

SHEET INDEX

Table with 2 columns: SHEET NO. and DESCRIPTION. Lists sheets 1 through 6 and their respective titles.

SOILS LEGEND

Table with 4 columns: SOIL, NAME, CLASS, & FACTOR. Lists soil types GcC and MgF with their respective details.

STORMWATER MANAGEMENT SUMMARY

Table with 4 columns: AREA ID., ESQV REQUIRED CU.FT., ESQV PROVIDED CU.FT., REMARKS. Summary of stormwater management for site.

GROSS AREA = 0.20 ACRES Rev = (5)(Rev)(A)/12
LOD = 2.63 ACRES Rev = (0.32)(0.15)(0.2)/12
RCN = 51.4 = 0.033 ac-ft or 1,429 cu-ft
TARGET Pe = 1.0'

STORMWATER MANAGEMENT PRACTICES

Table with 5 columns: LOT NO., ADDRESS, DRY WELLS (M-5) Y/N, NUMBER, MICRO-BIORETENTION (M-6) Y/N, NUMBER, BIORETENTION (F-6) Y/N, NUMBER.

Minimum Lot Size Chart

Table with 4 columns: Lot No., Gross Area, Pipetream Area, Minimum Lot Size. Chart showing minimum lot sizes for various lot numbers.

PRELIMINARY EQUIVALENT SKETCH PLAN
OAK HILL MANOR,
LOTS 1 THRU 8 &
OPEN SPACE LOTS 9 THRU 12

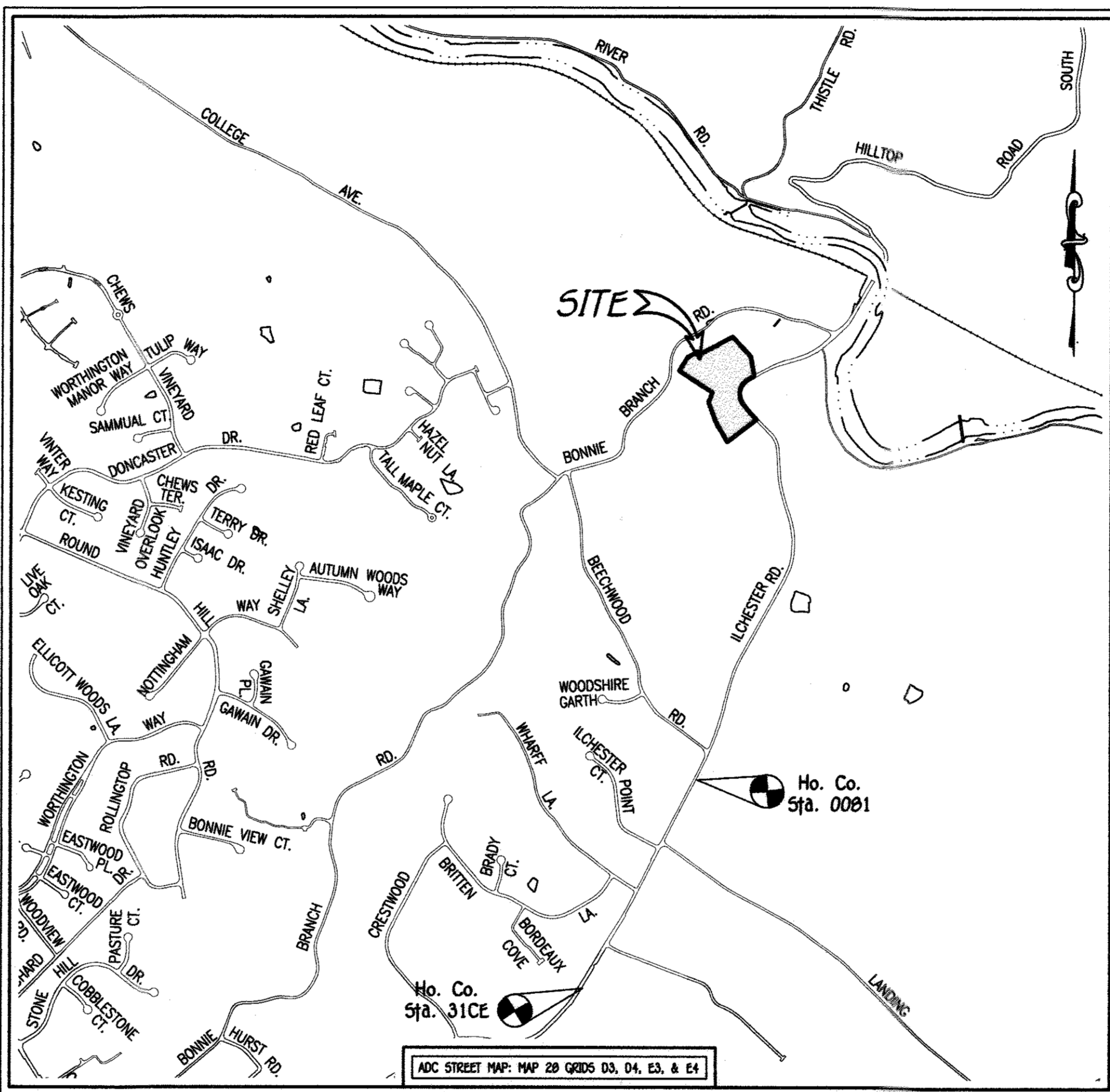
ZONED: R-ED

TAX MAP No. 31 GRID No. 04 PARCEL No. 618
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

LEGEND table with 4 columns: SYMBOL, DESCRIPTION, SYMBOL, DESCRIPTION. Defines symbols for contours, soil lines, tree lines, etc.

GENERAL NOTES

- 1. THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIERS HAVE BEEN APPROVED.
2. THE SUBJECT PROPERTY IS ZONED R-ED (PER DATE 10/06/2013 COMPREHENSIVE ZONING PLAN).
3. BOUNDARY SHOWN HEREON IS BASED ON A FIELD SURVEY MONUMENTED BOUNDARY SURVEY DATED SEPTEMBER, 2013.
... (Notes 1 through 37)



VICINITY MAP

SCALE: 1" = 1000'

BENCHMARKS

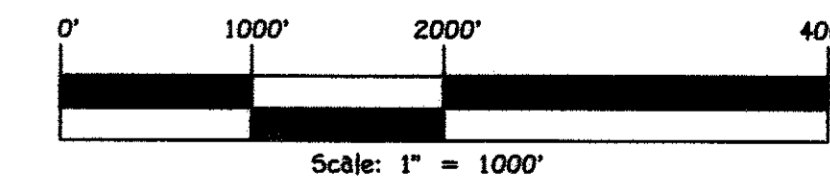
HOWARD COUNTY CONTROL STATION #00B1 - HORIZONTAL - (NAD '83)
N 572.335.330
E 1,377,504.092
ELEVATION = 477.919 - VERTICAL - (NAVD '86)
... (Benchmark details for stations #00B1 and #31EC)

SITE ANALYSIS DATA CHART

- A. TOTAL AREA OF THIS SUBMISSION = 0.20 AC.
B. LIMIT OF DISTURBED AREA = 2.63 AC.
C. PRESENT ZONING DESIGNATION = R-ED
... (Items A through S)

SPECIMEN TREE TABLE

Table with 5 columns: KEY, SPECIES, SIZE (DBH), CEZ (FT ABOVE), COMMENTS, REMARKS. Lists specimen trees A through BB with their species and sizes.

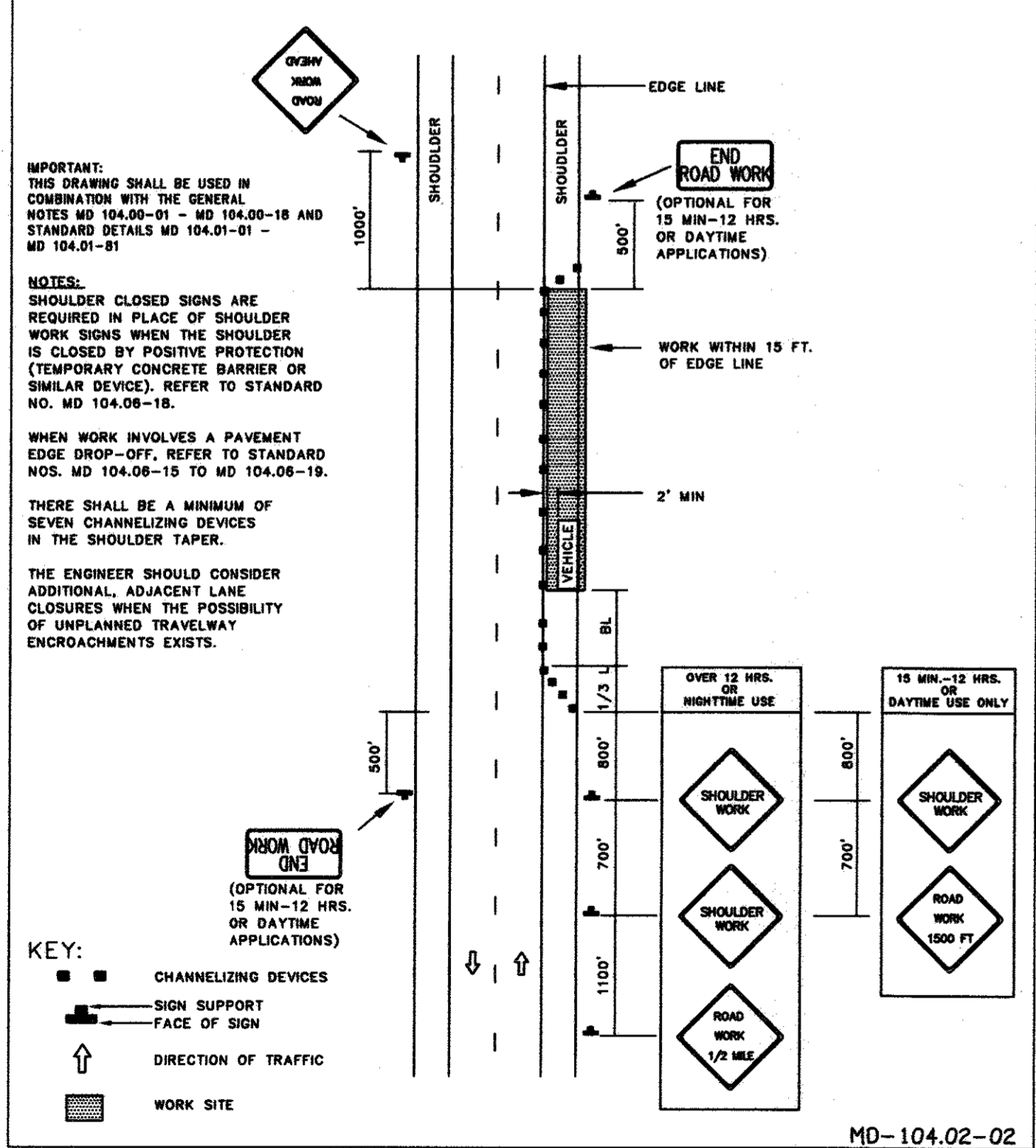


TITLE SHEET
OAK HILL MANOR
LOTS 1 THRU 8 &
OPEN SPACE LOTS 9 THRU 12
ZONED R-ED
TAX MAP NO.: 31 GRID NO.: 4 PARCEL NO.: 618
... (Sheet information)

SCALE: 1" = 50' DATE: FEBRUARY, 2018

SHEET 1 OF 6 SP-15-012

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



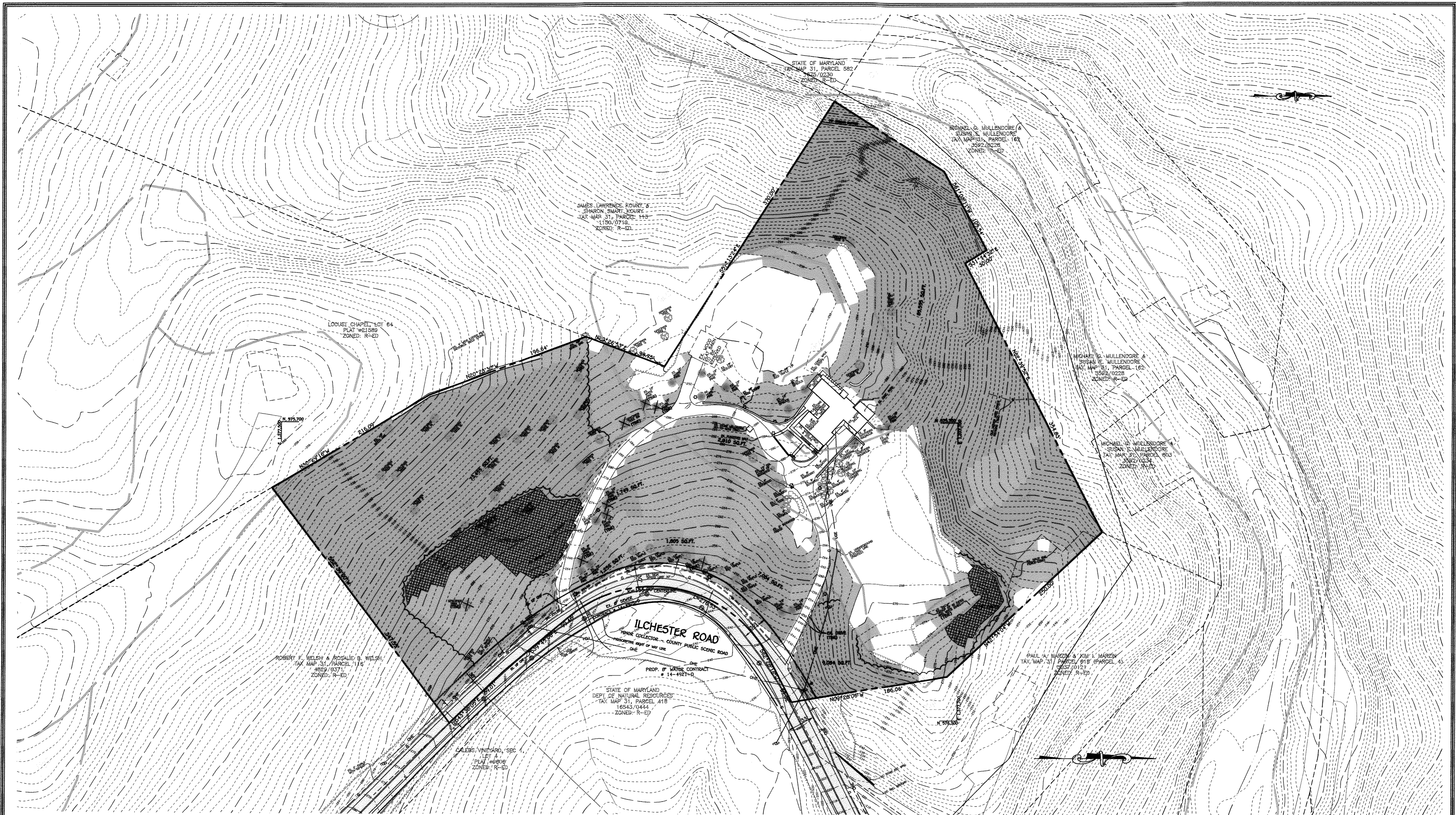
Professional Certification section including signature of Stephen J. Lutz, date 2/15/18, and professional engineer seal.

Developer/Owner information: EVA J. NELSON, 4472 ILCHESTER ROAD, ELLICOTT CITY, MARYLAND 21043-6836.

Approved by Planning Board of Howard County, dated 2-7-18.

Fisher, Collins & Carter, Inc. Civil Engineering Consultants & Land Surveyors.

201312026466/SHE132001.001 SP.dwg, Sheet (TITLE), 2/16/2018 8:05:03 PM, 1:1



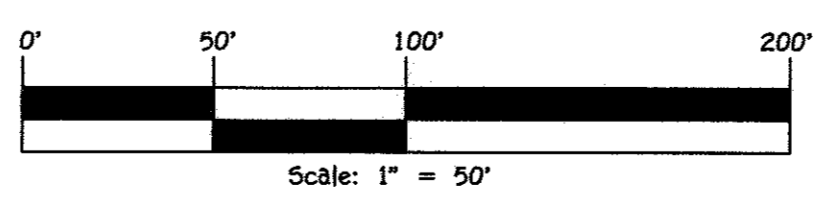
**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38396, EXPIRATION DATE: 01/12/2020.  
*Matthew J. Smith* 2/15/18  
 Signature of Professional Engineer DATE

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

TENTATIVELY APPROVED:  
 DEPARTMENT OF PLANNING AND ZONING  
 HOWARD COUNTY  
*Valerie Allen* 4-2-18  
 PLANNING DIRECTOR DATE

APPROVED:  
 PLANNING BOARD OF HOWARD COUNTY  
 2-7-18  
 DATE

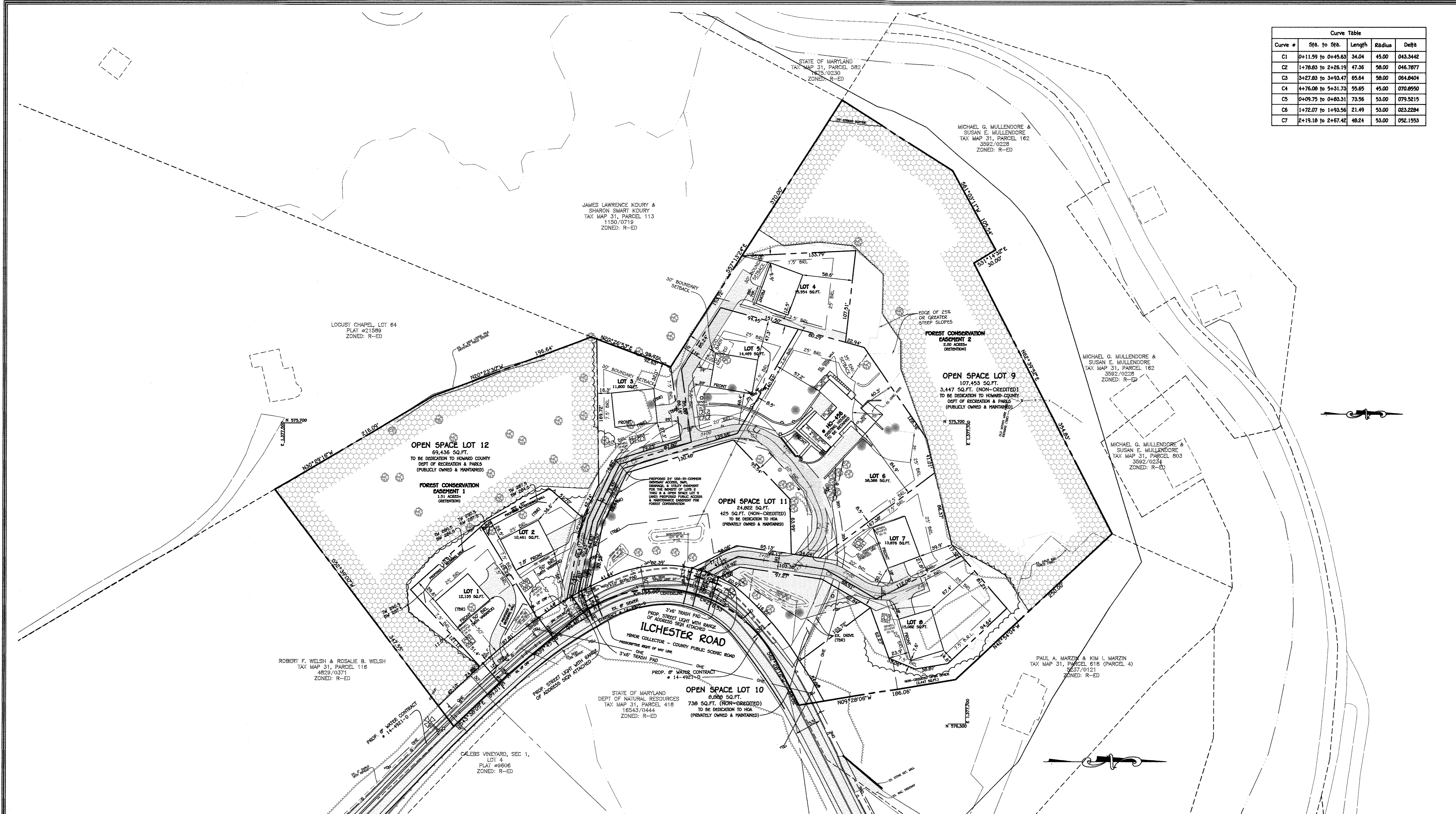
**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2995



**DEMOLITION PLAN**  
**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

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| Curve Table |                    |        |        |          |
|-------------|--------------------|--------|--------|----------|
| Curve #     | Sta. to Sta.       | Length | Radius | Delta    |
| C1          | 0+11.59 to 0+45.63 | 34.04  | 45.00  | 043.3442 |
| C2          | 1+78.83 to 2+26.19 | 47.36  | 58.00  | 046.7877 |
| C3          | 3+27.83 to 3+93.47 | 65.64  | 58.00  | 064.8404 |
| C4          | 4+76.09 to 5+31.73 | 55.65  | 45.00  | 070.8950 |
| C5          | 0+09.75 to 0+83.31 | 73.56  | 53.00  | 079.5215 |
| C6          | 1+72.07 to 1+93.56 | 21.49  | 53.00  | 023.2284 |
| C7          | 2+19.19 to 2+67.42 | 48.24  | 53.00  | 052.1553 |



**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38386, EXPIRATION DATE: 01/12/2020.  
*Anthony J. Wit* 2/15/18  
 Signature of Professional Engineer DATE

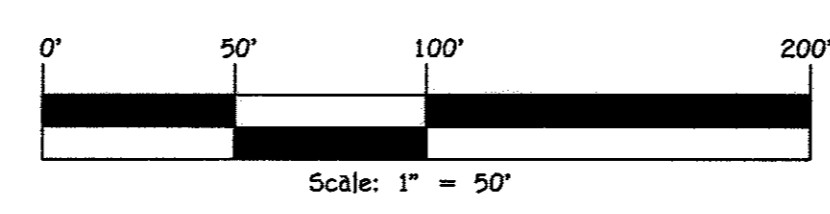


TENTATIVELY APPROVED:  
 DEPARTMENT OF PLANNING AND ZONING  
 HOWARD COUNTY  
*William J. Williams* 4-2-18  
 Signature of Planning Director DATE

APPROVED:  
 PLANNING BOARD OF HOWARD COUNTY  
 2-7-18  
 DATE

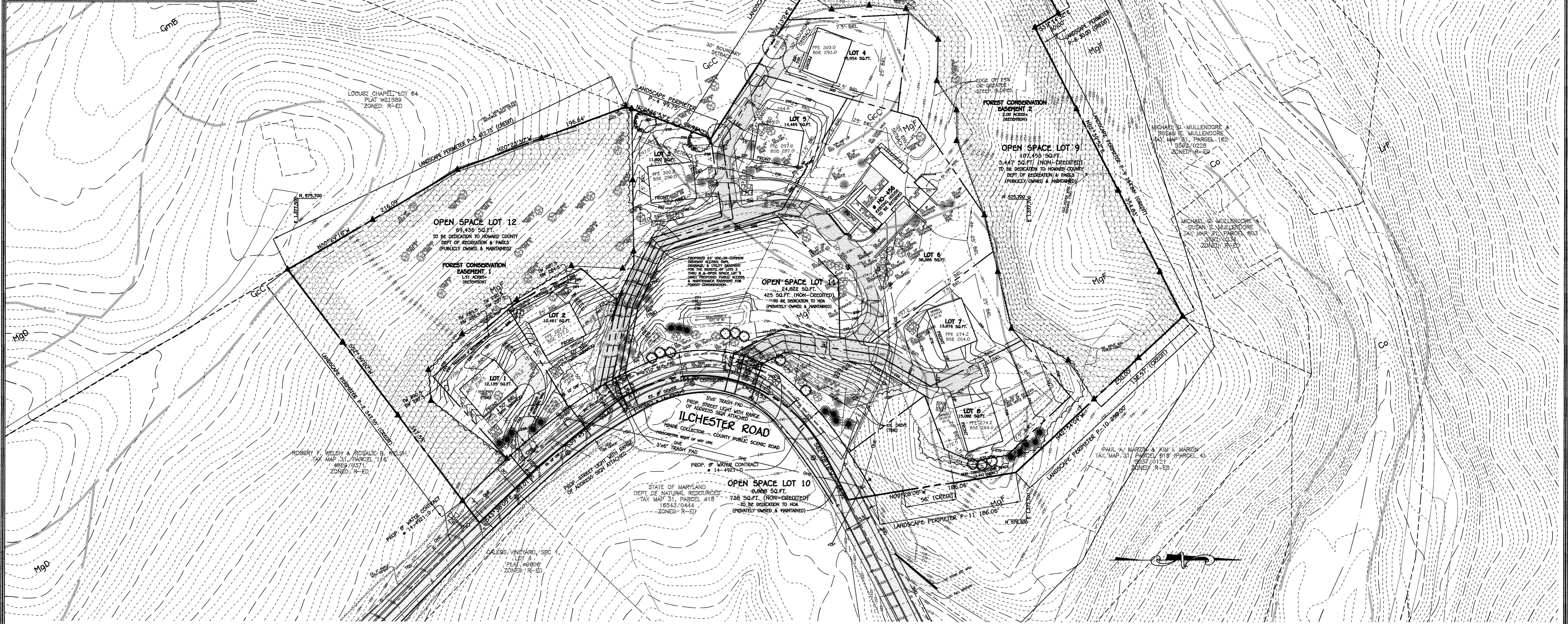
**DEVELOPER/OWNER**  
 EVA J. NELSON  
 1472 ILCHESTER ROAD  
 ELLICOTT CITY, MARYLAND 21043-6836  
 443-253-7535

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PKWY.  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2895



**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.: 4 PARCEL NO: 618  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: 1"=50' DATE: FEBRUARY, 2018  
 SHEET 3 OF 6 **SP-15-012**

| KEY | SPECIES      | SIZE (DBH) | CRZ (FT. 60/80) | COMMENTS                                 | REMARKS       |
|-----|--------------|------------|-----------------|--|---------------|
| A   | SILVER MAPLE | 47"        | 70.5'           | FAIR CONDITION, MULTI-STEM, SOME DIEBACK | TO REMAIN     |
| B   | WHITE OAK    | 56"        | 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     |
| E   | 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     |
| H   | WHITE ASH    | 31"        | 46.5'           | FAIR CONDITION, POOR CANOPY SPREAD       | TO REMAIN     |
| I   | TULIP POPLAR | 37"        | 45'             | GOOD CONDITION                           | TO BE REMOVED |
| J   | RED OAK      | 42"        | 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     |
| O   | TULIP POPLAR | 35"        | 52.5'           | GOOD CONDITION                           | TO REMAIN     |
| P   | TULIP POPLAR | 35"        | 52.5'           | 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 |
| S   | TULIP POPLAR | 42"        | 60'             | GOOD CONDITION                           | TO BE REMOVED |
| T   | TULIP POPLAR | 38.5"      | 57.75'          | GOOD CONDITION                           | TO REMAIN     |
| U   | TULIP POPLAR | 34.5"      | 51.75'          | GOOD CONDITION                           | TO REMAIN     |
| V   | 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     |
| Y   | TULIP POPLAR | 38"        | 57'             | GOOD CONDITION                           | TO REMAIN     |
| Z   | TULIP POPLAR | 44.5"      | 66.75'          | GOOD CONDITION                           | TO REMAIN     |
| AA  | TULIP POPLAR | 35"        | 52.5'           | GOOD CONDITION                           | TO REMAIN     |
| BB  | TULIP POPLAR | 38"        | 57'             | GOOD CONDITION                           | TO BE REMOVED |



**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 383086, EXPIRATION DATE: 01/12/2020.  
 Signature of Professional Engineer: *Stephen J. Lee* DATE: 2/15/18

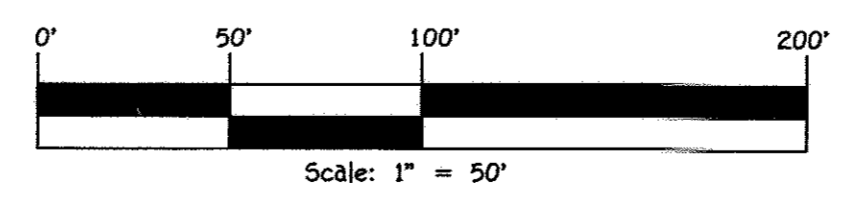


**DEVELOPER/OWNER**  
 EVA J. NELSON  
 4472 ILCHESTER ROAD  
 ELLICOTT CITY, MARYLAND 21043-6036  
 443-253-7535

TENTATIVELY APPROVED:  
 DEPARTMENT OF PLANNING AND ZONING  
 HOWARD COUNTY  
 Signature: *William J. Lee* DATE: 4-2-18

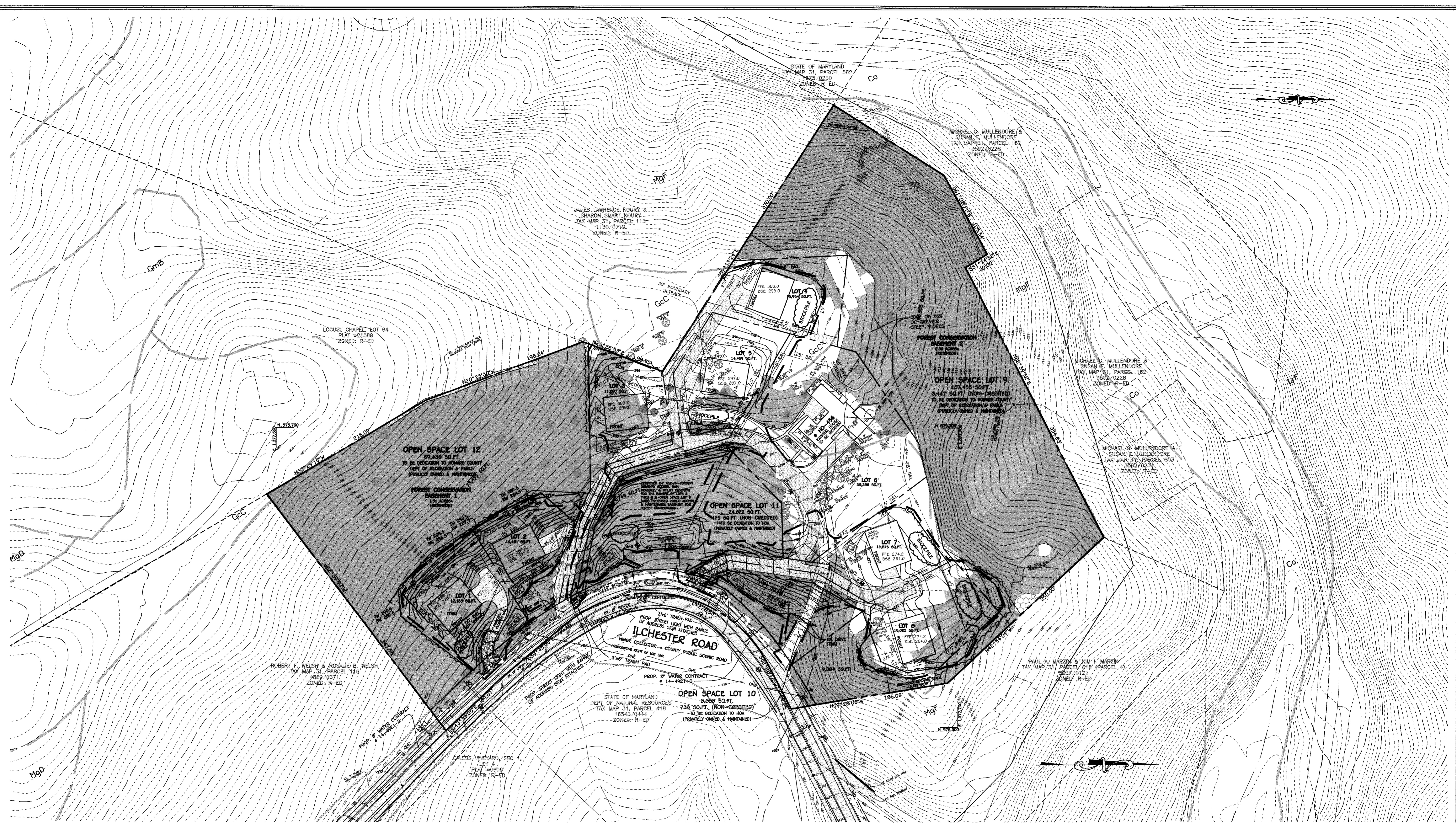
APPROVED:  
 PLANNING BOARD OF HOWARD COUNTY  
 DATE: 2-7-18

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SOURCE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2899



PRELIMINARY LANDSCAPE, FOREST CONSERVATION, & SOILS PLAN  
 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 4 OF 6 **5P-15-012**

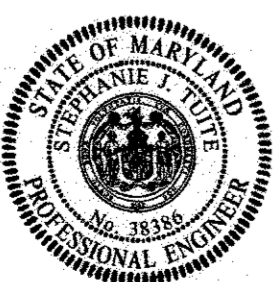
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**PROFESSIONAL CERTIFICATION**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 36366, EXPIRATION DATE: 01/12/2020.

*Stephen Lint* 2/15/18  
 Signature of Professional Engineer DATE



**DEVELOPER/OWNER**

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

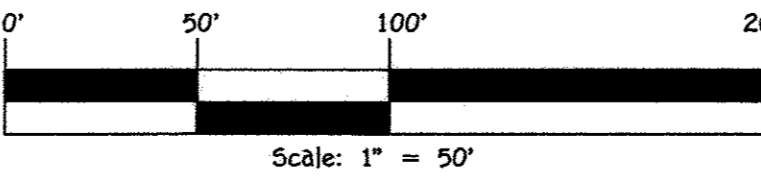
NOTE: BIORETENTION & DRYWELLS LOCATED ON INDIVIDUAL LOTS TO BE PRIVATELY OWNED AND MAINTAINED BY THE INDIVIDUAL LOT OWNER. BIORETENTION AND MICRO-BIORETENTION FACILITIES LOCATED ON OPEN SPACE LOTS 10 & 11 TO BE PRIVATELY MAINTAINED BY THE HOA.

TENTATIVELY APPROVED:  
 DEPARTMENT OF PLANNING AND ZONING  
 HOWARD COUNTY

APPROVED:  
 PLANNING BOARD OF HOWARD COUNTY

*Valaris Zilic* 4-2-18  
 PLANNING DIRECTOR DATE

2-7-18  
 DATE



**PRELIMINARY GRADING & SEDIMENT CONTROL PLAN**

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

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NOTES

- 1. THIS PLAN COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION... 2. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE...

FOREST PROTECTION GENERAL NOTES

- 1. ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC FENCING... 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...

PRE-CONSTRUCTION MEETING

- 1. AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED... 2. THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS...

CONSTRUCTION MONITORING

- 1. THE SITE SHALL BE INSPECTED PERIODICALLY DURING THE CONSTRUCTION PHASE OF THE PROJECT... 2. ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIATED IMMEDIATELY USING APPROPRIATE MEASURES...

MULTIFLORA ROSE CONTROL NOTE:

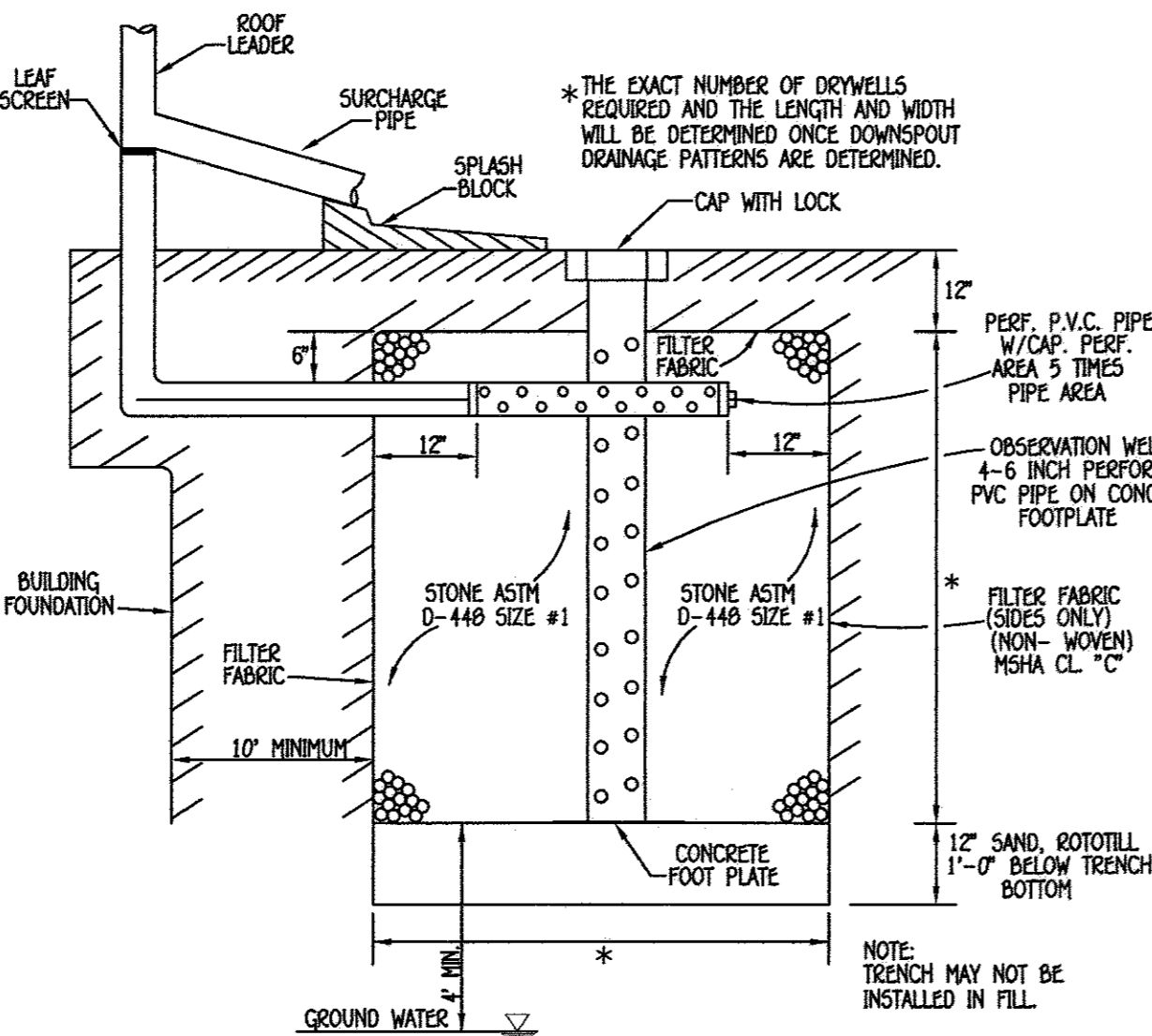
PRIOR TO PLANTING ALL MULTIFLORA ROSE WITHIN PLANTING AREAS SHALL BE REMOVED. Removal of the Multiflora Rose may be performed with Hacking and Herbicide Treatments...

FOREST CONSERVATION WORKSHEET VERSION 1.0

Table with columns for BASIC SITE DATA, INFORMATION FOR CALCULATIONS, PROPOSED FOREST CLEARING, and PLANTING REQUIREMENTS. Includes numerical values for various metrics.

LANDSCAPING PLANT LIST table with columns: QTY., KEY, NAME, SIZE. Lists plants like ACER RUBRUM, QUERCUS PALUSTRIS, ILEX NELLIE R. STEVENS, MAGNOLIA STELLATA.

TOTAL: 9 SHADE TREE, 20 EVERGREENS



DRY WELL DETAIL (M-5) NOT TO SCALE

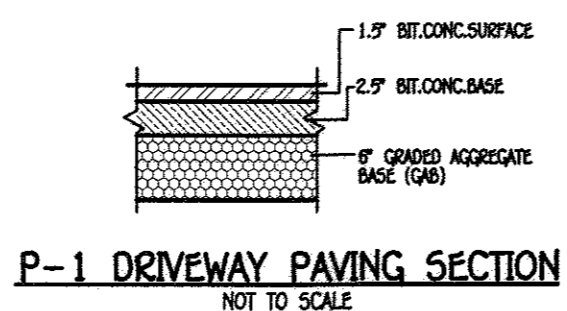
OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY WELLS (M-5)

- 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...

DRY WELL CHART table with columns: DRYWELL NO., AREA OF ROOF PER DOWN SPOUT, VOLUME REQUIRED, VOLUME PROVIDED, AREA OF TREATMENT, L, W, D. Lists details for 8 drywells.

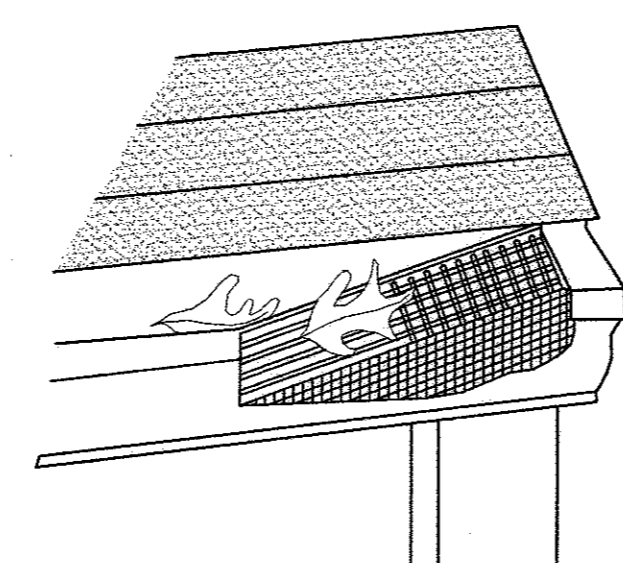
\* AREA OF TREATMENT EXCEEDS THAT REQUIRED.

NOTE: BIORETENTION & DRYWELLS LOCATED ON INDIVIDUAL LOTS TO BE PRIVATELY OWNED AND MAINTAINED BY THE INDIVIDUAL LOT OWNER...



P-1 DRIVEWAY PAVING SECTION NOT TO SCALE

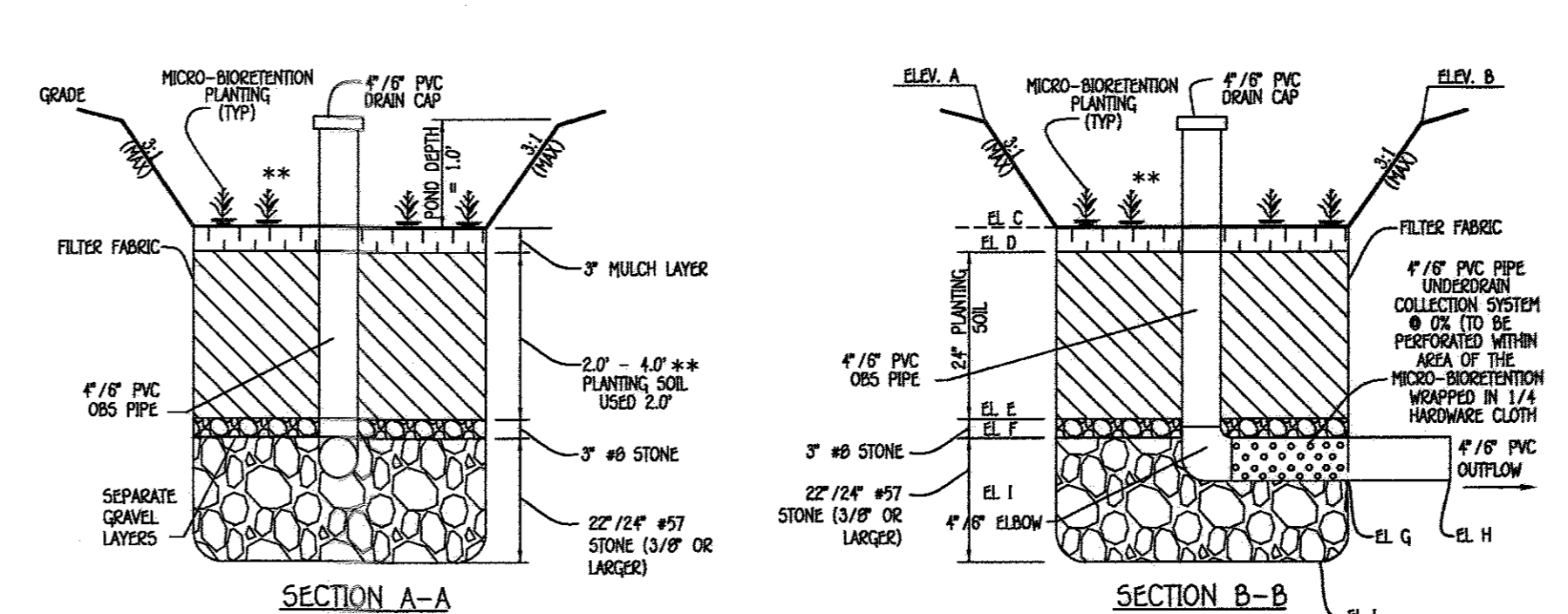
SCHEDULE A - PERIMETER LANDSCAPE EDGE table with columns: PERIMETER CATEGORY, ADJACENT TO ROADWAY, ADJACENT TO PERIMETER PROPERTIES, ADJACENT TO PERIMETER PROPERTIES, ADJACENT TO PERIMETER PROPERTIES, ADJACENT TO PERIMETER PROPERTIES, ADJACENT TO PERIMETER PROPERTIES, ADJACENT TO PERIMETER PROPERTIES, ADJACENT TO PERIMETER PROPERTIES, ADJACENT TO PERIMETER PROPERTIES, ADJACENT TO PERIMETER PROPERTIES, TOTAL.



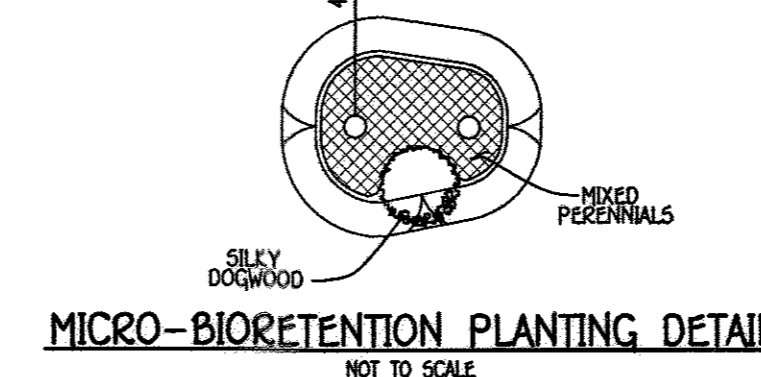
GUTTER DRAIN FILTER DETAIL NOT TO SCALE

STORMWATER MANAGEMENT NOTES

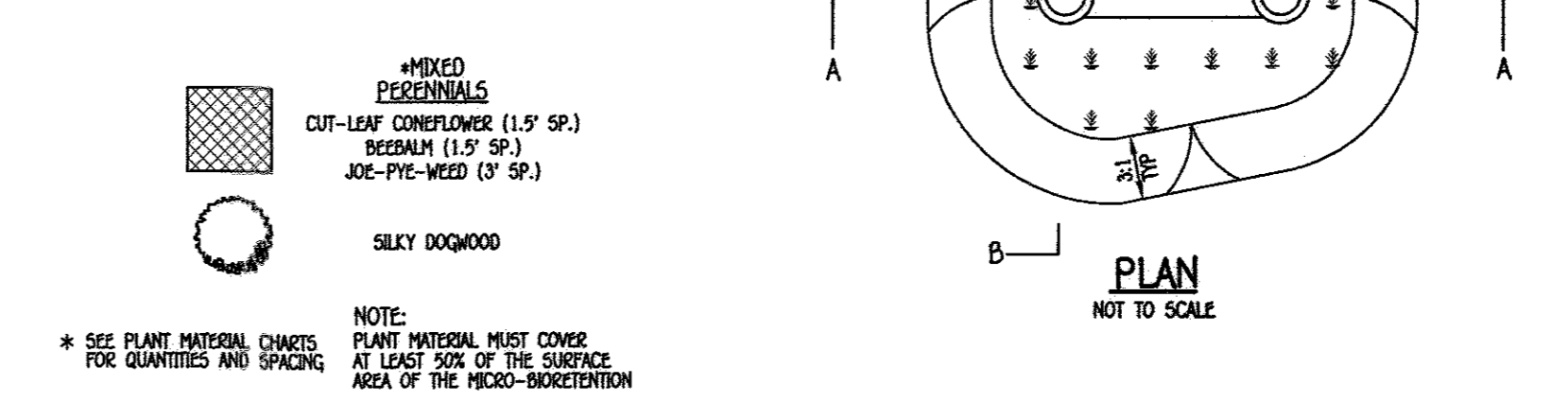
- 1. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL... 2. MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1,000 SQ. FT. OR LESS...



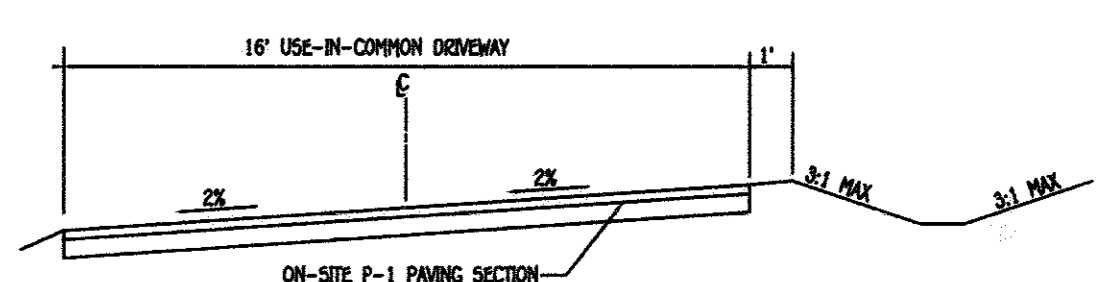
MICRO-BIORETENTION DETAIL (M-6) NOT TO SCALE



MICRO-BIORETENTION PLANTING DETAIL NOT TO SCALE



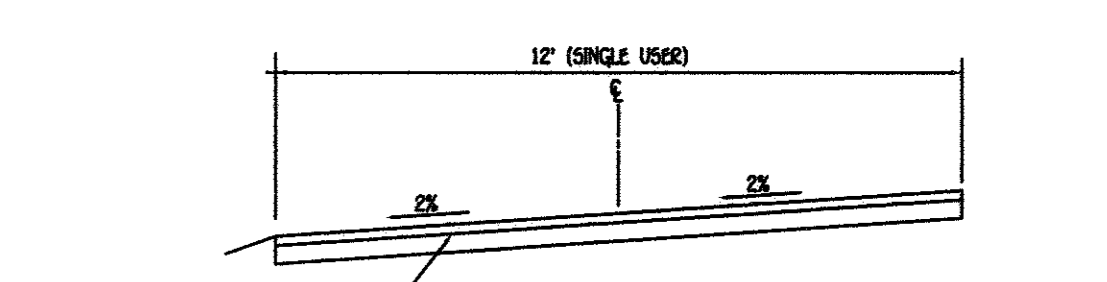
MICRO-BIORETENTION PLANT MATERIAL TABLE



16' USE-IN-COMMON DRIVEWAY CROSS SLOPE SECTION NOT TO SCALE

NOTE: ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION...

16' USE-IN-COMMON DRIVEWAY CROSS SLOPE SECTION



TYPICAL PRIVATE DRIVE CROSS SLOPE SECTION NOT TO SCALE

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

- A. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY... B. THE OWNER SHALL PRESERVE A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR... C. THE OWNER SHALL INSPECT THE MICRO-BIORETENTION MULCH LAYER AND REPLACE IT EVERY TWO TO THREE YEARS...

MICRO-BIORETENTION / BIORETENTION table showing various filter types (A-I) and their dimensions and costs.

PRELIMINARY FOREST CONSERVATION & STORMWATER MANAGEMENT DETAILS & NOTES

OAK HILL MANOR LOTS 1 THRU 8 & OPEN SPACE LOTS 9 THRU 12 ZONED R-ED... SHEET 6 OF 6

PROFESSIONAL CERTIFICATION section with signature of E. J. Nelson, date 2/15/18, and official seal. Includes TENTATIVELY APPROVED and APPROVED stamps from the Planning Board of Howard County.

FISHER, COLLINS & CARTER, INC. logo and contact information: CENTENNIAL SAVINGS OFFICE, 10722 BALTIMORE NATIONAL PkE, ELLICOTT CITY, MARYLAND 21042.

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

Table B.4. Materials Specifications for Micro-Bioretenion, Rain Gardens & Landscape Infiltration. Columns: Material, Specification, Size, Notes. Lists materials like Plantings, Planting soil, Organic Content, Mulch, etc.