

GENERAL NOTES

- THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVER OR ALTERNATIVE COMPLIANCE HAVE BEEN APPROVED.
- THE SUBJECT PROPERTY IS ZONED R-12 PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENTS NO. 3805 AND 3806 WERE USED FOR THIS PROJECT.
- TRACT BOUNDARY IS BASED ON A FIELD SURVEY PERFORMED BY BENCHMARK ENGINEERING, INC. IN JULY, 2019.
- THE EXISTING TOPOGRAPHY SHOWN IS BASED ON FIELD SURVEY PERFORMED BY BENCHMARK ENGINEERING, INC. IN JULY, 2019.
- THE EXISTING UTILITIES SHOWN ARE BASED ON FIELD LOCATIONS, SIGNED CONTRACT DRAWINGS AND HOWARD COUNTY GIS.
- THIS PROPERTY IS NOT LOCATED ALONG A SCENIC ROAD.
- TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO CEMETERIES, BURIAL GROUNDS OR HISTORIC STRUCTURES LOCATED ON THE SUBJECT PROPERTY.
- STORMWATER MANAGEMENT SYSTEMS SHOWN ARE ON AN APPROXIMATION OF THE SHAPE AND LOCATION. IT IS UNDERSTOOD THAT THIS SYSTEM HAS NOT BEEN DESIGNED AND THE ACTUAL DESIGN MAY CHANGE. THE SYSTEM WILL BE DESIGNED TO CONTROL AND CONVEY THE 10YR AND AND 100YR STORM AND MAY ALTER THE NUMBER OF UNITS ALLOCATED FOR THIS DEVELOPMENT. THE SUBMERGED GRAVEL WETLAND WILL BE PRIVATELY OWNED AND JOINTLY MAINTAINED.
- THE GEO-TECHNICAL REPORT WAS PREPARED BY GEOLAB DATED AUGUST, 2019.
- THIS PROJECT IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- WATER AND SEWER IS PUBLIC. THE DRAINAGE AREA IS THE DEEP RUN OF THE PATAPSCO RIVER. THE CONTRACT NUMBERS ARE:
256 W & S
610-W
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- THE TRAFFIC STUDY WAS PREPARED BY MARS GROUP 5/6/18 AND WAS APPROVED UNDER S-19-004.
- ALL PUBLIC TREES SHALL BE SPACED A MINIMUM OF 20' FROM PROPOSED PUBLIC STREET LIGHT LOCATIONS. CONTACT TRAFFIC ENGINEERING (410-313-5752) TO MARK STREET LIGHT LOCATIONS BEFORE PLANTING TREES.
- LANDSCAPING IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL VIA A CERTIFIED LANDSCAPE PLAN AS PART OF THIS PLAN SET. FINANCIAL SURETY SHALL BE POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT UNDER THE FINAL ROAD CONSTRUCTION PLANS.
- ALTERNATIVE COMPLIANCE, WP-19-053 TO REQUEST RELIEF FROM SECTION 16.1205(A)(7) SPECIMEN TREES RETENTION; SECTION 16.116(B) STEEP SLOPE DISTURBANCE; SECTION 16.120(B)(4)(III)(A) STEEP SLOPES ON RESIDENTIAL LOTS; WAS APPROVED BY HOWARD COUNTY DIRECTOR OF PLANNING AND ZONING DATED APRIL 15, 2019.

- APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:**
- STEEP SLOPE DISTURBANCE IS LIMITED TO THOSE AREAS SHOWN ON THE WP EXHIBIT FOR WP-19-053. ANY PROPOSAL TO IMPACT ADDITIONAL STEEP SLOPE AREA WILL REQUIRE A NEW ALTERNATIVE COMPLIANCE REQUEST OR AN AMENDMENT TO THIS ALTERNATIVE COMPLIANCE.
 - ALTERNATIVE COMPLIANCE APPROVAL IS LIMITED TO THE REMOVAL OF SPECIMEN TREES #1, 3 & 5 AS DEPICTED ON THE ALTERNATIVE COMPLIANCE EXHIBIT. ANY PROPOSAL TO REMOVE ADDITIONAL SPECIMEN TREES WILL REQUIRE A NEW ALTERNATIVE COMPLIANCE REQUEST OR AN AMENDMENT TO THIS ALTERNATIVE COMPLIANCE REQUEST.
 - ALL ATTEMPTS MUST BE MADE TO PRESERVE SPECIMEN TREE #3. INDIVIDUAL TREE PROTECTION DEVICES (TREE FENCING) SHALL BE PLACED COMPLETELY AROUND SPECIMEN TREE #3 PRIOR TO ANY GRADING, ROOT PRUNING WILL OCCUR. THESE MEASURES SHALL BE OUTLINED IN THE PRE-CONSTRUCTION MANAGEMENT PLAN OF THE FINAL FOREST CONSERVATION PLAN (FCP) AND WITHIN THE SEQUENCE OF CONSTRUCTION PROVIDED ON THE FINAL PLAN FOR "THE AERIE IN ELKCRIDGE".
 - A MINIMUM OF 6 ADDITIONAL, NATIVE, 2-3" CALIPER TREES SHALL BE PROVIDED ON SITE AS PART OF THE MITIGATION FOR THE SPECIMEN TREE REMOVAL. THIS MITIGATION WILL BE ADDRESSED WITH THE PROJECT KNOWN AS "THE AERIE IN ELKCRIDGE" AND WILL BE IN ADDITION TO ANY REQUIRED LANDSCAPE OR FOREST CONSERVATION PLANTINGS.
 - THE MITIGATION PLANTINGS SHOULD BE PLACED (IF POSSIBLE) WITHIN THE REAR YARDS OF LOTS 5, 10 AND 12.
 - THE EXISTING DRIVEWAY SHALL BE REMOVED AND THE AREA STABILIZED UNDER THE PRELIMINARY PLAN.

- A WAIVER TO THE DESIGN MANUAL, VOLUME III WAS APPROVED MARCH 25, 2019. THE WAIVERS GRANTED WERE FOR MINIMUM RADII, CURVE LENGTH, GEOMETRIC DESIGN AND MINIMUM CURB FILLET, AND INCLUDED SECTION 2.3.A.1.A, SECTION 2.3.A.1.C AND APPENDIX A. THE APPROVAL WAS SUBJECT TO INCREASING THE PAVEMENT WIDTH AT THE SUB-STANDARD CURVES TO 26' WITH RESTRICTED PARKING ON BOTH SIDES, AND WITH THE APPROVAL FROM THE DEPARTMENT OF FIRE AND RESCUE SERVICES.
- TRAFFIC CONTROL DEVICES:
 - THE TRAFFIC CONTROL DEVICES 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.
 - ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES." (MAMUTCD).
 - ALL SIGN POST 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.

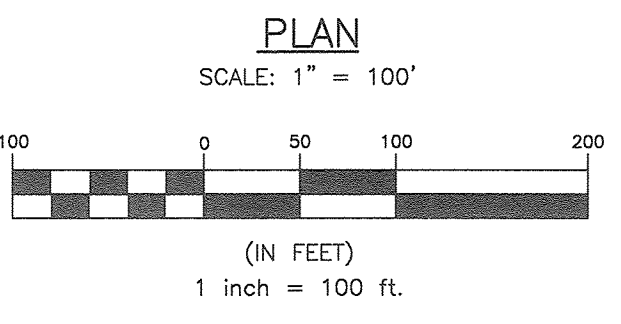
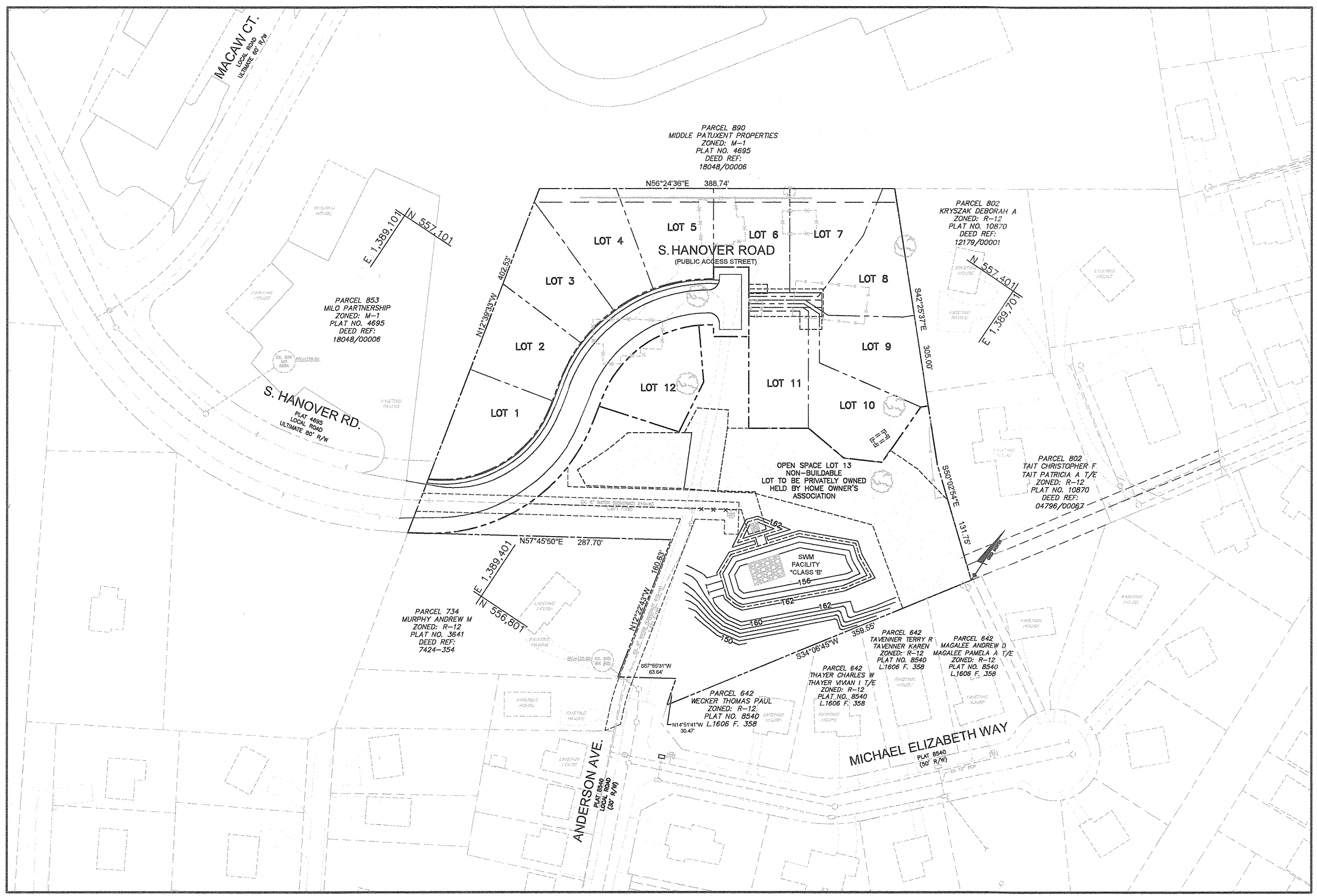
- A PRE-SUBMISSION COMMUNITY MEETING WAS HELD ON 11/28/18, 6:00 PM AT THE ELKCRIDGE LIBRARY, 6540 WASHINGTON AVE. ELKCRIDGE MD.
- MMA PERMIT WILL BE SUBMITTED PRIOR TO APPROVAL OF PLAT. ANY REQUIRED CONDITIONS WILL BE ADDRESSED ON THE PLAT.
- THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL 45-2003 AND THE ZONING REGULATIONS AS AMENDED BY COUNCIL BILL 75-2003.
- PREVIOUS HOWARD COUNTY FILE REFERENCES:
S-19-004, WP-19-053, ECP-19-028.
- THIS PROJECT IS SUBJECT TO SECTION 13.402 OF THE COUNTY CODE FOR MODERATE INCOME HOUSING UNITS (MIHU).
- OPEN SPACE WILL BE PROVIDED WITHIN LOT 13 AS INDICATED ON THIS PLAN.
- ECP-19-028 WAS APPROVED BY DEVELOPMENT ENGINEERING DIVISION AND MYLARS WERE SIGNED ON 5/3/19.
- THE FOREST CONSERVATION REQUIREMENTS FOR THIS SUBDIVISION SHALL BE ADDRESSED PRIOR TO RECORDATION OF THE FINAL SUBDIVISION PLAT AND SHALL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.1200 OF THE SUBDIVISION REGULATIONS AND FOREST CONSERVATION MANUAL. THE FOREST CONSERVATION OBLIGATION SHALL BE SATISFIED BY THE FOREST CONSERVATION ACT REQUIREMENTS FOR THIS PROJECT AND WILL BE MET THROUGH THE RETENTION OF 0.7 ACRES OF ON-SITE FOREST, 0.1 ACRES OF ON-SITE PLANTING AND 1.3 ACRES OF OFFSITE PLANTING, FEE-IN-LIEU IN A FOREST BANK, CREDIT PURCHASE OR SOME COMBINATION THEREOF.
- THE FOREST STAND DELINEATION (FSD) WAS PERFORMED BY ECO-SCIENCE PROFESSIONALS, INC. THERE ARE THREE (3) SPECIMEN TREES PROPOSED TO BE REMOVED AS APPROVED UNDER WP-19-053, THE FSD WAS APPROVED UNDER S-19-004.
- A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATES.

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

PLANNING DIRECTOR: *[Signature]* DATE: 1-17-20

THE AERIE IN ELKCRIDGE

LOTS 1-12 AND OS LOT 13
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
PRELIMINARY PLAN

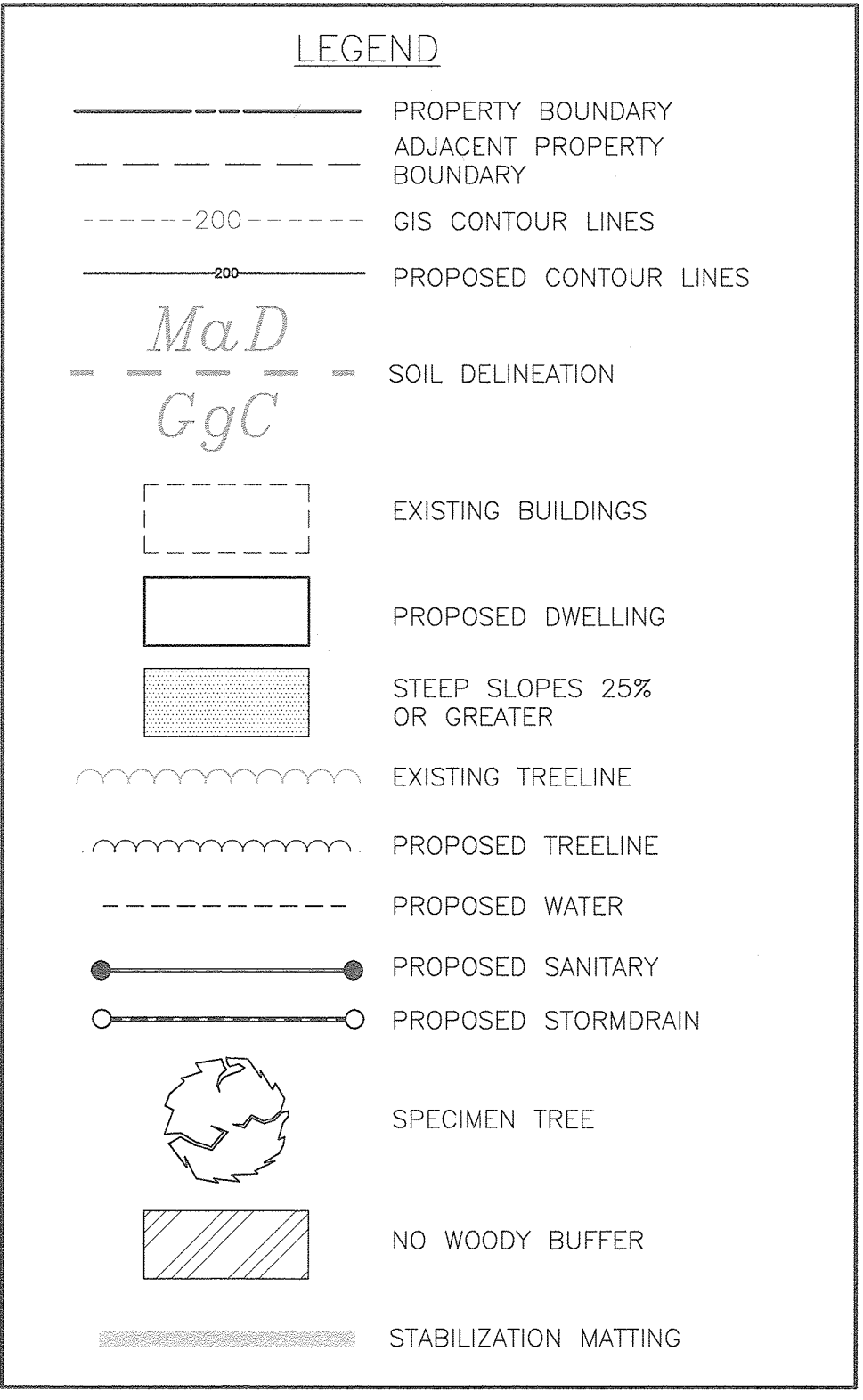
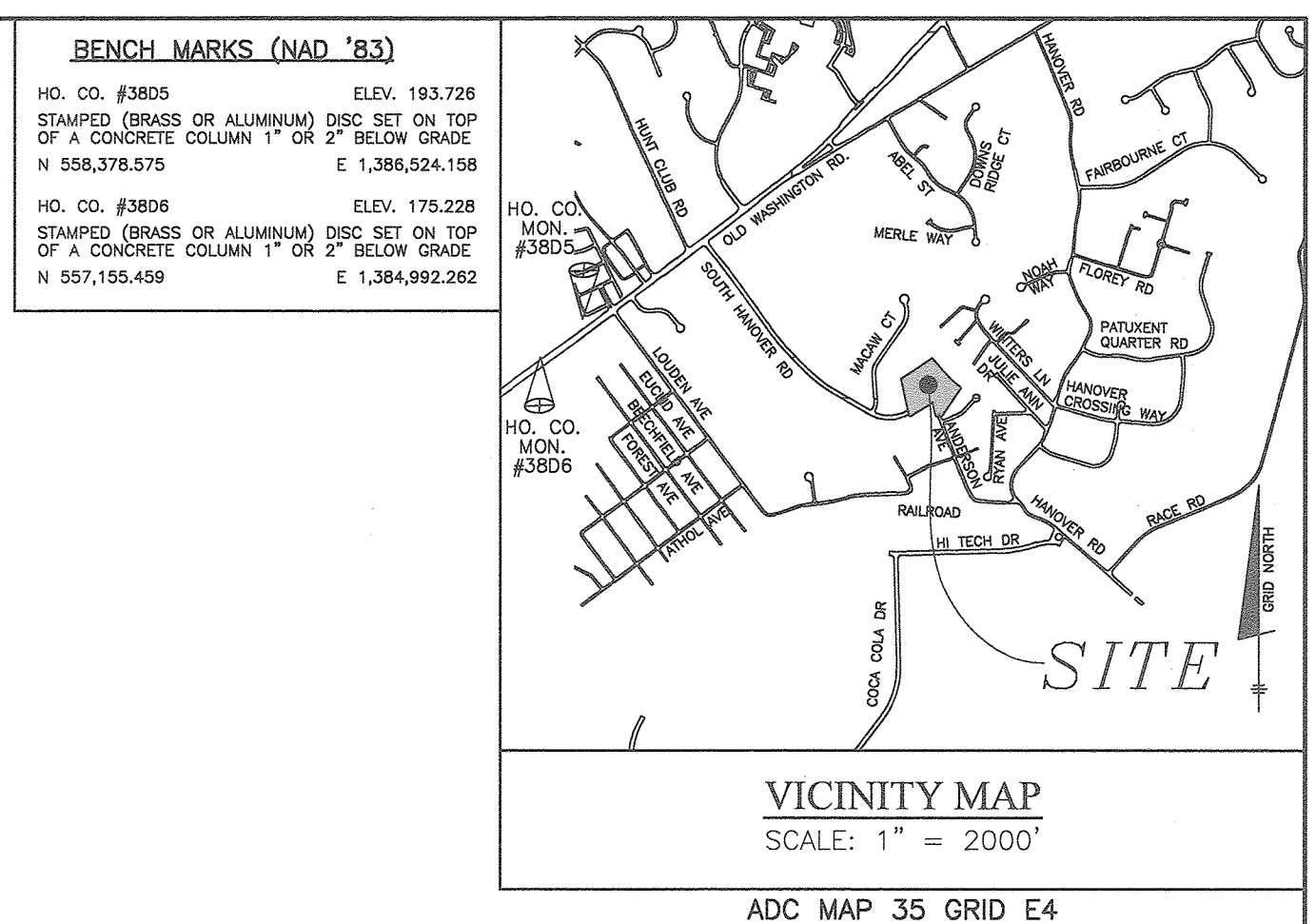


| STORMWATER MANAGEMENT PRACTICES | | | | | |
|---------------------------------|----------------|------------------------------|----------------|------------------------|-------------|
| LOT NO. | ADDRESS | NON-ROOFTOP DISCONNECT (N-2) | DRYWELLS (M-5) | MICRO-BIORENTION (M-6) | GRASS SWALE |
| 1 | S. HANOVER RD. | 0 | 2 | 0 | 0 |
| 2 | S. HANOVER RD. | 0 | 2 | 0 | 0 |
| 3 | S. HANOVER RD. | 0 | 2 | 0 | 0 |
| 4 | S. HANOVER RD. | 0 | 2 | 0 | 0 |
| 5 | S. HANOVER RD. | 0 | 2 | 0 | 0 |
| 6 | S. HANOVER RD. | 0 | 2 | 0 | 0 |
| 7 | S. HANOVER RD. | 0 | 2 | 0 | 0 |
| 8 | S. HANOVER RD. | 0 | 2 | 0 | 0 |
| 9 | S. HANOVER RD. | 0 | 2 | 0 | 0 |
| 10 | S. HANOVER RD. | 0 | 1 | 1 | 0 |
| 11 | S. HANOVER RD. | 0 | 2 | 0 | 0 |
| 12 | S. HANOVER RD. | 0 | 2 | 0 | 0 |

| MINIMUM LOT SIZE CHART | | | | |
|------------------------|-----------------|---------------|------------------|-------|
| LOT NO. | GROSS AREA (SF) | PIPESTEM (SF) | MINIMUM LOT SIZE | |
| | | | SQUARE FEET | ACRES |
| 1 | 9,287 | 0 | 9,287 | 0.21 |
| 2 | 8,402 | 0 | 8,402 | 0.19 |
| 3 | 8,569 | 0 | 8,569 | 0.20 |
| 4 | 9,362 | 0 | 9,362 | 0.22 |
| 5 | 8,983 | 0 | 8,983 | 0.21 |
| 6 | 8,416 | 0 | 8,416 | 0.19 |
| 7 | 8,581 | 179 | 8,402 | 0.19 |
| 8 | 8,733 | 246 | 8,487 | 0.19 |
| 9 | 8,765 | 327 | 8,438 | 0.19 |
| 10 | 9,438 | 640 | 8,798 | 0.20 |
| 11 | 8,601 | 0 | 8,601 | 0.20 |
| 12 | 8,414 | 0 | 8,414 | 0.19 |

SITE DATA TABULATION

- GENERAL SITE DATA
 - PRESENT ZONING: R-12
 - LOCATION: TAX MAP 38 - GRID 14 - PARCEL 232
 - APPLICABLE DPZ FILE REFERENCES: ECP-19-028, S-19-004, WP-19-053
 - DEED REFERENCE: L 18048 F. 6
 - PROPOSED USE OF SITE: 12 NEW SFD DETACHED RESIDENCES.
 - PROPOSED WATER AND SEWER: PUBLIC WATER AND PUBLIC SEWER
- AREA TABULATION
 - TOTAL AREA OF SITE: 5.25 Ac.±
 - AREA OF 100 YEAR FLOODPLAIN (APPROX.): 0.00 Ac.±
 - AREA OF STEEP SLOPES ON-SITE (25% OR GREATER): 1.07 Ac.±
 - NET AREA OF SITE: 4.18 Ac.±
 - AREA OF THIS PLAN SUBMISSION: 5.25 Ac.±
 - LIMIT OF DISTURBANCE (APPROX.): 4.30 Ac.±
 - AREA OF PROPOSED BUILDABLE LOTS: 2.42 Ac.±
 - AREA OF PROPOSED PUBLIC ROAD: 0.29 Ac.±
 - AREA OF PROPOSED PUBLIC R/W DEDICATION: 0.55 Ac.±
- DENSITY TABULATION
 - NET AREA OF SITE: 5.25 Ac.±
 - TOTAL NUMBER OF LOTS ALLOWED PER ZONING: 1 UNIT PER 12,000 GROSS SQUARE FEET ALLOWED BY RIGHT: 19
- UNIT/LOT TABULATION
 - TOTAL NUMBER OF BUILDABLE LOTS (8,400 SF MIN. LOT SIZE): 12
 - TOTAL NUMBER OF OPEN SPACE LOTS: 1
- OPEN SPACE
 - REQUIRED OPEN SPACE (FULL OBLIGATION 30%): 1.58 Ac.±
 - OPEN SPACE PROVIDED: 2.27 Ac.±
 - NON-CREDIT OPEN SPACE: 0
 - CREDITED OPEN SPACE: 2.27 Ac.±
 - PERCENT OF OPEN SPACE PROVIDED: 43.2%
 - RECREATIONAL OPEN SPACE (200 SF/UNIT): 2,400 SF



| SHEET INDEX | |
|-------------|---|
| NO. | DESCRIPTION |
| 1 | PRELIMINARY PLAN |
| 2 | PRELIMINARY LAYOUT PLAN |
| 3 | PRELIMINARY ROAD PROFILES S. HANOVER ROAD |
| 4 | PRELIMINARY GRADING, SEDIMENT AND EROSION CONTROL PLAN |
| 5 | PRELIMINARY STORMDRAIN DRAINAGE AREA MAP |
| 6 | PRELIMINARY GRADING & STORMWATER MANAGEMENT DRAINAGE AREA MAP |
| 7 | PRELIMINARY LANDSCAPE PLAN AND SOILS MAP |
| 8 | PRELIMINARY FOREST CONSERVATION PLAN |

BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS

ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE SUITE 315
ELLCOTT CITY, MARYLAND 21043
(P) 410-465-6105 A (F) 410-465-6844

WWW.BEI-CVLENGINEERING.COM

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. 22536, expiring on 06-30-2021.

[Signature]
1-2-2020

OWNER:

TROTTER 5857, LLC.
1819 PANARAMA CT.
MCLEAN, VA 22101
(P) 443-250-1555

THE AERIE IN ELKCRIDGE
LOTS 1-12 AND OS LOT 13

6399 ANDERSON AVE, HANOVER, MD 21076
TAX MAP: 38 - GRID: 14 - PARCEL: 232
ELECTION DISTRICT NO. 1 - HOWARD COUNTY, MARYLAND

PRELIMINARY PLAN

DATE: JANUARY, 2020

DESIGN: LDD DRAFT: LDD

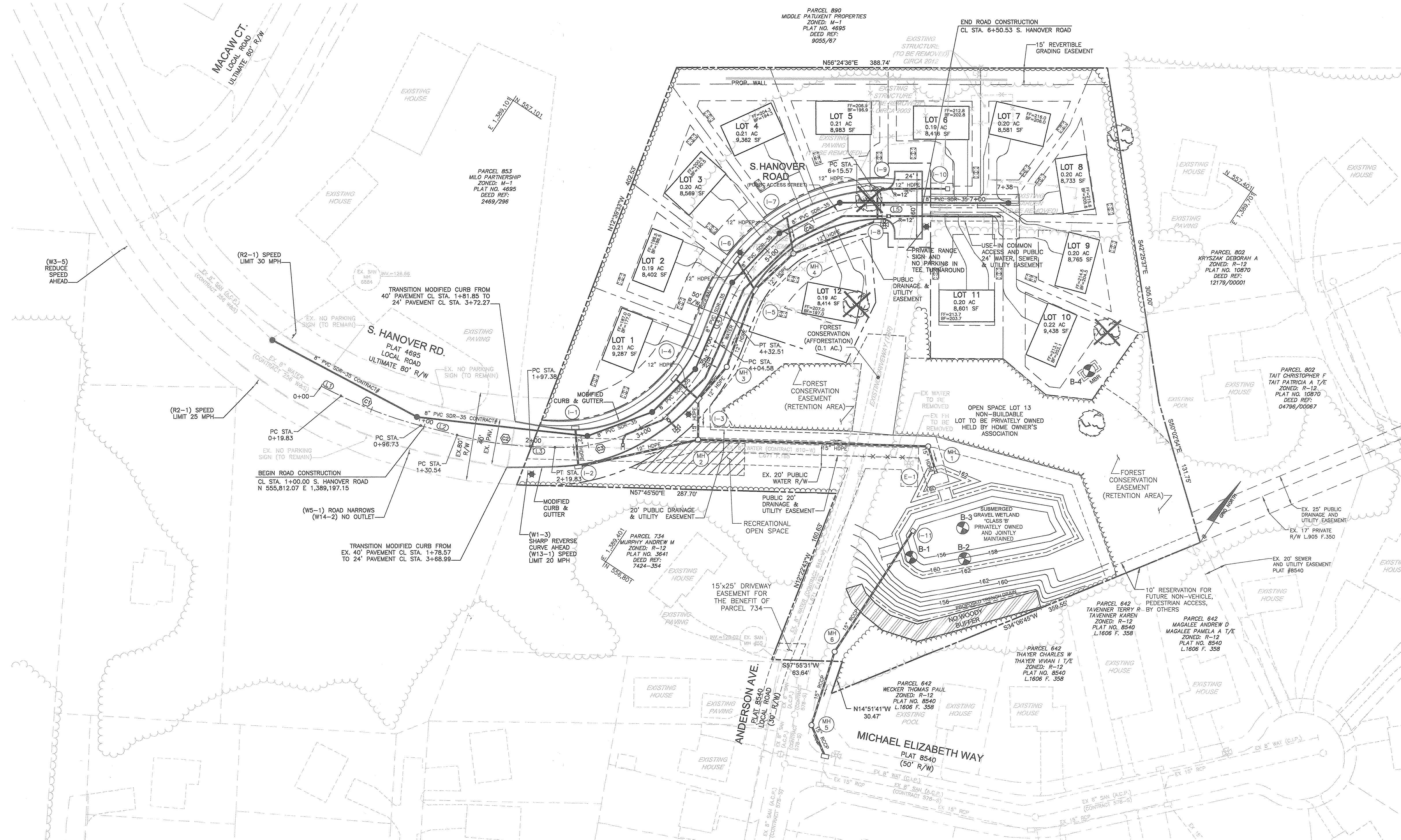
BEI PROJECT NO. 2894

SCALE: AS SHOWN

SHEET 1 OF 8

| CENTER LINE CURVE DATA | | | | | | | | |
|------------------------|-----------------|--------------------|---------|---------|-----------|---------|-----------------|--------------|
| CURVE | ALIGNMENT | STATION | RADIUS | ARC | DELTA | TANGENT | CHORD DIRECTION | CHORD LENGTH |
| C1 | S. HANOVER ROAD | 0+19.78 TO 0+96.73 | 375.79' | 76.95' | 11°43'58" | 38.61' | N76° 47' 04"E | 76.82' |
| C2 | S. HANOVER ROAD | 1+30.54 TO 1+97.38 | 325.75' | 66.84' | 11°45'24" | 33.54' | N85° 02' 23"E | 66.72' |
| C3 | S. HANOVER ROAD | 2+18.67 TO 4+04.79 | 148.48' | 186.12' | 71°49'14" | 107.52' | N23° 15' 04"E | 174.17' |
| C4 | S. HANOVER ROAD | 4+33.02 TO 6+14.58 | 150.61' | 181.55' | 69°04'06" | 103.64' | N21° 52' 30"E | 170.76' |

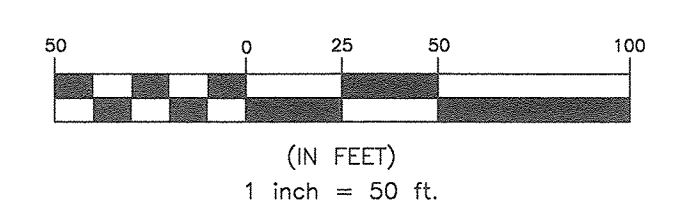
| LINE TABLE | | | | |
|------------|--------|------------------|-------------------------------|-------------------------------|
| LINE # | LENGTH | DIRECTION | START POINT | END POINT |
| L1 | 19.78 | N82° 39' 02.52"E | N 556790.7348, E 1389099.7345 | N 556793.2651, E 1389119.3529 |
| L2 | 33.81 | N70° 55' 04.81"E | N 556810.8271, E 1389194.1371 | N 556821.8792, E 1389226.0859 |
| L3 | 21.29 | N59° 09' 40.70"E | N 556850.0359, E 1389286.5775 | N 556860.9482, E 1389304.8551 |
| L4 | 28.24 | N12° 39' 33.00"W | N 557020.9725, E 1389373.6104 | N 557048.5226, E 1389367.4224 |
| L5 | 123.17 | N56° 24' 33.12"E | N 557206.9867, E 1389431.0443 | N 557275.1299, E 1389533.6438 |



LEGEND

- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- 200 GIS CONTOUR LINES
- 200 PROPOSED CONTOUR LINES
- Soil Delineation (MaD, GgC)
- EXISTING BUILDINGS
- EXISTING BUILDINGS (TO BE REMOVED)
- PROPOSED DWELLING
- EXISTING TREELINE
- PROPOSED TREELINE
- PROPOSED WATER
- PROPOSED SANITARY
- PROPOSED STORMDRAIN
- SPECIMEN TREE (TO BE REMOVED)
- SPECIMEN TREE
- NO WOODY BUFFER
- PROPOSED DRYWELL

PLAN
SCALE: 1" = 50'



| ROAD CHART | | | | |
|-----------------|----------------------|--------------|--------------|-----------|
| ROAD | CLASSIFICATION | DESIGN SPEED | RIGHT-OF-WAY | PVMT TYPE |
| S. HANOVER ROAD | PUBLIC ACCESS STREET | 30 MPH | 50' (VARIES) | P-2 |

| PUBLIC STREET LIGHT SCHEDULE | | |
|------------------------------|---------------------------|---|
| SYMBOL | LOCATION | DESCRIPTION |
| ★ | S. HANOVER RD: 2+00 RIGHT | LED-100 WATT COLONIAL POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE |
| ★ | S. HANOVER RD: 3+40 RIGHT | |
| ★ | S. HANOVER RD: 4+83 LEFT | |
| ★ | S. HANOVER RD: 6+54 RIGHT | |

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

Angie Con
PLANNING DIRECTOR

1-1720
DATE

BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE SUITE 315
ELLCOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CVLENGINEERING.COM

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. 38899, Expiration Date: 6-30-2021.

OWNER:
TROTTER 5857, LLC
1819 PANARAMA CT
MCLEAN, VA 22101
(P) 443-250-1555

THE AERIE IN ELKRIDGE
LOTS 1-12 AND OS LOT 13

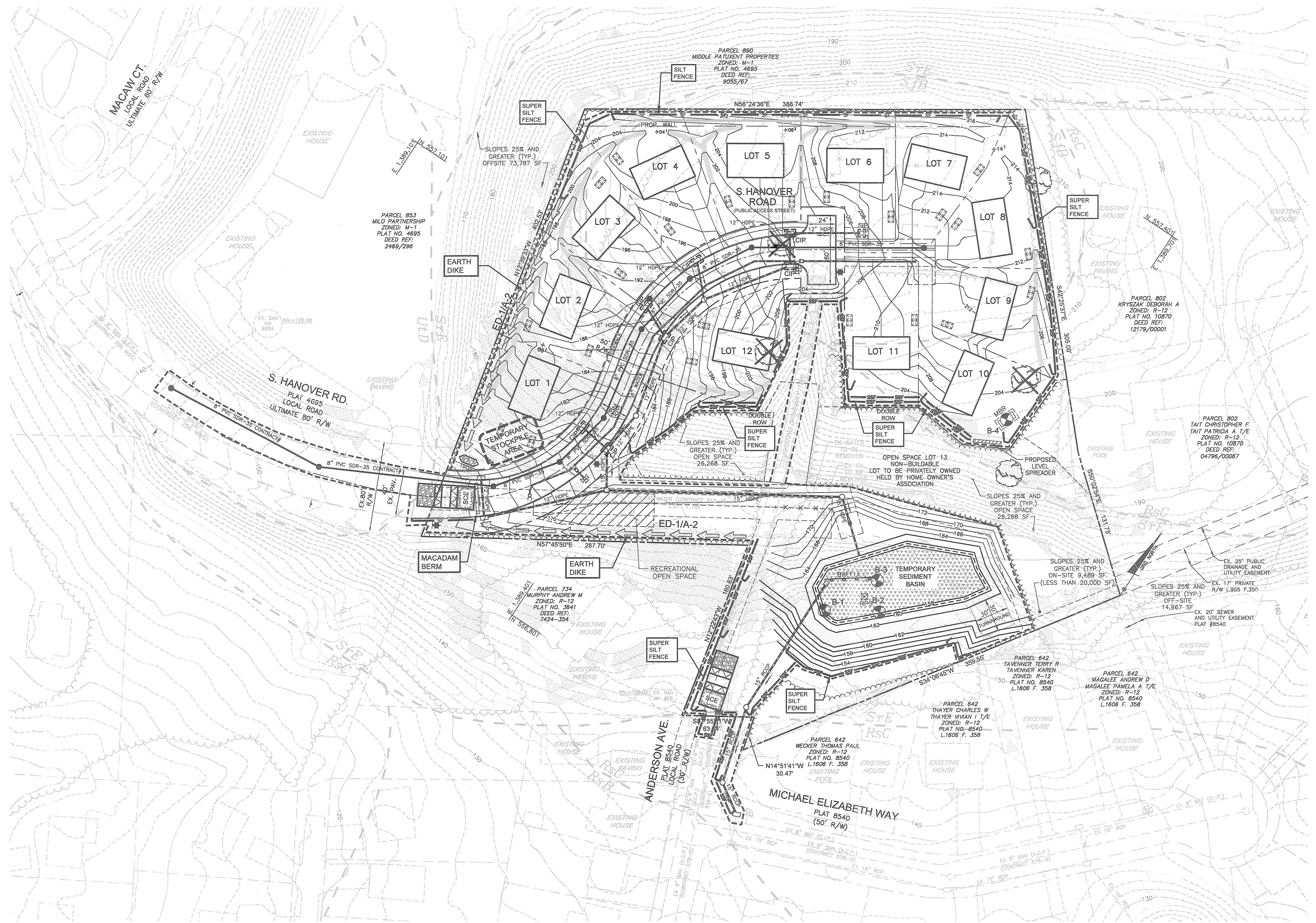
6399 ANDERSON AVE, HANOVER, MD 21076
TAX MAP: 38 - GRID: 14 - PARCEL: 232
ELECTION DISTRICT NO. 1 - HOWARD COUNTY, MARYLAND

PRELIMINARY LAYOUT PLAN

DATE: JANUARY, 2020 BEI PROJECT NO. 2894
DESIGN: LDD DRAFT: LDD SCALE: AS SHOWN SHEET 2 OF 8

| SOILS CHART - SOIL SURVEY HOWARD COUNTY, MARYLAND | | | | | |
|---|--------|------------------|-----------------|--|-----------|
| SYMBOL | HYDRIC | HYDROLOGIC GROUP | ALTERNATE GROUP | NAME | K-VALUE |
| RsC | | C | | RUSSETT FINE SANDY LOAM, 5 TO 10 PERCENT SLOPES | 0.24 |
| SfE** | | B | B | SASSAFRAS AND CROOM SOIL, 15 TO 25 PERCENT SLOPES | 0.24/0.28 |
| SfB | | B | | SASSAFRAS GRAVELLY SAND LOAM, 2 TO 5 PERCENT SLOPE | 0.24 |

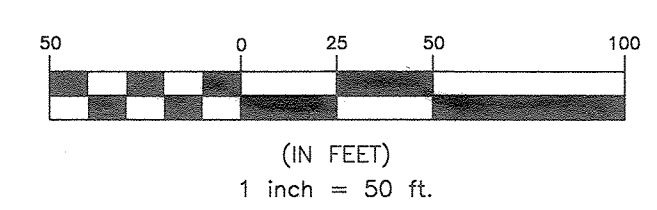
** HIGHLY ERODIBLE, K>0.35 AND STEEPER THAN 5%, OR 15% AND GREATER SLOPES. TAKEN FROM THE NRCS WEB SOIL SURVEY HOWARD COUNTY, MARYLAND, SEPTEMBER 2017.



| SEDIMENT CONTROLS LEGEND | |
|--|--|
| STABILIZED CONSTRUCTION ENTRANCE WITH BERM | |
| SUPER SILT FENCE | |
| SILT FENCE | |
| INLET PROTECTION | |
| STABILIZATION MATTING | |
| EARTH DIKE | |
| TEMPORARY STONE OUTLET STRUCTURE | |
| LIMIT OF DISTURBANCE | |

| LEGEND | |
|--------|---------------------------------------|
| | PROPERTY BOUNDARY |
| | ADJACENT PROPERTY BOUNDARY |
| | GIS CONTOUR LINES |
| | PROPOSED CONTOUR LINES |
| | SOIL DELINEATION |
| | EXISTING BUILDINGS |
| | EXISTING BUILDINGS (TO BE REMOVED) |
| | PROPOSED DWELLING |
| | STEEP SLOPES 20% TO 24.99% |
| | STEEP SLOPES 25% OR GREATER |
| | EXISTING TREELINE |
| | PROPOSED TREELINE |
| | PROPOSED WATER |
| | PROPOSED SANITARY |
| | PROPOSED STORMDRAIN |
| | SPECIMEN TREE (TO BE REMOVED) |
| | SPECIMEN TREE |
| | PROPOSED MICRO BIO-RETENTION FACILITY |
| | PROPOSED DRYWELL |
| | 2,400 SF RECREATION OPEN SPACE |

PLAN
SCALE: 1" = 50'



NOTE: REFER TO NOTE#17 ON SHEET 1 CONCERNING STEEP SLOPE DISTURBANCE.

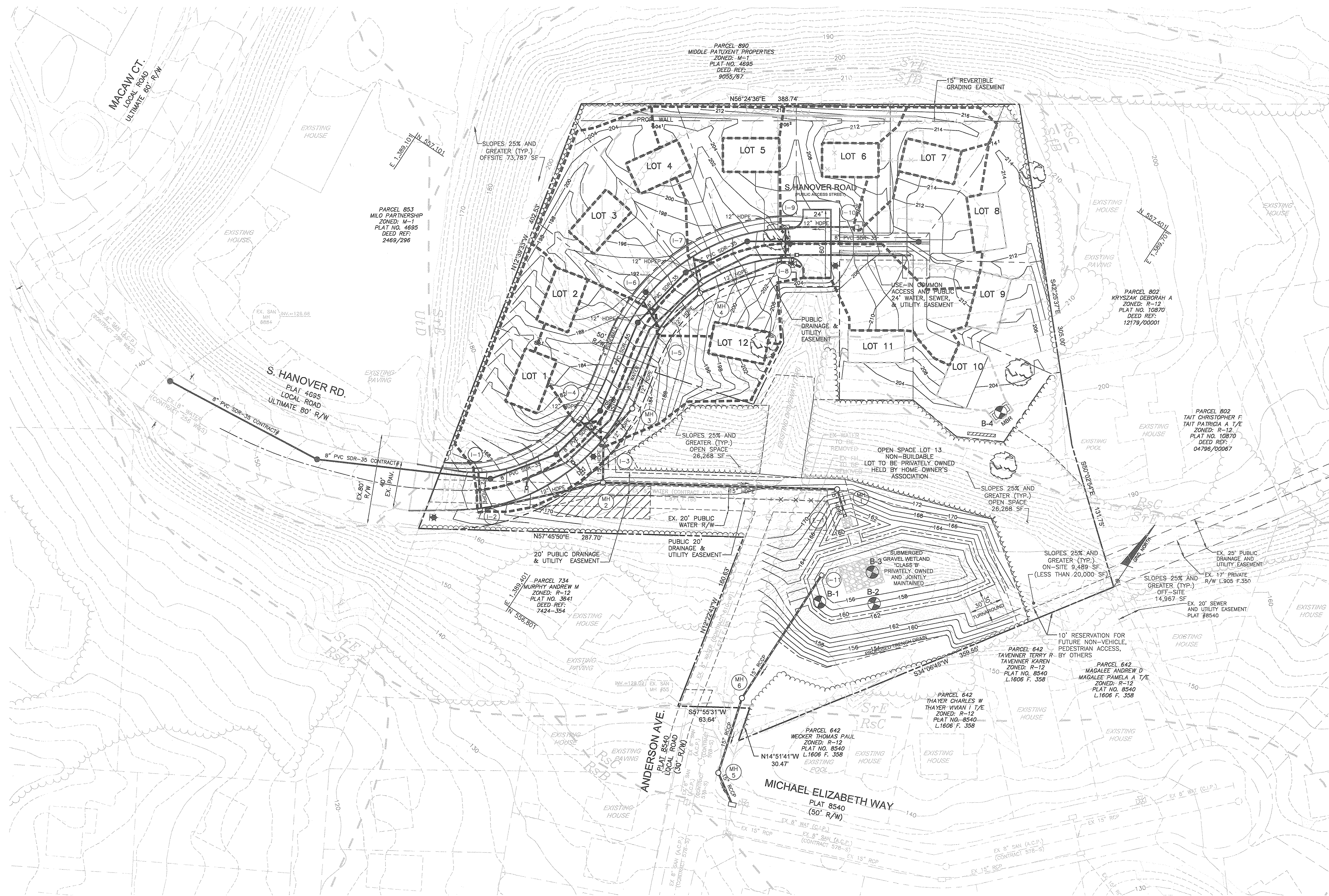
TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

PLANNING DIRECTOR DATE 1-17-20

| | | |
|--|--|--|
| <p align="center">BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS</p> <p align="center">ENGINEERING INC</p> <p align="center">8480 BALTIMORE NATIONAL PIKE SUITE 315 ELLCOTT CITY, MARYLAND 21043 (P) 410-485-8105 & (F) 410-485-6844 WWW.BEI-CVLENGINEERING.COM</p> | | <p>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. 33389, Effective Date: 6-30-2021.</p> |
| <p>OWNER:</p> <p>TROTTER 5857, LLC 1819 PANARAMA CT. MCLEAN, VA 22101 (P) 443-250-1555</p> | <p align="center">THE AERIE IN ELKRIDGE LOTS 1-12 AND OS LOT 13</p> <p align="center">6399 ANDERSON AVE, HANOVER, MD 21076 TAX MAP: 38 - GRID: 14 - PARCEL: 232 ZONED: R-12 ELECTION DISTRICT NO. 1 - HOWARD COUNTY, MARYLAND</p> | |
| <p align="center">PRELIMINARY GRADING, SEDIMENT AND EROSION CONTROL PLAN</p> | | |
| <p>DATE: JANUARY, 2020 DESIGN: LDD DRAFT: LDD</p> | <p>BEI PROJECT NO. 2894 SCALE: AS SHOWN</p> | <p>SHEET 4 OF 8</p> |

| SOILS CHART - SOIL SURVEY HOWARD COUNTY, MARYLAND | | | | | |
|---|--------|------------------|-----------------|--|-----------|
| SYMBOL | HYDRIC | HYDROLOGIC GROUP | ALTERNATE GROUP | NAME | K-VALUE |
| R&C | | C | | RUSSETT FINE SANDY LOAM, 5 TO 10 PERCENT SLOPES | 0.24 |
| StE** | | B | B | SASSAFRAS AND CROOM SOIL, 15 TO 25 PERCENT SLOPES | 0.24/0.28 |
| StB | | B | | SASSAFRAS GRAVELLY SAND LOAM, 2 TO 5 PERCENT SLOPE | 0.24 |

** HIGHLY ERODIBLE, K>0.35 AND STEEPER THAN 5%, OR 15% AND GREATER SLOPES. TAKEN FROM THE NRCS WEB SOIL SURVEY HOWARD COUNTY, MARYLAND, SEPTEMBER 2017.



LEGEND

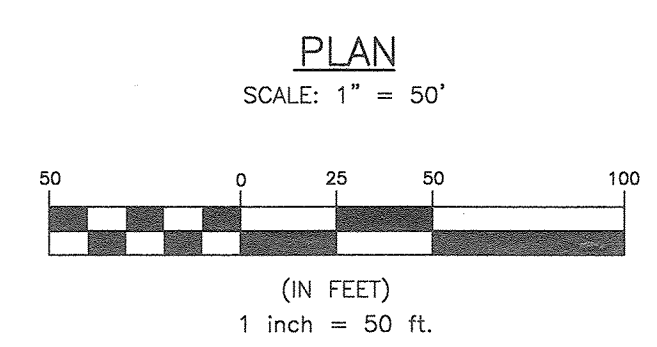
- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- GIS CONTOUR LINES
- PROPOSED CONTOUR LINES
- SOIL DELINEATION (MaD, GgC)
- EXISTING BUILDINGS
- PROPOSED DWELLING
- STEEP SLOPES 25% OR GREATER
- EXISTING TREELINE
- PROPOSED TREELINE
- PROPOSED WATER
- PROPOSED SANITARY
- PROPOSED STORMDRAIN
- SPECIMEN TREE (TO BE REMOVED)

- STRUCTURE LABEL (I-1)
- DRAINAGE DIVIDE

NOTE: The 100-year storm event is intended to be conveyed to the swm pond by the proposed inlets and associated storm drain pipes.

AREA AND "C" FACTOR TABULATION

| INLET # | ZONING (Z) | SUBAREA (B) | AREA (A) (Ac) | "C" FACTOR (C)<25 | "C" FACTOR (C)>25 | % IMPERVIOUS (P)<25 |
|---------|------------|-------------|---------------|-------------------|-------------------|---------------------|
| I-1 | R-12 | NA | 0.25 | 0.46 | 0.52 | 17.9 |
| I-2 | R-12 | NA | 0.07 | 0.86 | 0.96 | 47.4 |
| I-3 | R-12 | NA | 0.17 | 0.46 | 0.51 | 43.6 |
| I-4 | R-12 | NA | 0.17 | 0.46 | 0.52 | 44.7 |
| I-5 | R-12 | NA | 0.13 | 0.45 | 0.51 | 27.3 |
| I-6 | R-12 | NA | 0.32 | 0.35 | 0.39 | 14.2 |
| I-7 | R-12 | NA | 0.24 | 0.38 | 0.43 | 27.9 |
| I-8 | R-12 | NA | 0.19 | 0.40 | 0.45 | 41.7 |
| I-9 | R-12 | NA | 0.38 | 0.35 | 0.40 | 35.6 |
| I-10 | R-12 | NA | 0.10 | 0.86 | 0.96 | 5.3 |



TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

[Signature]
PLANNING DIRECTOR

1-17-20
DATE

BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE, SUITE 315
ELLICOTT CITY, MARYLAND 21043
(P) 410-465-8105 & (F) 410-465-8844
WWW.BE-CVLENGINEERING.COM

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. 22390, Expiration Date: 6-30-2021.

[Signature]
1-2-2020

OWNER:
TROTTER 5857, LLC
1819 PANARAMA CT.
MCLEAN, VA 22101
(P) 443-250-1555

THE AERIE IN ELKRIDGE
LOTS 1-12 AND OS LOT 13

6399 ANDERSON AVE, HANOVER, MD 21076
TAX MAP: 38 - GRID: 14 - PARCEL: 232
ZONED: R-12
ELECTION DISTRICT NO. 1 - HOWARD COUNTY, MARYLAND

PRELIMINARY STORM DRAIN DRAINAGE AREA MAP

DATE: JANUARY, 2020 BEI PROJECT NO. 2894
DESIGN: LDD DRAFT: LDD SCALE: AS SHOWN SHEET 5 OF 8

| | |
|---|-----------------|
| Project: The Aerie in Elkridge | Date: 7/23/2019 |
| (M-5) MICRO BIO-RETENTION COMPUTATIONS | |
| Pe: 1.2 inches | |
| MB-1: Micro Bio-Retention | |
| Total Drainage Area: 3562 s.f. | |
| Impervious: 42% | |
| Rv = 0.43 | |
| ESDV Req = 153 c.f. | |
| Req. ponding storage (75%) = 115 c.f. | |
| Req. stone reservoir storage (25%) = 46 c.f. | |
| Total ESDV Provided = 189 c.f. | |

| | | | | | | | | | | | |
|---------------------------------------|----------------|------------|-------|-------|------------|----------|--------------|---------------|----------------|------------|----------------------------|
| PROJECT: The Aerie in Elkridge | DATE: 8/8/2019 | | | | | | | | | | |
| PRACTICES AND SIZING | | | | | | | | | | | |
| Pe: 1.2 inches | | | | | | | | | | | |
| FACILITY SUMMARY TABLE | | | | | | | | | | | |
| FACILITY | Drainage Area | Impervious | I (%) | Rv | 1" WOV (c) | ESDV (c) | 75% ESDV (c) | Volume Stored | Volume Treated | Pa Treated | Required Pre-treatment (c) |
| SWG-1 | 232554 | 19676 | 8% | 0.128 | 2834 | 2220 | 3209 | 3209 | 4278 | 175 | 293 |
| TOTAL: 13028.82 c.f. | | | | | | | | | | | |

| | |
|---------------------------------------|--|
| FACILITY COMPUTATIONS | |
| SWM-1: Submerged Gravel Wetland (M-2) | |
| Total Drainage Area: 8.34 Ac. | |
| Impervious Area: 232554 s.f. | |
| Impervious: 8% | |
| Rv = 0.128 | |
| ESDV = 2834 c.f. | |
| 75% Req'd Storage: 2220 c.f. | |
| 10% Forebay Req'd: 293 c.f. | |
| 65% Above Stone: 1927 c.f. | |
| Depth of Stone: 2 ft. | |
| Stone Porosity: 0.40 | |
| Total ESDV Stone: 3209 c.f. | |

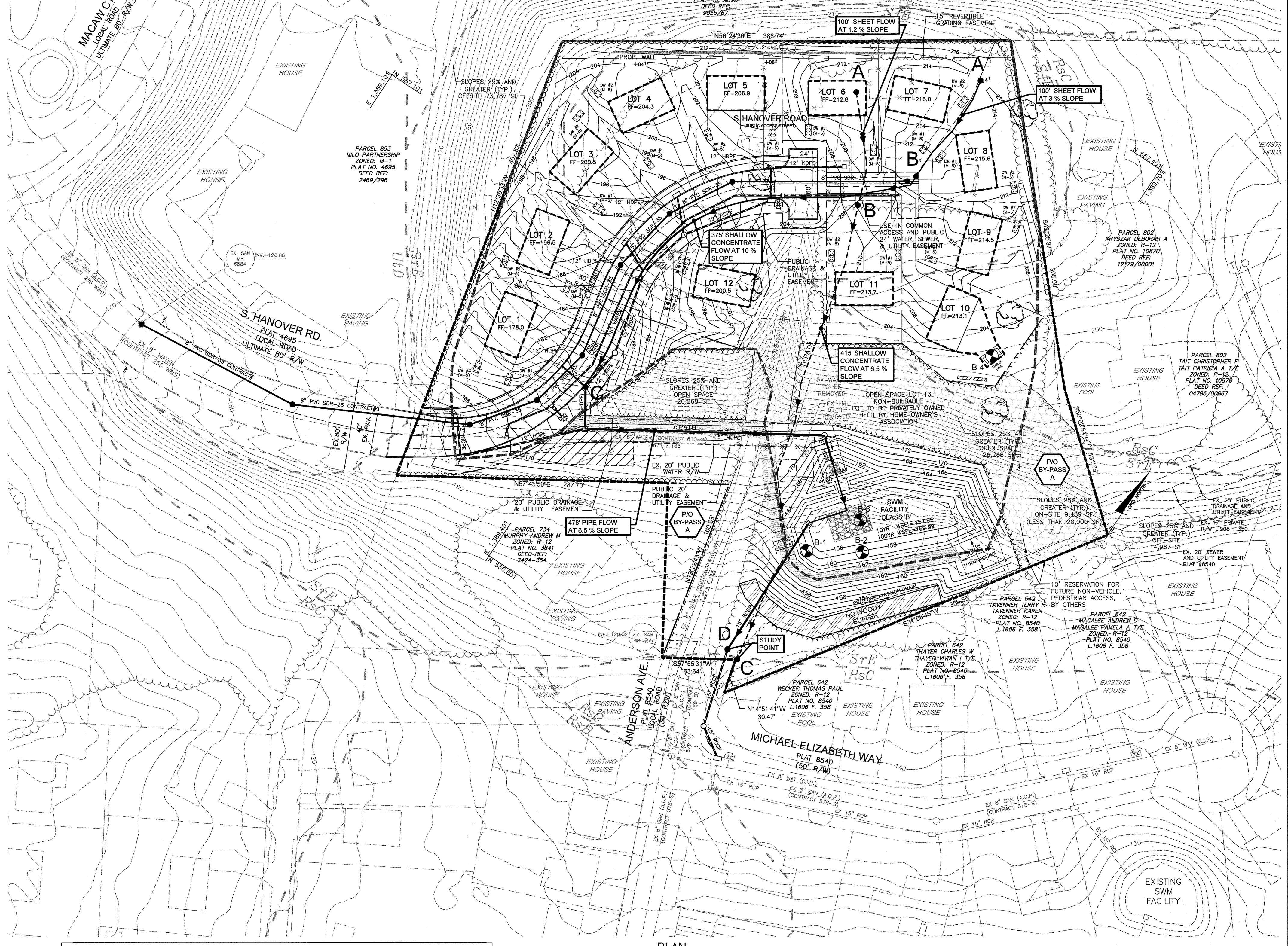
| ESD STORMWATER MANAGEMENT SUMMARY TABLE | | | | | | | | | | | | | | |
|--|---------|----------------|---------------|------------|-------------|----------|----------|--------|----------|-------------|-------------|------------|---------------|---------------|
| Practice | DA | Imp Area | % Imp | Rv | Pe | Required | Provided | 2% DA? | Required | Provided | Pe | Required | Provided | Ownership |
| (M-5) Dry Well | DW 1-1 | 750 | 750 | 100% | 0.95 | 1.2 | 50 | 50 | PASS | 71 | 100 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 1-2 | 375 | 375 | 100% | 0.95 | 1.2 | 25 | 25 | PASS | 36 | 50 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 1-3 | 375 | 375 | 100% | 0.95 | 1.2 | 25 | 25 | PASS | 36 | 50 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 2-1 | 750 | 750 | 100% | 0.95 | 1.2 | 50 | 50 | PASS | 71 | 100 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 2-2 | 750 | 750 | 100% | 0.95 | 1.2 | 50 | 50 | PASS | 71 | 100 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 3-1 | 750 | 750 | 100% | 0.95 | 1.2 | 50 | 50 | PASS | 71 | 100 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 3-2 | 750 | 750 | 100% | 0.95 | 1.2 | 50 | 50 | PASS | 71 | 100 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 4-1 | 750 | 750 | 100% | 0.95 | 1.2 | 50 | 50 | PASS | 71 | 100 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 4-2 | 750 | 750 | 100% | 0.95 | 1.2 | 50 | 50 | PASS | 71 | 100 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 5-1 | 750 | 750 | 100% | 0.95 | 1.2 | 50 | 50 | PASS | 71 | 100 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 5-2 | 750 | 750 | 100% | 0.95 | 1.2 | 50 | 50 | PASS | 71 | 100 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 6-1 | 750 | 750 | 100% | 0.95 | 1.2 | 50 | 50 | PASS | 71 | 100 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 6-2 | 375 | 375 | 100% | 0.95 | 1.2 | 25 | 25 | PASS | 36 | 50 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 6-3 | 375 | 375 | 100% | 0.95 | 1.2 | 25 | 25 | PASS | 36 | 50 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 7-1 | 750 | 750 | 100% | 0.95 | 1.2 | 50 | 50 | PASS | 71 | 100 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 7-2 | 375 | 375 | 100% | 0.95 | 1.2 | 25 | 25 | PASS | 36 | 50 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 7-3 | 375 | 375 | 100% | 0.95 | 1.2 | 25 | 25 | PASS | 36 | 50 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 8-1 | 750 | 750 | 100% | 0.95 | 1.2 | 50 | 50 | PASS | 71 | 100 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 8-2 | 750 | 750 | 100% | 0.95 | 1.2 | 50 | 50 | PASS | 71 | 100 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 9-1 | 750 | 750 | 100% | 0.95 | 1.2 | 50 | 50 | PASS | 71 | 100 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 9-2 | 750 | 750 | 100% | 0.95 | 1.2 | 50 | 50 | PASS | 71 | 100 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 11-1 | 375 | 375 | 100% | 0.95 | 1.2 | 25 | 25 | PASS | 36 | 50 | 1.7 | 1.7 | Private |
| (M-5) Dry Well | DW 11-2 | 375 | 375 | 100% | 0.95 | 1.2 | 25 | 25 | PASS | 36 | 50 | 1.7 | 1.7 | Private |
| (M-6) Micro Bio-Retention | MBR-1 | 3,562 | 1,500 | 42% | 0.43 | 1.2 | 92 | 193 | PASS | 163 | 188 | 1.5 | 1.5 | Private |
| Totals per ESD to the MEP: | | 3,562 | 1,500 | | | | | | | 163 | 208 | | | |
| (M-2) Submerged Gravel Wetland | #1 | 195,361 | 19,977 | 10% | 0.14 | 1.2 | N/A | 1300 | PASS | 2748 | 3209 | 1.4 | 1.4 | HOA |
| Totals per individual Drainage Area | | 198,923 | 21,477 | 11% | 0.15 | | | | | 4254 | 5298 | 1.7 | 0.0204 | 0.0362 |
| Totals per Overall Site | | 195,361 | 37,977 | 19% | 0.22 | | | | | 4254 | 5298 | 1.7 | 0.0204 | 0.0362 |

| BORING LOG | GEOLAR INC. |
|---|---|
| <p>1.0' - 1.5' 1.5' - 2.0' 2.0' - 2.5' 2.5' - 3.0' 3.0' - 3.5' 3.5' - 4.0' 4.0' - 4.5' 4.5' - 5.0' 5.0' - 5.5' 5.5' - 6.0' 6.0' - 6.5' 6.5' - 7.0' 7.0' - 7.5' 7.5' - 8.0' 8.0' - 8.5' 8.5' - 9.0' 9.0' - 9.5' 9.5' - 10.0'</p> | <p>1.0' - 1.5' 1.5' - 2.0' 2.0' - 2.5' 2.5' - 3.0' 3.0' - 3.5' 3.5' - 4.0' 4.0' - 4.5' 4.5' - 5.0' 5.0' - 5.5' 5.5' - 6.0' 6.0' - 6.5' 6.5' - 7.0' 7.0' - 7.5' 7.5' - 8.0' 8.0' - 8.5' 8.5' - 9.0' 9.0' - 9.5' 9.5' - 10.0'</p> |

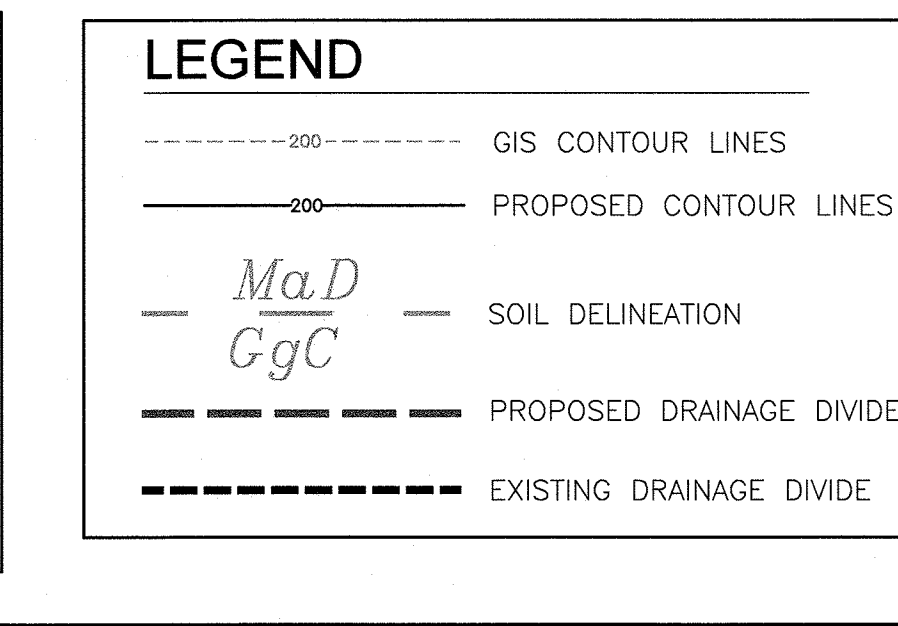
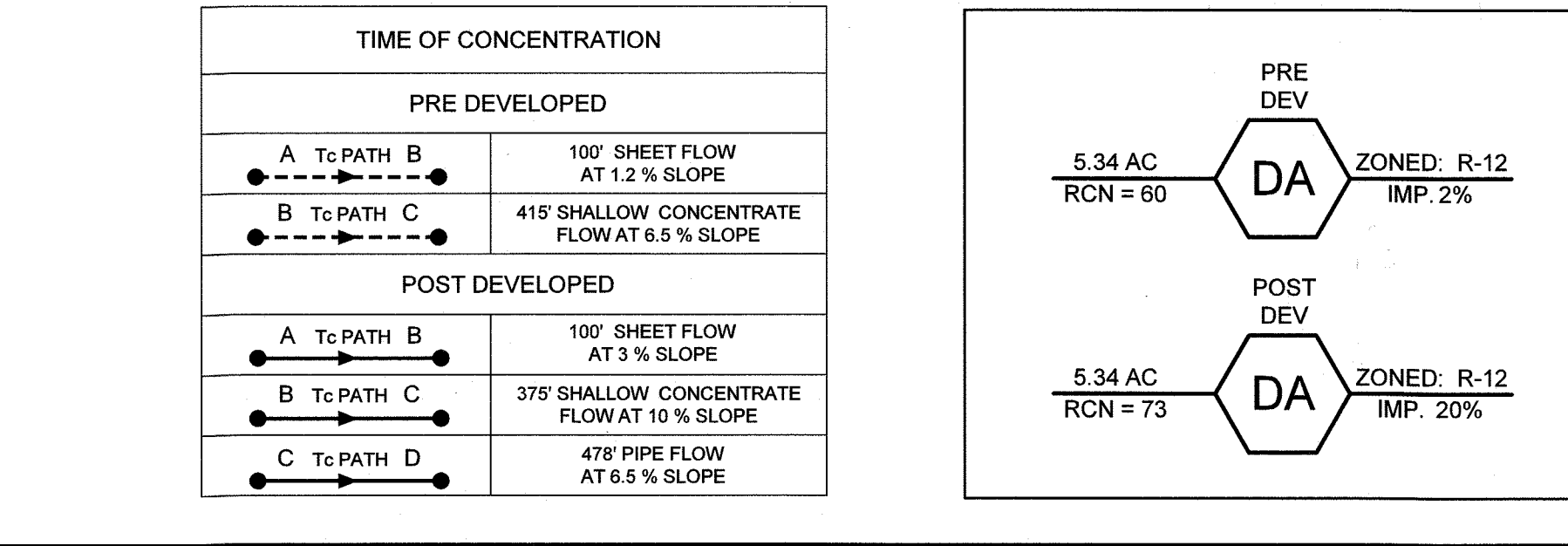
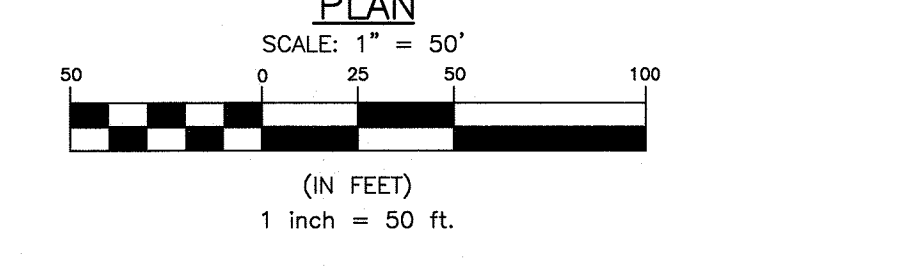
| BORING LOG | GEOLAR INC. |
|---|---|
| <p>1.0' - 1.5' 1.5' - 2.0' 2.0' - 2.5' 2.5' - 3.0' 3.0' - 3.5' 3.5' - 4.0' 4.0' - 4.5' 4.5' - 5.0' 5.0' - 5.5' 5.5' - 6.0' 6.0' - 6.5' 6.5' - 7.0' 7.0' - 7.5' 7.5' - 8.0' 8.0' - 8.5' 8.5' - 9.0' 9.0' - 9.5' 9.5' - 10.0'</p> | <p>1.0' - 1.5' 1.5' - 2.0' 2.0' - 2.5' 2.5' - 3.0' 3.0' - 3.5' 3.5' - 4.0' 4.0' - 4.5' 4.5' - 5.0' 5.0' - 5.5' 5.5' - 6.0' 6.0' - 6.5' 6.5' - 7.0' 7.0' - 7.5' 7.5' - 8.0' 8.0' - 8.5' 8.5' - 9.0' 9.0' - 9.5' 9.5' - 10.0'</p> |

| SYMBOL | HYDRIC | HYDROLOGIC GROUP | ALTERNATE GROUP | NAME | K-VALUE |
|--------|--------|------------------|-----------------|--|-----------|
| RSC | | C | B | RUSSETT FINE SANDY LOAM, 5 TO 10 PERCENT SLOPES | 0.24 |
| SE** | | B | B | SASSAFRAS AND CROOM SOIL, 15 TO 25 PERCENT SLOPES | 0.24/0.28 |
| SIB | | B | B | SASSAFRAS GRAVELLY SAND LOAM, 2 TO 5 PERCENT SLOPE | 0.24 |

** HIGHLY ERODIBLE, K>0.35 AND STEEPER THAN 5%, OR 15% AND GREATER SLOPES. TAKEN FROM THE NRCS WEB SOIL SURVEY HOWARD COUNTY, MARYLAND, SEPTEMBER 2017.



| 10 - 100 YEAR STORAGE CHART | | | | |
|-----------------------------|-----------------|-----------------|------------------|------------------|
| STORM | EXISTING RUNOFF | PROPOSED RUNOFF | STORAGE REQUIRED | STORAGE PROPOSED |
| 10 YEAR | 9.13 CFS | 22.18 CFS | | |
| 100 YEAR | 28.26 CFS | 48.33 CFS | 29,621 CF | 35,528 CF |



TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

BENCHMARK ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE, SUITE 315
ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 A (F) 410-465-6844
WWW.BEI-CIVILENGINEERING.COM

OWNER:
TROITER 5857, LLC.
1819 PANORAMA CT.
MCLEAN, VA 22101
(P) 443-250-1555

THE AERIE IN ELKRIDGE
LOTS 11-12 AND OS LOT 13

6399 ANDERSON AVE, HANOVER, MD 21076
TAX MAP: 38 GRID: 14 - PARCEL: 232
ELECTION DISTRICT NO. 1 - HOWARD COUNTY, MARYLAND

PRELIMINARY GRADING & STORMWATER MANAGEMENT DRAINAGE AREA MAP

DATE: JANUARY, 2020 BEI PROJECT NO. 2894
DESIGN: LDD DRAFT: LDD SCALE: AS SHOWN SHEET 6 OF 8

| SOILS CHART - SOIL SURVEY HOWARD COUNTY, MARYLAND | | | | | |
|---|--------|------------------|-----------------|--|-----------|
| SYMBOL | HYDRIC | HYDROLOGIC GROUP | ALTERNATE GROUP | NAME | K-VALUE |
| RSc | | C | | RUSSETT FINE SANDY LOAM, 5 TO 10 PERCENT SLOPES | 0.24 |
| SrE** | | B | B | SASSAFRAS AND CROOM SOIL, 15 TO 25 PERCENT SLOPES | 0.24/0.28 |
| SB | | B | | SASSAFRAS GRAVELLY SAND LOAM, 2 TO 5 PERCENT SLOPE | 0.24 |

** HIGHLY ERODIBLE, K>0.35 AND STEEPER THAN 5%, OR 15% AND GREATER SLOPES. TAKEN FROM THE NRCS WEB SOIL SURVEY HOWARD COUNTY, MARYLAND, SEPTEMBER 2017.

PLANTING SCHEDULE

FCE #1 - 0.1 acres
Planting Units Required: 70
Planting Units Provided:

| Qty | Species | Size | Spacing | Total FCA Units |
|---------------------------|---|-----------|----------|-----------------|
| 5 | Liriodendron tulipifera - Tulip poplar ** | 2-3" whip | 11' o.c. | |
| 5 | Nyssa sylvatica - Black gum | 2-3" whip | 11' o.c. | |
| 10 | Prunus serotina - Black cherry ** | 2-3" whip | 11' o.c. | |
| 10 | Quercus alba - White oak | 2-3" whip | 11' o.c. | |
| 5 | Viburnum prunifolium - Blackhaw ** | 2-3" whip | 11' o.c. | |
| Total whip plantings = 35 | | | | 70 |
| Total Unit Credit | | | | 70 |

Specimen Tree Mitigation

| Qty | Species | Size | Spacing |
|-----|-------------------------------|-----------|----------|
| 4 | Quercus alba - White oak | 2-3" cal. | as shown |
| 2 | Quercus prinus - Chestnut oak | 2-3" cal. | as shown |

- Planting Notes:**
- Planting density based on 700 planting units per acre. 2" caliper trees = 2 planting units, 1" caliper trees = 3.5 planting units, whips with shelter = 2 planting units.
 - ** - These species should not be planted within the wetland limits.
 - Planting shall be made in a curvilinear fashion along contour. The planting should avoid a grid appearance but should be spaced to facilitate maintenance.
 - Multiflora rose/hedge brush removal/control may be required prior to installation of planting.
 - All whips are required to be installed with tree shelters per Howard County FCA requirements.
 - Existing trees within reforestation area shall be counted toward final planting obligation.

REFORESTATION PLAN

A. Planting Plan and Methods

Plant species selection was based on our knowledge regarding plant communities in Maryland's Piedmont Plateau and information provided in the soil survey on the typical vegetation for the soil type on the planting site. Species selection was also based on our knowledge of plant availability in the nursery industry.

Reforestation will be accomplished through a direct planting of whips and/or bare root stock. Container grown stock is recommended but bare root stock may be used to meet special needs. If bare root stock is used the root system of all plants will be dipped in an antifungal fungicide prior to planting to improve successful establishment in the root system.

Prior to planting the proposed Forest Conservation Easement all multiflora rose in the planting area shall be removed. Removal of the rose may be performed with mowing and herbicide treatments. Physical removal of all the growth following by a periodic herbicide treatment of the remaining stems is recommended. Native tree and shrub species occurring within the easement should be retained where possible. Herbicide treatments shall not be applied to native trees or shrubs occurring within the easement area in the spring and fall for subsequent years. Herbicide used shall be made specifically to address native plant treatment and not to impact non-targeted species. Care should be taken to ensure that herbicide is applied to the target species and not to nearby desirable species. It is recommended that herbicide be applied at least six months prior to planting.

B. Planting and Soil Specifications

Plant material will be installed in accordance with the Planting Detail and Planting Specifications shown on the Forest Conservation Plan. Soil disturbance will be limited to individual planting locations.

C. Maintenance of Plantings

For information regarding maintenance of the reforestation plantings, see Post Construction Management Plan.

D. Guarantee Requirements

A 90 percent survival rate of the reforestation plantings will be required after one growing season. All plant material below the 90 percent survival threshold will be replaced by the end of the second growing season. If the survival rate after the second growing season is 75 percent survival rate will be required. All plant material below the 75 percent survival threshold will be replaced by the beginning of the third growing season.

E. Security for Reforestation

Section 16-209 of the Howard County Forest Conservation Act requires that a developer shall post a security deposit (letter of credit, etc.) with the County to insure that all work is done in accordance with the FCP.

CONSTRUCTION PERIOD PROTECTION PROGRAM

A. Forest Protection Techniques

1. Soil Protection Area (Critical Root Zone)

The soil protection area, or critical root zone, of a tree is that portion of the soil column where most of its roots may be found. The majority of roots responsible for water and nutrient uptake are located in the soil protection area. Soil disturbance within the critical root zone of the forest in areas where the forest limits occur within 25 feet of the limit of disturbance.

2. Fencing and Signage

Existing forest limits occurring within 25 feet of the limit of disturbance shall be protected using temporary protective fencing. Permanent signage shall be placed around the afforestation area prior to plant installation, as shown on the plan.

B. Pre-Construction Meeting

Upon signing of limits of disturbance a pre-construction meeting will be held between the developer, contractor and appropriate County officials. The purpose of the meeting will be to verify that all address control is in place, and to verify the contractor or possible penalties for non-compliance with the FCP.

C. Storage Facilities/Equipment Cleaning

All equipment storage, parking, sanitary facilities, material stockpiling, etc. associated with construction of the project will be restricted to those areas outside the limits of disturbance. Clearing of equipment will be limited to areas within the LOD of the proposed homesite. Widespread results from equipment cleaning will be conducted to prevent runoff into environmentally sensitive areas.

D. Sequence of Construction

The following timetable represents the proposed timetable for development. The items outlined in the Forest Conservation Plan will be installed within two (2) week submission approval.

Notes:

- Install all signage and sediment control devices.
- Hold pre-construction meeting between developer, contractor and County representative.
- Soil erosion mats, silt wall and water systems and covered frames. Stacking of disturbed areas accordingly.
- Begin multiflora rose removal. Install permanent protection signage for bare roots and stave plantings in accordance with Forest Conservation Plan. Plantings will be completed within 60 days of submission approval.
- Remove sediment control.
- Hold post-construction meeting with County Inspectors to assure compliance with FCP. Submit Certification of Installation.
- Monitor and maintain plantings for 2 years.

E. Construction Monitoring

Soil Science Professional, or another qualified professional designated by the developer, will monitor construction of the project to ensure that all activities are in compliance with the Forest Conservation Plan.

F. Post-Construction Meeting

Soil Science Professional, or another qualified professional designated by the developer, will notify the County that construction has been completed and arrange for a post-construction meeting to release the project site. The meeting will allow the County inspector to verify that all afforestation plantings have been installed.

POST-CONSTRUCTION MANAGEMENT PLAN

Howard County requires a two year post-construction management plan to be prepared as part of the forest conservation plan. The plan shall be the effect upon completion of the construction certification of completion by the County, Soil Science Professional, or another qualified professional designated by the developer, will be responsible for implementation of the post-construction management plan.

The following items will be incorporated into the plan:

A. Fencing and Signage

Permanent signage indicating the limits of the reforestation area shall be maintained.

B. General Site Inspection/Maintenance of Plantings

Site inspections will be performed a minimum of three times during the growing season. The purpose of the inspections will be to assess the health of the afforestation plantings. Appropriate measures will be taken to remedy any problems which may arise.

In addition, maintenance of the afforestation plantings will involve the following steps:

- Watering: All plant material shall be watered twice a month during the first growing season, more or less frequently depending on weather conditions. During the second growing season, once a month during May/September, if needed.
- Removal of invasive species and noxious weeds: On-site succession control will be initiated.
- Identification of native plant species and diseases, treatment with appropriate agents.
- Pruning of dead trunks.
- After 12 and 24 months, replacement of plants, if required, in accordance with the Guarantee Requirements shown on the FCP.

C. Education

The developer will provide appropriate materials to property owners informing them of the location and purpose of the afforestation area. Materials may include site plans and information regarding the intent of the forest conservation plan.

D. Final Inspection

At the end of the two year post-construction management period, Eco-Science Professionals, or another qualified professional, will submit to the administrator of the Howard County Forest Conservation Program certification that all reforestation requirements have been met. Upon acceptance of the certification, the County will release the developer from all future obligations and release the developer's bond.

TENTATIVELY APPROVED
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY

PLANNING DIRECTOR

1-17-20
DATE

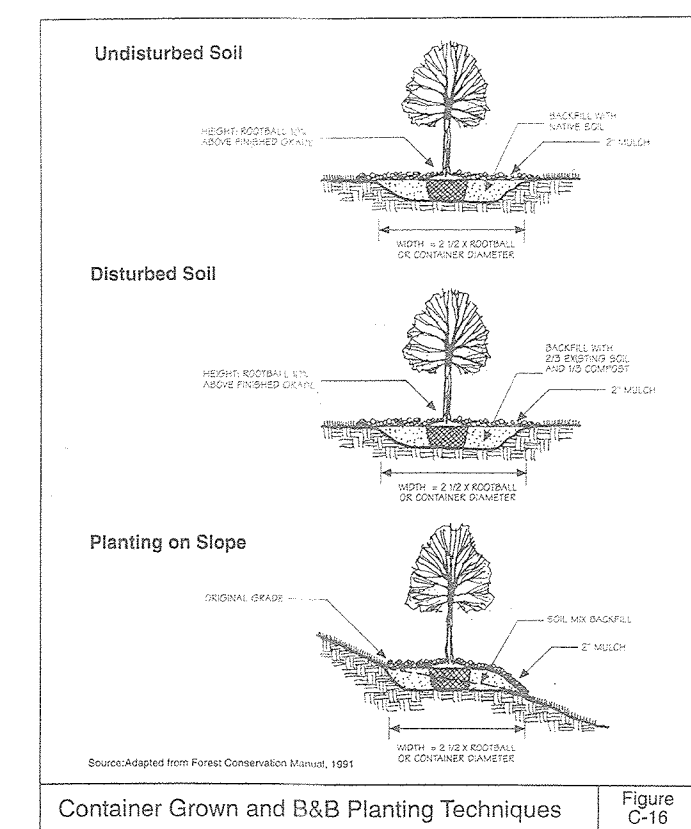
Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS
P.O. BOX 506 GLEN ARN, MARYLAND 21747

PLAN PREPARED BY:
JOHN COOPER
MD DNR FCA QUALIFIED PROFESSIONAL

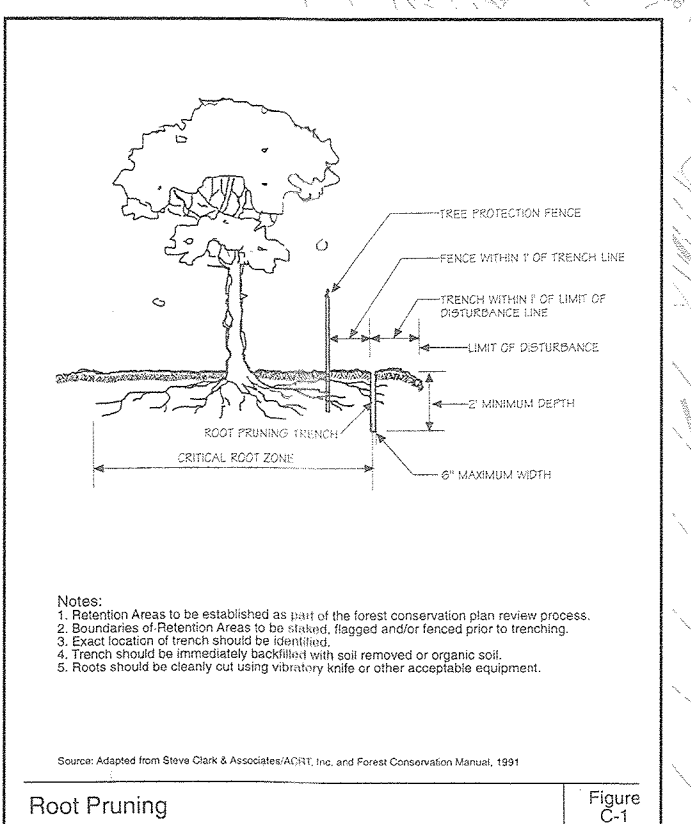
Specimen Tree Chart

| Key (X#) | Species | Size (in. dbh) | CRZ (feet radius) | Comments |
|----------|---------------|----------------|-------------------|--|
| 1 | Black oak | 30.5 | 45.75 | fair, some trimming noted |
| 2 | Chestnut oak | 31 | 46.5 | CRZ impacted by offsite activity |
| 3 | Chestnut oak* | 32 | 48 | fair, some dieback noted |
| 4 | Black oak | 41 | 61.5 | good |
| 5 | Chestnut oak | 29.8 | 44.7 | poor, heavy vine cover and dieback in canopy |

*NOTE: ALL ATTEMPTS MUST BE MADE TO PRESERVE SPECIMEN TREE #3. HOWEVER, WP-19-053 ALLOWED REMOVAL OF THIS TREE IF PROTECTIVE MEASURES PROVE INSUFFICIENT OR HEALTH OF TREE DECLINES. MITIGATION IS PROVIDED FOR THIS TREE UNDER THIS PLAN.



Container Grown and B&B Planting Techniques Figure C-1B



Root Pruning Figure C-1A

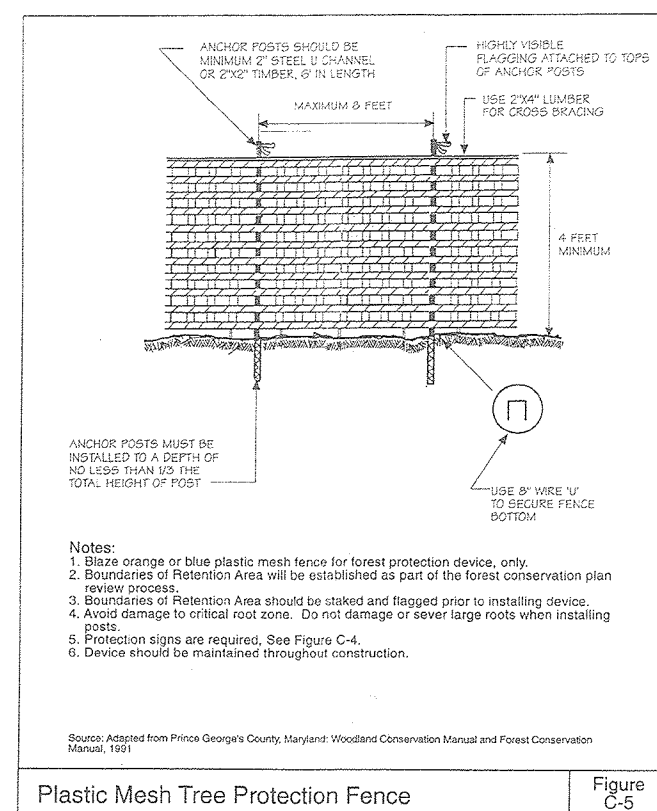
Forest Stand Data

| Key | Community Type | Acreage (nta) | Dominant Vegetation | General Condition | Priority Acreage |
|-----|----------------|---------------|--|-------------------|------------------|
| F1 | Mixed Oak | 3.4 | Quercus prinus, Quercus rubra, Quercus velutina, Liriodendron tulipifera, Pinus virginiana | Good | 3.4 slopes |

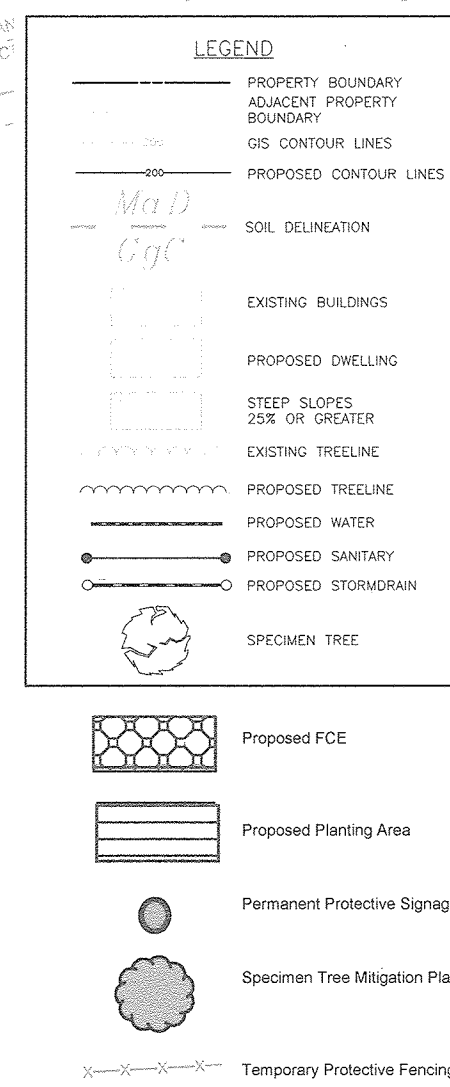
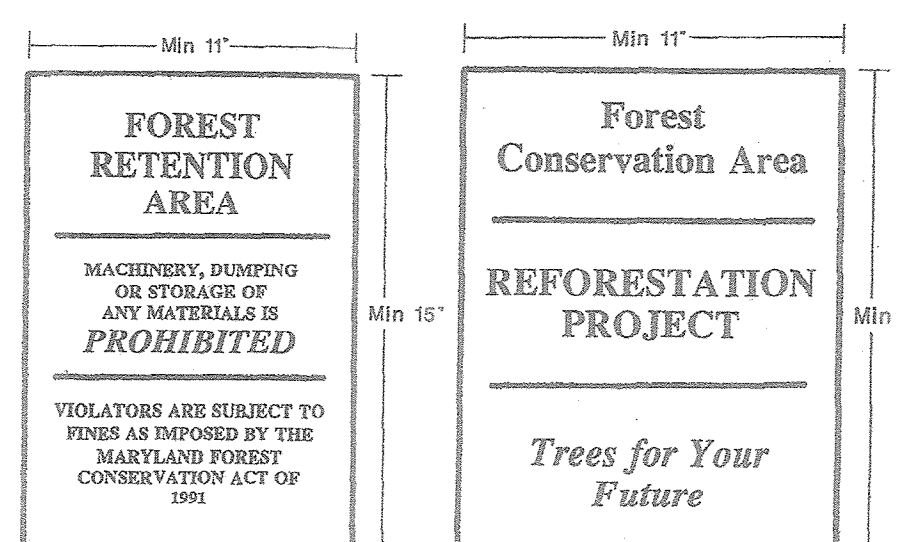
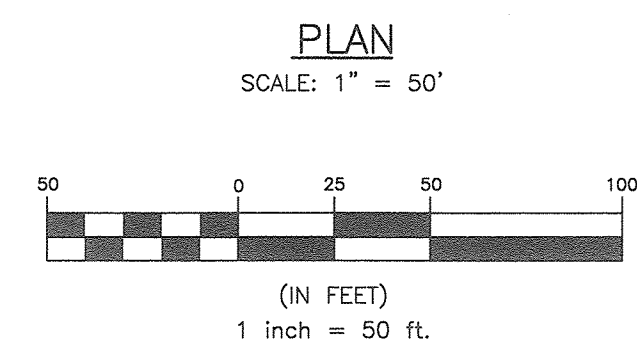
See accompanying report for complete stand descriptions

FSD NOTES:

- No rare, threatened or endangered species or their habitats were observed on the property.
- Surrounding land use is high density residential development and commercial.
- Approximately 0.3 acres of forest is present within 100 feet of the subject property.
- There are no wetlands, streams or buffers on the property. The property is within the Use I watershed of Deep Run (02-13-09).
- No 100 year floodplain is present on the subject property.
- There are steep slopes (25% or greater) on the property.
- There are no known historic structures or cemeteries on the property.
- There are specimen trees, State Champion Trees and/or trees 75% of the size of a State Champion tree on the property.



Plastic Mesh Tree Protection Fence Figure C-1C

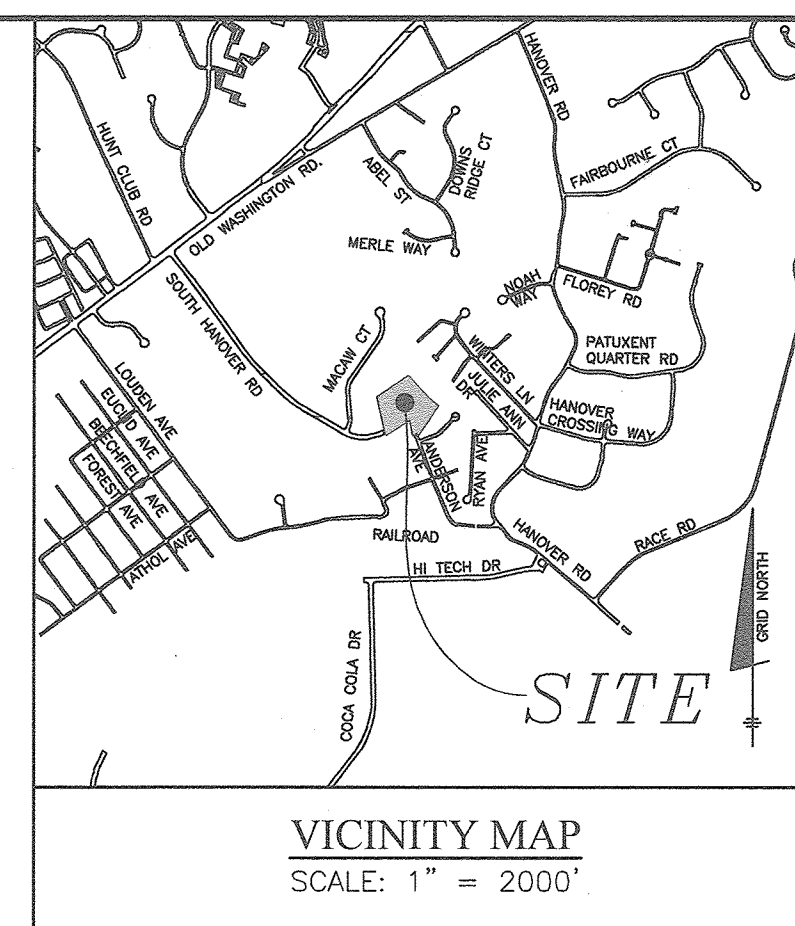


BENCHMARK ENGINEERING, INC.
ENGINEERS & LAND SURVEYORS & PLANNERS
8480 BALTIMORE NATIONAL PIKE & SUITE 315
ELICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CVLENGINEERING.COM

OWNER:
TROTTER 5857, LLC.
1519 PANARAMA CT.
MCLEAN, VA 22101
(P) 443-250-1555

THE AERIE IN ELKRIDGE
LOTS 1-12 AND OS LOT 13
6399 ANDERSON AVE, HANOVER, MD 21076
TAX MAP: 38 - GRID: 14 - PARCEL: 232
ELECTION DISTRICT NO. 1 - HOWARD COUNTY, MARYLAND

FOREST CONSERVATION PLAN
DATE: NOVEMBER, 2019 BEI PROJECT NO. 2894
DESIGN: LDD DRAFT: LDD SCALE: AS SHOWN SHEET 8 OF 8



FOREST CONSERVATION WORKSHEET
VERSION 2.0
(Enter in Yellow Cells)Project Name: Aerie in Elkrige; P-20-003 Date: Sept. 2019

NET TRACT AREA:

| | | |
|--|---|-----|
| A. Total tract area | = | 5.3 |
| B. Area within 100 year floodplain | = | 0.0 |
| C. Area to remain in agricultural production | = | 0.0 |
| D. Net tract area | = | 5.3 |

LAND USE CATEGORY (from table 3.2.1, page 40, Manual)
Input the number "1" under the appropriate land use zoning, and limit to only one entry:

| ARA | MDR | IDA | HDR | MPD | CIA |
|-----|-----|-----|-----|-----|-----|
| 0 | 1 | 0 | 0 | 0 | 0 |

E. Afforestation Threshold..... 15% x D = 0.8
F. Conservation Threshold..... 20% x D = 1.1

EXISTING FOREST COVER:

| | | |
|---|---|-----|
| G. Existing forest cover (excluding floodplain) | = | 3.4 |
| H. Area of forest above afforestation threshold | = | 2.6 |
| I. Area of forest above conservation threshold | = | 2.3 |

BREAK EVEN POINT (BEP):
J. Forest retention above threshold with no mitigation (BEP)..... 1.6
K. Clearing permitted without mitigation..... 1.8

PROPOSED FOREST CLEARING:

| | | |
|--|---|-----|
| L. Total area of forest to be cleared | = | 2.7 |
| M. Total area of forest to be retained | = | 0.7 |

PLANTING REQUIREMENTS:

| | | |
|--|---|-----|
| N. Reforestation for clearing above conservation threshold | = | 0.6 |
| P. Reforestation for clearing below conservation threshold | = | 0.8 |
| Q. Credit for retention above conservation threshold | = | 0.0 |
| R. Total reforestation required | = | 1.4 |
| S. Total afforestation required | = | 0.0 |
| T. Total reforestation and afforestation required | = | 1.4 |

FOREST CONSERVATION EASEMENT
0.8 ACRES
0.7 acres to be retained
0.1 acres to be planted

FCP NOTES

- Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
- Forested areas retained outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants.
- Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater.
- There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
- No stockpiles, parking areas, equipment cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements.
- Temporary fencing shall be used to protect forest resources during construction. Fencing shall be installed along limits of disturbance occurring within 50 feet of the proposed FCE limits. Permanent signage will be posted at a 50-100 foot intervals along all FCE limits.
- The Forest Conservation Act requirements for this project will be met through the onsite retention of 0.7 acres of forest; 0.1 acres of onsite planting; and the purchase of 1.3 acres of planting credit in an offsite forest conservation bank. If a retention bank is used to satisfy this obligation 2.6 acres of retention credit will be purchased.
- The removal of specimen trees 1, 3, and 5 has been approved by Howard County. To mitigate for the removal of these trees six 2-3" caliper trees will be planted onsite. These trees will be in addition to standard landscaping and FCA requirements. County recommendations include locating the trees on lots 5, 10 and 12. In addition, root pruning is proposed for Specimen tree 3, per the conditions of the Alternative Compliance approval.

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. 25366, expiring 07/31/2020.

1-2-2020