	50ILS LEGEND		
50IL	NAME	CLA55	K FACTOR
GcC	Gladstone-Legore complex. 8 to 15 percent slopes	A	0.28
MgF	Manor-Bannertown sandy loams, 25 to 65 percent slopes, rocky	В	0.20

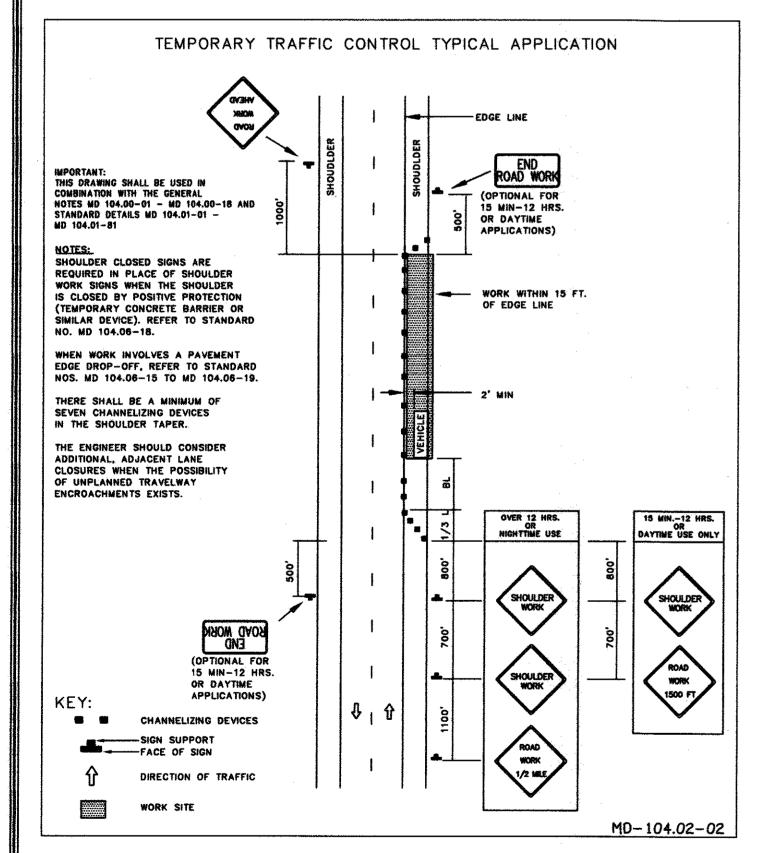
	STORMWA	iter man	AGEMENT SUMMARY
area id.	E5DV REQUIRED CU.FT.	E5Dv PROVIDED CU.FT.	remark5
SITE	4,436	4,501	DRY WELLS (M-5), MICRO-BIORETENTION (M-6) & BIORETENTION (F-6)
TOTAL	4,436	4,501	

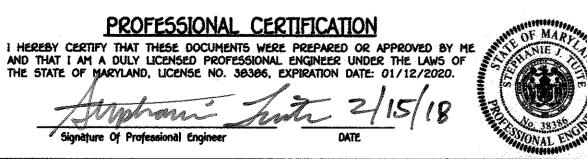
GROSS AREA = 0.20 ACRES LOD = 2.63 ACRES RCN = 51.4TARGET Pe = 1.0"

Rev = (5)(Rev)(A)/12Rev = (0.32)(0.15)(0.2)/12= 0.033 dc-ff or 1,429 cu-ff

	STOOMWA	TEO MANA	CEMENT DOACTICE	BIORETENTION (F-6) Y/N, NUMBER					
	JIOKI WA	VICK PINITA	IGEMENT PRACTICE						
LOT NO.	ADDRESS	DRY WELLS (M-5) Y/N, NUMBER	MICRO-BIORETENTION (M-6) Y/N, NUMBER	(F-6)					
1	4502 ILCHESTER ROAD	YES, ONE (1)	YES, ONE (1) - MICRO-BIO 1	NO					
2	4498 ILCHESTER ROAD	YES, ONE (1)	YES, ONE (1) - MICRO-BIO 2	NO NO					
. 3	4400 ILCHESTER ROAD	YES, ONE (1)	NO	YES, ONE (1) - BIO 3					
4	4480 ILCHESTER ROAD	NO	NO	YES, ONE (1) - BIO 3					
5	4476 ILCHESTER ROAD	YES, ONE (1)	NO	YES, ONE (1) - 810 3					
6	4472 ILCHESTER ROAD	NO	YES, ONE (1) - MICRO-BIO 4	NO NO					
7	4460 ILCHESTER ROAD	YES, ONE (1)	YES, ONE (1) - MICRO-BIO 4	NO					
Ø	4464 ILCHESTER ROAD	YES, ONE (1)	YES, ONE (1) - MICRO-BIO 4	NO					

	Minimum	nimum Lot Size Chart					
Lot No.	Gross Ared	Pipestem Area	Minimum Lo† Size				
3	11,800 Sq.Ft.±	815 Sq.Ft. ±	10,985 Sq.F7.				
4	15,954 5q.Ft.±	3,559 5q.Ft.±	12,395 5q.Ft.				
5	14,469 5q.Ft.±	1,440 5q.Ft.±	13,029 5q.Ft.				
6	30,386 5q.F7.±	1,650 5q.Ft.±	36,728 Sq.Ft.				
7	13,876 5q.Ft.±	1,760 5q.Ft.±	12,116 5q.Ft.				
8	15,082 5q.Ff.±	2,421 5q.Ft.=	12,661 5q.Ff.				





DEVELOPER/OWNER EVA J. NELSON 4472 ILCHESTER ROAD ELLICOTT CITY, MARYLAND 21043-6836 443-*253-7535*

DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY

TENTATIVELY APPROVED:

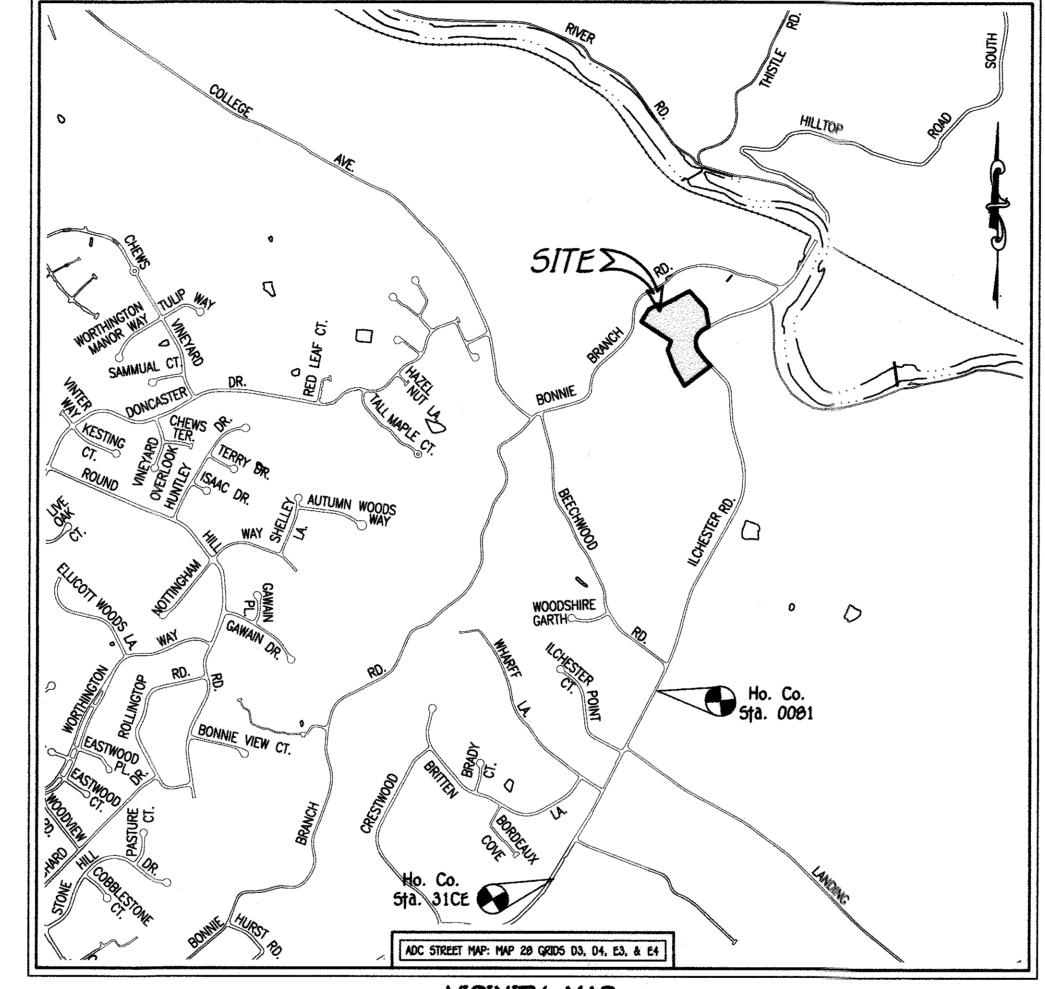
PLANNING BOARD OF HOWARD COUNTY



PRELIMINARY EQUIVALENT SKETCH PLAN OAK HILL MANOR,

LOTS 1 THRU 8 & OPEN SPACE LOTS 9 THRU 12

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



VICINITY MAP

BENCHMARKS HOWARD COUNTY CONTROL STATION #0001 - HORIZONTAL - NAD '03) £ 1,377,504.092 ELEVATION = 477.919 - VERTICAL - (NAVD '88) HOWARD COUNTY CONTROL STATION #31EC - HORIZONTAL - (NAD '83) N 570.367.015 E 1,376,436.771 ELEVATION = 477.758 - VERTICAL - (NAVD '88)

SITE ANALYSIS DATA CHART

- TOTAL AREA OF THIS SUBMISSION = 8.20 ac.±. LIMIT OF DISTURBED AREA = 2.63 Ac±. PRESENT ZONING DESIGNATION = R-ED
- (PER 10/06/2013 COMPREHENSIVE ZONING PLAN).
- E. OPEN SPACE REQUIRED: 8.20 AC x 50% = 4.10 Ac.
- OPEN SPACE PROVIDED: 4.83 Ac. 4 (4.72 Ac. + CREDITED, 0.11 Ac. + NON-CREDITED) F. RECREATIONAL AREA PROVIDED: N/A
- G. BUILDING COVERAGE OF SITE: 16,000 SQ.FT. OR 0.37 Ac. +
 H. PREVIOUS HOWARD COUNTY FILES: ECP-15-043, WP-16-115
- 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 Ac+ (8.20-0-4.04) (TOTAL SITE AREA - FLOODPLAIN - STEEP SLOPES AREA)

 DENSITY PERMITTED =
- 4.16 ACRES X 2 LOTS PER ACRE = 8 LOTS M. PROPOSED NUMBER OF LOTS = 8 LOTS.
- TOTAL AREA OF LOTS = 3.04 AC. =
- O. AREA OF ROAD DEDICATION = 0.33 AC. TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 Ac.
- Q. TOTAL AREA OF FOREST = 6.9 Ac. * . TOTAL GREEN OPEN AREA = 7.33 Ac. + TOTAL IMPERVIOUS AREA = 0.87 Ac. + 5. AREA OF ERODIBLE SOILS = 5.90 Ac. *

STMBUL	DESCRIPTION	STIMBUL	DESCRIPTION
492	EXISTING 2' CONTOURS	102	PROPOSED CONTOUR
+90	EXISTING 10' CONTOURS	+362.5	SPOT ELEVATION
GgB GgC	SOILS LINES AND TYPE	LOD	LIMITS OF DISTURBANCE
and teachers have been been	EXISTING TREELINE		drainage area divide
~~~~	PROPOSED TREELINE	5F	SILT FENCE
0 <b>*</b>	INDIMIDUAL TREES & SHRUBS	55F	SUPER SILT FENCE
PECIMEN 🕝	SPECIMEN TREE	. ECM .	EROSION CONTROL MATTING
	EXISTING & PROPOSED PAVING	麗	STABILIZES CONSTRUCTION ENTRANCE
	25% OR GREATER SLOPES		PROPOSED DRYWELL (M-5)
	15% TO 24.9% SLOPES	-	FLOW ARROW
Y IS ZONED R	ITH THE LATEST HOWARD COUNTY STANDARDS UNLE 2-ED (PER DATE 10/06/2013 COMPREHENSIVE ZON O ON A FIELD RUN MONUMENTED BOUNDARY SURVEY H MAXIMUM TWO FOOT CONTOUR INTERVALS PREPAR	ING PLAN). DATED SEPTEN	IBER, 2013. THE EXISTING TOPOGRAPHY IS

LEGEND

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 FI

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 PROPOSED TO BE REMOVED. THE MAIN HOUSE IS ON THE HISTORIC REGISTED.

There are no wetlands on this site per investigation by eco-science professionals, inc. dated december, 2014.

A WETLAND DELINEATION & FOREST STAND DELINEATION REPORT FOR THIS PROJECT DATED DECEMBER 2014 WAS PREPARED BY ECO-SCIENCE

A WEILAND DELINEATION & FUREST STATIO DELINEATION AND VICTORIAN PROPESSIONALS.

STEEP SLOPES AND STREAM BUFFER EXIST ON-SITE.

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

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.

THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP IN JULY 2013 (NO INTERSECTIONS WERE REQUIRED TO BE STUDIED), AND WAS TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP IN JULY 2013 (NO INTERSECTIONS WERE REQUIRED TO BE STUDIED), AND WAS TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP IN JULY 2013 (NO INTERSECTIONS WERE REQUIRED TO BE STUDIED).

4. 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.

5. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.

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

7. EXCAVATIONS TO VERIFY DEPTH TO ROCK AND WATER WERE CONDUCTED ON JUNE 9, 2016.

9. 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 ALONG WITH BIORETICHON (F-6) UNDER CHAPTER 3. 10 YEAR MANAGEMENT IS NOT REQUIRED SINCE RUNOFF IS BEING DIRECTED AWAY FROM BONNIE BRANCH.

10. LANDSCAPING WILL BE PROVIDED AT THE FINAL PLAN STAGE OF THIS PROJECT, LANDSCAPING SHOWN IS CONCEPTUAL.

11. FOREST CONSERVATION OBLIGATIONS WILL BE MET BY ON-SITE RETENTION OF EXISTING FOREST AT THE FINAL PLAN STAGE OF THIS PROJECT.

12. TRASH AND RECYCLABLES COLLECTION WILL BE AT ROAD A WITHIN 5' OF THE COUNTY ROADWAY.

13. A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FARRICATED AND INSTALLED BY HOWARD COUNTY. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5751 FOR DETAILS AND COST ESTIMATE.

14. SUBDIVISION IS REQUIRED TO PROVIDE MILH.U. (MODERATE INCOME HOUSING UNIT). IT IS ANTICIPATED AT THIS TIME THAT A FEE-IN-LIEU WILL BE PAID MILH AGREEMENT WILL BE SUBMITTED AT FINAL PLAN STAGE OUTLINING HOW THE MIHU REQUIREMENT WILL BE MET.

14. ALIH.U. REQUIRED = 0.7 MILH.U.

A. M.I.H.U. REQUIRED = 0.7 M.I.H.U. (7 LOTS X 10% M.I.H.U./LOT)

(7 LOTS X 10% M.I.H.U./LOT)

B. ONE UNIT IS EXEMPT FROM MIHU REQUIREMENTS.

25. THIS PLAN RECEIVED ADVISORY COMMENTS FROM THE HISTORIC PRESERVATION COMMISSION (HPC) ON NOVEMBER 5, 2013 AND NOVEMBER 21, 2014.

26. 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.

27. A 100-WAIT HPS VAPOR EQUIVALENT LED "MAPLE LAWN ACORN" PIXTURE MOUNTED ON A 12-FOOT BLACK FIBERGLASS POLE (WITH A SHROUD) IS PROPOSED AT THE INTERSECTION OF THE PUBLIC ROAD AND THE TWO PRIVATE DRIVEWAY ENTRANCES.

28. PREVIOUS DPZ FILE NOS: ECP-15-043, WP-16-115.

29. PLAN IS SUBJECT TO PLANNING BOARD APPROVAL, IN ACCORDANCE WITH SECTION 107.0 OF THE ZONING REGULATIONS.

30. THIS SUBDIVISION IS SUBJECT TO THE PROTECTION OF SCENIC ROADS, PER SECTION 16.125 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.

31. TRAFFIC CONTROL DEVICES:

COMPLETED.

(b) THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIMISION (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.

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

OPEN SPACE PROVIDED: 4.18 ACRES

33. IN ACCORDANCE WITH SECTION 16.128 OF THE SUBDIMISION 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.

34. 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.

35. 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.

EXIDID FOR A MINIMUM OF 4 FEET BENEATH THE PROPUSED FACILITIES AND THE POINTS AT WHICH ROCK OR WATER WAS ENCOUNTERED.

5. 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.

7. PARKING REQUIRED: 2.5 SPACES PER UNIT x 8 UNITS = 20 SPACES.

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

8. 2 SPACES IN GARAGE AND 2 SPACES OUTSIDE GARAGE IN DRIVEWAY.

8. ALTERNATIVE COMPLIANCE, WP—16—115, REQUESTING ALTERNATIVE COMPLIANCE FROM HOWARD COUNTY SUBDIMISION AND LAND DEVELOPMENT REGULATIONS SPECIFICALLY SECTION 16.1205(A)(7) FOREST RETENTION PRIORITIES — RETENTION OF SPECIMEN TREES, SECTION 16.116(8)(1) STATING THAT CRADING, REMOVAL OF VECETATIVE COVER AND TREES. NEW STRUCTURES, AND PAVING SHALL NOT BE PERMITTED ON LAND LITTLE STREED. 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 SQ.FT. IS SIZE, SECTION 16.134(A)(1)(I) SIDEWALLS ARE REQUIRED ON ONLY ONE SIDE OF CUL-DE-SACS AND LOCAL STREETS OF SINGLE-FAMILY DETACHED SUBDIVISIONS, AND SECTION 16.125(B)(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, 2018. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:

1. 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.

minimum of 3" Califer 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.

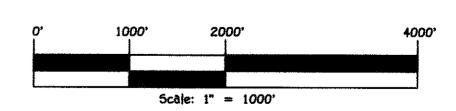
5. The construction of the new houses fronting along ilchester road shall be adequately screened using enhanced landscaping and house siting to minimize impacting the natural setting along the scenic road. This condition will be evaluated further at the site development plan stage.

6. THE ALTERNATIVE COMPLIANCE PETITION NUMBER AND ITS CONDITIONS OF APPROVAL MUST BE ADDED TO THE SUBDIVISION PLANS AND FINAL PLAT.
PLANNING BOARD APPROVED THIS PRELIMINARY EQUIVALENT SKETCH PLAN ON FEBRUARY 7, 2018 SUBJECT TO THE FOLLOWING CONDITIONS:

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 FAMOUR 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 1.

		51	PECIMI	EN TREE TABLE	
KEY	5PECIE5	SIZE (DBH)	CRZ (PT RADIUS)	COMMENTS	remarks
A	SILVER MAPLE	47"	70.5	FAIR CONDITION, MULTI-STEM, SOME DIEBACK	to remain
В	WHITE OAK	58"	87	GOOD CONDITION	to remain
C	TULIP POPLAR	35"	52.5	GOOD CONDITION	TO REMAIN
D	WHITE OAK	34.5"	51.75	GOOD CONDITION	TO REMAIN
£	WHITE OAK	37.5"	56.25	GOOD CONDITION	to remain
F	WHITE OAK	34.5"	51.75	GOOD CONDITION	to remain
G	RED OAK	54"	81	GOOD CONDITION	to remain
Н	WHITE ASH	31"	46.5	fair condition, poor canopy spread	to remain
i	TULIP POPLAR	30"	45	GOOD CONDITION	TO BE REMOVED
J	red oak	40°	60	GOOD CONDITION	to remain
K	BLACK OAK	37"	55.5	fair condition, LIMB DIEBACK	to remain
L	TULIP POPLAR	34.5"	51.75	GOOD CONDITION	to remain
M	TULIP POPLAR	46"	69	GOOD CONDITION	to remain
N	TULIP POPLAR	37"	55.5	GOOD CONDITION	to remain
0	TULIP POPLAR	36"	54	GOOD CONDITION	to remain
ρ	TULIP POPLAR	36"	54	GOOD CONDITION	to remain
Q	TULIP POPLAR	35.5"	53.25	GOOD CONDITION	to remain
R	TULIP POPLAR	31"	46.5	GOOD CONDITION	to be removed
5	TULIP POPLAR	40"	60	GOOD CONDITION	to be removed
T	TULIP POPLAR	30.5"	57.75	GOOD CONDITION	to remain
U	TULIP POPLAR	34.5	51.75	GOOD CONDITION	to remain
٧	TULIP POPLAR	34"	51	GOOD CONDITION	to remain
W	TULIP POPLAR	39"	58.5	GOOD CONDITION	to remain
X	TULIP POPLAR	32"	48	GOOD CONDITION	to remain
Υ	TULIP POPLAR	38"	57	GOOD CONDITION	to remain
Z	TULIP POPLAR	44.5"	66.75	GOOD CONDITION	to remain
AA	TULIP POPLAR	36"	54	GOOD CONDITION	to remain
88	TULIP POPLAR	38"	57	GOOD CONDITION	to be removed



TITLE SHEET

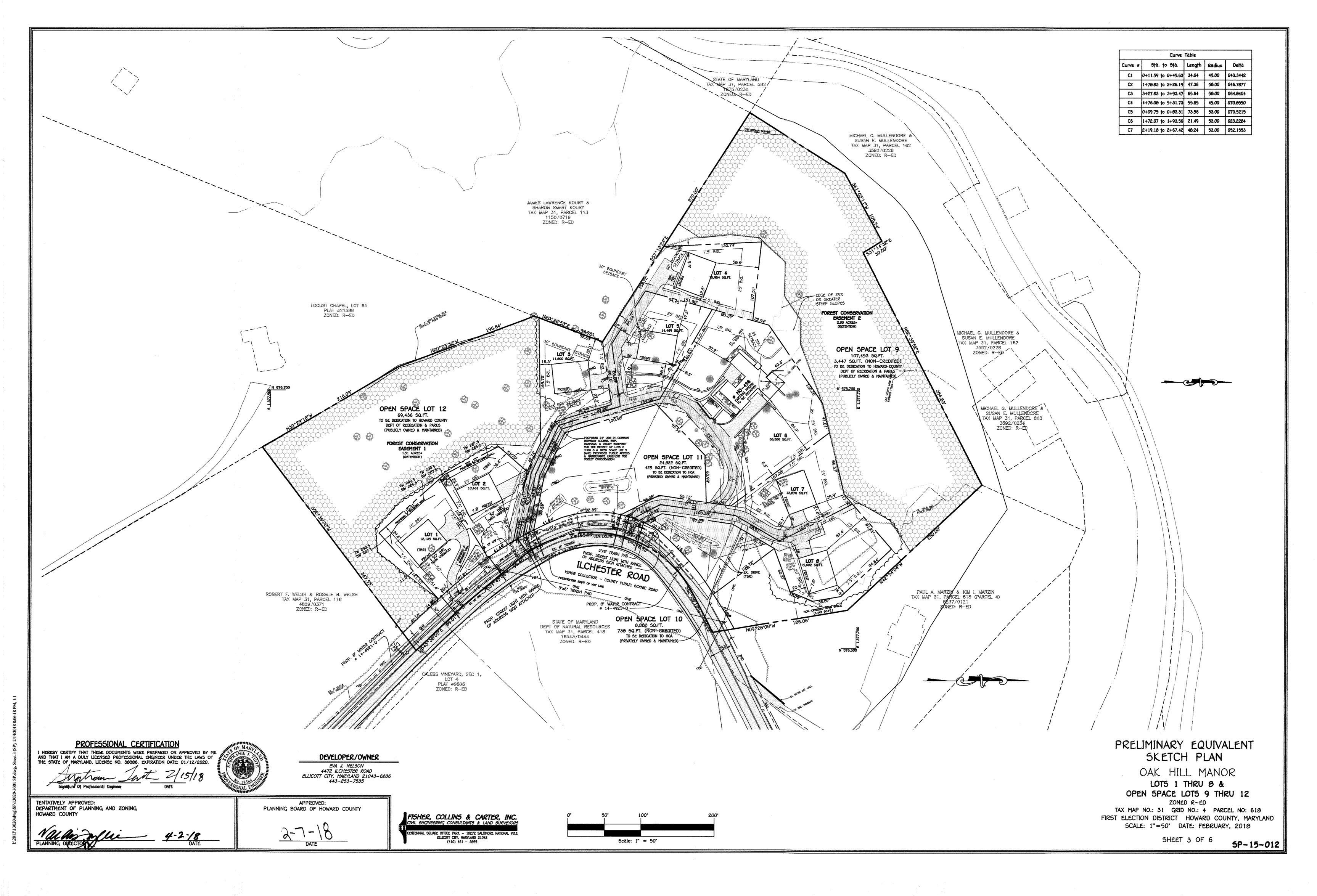
OAK HILL MANOR

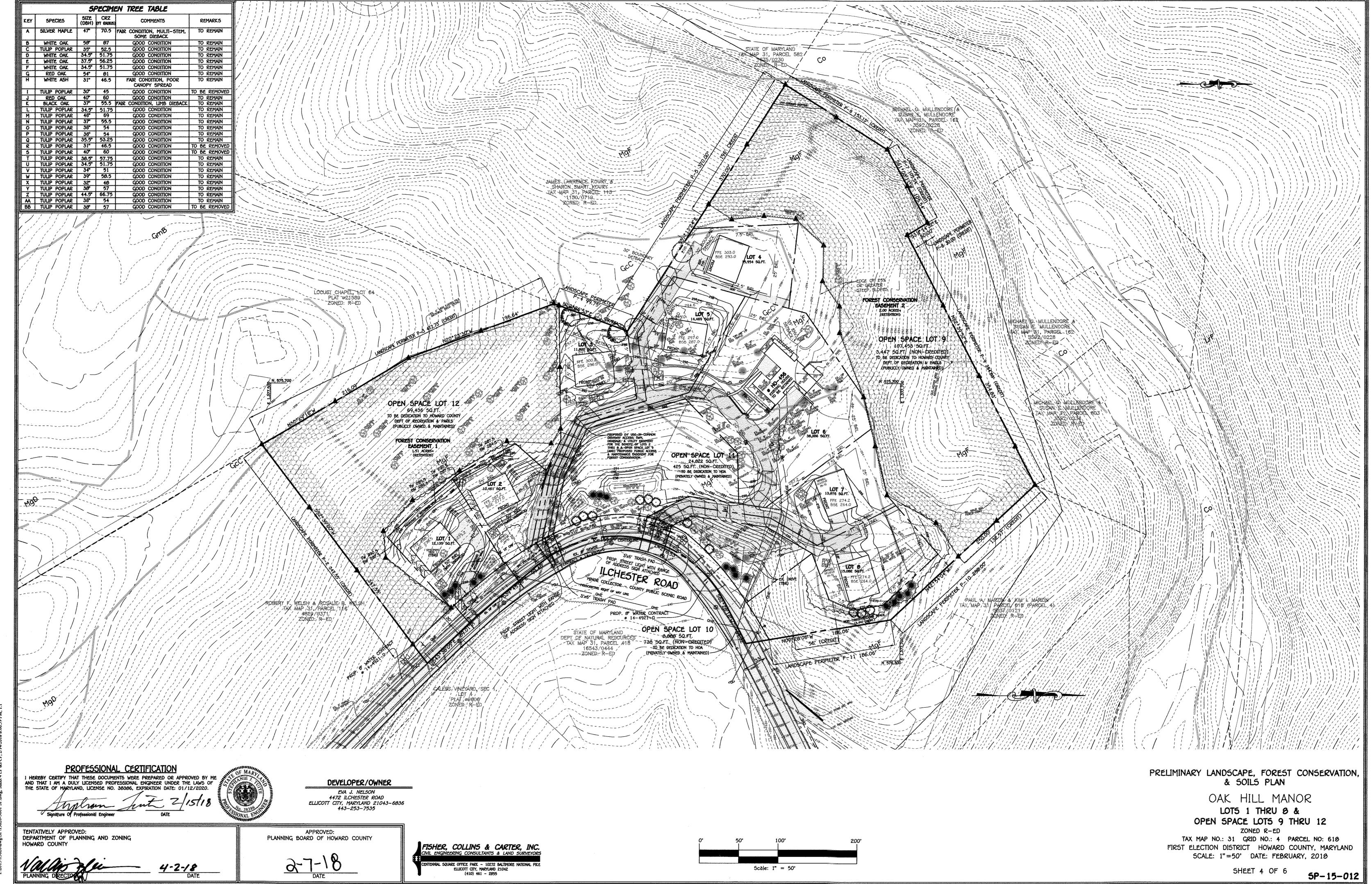
LOTS 1 THRU 8 & OPEN SPACE LOTS 9 THRU 12 ZONED R-ED

TAX MAP NO.: 31 GRID NO.: 4 PARCEL NO: 618 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: 1"=50' DATE: FEBRUARY, 2018

SHEET 1 OF 6

5P-15-012





MAN Anna CB 12000 2001 CB Anna Chang AT B RECT 3/14/2019 0-02.40 BM 1-1

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL A LANDSCAPE SURETY FOR REQUIRED SHADE TREES WILL BE REQUIRED AT FINAL PLAN STAGE. AT FINAL PLAN STAGE ADDITIONAL SCREENING WILL BE

### FOREST PROTECTION GENERAL NOTES

REQUIRED IN ACCORDANCE WITH PLANNING BOARD APPROVAL ON FEBRUARY 7, 2019.

- 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.
- 2. 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.
- 3. 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 PROTECTED AREAS.
- 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.
- 6. THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPILING OF EARTH
- 7. REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE
- 8. THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS.
- 9. 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

A. TOTAL TRACT AREA

D. NET TRACT AREA .

BREAK EVEN POINT:

PROPOSED FOREST CLEARING:

L TOTAL AREA OF FOREST TO BE CLEARED

M. TOTAL AREA OF FOREST TO BE RETAINED

J. POREST RETENTION ABOVE THRESHOLD WITH NO MITICATION.....

N. REPORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD ...
P. REPORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD ...

a credit for retention above conservation threshold .

- 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
- 3. 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:

FOREST CONSERVATION WORKSHEET

PRIOR TO PLANTING ALL MULTIFLORA ROSE WITHIN PLANTING AREAS SHALL BE REMOVED. 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 So That New Growth OF Roses is Able To Be More Successfully Managed.

#### VERSION 1.0 FOREST B. AREA WITHIN 100 YEAR FLOODPLAIN . C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION RETENTION LAND USE CATEGORY: (from table 3.2.1, page 40, Manual) AREA ARA MDR IDA HDR MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS IS INFORMATION FOR CALCULATIONS: E. AFFORESTATION THRESHOLD..... F. FOREST CONSERVATION THRESHOLD... PROHIBITED EXISTING FOREST COVER: G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) VIOLATORS SUBJECT TO THE FINES AS IMPOSED BY THE MARYLAND FOREST CONSERVATION ACT OF I. AREA OF FOREST ABOVE CONSERVATION

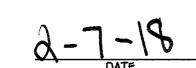
11" MINIMUM NOTE: THE PROTECTIVE SIGNAGE SHALL BE IN PLACE FOR PERPETUITY.

## FOREST CONSERVATION SIGN DETAIL NOT TO SCALE

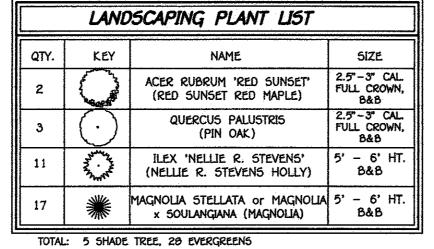
R. TOTAL REFORESTATION REQUIRED 5. TOTAL AFFORESTATION REQUIRED T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED PROFESSIONAL CERTIFICATION HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 30306. EXPIRATION DATE: 01/12/2020.



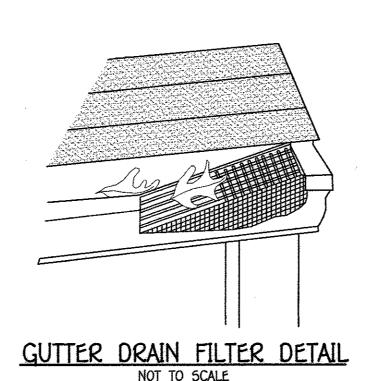
TENTATIVELY APPROVED: PLANNING BOARD OF HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY







SURCHARGE PIPE  SURCHARGE PIPE  * THE EXACT NUMBER OF D REQUIRED AND THE LENGT WILL BE DETERMINED ONC DRAINAGE PATTERNS ARE  CAP WITH LOC	h and width e downspout determined.
BUILDING FOUNDATION  STONE ASTM D-448 SIZE #1  CONCRETE FOOT PLATE	PERF. P.V.C. PIPE W/CAP. PERF. AREA 5 TIMES PIPE AREA  OBSERVATION WELL 4-6 INCH PERFORATED PVC PIPE ON CONCRETE FOOTPLATE  * FILTER FABRIC —(SIDES ONLY) (NON—WOVEN) MSHA CL. "C"
GROUND WATER TO THE STATE OF TH	NOTE: TRENCH MAY NOT BE INSTALLED IN FILL.



ADJACENT TO

N/A (FRONT)

N/A

ROADWAY

ADJACENT TO

PERIMETER PROPERTIES

317.54' LF

YES, 317.54 L.F.

(O L.F. REMAINING)

ADJACENT TO

PERIMETER PROPERTIES

412.73' L.F.

YES, 412.73 L.F.

(0 L.F. REMAINING)

PERIMETER

CATEGORY

LANDSCAPE TYPE

(YES/NO, LENGTH)

SHADE TREES

**EVERGREENS** 

SHADE TREES

EVERGREENS

SHRUBS

5HRUB5

LINEAR FEET OF PERIMETER

CREDIT FOR EXISTING TREES

SHADE TREES/EVERGREENS

NUMBER OF PLANTS REQUIRED

CREDIT FOR EXISTING VEGETATION

SMALL/MEDIUM DECIDUOUS TREES

NUMBER OF PLANTS PROVIDED

SMALL/MEDIUM DECIDUOUS TREES

# STORMWATER MANAGEMENT NOTES

- 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. OR LESS. 3. DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH
- THE DETAIL SHOWN ON THIS SHEET. 4. FINAL GRADING WILL BE SHOWN ON A SITE DEVELOPMENT PLAN.

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

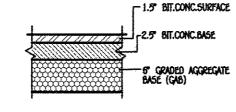
- A. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- B. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO ENSURE TRENCH DRAINAGE.
- C. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS. 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.

	D	RY WE	LL CHA	ART	
DRYWELL NO.	AREA OF ROOF PER DOWN SPOUT	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF TREATMENT	L W D
LOT 1	1,000 5Q. FT.	80 C.F.	280 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 SQ. 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'

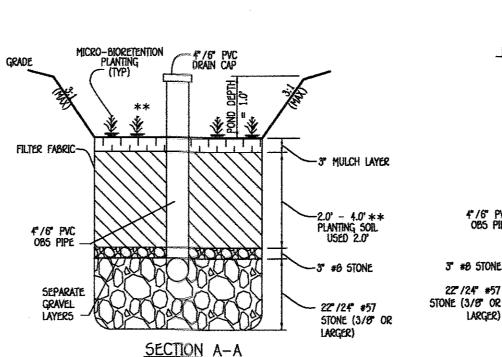
* AREA OF TREATMENT EXCEEDS THAT REQUIRED.

NOTE: 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 THE HOA.



P-1 DRIVEWAY PAVING SECTION





MICRO-BIORETENTION PLANTING DETAIL

PERENNIALS

CUT-LEAF CONEFLOWER (1.5' 5P.)

BEEBALM (1.5' SP.)

JOE-PYE-WEED (3' 5P.)

SILKY DOGWOOD

MICRO-BIO 2

QUANTITY

Specification

learny sand 60-659

sandy loam 30%

coarse sand 30% compost 40%

Min. 10% by dry weight (ASTM D 2974)

pea gravel: ASTM-D-448

ornamental stone: washed

# 756, Type P5 28 or AASHTO M-278

dir-entrained; reinforcing to meet ASTM-615-60

AASHTO-M-6 or ASTM-C-33

shredded hardwood

see Appendix A; Table A.4

MICRO-BIO 1

QUANTITY

Material

Organic Content

Curtain drain

Pea gravel diaphragm

Gravel (underdrains and infiltration berms)

Poured in place concrete (if

Underdrain piping

Mulch

ADJACENT TO

7.12 L.F.

YES, 526 LF.

ADJACENT TO

370.00 LF.

YES, 196 L.F.

MICRO-BIORETENTION DETAIL (M-6)

47/5" PVC PIPE

MICRO-BIORETENTION PLANT MATERIAL

QUANTITY

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

No. 8 or No. 9 (1/8" to 3/8")

stone: 2 to 5

Aggregate (3/8" to 3/4")

4" to 6" rigid schedule 40 PVC or 5DR35

0.02" to 0.04"

n/a

n.a

MICRO-BIO 4

QUANTITY

NAME

MIXED Perennials

SILKY DOGWOOD

plantings are site-specific

aged 6 months, minimum

PE Type 1 nonwoven

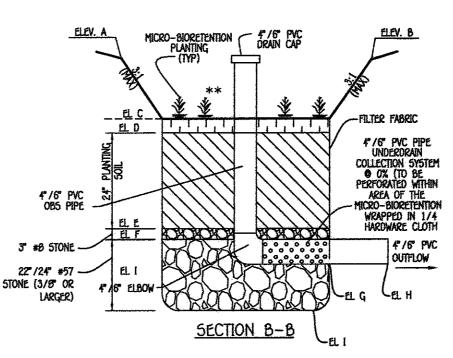
UNDERDRAIN COLLECTION

5Y5TEM @ 0.5% MIN-

PERIMETER PROPERTIES PERIMETER PROPERTIES

92.63 L.F. REMAINING) (174 L.F. REMAINING)

(93'/60' = 1.6 OR 2) (174'/60' = 2.9 OR 3)



* * * * *

NOT TO SCALE

MAXIMUM SPACING (FT.

1.5 TO 3.0 FT.

PLANT AWAY FROM INFLOW LOCATION

USDA soil types loamy sand or sandy loam; clay content <5%

Slotted or perforated pipe; 3/6" pert. 6 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

on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design

28 day strength and siump test; all concrete design (cast—in-place or pre-cast) not using previously approved 5tate or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland — design to include meeting ACI Code 350.R/89; vertical loading IH-10 or H-201; allowable horizontal loading (based on soil pressures); and analysis of potential cracking

Sand substitutions such as Diabase and Graystone (AASHTO #10 are not acceptable. No calcium carbonated or dolomiti sand substitutions are acceptable. No "rock dust" can be

ADJACENT TO

PERIMETER PROPERTIES

105.54 L.F.

YES, 105.54 L.F.

(O L.F. REMAINING)

ADJACENT TO

PERIMETER PROPERTIES

30 L.F.

YES, 30 L.F.

(O L.F. REMAINING)

- 4"/6" Perforated VC Observation Pipt W/ Orain Cai

SCHEDULE A - PERIMETER LANDSCAPE EDGE

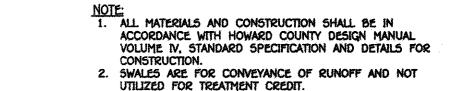
ADJACENT TO

PERIMETER PROPERTIES

153.13 LF.

YES, 153.13 LF.

(O L.F. REMAINING)



ADJACENT TO

56 L.F.

YES, 106.06 L.F

 $(130.06^{\circ}/60^{\circ} = 2.2 \text{ OR } 2)$ 

ADJACENT TO

PERIMETER PROPERTIES

354.83 L.F.

YES, 354.83 L.F.

(O L.F. REMAINING)

ADJACENT TO

250.00 LF.

16' USE-IN-COMMON DRIVEWAY

YES, 132.57 L.F.

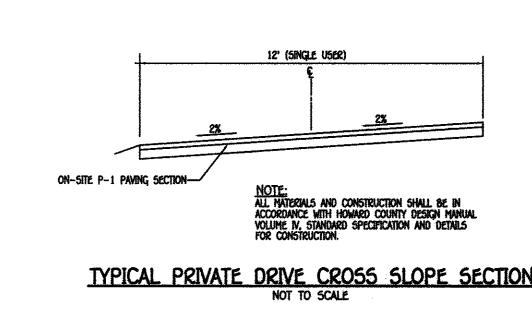
 $(117.43^{\circ}/60^{\circ} = 2)$ 

PERIMETER PROPERTIES | PERIMETER PROPERTIES

(117.43 L.F. REMAINING) (130.06 L.F. REMAINING)

TOTAL

16' USE-IN-COMMON DRIVEWAY CROSS SLOPE SECTION



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

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY, MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. plant material shall be checked for disease and insect infestation and MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING, ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
- 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. D. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

***************************************	MICRO-BIORETENTION / BIORETENTION									N	
_	BIORETENTION A B C D E F G H I							I			
	MICRO-BIO	1	265.00	265.00	264.00	263.75	261.75	261,50	261.17	259.90	259.67
1	MICRO-BIO	2	250.00	258.00	257.00	256.75	254.75	254.50	254.17	254.02	252.67
1	BIO 3		257.00	257.00	256.00	255.75	253.75	253.50	253.00	251.00	251.50
_	MICRO-BIO	4	251.00								

### PRELIMINARY FOREST CONSERVATION & STORMWATER MANAGEMENT DETAILS & NOTES

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

ZONED R-ED TAX MAP NO.: 31 GRID NO.: 4 PARCEL NO: 610 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: 1"=50' DATE: FEBRUARY, 2018

SHEET 6 OF 6

5P-15-012