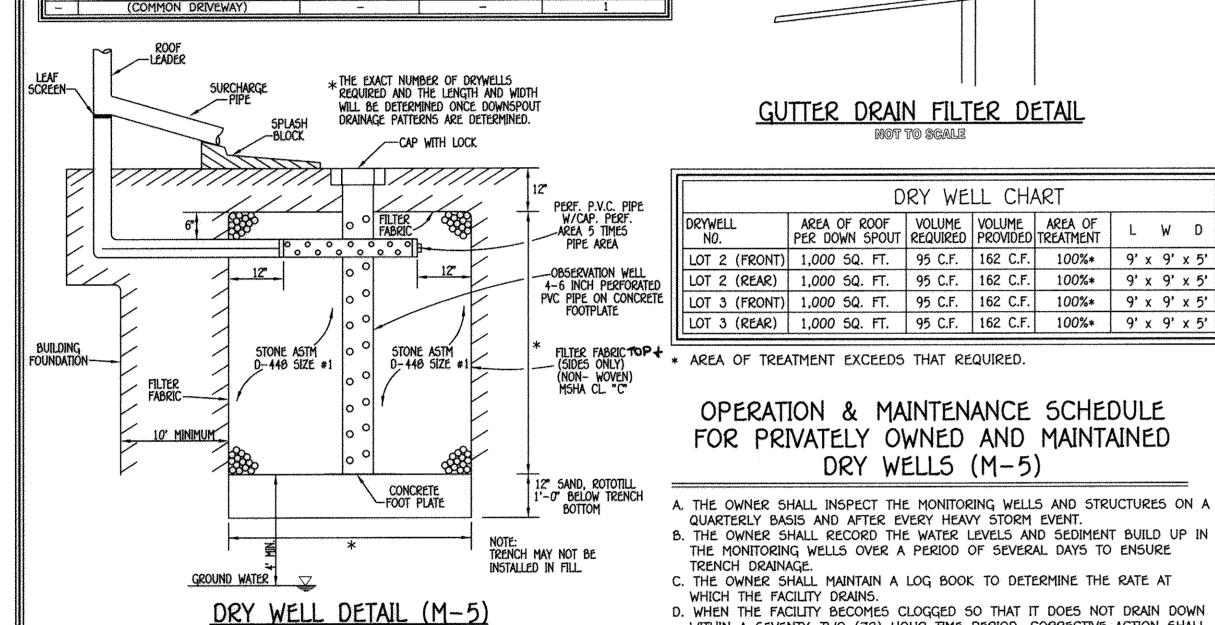
	STORMWA	ITER MAN	AGEMENT SUMMARY	
area id.	E50v REQUIRED CU.FT.	ESDV PROVIDED CU.FT.	REMARKS	
SITE	1,906	1,915	NON-ROOFTOP DISCONNECTION (N-2), DRYWELLS (M-5), & MICRO-BIORETENTION (M-6)	
TOTAL	1,906	1,915		

GROSS AREA = 10.41 ACRES LOD = 2.07 ACRES (SITE) RCN = 55.1TARGET Pe = 1.2"

1710.1	qc: 16 - 1.2			
	STORMWATER	MANAGEMENT	PRACTICES	
LOT No.	ADDRE55	NON-ROOFTOP DISCONNECTIONS N-2 (NUMBER)	DRYWELLS M-5 (NUMBER)	MICRO-BIORETENTION M-6 (NUMBER)
1	13000 BRIGHTON DAM ROAD	900	-	
2	13010 BRIGHTON DAM ROAD	1	2	



STORMWATER MANAGEMENT NOTES

1. FINAL GRADING IS TO BE SHOWN ON A GRADING PLAN.

. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010. MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1,000 SQ. FT. OR LESS. 3. DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET.

Material Specification plantings are site-specific

USDA soil types loamy sand or sandy loam; clay content <5% see Appendix A: Table A.4 compost 35-40% sandy loam 30% coarse sand 30% compost 40% Organic Content Min. 10% by dry weight (ASTM D 2974) shredded hardwood ea gravel: ASTM-D-448 Pea gravel diaphragm stone: 2" to 5" Curtain drain ornamental stone: washe Georextile PE Type 1 nonwoven VASHTO M-43 Gravel (underdrains and infiltration berms) No. 57 or No. 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 F 750, Type P5 20 or AASHTO M-270 Underdrain piping 4" to 6" rigid schedule on-site testing of poured-in-place concrete required Poured in place concrete (if M5HA Mix No. 3; f = 3500 psi at 28 days, normal weight 28 day strength and slump test: all concrete design air-entrained: reinforcing to meet ASTM-615-60 (cast-in-place or pre-cast) not using previously approve State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland — design to include meeting ACI Code 350.R/89; vertical loading EH-10 or H-201; allowable horizontal loading (based on soil pressures); and analysis of potential cracking

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

DENOTES PROPOSED WELL DENOTES FAILED PERC DENOTES PASSED PERC DENOTES PROPOSED SEPTIC EASEMENT DENOTES EXISTING SEPTIC EASEMENTS

- SOIL LINES AND TYPES

LEGEND

---- EXISTING 2' CONTOURS

- - EXISTING 10' CONTOURS

EXISTING TREE LINE

DENOTES 15% TO 25% SLOPES DENOTES 1500 Sq.Ft. ALTERNATE WELL SITE DENOTES EXISTING PERCS FROM 5/6/92 DENOTES PUBLIC 100 YEAR FLOODPLAIN, DRAINAGE & UTILITY EASEMENT

GUTTER DRAIN FILTER DETAIL

DRY WELL CHART

AREA OF ROOF VOLUME VOLUME AREA OF PER DOWN SPOUT REQUIRED PROVIDED TREATMENT

1,000 SQ. FT. 95 C.F. 162 C.F. 100%*

DRY WELLS (M-5)

INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE

F. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY

ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE

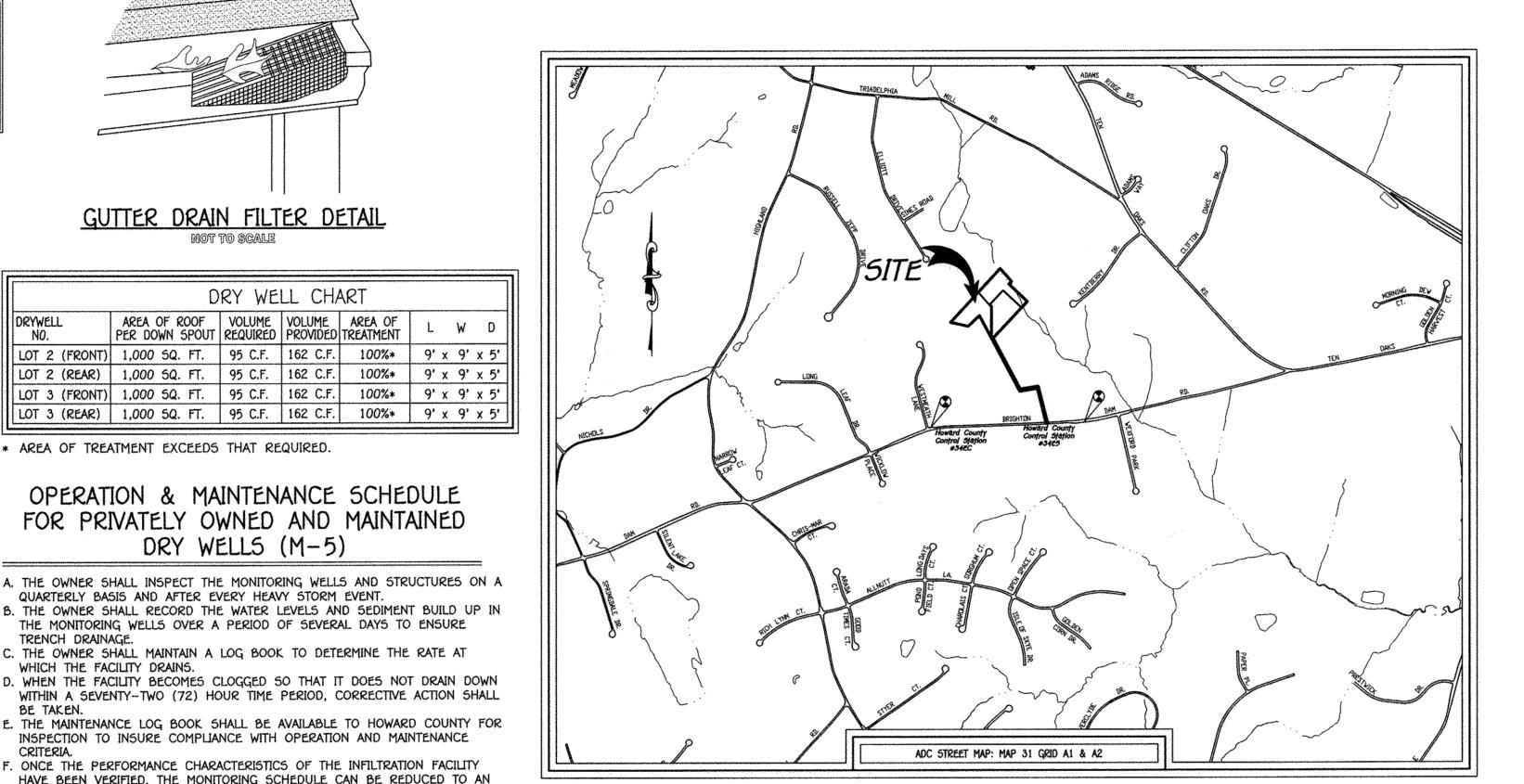
BE TAKEN.

#10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

FREQUENT SCHEDULE IS REQUIRED.

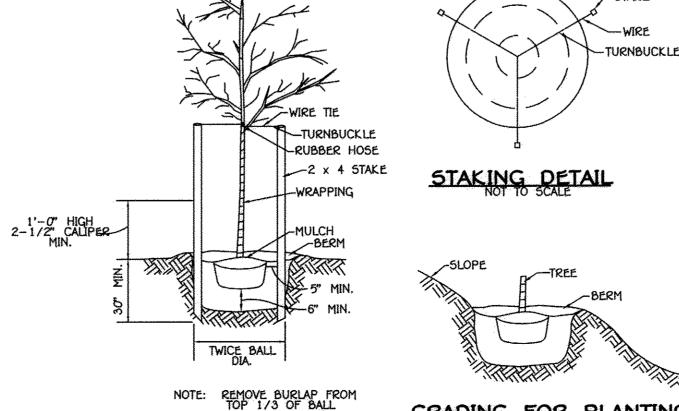
SUPPLEMENTAL PLAN BRIGHTON ESTATES LOTS 1 THRU 3

GRID No. 12 PARCEL NOS. 432 & 308 TAX MAP No. 34 HOWARD COUNTY, MARYLAND FIFTH ELECTION DISTRICT



VICINITY MAP

BENCHMARK INFORMATION 3.M.#1 - HOWARD COUNTY CONTROL STATION #34E5 - HORIZONTAL - NAD '83) £ 1,322,535.820 ELEVATION = 460.445 - VERTICAL - (NAVD '00) B.M.#2 - HOWARD COUNTY CONTROL STATION #34EC - HORIZONTAL - (NAD '83) ELEVATION = 496.354 - VERTICAL - (NAVO '88)



EXISTING GROUND [0' BOTTOM OF EXCAVATION NOTE: SOIL PROFILE BASED ON ON-SITE OBSERVATION

ON NOVEMBER 17, 2015. NO ROCK OR WATER WAS ENCOUNTERED

Minimum Lot Size Chart

3.362 Ac. ± 0.247 Ac. ± 3.115 Ac. ± 3.566 Ac. ± 0.370 Ac. ± 3.196 Ac. ±

3.467 Ac. ± 0.252 Ac. ± 3.215 Ac. ±

OWNER

RENE EPPI

ANETTA GRABOWSKA

13000 BRIGHTON DAM RD

CLARKSVILLE, MD 21029-1410

240-381-3386

1. Subject Property Zoned RR-DEO Per The 10/06/13 Comprehensive Zoning Plan Coordinates Based On Nad '83, Maryland Coordinate System As Projected By Howard County Geodetic Control Stations No. 34E5 And

Station No. 34E5 North 559,538.083 East 1,322,535.820 Elev.=460.445

Station No. 34EC North 559,469.751 East 1,320,470.709 Elev.=496.354 This Plan Is Based On Field Run Monumented Boundary Survey Performed On Or About April, 2015 By Fisher, Collins & Carter, Inc..

B.R.L. Denotes Building Restriction Line. • Denotes Iron Pin Set With Cap "F.C.C. 106".

Denotes Iron Pipe Or Iron Bar Found.

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

■ Denotes Concrete Monument Set With Cap "F.C.C. 106" # Denotes Concrete Monument Or Stone Found.

10. For Flag Or Pipe Stem Lots, Refuse Collection, Snow Removal And Road Maintenance Are Provided To The Junction Of Flag Or Pipe Stem And The Road Right-Of-Way Line Only And Not Onto The Flag Or Pipe Stem Lot Driveway 11. Driveways Shall Be Provided Prior To Residential Occupancy 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. (1 —1/2" Minimum);

c) Geometry - Maximum 15% Grade, Maximum 10% Grade Change And 45-Foot Turning Radius; d) Structures (Culverts/Bridges) - Capable Of Supporting 25 Gross Tons (H25-Loading); e) Drainage Elements - Capable Of Safely Passing 100 Year Flood With No More Than 1 Foot Depth Over Surface;

f) Structure Clearances - Minimum 12 Feet; g) Maintenance - Sufficient To Ensure All Weather Use. 12. No Grading, Removal Of Vegetative Cover Or Trees, Paving And New Structures Shall Be Permitted Within The Limits Of Wetlands,

Stream(s). Or Their Required Buffers And Floodplain. 13. All Lot Areas Are More Or Less (+).

14. Distances Shown Are Based On Surface Measurement And Not Reduced To Nad '83 Grid Measurement. 15. APFO Traffic Study Is Not Required For This Project Since It Is A Minor Subdivision.

16. No Cemeteries Exist On This Site Based On A Visual Site Visit And Based On A Examination Of The Howard County Cemetery Inventory Map. No Historic Structures Exist On This Site.

17. Previous Department Of Planning And Zoning File Numbers: ECP-15-043; WP-15-071; ECP-16-016.

18. A Floodplain Study For This Project Was Prepared By Fisher, Collins & Carter, Inc. Dated August 21, 2015 And Approved On October

19. This Property Is Not Located Within The Metropolitan District 20. Private Water And Sewage Will Be Used Within This Site.

21. There is An Existing Dwelling And Accessory Structures Located On Lot 1 Which Are 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.

22. This Plan Is In Compliance With The Amended Fifth Edition Of The Subdivision And Land Development Regulations Per Council Bill

45-2003 And The Zoning Regulations As Amended By Council Bill 75-2003. 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.

23. No Noise Study Is Required For This Project.

24. Wetlands Delineation Report Prepared By Eco-Science Professionals, Inc., Dated August 24, 2015. There is A 100 Year Floodplain, Wetlands And A Perennial Stream Located On Lots 2 And 3. A 35-Foot Environmental Buffer Has Been Provided From The

25. The Lots Shown Hereon Comply With The Minimum Ownership, Width And Lot Area As Required By The Maryland State Department Of

26. Section 16.121 Of The Subdivision Regulations Require A \$1,500.00 Payment For Fee-In-Lieu Of Providing Open Space For Non-Cluster Subdivisions In The RR Zoning District. The Developer Will Pay The Fee-In-Lieu.

27. Stormwater Management Will Be Provided In Accordance With Howard County And Maryland 378 Specifications. Stormwater Management Is In Accordance With Chapter 5. The Developer Will Be Required To Execute The Declaration Of Covenant And/Or A Developers Agreement For The Construction Of The Stormwater Management Practices And A Maintenance Agreement. Drywells (M-5), Non-Rooftop Disconnection (N-2), And A Micro-Bioretention (M-6) Have Been Provided To Treat Stormwater Management Requirements. These Devices Will Be Privately Owned And Maintained By The Individual Homeowners. Micro-Bioretention (M-6) Which Treats The Common Driveway Impervious Surface Will Have Maintenance Responsibilities Described In The Driveway Maintenance

Agreement.
28. V///) This Area Designates A Private Sewage Easement Of At Least 10,000 Square Feet As Required By The Maryland State
Department Of The Environment For Individual Sewage Disposal (COMAR 26.04.03). Improvements Of Any Nature In This Area Are Restricted Until Public Sewage Is Available. These Easements Shall Become Null And Void Upon Connection To A Public Sewage System. The County Health Officer Shall Have The Authority To Grant Adjustments To The Private Sewage Easement.

29. Existing Well And Septic Systems Are To Be Utilized On Lot 1 30. Wells On Lots 2 And 3 Must Be Drilled Prior To Howard County Health Department Signature Of The Final Plat.

31. This Subdivision Is Within The Growth Tier III Which Are Minor Subdivisions of 4 Lots Or Less That Utilize On-Site Septic Systems. 32. The Private Stormwater Management, Use-In-Common Driveway Access Easement And Maintenance Agreement For Shared Driveways Is To Be Recorded Simultaneously With The Plat. Lots 1 Thru 3 Shall Be The Only Lots Permitted To Use This Shared

33. This Subdivision is Exempt From Forest Conservation Requirements, Since it is A Minor Subdivision Creating One Additional Lot With No Further Subdivision Potential Per Section 16.1202(b)(1)(viii) Of The Howard County Code. This Subdivision Is Creating One

34. Sight Distance At Brighton Dam Road Was Determined To Be Adequate By The Development Engineering Division. 35. This Plan Has Been Prepared In Accordance With The Provisions Of Section 16.124 Of The Howard County Code And The Landscape Manual. Financial Surety For The Required Perimeter Landscaping Will Be Posted As Part Of The Builders Grading Permit In The

Amount Of \$1,200.00 (4 Shade Trees, Based ON The Total Number Of Required Trees, @ \$300.00 Each). 36. A Pre-Submission Community Meeting Was Held For This Project On November 21, 2014 In Accordance With Section 16.128 Of The

Subdivision And Land Development Regulations. 37. This Site Is Not Adiacent To A Scenic Road.

38. This Project Is In Conformance With The Latest Howard County Standards Unless Waivers Have Been Approved. 39. No Grading, Removal Of Vegetative Cover And Trees, Paving And New Structures Are Permitted Within The 100 Year Floodplain, 25-Foot Wetland Buffers And 100-Foot Streambank Buffer, Except For The Use-In-Common Driveway. The Disturbance To The Wetlands And its Buffers Are Deemed As A Necessary Disturbance For The Construction Of The Northern End Of The New Shared

Driveway, Per Section 16.116(c)(1)(i) Of The Subdivision Regulations. 40. All Construction Shall Be In Accordance With The Latest Standards And Specifications Of Howard County Plus MSHA Standards And

Specifications, If Applicable. 41. 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.

42. The Contractor Shall Notify "Miss Ufility" At 1-800-257-7777 At Least 48 Hours Prior To Any Excavation Work Being Done. 43. The Existing Topography Shown Hereon Is Based On Howard County GIS Topography And Supplemented With Field Run Location Of Existing Driveway, On-Site Structures, Wetlands, And Streams Taken From A Field Run Survey Prepared By Fisher, Collins & Carter,

Inc. Dated September 2015 & February 2016. 44. Existing Utilities Shown Based On Available County Information And Field Locations By Survey Prepared By Fisher, Collins & Carter,

Inc. Dated September 2015.

45. Driveway Entrance To Be Provided In Accordance With Howard County Detail R-6.06. 46. On March 21, 2016 The Development Engineering Division Approved A Request To The Design Manual, Volume III, Section 2.6.8 Which Requires A Public Access Place If A Shared Driveway Crosses The 100-Year Floodplain To Use A Private Use-In-Common Driveway. Subject To The Driveway Being Paved And That The 100-Year Floodplain Water Surface Elevation is No More Than 1 foot Over The

Driveway At Any Point. 47. WP-15-071 Was Approved On December 18, 2014 Waiving Section 16.120(b)(4)(i) To Combine and Reconfigure Two Irregular Shaped Lots Into Three Lots, Section 16.120(b)(4)(III)(b) To Subdivide The Property Into Three Lots With Environmentally Sensitive Features On The Three Proposed Lots, Section 16.120(b)(6)(ii)(a) To Utilize A Pipestern Design That Has A Pipestern Length Of Approximately 1.980 Feet In Lenath, Section 16.120(b)(6)(vi) To Reduce The Required 10 Foot Setback Between The Project Boundary And The Common Driveway, and Section 16.120(c)(2)(ii) To Reduce The Collective Frontage Required For The Driveway Easement In The Design

Manual, Approval is Subject To The Following Condition: 1. An Environmental Setback On The Final Plat Shall Be Provided As A 35' Setback From All Environmental Features And Buffers On the Forthcoming Final Plat.

2. No Grading, Removal Of Vegetative Cover And Trees, Paving, And New Structures Are Permitted Within The 100 Year Floodplain, 25-Foot Wetland Buffer, And 100 Foot Streambank Buffer, Except For The Existing Use-in-Common Driveway.

The Submission And Approval Of An Environmental Concept Plan (ECP) And A Final Subdivision Plat (Final). Each Of The Newly Created Pipestem Lots Must Equally Share Public Road Frontage (Collectively) At Brighton Dam Road.

5. A Use-In-Common Driveway Easement And Maintenance Agreement For Proposed Lots 1, 2, And 3 Must Be Prepared And Recorded With The Forthcoming Plat. 6. The Use-In-Common Driveway Entrance Onto Brighton Dam Road, A Major Collector Road, Shall Comply With The Design Manual

Minimum Sight Distance Requirements As Approved By The Development Engineering Division. 7. Lots 1 Thru 3 Shall Be Designed As A Minimum Lot Size Of 3 Acres Excluding The Pipestern Areas In Accordance With Section

16.120(b)(6)(iii) Of The Subdivision And Land Development Regulations And Section 103.0.L. Of The Zoning Regulations. 8. Waiver Approval Is Conditioned On Approval Of The Required Perc Testing Well And Septic Requirements Of The Health

9. Include This Waiver Decision As A General Note On The Final Plat. This Note Shall Include The Waiver File Number. The Sections Waived, Decision Date, And The Conditions Of Approval.

48. Subdivision Is Subject To Section 104.0.F. Of The Zoning Regulations, At Least 10% Of The Dwelling Units Shall Be Moderate Income Housing Units (M.I.H.U.) Or An Alternative Compliance Will Be Provided. The Developer Shall Execute A M.I.H.U. Agreement With The Department Of Housing To Indicate How The M.I.H.U. 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. Moderate Income Housing Unit (M.I.H.U.) Tabulation:

a. M.I.H.U. Required = (2 Lots x 10%) = 0.2 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. . An Executed M.I.H.U. Agreement With The Howard County Housing Department Will Be Completed Prior To Plat

SUPPLEMENTAL PLAN - TITLE SHEET

BRIGHTON ESTATES

LOTS 1 THRU 3 ZONED RR-DEO

TAX MAP No. 34 GRID No. 12 PARCEL Nos. 432 & 308 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: MAY, 2016 SHEET 1 OF 5

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 7.11.16

PROFESSIONAL CERTIFICATION

- 1.5" BIT, CONC. SURFACE

B. LIMIT OF DISTURBED AREA = 87,520 SQ.FT. OR 2.01 Ac. + (SWM BASED

PREVIOUS HOWARD COUNTY FILES: WP-15-071; ECP-16-016. TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0.79 AC±

TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 1.24 AC. *

TOTAL AREA OF EXISTING FOREST = 6.59 AC* (EXCLUDING FLOODPLAIN)

(SUBDIVISION IS EXEMPT FROM FOREST CONSERVATION REGULATIONS.

MINOR SUBDIVISION CREATING ONE ADDITIONAL LOT AND NO FURTHER

TOTAL IMPERVIOUS AREA = 0.32 AC+ (WITHIN LOD, EXCLUDES EXISTING

TOTAL AREA OF SLOPES IN EXCESS OF 15% = 0.74 AC*

TOTAL AREA OF STREAM (INCLUDING BUFFER) = 2.03 AC. =

TOTAL AREA OF LOTS / BUILDABLE PARCELS = 10.395 AC+

TOTAL AREA OF FOREST TO BE RETAINED = 4.68 AC+

TOTAL GREEN OPEN AREA = 1.68 AC+ (WITHIN LOD)

TOTAL AREA OF ERODIBLE SOILS = 3.00 AC.+

P. TOTAL AREA OF ROAD DEDICATION = 0.015 AC. ±

-2.5" BIT.CONC.BASE

P-1 DRIVEWAY

PAVING SECTION

NOT TO SCALE

SITE ANALYSIS DATA CHART

C. PRESENT ZONING DESIGNATION = RR-DEO

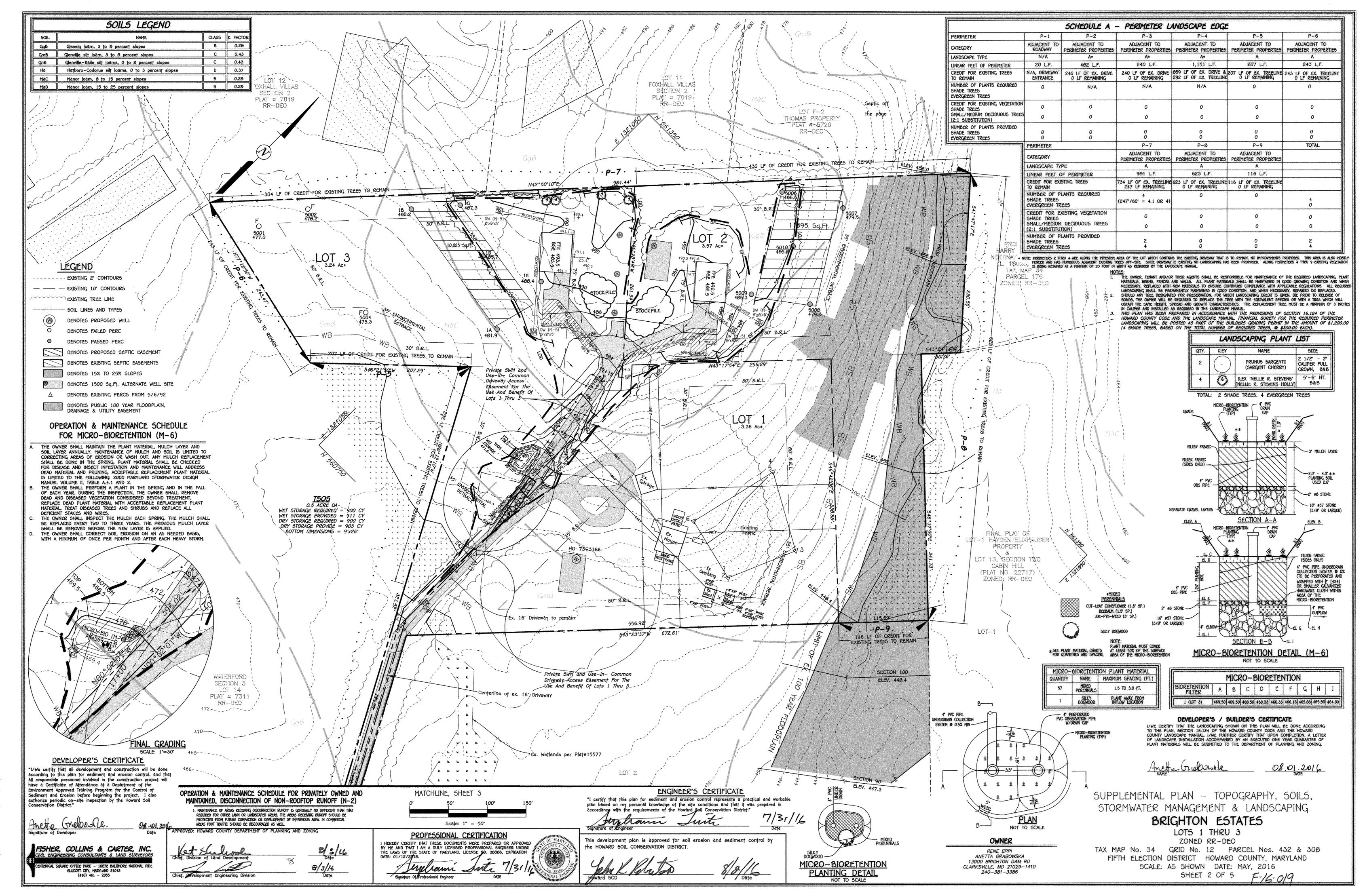
PROPOSED USE: RESIDENTIAL

SUBDIVISION POTENTIAL)

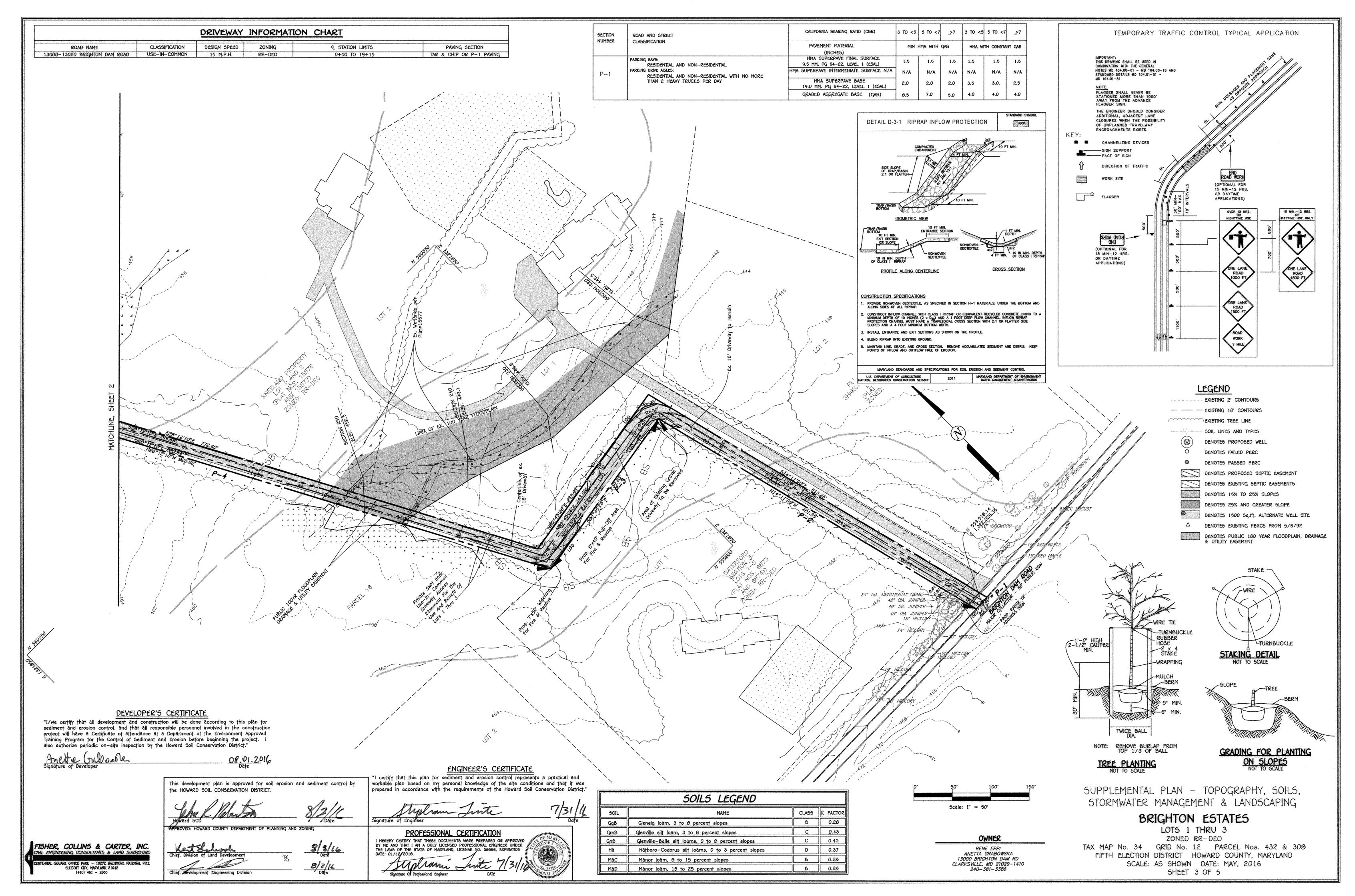
A. TOTAL AREA OF THIS SUBMISSION = 10.41 AC. ±.

(PER 10/06/2013 COMPREHENSIVE ZONING PLAN)

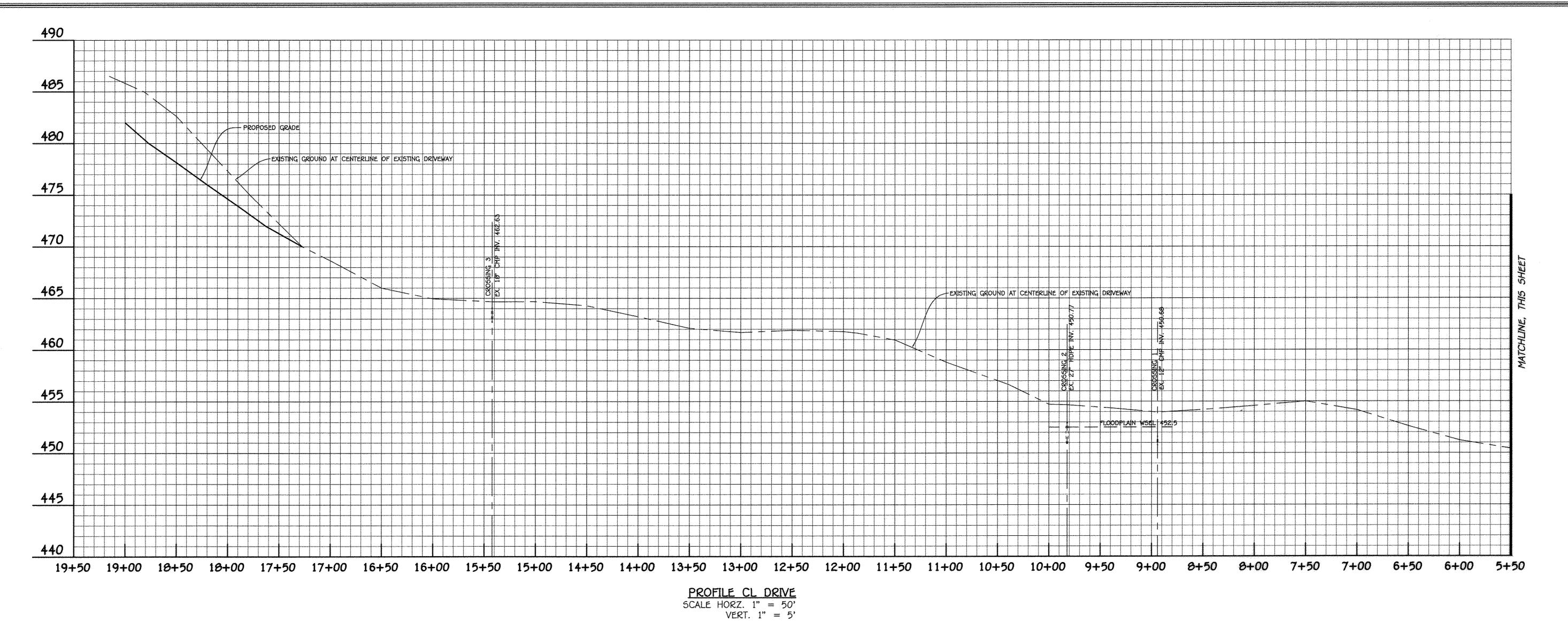
HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED by me and that I am a duly licensed professional engineer under

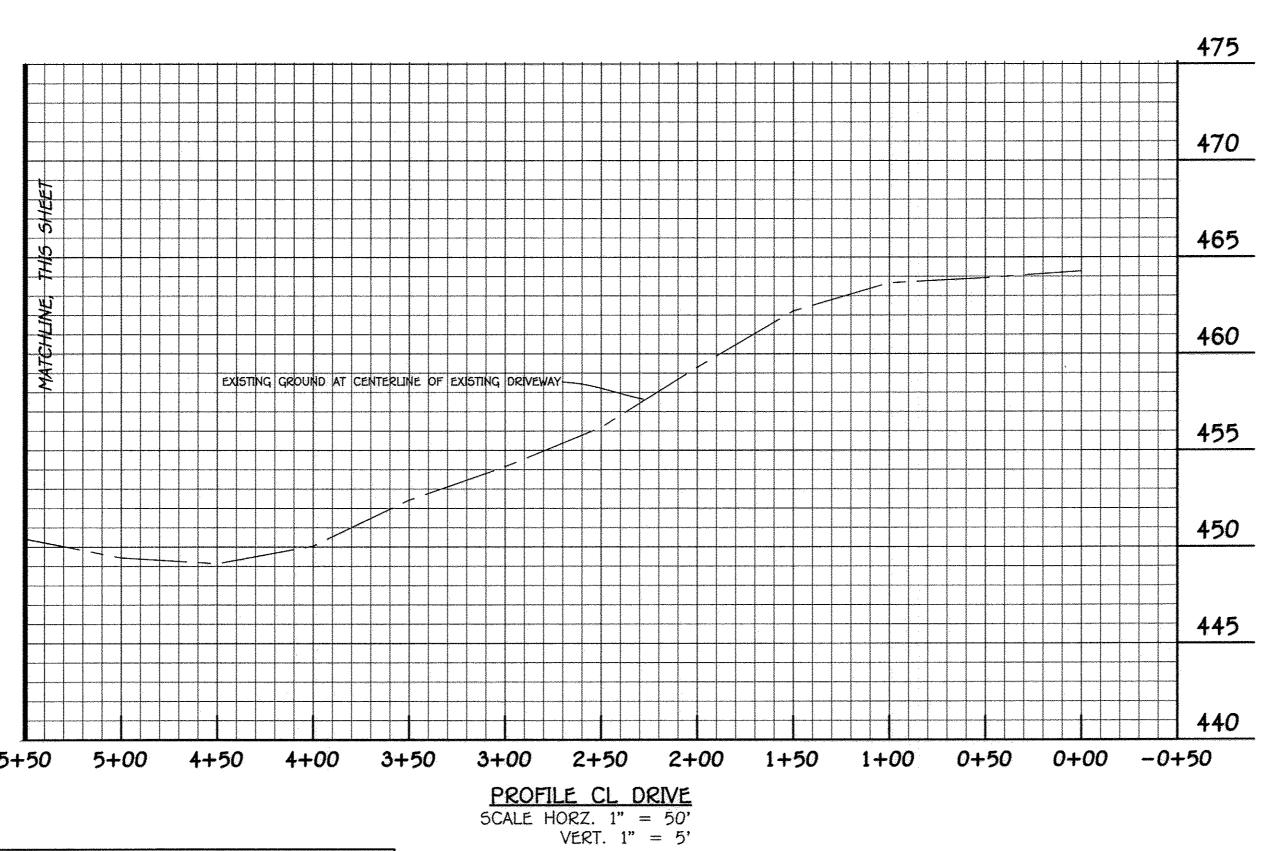


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SUPPLEMENTAL PLAN -EXISTING/PROPOSED DRIVEWAY PROFILE

BRIGHTON ESTATES

LOTS 1 THRU 3 ZONED RR-DEO

TAX MAP No. 34 GRID No. 12 PARCEL Nos. 432 & 308 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: MAY, 2016 SHEET 4 OF 5

OWNER RENE EPPI ANETTA GRABOWSKA 13000 BRIGHTON DAM RD CLARKSVILLE, MD 21029-1410 240-381-3386

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

A. Soil Preparation 1. Temporary Stabilization

a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.

c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.

a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:

i. Soil pH between 6.0 and 7.0. ii. Soluble salts less than 500 parts per million (ppm)

iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.

iv. Soil contains 1.5 percent minimum organic matter by weight. v. Soil contains sufficient pore space to permit adequate root penetration.

b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test. e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.

3. Topsoiling is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible

4. Areas having slopes steeper than 2:1 require special consideration and design.

5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:

a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may b used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of confrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter

b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison by, thistle, or others as specified.

c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil

a. Erosion and sediment control practices must be maintained when applying topsoil.

b. Uniformly distribute topsoil in a 5 to 0 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.

c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses. 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applications laws and must bear the name, trade name or trademark and warranty of the producer. 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding

which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 90 to 100 percent will pass through a #20 mesh sieve. 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or

other suitable means. 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

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

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

a. All seed must meet the requirement of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of

seed and seeding rate. b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws. c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cook as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less

d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

a. Dry Seeding: This includes use of conventional drop or broadcast spreaders. i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or

site-specific seeding summaries. ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with

weighted roller to provide good seed to soil contact.

b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.

i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.

ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction

c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).

i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P 0 (phosphorus), 200 pounds per acre; K 0 (potassium), 200 pounds per acre.

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.
 Mix seed and fertilizer on site and seed immediately and without interruption.

iv. When hydroseeding do not incorporate seed into the soil.

1. Mulch Materials (in order of preference) a. Straw consisting of thoroughly threshed wheat, rye, cat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.

b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into uniform fibrous physical

certify that this plan for sediment and erosion control represents a practical and This development plan is approved for soil erosion and sediment control by workable plan based on my personal knowledge of the site conditions and that it was the HOWARD SOIL CONSERVATION DISTRICT. prepared in accordance with the requirements of the Howard Soil Conservation District."

. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.

ii. WCFM, including dye, must contain no germination or growth inhibiting factors. iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the

growth of the grass seedlings. v. WCFM material must not contain elements or compounds at concentration levels that will by phyto—toxic. v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of

90 percent minimum. a. Apply mulch to all seeded areas immediately after seeding.

b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.

. Wood cellulose fiber used as mulch must be applied to a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of

Anchoring
a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard: i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.

ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petraset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be

heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4-15 feet wide and 300 to 3,000 feet long.

TEMPORARY SEEDING NOTES (B-4-4)

To stabilize disturbed soils with vegetation for up to 6 months.

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

1. Select one or more of the species or seed mixtures listed in Table 8.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.

2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.

3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section 8-4-3.A.1.b and maintain until the next seeding season. Temporary Seeding Summary

	e (from Figure B. (from Table B.1):	3): <u>6b</u>		Fertilizer Rate (10-20-20)	Lime Rāțe
Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	and the control of th	
BARLSY	\$ \$	8/1 - 8/15.	G.	436 lb/ac (10 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
oats	72	8/15 - 10/15	ΰ×		
WYE	192		√.) °		

PERMANENT SEEDING NOTES (8-4-5)

A. Seed Mixtures 1. General Use

Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan. b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or desthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.

c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency. d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary .

2. Turfords Mixtures

a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.

b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The

i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the

iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.

iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3

Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland"

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a) Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 1/2 inches in diameter The resulting seedbed must be in such condition that future moving of grasses will pose no difficulty. e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

			Permanent Se	eding Sum	mαrγ			
Hardiness Zone (from Figure B.3): 6b Seed Mixture (from Table B.3):				Fertilizer Rate (10-20-20)			Lime Rațe	
No.	5pecies	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P ₂ O ₅	K ₂ 0	
8	TALL FESCUE	100	Mar. 1-May 15 Aug. 15-Oct. 15	1/4-1/2 in.	45 lbs. per acre	90 b/ac (2 b/	(2 lb/	2 tons/ac (90 lb/ 1000 sf)
-					(1.0 lb/ 1000 sf)	1000 sf)	1000 sf)	1000 5)

ENGINEER'S CERTIFICATE

6/29/16 Date

PROFESSIONAL CERTIFICATION HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER HE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 30306, EXPIRATION DATE: 01/12/2018.

DEVELOPER'S CERTIFICATE "I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved

also authorize periodic on-site inspection by the Howard Soil Conservation District." Anetta Graboraha

Training Program for the Control of Sediment and Erosion before beginning the project. I

B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector. b. Sod must be machine cut at a uniform soil thickness to 4 inch, plus or minus 1/4 inch, at the time of cutting. Measurement for thickness must exclude top

growth and thatch. Broken pads and torn or uneven ends will not be acceptable. c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.

d. Sod must not be harvested or transplanted when moisture content (excessively dry of wet) may adversely affect its survival. e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or

a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod. b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids

which would cause dir drying of the roots. c. Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent alippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface. d. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping, and irrigating for any piece of sod within eight hours.

a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.

b. After the first week, sod watering is required as necessary to maintain adequate moisture content. c. Do not mow until the sod is firmly rooted. No more than % of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREAS

<u>Definition</u>

A mound or pile of soil projected by appropriately designed erosion and sediment control measures. To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and

changes to drainage patterns. Conditions Where Practice Applies Stockpile dreds are utilized when it is necessary to salvage and store soil for later use.

grass height of at least 3 inches unless otherwise specified.

material must be covered with impermeable sheeting.

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan. 2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading. 3. Runoff from the stockpile area must drain to a suitable sediment control practice.

4. Access the stockpile area from the upgrade side. 5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner. 6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge. . Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard 8-4-1 incremental Stabilization and Standard 8-4-4 8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section 8-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section 8-3 Land Grading.

HOWARD SOIL CONSERVATION DISTRICT (HSCD)
STANDARD SEDIMENT CONTROL NOTES

l. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1955 after the future LOD and protected areas are marked clearly in the field. A minimum of 40 hour notice to CID must be given at the following stages: a. Prior to the start of earth disturbance.

b. Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading,
c. Prior to the start of another phase of construction or opening of another grading unit.

Prior to the removal or modification of sediment control practices.

Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to avoid conflicts with this plan. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND

STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.
Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.

All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL

EROSION AND SEDIMENT CONTROL for topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the ground is frozen. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15 of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 ft. must be benched with stable outlet. All All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from

Site Analysis:
Total Area of Site: _____ 10.41 Acres 2.07 Acres Area Disturbed: Area to be roofed or paved: 0.36 Acres Area to be vegetatively stabilized: 1.71 Acres
Total Cut: 1.200 Cu. Yds.
Total Fill: 1.200 Cu. Yds.

Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly; and the next day after each rain event. A written report by the contractor, made available upon request, is part of every inspection and should include:

inspection type (routine, pre-storm event, during rain event) Name and title of inspector Weather Information (current conditions as well as time and amount of last recorded precipitation) Brief description of project's status (e.g., percent complete) and/or current activities Evidence of sediment discharges

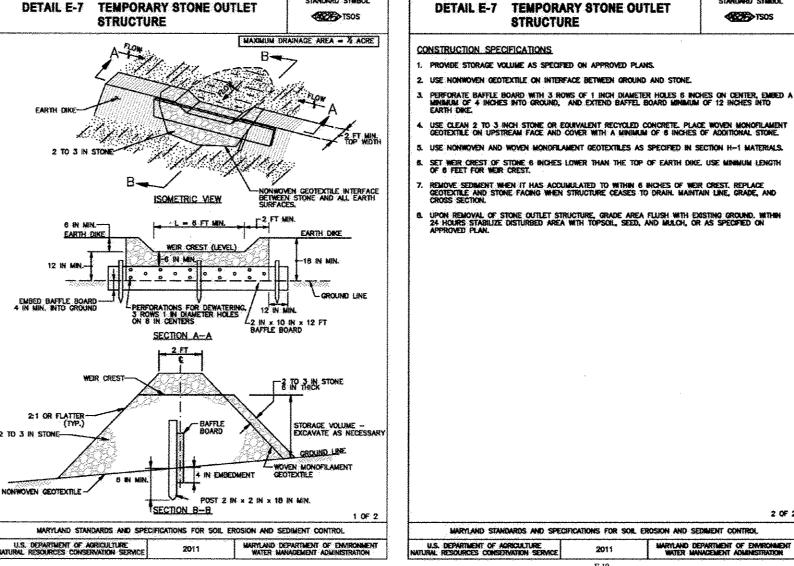
Identification of plan deficiencies identification of sediment controls that require maintenance entification of missing or improperly installed sediment controls Compliance status regarding the sequence of construction and stabilization requirements

Monitoring/sampling
Monitoring/sampling
Maintenance and/or corrective action performed
Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE).

Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE). Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of each workday.

Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may allowed by the CID per the list of HSCD-approved field changes. Disturbance shall not occur outside the LO.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the CID. Unless otherwise specified and approved by the CID, no more than 30 acres cumulatively may be disturbed at a given time. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.

15. Stream channels must not be disturbed during the following restricted time periods (inclusive): Use I and IP March 1 - June 15 Use IV March 1 - May 31 16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and associated permits shall be on-site and available when the site is active.



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL FROSION AND SEDIMENT CONTROL. DETAIL C-9 All Silt Fence and Super Silt Fence shall be placed on-the-confour, and be imbricated at 25 minimum intervals, with lower ends curied uphill by 2 in elevation. OR PROVIDE SOIL STABILIZATION MATTING
4 FT MIN. ALONG PLOW SURFACE PLOW -CONSTRUCTION SPECIFICATIONS USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2% INCH MAXIMUM OPENING). USE 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.005 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND, SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL U.S. DEPARTMENT OF AGRICULTURE

DETAIL E-1 SILT FENCE |----SF-----| CENTER TO CENTER __36 IN MIN. FENCE POST LENGTH DRIVEN MIN. 16 IN INTO GROUND 8 IN MIN, HEIGHT OF WOVEN SLIT FILM GEOTEXTILE ELEVATION STAPLE-STAPLE-STAPLE -------STAPLE JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW) CONSTRUCTION SPECIFICATIONS

SCE

STANDARD SYMBO

----SSF-----I

|-----SFD------|

MAXIMUM DRAINAGE AREA - 2 ACRI

UV RESISTANT IMPERMEABLE SHEETING ON BOTH SIDES OF FENCE

MARYLAND DEPARTMENT OF ENVIRONMEN WATER MANAGEMENT ADMINISTRATION

SECTION

2011

OWNER

RENE EPPI

ANETTA GRABOWSKA

13000 BRIGHTON DAM RD

CLARKSVILLE, MD 21029-1410

240-381-3386

-EARTH FILL

-PIPE (SEE NOTE 6)

ENTRANCE

PROFILE

PLAN MEW

PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.

PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD. THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE, PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE, PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN, WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY, A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.

PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS

MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT, ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SEDIMENT OF ROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACULUMING, SCRAPING, AND/OR SWEEPING, WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

10 FT MAX

ELEVATION

INSTALL 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOO'LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.

. FASTEN WOVEN SUT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.

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

EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM COING AROUND THE END!

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

2011

DIVERSION FENCE

10 FT MAX.

CROSS SECTION

DETAIL E-3 SUPER SILT FENCE

CHAIN LINK FENCING

WOVEN SLIT FILM GEOTEXTILE.

FLOW ____

CONSTRUCTION SPECIFICATIONS

OF THE SUPER SILT FENCE.

PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.

CONSTRUCTION SPECIFICATIONS

50 FT MIN.

USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL 2011 STANDARD SYMBOL STABILIZATION MATTING PSSMC - * Ib/ft (* Include shear stress) CHANNEL APPLICATION

CONSTRUCTION SPECIFICATIONS: USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO

USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN MEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SIGN, IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.

PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS, PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.

OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.

STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT. IO. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION 8-4 VEGETATIVE STABILIZATION.

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION SEQUENCE OF CONSTRUCTION OBTAIN A GRADING PERMIT AND HOLD PRE-CONSTRUCTION MEETING WITH COUNTY INSPECTOR, (2 WEEKS)

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT -800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/ INSPECTION AT 410-313-1330 AT LEAST 24 HOURS BEFORE STARTING WORK. INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER SILT FENCE, IVERSION FENCE, AND TSOS. (1 DAY) REMOVE NECESSARY TREES AND ROUGH GRADE COMMON DRIVEWAY. ROUGH GRADE LOTS. 1 WEEK PER LOT)

INSTALL TEMPORARY SEEDING AND PERMANENT SOIL STABILIZATION MATTING WHERE NECESSARY. (1 DAY PER LOT)
CONSTRUCT HOUSES AND DRIVEWAYS. INSTALL SEPTIC SYSTEMS. (4 MONTHS PER LOT)
INSTALL ROOF LEADERS & DRYWELLS UPON CONSTRUCTION OF HOUSES. FINE GRADE INSTALL PERMANENT SEEDING WITH CONSTRUCTION ON EACH LOT. (1 DAY PER LOT) UPON COMPLETION OF GRADING WITHIN DRAINAGE AREA TO TSOS, REMOVE TSOS, AND

NSTALL MICRO-BIORETENTION. (1 WEEK) ALL FINAL GRADES AND STABILIZATION SHOULD BE COMPLETED BEFORE ANY REMOVAL OF CONTROLS. WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE SEDIMENT CONTROL DEVICES MAY BE REMOVED. (3 DAYS) NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE EACH RAINFALL

ONLY THE OWNERS SHOWN HEREON MAY USE THESE PLANS TO OBTAIN BUILDING AND GRADING PERMITS.

SEDIMENT & EROSION CONTROL NOTES & DETAILS

BRIGHTON ESTATES

LOTS 1 THRU 3 ZONED RR-DEO

TAX MAP No. 34 GRID No. 12 PARCEL Nos. 432 & 308 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: MAY, 2016 SHEET 5 OF 5

ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855

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

