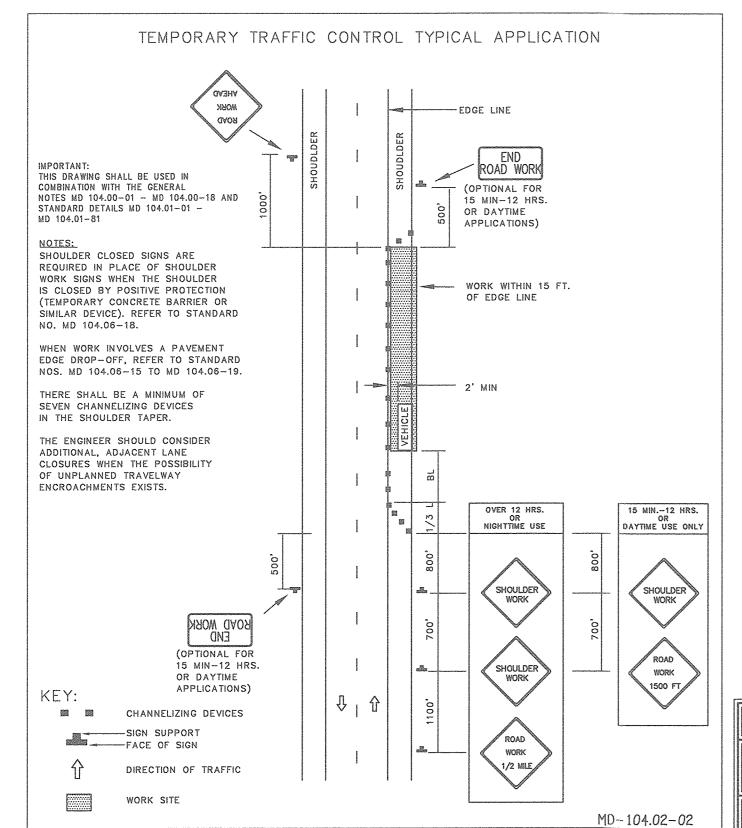
	SHEET INDEX							
5HEET	HEET NO. DESCRIPTION							
1		TITLE SHEET						
2		DEMOLITION PLAN						
3		IOUSE AND DRIVEWAY PLAN						
4		SEDIMENT AND EROSION CONTROL PLAN						
5		INLET DRAINAGE AREA MAP AND SOILS MAP						
6		LANDSCAPE PLAN AND FOREST CONSERVATION PLAN						
7		CHARTS, NOTES AND DETAILS						
8		STORM & DRIVEWAY PROFILES & DETAILS AND RETAINING WALL DETAIL						
9		CHARTS, NOTES AND DETNIS						

15% TO 24.9% 5LOPES

ſ.				
**************************************		Minimum	Lot Size	Chart
NOTICE STREET,	Lo† No.	Gross Area	Pipestem Ared	Minimum Lo† Size
(HEGONOONIO	3	11,800 Sq.F†.±	815 Sq.Ft.±	10,985 5q.F†.±
000000000000000000000000000000000000000	4	15,954 5q.F†.±	3,559 5q.Ft.±	12,395 Sq.F†.±
ANNERSON AND ANNERSON AND ANNERSON AND ANNERSON AND AND AND AND AND AND AND AND AND AN	5	14,469 5q.Ft.±	1,440 5q.F†.±	13,029 5q.Ft.±
Assessment	6	38,386 5q.F†.±	1,678 5q.F†.±	36,700 5q.Ft.±
Negation of the	7	13,876 5q.Ft.±	1,760 5q.F†.±	12,116 5q.F†.±
Podabowinary	8	15,082 Sq.Ft.±	2,421 5q.Ft.±	12,661 5q.F†.±

LEGEND									
5YMBOL	DESCRIPTION	5YMBOL	DESCRIPTION						
492	EXISTING 2' CONTOURS	_462	PROPOSED CONTOUR						
490	EXISTING 10' CONTOURS	+362.5	SPOT ELEVATION						
GgB GgC	SOILS LINES AND TYPE	LOD	LIMITS OF DISTURBANCE						
~~~~	EXISTING TREELINE		DRAINAGE AREA DIVIDE						
<b>~~~</b>	PROPOSED TREELINE	5F	SILT FENCE						
◎ ※ ø	INDIVIDUAL TREES & SHRUBS	55F	SUPER SILT FENCE						
PECIMEN (3)	SPECIMEN TREE	. ECM	EROSION CONTROL MATTING						
	EXISTING & PROPOSED PAVING	風	STABILIZES CONSTRUCTION ENTRANCE						
	25% OR GREATER SLOPES		PROPOSED DRYWELL (M-5)						

FLOW ARROW



	STORMWA	ATER MANA	GEMENT PRACTICE	5
LOT NO.	ADDRE55	DRY WELLS (M-5) Y/N, NUMBER	MICRO-BIORETENTION (M-6) Y/N, NUMBER	BIORETENTION (F-6) Y/N, NUMBER
1	4502 ILCHESTER ROAD	YE5, ONE (1)	YES, ONE (1) - MICRO-BIO 1	NO
2	4498 ILCHESTER ROAD	YE5, ONE (1)	NO	NO
3	4488 ILCHESTER ROAD	YE5, ONE (1)	NO	NO
4	4480 ILCHESTER ROAD	NO	NO	NO
5	4476 ILCHESTER ROAD	YE5, ONE (1)	NO	NO
6	4472 ILCHESTER ROAD	NO	NO	NO
7	4460 ILCHESTER ROAD	YE5, ONE (1)	NO	NO
8	4464 ILCHESTER ROAD	YES, ONE (1)	NO	NO

	STORMWA	TER MAN	AGEMENT SUMMARY
AREA ID.	E5DV REQUIRED CU.FT.	E5Dv PROVIDED CU.FT.	REMARK5
5ITE	4,436	4,509	DRY WELLS (M-5), MICRO-BIORETENTION (M-6) & BIORETENTION (F-6)
TOTAL	4,436	4,509	

GROSS AREA = 8.20 ACRES LOD = 3.07 ACRESRCN = 51.4

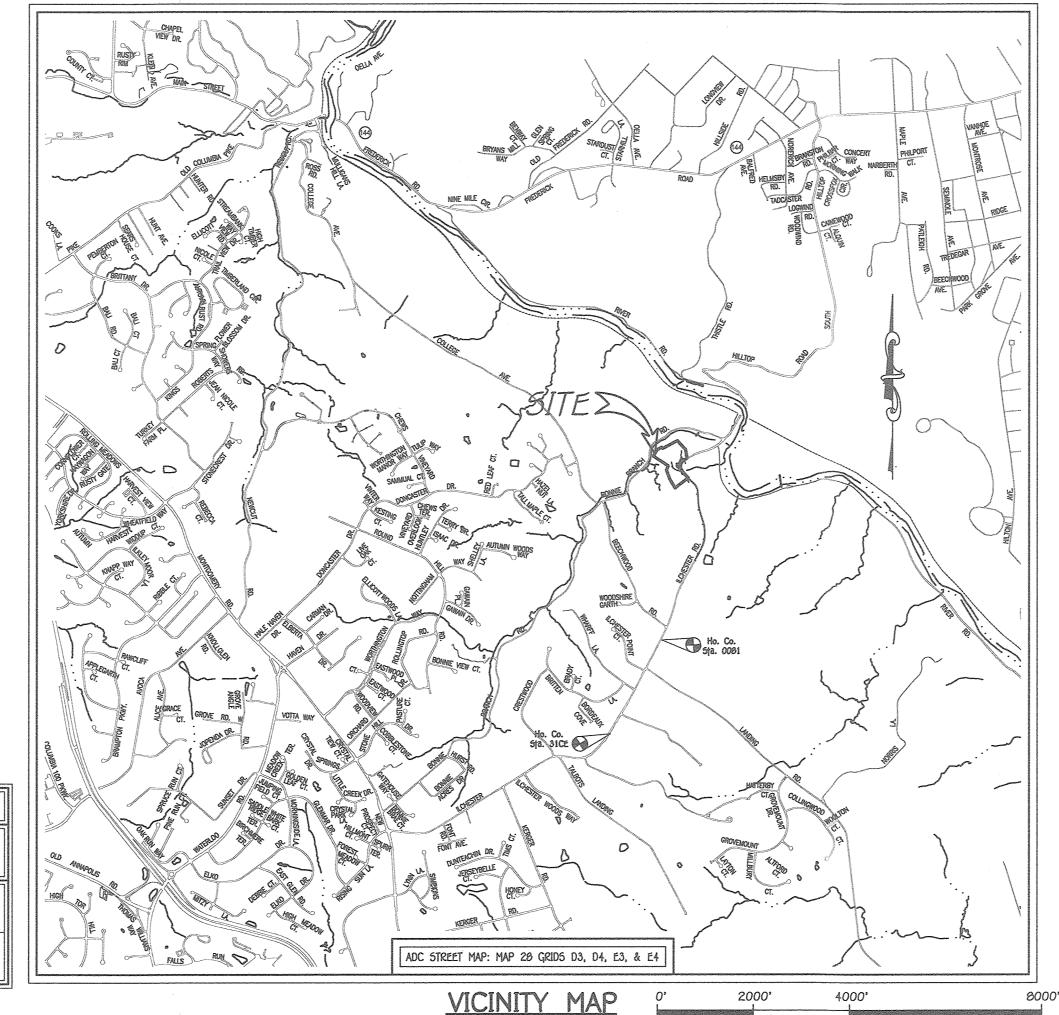
TARGET Pe =  $1.0^{\circ}$ 

Rev = (5)(Rev)(A)/12ReV = (0.32)(0.15)(8.2)/12= 0.033 dc-ff or 1,429 cu-ff

ga.				
ALCOHOLOGO AND		Minimum	Lot Size	Chart
NORTH SERVICE STREET, SECURITY	Lo† No.	Gross Ared	Pipes†em Area	Minimum Lo† Size
STATESCOCCOSTON.	3	11,800 5q.F†.±	815 Sq.F†.±	10,985 5q.F†.±
SOSWOOD SERVICES	4	15,954 5q.F†.±	3,559 5q.Ft.±	12,395 Sq.F†.±
demonstrated.	5	14,469 5q.F†.±	1,440 5q.F†.±	13,029 5q.F†.±
ASSESSMENT OF THE PARTY OF THE	6	38,386 5q.F†.±	1,678 5q.F†.±	36,708 5q.Ft.±
ментория	7	13,876 5q.Ft.±	1,760 5q.F†.±	12,116 Sq.F†.±
AND DESCRIPTION OF THE PERSONS ASSESSMENT	8	15,082 5q.F†.±	2,421 5q.Ft.±	12,661 5q.F†.±

# FINAL ROAD CONSTRUCTION PLAN OAK HILL MANOR, OPEN SPACE LOTS 9 THRI

ZONED: R-ED TAX MAP No. 31 GRID No. 04 PARCEL No. 618 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND



STORMWATE	R MANAGEMENT	INFORM	ATION
LOT / PARCEL NO.	FACILITY NAME & NUMBER	PUBLIC	PRIVATE
05 LOT 10	BIORETENTION 4	NO	NO
05 LOT 11	MICRO-BIO 2 & BIORETENTION 3	NO	NO

SITE ANALYSIS DATA CHART

A. TOTAL AREA OF THIS SUBMISSION = 8.20 ac. ±. LIMIT OF DISTURBED AREA = 3.07 Ac+. PRESENT ZONING DESIGNATION = R-ED (PER 10/06/2013 COMPREHENSIVE ZONING PLAN).

PROPOSED USE: RESIDENTIAL. E. OPEN SPACE REQUIRED: 8.20 AC x 50% = 4.10 Ac. OPEN 5PACE PROVIDED: 4.83 Ac. + (4.72 Ac. + CREDITED, 0.11 Ac. + NON-CREDITED) F. RECREATIONAL AREA PROVIDED: N/A

G. BUILDING COVERAGE OF SITE: 16,080 SQ.FT. OR 0.37 Ac. ± H. PREVIOUS HOWARD COUNTY FILES: ECP-15-043, WP-16-115, SP-15-012, BA-14-020V, I. TOTAL AREA OF FLOODPLAIN LOCATED ON SITE: 0.00 Ac.

TOTAL AREA OF SLOPES IN EXCESS OF 15% = 5.90 Ac. ± (4.04 Ac. ± 25% OR GREATER) NET TRACT AREA =  $4.16 \text{ Ac} \pm (0.20-0-4.04)$ (TOTAL SITE AREA - FLOODPLAIN - STEEP SLOPES AREA) DENSITY PERMITTED = 4.16 ACRES X 2 LOTS PER ACRE = 0 LOTS

PROPOSED NUMBER OF LOTS = 8 LOTS. TOTAL AREA OF LOTS = 3.04 AC. ±

OPMENT ENGINEERING DIVISION

AREA OF ROAD DEDICATION = 0.33 AC. TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 Ac. TOTAL AREA OF FOREST = 6.9 Ac. * TOTAL GREEN OPEN AREA = 7.33 Ac. * TOTAL IMPERVIOUS AREA = 0.87 Ac. * . AREA OF ERODIBLE SOILS = 5.90 Ac. ±

10.58.19

APPROVED: DEPARTMENT OF PUBLIC WORKS 10/21/2019 CHIEF, BUREAU OF HIGHWAYS MK APPROVED: DEPARTMENT OF PLANNING AND ZONING 10.30.19 DATE

BENCHMARKS HOWARD COUNTY CONTROL STATION #0081 - HORIZONTAL - NAD '83) N 572,335.338 E 1,377,504.092 ELEVATION = 477.919 - VERTICAL - (NAVD '88) HOWARD COUNTY CONTROL STATION #31EC - HORIZONTAL - (NAD '83) £ 1,376,436.771 ELEVATION = 477.758 - VERTICAL - (NAVD '88)

REVISION BLOCK

QUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE

FISHER, COLLINS & CARTER, INC.

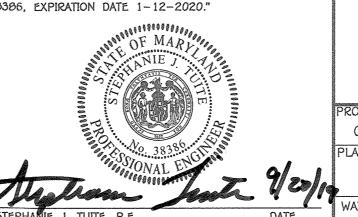
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

ELLICOTT CITY, MARYLAND 21042

(410) 461 - 2855

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME, AND THAT AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38386, EXPIRATION DATE 1-12-2020."

5CALE: 1" = 2000"



OWNER/DEVELOPER EVA J. NELSON 4472 ILCHESTER ROAD ELLICOTT CITY, MARYLAND 21043 443-253-7535

SECTION/AREA PARCEL OAK HILL MANOR 618 PLAT NOS. BLOCK NO. ZONE TAX MAP | ELEC. DIST. | CENSUS T **FIRST** 601104 R-ED 31 WATER CODE SEWER CODE

### GENERAL NOTES

THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED

THE SUBJECT PROPERTY IS ZONED R-ED (PER DATE 10/06/2013 COMPREHENSIVE ZONING PLAN). BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY DATED SEPTEMBER, 2013. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY FISHER, COLLINS & CARTER, INC. DATED JULY 2013 AND SUPPLEMENTED BY HOWARD COUNTY GIS TOPOGRAPHY.

THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 0001 AND 31EC WERE USED FOR

. PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER IS PUBLIC, CONTRACT NO. 14-4921-D. EXISTING WELL TO BE ABANDONED IN ACCORDANCE WITH HEALTH DEPARTMENT REQUIREMENTS.

EXISTING UTILITIES ARE BASED ON FIELD LOCATION OF MISS UTILITY MARKINGS AS A PART OF THE TOPOGRAPHIC SURVEY. SOILS ARE BASED ON THE NRCS WEBSOIL SURVEY AND HOWARD COUNTY SOIL MAP 19.

THERE ARE EXISTING STRUCTURES ON-SITE. THE EXISTING BARN IS TO BE REMOVED. THE MAIN HOUSE IS ON THE HISTORIC REGISTER, HO-456. 9. THERE ARE NO WETLANDS ON THIS SITE PER INVESTIGATION BY ECO-SCIENCE PROFESSIONALS, INC. DATED DECEMBER, 2014.

10. A WETLAND DELINEATION & FOREST STAND DELINEATION REPORT FOR THIS PROJECT DATED DECEMBER 2014 WAS PREPARED BY ECO-SCIENCE STEEP SLOPES AND STREAM BUFFER EXIST ON-SITE.

NO 100 YEAR FLOODPLAIN, STREAMS, CEMETERIES, NOR GRAVE SITES EXIST ON THE PROPERTY.

3. NO CLEARING, GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF STREAM BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.

14. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP IN JULY 2013 (NO INTERSECTIONS WERE REQUIRED TO BE STUDIED), AND WAS APPROVED ON AUGUST 11, 2016. 15. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.

16. SITE HAS FRONTAGE ON ILCHESTER ROAD, A COUNTY, MINOR COLLECTOR, SCENIC ROAD.

17. EXCAVATIONS TO VERIFY DEPTH TO ROCK AND WATER WERE CONDUCTED ON JUNE 9, 2016. 10. STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. NON-STRUCTURAL PRACTICES (MICRO BIO-RETENTION FACILITIES (M-6) AND DRYWELLS (M-5)) IN ACCORDANCE WITH CHAPTER 5 ARE BEING UTILIZED ON INDIVIDUAL LOTS ALONG WITH BIORETENTION (F-6) UNDER CHAPTER 3 ON OPEN SPACE LOTS 10 & 11. 10 YEAR MANAGEMENT IS NOT REQUIRED SINCE RUNOFF IS BEING DIRECTED AWAY FROM BONNIE BRANCH. MAINTENANCE OF THESE STORMWATER MANAGEMENT DEVICES WILL BE BY OWNERS ON LOTS AND HOA 19. TRASH AND RECYCLABLES COLLECTION WILL BE AT ROAD A WITHIN 5' OF THE COUNTY ROADWAY.

20. A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE AND INSTALLED AT EACH INTERSECTION WITH ILCHESTER ROAD BY HOWARD COUNTY. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5751 FOR DETAILS AND COST ESTIMATE.

21. SUBDIVISION IS REQUIRED TO PROVIDE M.I.H.U. (MODERATE INCOME HOUSING UNIT). IT IS ANTICIPATED AT THIS TIME THAT A FEE-IN-LIEU WILL BE PAID. MIHU AGREEMENT WILL BE SUBMITTED AT FINAL PLAN STAGE OUTLINING HOW THE MIHU REQUIREMENT WILL BE MET. A. M.I.H.U. REQUIRED = 0.7 M.I.H.U. (7 LOTS X 10% M.I.H.U./LOT)

B. ONE UNIT IS EXEMPT FROM MIHU REQUIREMENTS. 22. THIS PLAN RECEIVED ADVISORY COMMENTS FROM THE HISTORIC PRESERVATION COMMISSION (HPC) ON NOVEMBER 5, 2013 AND NOVEMBER 21, 2014.

23. STREET LIGHTS WILL BE REQUIRED AT TWO INTERSECTIONS WITH THE PUBLIC ROAD. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURES AND POLES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (2006), SECTION 5.5.A. A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE. 24. COLONIAL POST-TOP FIXTURE (LED-100) MOUNTED ON A 14' BLACK FIBERGLASS POLE (WITH A SHROUD) IS PROPOSED AT THE INTERSECTION OF THE

PUBLIC ROAD AND THE TWO PRIVATE DRIVEWAY ENTRANCES. 25. PREVIOUS DPZ FILE NOS: ECP-15-043, WP-16-115, SP-15-012; PB-420, BA-14-020V. 26. PLAN IS SUBJECT TO PLANNING BOARD APPROVAL, IN ACCORDANCE WITH SECTION 107.0 OF THE ZONING REGULATIONS.

27. THIS SUBDIVISION IS SUBJECT TO THE PROTECTION OF SCENIC ROADS, PER SECTION 16.125 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. 28. TRAFFIC CONTROL DEVICES: (a) THE R1-1 ("STOP") SIGN AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS (b) THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES. (c) ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MDMUTCD)

(d) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH"), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.

29. OPEN SPACE REQUIRED: 8.20 ACRES X 0.50% = 4.10 ACRES OPEN SPACE PROVIDED: 4.83 ACRES

30. IN ACCORDANCE WITH SECTION 16.128 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, PRE-SUBMISSION COMMUNITY MEETINGS WERE HELD ON AUGUST 26, 2013, OCTOBER 22, 2014 AND FEBRUARY 1, 2016 FOR THE DEVELOPER TO PROVIDE INFORMATION TO THE COMMUNITY REGARDING THE PROPOSED INITIAL PLAN SUBMITTAL AND TO ALLOW COMMUNITY RESIDENTS TO ASK QUESTIONS AND TO MAKE COMMENTS.

31. ALL EXISTING WELLS AND SEWAGE DISPOSAL SYSTEM COMPONENTS MUST BE PROPERLY ABANDONED WITH DOCUMENTATION SUBMITTED TO THE HEALTH DEPARTMENT PRIOR TO HEALTH SIGNATURE OF THE FINAL RECORD PLAT. 32. NO GEOTECHNICAL REPORT IS REQUIRED FOR THIS PROJECT. DOCUMENTATION HAS BEEN PROVIDED AS PART OF THE PRELIMINARY EQUIVALENT SKETCH PLAN REGARDING DEPTHS TO ROCK OR WATER THAT WERE ENCOUNTERED DURING THE EXCAVATIONS CONDUCTED ON JUNE 9, 2016. SUITABLE SOIL

EXISTS FOR A MINIMUM OF 4 FEET BENEATH THE PROPOSED FACILITIES AND THE POINTS AT WHICH ROCK OR WATER WAS ENCOUNTERED. 33. 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. 34. PARKING REQUIRED: 2.5 SPACES PER UNIT x 8 UNITS = 20 SPACES

PARKING PROPOSED: 4 SPACES PER UNIT (*) X 8 UNITS = 32 SPACES.

* 2 SPACES IN GARAGE AND 2 SPACES OUTSIDE GARAGE IN DRIVEWAY. 35. ALTERNATIVE COMPLIANCE, WP-16-115, REQUESTING ALTERNATIVE COMPLIANCE FROM HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SPECIFICALLY SECTION 16.1205(A)(7) FOREST RETENTION PRIORITIES - RETENTION OF SPECIMEN TREES, SECTION 16.116(B)(1) STATING THAT GRADING, REMOVAL OF VEGETATIVE COVER AND TREES, NEW STRUCTURES, AND PAVING SHALL NOT BE PERMITTED ON LAND WITH EXISTING STEEP SLOPES TO REMOVE STEEP SLOPES IN AREAS GREATER THAN 20,000 5Q.FT. IS SIZE, SECTION 16.134(A)(1)(I) SIDEWALKS ARE REQUIRED ON ONLY ONE SIDE OF CUL-DE-SACS AND LOCAL STREETS OF SINGLE-FAMILY DETACHED SUBDIVISIONS, AND SECTION 16.125(8)(1)(II)&(2) REQUIRING MINIMIZATION OF TREE AND VEGETATION REMOVAL ALONG A SCENIC ROAD AND REQUIRING RETENTION OF FOREST OR WOODED AREAS OF 35-FOOT IN WIDTH, WAS APPROVED ON FEBRUARY 9, 2019. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:

COMPLIANCE WITH SRC COMMENTS FOR SP-15-012. 2. NO ADDITIONAL DISTURBANCE OR GRADING SHALL OCCUR BEYOND THE LIMIT OF DISTURBANCE SHOWN ON THE PRELIMINARY GRADING PLAN AND

AS APPROVED BY THE PLANNING BOARD UNLESS IT CAN BE SUFFICIENTLY DEMONSTRATED TO BE WARRANTED OR JUSTIFIED.

3. THE REMOVAL OF FOUR (4) SPECIMEN TREES WILL REQUIRE MITIGATION WITH THE PLANTING OF 2:1 REPLACEMENT TREES (8 TOTAL) WITH A MINIMUM OF 3" CALIPER NATIVE PLANT SPECIES. THE REPLACEMENT TREES SHALL BE BONDED AND SHOWN ON THE LANDSCAPE PLAN WITH THE FORECOMING FINAL PLAN. 4. ANY ADDITIONAL REMOVAL OF SPECIMEN TREES DURING CONSTRUCTION ACTIVITY SHALL REQUIRE SUBMITTAL OF A NEW ALTERNATIVE COMPLIANCE

APPLICATION. THE REMAINING 24 SPECIMEN TREES SHALL BE SAVED AND PROTECTED DURING THE CONSTRUCTION ACTIVITY. 5. THE CONSTRUCTION OF THE NEW HOUSES FRONTING ALONG ILCHESTER ROAD SHALL BE ADEQUATELY SCREENED USING ENHANCED LANDSCAPING AND HOUSE SITING TO MINIMIZE IMPACTING THE NATURAL SETTING ALONG THE SCENIC ROAD. THIS CONDITION WILL BE EVALUATED FURTHER AT THE SITE DEVELOPMENT PLAN STAGE.

6. THE ALTERNATIVE COMPLIANCE PETITION NUMBER AND ITS CONDITIONS OF APPROVAL MUST BE ADDED TO THE SUBDIVISION PLANS AND FINAL PLAT. 36. PLANNING BOARD APPROVED THIS PRELIMINARY EQUIVALENT SKETCH PLAN ON FEBRUARY 7, 2018 SUBJECT TO THE FOLLOWING CONDITION 1. THAT THE PETITIONER PROVIDE ADDITIONAL LANDSCAPING CONSISTING OF A MIX OF EVERGREEN TREES AND SHRUBS THAT GROW TO 8 FEET IN HEIGHT TO PROVIDE YEAR-ROUND BUFFERING AND SCREENING FOR ILCHESTER ROAD FROM THE HOUSES ON LOTS 1 AND 2, AND FOR THE MARZIN PROPERTY TO THE EAST FROM THE HOUSE ON LOT 8, TO BE ADMINISTERED BY THE DEPARTMENT OF PLANNING AND ZONING ON THE PETITIONERS

THAT THE PROPOSED LANDSCAPING PLAN ON THE SITE DEVELOPMENT PLAN AS REQUIRED BY CONDITION 1 BE APPROVED BY THE PLANNING

BOARD AS MEETING ITS INTENT IN IMPOSING CONDITION I 37. WATER AND SEWER TO THESE LOTS WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 10.122.8 OF THE HOWARD COUNTY CODE. 06. PUBLIC WATER AND SEWERAGE ALLOCATIONS WILL BE GRANTED AT TIME ISSUANCE OF BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.

39. THERE IS AN EXISTING DWELLING/STRUCTURE LOCATED ON LOT 6 TO REMAIN. NO NEW BUILDINGS, EXTENSIONS OR ADDITIONS TO THE EXISTING DWELLING ARE TO BE CONSTRUCTED AT A DISTANCE LESS THAN THE ZONING REQULATIONS REQUIREMENTS. 40. DEVELOPER RESERVES UNTO ITSELF, ITS SUCCESSORS AND ASSIGNS, ALL EASEMENTS SHOWN ON THIS PLAN FOR WATER, SEWER, STORM DRAINAGE OTHER PUBLIC UTILITIES AND FOREST CONSERVATION (DESIGNATED AS "FOREST CONSERVATION AREA") 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 EXPRESSIV STATED IN THE DEEDS CONVEYED SAID LOTS/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, AND IN THE CASE OF THE FOREST CONSERVATION EASEMENTS. UPON COMPLETION OF THE DEVELOPER'S OBLIGATIONS UNDER THE FOREST CONSERVATION INSTALLATION AND

MAINTENANCE AGREEMENT EXECUTED BY THE DEVELOPER AND THE COUNTY, AND THE RELEASE OF DEVELOPERS SURETY POSTED WITH SAID AGREEMENT. THE COUNTY SHALL ACCEPT THE EASEMENTS AND RECORD THE DEEDS OF EASEMENT IN THE LAND RECORDS OF HOWARD COUNTY. 41. LANDSCAPING FOR LOTS 1 THRU Ø IS PROVIDED IN ACCORDANCE WITH A CERTIFIED LANDSCAPE PLAN (SHEET 7) ON FILE WITH THIS ROAD CONSTRUCTION PLAN SET. FINANCIAL SURETY FOR THE PROPOSED LANDSCAPING, 13 SHADE TREES (\$3,900) AND 31 EVERGREENS (\$4,650) IN THE AMOUNT OF \$8,550 WILL

BE POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT. 42. THE FOREST CONSERVATION EASEMENT AREAS WITHIN THIS SUBDIVISION HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT: HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION ARE ALLOWED. THE FOREST CONSERVATION ACT REQUIREMENTS FOR SUBDIVISION WILL BE MET THROUGH THE ON-SITE RETENTION OF 3.51 AC. NO SURETY IS REQUIRED FOR

43. OPEN SPACE LOT 9 WILL BE OWNED AND MAINTAINED BY THE HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS AND OPEN SPACE LOTS 10 THRU 12 WILL BE OWNED AND MAINTAINED BY THE OAK HILL MANOR HOMEOWNERS ASSOCIATION, INC.

44. OPEN SPACE TABULATION: a. OPEN SPACE REQUIRED: 4.10 ACRES

(8.20 ACRES X 0.50%) b. OPEN SPACE PROVIDED: 4.83 ACRES

(LOT 9 + LOT 10 + LOT 11 + LOT 12)(2.467 AC. + 0.204 AC. + 0.570 AC. + 1.594 AC.) c. NON-CREDITED OPEN SPACE PROVIDED: 0.11 AC.+

0.079 AC.(05 LOT 9) + 0.017 AC. (05 LOT 10) + 0.010 AC. (05 LOT 11) 45. ARTICLES OF INCORPORATION FOR THE OAK HILL MANOR HOMEOWNERS ASSOCIATION, INC. WAS FILED WITH THE STATE DEPARTMENT OF ASSESSMENTS AND TAXATION ON 5FPTEMBER 9, 2019, DEPT, ID NO. D19935501 46. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS

AND SPECIFICATIONS IF APPLICABLE. 47. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.

40. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 40 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE. 49. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

50. THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 2013 ZONING REGULATIONS. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH SETBACKS AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF A BUILDING OR GRADING PERMIT APPLICATION.

. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-190. TRASH AND RECYCLABLES COLLECTION WILL BE AT ILCHESTER ROAD A WITHIN 5' OF THE COUNTY OR STATE ROADWAY. 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); s). SURFACE - SIX (6°) INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING. (1 -1/2" MINIMUM);

:). 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);

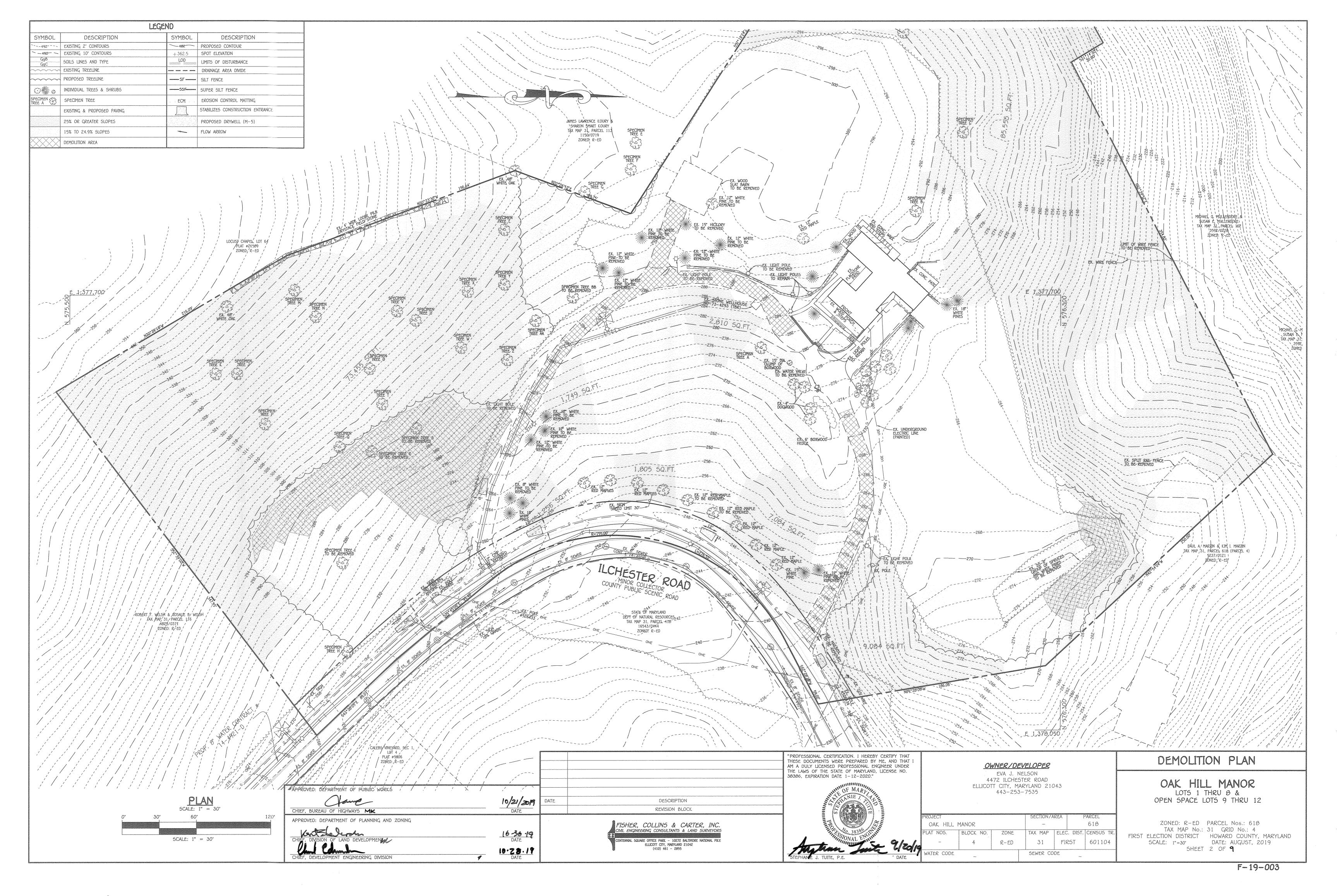
.). DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER SURFACE; F). STRUCTURE CLEARANCE - MINIMUM 12 FEET: G). MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.

TITLE SHEET

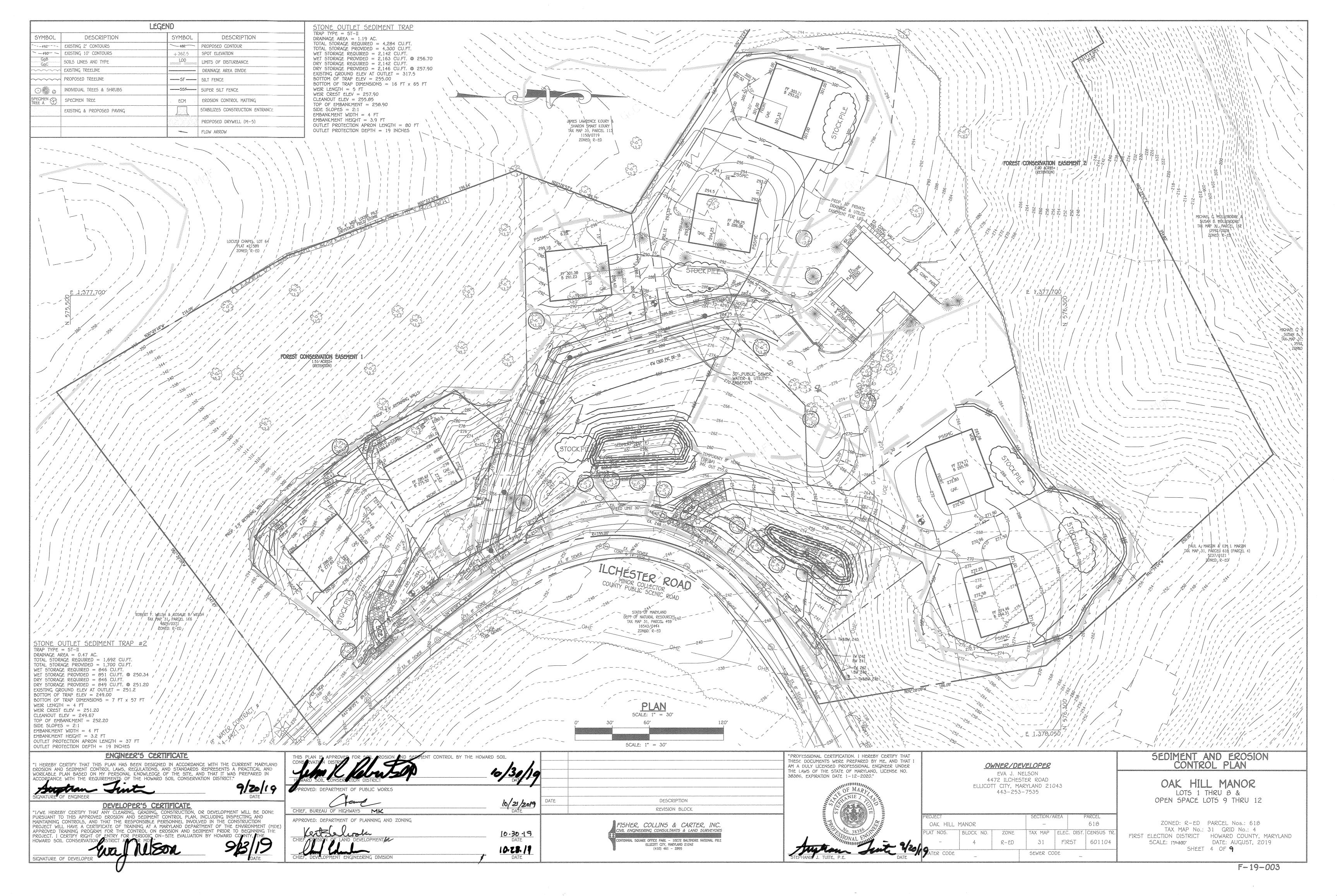
OAK HILL MANOR LOTS 1 THRU 8 & OPEN SPACE LOTS 9 THRU 12

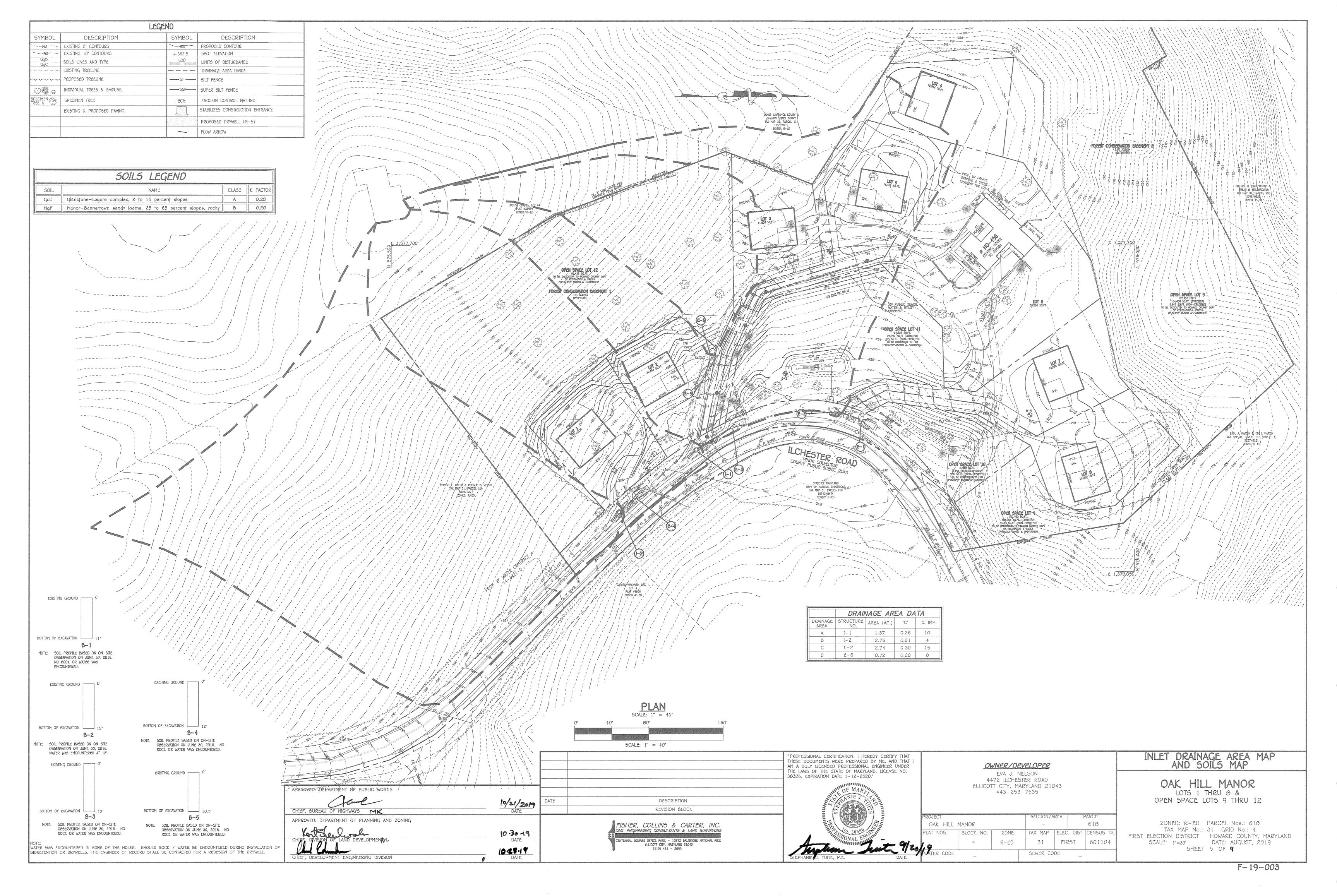
ZONED: R-ED PARCEL Nos.: 618 TAX MAP No.: 31 GRID No.: 4 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: AUGUST, 2019

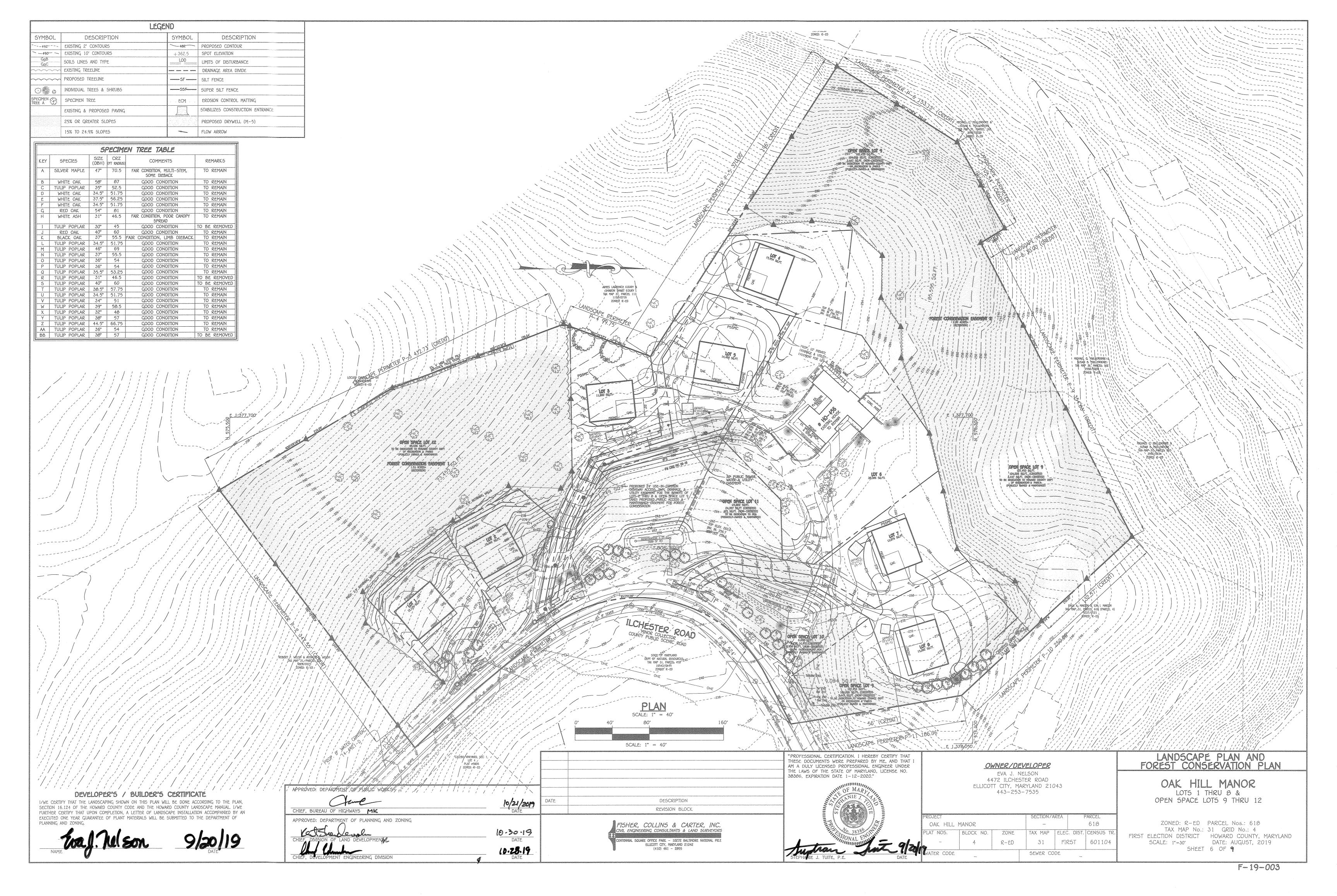
SHEET 1 OF 9

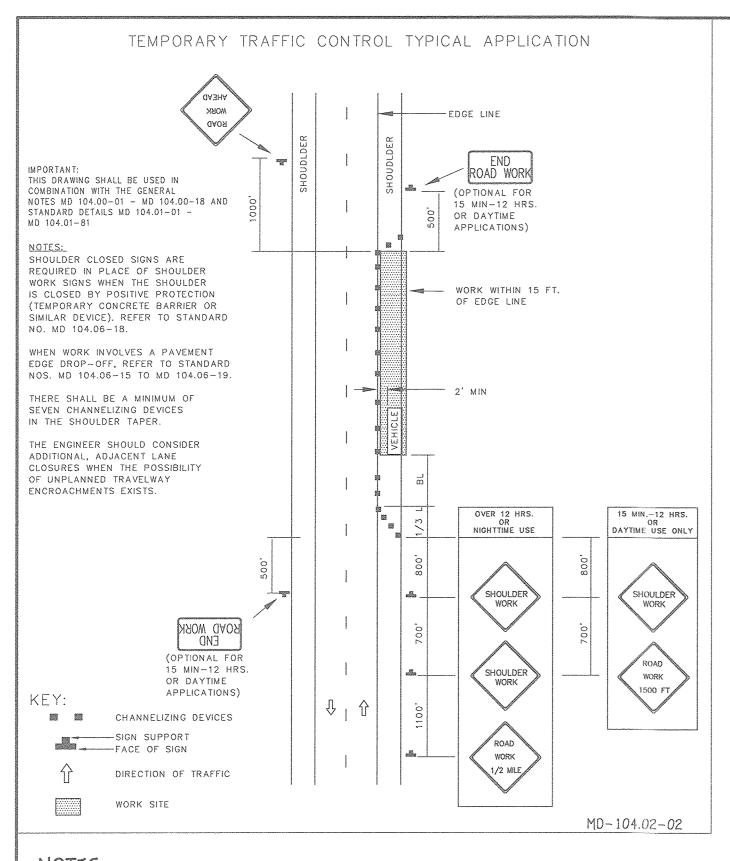












- 1. THIS PLAN COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY THE ON-SITE RETENTION OF 3.51 ACRES OF FOREST. NO SURETY WILL
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE PROPOSED LANDSCAPING, 13 SHADE TREES (\$3,900) AND 31 EVERGREENS (\$4,650) IN THE AMOUNT OF \$8.550 WILL BE POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT

#### FOREST PROTECTION GENERAL NOTES

- . ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC MESH FENCING, AS NECESSARY, AND SIGNAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO ANY LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES.
- THE FOREST PROTECTION DEVICES SHALL BE INSTALLED SUCH THAT THE CRITICAL ROOT ZONES OF ALL TREES WITHIN THE RETENTION AREA NOT OTHERWISE PROTECTED WILL BE WITHIN FOREST PROTECTION DEVICES, UNLESS ROOT PRUNING IS PROPOSED.
- ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING SILT FENCE BEING USED AS PROTECTIVE FENCING. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
- ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE
- INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE UTMOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DE-WATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND DRAINING OF MATERIALS THAT MAY BE HARMFUL TO TREES.
- THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPILING OF EARTH WITHIN FOREST CONSERVATION
- REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.
- 8. THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS.
- ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE OR LIMIT OF GRADING WITHIN AND ADJACENT TO ALL PRESERVATION AREAS, AS NECESSARY.

#### PRE-CONSTRUCTION MEETING

- AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED, AND AFTER THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED, BUT BEFORE ANY OTHER DISTURBANCE HAS TAKEN PLACE ON SITE, A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE ON SITE. THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER, AND HOWARD COUNTY INSPECTORS SHALL ATTEND. THE PURPOSE OF THIS MEETING WILL BE:
  - A. TO IDENTIFY THE LOCATIONS OF THE FOREST RETENTION AREAS, SPECIMEN TREES WITHIN 50 FEET OF THE LIMIT OF DISTURBANCE, LIMITS OF CONSTRUCTION, EMPLOYEE PARKING AREAS AND EQUIPMENT STAGING AREAS:
  - B. INSPECT ALL FLAGGED BOUNDARIES AND PROTECTION DEVICES;
- C. MAKE ALL NECESSARY ADJUSTMENTS; D. ASSIGN RESPONSIBILITIES AS APPROPRIATE AND DISCUSS PENALTIES.

#### CONSTRUCTION MONITORING

- THE SITE SHALL BE INSPECTED PERIODICALLY DURING THE CONSTRUCTION PHASE OF THE PROJECT. A QUALIFIED PROFESSIONAL SHALL BE RESPONSIBLE FOR IDENTIFYING DAMAGE TO PROTECTED FOREST AREAS OR INDIVIDUAL TREES WHICH MAY HAVE BEEN CAUSED BY CONSTRUCTION ACTIVITIES, SUCH AS SOIL COMPACTION, ROOT INJURY, TRUNK WOUNDS, LIMB INJURY, OR STRESS CAUSED BY FLOODING OR DROUGHT CONDITIONS.
- ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS MAY REQUIRE CONSULTATION WITH A PROFESSIONAL ARBORIST. . THE CONSTRUCTION PROCEDURE SHALL NOT DAMAGE AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE AS DESIGNATED ON THE PLANS. ANY DAMAGE SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

#### MULTIFLORA ROSE CONTROL NOTE:

REMOVAL OF THE MULTIFLORA ROSE MAY BE PERFORMED WITH MOWING AND HERBICIDE TREATMENTS. PHYSICAL REMOVAL OF ALL TOP GROWTH FOLLOWED BY A PERIODIC HERBICIDE TREATMENT OF STUMP SPROUTS IS RECOMMENDED. NATIVE TREE AND SHRUB SPECIES OCCURRING WITHIN THE ROSE THICKETS SHOULD BE RETAINED WHEREVER POSSIBLE. HERBICIDE TREATMENTS SHALL OCCUR ON TWO (2) MONTH INTERVALS DURING THE FIRST GROWING SEASEON AND ONCE IN THE SPRING AND ONCE IN THE FALL FOR SUBSEQUENT YEARS. HERBICIDE USED SHALL BE MADE SPECIFICALLY TO ADDRESS WOODY PLANT MATERIAL AND SHALL BE APPLIED AS PER MANUFACTURERS SPECIFICATIONS. CARE SHOULD BE TAKEN NOT TO SPRAY PLANTED TREES OR NATURALLY OCCURRING NATIVE TREE AND SHRUB SEEDLINGS. IT IS RECOMMENDED THAT INITIATION OF ROSE REMOVAL BEGIN AT LEAST SIX MONTHS PRIOR TO PLANTING 50 THAT NEW GROWTH OF ROSES IS ABLE TO BE MORE SUCCESSFULLY MANAGED.

## DEVELOPER'S / BUILDER'S CERTIFICATE

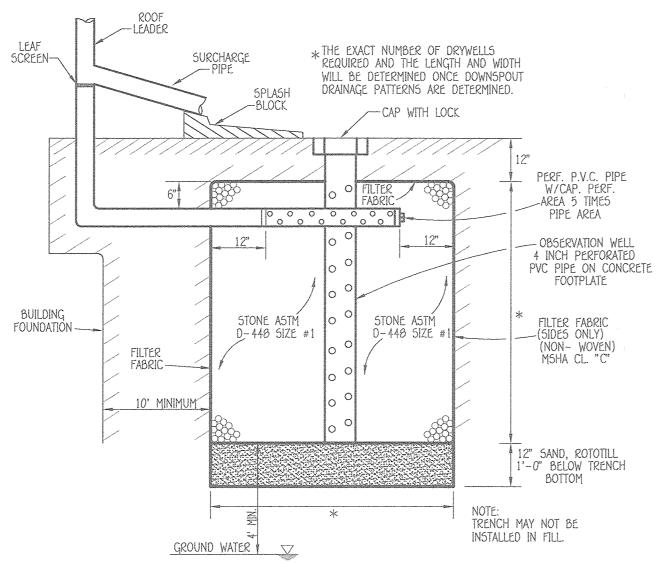
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT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



#### STORMWATER MANAGEMENT NOTES

ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET

- 1. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT
- DESIGN MANUAL, EFFECTIVE MAY 4, 2010. 2. MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1,000 SQ. FT.
- 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
- 4. FINAL GRADING WILL BE SHOWN ON A SITE DEVELOPMENT PLAN 5. BIORETENTION & DRYWELLS LOCATED ON INDIVIDUAL LOTS TO BE PRIVATELY OWNED AND MAINTAINED BY THE INDIVIDUAL LOT OWNER. BIORETENTION AND MICRO-BIORETENTION FACILITIES LOCATED ON OPEN SPACE LOTS 10 & 11 TO BE PRIVATELY MAINTAINED BY



DRY WELL DETAIL (M-5)

#### OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY WELLS (M-5)

- A. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- B. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO ENSURE TRENCH DRAINAGE. C. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY
- D. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A
- SEVENTY-TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN. E. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO
- INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA. F. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED. THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED

	DRY WELL CHART							
DRYWELL NO.	AREA OF ROOF PER DOWN SPOUT	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF TREATMENT	L W D			
LOT 1	1,000 SQ. FT.	80 C.F.	288 C.F.	100%*	12' x 12' x 5'			
LOT 2	1,000 5Q. FT.	80 C.F.	288 C.F.	100%*	12' x 12' x 5'			
LOT 3	1,000 5Q. FT.	80 C.F.	288 C.F.	100%*	8' x 18' x 5'			
LOT 5	1,000 5Q. FT.	80 C.F.	288 C.F.	100%*	12' x 12' x 5'			
LOT 7	1,000 5Q. FT.	80 C.F.	288 C.F.	100%*	12' x 12' x 5'			
LOT 8	1,000 5Q. FT.	80 C.F.	200 C.F.	100%*	10' x 10' x 5'			

* AREA OF TREATMENT EXCEEDS THAT REQUIRED.

BASIC SITE DATA:

D. NET TRACT AREA

EXISTING FOREST COVER:

BREAK EVEN POINT:

K. CLEARING PERMITTED WITHOUT MITIGATION ...

L. TOTAL AREA OF FOREST TO BE CLEARED ...

M. TOTAL AREA OF FOREST TO BE RETAINED ..

PROPOSED FOREST CLEARING:

R. TOTAL REFORESTATION REQUIRED

S. TOTAL AFFORESTATION REQUIRED

PLANTING REQUIREMENTS:

J. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION......

N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD ...

O. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD

APPROVED: DEPARTMENT OF PUBLIC WORKS

T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED

CHIEF, BUREAU OF HIGHWAYS MK

P. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD ...

APPROVED: DEPARTMENT OF PLANNING AND ZONING

A. TOTAL TRACT AREA .

#### FOREST CONSERVATION WORKSHEET VERSION 1.0 FOREST RETENTION B. AREA WITHIN 100 YEAR FLOODPLAIN . AREA C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION . MACHINERY, DUMPING LAND USE CATEGORY: (from table 3.2.1, page 40, Manual) ARA MOR IDA HOR MPD CIA OR STORAGE OF ANY MATERIALS IS INFORMATION FOR CALCULATIONS: PROHIBITED E. AFFORESTATION THRESHOLD..... 0.15% x D = F. FOREST CONSERVATION THRESHOLD..... VIOLATORS SUBJECT TO THE $0.20\% \times D =$ MARYLAND FOREST G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) . CONSERVATION ACT OF H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD .

....= 3.51

11" MINIMUM NOTE: THE PROTECTIVE SIGNAGE SHALL BE IN PLACE FOR PERPETUITY. FOREST CONSERVATION **SIGN DETAIL** NOT TO SCALE

TYPICAL PRIVATE DRIVE CROSS SLOPE SECTION

10-30-1

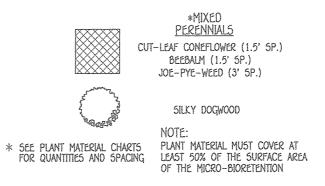
SCHEDULE A - PERIMETER LANDSCAPE EDGE SPECIMEN TREES TOTAL PERIMETER ADJACENT TO CATEGORY ROADWAY PERIMETER PROPERTIES PERIMETER PROPERTIES PERIMETER PROPERTIES | PERIMETER PROPERTIES | PERIMETER PROPERTIES PERIMETER PROPERTIES PERIMETER PROPERTIES PERIMETER PROPERTIES PERIMETER PROPERTIES FRIMETER PROPERTIES LANDSCAPE TYPE N/A (FRONT) 30 L.F. 354.83 L.F 250.00 L.F. 7.12 L.F. 370.00 L.F. 153.13 L.F 105.54 L.F 56 L.F. LINEAR FEET OF PERIMETER 524 L.F. 317.54' L.F. 412.73' L.F. CREDIT FOR EXISTING TREES (YES/NO, YE5, 196 L.F. YES, 132.57 L.F. YES, 186.06 L.F. N/A YES, 317.54 L.F. YES, 412.73 L.F. YES, 526 L.F. YES, 153.13 L.F. YES, 105.54 L.F. YES, 30 L.F. YES, 354.83 L.F. (0 L.F. REMAINING) (117.43 L.F. REMAINING) |(130.06 L.F. REMAINING) LENGTH) (0 L.F. REMAINING) (0 L.F. REMAINING) (92.63 L.F. REMAINING) (174 L.F. REMAINING) (0 L.F. REMAINING) (O L.F. REMAINING) (0 L.F. REMAINING) NUMBER OF PLANTS REQUIRED 17 (117.43'/60' = 2) $(130.06^{\circ}/60^{\circ} = 2.2 \text{ OR } 2)$ SHADE TREES/EVERGREENS  $(93'/60' = 1.6 \text{ OR } 2) \mid (174'/60' = 2.9 \text{ OR } 3)$ CREDIT FOR EXISTING VEGETATION SHADE TREES SMALL/MEDIUM DECIDUOUS TREES/ EVERGREENS SHRUB5 NUMBER OF PLANTS PROVIDED 13 SHADE TREES SMALL/MEDIUM DECIDUOUS TREES/ EVERGREEN5 22 31 SHRUBS

	LANDSCAPING PLANT LIST								
QTY.	KEY	NAME	SIZE						
8	+	ACER RUBRUM 'RED SUNSET' (RED SUNSET RED MAPLE)  3" C FULL C B&							
2	The state of the s	TILIA CORDATA (LITTLELEAF LINDEN)	2.5"-3" CAL. FULL CROWN, B&B						
3	$\odot$	QUERCUS PALUSTRIS (PIN OAK)	2.5"-3" CAL. FULL CROWN, B&B						
13	S. A.	ILEX 'NELLIE R. STEVENS' (NELLIE R. STEVENS HOLLY)	5' – 6' HT. B&B						
18	MAN AND THE STATE OF THE STATE	MAGNOLIA GRANDIFLORA (MAGNOLIA)	5' - 6' HT. β&β						

TOTAL: 13 SHADE TREE, 31 EVERGREENS

MICRO-BIO 1 QUANTITY	MICRO-BIO 2 QUANTITY	BIO 3 QUANTITY	MICRO-BIO 4 QUANTITY	NAME	MAXIMUM SPACING (FT.
10	14	65	45	MIXED PERENNIALS	1.5 TO 3.0 FT.
ę poeg	t production of the control of the c	Andrew Property and Andrew Property Andrew Property and Andrew Property and Andrew Property Andrew	Pero P	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION

Salona control de la control d	MIC	R	0-B	IORE	TEN	TION	/	BIO	RETE	NTIC	)N	
Contraction of the Contraction o	BIORETENTIO FILTER	Ν	Α	В	С	D	E	F	G	Н	I	PIPE DIA.
-	MICRO-BIO	1	265.00	265.00	264.00	263.75	261.75	261.50	261.17	259.67	259.90	4"
	MICRO-BIO	2	258.00	258.00	257.00	256.75	254.75	254.50	254.17	252.67	254.02	4"
	BIO 3		257.00	257.00	256.00	255.75	253.75	253.50	253.00	251.50	251.00	6"
	MICRO-BIO	4	251.00	251.00	250.00	249.75	247.75	247.50	247.00	245.50	242.00	6"



'PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT

AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER

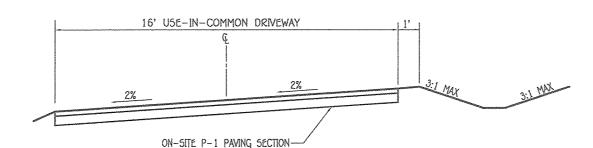
THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.

38386, EXPIRATION DATE 1-12-2020."

THESE DOCUMENTS WERE PREPARED BY ME, AND THAT I

#### TABLE B 4 MATERIALS SPECIFICATIONS FOR MICRO-BIORETENTION (M-6) & BIORETENTION (E-6)

MATERIAL	SPECIFICATION	SIZE	NOTES .
PLANTING5	SEE APPENDIX A; TABLE A.4	N/A	PLANTINGS ARE SITE-SPECIFIC
PLANTING 50IL 2' TO 4' DEEP	LOAMY SAND 60-65% COMPOST 35-40% OR SANDY LOAM 30% COARSE SAND 30% COMPOST 40%		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	PEA GRAVEL: ASTM-D-440	NO. 8 OR NO. 9 (1/8" TO 3/8")	
CURTAIN DRAIN	ORNAMENTAL STONE: WASHED COBBLES	STONE: 2" TO 5"	
GEOTEXTILE	200	N/A	PE TYPE 1 NONWOVEN
GRAVEL (UNDERDRAINS AND INFILTRATION BERMS)	AASHTO M-43	NO. 57 OR AGGREGATE (3/8" TO 3/4")	
UNDERDRAIN PIPING	F 750, TYPE P5 20 OR AASHTO M-270	4" TO 6" RIGID SCHEDULE 40 PVC OR SDR35	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)	MSHA MIX NO. 3; F = 3500 PSI AT 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 SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND - DESIGN TO INCLUDE MEETING ACI CODE 350.R/P9; VERTICAL LOADING IH-10 OR H-201; 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.



1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION. 2. SWALES ARE FOR CONVEYANCE OF RUNOFF AND NOT UTILIZED FOR TREATMENT

#### 16' USE-IN-COMMON DRIVEWAY CROSS SLOPE SECTION

NOT TO SCALE

DESCRIPTION

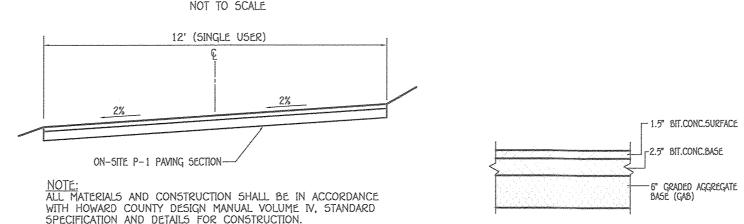
REVISION BLOCK

FISHER, COLLINS & CARTER, INC.

ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855

CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

NIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE



OPERATION & MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6) & 3IORETENTION (F-6)

- A. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED 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.
- B. 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.
- C. 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.

## SEQUENCE OF CONSTRUCTION

- 1. OBTAIN APPROVED SEDIMENT CONTROL PLAN AND GRADING PERMIT AND HOLD PRE-CONSTRUCTION MEETING WITH COUNTY INSPECTOR. (2 WEEKS)
- 2. NOTIFY "MISS UTILITY" AT LEAST 40 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY DEPT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION AT 410-313-1055 AT LEAST 40 HOURS BEFORE STARTING WORK.
- 3. INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER-SILT FENCE, AND
- SEDIMENT TRAPS WITH OUTFLOW PROTECTION. (3 DAYS) 4. INSTALL CULVERTS, INLETS, STORM DRAIN PIPING, AND INSTALL SSF AROUND INVERT INTO PIPES. PLACE 50D IN SWALE ALONG THE COMMON DRIVEWAY AND UPSTREAM AND DOWNSTREAM OF CULVERT PIPE FOR LOT 2 DRIVEWAY. (5 DAYS)
- 5. UPON STABILIZATION OF SWALE ON LOT 2 INSTALL DIVERSION FENCE ALONG THE REAR OF LOTS 1 AND 2. (2 DAYS) 6. REMOVE ALL DESIGNATED UTILITIES SHOWN TO BE REMOVED. CONSTRUCT RETAINING WALLS, ROUGH GRADE SITE AND CONSTRUCTION WATER MAIN AND INDIVIDUAL SERVICE
- CONNECTIONS TO THE EXISTING & PROPOSED HOUSES PER COUNTY CONTRACT DRAWINGS. 7. INSTALL EROSION CONTROL MATTING IN SWALES AS SHOWN ON THE PLAN IN AREAS NOT
- BEING SODDED, AND TEMPORARY SEED DISTURBED AREAS AS NECESSARY. (3 DAYS) 6. CONSTRUCT DRIVEWAY BASE PAVING AND INSTALL MOUNTABLE BERM. (1 WEEK)
- 9. INSTALL PERMANENT SEEDING. (3 DAYS) 10. HOUSES TO BE CONSTRUCTED UNDER FUTURE SDP. (18 MONTHS)

11. UPON STABILIZATION AND COMPLETION OF HOUSE CONSTRUCTION, REMOVE SEDIMENT

SEDIMENT CONTROL DEVICES MAY BE REMOVED. (3 DAYS)

OAK HILL MANOR

BLOCK NO.

PLAT NOS.

- TRAPS, INSTALL ROOF LEADERS, DRYWELLS, MICRO-BIORETENTIONS, AND BIORETENTION. (3 DAYS EACH LOT) 12. 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
- NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE EACH RAINFALL AND ON A DAILY BASIS.

OWNER/DEVELOPER

EVA J. NELSON

4472 ILCHESTER ROAD

ELLICOTT CITY, MARYLAND 21043

443-253-7535

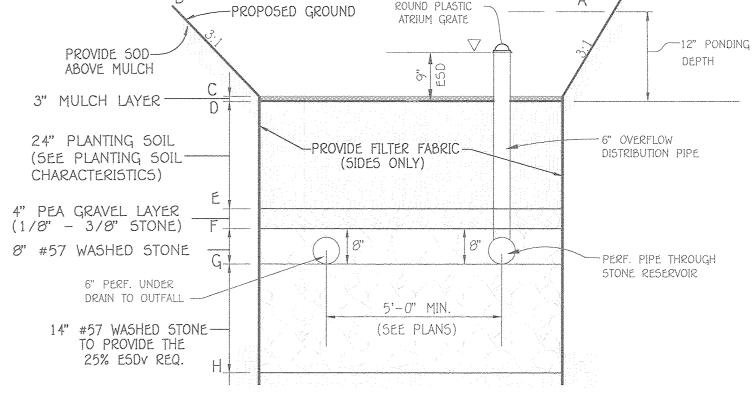
SECTION/AREA

31

SEWER CODE

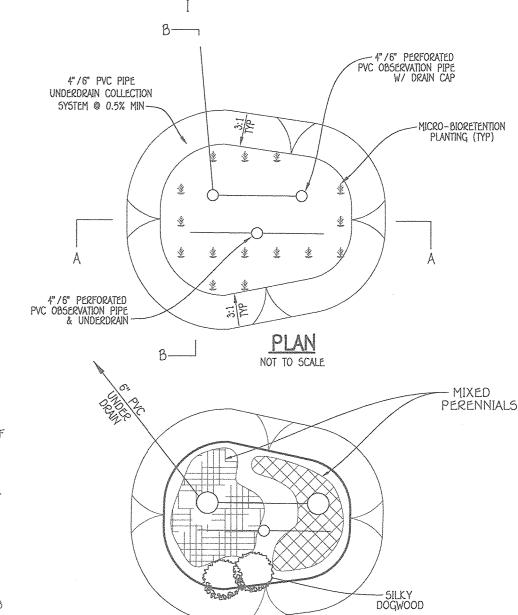
TAX MAP ELEC. DIST. CENSUS

FIRST



## MICRO BIO-RETENTION SECTION WITH 6" OVERFLOW DISTRIBUTION PIPE

NO SCALE



MICRO BIO-RETENTION PLANTING DETAIL NOT TO SCALE

PARCEL

618

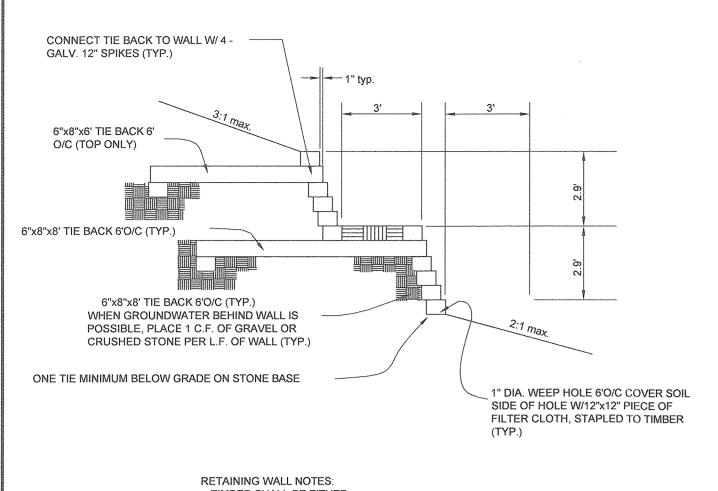
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CHARTS, NOTES AND DETAILS

OAK HILL MANOR LOTS 1 THRU 8 & OPEN SPACE LOTS 9 THRU 12

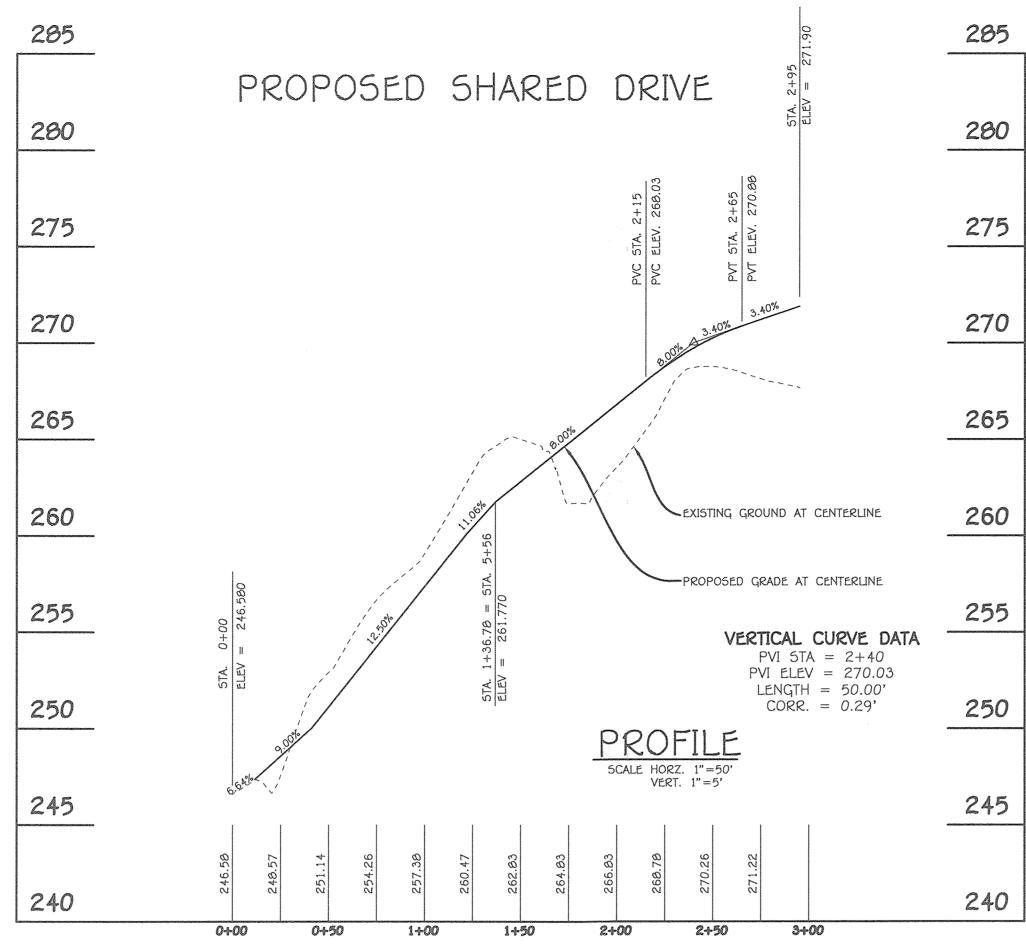
ZONED: R-ED PARCEL Nos.: 618 TAX MAP No.: 31 GRID No.: 4 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: NOT TO SCALE DATE: AUGUST, 2019

SHEET 7 OF 9



TIMBER SHALL BE EITHER: A.) CREOSOTE TREATED RAILROAD TIES. B.) CCA TREATED LANDSCAPING TIMBERS (.40 lbs./CF RETENTION) HARDWARE SHALL BE HOT DIPPED GALVANIZED. WEEP HOLES WITH OR WITHOUT GRAVEL DRAIN ARE MINIMUM MEASURES FOR GROUNDWATER. A DRAIN SYSTEM SHOULD BE DESIGNED & UTILIZED. DESIGN SHALL BE VERIFIED FOR SITE SPECIFIC SOIL CONDITION BY A PROFESSIONAL GEOTECHNICAL ENGINEER.

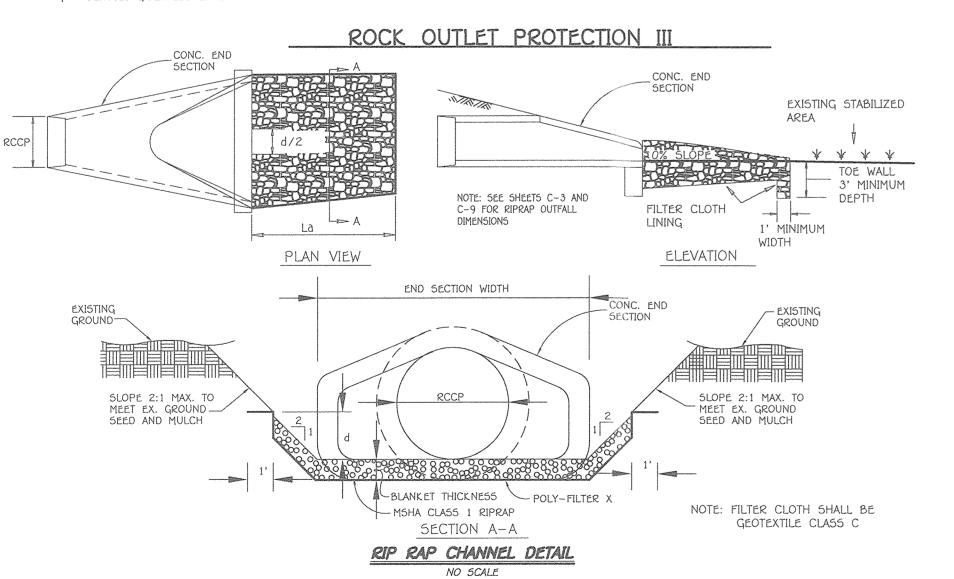
## RETAINING WALL DETAIL NOT TO SCALE

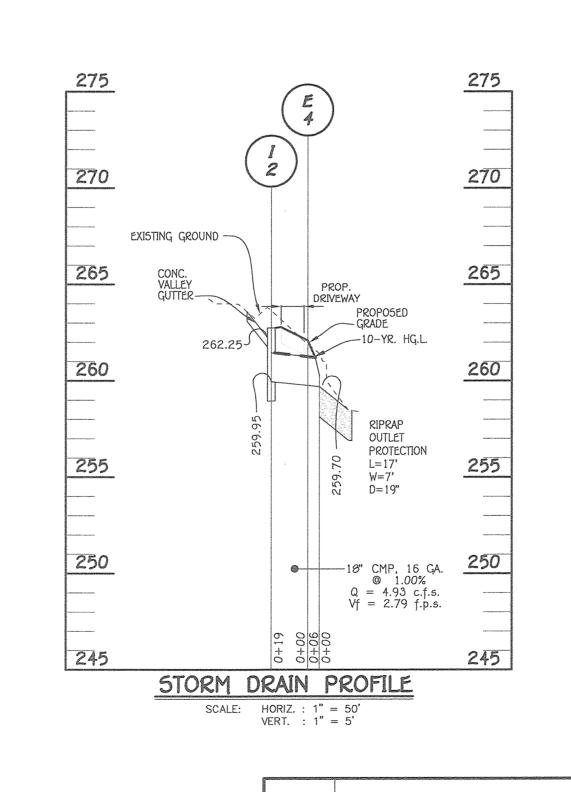


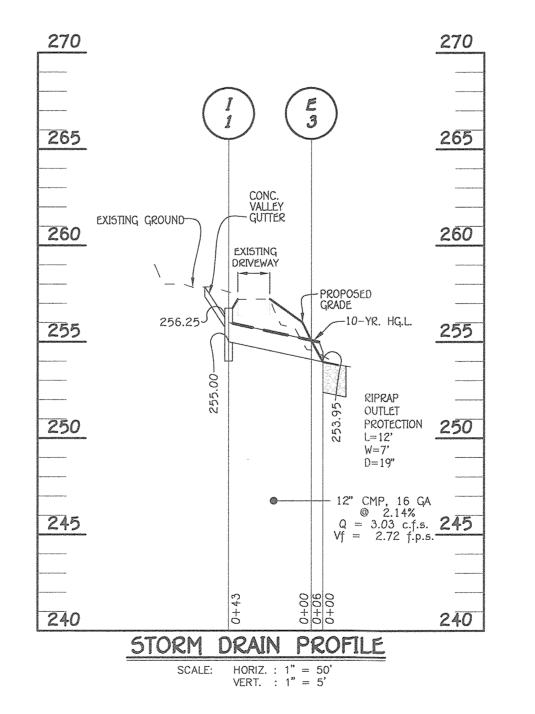
300	<b>VERTICAL CURVE DATA</b> PVI 5TA = 3+25  PVI ELEV = 285.81  LENGTH = 75.00'  CORR. = 0.55'	300
295	550 = 150.20'  HIGH PT STA = $3+00.22$ HIGH PT ELEV = $285.50$	295
290	5TA. 2+87.50 284.98 284.98 5TA. 2+87.50 5TA. 3+62.50 79.17 79.17 285.43 6.76 8.76	290
285	PVC 5TA. 14  ELEV. 279.11  ELEV. 279.11  PVT 5TA. 4+2  ELEV. 279.11	285
280		280
275	EXISTING GROUND AT CENTERLINE  PAC 51A 3+75	275
270	VERTICAL CURVE DATA  PVI 5TA = 2+05  PVI 5TA = 2+05  PVI STA = 50,000	270
265	PVI ELEV = 284.61 LENGTH = 75.00' CORR. = 0.54'	265
260	PROPOSED LOOP DRIVE	260
255	PROFILE  SCALE HORZ. 1"=50"  VERT. 1"=5"	255
250	265.13 265.26 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 265.46 26	250

STRUCTURE SCHEDULE								
STRUCTURE NO.	OWNERSHIP AND MAINTENANCE	TOP ELEVATION	INV.IN	INV.OUT	COORDINATES	WIDTH	TYPE	REMARK5
I-1	PRIVATE	256.75		255.00 (12")	N 575828.47 E 1377919.16	3.00'	K INLET	D-4.12
I-2	PRIVATE	262.75		259.95 (18")	N 575745.06 E 1377986.00	3.00'	K INLET	D-4.12
E-1	PRIVATE	247.15	_	245.80 (15")	N 576004.22 E 1377886.48	15"	METAL END SECTION	0-5.51
E-2	PRIVATE	245.05	****	246.40 (15")	N 575983.07 E 1377878.86	15"	METAL END SECTION	D-5.51
E-3	PRIVATE	255.08	NAME OF THE PROPERTY OF THE PR	253.95 (12")	N 563449.71 E 1356403.51	-	METAL END SECTION	D-5.51
E-4	PRIVATE	261.26		259.70 (18")	N 575759.51 E 1377973.67	18"	METAL END SECTION	D-5.51
E−5	PRIVATE	268.77	-	267.25 (15")	N 563449.71 E 1356403.51		METAL END SECTION	D-5.51
E-6	PRIVATE	269.73		268.75 (15")	N 563449.71 E 1356403.51	-	METAL END SECTION	D-5.51

* - DENOTES GRATE ELEVATION







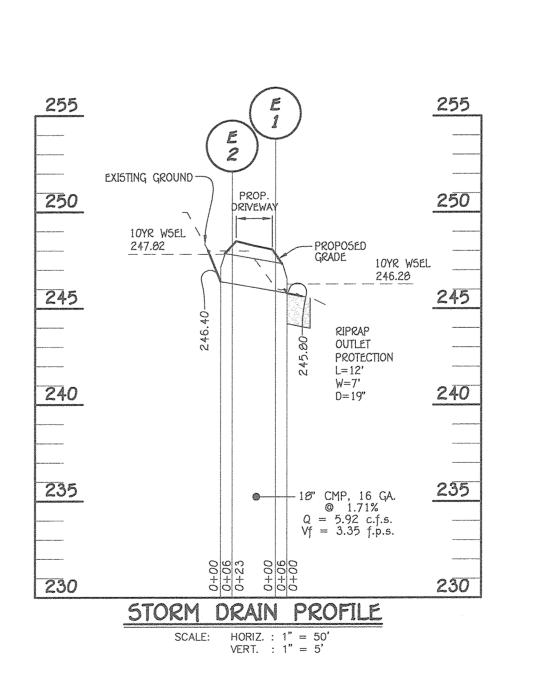
DESCRIPTION

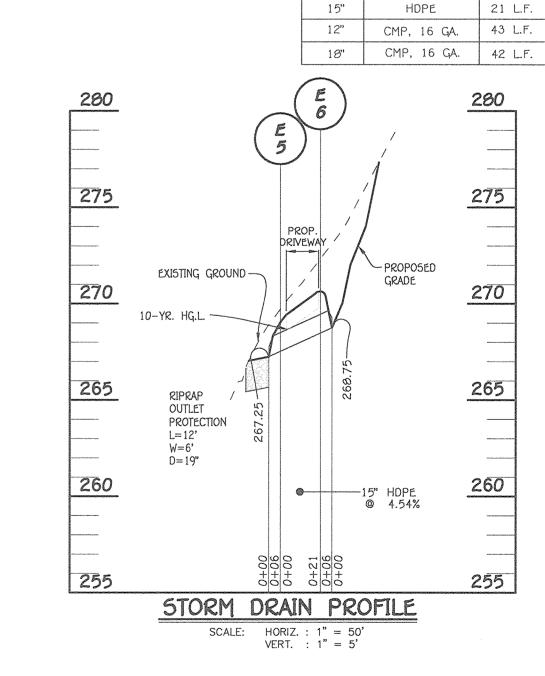
REVISION BLOCK

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

ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855

ENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE





PIPE SCHEDULE

15"

LENGTH

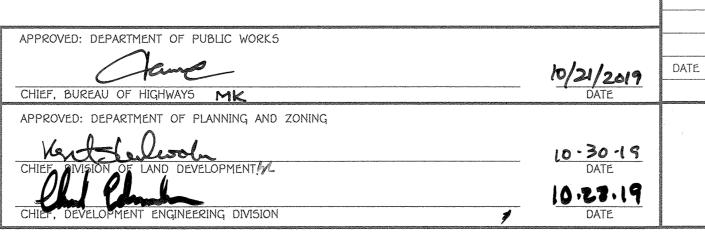
#### CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS

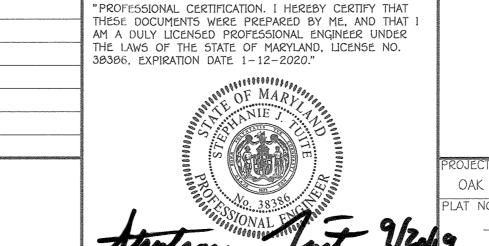
1. The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.

2. The rock or gravel shall conform to the specified grading limits when installed respectively in the riprap or filter.

3. Filter cloth shall be protected from punching, cutting or tearing. Any damage other than an occasional shall hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.

4. Stone for the riprap or gabion outlets may be placed by equipment. Both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for riprap or gabion outlets shall be delivered and placed in a manner that will insure that it is reasonably homogenous with the smaller stones and spalls filling the voids between the larger stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent works.





OWNER/DEVELOPER EVA J. NELSON 4472 ILCHESTER ROAD ELLICOTT CITY, MARYLAND 21043 443-253-7535 SECTION/AREA PARCEL

OAK HILL MANOR 618 TAX MAP ELEC. DIST. CENSUS ZONE FIRST 601104 31 SEWER CODE

## STORM & DRIVEWAY PROFILES & DETAILS AND RETAINING WALL DETAIL

OAK HILL MANOR LOTS 1 THRU 8 & OPEN SPACE LOTS 9 THRU 12

ZONED: R-ED PARCEL Nos.: 618 TAX MAP No.: 31 GRID No.: 4 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: AUGUST, 2019 SHEET 8 OF 9

#### SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

#### A. Soil Preparation

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 plays 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.
- 2. Permanent Stabilization

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:

Soil pH between 6.0 and 7.0.

. 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.

#### B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils 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 be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting 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

b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, 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. 6. Topsoil Application

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

b. Uniformly distribute topsoil in a 5 to 8 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)

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

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 applicable 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 98 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

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.

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 8.3), 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

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

ENGINEER'S CERTIFICATI "I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH THE CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE. AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE

HOWARD SOIL CONSERVATION DISTRICT."

"I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED N THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT OF ENTRY



		Temporary Seedin	g Summary				
	e (from Figure B. (from Table B.1):	3): <u>6b</u>	Fertilizer Ràte (10-20-20)	Lime Rāțe			
5pecies	Application Rate (lb/ac)	Seeding Dațes	Seeding Depths				
BARLEY	96	3/1 - 5/15, 8/15 - 10/15	1"	436  b/ac	2 †ons/āc		
OAT5	72	3/1 - 5/15, 8/15 - 10/15	1,20	(10 lb/ 1000 sf)	(90 lb/ 1000 sf)		
RYE	112	3/1 - 5/15, 8/15 - 10/15	1"				

### PERMANENT SEEDING NOTES (8-4-5)

A. Seed Mixtures General Use

a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure 8.3) and based on the site condition or purpose found on Table 8.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be

b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Plantina.

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. Turforass Mixtures

à. Areàs where turfgràss mày be desired include làwns, pàrks, plàygrounds, ànd 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 summary is to be placed on the plan.

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 total mixture by weight.

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 pounds per 1000 square feet.

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

c. 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

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

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

#### Permanent Seeding Summary

Hardiness Zone (from Figure B.3): 6b Seed Mixture (from Table B.3): 8					Fertilizer Rate (10-20-20)			Lime Rațe
No.	Species	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. 1-Oct. 15	1/4-1/2 in.	45 lbs. per acre		(2 lb/	1 ' '
8	MILLET FOXTAIL	50 50	May 15-June 15	1/4-1/2 in.	(1.0 lb/ 1000 sf)	1000 sf)	1000 sf)	1000 sf)
8	500	100	Mar. 15-May 31 May 16-Sept.14 Sept.15-Nov.15	1/4-1/2 in.				

#### B-4-1 STANDARDS AND SPECIFICATIONS NCREMENTAL STABILIZATION

Definition Establishment of vegetative cover on cut and fill slopes. Purpose

To provide timely vegetative cover on cut and fill slopes as work progresses.

Conditions Where Practice Applies Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

A. Incremental Stabilization - Cut Slopes 1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and

apply seed and mulch on all cut slopes as the work progresses. 2. Construction sequence example (Refer to Figure B.1): a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.

b. Perform Phase 1 excavation, prepare seedbed, and stabilize. c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate

PHASE 1 EXCAVATION -- PHASE 2 EXCAVATION - PHASE 3 EXCAVATION

2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans.

3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner. Construction sequence example (Refer to Figure 8.2): Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct silt fence on low side of fill unless other methods shown on the plans address this area. b. At the end of each day, install temporary water conveyance practice(s), as necessary, to

c. Place Phase 1 fill, prepare seedbed, and stabilize. d. Place Phase 2 fill, prepare seedbed, and stabilize. e. Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary. Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any

interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

APPROVED: DEPARTMENT OF PUBLIC WORKS

ENGINEERING DIVISION

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HWAYS MK	
T OF PLANNING AND ZONING	
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D DEVELOPMENT NO	
-	10.

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1855 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 DETAIL B-1 STABILIZED
CONSTRUCTION ENTRANCE

CONSTRUCTION SPECIFICATIONS

SCE

EXISTING PAVEMENT

-FARTH FILL

PROFILE

PLAN VIEW

PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTRE 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 SPILLED, DROPPED, OR

D ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING, WASHING AY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS

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.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

2011

10 FT MAX.

ELEVATION

1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2% INCH MAXIMUM OPENING).

. USE 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN

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.

6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM

KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

STABILIZATION MATTING

· ISOMETRIC VIEW

USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.

USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE 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 VECETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. 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.

5. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 ½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.

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

UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.

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.

KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.

IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLE 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.

10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

2011 MARYLAND DEPARTMENT OF ENVIRONMEN WATER MANAGEMENT ADMINISTRATION

CHANNEL APPLICATION

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

5. 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.

SECTION

DETAIL C-9 DIVERSION FENCE

FLOW 1

3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.

DETAIL B-4-6-C PERMANENT SOIL

CONSTRUCTION SPECIFICATIONS::

CONSTRUCTION SPECIFICATIONS

-PIPE (SEE NOTE 6)

MARYLAND DEPARTMENT OF ENVIRONMED WATER MANAGEMENT ADMINISTRATION

STANDARD SYMBOL

MAXIMUM DRAINAGE AREA = 2 ACRES

UV RESISTANT IMPERMEABLE SHEETING ON BOTH SIDES OF FENCE

MARYLAND DEPARTMENT OF ENVIRONMED WATER MANAGEMENT ADMINISTRATION

STANDARD SYMBOL

PSSMC - * Ib/ft²
(* INCLUDE SHEAR STRESS)

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, d. 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 2. All vegetative and structural practices are to be installed according to the provisions of this plan and are

SEDIMENT CONTROL, and revisions thereto. 3. 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

to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND

areas on the project site except for those areas under active grading. 4. 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 (Se 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. 8-4-1) 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 concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization matting (Sec. B-4-6).

5. 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 the CID.

6. Site Analysis: Total Area of Site: 8.20 Acres Area Disturbed: _____3.07__ Acres Area to be roofed or paved: 0.74 Acres Area to be vegetatively stabilized: 2.33 Acres 4.000 Cu. Yds. Total Fill: 4.000 Cu. Yds. Offsite waste/borrow area location: ___ON-SITE____

PLACED AT THE END OF EACH WORK DAY, TO BE USED UNTIL

PHASE 3 EXCAVATION-

Figure B.2: Incremental Stabilization - Fill

STANDARD STABILIZATION NOTE

a.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES,

STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

(B-4-3)

Definition

Purpose

Conditions Where Practice Applies

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

Mulch alone may be applied between the fall and spring seeding dates only if the ground is

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

inoculant as cook as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can

Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals

Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1

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

Cultipacking seeders are required to bury the seed in such a fashion as to provide at

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

If fertilizer is being applied at the time of seeding, the application rates should not exceed

hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one

a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of

noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note:

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

WCEM 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

sturry. 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 must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately

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

c. Wood cellulose fiber used as mulch must be applied to a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber

inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a

a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by

i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of

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

iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, 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

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to

The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.

Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale

Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to

Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental

8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles

Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion.

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4

The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio

edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.

iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually

STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

(8-4-8)

Definition The mound or pile of soil protected by appropriately designed erosion and sediment control measures.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

no steeper tha 2:1. Benching must be provided in accordance with Section B-3 Land Grading

or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.

Runoff from the stockpile area must drain to a suitable sediment control practice.

2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If

with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:

the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.

200 pounds per acre; K O (potassium), 200 pounds per acre.
ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by

WCFM is to be dyed green or contain a green dye in the package that will provide an

WCFM, including dye, must contain no germination or growth inhibiting factors.

iv. WCFM material must not contain elements or compounds at concentration levels that will by phyto-toxic.

the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P 0 (phosphorus),

each direction. Roll the seeded area with weighted roller to provide good seed to soil

used for weedcontrol until sufficient time has elapsed (14 days min.) to permit dissipation of

Use four times the recommended rate when hydroseeding. Note: It is very important to keetp

frozen. The appropriate seeding mixture must be applied when the ground thaws.

Dry Seeding: This includes use of conventional drop or broadcast spreaders.

Permanent Seeding Table B.3, or site-specific seeding summaries.

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

time. Do not use burnt or hydrated lime when hydroseeding

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

Use only sterile straw mulch in areas where one species of grass is desired.

appropriate colot to facilitate visual inspection of the uniformly spread slurry.

mulch anchoring tool, increase the application rate to 2.5 tons per acre.

a. Apply mulch to all seeded areas immediately after seeding.

used on sloping land, this practice should follow the contour.

available in rolls 4-15 feet wide and 300 to 3,000 feet long.

Access the stockpile area from the upgrade side.

tabilization and Standard B-4-4 Temporary Stabilization.

provided in accordance with Section B-3 Land Grading.

containing contaminated material must be covered with impermeable sheeting.

least 1/4 inch of soil covering. Seedbed must be firm after planting

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

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

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

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR

SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3

b.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED

TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING

HORIZONTAL TO 1 VERTICAL (3:1); AND

The application of seed and mulch to establish vegetative cover.

Specifications

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

verify type of seed and seeding rate

phyto-toxic materials.

each direction.

1. Mulch Materials (in order of preference)

weaken bacteria and make the inoculant less effective.

PHASE 2 EXCAVATION -

PHASE 1 EXCAVATION -

SLOPE IS COMPLETELY STABILIZED

7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance. 8. Additional sediment control must be provided, it 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 Identification of missing or improperly installed sediment controls
 Compliance status regarding the sequence of construction and stabilization requirements

· Maintenance and/or corrective action performed · Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE). 9. 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, whichever is shorter.

10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by

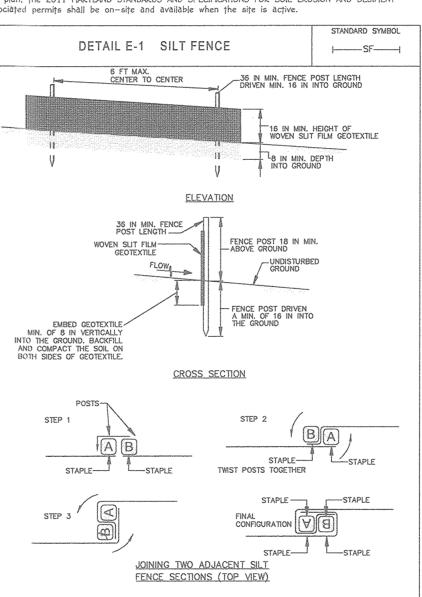
he HSCD prior to proceeding with construction. Minor revisions may allowed by the HSCD per the list of HSCD-approved field changes. 11. Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin n one grading unit (maximum acreage of 20 ac. per grading 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 HSCD. Unless otherwise specified and approved by the HSCD, no more than 30 acres cumulatively may be disturbed at a given time.

12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure. 13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.

14. All Silt Fence and Super Silt Fence shall be placed on-the-contour, and be imbricated at 25' minimum intervals, with lower ends curled uphill by 2' in elevation 15. Stream channels must not be disturbed during the following restricted time periods

· 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.



CONSTRUCTION SPECIFICATIONS

USE WOOD POSTS 1¾ X 1¾ ± ⅓ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS
AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT
LESS THAN 1 POUND PER LINEAR FOOT.

. 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

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.

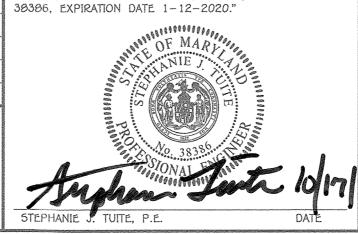
REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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 2011 "PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME, AND THAT I

AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER

THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.



#### OWNER/DEVELOPER EVA J. NELSON 4472 ILCHESTER ROAD

ELLICOTT CITY, MARYLAND 21043 443-253-7535

SECTION/AREA PARCEL 618 OAK HILL MANOR LAT NOS. BLOCK NO. ZONE TAX MAP | ELEC. DIST. CENSUS 31 FIR5T 601104 R-ED SEWER CODE

STANDARD SYMBOL DETAIL E-3 SUPER SILT FENCE ----SSF-----I -34 IN MIN. GALVANIZED CHAIN LINK FENCE WITH WOVEN SLIT FILM GEOTEXTILE **ELEVATION** CHAIN LINK FENCING -WOVEN SLIT FILM GEOTEXTILE-FLOW -CROSS SECTION CONSTRUCTION SPECIFICATIONS

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

FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.

5. FASTEN WOVEN SLIT 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 GOING AROUND THE ENDS OF THE SUPER SILT FENCE.

REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMEN' REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION STANDARD SYMBO DETAIL D-4-1-B ROCK OUTLET PROTECTION ROPII - d/2 -

EXTEND RIRRAP PLAN VIEW 0% SLOPE INVERT SECTION A-A CLASS THICKNESS (1 NONWOVEN GEOTEXTILE OR STONE FILTER LG IN 3 FT MIN. 19 IN | 32 IN || 46 IN **PROFILE** CONSTRUCTION SPECIFICATIONS RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.

2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING, REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (% TO 11/2 INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.

EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF RIPRAP. 6. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.

WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.

MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

2011 SEQUENCE OF CONSTRUCTION

COUNTY INSPECTOR. (2 WEEKS) NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY DEPT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION AT 410-313-1855 AT LEAST 48 HOURS BEFORE STARTING WORK. INSTALL SILT FENCE, SUPER-SILT FENCE, AND DIVERSION FENCE. WITH

OBTAIN A GRADING PERMIT AND HOLD PRE-CONSTRUCTION MEETING WITH

APPROVAL OF SEDIMENT CONTROL INSPECTOR TREES MAY BE CUT PRIOR TO INSTALLATION OF FENCING AS LONG AS EARTH IS NOT DISTURBED PRIOR TO INSTALLATION OF FENCING. (5 DAYS) INSTALL SEDIMENT TRAPS. (5 DAYS)

REMOVE DESIGNATED PAVED AREAS AND REMOVE ALL DESIGNATED UTILITIES SHOWN TO BE REMOVED. (1 MONTH) RECEIVE PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR BEFORE

PROCEEDING, THEN ROUGH GRADE SITE AND INSTALL CULVERT PIPES AND RIPRAP. (2

INSTALL EROSION CONTROL MATTING IN SWALES AS SHOWN ON THE PLANS, AND TEMPORARY SEED DISTURBED AREAS AS NECESSARY.

CONSTRUCT DRIVEWAY. (2 WEEKS) INSTALL PERMANENT SEEDING. (3 DAYS)

10. ONCE INDIVIDUAL LOTS ARE CONSTRUCTED AND ALL FINE GRADING & STABILIZATION IS COMPLETE (HOUSES TO BE CONSTRUCTED UNDER FUTURE SOP) AND WITH APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, COVERT AND MUCK OUT SEDIMENT TRAPS, AND CONVERT OR INSTALL STORMWATER MANAGEMENT FACILITIES/DEVICES. (24 MONTHS) UPON COMPLETION OF ALL ROUGH GRADING WITHIN THE CONTRIBUTING

AREA TO THE SEDIMENT TRAP AND APPROVAL OF SEDIMENT CONTROL INSPECTOR, CONVERT AND MUCK OUT SEDIMENT TRAP THEN CONVERT TO BIO-RETENTION FACILITY THEN INSTALL REQUIRED PLANTINGS WITHIN THE FACILITY. (1 YEAR) . 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 AND ON A DAILY BASIS.

CHARTS, NOTES AND DETAILS

OAK HILL MANOR LOTS 1 THRU 8 & OPEN SPACE LOTS 9 THRU 12

ZONED: R-ED PARCEL Nos.: 618 TAX MAP No.: 31 GRID No.: 4 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: NOT TO SCALE DATE: AUGUST, 2019

F-19-003

SHEET 9 OF 9

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

d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded

the application of temporary stabilization.

Figure 8.1: Incremental Stabilization - Cut B. Incremental Stabilization - Fill Slopes 1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses.

intercept surface runoff and convey it down the slope in a non-erosive manner.

10/21/2019 .30 .19

ENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE (410) 461 - 2855

FILICOTT CITY, MARYLAND 21042

DESCRIPTION

REVISION BLOCK