

LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- EXISTING EDGE OF PAVING
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING WATER LINE
- EXISTING TREELINE
- EXISTING TREES
- EXISTING WOOD FENCE
- PROPOSED TREELINE
- PROPOSED DRYWELL (M-5)
- EX. 15" DRAINAGE & UTILITY EXHIBIT (PLAT BOOK 7/9)

SITE DATA

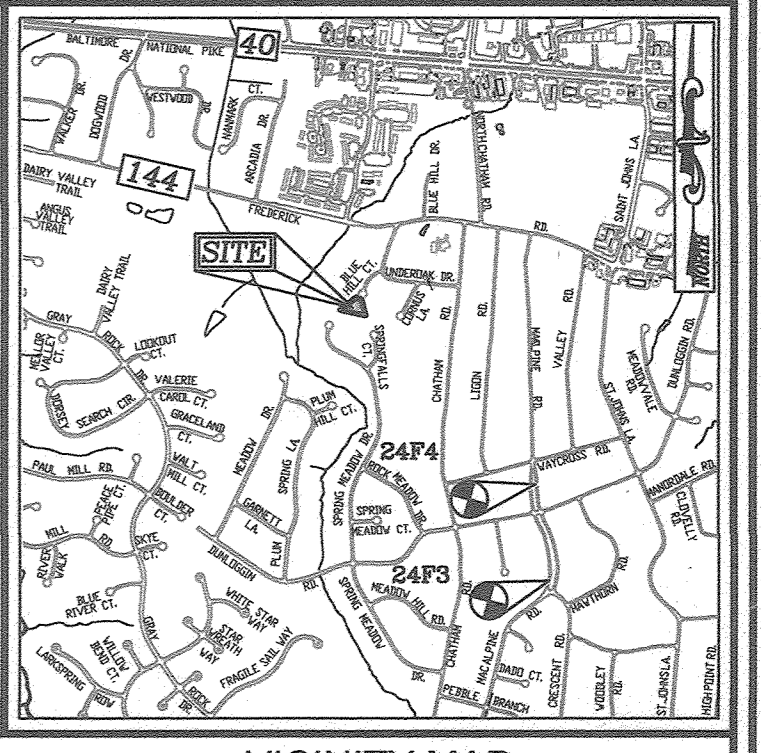
LOCATION: TAX MAP 24, GRID 10, PARCEL 660
 DEED REFERENCE: L. 16330 / F. 42
 2ND ELECTION DISTRICT
 PRESENT ZONING DESIGNATION: R-20
 PER THE COMPREHENSIVE ZONING PLAN DATED 10/6/13.
 TOTAL PROJECT AREA: 0.58 AC. (25,157 SF)
 AREA OF RIGHT OF WAY: 0.00 AC. (0.00 SF)
 AREA OF FLOODPLAIN: 0.00 AC. (0.00 SF)
 NET AREA OF PROJECT: 0.58 AC. (25,157 SF)
 LIMIT OF DISTURBED AREA: **0.59 AC. (25,068 SF)**
 PROPOSED USES FOR SITE AND STRUCTURES: SFD RESIDENTIAL
 TOTAL NUMBER OF UNITS ALLOWED: 1 UNIT
 TOTAL NUMBER OF UNITS PROPOSED: 1 UNIT
 OPEN SPACE REQUIRED: 0.00 AC.
 OPEN SPACE PROVIDED: 0.00 AC.
 APPLICABLE DPZ FILE REFERENCES: PLAT BOOK 7/9 & ECP-16-005 (APPROVED 09/14/15)

SITE DEVELOPMENT PLAN GRAY ROCK - SECTION TWO - LOT 23

PARCEL 660 (L. 16330 / F. 42)
 3630 BLUE HILL COURT
 ELLICOTT CITY, MD 21042

GENERAL NOTES

1. THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
 AT&T CABLE LOCATION DIVISION 1-800-393-3553
 BGE (CONTRACTOR SERVICES) 410-850-4620
 BGE (UNDERGROUND DAMAGE CONTROL) 410-787-4620
 HOWARD COUNTY BUREAU OF UTILITIES 410-313-2366
 COLONIAL PIPELINE CO. 410-795-1390
 M&S UTILITY 1-800-257-7777
 STATE HIGHWAY ADMINISTRATION 410-513-5533
 VERIZON TELEPHONE CO. 1-410-954-6281
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "M&S UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
5. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 24F3 AND 24F4 WERE USED FOR THIS PROJECT.
6. THE PROJECT BOUNDARY IS BASED ON A FIELD RUN BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. DATED DECEMBER 12, 2014. DATUM USED IS FROM PLAT BOOK 7/9.
7. THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON FIELD RUN TOPOGRAPHIC SURVEY WITH TWO FOOT CONTOUR INTERVALS, PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. DATED JUNE 15, 2015.
8. EXISTING UTILITIES ARE BASED ON HOWARD COUNTY RECORDS, FIELD SURVEY, ROAD CONSTRUCTION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
9. ANY DAMAGE TO THE COUNTY'S RIGHTS-OF-WAY, PAVING, OR EXISTING UTILITIES SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
10. PUBLIC WATER AVAILABLE THROUGH CONTRACT NO. 11-W AND PUBLIC SEWER AVAILABLE THROUGH CONTRACT NO. 129-S WATER AND SEWER SERVICE WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 16.122B OF THE HOWARD COUNTY CODE.
11. PUBLIC WATER AND SEWER ALLOCATION WILL BE GRANTED AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT IF THE CAPACITY IS AVAILABLE AT THAT TIME.
12. ALL WATER HOUSE CONNECTIONS SHALL BE FOR OUTSIDE METER SETTING UNLESS OTHERWISE NOTED.
13. THIS PROJECT IS LOCATED IN THE METROPOLITAN DISTRICT.
14. THIS SITE IS NOT LOCATED IN A HISTORIC DISTRICT.
15. THERE ARE NO STREAMS, OR STREAM BUFFERS LOCATED WITHIN THE LIMITS OF THIS SITE.
16. THERE IS NO 100-YR FLOODPLAIN LOCATED WITHIN THE LIMITS OF THIS SITE.
17. THERE ARE NO WETLANDS, OR WETLAND BUFFERS LOCATED WITHIN THE LIMITS OF THIS SITE.
18. THE SUBJECT PROPERTY IS ZONED R-20 IN ACCORDANCE WITH THE 10/06/13 COMPREHENSIVE ZONING PLAN.
19. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
20. FINANCIAL SURETY FOR THE REQUIRED 8 SHADE TREES IN THE AMOUNT OF \$2,400.00 SHALL BE POSTED AS PART OF THE BUILDERS CRDING PERMIT APPLICATION.
21. THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS OR CONSTRUCTION OF THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION, OR BUILDING AND GRADING PERMITS.
22. DRIVEWAY(S) SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 a) WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE);
 b) SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CLIP COATING (1-1/2" MIN.);
 c) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM 45-FOOT TURNING RADIUS;
 d) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING);
 e) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE;
 f) STRUCTURE CLEARANCES - MINIMUM 12 FEET;
 g) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
23. FOR DRIVEWAY ENTRANCE DETAILS REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL 9-6.05.
24. THERE IS NO EXISTING HOUSE, CONSTRUCTION, OR HISTORIC STRUCTURES LOCATED ON THIS PROPERTY.
25. ~~STORMWATER MANAGEMENT TO BE PROVIDED PER THE TERMS BY AN UNDERGROUND DETENTION SYSTEM AND DREVELLS (M-5). THE FACILITIES ARE TO BE PRIVATELY OWNED AND MAINTAINED BY THE HOMEOWNER.~~
26. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
27. TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL/CEMETERY LOCATIONS ON SITE.
28. THERE ARE NO STEEP SLOPES LOCATED ON THIS SITE.
29. THIS PROJECT IS EXEMPT FROM THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BECAUSE THE TOTAL AREA OF THE PROJECT IS LESS THAN 40,000 SQUARE FEET, IN ACCORDANCE WITH SECTION 16.1202(b)(1)(c) OF THE SUBDIVISION REGULATIONS.
30. IN ACCORDANCE WITH SECTION 128.0 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.
31. NO RARE, THREATENED OR ENDANGERED SPECIES OR THEIR HABITATS WERE OBSERVED ON THE PROPERTY.
32. SHC ELEVATIONS SHOWN ARE LOCATED AT THE PROPERTY LINE.
33. THIS PROJECT IS EXEMPT FROM MODERATE INCOME HOUSING UNIT (MIHU) REQUIREMENTS.



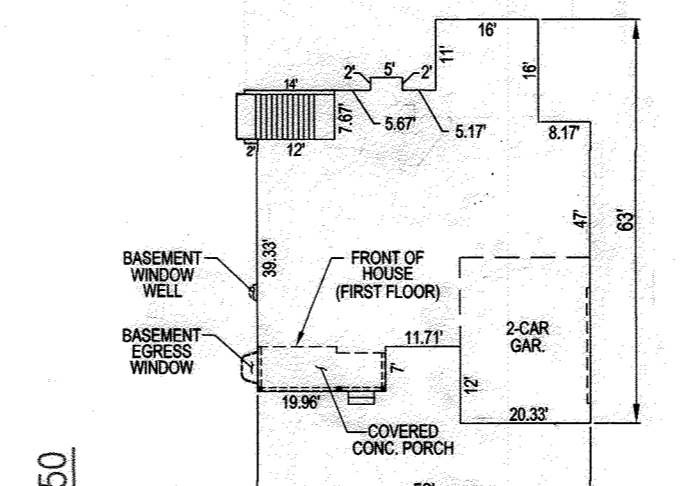
VICINITY MAP
 SCALE: 1"=2,000'
 ADC MAP COORDINATE: MAP: 20, GRID: D-8

BENCHMARKS

HOWARD COUNTY BENCHMARK 24F3 (CONC. MON.)
 N 581299.84 E 1360713.73 ELEV. 365.41
 LOCATION: ISLE OF MACLAINIE RD. +/- 120' N. OF CRESCENT RD.
 HOWARD COUNTY BENCHMARK 24F4 (CONC. MON.)
 N 582298.52 E 1360570.97 ELEV. 366.19
 LOCATION: MACLAINIE ROAD, SOUTH OF WAYCROSS RD.



28'-0" MEAN HEIGHT



PROP. HOUSE
 SCALE 1/8"=1'-0"

E 1358950
 N 584250

PIPE SCHEDULE

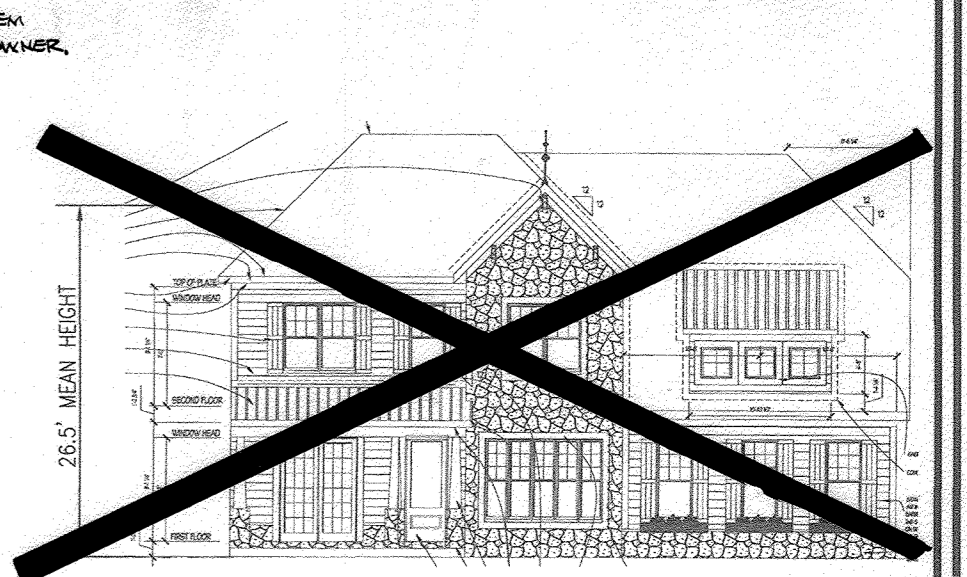
SIZE	TYPE	LENGTH
4"	SOLID PVC	209 LF
6"	SOLID PVC	183 LF
12"	SOLID PVC	26 LF
8"	PERFORATED HDPE	17 LF
12"	HDPE	55 LF
30"	PERFORATED HDPE	132 LF

NO.	TYPE	LOCATION	IN/IN	IN/OUT	COMMENTS
1-1	12" PVC CLEANOUT	N 584215.26 E 1358673.87 404.70	-	402.27	PROVIDE DOME GRATE

ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
LOT 23	3630 BLUE HILL COURT

PERMIT INFORMATION CHART			
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL NUMBER	
GRAY ROCK - SECTION TWO	N/A	LOT 23	
PLAT OR L/F	GRID NO.	ZONING	TAX MAP NO.
PLAT BOOK 7/9	10	R-20	24
L. 16330/F. 42			2ND
			602306.1

SHEET INDEX		
DESCRIPTION	SHEET NO.	
LAYOUT PLAN	1 OF 5	
SOILS MAP, GRADING, EROSION AND SEDIMENT CONTROL PLAN	2 OF 5	
SITE, GRADING, EROSION AND SEDIMENT CONTROL NOTES AND DETAILS	3 OF 5	
STORMWATER MANAGEMENT DRAINAGE AREA MAP AND DETAILS	4 OF 5	
LANDSCAPE PLAN, NOTES, AND DETAILS	5 OF 5	



OWNER/DEVELOPER

Viking Custom Homes
 C/O CARY CUMBERLAND
 12800 FREDERICK ROAD
 WEST FRIENDSHIP, MD 21794
 (410) 489-6728

NO.	REVISION	DATE
3	REVISE HOUSE TYPE	1-11-21
2	REVISE THE HOUSE TYPE ON LOT 23	9-25-20
1	REVISE THE PROPOSED STORMWATER MANAGEMENT AND HOUSE FOOTPRINT	6-23-20

**SITE DEVELOPMENT PLAN
 LAYOUT PLAN**

GRAY ROCK - SECTION TWO - LOT 23
 PARCEL 660 (L. 16330 / F. 42)
 3630 BLUE HILL COURT
 ELLICOTT CITY, MD 21042
 SFD UNIT

TAX MAP: 24, GRID: 10
 2ND ELECTION DISTRICT
 DPZ REF: PLAT BOOK 7/9, ECP-16-005

ROBERT H. VOGEL ENGINEERS, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE
 DESIGN BY: RHV
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: DECEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 15-16

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. 16193, EXPIRATION DATE: 09-27-2016

1 SHEET OF 5

THE MILLER LAND CO.
 TM: 24 PARCEL: 1030
 L. 704 / F. 363
 AREA: 9.51 AC.
 USE: AGRICULTURAL
 ZONED: R-20

TOOD CALDIS
 SHEILA CALDIS
 TM: 24 PARCEL: 660
 L. 9507 / F. 108
 GRAY ROCK
 LOT: 24
 AREA: 37,853 SF
 USE: RESIDENTIAL
 ZONED: R-20

JOHN P. OMARA & WF
 TM: 24 PARCEL: 1052
 L. 747 / F. 374
 DUNLOGGIN 2
 LOT: 27
 AREA: 22,607 SF
 USE: RESIDENTIAL
 ZONED: R-20

JANET E. YEISLEY
 TM: 24 PARCEL: 1052
 L. 4427 / F. 482
 DUNLOGGIN 2
 PLAT: 22-30
 LOT: 28
 AREA: 26,571 SF
 USE: RESIDENTIAL
 ZONED: R-20

MARIO J. REDA SR.
 MARIONA REDA
 TM: 24 PARCEL: 1052
 L. 11512 / F. 496
 DUNLOGGIN 2
 LOT: 20
 AREA: 36,937 SF
 USE: RESIDENTIAL
 ZONED: R-20

JOHANNA P. MALEH
 TM: 24 PARCEL: 660
 L. 12141 / F. 264
 GRAY ROCK
 LOT: 22
 AREA: 30,404 SF
 USE: RESIDENTIAL
 ZONED: R-20

KATHERINE L. WINDLEY
 WILLIAM H. WINDLEY
 TM: 24 PARCEL: 570
 L. 8738 / F. 434
 GRAY ROCK
 LOT: 14
 AREA: 20,255 SF
 USE: RESIDENTIAL
 ZONED: R-20

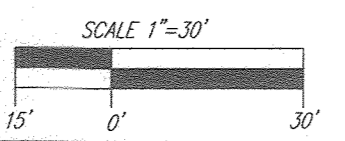
DONNA C. TROLL
 PETER TROLL
 TM: 24 PARCEL: 1052
 L. 6255 / F. 208
 DUNLOGGIN 2
 LOT: 19
 AREA: 21,582 SF
 USE: RESIDENTIAL
 ZONED: R-20

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad E. Smith 4-12-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Walter J. Smith 4-14-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

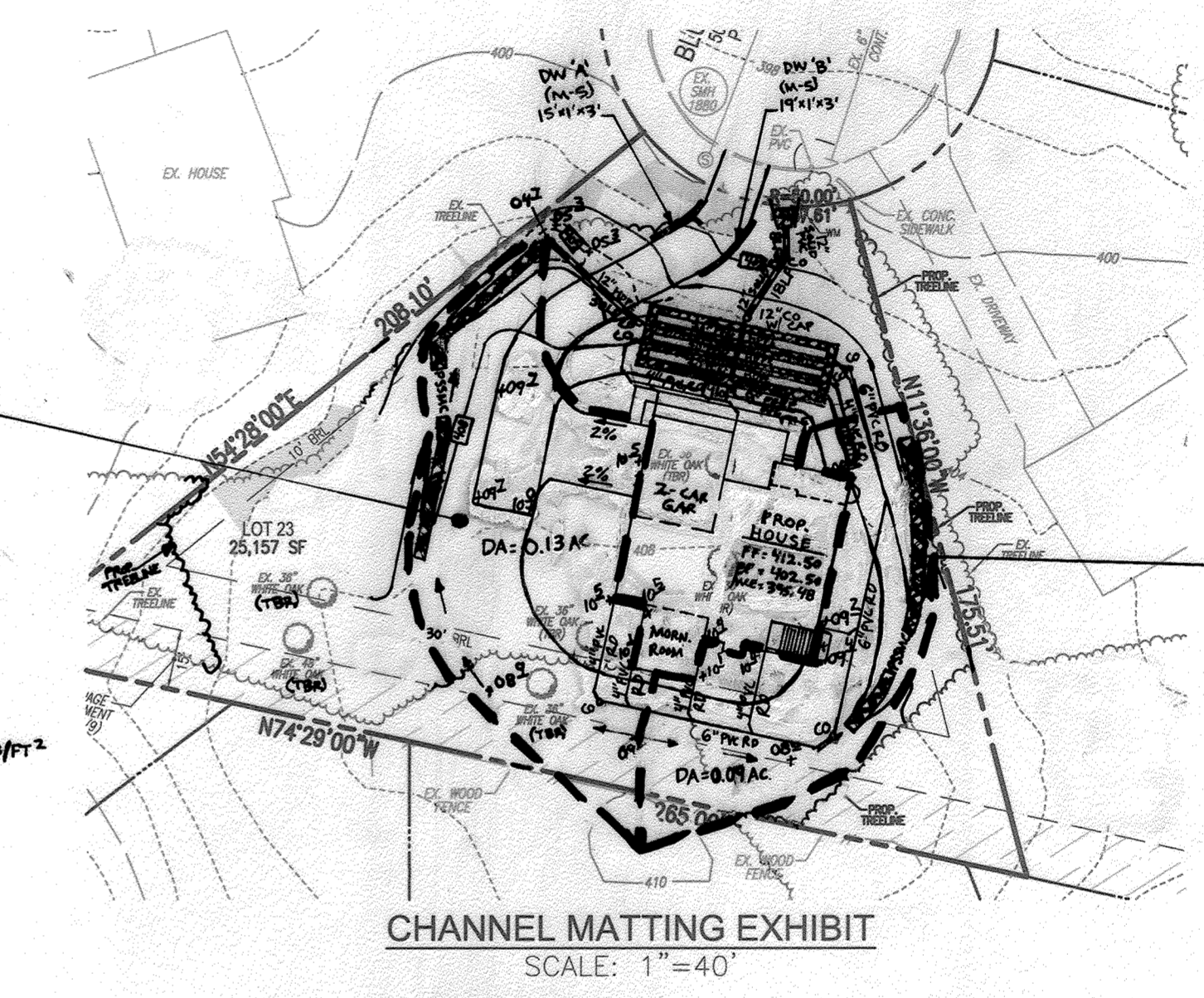
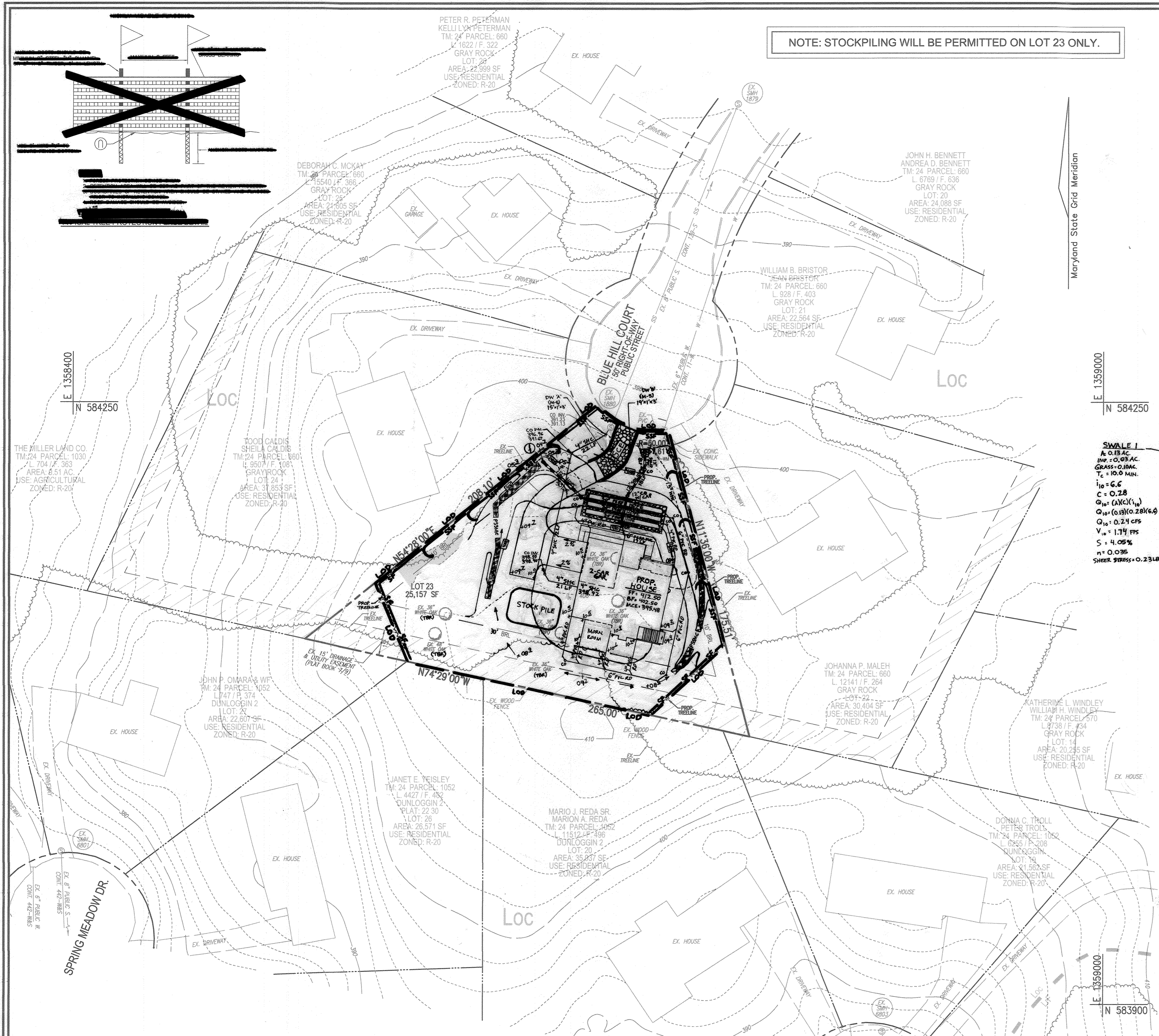
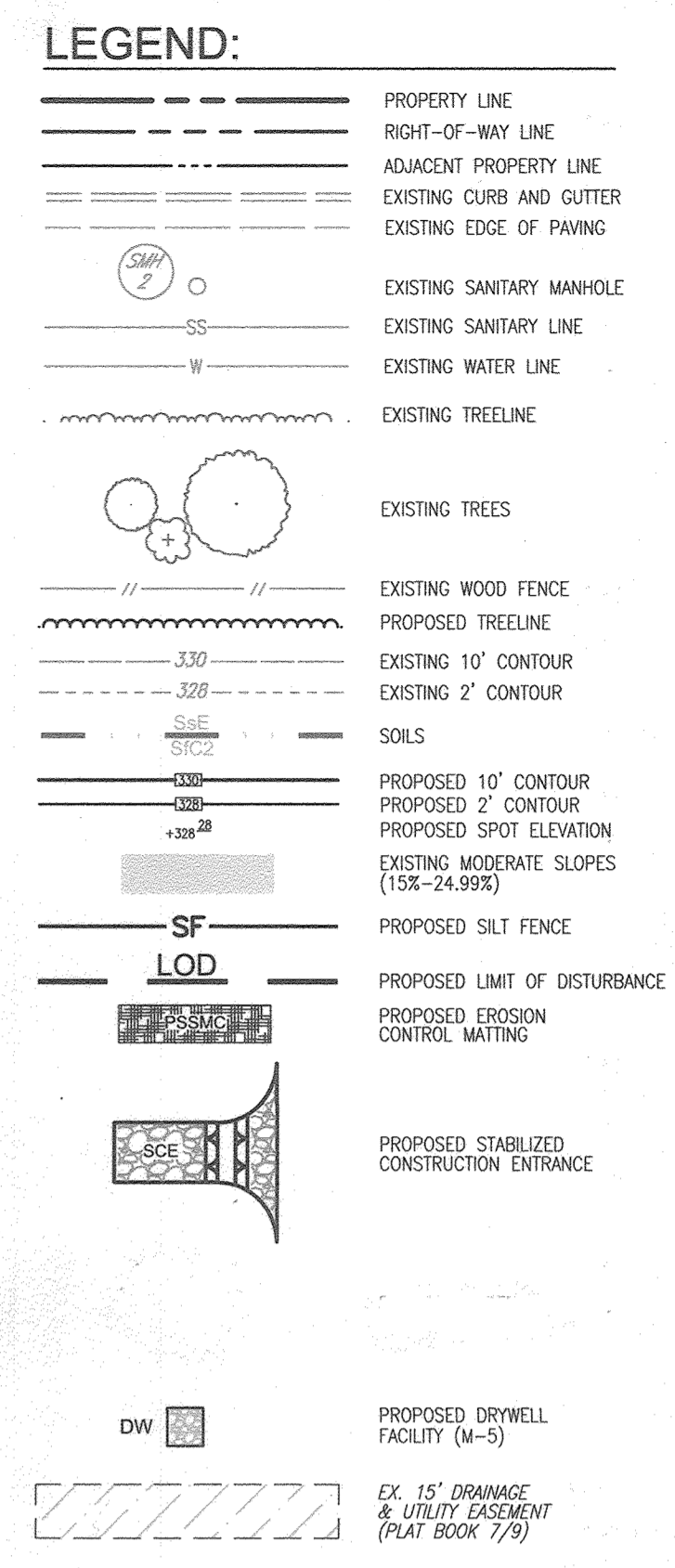
Walter J. Smith 4-15-16
 DIRECTOR DATE



LAYOUT PLAN
 SCALE: 1"=30'

NOTE: STOCKPIILING WILL BE PERMITTED ON LOT 23 ONLY.

- R.H. STANDARDS AND SPECIFICATIONS**
- SOIL**
- SOIL CONTROLS**
- Subsoils
- Drains
- To prevent heaving and movement of dirt from exposed soil surfaces to reduce on- and off-site damage including health and safety hazards.
- Conditions Where Drains Are Used**
- Areas subject to dirt blowing and movement when on- and off-site damage is likely without treatment.
- Specifications**
1. **Material:** See Section B-4.3 Soil Preparation, Topsoiling, and Soil Amendment, Section B-4.2 Seeding and Mulching, and Section B-4.1 Temporary Stabilization. Mulch must be selected to prevent blowing.
 2. **Installation:** See Section B-4.4 Temporary Stabilization.
 3. **Drains:** 20% to 30% of the area shall be graded to the surface. High blowing on windward side of the site. Child-type pipes should be used. All drains shall be installed in accordance with Section B-3.1 Land Grading.
 4. **Installation:** Suitable site with water until the surface is stable. As soon as possible, the site must not be exposed to the point that runoff occurs.
 5. **Drains:** Shall meet Section B-3.1, Section B-3.2, Section B-3.3, Section B-3.4, Section B-3.5, and Section B-3.6. Drains shall be installed in accordance with Section B-3.1 Land Grading.
 6. **Chemical Treatment:** Use of chemical treatment requires approval by the appropriate plus area authority.
- Stockpiling Areas**
- Stockpiling areas are defined when it is necessary to salvage and store soil for later use.
- Conditions Where Stockpiling Is Used**
1. The multiple location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
 2. The location of the stockpile must be sited to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Stockpiling must be provided in accordance with Section B-3.1 Land Grading.
 3. Runoff from the stockpile area must drain to a suitable sediment control practice.
 4. Access to the stockpile area from the upgrade side.
 5. Clear water runoff into the stockpile area must be prevented by use of a diversion device such as an earth ditch, temporary grade or diversion fence. Provision must be made for the discharging accumulated flow in a non-erosive manner.
 6. When runoff concentrations along the side of the stockpile are high, an appropriate erosion/sediment control practice must be used to manage the discharge.
 7. Stockpiles must be modified in accordance with the 37-day stabilization requirement as well as Section B-4.3 Temporary Stabilization and Section B-4.4 Temporary Stabilization.
 8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiling containing contaminated material must be covered with impervious sheeting.
- Maintenance**
- The multiple area must continuously meet the requirements for Adaptive Vegetative Stabilization as well as Section B-4.3 Temporary Stabilization. Site slopes must be maintained at no steeper than a 2:1 slope. The multiple area must be kept free of debris. If the vertical height of an accumulation exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, the multiple area must be provided in accordance with Section B-3.1 Land Grading.



OWNER/DEVELOPER
VIKING CUSTOM HOMES
C/O CARY CUMBERLAND
12800 FREDERICK ROAD
WEST FRIENDSHIP, MD 21794
(410) 489-6728

NO.	REVISION	DATE
3	REVISE HOUSE TYPE	1-11-21
2	REVISE THE HOUSE TYPE ON LOT 23	9-25-20
1	REVISE THE PROPOSED STORMWATER MANAGEMENT AND HOUSE FOOTPRINT	6-23-20

SITE DEVELOPMENT PLAN
SOILS MAP, GRADING, EROSION, AND SEDIMENT CONTROL PLAN
GRAY ROCK - SECTION TWO - LOT 23
PARCEL 660 (L. 16330 / F. 42)
3630 BLUE HILL COURT
ELLCOTT CITY, MD 21042
SFD UNIT

TAX MAP: 24 GRD. 10
2ND ELECTION DISTRICT
DPZ REF'S: PLAT BOOK 7/9, ECP-16-005

PARCEL 660
ZONED: R-20
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLCOTT CITY, MD 21043
Tel: 410-461-7666
Fax: 410-461-8961

PROFESSIONAL CERTIFICATE

DESIGN BY: RHV
DRAWN BY: JMR
CHECKED BY: JMR
DATE: DECEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 15-16

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. 161813, EXPIRATION DATE: 09-27-2016.

2 SHEET OF 5

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division
4/12/16

Chief, Division of Land Development
4-14-16

Director
4-15-16

BY THE DEVELOPER:
I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature of Developer: *John P. Colaninno*
Date: 3/29/16

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Signature of Engineer: *John P. Colaninno*
Date: 4/16/16

GRADING PLAN
SCALE: 1" = 30'

Signature of Engineer: *John P. Colaninno*
Date: 4/16/16

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR	ERODIBLE
LOC	LEOCRE-MONTALTO-URBAN LAND COMPLEX, B TO 15 PERCENT SLOPES	B	N/A	NO

NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

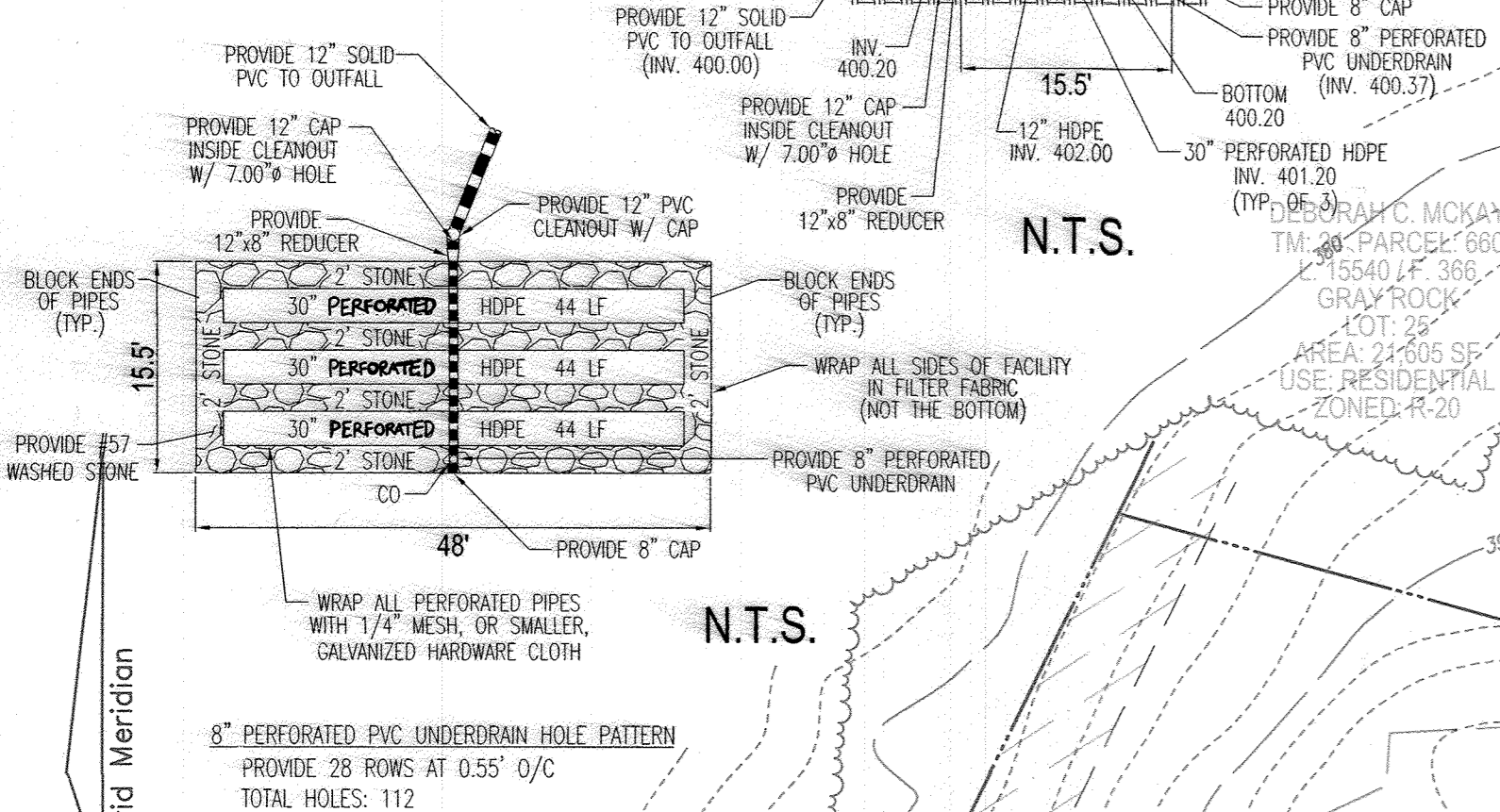
SCALE 1" = 30'

15' 0' 30'

SDP-16-020

SWM PRACTICE CHART
ESD PRACTICES BY LOT

LOT # 23
TWO DRYWELL FACILITIES (M-5)
AND AN UNDERGROUND STORAGE DETENTION SYSTEM

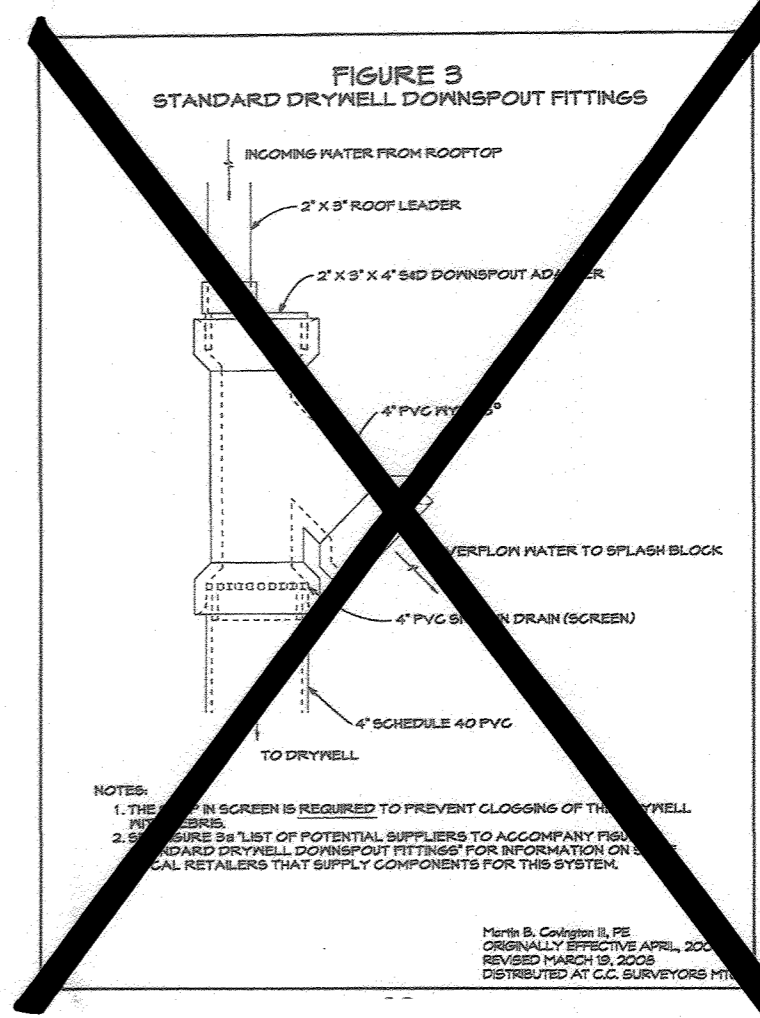
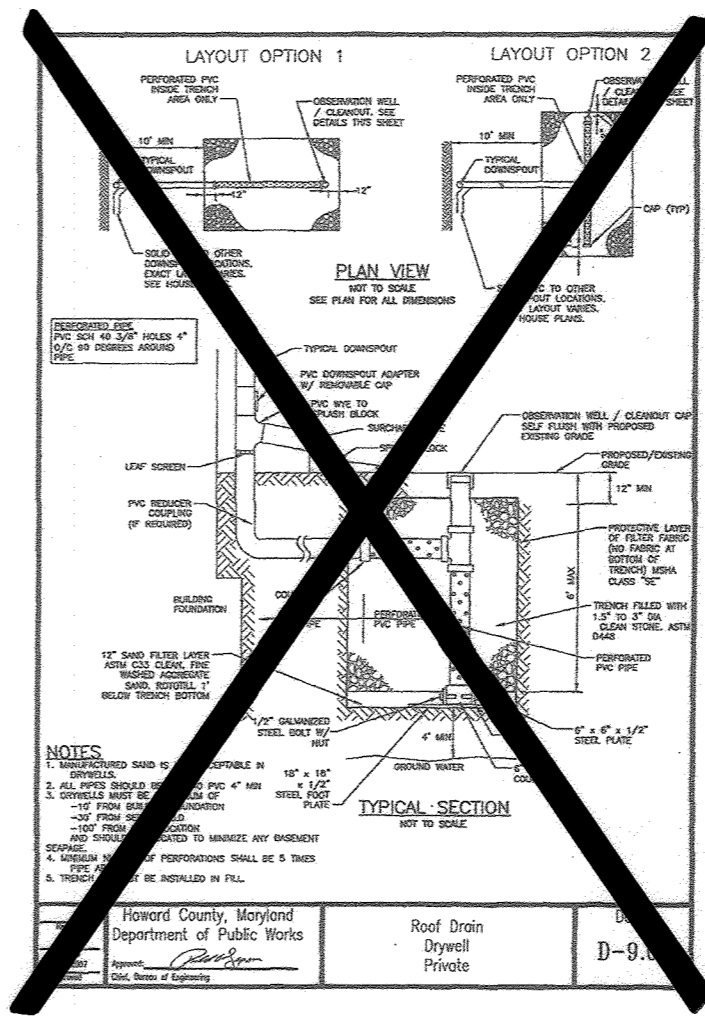


N.T.S.

N.T.S.

NOTE:
PROVIDE FILTER FABRIC ON ALL DRYWELL FACILITIES. ONLY THE SIDES OF THE DRYWELLS ARE TO BE WRAPPED IN FILTER FABRIC. FILTER FABRIC AT THE BOTTOM OF THE FACILITY WILL CAUSE THE DRYWELL TO FAIL, AND THEREFORE SHALL NOT BE INSTALLED.

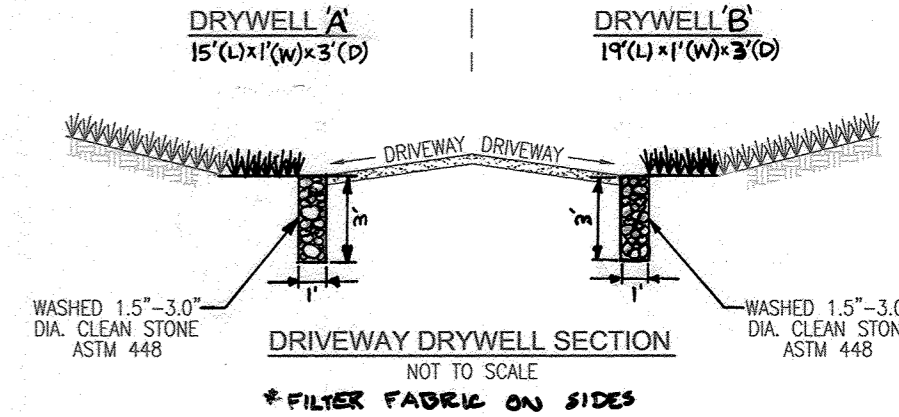
HOWARD COUNTY - OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRYWELL (M-5)
A. THE OWNER SHALL INSPECT & CLEAN ANNUALLY, INCLUDING PIPES, GUTTERS, DOWNSPOUTS AND FILTERS.
B. PONDING STANDING WATER OR ALGAL GROWTH ON THE TOP OF A DRYWELL MAY INDICATE FAILURE DUE TO SEDIMENTATION IN THE GRAVEL MEDIA. IF WATER PONDING FOR MORE THAN 48 HOURS AFTER A MAJOR STORM OR MORE THAN SIX INCHES OF SEDIMENT HAS ACCUMULATED, THE GRAVEL MEDIA SHOULD BE EXCAVATED AND REPLACED.



LEGEND:

---	PROPERTY LINE
- - - -	RIGHT-OF-WAY LINE
- · - · -	ADJACENT PROPERTY LINE
- · - · -	EXISTING CURB AND GUTTER
- · - · -	EXISTING EDGE OF PAVING
○	EXISTING SANITARY MANHOLE
○	EXISTING SANITARY LINE
○	EXISTING WATER LINE
○	EXISTING TREENE
○	EXISTING TREES
	EXISTING WOOD FENCE
	PROPOSED TREENE
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	SOILS
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR
	PROPOSED SPOT ELEVATION
	EXISTING MODERATE SLOPES

DW	PROPOSED DRYWELL FACILITY (M-5)
□	AREA OF ROOFTOP DRAINAGE TO UNDERGROUND STORAGE DETENTION SYSTEM
□	AREA OF DRIVEWAY RUNOFF TO DRIVEWAY DRYWELL (M-5)
□	EX. 15" DRAINAGE & UTILITY EASEMENT (PLAT BOOK 7/9)



DRYWELL 'A' (DRIVEWAY)
DRIVEWAY AREA = 222 SF
P₁₀ = 1.0' R=0.95
ESDV = A/P₁₀W₁₂ = 18 CF
ESDV = 222 SF (1.0' x 0.95) / 12 = 18 CF
18 CF / 0.4 VOIDS = 45 CF
(15' x 3')

DRYWELL 'B' (DRIVEWAY)
DRIVEWAY AREA = 272 SF
P₁₀ = 1.0' R=0.95
ESDV = A/P₁₀W₁₂ = 22 CF
ESDV = 272 SF (1.0' x 0.95) / 12 = 22 CF
22 CF / 0.4 VOIDS = 55 CF
(19' x 3')

OWNER/DEVELOPER
VIKING CUSTOM HOMES
C/O CARY CUMBERLAND
72800 FREDERICK ROAD
WEST FRIENDSHIP, MD 21794
(410) 489-6728

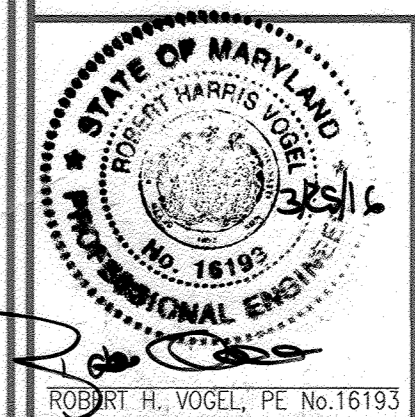
3	REVISE HOUSE TYPE	1-11-21
2	REVISE THE HOUSE TYPE ON LOT 23	9-25-20
1	REVISE THE PROPOSED STORMWATER MANAGEMENT AND HOUSE FOOTPRINT	6-23-20
NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
STORMWATER MANAGEMENT DRAINAGE
AREA MAP AND DETAILS

GRAY ROCK - SECTION TWO - LOT 23
PARCEL 660 (16630 / F. 42)
3630 BLUE HILL COURT
ELlicott CITY, MD 21042
SFD UNIT

TAX MAP: 24 GRID: 10
2ND ELECTION DISTRICT
DPZ REF'S: PLAT BOOK 7/9, ECP-16-005
PARCEL: 660
ZONED: R-20
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL
ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELlicott CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961



PROFESSIONAL CERTIFICATE
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. 16193, EXPIRATION DATE: 09-27-2016

DESIGN BY: RHV
DRAWN BY: JMR
CHECKED BY: RHV
DATE: DECEMBER 2016
SCALE: AS SHOWN
W.O. NO.: 15-16

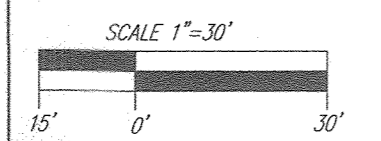
4 SHEET OF 5

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4-12-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION v4 DATE

[Signature] 4-14-16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 4-15-16
DIRECTOR DATE



SWM DRAINAGE AREA MAP
SCALE: 1"=30'

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP	K-FACTOR	ERODIBLE
□	LEGORE-MONTALTO-URBAN LAND COMPLEX, 8 TO 15 PERCENT SLOPES	B	N/A	NO

-SOILS INFORMATION FROM USDA WEB SOIL SURVEY WEBSITE
-HOWARD COUNTY SOILS MAP NUMBER 17 - CLARKSVILLE NE

NOTE:
HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

SCHEDULE A: PERIMETER LANDSCAPE EDGE				
CATEGORY	ADJACENT TO PERIMETER PROPERTIES AND ROADWAYS			TOTAL
	1	2	3	
PERIMETER/FRONTAGE DESIGNATION LANDSCAPE TYPE	A	A	A	
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	208'	265'	176'	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	YES 16'	YES 92'	YES 44'	
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	
NUMBER OF PLANTS REQUIRED (LF REMAINING)	192	175	132	
SHADE TREES	1:60 3	1:60 3	1:60 2	8
EVERGREEN TREES	-	-	-	-
SHRUBS	-	-	-	-
NUMBER OF PLANTS PROVIDED	3	3	2	8
SHADE TREES	-	-	-	-
EVERGREEN TREES	-	-	-	-
OTHER TREES (1:1 SUBSTITUTION)	-	-	-	-
SHRUBS (10:1 SUBSTITUTION)	-	-	-	-
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED				

LANDSCAPE NOTES

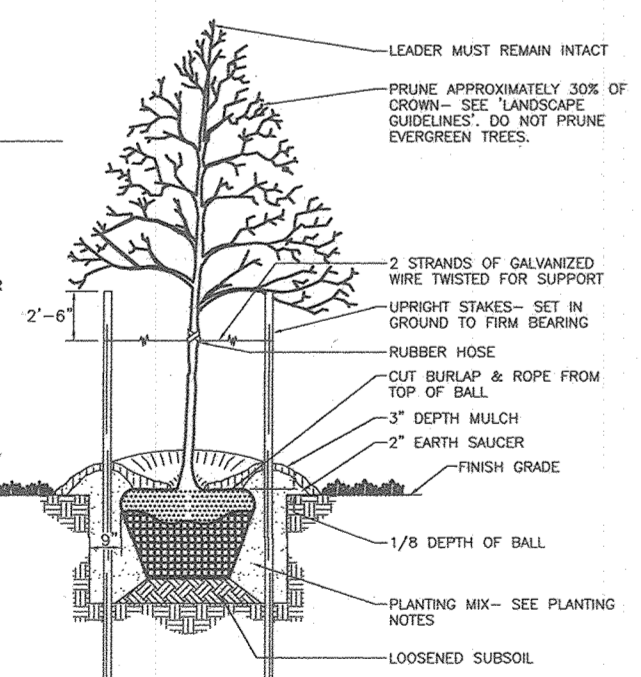
1. AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.
2. THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
3. SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD, AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE HOWARD COUNTY LANDSCAPE MANUAL.
4. PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THE FINAL PLAN.

GENERAL NOTE:

LANDSCAPING FOR LOT 23 IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$2,940.00 FOR THE REQUIRED 8 SHADE TREES SHALL BE POSTED AS PART OF THE BUILDERS GRADING PERMIT APPLICATION.

NOTES

1. SEE "LANDSCAPE SPECIFICATION" FOR ALL MATERIALS, PRODUCT, AND PROCEDURE SPECIFICATIONS.
2. SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
3. PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
4. KEEP WALK 1" FROM TRUNK.
5. SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANNING WHICH EXCEEDS HOWARD COUNTY MINIMUM REQUIREMENTS.
6. TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWER EASEMENT.



TREE PLANTING AND STAKING

DECIDUOUS TREES UP TO 2-1/2" CALIPER NOT TO SCALE

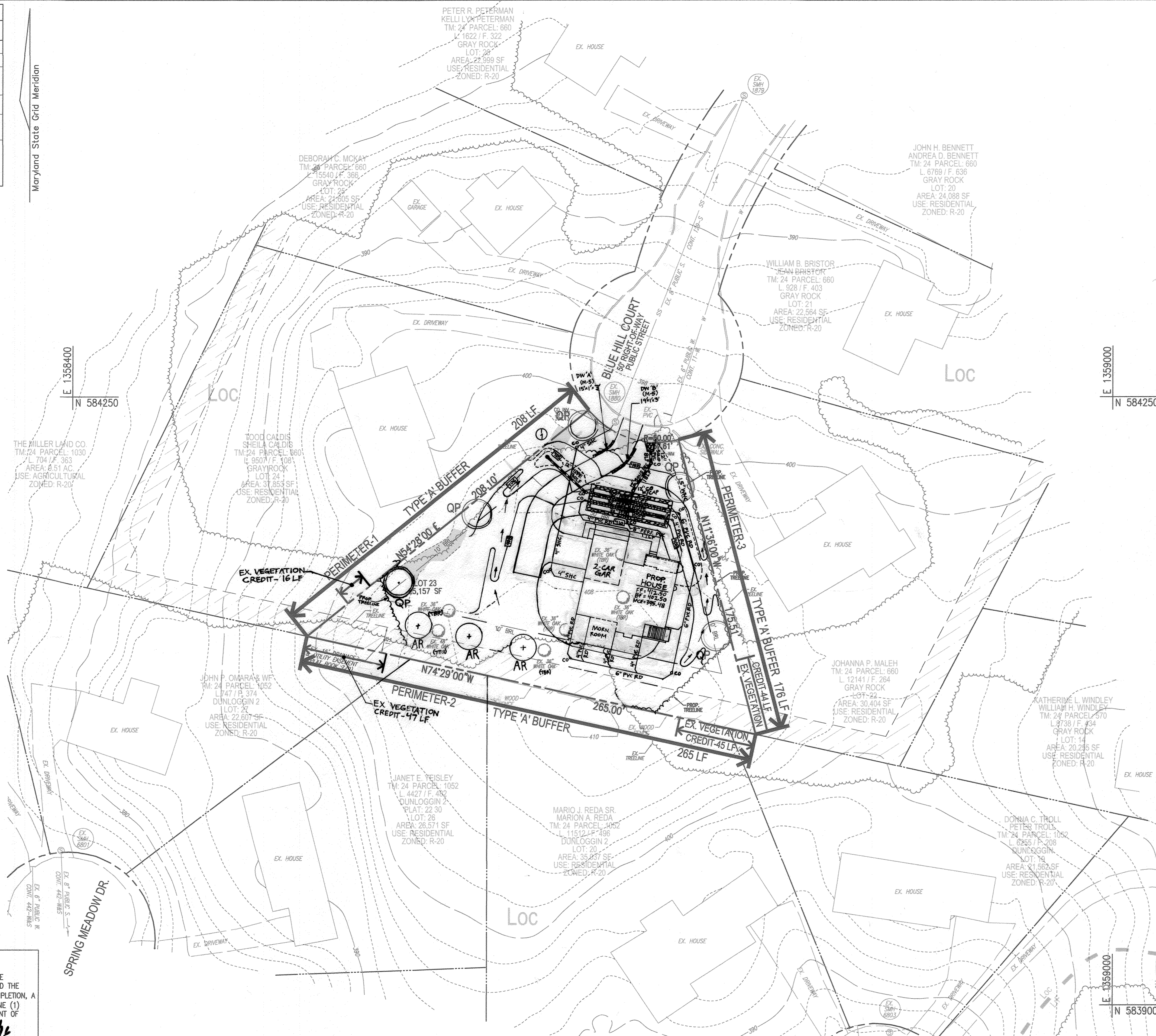
DEVELOPER/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Signature of Developer: *Robert R. Callaway* 4/15/16 DATE

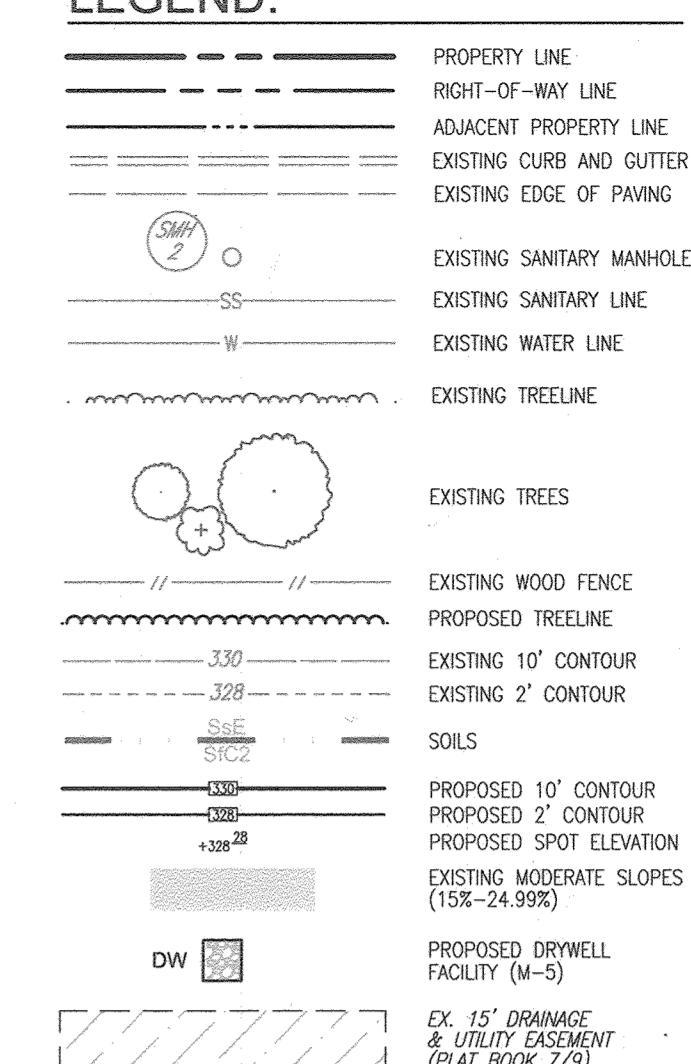
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *Robert R. Callaway* 4/12/16 DATE
 Chief, Division of Land Development: *Robert R. Callaway* 4-14-16 DATE
 Director: *Robert R. Callaway* 4-15-16 DATE



LANDSCAPE PLAN
SCALE: 1"=30'

LEGEND:



LANDSCAPE SCHEDULE NOTE:

1. ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAS SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HFD PLANTING SPECIFICATIONS.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
3. FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
4. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

LANDSCAPE SCHEDULE					
SYMBOL	KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
+	AR	3	ACER RUBRUM 'RED SUNSET' RED SUNSET RED MAPLE	2 1/2"-3" CAL	B & B
○	QP	5	QUERCUS PHellos WILLOW OAK	2 1/2"-3" CAL	B & B

OWNER/DEVELOPER

WIKING CUSTOM HOMES
C/O CARY CUMBERLAND
12800 FREDERICK ROAD
WEST FRIENDSHIP, MD 21794
(410) 489-6728

NO.	REVISION	DATE
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SITE DEVELOPMENT PLAN
LANDSCAPE PLAN, NOTES, AND DETAILS
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 DATE: DECEMBER 2016
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5 SHEET OF 5