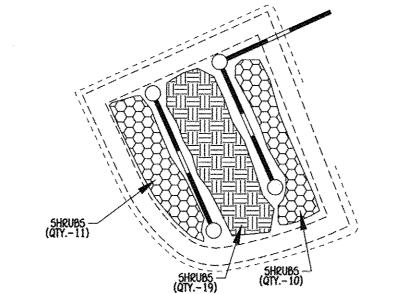


	50IL5 LEGEND		
50IL	NAME	CLA55	K FACTOR
UfA	Urban Land-Fallsington Complex. 0 to 2 percent slope	D	.02
UsB	Urbān Lānd—5āssāfrās—Beltsville Complex, 0 to 5 percent slope		.37
Soil Ma	Number: 19 (Savage, NE)		

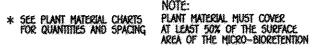


MICRO-BIORETENTION PLANTING DETAIL

# SUPPLEMENTAL PLAN PAGAN PROPERTY LOTS 1 AND 2

GRID No. 20 TAX MAP No. 31 PARCEL NO. 199 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

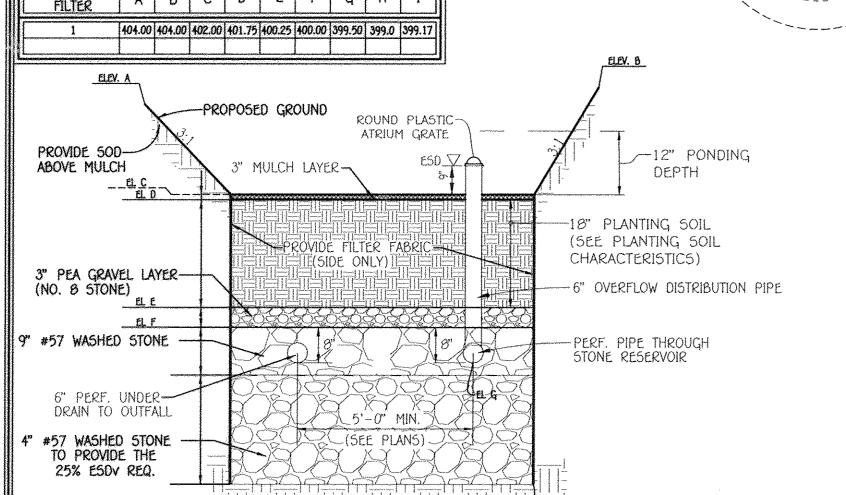
	MICRO-BIORETENTION PLANT MATERIAL			
MICRO-BIO QUANTITY	NAME	SIZE (HT.)	MAXIMUM SPACING (FT.) 3.0 FT.	
15	Itea virginica 'Henry's Garnet' Virginia Sweetspire			
15 llex crenata 'Helleri' Japanese Holly		24"-30"	2.5 FT.	



	STORMWA	AGEMENT SUMMARY	
AREA ID.	E5DV REQUIRED CU.FT.	E50v PROVIDED CU.FT.	REMARK5
SITE	599	452	MICRO-BIORETENTION (M-6) & GRASS SWALE (M-8)
TOTAL	599	452	

MICRO-BIORETENTION / BIORETENTION

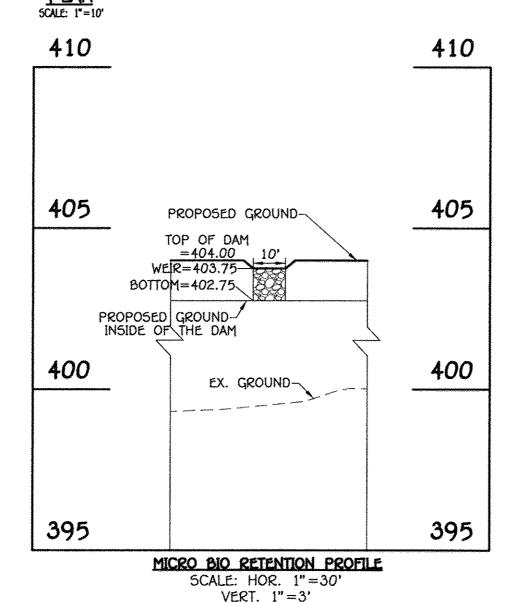
GROSS AREA = 1.20 ACRES (LOTS 1 & 2) LOD = 0.59 ACRES RCN = 77 TARGET Pe = 1.0"



MICRO BIO-RETENTION SECTION WITH 6" OVERFLOW DISTRIBUTION PIPE

NO SCALE
Table B.4. Materials Specifications for Micro-Bioretention, Rain Gardens & Landscape Infiltration

Material	Specification	5ize	Notes
Plantings	see Appendix A; Table A.4	n/à	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%	and an extra process of the second	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
Pea gravel diaphragm	ped gravel: ASTM-D-440	No. 8 or No. 9 (1/8 to 3/8)	
Curțăin drăin	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile		n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AA5HTO M-43	No. 57 or No. Aggregate (3/8° to 3/4°)	
Underdråin piping	F 750, Type PS 20 of AASHTO M-270	4" to 6" rigid schedule 40 PVC or 50R35	Slotted or perforated pipe; 3/8" pert. © 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4 inch galvanized hardware cloth
Poured in place concrete (if required)	M5HA Mix No. 3; f = 3500 psi at 28 days, normal weight, air-entrained; reinforcing to meet A5TM-615-60	n.ā	on-site testing of poured-in-place concrete required:  20 day strength and slump test; all concrete design  (cast-in-place or pre-cast) not using previously approved  State or local standards requires design drawings sealed  and approved by a professional structural engineer  licensed in the State of Maryland — design to include  meeting ACI Code 350.R/09; vertical loading [H-10 or  H-201; allowable horizontal loading (based on soil  pressures); and analysis of potential cracking
5and	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone (MSHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.



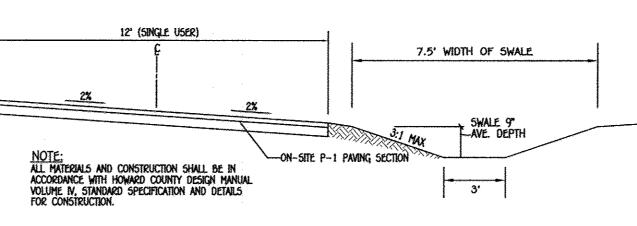
## OPERATION & MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

A. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY.
MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2. 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.

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. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.



#### VICINITY MAP 5CALE: 1" = 1200'



TYPICAL PRIVATE DRIVE & SWALE SECTION NOT TO SCALE

# SITE ANALYSIS DATA CHART

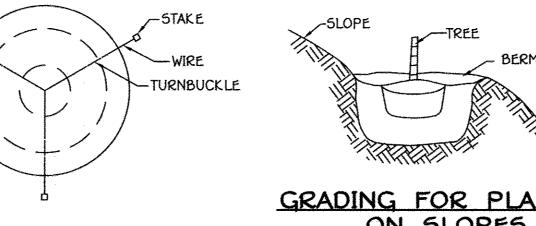
A. TOTAL AREA OF THIS SUBMISSION = 1.377 AC. ±. LIMIT OF DISTURBED AREA = 25,788 SQ.FT. OR 0.59 Ac. + PRESENT ZONING DESIGNATION = R-20 (PER 10/06/2013 COMPREHENSIVE ZONING PLAN)

PROPOSED USE: RESIDENTIAL PREVIOUS HOWARD COUNTY FILES: ECP-16-068 TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0.00 AC± TOTAL AREA OF STEEP SLOPES: MODERATED STEEP SLOPES: 15%-24.9% = 0.00 AC+

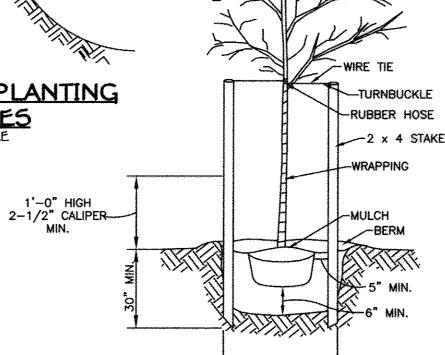
STEEP SLOPES: 25% OR GREATER = 0.00 AC\* TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 AC.+ TOTAL AREA OF STREAM (INCLUDING BUFFER) = 0.00 AC. \* TOTAL AREA OF EXISTING FOREST = 0.00 AC\* TOTAL AREA OF FOREST TO BE RETAINED = 0.00 AC+ TOTAL AREA OF LOTS / BUILDABLE PARCELS = 1.377 AC+ TOTAL GREEN OPEN AREA = 1.060 AC+

TOTAL IMPERVIOUS AREA = 0.215 AC+ TOTAL AREA OF ERODIBLE SOILS = 0.00 AC. ± TOTAL AREA OF ROAD DEDICATION = 0.094 AC. ±

# STAKING DETAIL



GRADING FOR PLANTING



### OWNER/DEVELOPER JOSEPH AND MARY PAGAN

5ta. 31R1 N 565,303.479 E 1,372,517.790 5ta. 3784 N 563,920.557 E 1,373,109.173 Elev.= 401.36 Fisher, Collins And Carter, Inc.

Subject Property Zoned R-20 Per 10/06/13 Comprehensive Zoning Plan.

Coordinates Based On Nad '83, Maryland Coordinate System As Projected By Howard County Geodetic

This Plan Is Based On Field Run Monumented Boundary Survey Performed On Or About January, 2016 By

Control Stations No. 31R1 And No. 3784.

General Notes:

B.R.L. Denotes Building Restriction Line

Denotes Iron Pin Set Capped "F.C.C. 106".

Denotes Iron Pipe Or Iron Bar Found.

Denotes Angular Change In Bearing Of Boundary Or Rights-Of-Way.

Denotes Concrete Monument Set With Aluminum Plate "F.C.C. 106".

Denotes Concrete Monument Or Stone Found.

10. All Areas Are More Or Less (±).

11. Distances Shown Are Based On Surface Measurement And Not Reduced To Nad '83 Grid Measurement. 12. For Flag Or Pipestem Lots, Refuse Collection, Snow Removal And Road Maintenance is To Be Provided At The Junction Of The Flag Or Pipestem And The Road Right-Of-Way And Not Onto The Flag Or Pipestem

13. Driveways Shall Be Provided Prior To Issuance Of A Use And Occupancy Permit For Any New Dwellings To Ensure Safe Access For Fire And Emergency Vehicles Per The Following (Minimum) Requirements:

a). Width - 12 Feet (16 Feet Serving More Than One Residence); b). Surface - Six (6") Inches Of Compacted Crusher Run Base With Tar And Chip Coating.

c). Geometry — Māximum 15% Grāde, Māximum 10% Grāde Chānge And 45—Foot Turning Rādius; d). Structures (Culverts/Bridges) — Cāpāble Of Supporting 25 Gross Tons (H25—Loāding); e). Drainage Elements - Capable Of Safely Passing 100 Year Flood With No More Than 1 Foot

Depth Over Surface; f). Structure Clearance - Minimum 12 Feet;

g). Maintenance — Sufficient To Ensure All Weather Use.

14. Property Subject To Prior Department Of Planning And Zoning File No's: ECP-16-068.

15. No Cemeteries Exist On The Subject Property Based On Visual Observation Or Listed In Available Howard

County Cemetery Inventory Map.

16. There Is An Existing Dwelling, Shed And Chain Link Fence On Lot 2 To Remain. No New Buildings, Extensions Or Additions To The Existing Dwelling Are To Be Constructed At A Distance Less Than The Zoning Regulation Requirements.

17. Site is Not Adjacent To A Scenic Road.

18. A Letter Of Findings Dated July 14, 2016 Prepared By Eco-Science Professionals, Inc. Determined That There Are No 100 Year Floodplain, Wetlands, Stream(s) And/Or Their Buffers, And Steep Slopes On—Site. 19. Plat Is Exempt From Providing Forest Conservation Obligation In Accordance With Section 16.1202(b)(1)(viii) Because This Is A Minor Subdivision That Creates One (1) New Lot And Has No

Further Subdivision Potential. 20. Water And Sewer Service To These Lots Will Be Granted Under The Provisions Of Section 18.122.8 Of The

Howard County Code. 21. Public Water And Sewer Allocation Will Be Granted At The Time Of Issuance Of The Building Permit If

Capacity Is Available At That Time. 22. Stormwater Management Is In Accordance With The M.D.E. Storm Water Design Manual, Volumes I & II,

Revised 2009. Non-Structural Practices in Accordance With Chapter 5 Are Being Utilized. 23. This Plat Is In Compliance With The Amended Fifth Edition Of The Subdivision And Land Development

Regulations Per Council Bill 45-2003 And The 10/06/13 Comprehensive Zoning Plan. Development Or Construction On These Lots Must Comply With Setback And Buffer Regulations in Effect At The Time Of Submission Of The Site Development Plan. Waiver Petition Application, Or Building/Grading Permit.

24. Landscaping For Lots 1 And 2 Is Provided In Accordance With Section 16.124 Of The Howard County

Code And The Landscape Manual. A Landscape Surety in The Amount Of \$3,450.000 Based On 8 Shade Trees @ \$300/5hade Tree And 7 Evergreen Trees @ \$150/Evergreen Tree Will Be Completed With The SDP And Bonded With The Building/Grading Permit.

25. Approval Of A Site Development Plan Is Required For The Development Of Residential Lot Within This Subdivision Prior To Issuance Of Any Grading Or Building Permits For New House Construction In Accordance With Section 16.155 Of The Subdivision And Land Development Regulations.

26. This Development is Designed To Be in Accordance With Section 16.127 - Residential Infill Development Of The Subdivision And Land Development Regulations. The Developer Of This Project Shall Create Compatibility With The Existing Neighborhood Through The Use Of Enhanced Perimeter Landscaping, Berms, Fences, Similar Housing Unit Types And The Directional Orientation Of The Proposed House. The Minimum Setback Requirements Have Been Met And The Shown Setback Is In Compliance With The Residential Infill Development Requirements. In Addition A Shared Use—In—Common Driveway Will Be Provided As A Connection To The Public Road.

27. Open Space Requirements Are Provided By A Fee-In-Lieu Payment Of \$1,500.00.

28. A Pre-Submission Community Meeting Was Conducted On June 17, 2016 For The Purpose Of The Developer To Provide Information To The Community Regarding The Proposed Residential Development And To Allow The Community To Ask Questions And To Make Comments, Per Section 16.128(d) Of The Subdivision Regulations.

29. A Traffic Study Is Not Required For This Project Since This Is A Minor Subdivision

30. This Property is Located Within The Metropolitan District And Will Be Served By Public Water And Sewer. 31. Lot 1 Is Subject To Section 108.0(E) Of The Zoning Regulations. At Least 10% Of The Dwelling Units Shall Be Moderate Income Housing Units (M.I.H.U.) Or An Alternative Compliance Will Be Provided. The Developer Shall Execute A M.I.H.U. Agreement With The Department Of Housing To Indicate How The M.I.H.U. Requirement Will Be Met. The M.I.H.U. Agreement And Covenants Will Be Recorded Simultaneously With This Plat In The Land Records Office Of Howard County, Maryland. This Development Will Meet M.I.H.U. Alternative Compliance by A Payment Of A Fee-In-Lieu To The

Department Of Housing For Each Required Unit.

32. Moderate Income Housing Unit (M.I.H.U.) Tabulation:
a. M.I.H.U. Required = (1 Lots x 10%) = 0.1 M.I.H.U. b. M.I.H.U. Proposed = Developer Will Pursue Alternative Compliance By Paying A Fee-In-Lieu To

The Howard County Housing Department For The Units Required By The Development. c. An Executed M.I.H.U. Agreement With The Howard County Housing Department Has Been Completed And Recorded Simultaneously With This Plat.

d. Lot 2 is Exempt From M.I.H.U. Requirements. An M.I.H.U. Agreement And Declaration Of Covenants Are Recorded Simultaneously With The Final Plat.

34. This Subdivision Is In Conformance With The Latest Howard County Standards Unless Alternative Compliance Has Been Approved.

35. Noise Analysis Study Dated January, 2017 Was Prepared By MARS Group. The Unmitigated 65dBA Noise Line Contour Line Drawn On This Plan Is Advisory As Required By The Howard County Design Manual, Chapter 5, Revised February, 1992 And Cannot Be Considered To Exactly Located The 65dBA Noise Exposure. The Unmitigated 65dBA Noise Contour Line Was Established By Howard County To Alert Developers, Builders And Future Residents That Areas Beyond This Threshold May Exceed Generally Accepted Noise Levels Established By The U.S. Department Of Housing And Urban Development.

36. The Private Use-In-Common Driveway Access Easement And Maintenance Agreement For Shared Driveway On Lots 1 And 2 is Recorded Simultaneously With This Plat. 37. No Historic Structures Exist Within The Limits Of This Plat Submission.

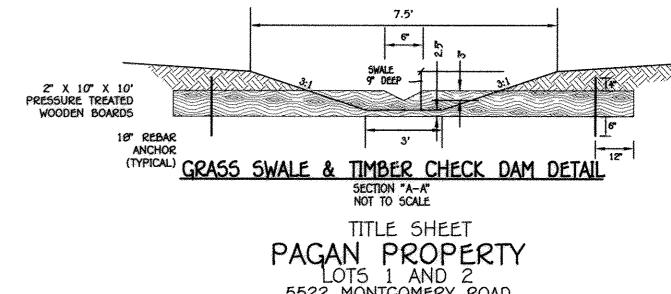
38. The Existing Topography Shown Hereon is Based On A Topographic Survey Performed By Fisher, Collins & Carter, Inc. In April, 2016 And Supplemented With Howard County GIS Topography At 5' Contour Interval Interpolated For 2' Contour Interval. 39. All Construction Shall Be In Accordance With The Latest Standards And Specifications Of Howard County

Plus MSHA Standards And Specification If Applicable 40. 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 The Start Of Work.

41. The Contractor Shall Notify "Miss Utility" At 1-800-257-7777 At Least 48 Hours Prior To Any Excavation Work Being Done.

42. 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.

43. Developer Reserves Unto Itself, its Successors And Assigns, All Easements Ehown On This Plan For Water, Sewer, Storm Orainage, And Other Public Utilities, Located In, On, Over And Through Lots/Parcels, Any Conveyances Of The Aforesaid Lots/Parcels Shall Be Subject To The Easements Herein Reserved. Whether Or Not Expressly Stated in The Deed(s) Conveying Said Lot(s)/Parcels. Developer Shall Execute And Deliver Deeds For The Easements Herein Reserved To Howard County. Upon Completion Of The Public Utilities And Their Acceptance By Howard County, The County Shall Accept The Easements And Record The Deed(s) Of Easement in The Land Records Of Howard County.



5522 MONTGOMERY ROAD

ZONED R-20

TAX MAP No. 31 GRID No. 20 PARCEL No. 199 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: JUNE, 2017

F-17-033

FISHER, COLLINS & CARTER, INC. iuare office park – 10272 baltimore national pike ELLICOTT CITY, MARYLAND 21042 (410) 461 – 2055

10-12-17 10.11.17

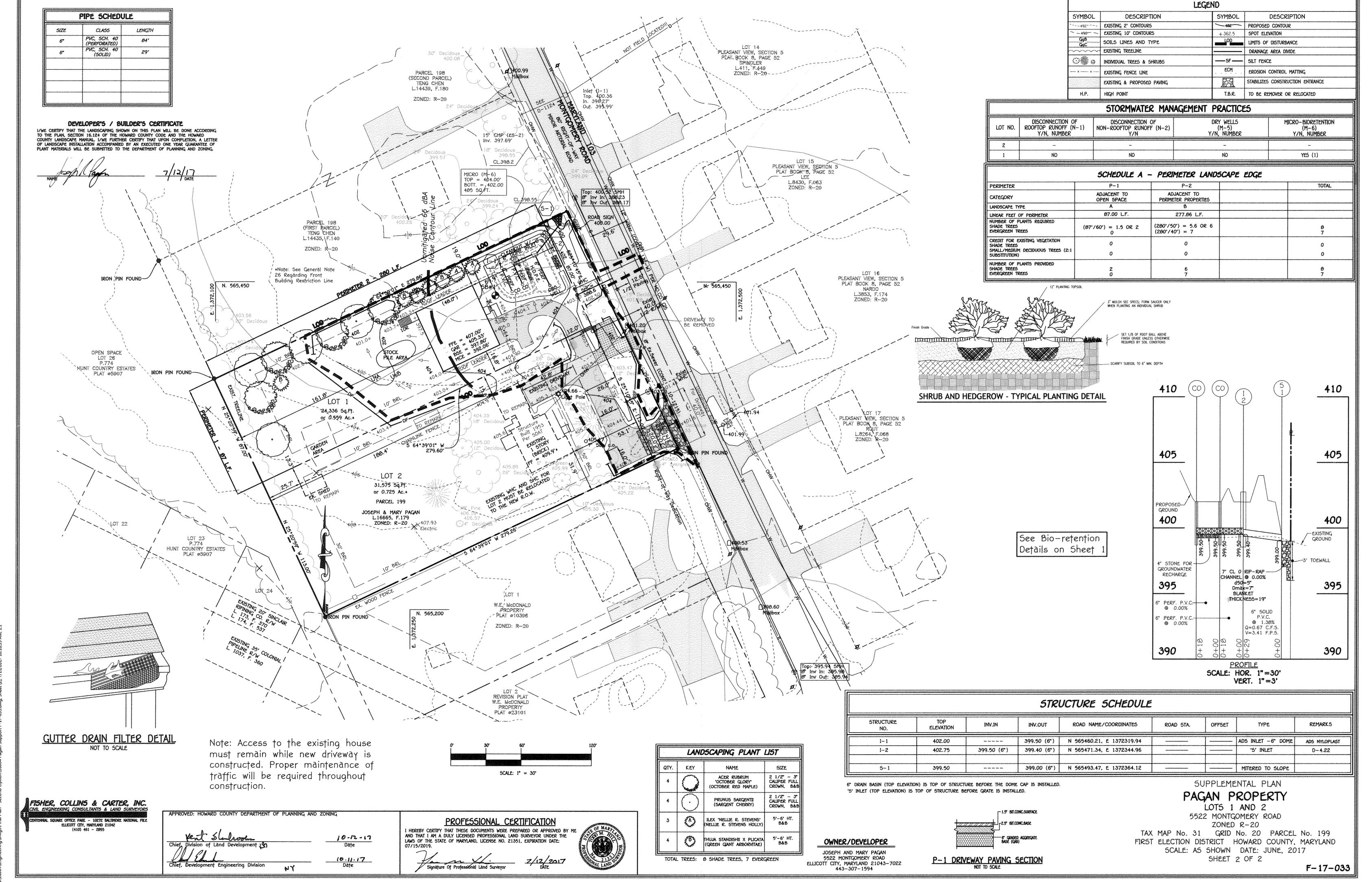
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

PROFESSIONAL CERTIFICATION HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21351, EXPIRATION DATE:

TREE PLANTING

5522 MONTGOMERY ROAD ELLICOTT CITY, MARYLAND 21043-7022

SHEET 1 OF 2



17 2016/1600A/Engineeripal Planck Einst Blan . Carond Ontival 160M Bagas Connect E. 17 032 due Chack 12 711 1201