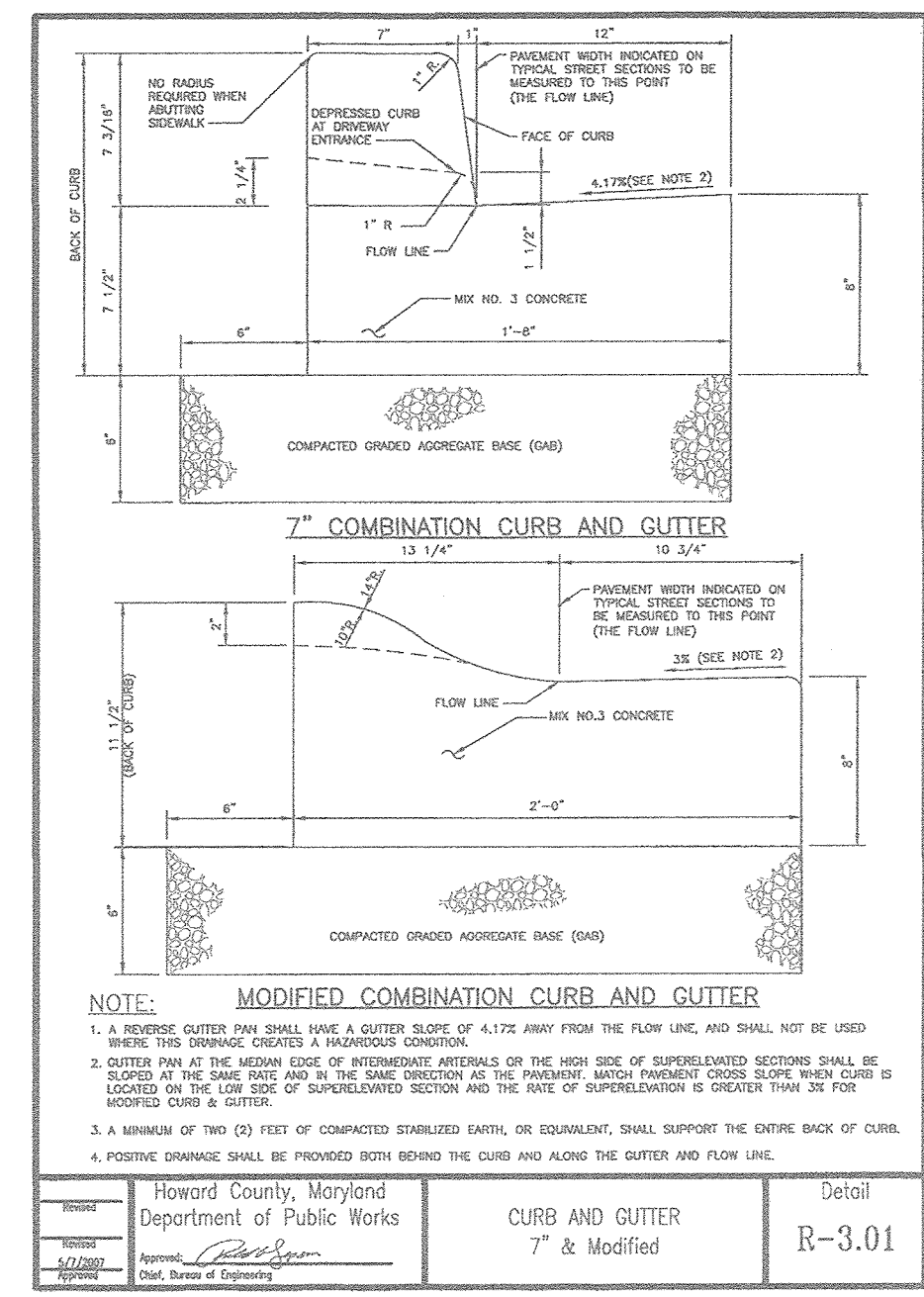
2 SHEET OF 9



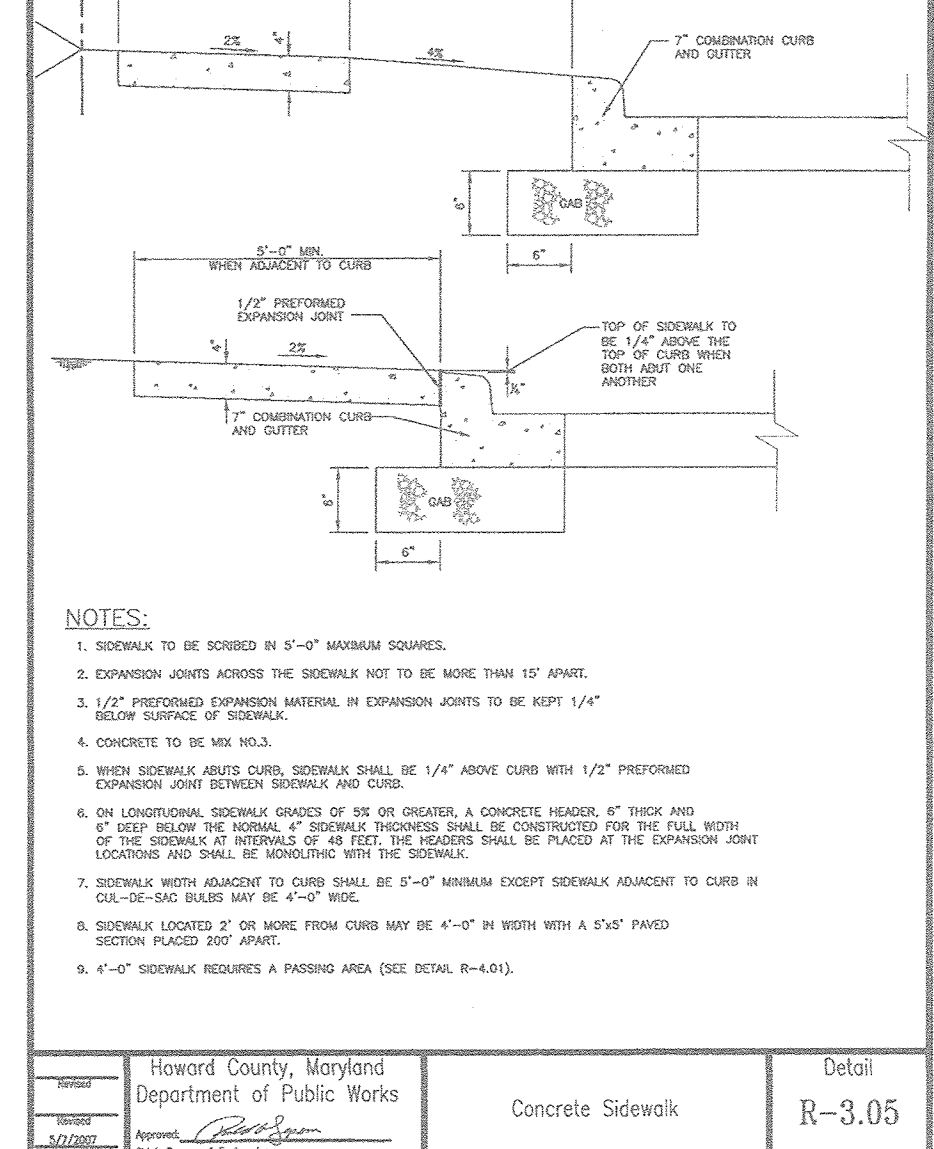
CLOVIS PLACE
PRIVATE ROAD (25 MPH)
26' PAVEMENT
SCALE : HORIZONTAL = 1"=50'
VERTICAL = 1"=5'



Howard County, Maryland
Department of Public Works
TEE TURN-AROUND
Permanent
(<200 ADT)
R-5.05
Detail

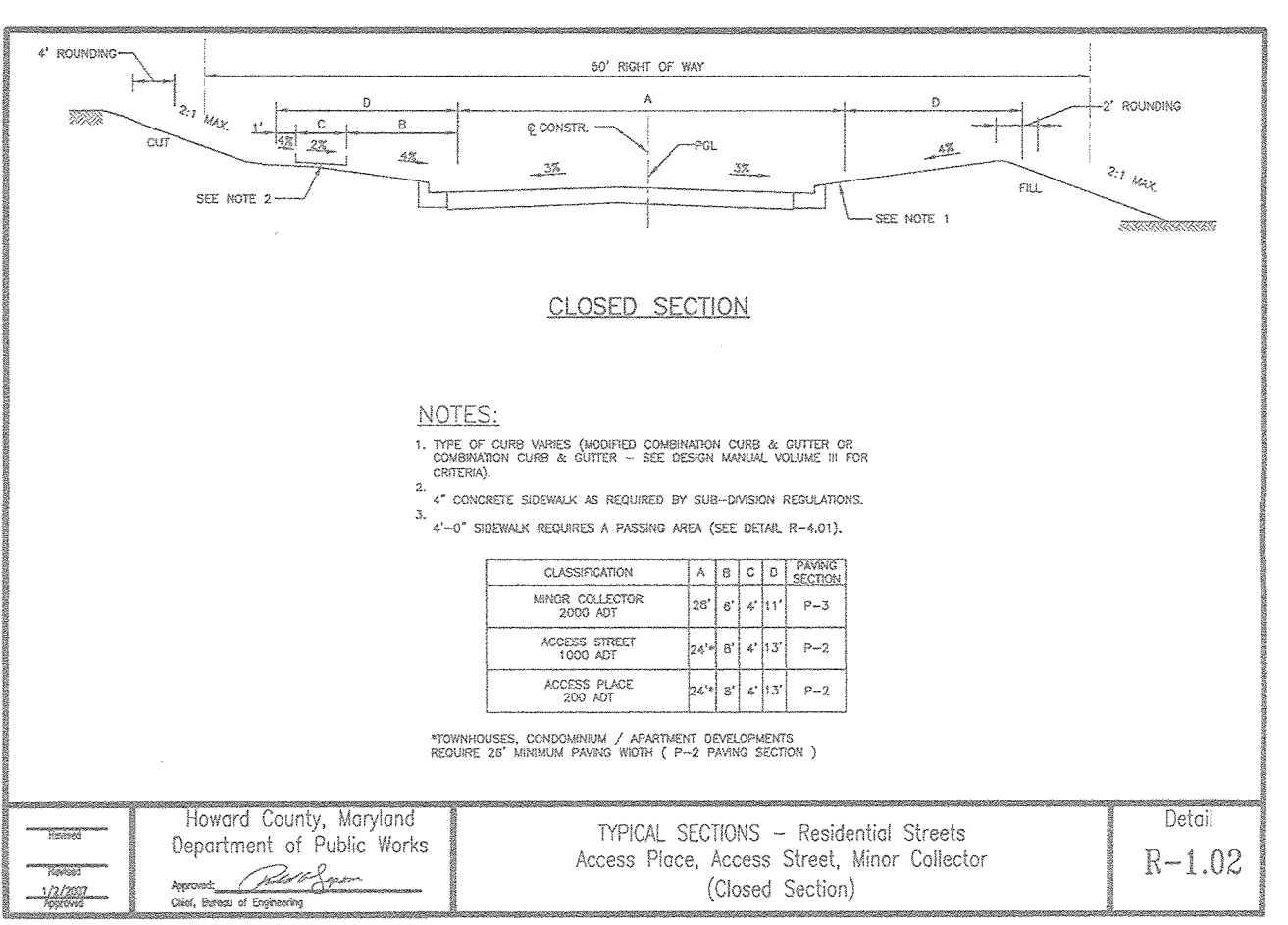


Howard County, Maryland
Department of Public Works
CURB AND GUTTER
7' & Modified
R-3.01
Detail

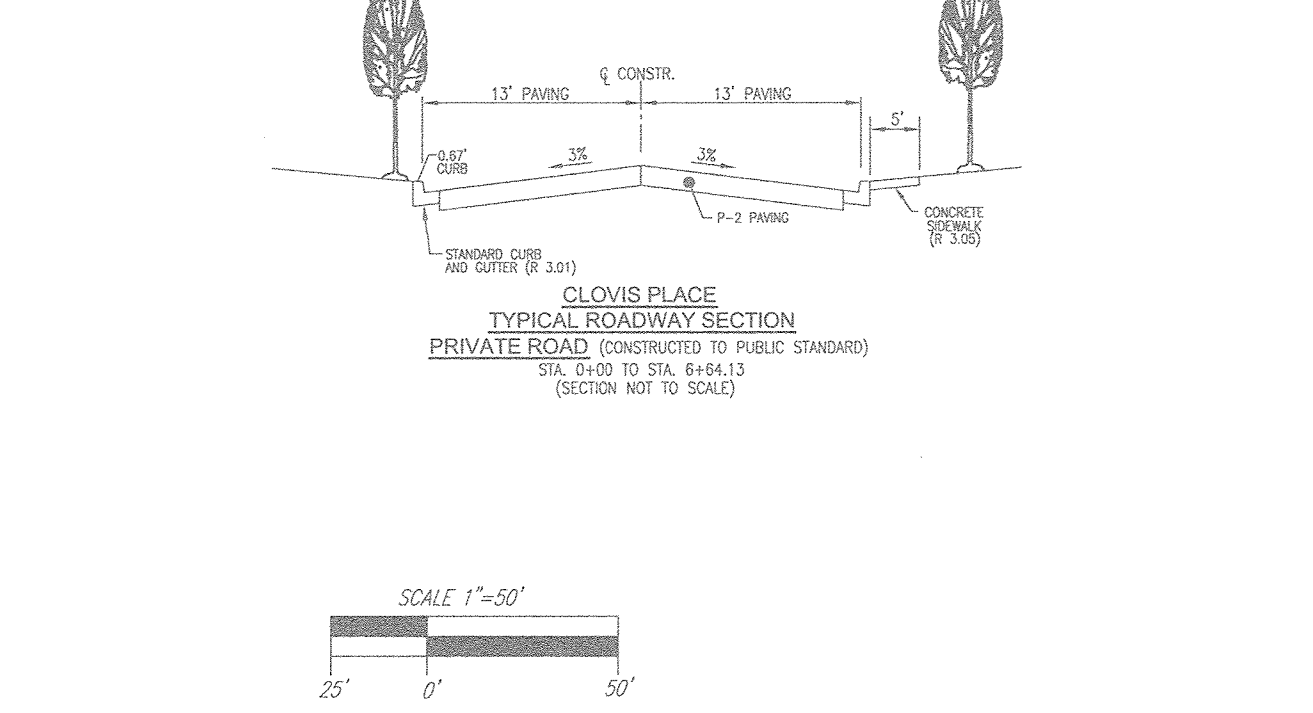


Howard County, Maryland
Department of Public Works
Concrete Sidewalk
R-3.05
Detail

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA STANDARD SPECIFICATIONS			
		3 TO 4 1/2\"/>			
P-1	RESIDENTIAL AND NON-RESIDENTIAL PAVEMENT WITH NO HOLES	1.5	1.5	1.5	1.5
P-2	RESIDENTIAL AND NON-RESIDENTIAL PAVEMENT WITH HOLES	2.0	2.0	2.0	2.0
P-3	RESIDENTIAL AND NON-RESIDENTIAL PAVEMENT WITH HOLES	2.5	2.5	2.5	2.5
P-4	RESIDENTIAL AND NON-RESIDENTIAL PAVEMENT WITH HOLES	3.0	3.0	3.0	3.0



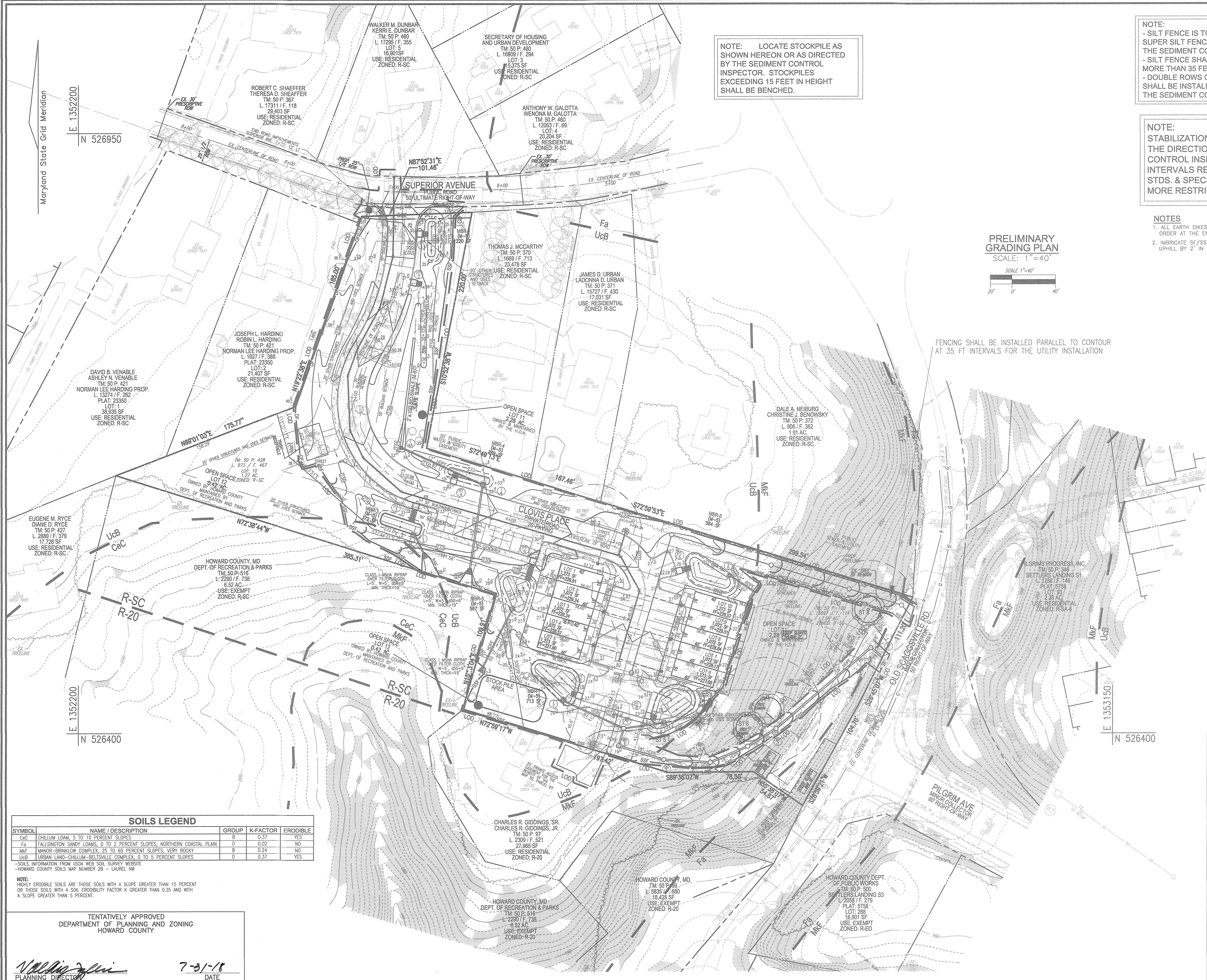
Howard County, Maryland
Department of Public Works
TYPICAL SECTIONS - Residential Streets
Access Place, Access Street, Minor Collector
(Closed Section)
R-1.02
Detail



Howard County, Maryland
Department of Public Works
TYPICAL ROADWAY SECTION
PRIVATE ROAD (CONSTRUCTED TO PUBLIC STANDARD)
R-1.03
Detail

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY
William J. Davis
PLANNING DIRECTOR
7-31-18
DATE

PRELIMINARY PLAN
ROAD PROFILE AND SITE DETAILS
FALCON PLACE
LOTS 1-10 & OPEN SPACE LOTS 11-12
A SUBDIVISION OF TAX MAP 50 - PARCELS 100 & 428
PARCEL 100: L 16297/F 114
PARCEL 428: L 973/F 467
ZONED: R-3C
PARCELS: 100 & 428
HOWARD COUNTY, MARYLAND
TAX MAP: 50 GRID: 02
6TH ELECTION DISTRICT
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
3300 N. RIDGE ROAD, SUITE 110 TEL: 410.461.7666
ELICOTT CITY, MD 21043 FAX: 410.461.8961
PROFESSIONAL CERTIFICATE
DESIGN BY: RHV
DRAWN BY: KG
CHECKED BY: RHV
DATE: JULY 2018
SCALE: AS SHOWN
W.O. NO.: 16-15
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. 16193, EXPIRATION DATE 09-27-2018
3 SHEET OF 9
ROBERT H. VOGEL, PE No. 16193



NOTE:
 - SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
 - SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART
 - DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

NOTE:
 STABILIZATION IS TO BE DONE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE INTERVALS REQUIRED BY THE 2011 STDS. & SPECS. WHICHEVER IS MORE RESTRICTIVE.

NOTES
 1. ALL EARTH DIKES ARE TO BE PLACED IN WORKING ORDER AT THE END OF EACH WORKING DAY.
 2. IMBRICATE SF/SSF IN 35' SEGMENTS AS REQUIRED UPHILL BY 2' IN ELEVATION.

PRELIMINARY GRADING PLAN
 SCALE: 1"=40'

FENCING SHALL BE INSTALLED PARALLEL TO CONTOUR AT 35 FT INTERVALS FOR THE UTILITY INSTALLATION

LEGEND:

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING EDGE OF PAVING
	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
	EXISTING SPECIMEN TREES
	EXISTING WOOD FENCE
	EXISTING METAL FENCE
	PROPOSED TREE LINE
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	SOILS
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR
	PROPOSED SPOT ELEVATION
	EXISTING STEEP SLOPES (25% SLOPES OR GREATER)
	EXISTING MODERATE SLOPES (15% TO 24.99% SLOPES)
	LIMIT OF DISTURBANCE
	PROPOSED STORM DRAIN
	MICRO-BIORETENTION
	PROPOSED STABILIZED CONSTRUCTION ENTRANCE
	PROPOSED TREE PROTECTION FENCE
	SUPER SILT FENCE
	DIVERSION FENCE
	SILT FENCE

NOTE
 - APPROVAL OF THIS PRELIMINARY GRADING PLAN BY THE HOWARD SOIL CONSERVATION DISTRICT DOES NOT GRANT APPROVAL OF THE PROPOSED SEDIMENT CONTROL SCHEME.
 - THE PROJECT'S FINAL PLAN SHALL INCLUDE A SEQUENCE OF CONSTRUCTION WHICH SHALL DETAIL SEDIMENT & EROSION CONTROLS AND ADDRESS THE PROJECT TEMPORARY STORMWATER MANAGEMENT REQUIREMENTS.

OWNER
 MAGNOLIA MANOR, LLC
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 ELLICOTT CITY, MD 21043
 (410) 480-0023

DEVELOPER
 TRINITY HOMES MARYLAND, LLC
 3675 PARK AVE., SUITE 301
 ELLICOTT CITY, MD 21043
 (410) 480-0023

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR	ERODIBLE
CcC	CHILLUM LOAM, 5 TO 10 PERCENT SLOPES	B	0.31	YES
Fa	FALLSINGTON SANDY LOAMS, 0 TO 2 PERCENT SLOPES, NORTHERN COASTAL PLAIN	D	0.02	NO
MfF	MANOR-BRINKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY	B	0.24	NO
UcB	URBAN LAND-CHILLUM-BELTSVILLE COMPLEX, 0 TO 5 PERCENT SLOPES	D	0.37	YES

-SOILS INFORMATION FROM USDA WEB SOIL SURVEY WEBSITE
 -HOWARD COUNTY SOILS MAP NUMBER 26 - LAUREL NW

NOTE:
 HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

TENTATIVELY APPROVED
 DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY

Valerie J. Allen
 PLANNING DIRECTOR
 7-31-18
 DATE

REVISION	DATE

PRELIMINARY PLAN
PRELIMINARY GRADING PLAN & SOILS MAP

FALCON PLACE
 LOTS 1-10 & OPEN SPACE LOTS 11-12
 A SUBDIVISION OF TAX MAP 50 - PARCELS 100 & 428
 PARCEL 100, L. 16297 / F. 114
 PARCEL 428, L. 973 / F. 467

TAX MAP: 50 GRID: 02
 6TH ELECTION DISTRICT

ZONED: R-SC
 PARCELS: 100 & 428
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
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PROFESSIONAL CERTIFICATE

DESIGN BY: RHV
 DRAWN BY: KG
 CHECKED BY: RHV
 DATE: JULY 2018
 SCALE: AS SHOWN
 W.O. NO.: 16-15

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. 16193, EXPIRATION DATE 09-27-2018.

4 SHEET OF 9



LEGEND:

---	PROPERTY LINE	---	EXISTING 10' CONTOUR
---	RIGHT-OF-WAY LINE	---	EXISTING 2' CONTOUR
---	ADJACENT PROPERTY LINE	---	SOILS
---	EXISTING EDGE OF PAVING	---	PROPOSED 10' CONTOUR
---	EXISTING SANITARY MANHOLE	---	PROPOSED 2' CONTOUR
---	EXISTING SANITARY LINE	---	PROPOSED SPOT ELEVATION
---	EXISTING FIRE HYDRANT	---	NRS/MDC/MSD
---	EXISTING WATER LINE	---	20%+ STEEP SLOPES
---	EXISTING TREETRINE	---	EXISTING ERODIBLE SOILS
---	EXISTING SPECIMEN TREES	---	PROPOSED MICRO-BIORETENTION FACILITY (M-B)
---	PROPOSED TREETRINE	---	DRAINAGE AREA DIVIDE
---	20' PUBLIC WATER UTILITY EASEMENT	---	AREA INLET ZONE % IMP
---	VARIABLE WIDTH PUBLIC SEWER, WATER & UTILITY EASEMENT	---	PROPOSED TREE PROTECTION FENCE
---	20' PUBLIC SEWER & UTILITY EASEMENT	---	20' PRIVATE ACCESS EASEMENT

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR	ERODIBLE
CcC	CHILLUM LOAM, S TO 10 PERCENT SLOPES	B	0.37	YES
Fa	FALLSINGTON SANDY LOAMS, 0 TO 2 PERCENT SLOPES, NORTHERN COASTAL PLAIN	D	0.02	NO
MkF	MANOR-BRONKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY	B	0.24	NO
UcB	URBAN LAND-CHILLUM-BELTSVILLE COMPLEX, 0 TO 5 PERCENT SLOPES	D	0.37	YES

-SOILS INFORMATION FROM USDA WEB SOIL SURVEY WEBSITE
-HOWARD COUNTY SOILS MAP NUMBER 28 - LAUREL NW

NOTE:
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DEVELOPER
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ELlicott CITY, MD 21043
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REVISION	DATE

PRELIMINARY PLAN
PRELIMINARY STORMDRAIN DRAINAGE AREA MAP
FALCON PLACE
LOTS 1-10 & OPEN SPACE LOTS 11-12
A SUBDIVISION OF TAX MAP 50 - PARCELS 100 & 428
PARCEL 100: L. 16697 / F. 114
PARCEL 428: L. 973 / F. 467

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CHECKED BY: RHV
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W.O. NO.: 16-15

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5 SHEET OF 9

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

William J. Glin
PLANNING DIRECTOR

7-31-18
DATE

PRELIMINARY STORM DRAIN DRAINAGE AREA MAP
SCALE: 1"=40'
SCALE 1"=40'
20' 0' 40'

Maryland State Grid Meridian

E 1352200

N 526950

E 1352200

N 526400

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

Valerie J. ...
PLANNING DIRECTOR

7-31-18
DATE

SOILS LEGEND				
SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR	ERODIBLE
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MkF	MANOR-BRINKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY	B	0.24	NO
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LEGEND:

- PROPERTY LINE
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- ADJACENT PROPERTY LINE
- EXISTING EDGE OF PAVING
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING TREELINE
- EXISTING SPECIMEN TREES
- PROPOSED TREELINE
- 20' PUBLIC WATER & UTILITY EASEMENT
- VARIABLE WIDTH PUBLIC SEWER, WATER & UTILITY EASEMENT
- 20' PUBLIC SEWER & UTILITY EASEMENT
- 20' PRIVATE ACCESS EASEMENT
- PROPOSED TREE PROTECTION FENCE
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- SOILS
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SPOT ELEVATION
- NRCS/ADE/HSCD 2094 STEEP SLOPES
- EXISTING ERODIBLE SOILS
- PROPOSED MICRO-BIORETENTION FACILITY (M-6)
- DRAINAGE AREA DIVIDE
- DA-2 DRAINAGE AREA DESCRIPTION
- B-1 TEST PIT

PRELIMINARY STORMWATER MANAGEMENT DRAINAGE AREA MAP
SCALE: 1"=40'



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PRELIMINARY PLAN
PRELIMINARY STORMWATER MANAGEMENT DRAINAGE AREA MAP
FALCON PLACE
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6 SHEET OF 9

APPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS

1. MATERIAL SPECIFICATIONS
THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

2. FILTERING MEDIA OR PLANTING SOIL
THE SOIL SHALL BE A UNIFORM MIX FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DISPERSED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVIDE A BARRIER TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERBERIDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.

- SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (SOIL TEXTURE CLASSIFICATION)
 - ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (30% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%).
 - CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.
 - PH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED IN TO THE SOIL TO INCREASE OR DECREASE PH.
- THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

3. COMPACTION
IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING LOADERS, THE CONTRACTOR SHOULD USE WIDE TRACKS OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TYRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL FLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO RESTRUCTURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE OPERATOR. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT. ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE.

WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.

WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12 TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPORT SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

4. PLANT MATERIAL
RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

5. PLANT INSTALLATION
COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL PLANT AND MOVE TO THE PERIPHERY OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.

ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION. TREES SHALL BE BRANDED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL. GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.

THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS, SEEDS, OR A AT MINIMUM MIXES THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

6. UNDERDRAINS
UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:

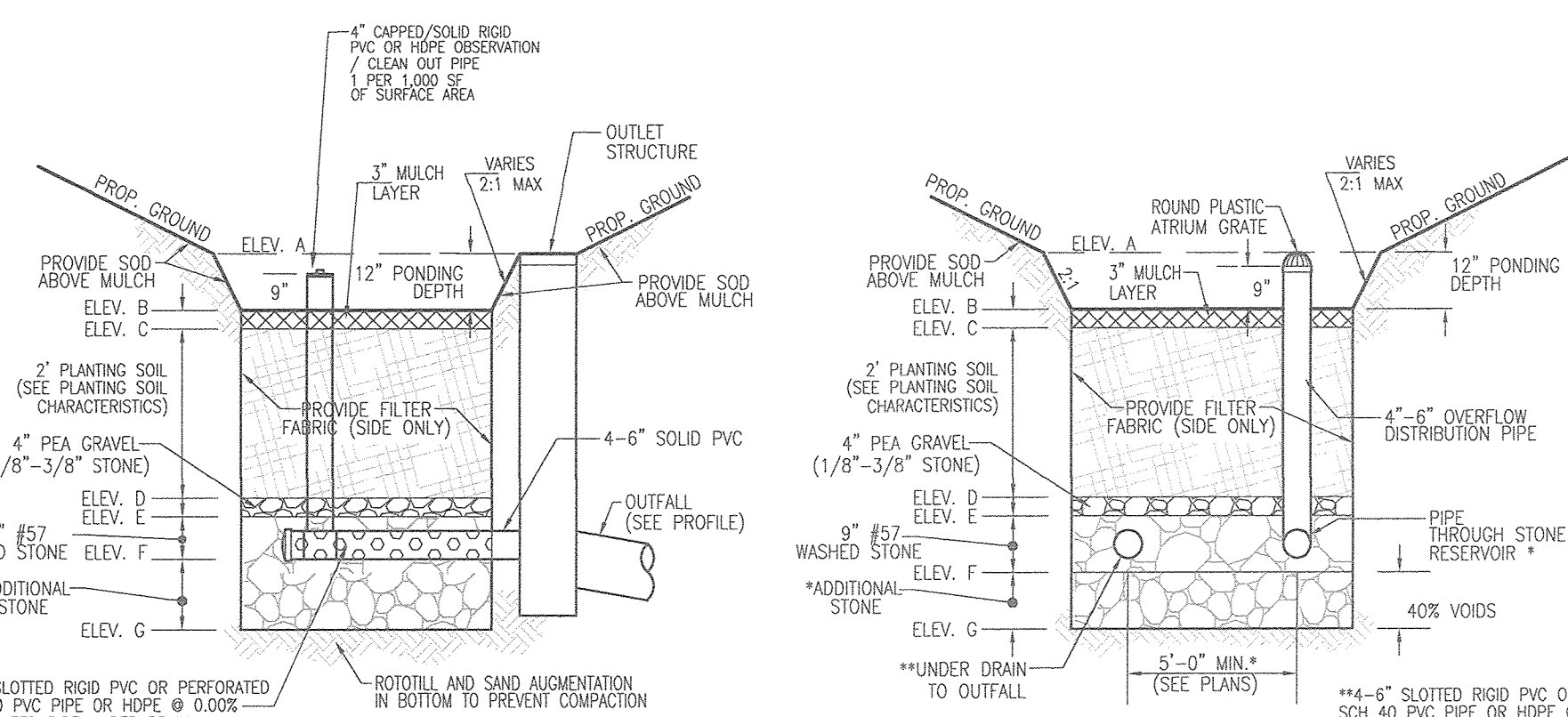
- PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F 758, TYPE PS 28, OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OF HOPE).
- PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4 OR 4x4) GALVANIZED HARDWARE CLOTH.
- THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
- A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
- A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".

THIS MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

7. MISCELLANEOUS
THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-6), RAIN GARDENS (M-7), BIORETENTION SWALE (M-8), AND ENHANCED FILTERS (M-9)

1. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL. PRUNING ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME 4, TABLE A-4.1 AND 2.
2. THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
3. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
4. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

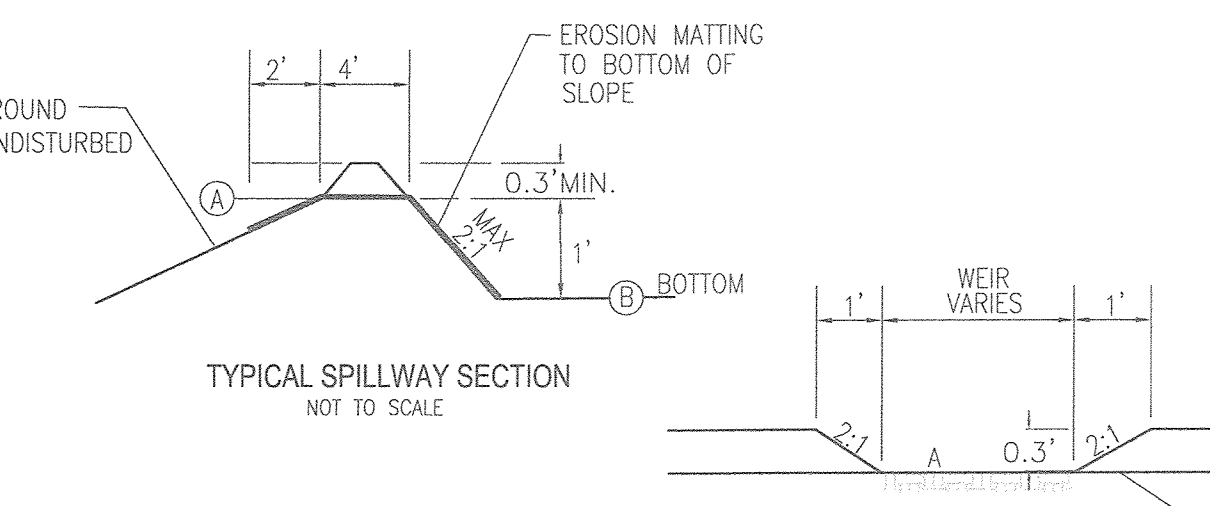


MICRO-BIORETENTION (UNDERDRAIN) NOT TO SCALE
MICRO-BIORETENTION (OVERFLOW) NOT TO SCALE

*ADDITIONAL STONE AS APPLICABLE

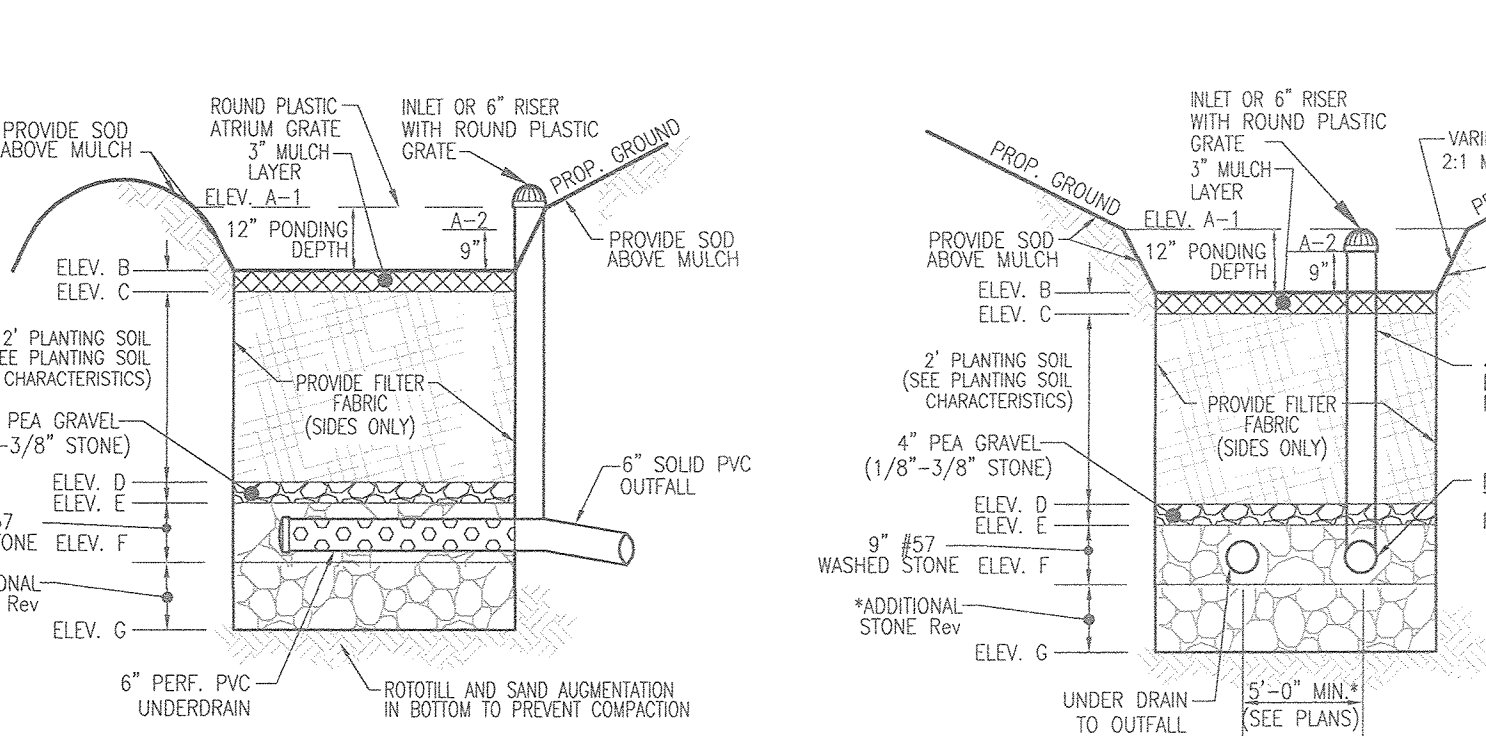
MICROBIORETENTION NOTES:

1. ONLY THE SIDES OF MICRO BIORETENTION ARE TO BE WRAPPED IN FILTER FABRIC. FILTER FABRIC BETWEEN LAYER OR AT THE BOTTOM OF THE MICRO BIORETENTION WILL CAUSE THE MBR TO FAIL AND THEREFORE SHALL NOT BE INSTALLED.
2. WRAP THE PERFORATED MBR UNDERDRAIN PIPE WITH 1/4" MESH (4x4) OR SMALLER GALVANIZED HARDWARE CLOTH. SEE APPENDIX B.4.C.6.
3. PROVIDE 5" MINIMUM SPACING BETWEEN UNDER DRAIN AND PERFORATED PIPE THROUGH STONE RESERVOIR OR SPACE PIPE EQUALLY ACROSS BOTTOM FOR SMALL BIOS. (SEE PLANS)



TYPICAL SPILLWAY SECTION NOT TO SCALE
TYPICAL SPILLWAY PROFILE NOT TO SCALE

DETAILS OF WEIR OUTLET MICRO-BIORETENTION

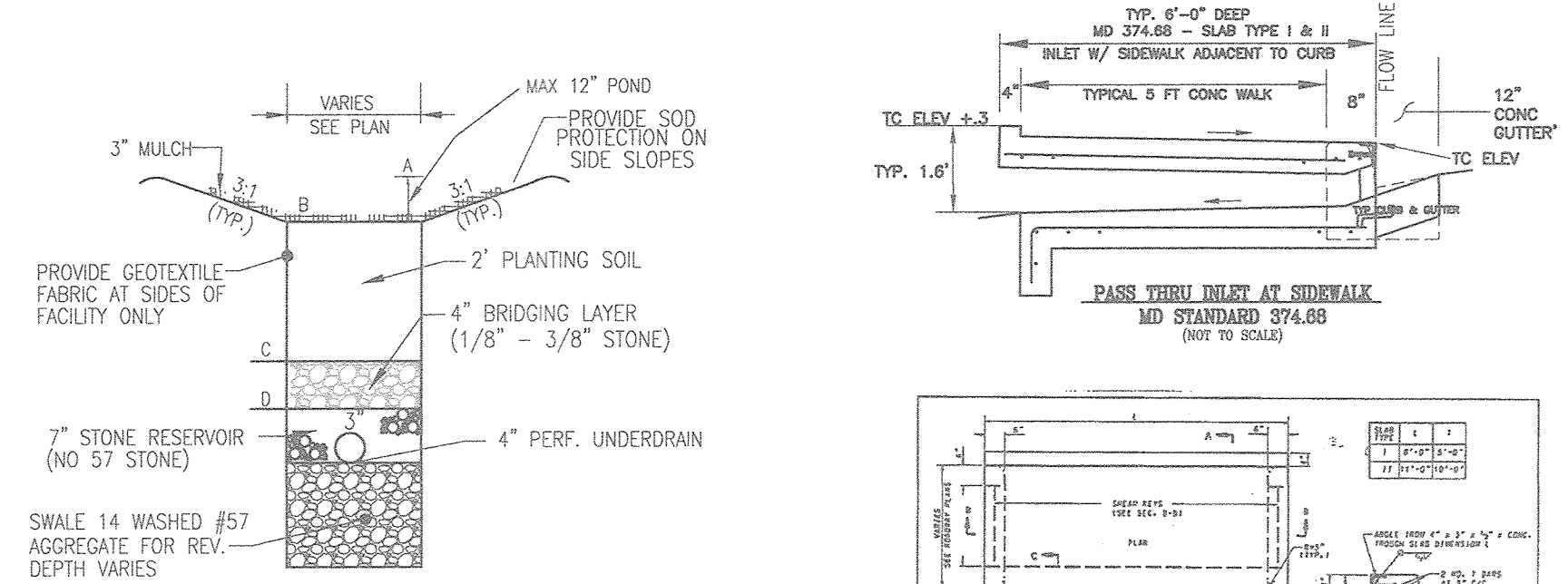


SMALL MICRO BIORETENTION (UNDERDRAIN) NOT TO SCALE
MICRO BIORETENTION (OVERFLOW) NOT TO SCALE

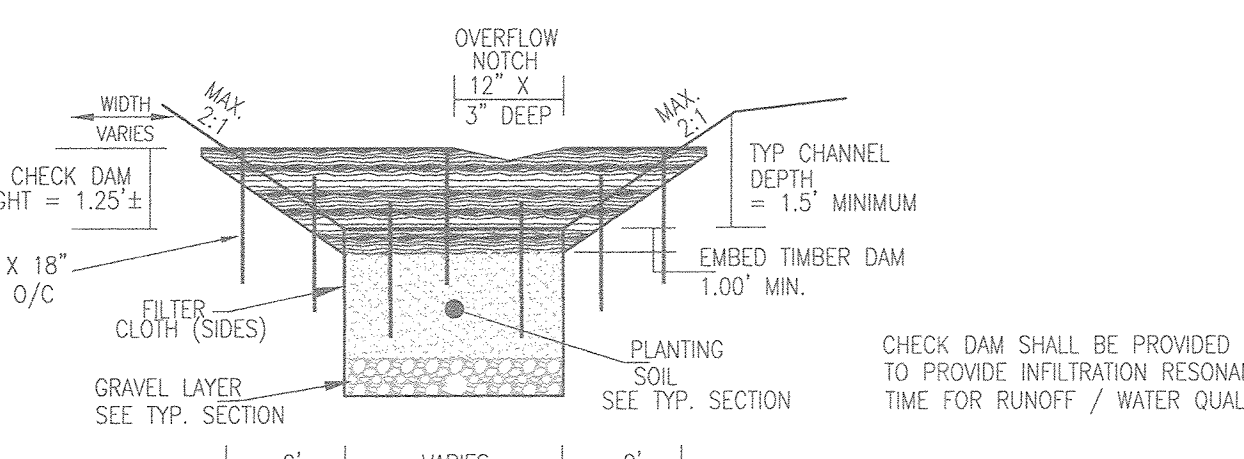
*ADDITIONAL STONE AS APPLICABLE

MICRO BIORETENTION NOTES:

1. ONLY THE SIDES OF MICRO BIORETENTION ARE TO BE WRAPPED IN FILTER FABRIC. FILTER FABRIC BETWEEN LAYER OR AT THE BOTTOM OF THE MICRO BIORETENTION WILL CAUSE THE MBR TO FAIL AND THEREFORE SHALL NOT BE INSTALLED.
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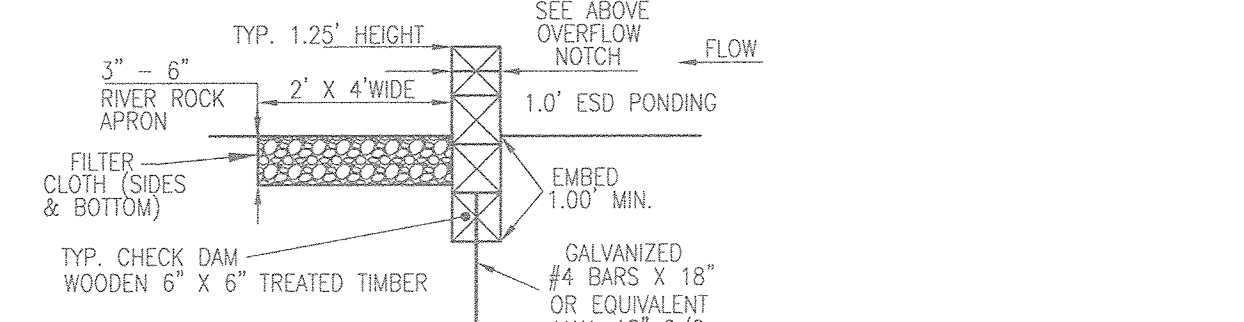


BIO SWALE - DETAIL
TYPICAL CROSS SECTION (NOT TO SCALE)

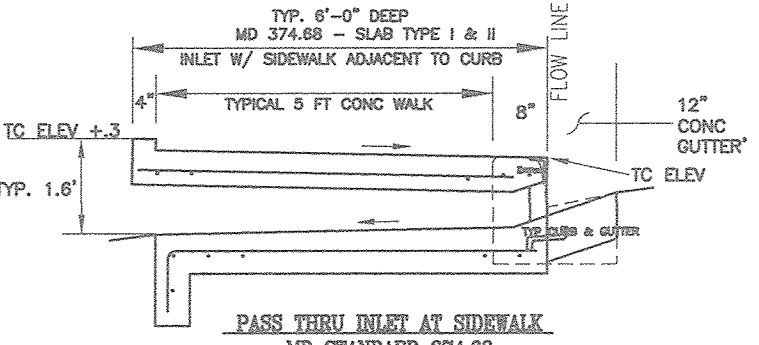


BIO-SWALE CHECK DAM - VIEW 1
TYPICAL CROSS SECTION (NOT TO SCALE)

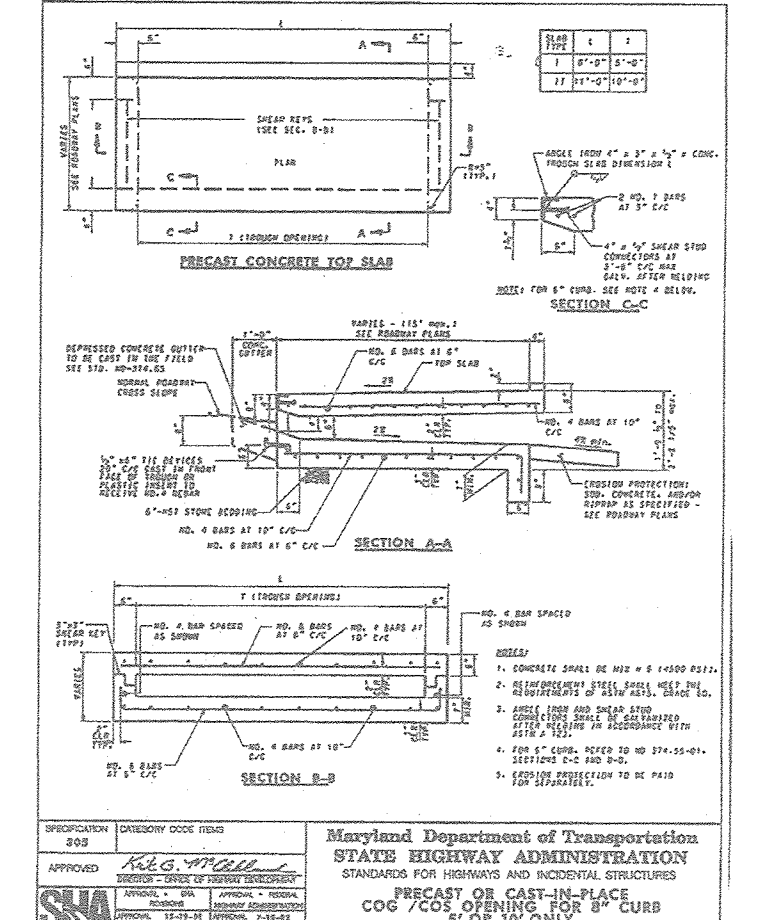
*CHECK DAM SHALL BE PROVIDED TO PROVIDE INFILTRATION RESONANCE TIME FOR RUNOFF / WATER QUALITY



BIO-SWALE CHECK DAM - VIEW 2
TYPICAL CROSS SECTION



TYPICAL CURB OPENING INLETS



TYPICAL CURB OPENING INLETS

Appendix B.4. Construction Specifications for Environmental Site Design Practices

Table B.4.1 Materials Specifications for Micro-Bioretenion, Rain Gardens & Landscape Infiltration-

Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil (2" to 4" deep)	loamy sand (60 - 65%) & compost (35 - 40%) or sandy loam (30%), coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile		n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" to 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/2-inch galvanized hardware cloth.
Poured in place concrete (if required)	MSHA Mix No. 3; F _c = 3500 psi @ 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 design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings scaled and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 309 R(89); vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressures); and analysis of potential cracking
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

William J. Flynn
PLANNING DIRECTOR

7-31-18
DATE

OWNER
MAGNOLIA MANOR, LLC
3675 PARK AVE., SUITE 301
ELICOTT CITY, MD 21043
(410) 480-0023

DEVELOPER
TRINITY HOMES MARY LAND, LLC
3675 PARK AVE., SUITE 301
ELICOTT CITY, MD 21043
(410) 480-0023

PRELIMINARY PLAN
STORMWATER MANAGEMENT NOTES AND DETAILS

FALCON PLACE
LOTS 1-10 & OPEN SPACE LOTS 11-12
A SUBDIVISION OF TAX MAP 50 - PARCELS 100 & 428
PARCEL 100: L 16687 / F. 114
PARCEL 428: L 973 / F. 467

TAX MAP: 50 GRID: 02
6TH ELECTION DISTRICT

ZONED: R-SC
PARCELS: 100 & 428
HOWARD COUNTY, MARYLAND

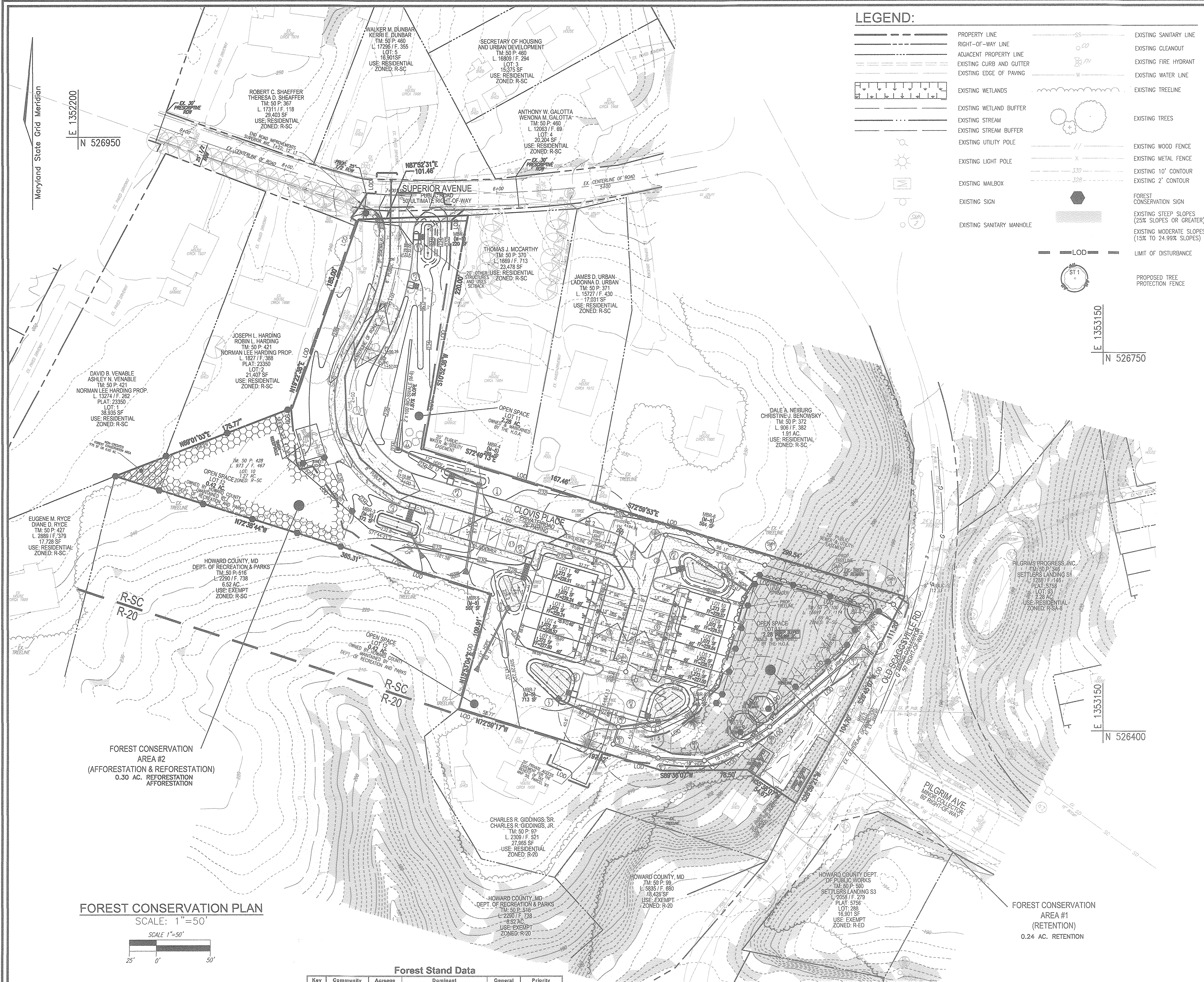
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
3300 N. RIDGE ROAD, SUITE 110 TEL: 410.461.7666
ELICOTT CITY, MD 21043 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

DESIGN BY: RHV
DRAWN BY: KG
CHECKED BY: RHV
DATE: JULY 2018
SCALE: AS SHOWN
W.O. NO.: 16-15

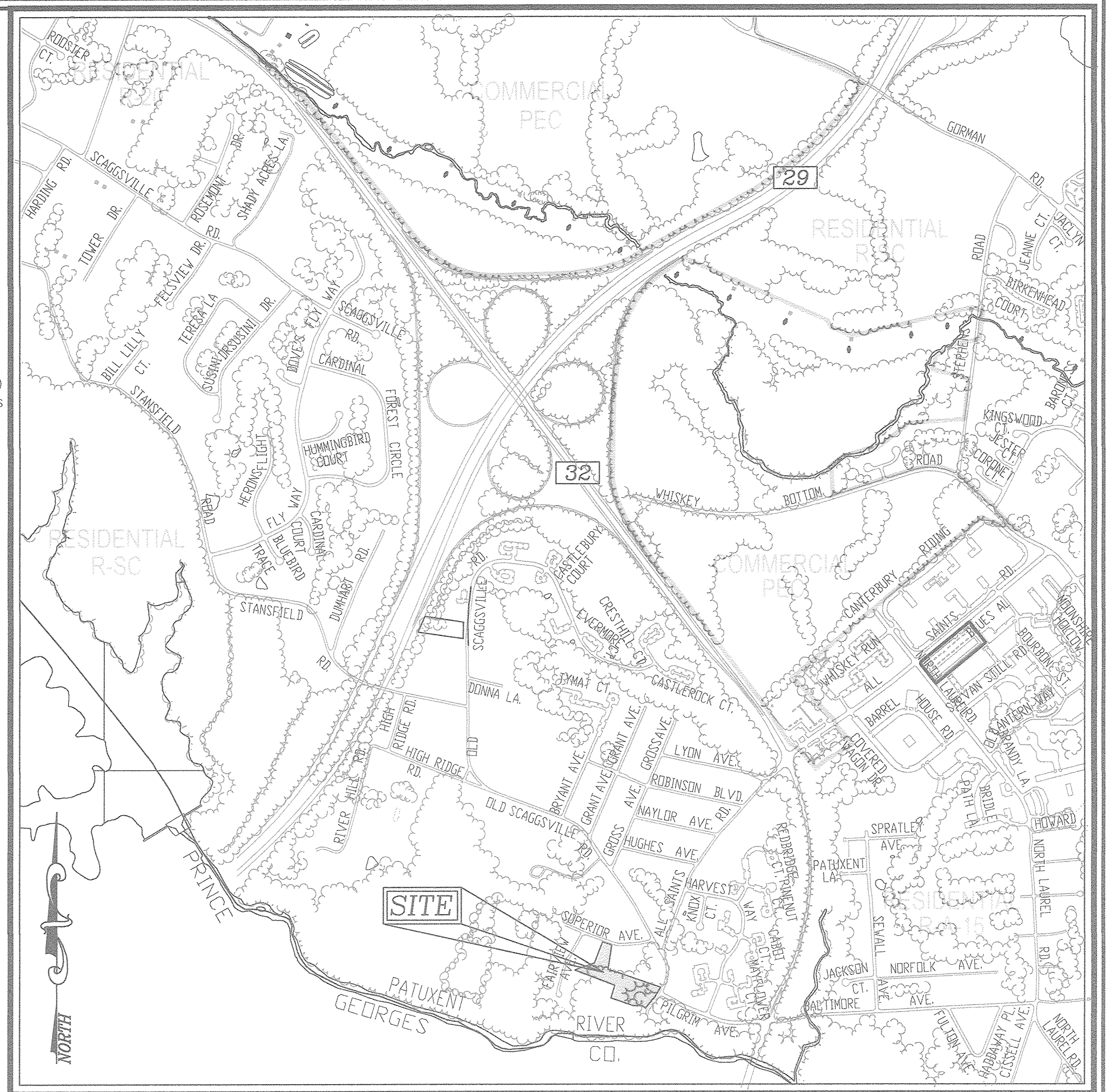
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18193, EXPIRATION DATE: 09-27-2018

7 SHEET OF 9



LEGEND:

—	PROPERTY LINE	—	EXISTING SANITARY LINE
---	RIGHT-OF-WAY LINE	—	EXISTING CLEANOUT
---	ADJACENT PROPERTY LINE	—	EXISTING FIRE HYDRANT
---	EXISTING CURB AND GUTTER	—	EXISTING WATER LINE
---	EXISTING EDGE OF PAVING	—	EXISTING TREELINE
---	EXISTING WETLANDS	—	EXISTING WETLAND BUFFER
---	EXISTING STREAM	—	EXISTING STREAM BUFFER
---	EXISTING UTILITY POLE	—	EXISTING LIGHT POLE
---	EXISTING LIGHT POLE	—	EXISTING MAILBOX
---	EXISTING SIGN	—	EXISTING SANITARY MANHOLE
---	EXISTING SANITARY MANHOLE	—	EXISTING WOOD FENCE
---	EXISTING WOOD FENCE	—	EXISTING METAL FENCE
---	EXISTING METAL FENCE	—	EXISTING 10' CONTOUR
---	EXISTING 10' CONTOUR	—	EXISTING 2' CONTOUR
---	EXISTING 2' CONTOUR	—	FOREST CONSERVATION SIGN
---	FOREST CONSERVATION SIGN	—	EXISTING STEEP SLOPES (25% SLOPES OR GREATER)
---	EXISTING STEEP SLOPES (25% SLOPES OR GREATER)	—	EXISTING MODERATE SLOPES (15% TO 24.9% SLOPES)
---	EXISTING MODERATE SLOPES (15% TO 24.9% SLOPES)	—	LIMIT OF DISTURBANCE
---	LIMIT OF DISTURBANCE	—	PROPOSED TREE PROTECTION FENCE
---	PROPOSED TREE PROTECTION FENCE	—	



VICINITY MAP
SCALE: 1"=1,000'
ADC MAP COORDINATE: PAGE: 40, GRID: A8

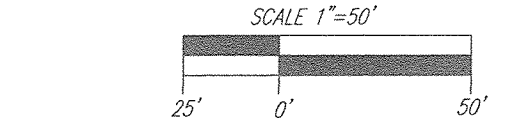
GENERAL NOTES

- WATERSHED NAME: PATUXENT RIVER UPPER
WATERSHED NUMBER: 2131104
- A. GROSS SITE AREA: 2.97 AC.
 - B. NET SITE AREA: 2.65 AC.
 - C. AREA OF 100-YEAR FLOODPLAIN: 0.00 AC.
 - D. AREA OF WETLANDS AND BUFFERS(ONSITE): 0.00 AC.
 - E. AREA OF STREAM AND BUFFERS(ONSITE): 0.00 AC.
 - F. AREA OF > 25% STEEP SLOPES: 0.32 AC.
 - G. EXISTING FOREST (FSD): 0.36 AC.
 - H. ZONED: R-SC
 - I. EXISTING USE: RESIDENTIAL
 - J. PROPOSED USE: RESIDENTIAL
 - K. AFFORESTATION: 0.08 AC.

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FOREST CONSERVATION PLAN
SCALE: 1"=50'



Forest Stand Data

Key	Community Type	Acreage	Dominant Vegetation	General Condition	Priority
F1	Successional	0.36	Acer rubrum, Acer platanoides, Prunus serotina, Robinia pseudo-acacia, Liquidambar styraciflua, Quercus rubra, Platanus occidentalis	Good	0.36 slopes

See accompanying report for complete stand descriptions

- SFSD NOTES:**
- No rare, threatened or endangered species or their appropriate habitat were observed on the property.
 - Surrounding land use is medium-high density residential development.
 - All forest on the site is within Stand F-1. Approximately 0.8 acres of forest is present within 100 feet of the property.
 - No wetlands, streams, buffers or 100 year floodplain is present on the property.
 - Steep slopes are present on the property.
 - Specimen trees are present on the property.
 - The property is located in the Use 1 watershed of the Patuxent River (02-13-11)
 - No cemeteries or historic elements were noted on the property.

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR	ERODIBLE
CcC	CHILLUM LOAM, 5 TO 10 PERCENT SLOPES	B	0.37	YES
Fo	FALLSINGTON SANDY LOAMS, 0 TO 2 PERCENT SLOPES, NORTHERN COASTAL PLAIN	D	0.02	NO
MkF	MANOR-BRINKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY	B	0.24	NO
UcB	URBAN LAND-CHILLUM-BELTSVILLE COMPLEX, 0 TO 5 PERCENT SLOPES	D	0.37	YES

— SOILS INFORMATION FROM USDA WEB SOIL SURVEY WEBSITE
— HOWARD COUNTY SOILS MAP NUMBER 28 - LAUREL NW

NOTE:
HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

FOREST CONSERVATION LEGEND:

[Pattern]	FOREST CONSERVATION EASEMENT (RETENTION)
[Pattern]	FOREST CONSERVATION EASEMENT (AFFORESTATION / REFORESTATION)

Specimen Tree Chart

Key (X,Y)	Species	Size (inches)	CRZ (feet)	Comments
1	Red maple	37	55.5	good condition
2	Red maple	30	45	good condition
3	Red maple	34	51	fair condition, limb dieback
4	Red maple	30.5	45.75	good condition
5	Red maple	31.5	47.25	poor condition, major trunk rot
6	Red maple	30.5	45.75	fair condition, limb dieback
7	Tulip poplar	32.5	48.75	good condition
8	Sycamore	30	45	fair condition, leaning, narrow crown

- TO BE REMOVED
- TO BE REMOVED
- TO BE REMOVED
- TO BE REMOVED
- TO BE REMOVED
- TO REMAIN
- TO REMAIN
- TO REMAIN

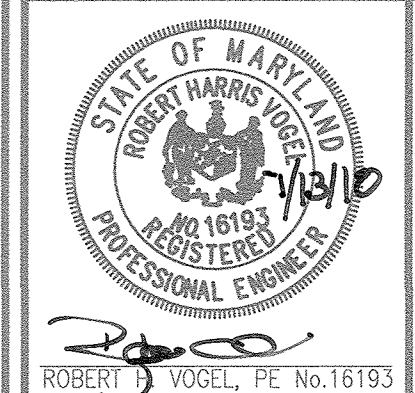
TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

N. M. [Signature]
PLANNING DIRECTOR

7-31-18
DATE

Eco-Science Professionals, Inc.
Consulting Ecologists
P.O. Box 5006 Glen Arva, Maryland 21057 Telephone (410) 832-2480 Fax (410) 832-2488

MD DNR Qualified Professional
USACOE Wetland Delineator
Certification # WDCP93MD061004B2
[Signature]
John P. Canoles



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DESIGN BY: RHV
DRAWN BY: KG
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DATE: JULY 2018
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PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE 09-27-2018

**HOWARD COUNTY
FOREST CONSERVATION WORKSHEET**

**ZONED R-SC
NET TRACT AREA:**
A. TOTAL TRACT AREA 2.99 AC.
B. AREA WITHIN 100 YEAR FLOODPLAIN 0.00 AC.
C. AREA TO REMAIN IN AG. PRODUCTION 0.00 AC.
D. NET TRACT AREA 2.97 AC

LAND USE CATEGORY
INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY. ZONED R-ED-MXD-3

ARA MDR IDA HDR MPD CIA
0 0 0 1 0 0

E. AFFORESTMENT THRESHOLD 15% X 2.97 = 0.45 AC
F. CONSERVATION THRESHOLD 20% X 2.97 = 0.59 AC

EXISTING FOREST COVER:
G. EXISTING FOREST COVER = 0.36 AC
H. AREA OF FOREST ABOVE CONSERVATION THRESHOLD = 0.00 AC
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD = 0.00 AC

BREAK EVEN POINT:
(2 X I) + F = BREAK EVEN POINT (0 AC)
J. BREAK EVEN POINT / FOREST RET. ABOVE THRESHOLD W/ NO MIT. = 0.00 AC
K. FOREST CLEARING PERMITTED WITHOUT MITIGATION = 0.00 AC

PROPOSED FOREST CLEARING:
L. TOTAL AREA OF FOREST TO BE CLEARED = 0.12 AC
M. TOTAL AREA OF FOREST TO BE RETAINED = 0.24 AC (N FCE)

PLANTING REQUIREMENTS:
N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD (L X 25) = 0.00 AC
P. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD = 0.24 AC
Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD (M-F) = 0.00 AC
R. TOTAL REFORESTATION REQUIRED (N+P-Q) = 0.24 AC
S. TOTAL AFFORESTATION REQUIRED = 0.09 AC
T. TOTAL PLANTING REQUIREMENT (REFORESTATION AND AFFORESTATION) = 0.33 AC

FOREST CONSERVATION EASEMENT HAVE BEEN ESTABLISHED TO FULFILL A PORTION OF THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION MANUAL.
NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

TOTAL FOREST CONSERVATION OBLIGATION OF THIS PROJECT TO BE FULFILLED BY:
1. ONSITE RETENTION EASEMENT = 0.24 AC.
2. ONSITE AFFORESTATION AND REFORESTATION PLANTING EASEMENT = 0.30 AC.
CREATING AREA = 0.28 AC.
NON CREDITED AREA = 0.02 AC.

THE REMAINING PLANTING OBLIGATION (0.05 AC.) SHALL BE SATISFIED UNDER THE FINAL PLAN VIA PAYMENT OF FEE-IN-LIEU OR A PURCHASE OF THE EQUIVALENT AREA OF REFORESTATION CREDIT IN AN APPROVED FOREST BANK.
FINANCIAL SURETY SHALL BE POSTED WITH THE FINAL PLAN.

FOREST CONSERVATION EASEMENT TABLE			
EASEMENT	RETENTION	REFORESTATION	TOTAL
FCE#1	0.24 AC	0.00 AC	0.24 AC
CREDITED	0.00 AC	0.00 AC	0.00 AC
NON-CREDITED	0.00 AC	0.00 AC	0.00 AC
FCE#2	0.00 AC	0.30 AC	0.30 AC
CREDITED	0.00 AC	0.28 AC	0.28 AC
NON-CREDITED	0.00 AC	0.02 AC	0.02 AC
TOTAL		0.54 AC	

REFORESTATION/AFFORESTATION PROVIDED

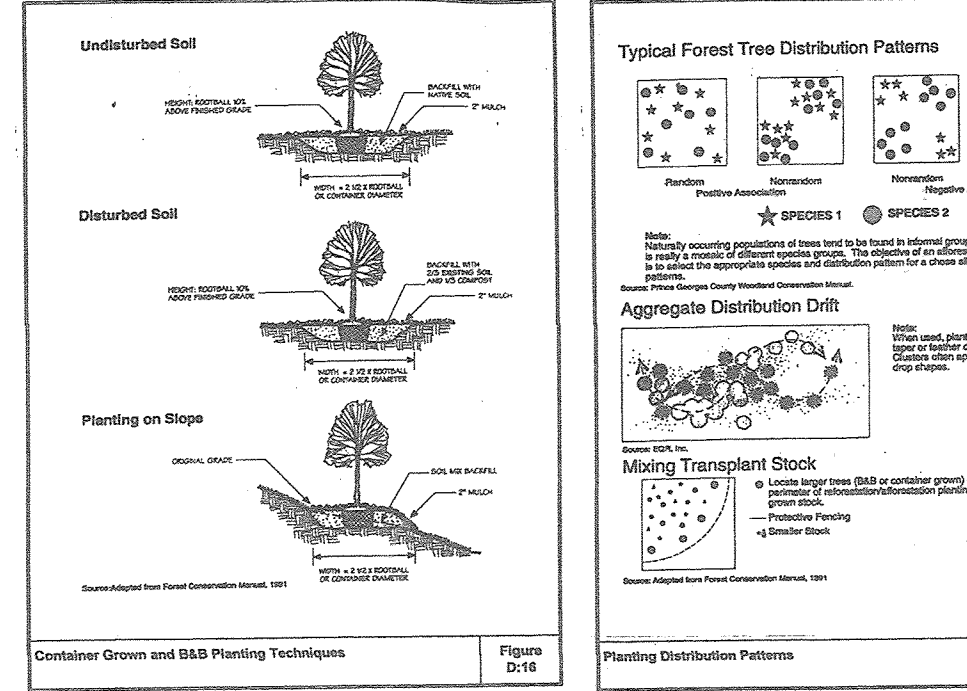
0.28 ACRES
1" CALIPER TREES
56 TREES @ 200 TREES
PER ACRE OR EQUAL

SEQUENCE OF CONSTRUCTION-FOREST CONSERVATION

1. PRECONSTRUCTION MEETING / SITE WALK WITH CONTRACTORS AND OTHER RESPONSIBLE PARTIES TO DEFINE PROTECTION MEASURES TO BE UTILIZED AND TO POINT OUT PARTICULAR TREES TO BE SAVED.
2. STAKE OUT LIMITS OF DISTURBANCE AND TREE PROTECTION FENCING LOCATIONS.
3. INSTALL TREE PROTECTION FENCING; FENCING TO BE INSPECTED BY THE PROJECT ENGINEER OR THE PROJECT ECOLOGIST AND HOWARD COUNTY PLANNING AND ZONING.
4. PROCEED WITH TREE REMOVAL AND SITE IMPROVEMENTS AS PER APPROVED SEDIMENT CONTROL PLAN - TO BE INSPECTED BY HOWARD COUNTY PLANNING AND ZONING.
5. TEMPORARY TREE PROTECTION DEVICES SHALL BE REMOVED AFTER ALL FINISHED GRADING AND UTILITY CONSTRUCTION HAS OCCURRED AND WITH APPROVAL FROM THE HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

FOREST RETENTION AREAS AND NOTES

1. THE WETLANDS AND WETLAND BUFFERS ARE LOCATED ON AN OPEN SPACE LOT 189.
2. NO RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THIS SITE.
3. FORESTED AREAS ADJACENT TO FLOODPLAINS AND STREAM BUFFERS ARE SUBSTANTIALLY RETAINED IN OPEN SPACE LOTS.
4. CHANGES IN GRADING AND RUNOFF WITHIN CONSTRUCTION/INSTALLATION AREAS WILL NOT ADVERSELY AFFECT THE SOILS WITHIN THE FOREST RETENTION AREA. SEDIMENT CONTROL MEASURES WILL REDIRECT CONCENTRATED FLOW RUNOFF TO STORMWATER MANAGEMENT FACILITIES, RETAIN SEDIMENT WITHIN THE CONSTRUCTION SITE, AND/OR REDIRECT CLEAN WATER AWAY FROM CONSTRUCTION AREAS.
5. THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

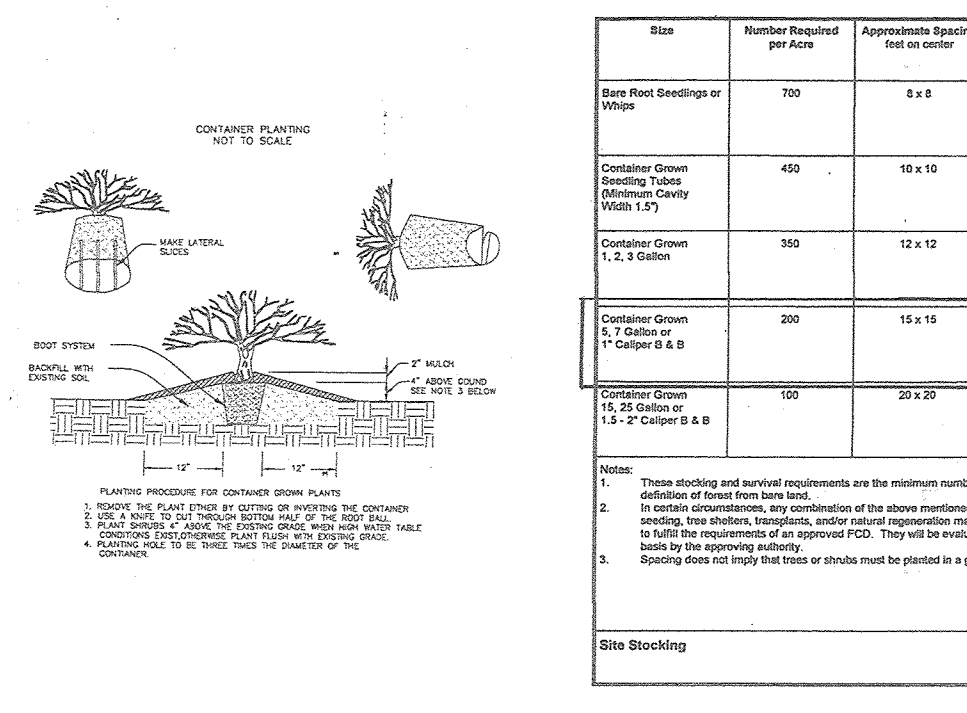


REFORESTATION AREA MONITORING NOTES

1. MONTHLY VISITS DURING THE FIRST GROWING SEASON ARE TO ASSESS THE SUCCESS OF THE PLANTINGS AND TO DETERMINE IF SUPPLEMENTAL WATERING, PEST CONTROL OR OTHER ACTIONS ARE NECESSARY. EARLY SPRING VISITS WILL DOCUMENT WINTER KILL AND AUTUMN VISITS WILL DOCUMENT SUMMER KILL.
2. THE MINIMUM SURVIVAL RATE SHALL BE 75% OF THE TOTAL NUMBER OF TREES PLANTED PER ACRE AT THE END OF THE TWO YEAR MAINTENANCE PERIOD. WILD TREE SEEDLINGS FROM NATURAL REGENERATION ON THE PLANTING SITE MAY BE COUNTED UP TO 50% TOWARD THE TOTAL SURVIVAL NUMBER IF THEY ARE HEALTHY NATIVE SPECIES AT LEAST 12 INCHES TALL.
3. SURVIVAL WILL BE DETERMINED BY A STRATIFIED RANDOM SAMPLING OF THE PLANTINGS. THE SPECIES COMPOSITION OF THE SAMPLE POPULATION SHOULD BE PROPORTIONATE TO THE AMOUNT OF EACH SPECIES IN THE ENTIRE PLANTING TO BE SAMPLED.
4. EFFECTIVE MONITORING WILL ASSESS PLANT SURVIVABILITY DURING THE FIRST GROWING SEASON AND MAKE RECOMMENDATIONS FOR REINFORCEMENT PLANTINGS IF REQUIRED AT THAT TIME.

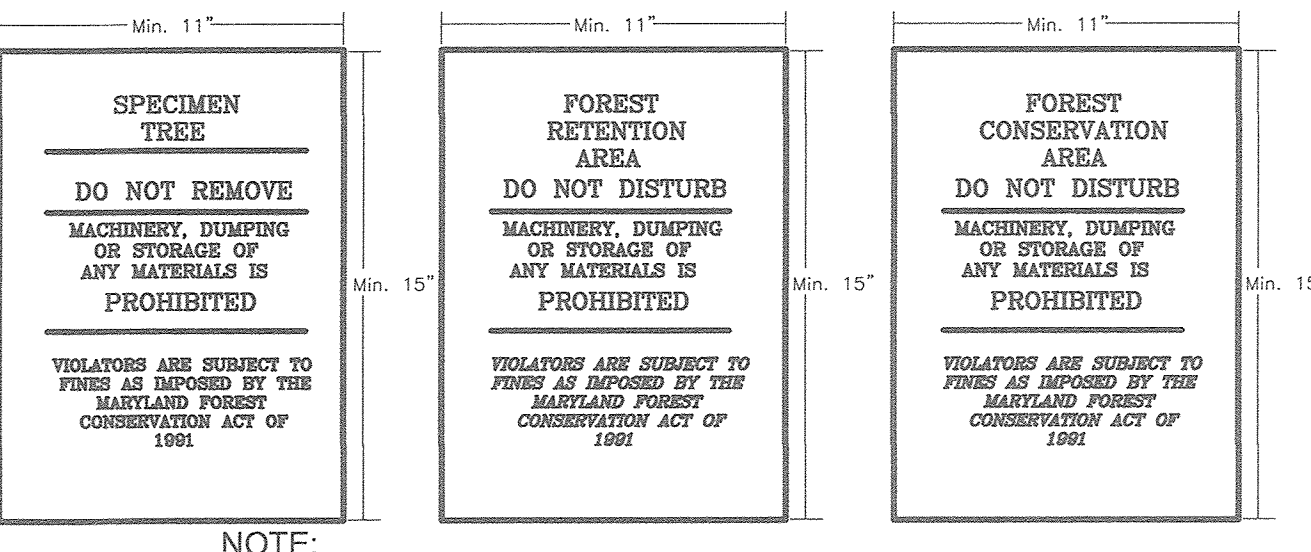
AFFORESTATION PLANTING NOTES

1. AFFORESTATION AREAS MAY BE PLANTED AS SOON AS REASONABLE TO DO SO. LATE WINTER-EARLY SPRING PLANTINGS ARE PREFERRED. EARLIEST PLANTING DATES WILL VARY FROM YEAR TO YEAR BUT PLANTING MAY GENERALLY BEGIN AS SOON AS THE GROUND IS NO LONGER FROZEN. ALTERNATE PLANTING DATES MAY BE CONSIDERED AS CONDITION WARRANTS.
2. SOIL AMENDMENTS AND FERTILIZATION RECOMMENDATIONS WILL BE BASED UPON THE RESULTS OF SOIL ANALYSIS FOR NITROGEN, IF PHOSPHORUS, POTASSIUM, ORGANIC MATTER CONTENT AND PH. IF REQUIRED, FERTILIZER WILL BE PROVIDED USING A SLOW RELEASE SOLUBLE 16-8-16 ANALYSIS DESIGNED TO LAST 5-8 YEARS CONTAINED IN POLYETHYLENE PERFORATED BAGS SUCH AS MANUFACTURED BY ADCO WORKS, P.O. BOX 310 HOLLIS, N.J. 11423 OR APPROVED EQUAL.
3. PLANT MATERIALS WILL BE PLANTED IN ACCORDANCE WITH THE PLANTING DETAILS AND PLANT SCHEDULE.
4. PLANT MATERIAL SHALL BE NURSERY GROWN AND INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO THE AMERICAN STANDARD FOR NURSERY STOCK SPECIFICATIONS FOR SIZE, FORM, VIGOR OR ROOTS OR DUE TO TRUNK WOUNDS, BREAKAGE, DESICCATION, INSECT OR DISEASE MUST BE REPLACED.
5. PLANTING STOCK MUST BE PROTECTED FROM DESICCATION AT ALL TIMES PRIOR TO PLANTING. MATERIALS HELD FOR PLANTING SHALL BE MOISTENED AND PLACED IN COOL SHADED AREAS UNTIL READY FOR PLACEMENT.
6. NEWLY PLANTED TREES MAY REQUIRE WATERING AT LEAST ONCE PER WEEK DURING THE FIRST GROWING SEASON DEPENDING ON RAINFALL. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE WATERING. THE INITIAL PLANTING OPERATION SHOULD ALLOW FOR WATERING DURING INSTALLATION TO COMPLETELY SOAK BACKFILL MATERIAL.
7. MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE DIAGRAM PROVIDED AND SHALL CONSIST OF COMPOSTED, SHREDDED HARDWOOD BARK MULCH, FREE OF WOOD ALCOHOL.
8. ALL NURSERY STOCK TO BE SPRAYED WITH DEER REPELLENT CONTAINING BITREX, SUCH AS REPELLEX. ALL NURSERY STOCK TO BE GROWN WITH DEER REPELLENT TABLETS IN GROWING MEDIUM, SUCH AS REPELLEX TABLETS.



TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY
7-21-18
DATE

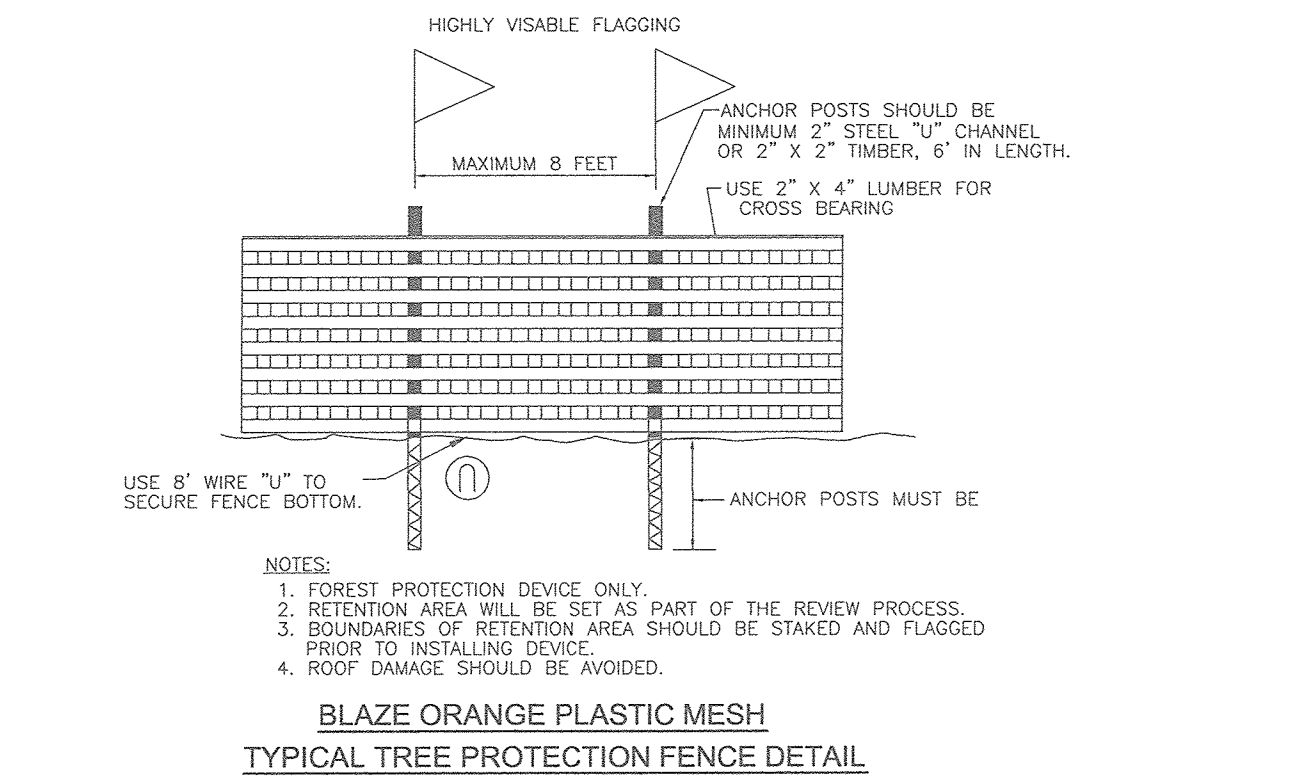
FOREST CONSERVATION AREA SIGNS



NOTE:
1. BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.
2. SIGNS TO BE PLACED APPROXIMATELY 50-100 FEET APART. CONDITIONS ON SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.
WHERE SIGNS ARE TO BE PLACED AT THE REAR OF PROPOSED LOTS, SPACING SHALL BE APPROX. 25-30' +/-.
3. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.
4. ALL FOREST CONSERVATION SIGNAGE SHALL BE IN PLACE FOR PERPETUITY.
5. SIGN LOCATION SYMBOL = ●

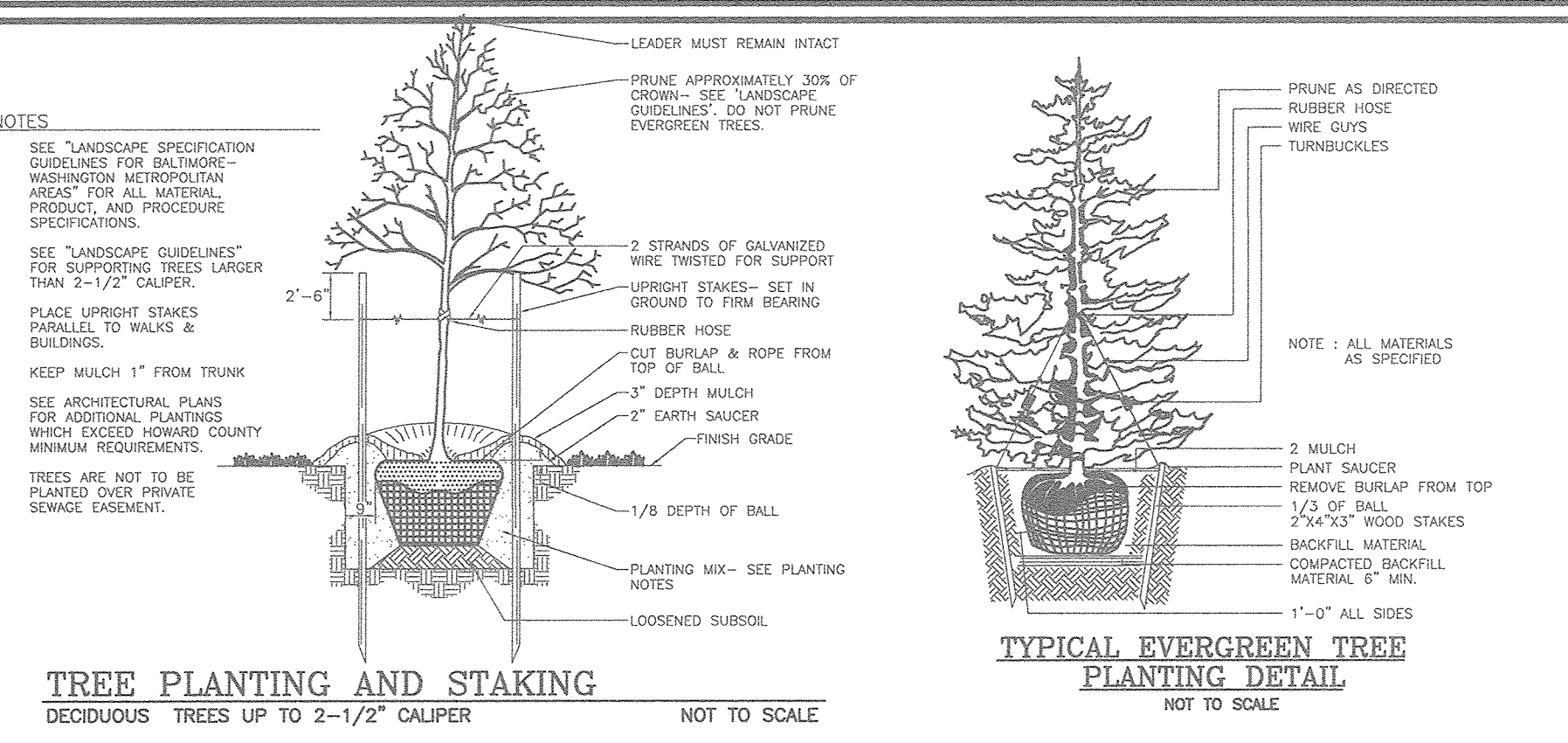
CONSTRUCTION PERIOD PROTECTION AND MANAGEMENT NOTES FOR FOREST CONSERVATION

- PRE-CONSTRUCTION PHASE**
1. FOR RETENTION AREAS, INSTALL BLAZE ORANGE FENCE AND RETENTION SIGNS BEFORE CONSTRUCTION BEGINS.
 2. FENCING SHALL BE MAINTAINED IN GOOD CONDITION AND PROMPTLY REPAIRED OR RESTORED AS THE SITUATION WARRANTS.
 3. A QUALIFIED TREE CARE EXPERT SHALL DETERMINE IF ROOT PRUNING IS REQUIRED ALONG THE LIMIT OF DISTURBANCE. ROOT PRUNING SHALL BE REQUIRED. WATER ANY ROOT-PRUNED TREES IMMEDIATELY AFTER ROOT-PRUNING AND MONITOR FOR SIGNS OF STRESS DURING CONSTRUCTION.
- CONSTRUCTION PHASE**
1. NO DISTURBANCE OR DUMPING IS ALLOWED INSIDE THE TREE RETENTION AREA.
 2. NO EQUIPMENT SHALL BE OPERATED INSIDE THE TREE RETENTION AREA INCLUDING TREE CANOPIES.
 3. IN THE EVENT OF DROUGHT, THE PROTECTED TREES SHALL BE MONITORED FOR SIGNS OF STRESS AND WATERED AS NEEDED.
- POST-CONSTRUCTION PHASE**
1. AT THE DISCRETION OF A QUALIFIED TREE CARE EXPERT, DAMAGES TO RETAINED TREES SHALL BE REPAIRED BY THE CONTRACTOR.
 2. FENCE REMOVAL AND STABILIZATION SHALL BE AS PER THE SEDIMENT AND EROSION CONTROL PLAN.
 3. DO NOT REMOVE SIGNS.



LANDSCAPE NOTES

1. 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.
 2. PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THE FINAL PLAN.
 3. SURETY FOR THE PROPOSED LANDSCAPING SHALL BE BASED ON THE NUMBER OF PLANTINGS REQUIRED.
- GENERAL NOTES:**
1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE LANDSCAPE REQUIREMENTS FOR THIS PROJECT ARE 40 SHADE TREES, 70 EVERGREENS AND 10 SPECIMEN TREE REPLACEMENT PLANTINGS (WP-17-067).
 2. PUBLIC STREET TREES ARE PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124(e)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. THE REQUIRED STREET TREES FOR THIS PROJECT IS 41 STREET TREES.
 3. THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, PLANT MATERIALS, 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 REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
 4. AT THE TIME OF INSTALLATION, ALL SHRUBS AND OTHER PLANTINGS LISTED HEREWITH 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.
 5. THE REMOVAL OF TREES 30" OR GREATER DHB IS PROHIBITED WITHOUT COUNTY APPROVAL.



SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS AND PERIMETER PROPERTIES				TOTAL
	1	2	3	5	
PERIMETER/PLANTAGE DESIGNATION	C	A	C	NA	C
LANDSCAPE TYPE					
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	361'	475'	330'	216'	687'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED	361'	475'	330'	216'	687'
SHADE TREES	140	190	140	90	560
EVERGREEN TREES	120	170	120	75	485
SHRUBS	-	-	-	-	-
NUMBER OF PLANTS PROVIDED					
SHADE TREES	9	8	9	18	44
EVERGREEN TREES	18	17	17	35	70
OTHER TREES (2:1 SUBSTITUTION)	-	-	-	-	-
SHRUBS (10:1 SUBSTITUTION)	-	-	-	-	-
EX. SPECIMEN TREES TO REMAIN	-	-	-	-	-
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED					

* OR EQUAL SUBSTITUTION AT FINAL PLAN PLANTINGS SHALL CONFORM WITH BGE REQUIREMENTS

STREET TREE CALCULATIONS

STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED
CLOVIS PLACE	1328/40	33	33
SUPERIOR AVENUE	101/40	3	3
OLD SCAGGSVILLE RD	216/40	5	5
TOTAL		41	41

PLANTINGS SHALL CONFORM WITH BGE REQUIREMENTS

LANDSCAPE SCHEDULE 'C'

NUMBER OF DWELLING UNITS	10 SFA
NUMBER OF TREES REQUIRED (1:0U SFA)	10
NUMBER OF TREES PROVIDED	10
SHADE TREES (2:1 SUBSTITUTION)	-
SHRUBS (10:1 SUBSTITUTION)	-

**SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING**

NUMBER OF PARKING SPACES	31
NUMBER OF TREES REQUIRED	4
NUMBER OF TREES PROVIDED	4
SHADE TREES (2:1 SUBSTITUTION)	-
SHRUBS (10:1 SUBSTITUTION)	-

ISLANDS 1/9 = 4

LANDSCAPE SCHEDULE NOTE:

1. ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HRD PLANTING SPECIFICATIONS.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
3. 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.
4. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO DIGGING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

Specimen Tree Chart

Key (DBH)	Species	Size (in dbh)	CRZ (feet radius)	Comments	Action
1	Red maple	37	56.5	good condition	TO BE REMOVED
2	Red maple	39	45	good condition	TO BE REMOVED
3	Red maple	34	51	fair condition, limb dieback	TO BE REMOVED
4	Red maple	30.5	45.75	good condition	TO BE REMOVED
5	Red maple	31.5	47.25	poor condition, major trunk rot	TO BE REMOVED
6	Red maple	30.5	45.75	fair condition, limb dieback	TO REMAIN
7	Tulip poplar	32.5	48.75	good condition	TO REMAIN
8	Sycamore	30	45	fair condition, bearing narrow crown	TO REMAIN

NOTE:
-PER WP-17-067 REPLACEMENT TREES PER THE REMOVAL OF SPECIMEN TREES 1, 2, 3, 4 AND 5 SHALL BE PLANTED AS PART OF THE FINAL PLAN SUBMISSION. LOCATION OF PLANTINGS SHALL BE DETERMINED UNDER THE FINAL PLAN SUBMISSION

- PER WP-17-067
1. REMOVAL OF THE FIVE (5) SPECIMEN TREES WILL REQUIRE REPLACEMENT MITIGATION AT A RATIO OF TWO (2) LARGER CALIPER NATIVE TREE SPECIES (AT LEAST THREE (3) INCHES DBH) FOR EACH SPECIMEN TREE REMOVED (10 TREES TOTAL). THE MITIGATION PLANTING CAN BE PROVIDED AS PART OF THE REQUIRED PERIMETER LANDSCAPING FOR THIS PROJECT. YOU MUST SUBMIT A SUPPLEMENTAL PLAN WITH YOUR FINAL SUBMISSION PLAN FOR THIS PROPERTY THAT SHOWS HOW YOU PLAN TO ADDRESS THIS ALTERNATIVE FOREST CONSERVATION MITIGATION.
 2. SPECIMEN TREES 6, 7, AND 8 MUST BE PROTECTED DURING CONSTRUCTION. A REGISTERED ARBORIST MUST INSPECT THE TREES AND IMPLEMENT RECOMMENDATIONS FOR PROFESSIONAL PRUNING OF ROOTS AND FOLIAGE. ALL PRUNING MUST BE PERFORMED BY A MARYLAND LICENSED TREE EXPERT. TREE PROTECTION FENCING MUST BE INSTALLED AROUND THE ENTIRE PERIMETER OF EACH SPECIMEN TREE TO THE GREATEST EXTENT POSSIBLE TO PREVENT ROOT AND FOLIAGE DAMAGE DURING CONSTRUCTION. ALTERNATIVE DESIGNS OF THE SITE MUST BE CONDUCTED BY THE CONSULTANT IN ORDER TO MINIMIZE ROOT DAMAGE.

OWNER
MAGNOLIA MANOR, LLC
3675 PARK AVE., SUITE 301
ELLCOTT CITY, MD 21043
(410) 480-0023

DEVELOPER
TRINITY HOMES MARYLAND, LLC
3675 PARK AVE., SUITE 301
ELLCOTT CITY, MD 21043
(410) 480-0023

**PRELIMINARY PLAN
LANDSCAPE AND FOREST CONSERVATION
NOTES AND DETAILS**
FALCON PLACE
LOTS 1-10 & OPEN SPACE LOTS 11-12
A SUBDIVISION OF TAX MAP 50 - PARCELS 100 & 428
PARCEL 100: L 16937 F. 114
PARCEL 428: L 973 F. 467

TAX MAP: 50 GRID: 02
6TH ELECTION DISTRICT

ZONED: R-SC
PARCELS: 100 & 428
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
ENGINEERING, INC.**
ENGINEERS • SURVEYORS • PLANNERS
3300 N. RIDGE ROAD, SUITE 110 TEL: 410-461-7666
ELLCOTT CITY, MD 21043 FAX: 410-461-7666

PROFESSIONAL CERTIFICATE

DESIGN BY: RHV
DRAWN BY: KC
CHECKED BY: RHV
DATE: JULY 2018
SCALE: AS SHOWN
W.O. NO.: 16-15

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 # 130183 EXPIRATION DATE 09-27-2018

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