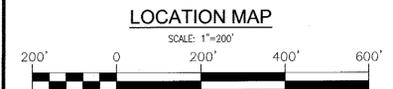
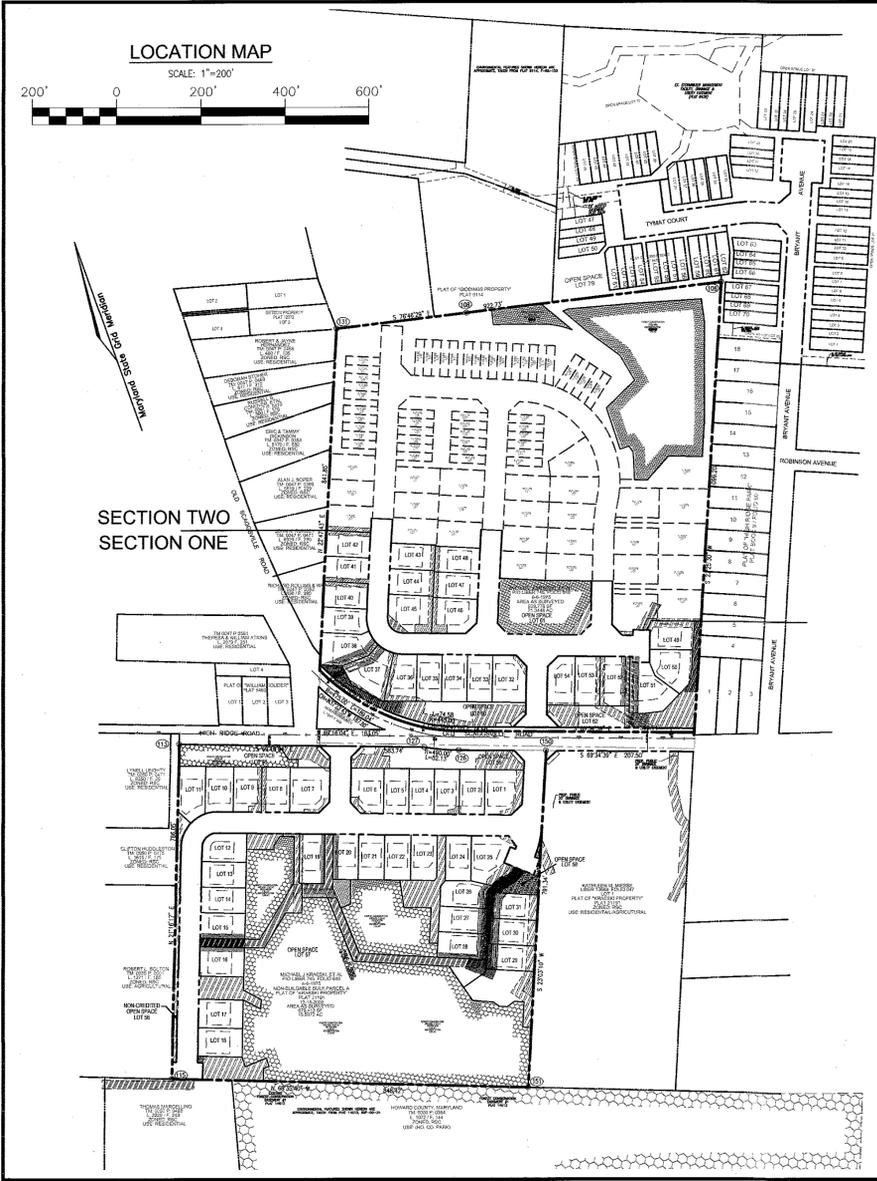


GENERAL NOTES

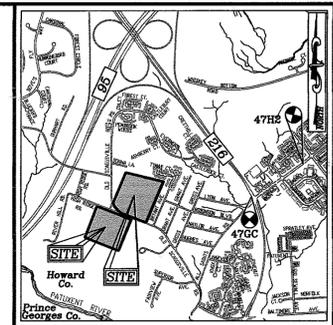
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- THE SUBJECT PROPERTY IS ZONED R-5C IN ACCORDANCE WITH 02/02/04 COMPREHENSIVE ZONING PLAN AND THE COMP. LITE ZONING REGULATIONS EFFECTIVE ON COMPREHENSIVE ZONING PLAN AND THE COMP. LITE ZONING REGULATIONS EFFECTIVE ON 7/28/06, AND IS SUBJECT TO THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE 10/2/03 PER COUNCIL BILL 78-2003.
- PROPERTY OUTLINE SHOWN HEREON IS BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED FEBRUARY 2012.
- TOPOGRAPHY SHOWN HEREON IS OBTAINED FROM AERIAL PHOTOCORRECTION COMPILED BY POTOMAC AERIAL SURVEYS INC., JANUARY 12, 2012.
- 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. 47H2 AND 47G6 WERE USED FOR THIS PROJECT.
- THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. DEVELOPMENT 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.
- STORMWATER MANAGEMENT FOR THE PROJECT IS PROVIDED BY THE USE OF ALTERNATIVE SURFACES, NON STRUCTURAL PRACTICES & MICRO-SCALE PRACTICES IN ACCORDANCE WITH ENVIRONMENTAL SITE DESIGN CRITERIA. NON STRUCTURAL PRACTICES INCLUDE ROOFTOP DISCONNECTIONS, MICRO-SCALE PRACTICES INCLUDE MICRO-BIoretention, BIO SWALES, DRYWELLS, RAIN BARRELS AND RAIN GARDENS. ALTERNATIVE SURFACES INCLUDE PERMEABLE SURFACES, TYPICALLY ALTERNATIVE SURFACE, NON STRUCTURAL AND MICRO-SCALE FACILITIES ONLOT WILL BE PRIVATELY OWNED AND MAINTAINED (H.O.A.). MICRO-SCALE FACILITIES MANAGING ROAD RUNOFF (F14-022) SHALL BE DESIGNATED AS PUBLICLY OWNED AND MAINTAINED (H.O.A.). MICRO-SCALE FACILITIES MANAGING ROAD RUNOFF (F14-022) SHALL BE DESIGNATED AS PUBLICLY OWNED AND MAINTAINED (H.O.A.). HOWARD COUNTY WILL MAINTAIN OUTLET STRUCTURES AND PIPES WHILE THE H.O.A. SHALL MAINTAIN MULCH, WEEDING, PLANTINGS, PERFORATED UNDERDRAINS, FEEDER PIPES, AND ROUTINE SOIL REPLACEMENT.
- THE PROPOSED UNITS SHALL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTORS 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.
- ANY DAMAGE TO THE COUNTY'S RIGHTS-OF-WAY, PAVING, OR EXISTING UTILITIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- SHC ELEVATIONS ARE LOCATED AT THE PROPERTY LINE/EDGE OF EASEMENT.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OF AGENCIES AT LEAST FIVE DAYS BEFORE STARTING:
 - AT&T 1-800-252-1133
 - BGE (CONSTRUCTION SERVICES) 410-637-8713
 - BGE (EMERGENCY) 410-685-0123
 - BUREAU OF UTILITIES 410-315-4900
 - COLONIAL PIPELINE CO 410-795-1390
 - MISS UTILITY 1-800-257-7777
 - STATE HIGHWAY ADMINISTRATION 410-315-4900
 - VERIZON 1-800-743-0033
- THERE ARE NO EXISTING DWELLING/STRUCTURES LOCATED ON THIS SITE.
- IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS, OR EXTERIOR STAIRWAYS NOT MORE THAN 16 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.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - A) WIDTH - 12 FEET (16 FEET IF SERVING MORE THAN ONE RESIDENCE)
 - B) SURFACE - 6" OF COMPACTED CRUSHER RUN BASE W/TAR AND CHIP 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 EVENTS WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
 - F) MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE
- LOTS 26 - 31 AND OPEN SPACE LOT 57 & 68 SHALL UTILIZE THE USE-IN-COMMON ACCESS EASEMENT. A USE-IN-COMMON MAINTENANCE AGREEMENT WAS PREVIOUSLY RECORDED AS L F.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN.
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND ROAD RIGHT-OF-WAY LINE AND NOT ONTO THE FLAG OR PIPE STEM DRIVEWAY.
- TRASH & RECYCLING COLLECTION WILL BE AT THE COUNTY ROADWAYS WITHIN FIVE FEET (5') OF THE COUNTY ROADWAY.
- THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- WATER AND SEWER SERVICE TO THESE LOTS WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 18.122.B OF THE HOWARD COUNTY CODE.
- WATER FOR THIS PROJECT IS TO BE PUBLIC CONTRACT 24-4778-D AN EXTENSION OF CONTRACT NO. 1-W.
- SEWER FOR THIS PROJECT IS TO BE PUBLIC CONTRACT 24-4778-D AN EXTENSION OF CONTRACT NO. 30-S AND CONTRACT NO. 30-3253.
- PUBLIC WATER AND SEWER ALLOCATION WILL BE GRANTED AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.
- ALL WATER HOUSE CONNECTIONS SHALL BE OUTSIDE METER SETTING UNLESS OTHERWISE NOTED ON THE PLANS OR IN SPECIFICATIONS.
- TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THERE ARE NO HISTORIC STRUCTURES EXISTING ON THIS SITE.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL/CEMETERY LOCATIONS EXISTING ON THIS SITE.
- OLD SCAGGSVILLE ROAD IS CLASSIFIED AS A MINOR COLLECTOR. THE DIVISION APPROVED THE PROJECT ON OCTOBER 2012.
- FOREST STAND DELINEATION PLAN WAS PREPARED BY MCCARTHY & ASSOCIATES, INC., APRIL 2012 AND AMENDED OCTOBER 2012.
- FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL A PORTION OF THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION MANUAL (REFER TO F14-022). NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- A PORTION OF THE REQUIRED FOREST CONSERVATION IS PROVIDED ON NON-BUILDABLE BULK PARCEL "B", OPEN SPACE LOT 145 UNDER SECTION II (F-14-023) AND MEETS THE INTENT OF SECTION 16.117 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- TOTAL FOREST CONSERVATION OBLIGATION FOR THIS PROJECT WAS FULFILLED BY ONSITE RETENTION OF 5.85 AC. (NO SURETY REQ), REFORESTATION OF 2.20 AC. AND PURCHASE OF 1.71 ACRES OF REFORESTATION CREDIT IN THE BRIGHAM MILL PROPERTY FOREST BANK SDP 11-056.
- FINANCIAL SURETY FOR THE REQUIRED REFORESTATION WAS POSTED WITH THE DEVELOPERS AGREEMENTS UNDER F14-022.
- A TRAFFIC STUDY FOR THIS PROJECT PREPARED BY THE TRAFFIC GROUP, INC., DATED AUGUST 2012, WAS APPROVED 3/2013.
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT. NOISE WALL MITIGATION CURRENTLY EXISTS ALONG INTERSTATE 95.
- GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY HILLIS GARNES ENGINEERING ASSOCIATES, INC., DATED AUGUST 2012.
- THE OFFICIAL PRE-SUBMISSION COMMUNITY MEETING WAS HELD FOR THIS PROJECT ON FEBRUARY 28, 2012 AT SAINT VINCENT PALOTI HIGH SCHOOL. ON APRIL 12, 2012 A SECOND, NON-OFFICIAL MEETING WAS HELD AT THE LAUREL COMMUNITY CENTER.
- AN ENVIRONMENTAL CONCEPT PLAN (ECP12-047) WAS APPROVED ON OCTOBER 1, 2012.
- A PRELIMINARY EQUIVALENT SKETCH PLAN (SP13-007) WAS APPROVED ON JULY 3, 2013.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. TOTAL FINANCIAL SURETY FOR THE REQUIRED STREET SIDE LANDSCAPING IN THE AMOUNT OF \$ 9,300 FOR THE 18 SHADE TREES AND 26 EVERGREEN TREES SHALL BE POSTED WITH THE GRADING PERMIT FOR SDP-14-081. SEE SHEETS 2,3,5,6 AND 7.
- PUBLIC STREET TREES AND PREMIER LANDSCAPING WAS PROVIDED FOR THIS PROJECT UNDER F14-022 ACCORDANCE WITH SECTION 16.124(a)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. FINANCIAL SURETY WAS POSTED AS PART OF THE F-14-022 DEVELOPER'S AGREEMENTS.
- THE PROPOSED SUBDIVISION AND RELATED CONSTRUCTION WILL NOT IMPACT ENVIRONMENTAL FEATURES OR BUFFERS.
- SOIL TYPES SHOWN HEREON ARE IN ACCORDANCE WITH THE WEB SOIL SURVEY, HOWARD COUNTY, MARYLAND.
- NO FLOODPLANS EXIST ONSITE.
- STEEP SLOPES ARE LOCATED AND SHOWN HEREON.
- WETLANDS AND STREAMS SHOWN HEREON ARE BASED ON DELINEATION BY MCCARTHY & ASSOCIATES, INC., DECEMBER 2011. THE REPORT WAS AMENDED OCTOBER 2012.
- THE PROPOSED UNITS SHALL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.
- IN ACCORDANCE WITH DESIGN MANUAL-VOLUME 3, CHAPTER 2 - SECTION 2.9.B. PARKING IS REQUIRED AT TWO (2) SPACES PER UNIT OFF STREET PARKING TO INCLUDE GARAGE SPACE, DRIVEWAY AND PARKING PADS.
- THE HOMEOWNERS ASSOCIATION DOCUMENTS HAVE BEEN RECORDED WITH THE MARYLAND STATE DEPARTMENT OF ASSESSMENTS AND TAXATION AS RECORDING REFERENCE NUMBER **D15737802** ON **MARCH 15, 2014**. HIGH RIDGE MEADOWS COMMUNITY ASSOCIATION HOMEOWNERS ASSOCIATION COVENANTS AND RESTRICTIONS WERE RECORDED SIMULTANEOUSLY WITH F 14-022 AS LIBER 15877 FOLIO 457, ON SEPTEMBER 24, 2014.
- THIS PROJECT IS SUBJECT TO A DESIGN MANUAL WAIVER. ON DECEMBER 4, 2012, THE CHIEF OF THE DEVELOPMENT ENGINEERING DIVISION APPROVED THE REQUEST TO WAIVE THE REQUIREMENTS OF SECTION 2.5 AND APPENDIX A OF DESIGN MANUAL VOLUME III, WHICH REQUIRES AN 85TH PERCENTILE SPEED STUDY AND PUBLIC ROADWAY SECTION DESIGN. THE DIVISION APPROVED THE REQUEST 1. BASED ON CONDITIONS MADE IN THE REQUEST. 2) THE ASSUMED 85TH PERCENTILE SPEED IS IN LINE WITH THE ACTUAL STUDY MADE BY THE ENGINEER AT THE NEXT INTERSECTION. 3. MINIMUM CURVE RADIUS HAS BEEN REDUCED WITHIN RESIDENTIAL AREA PROVIDING SPEED CONTROL WITHIN THIS PORTION OF THE SUBDIVISION. IT IS NOTED THAT ALL RADI WITHIN THE SUBDIVISION MEETS THE HOWARD COUNTY FIRE DEPARTMENT REQUIREMENTS. THE REQUESTED WAIVER TO DESIGN MANUAL VOLUME 4, DETAIL 81.02 HAS BEEN DEFERRED UNTIL THE SUBMISSION OF THIS FINAL PLAN.
- ALL TRASH AND RECYCLING WILL BE COLLECTED WITHIN 5' OF THE COUNTY ROADWAYS.

SITE DEVELOPMENT PLAN HIGH RIDGE MEADOWS - SECTION ONE

LOTS 1-54 (SFD RESIDENTIAL) OLD SCAGGSVILLE ROAD HOWARD COUNTY, MARYLAND



SHEET INDEX	
DESCRIPTION	SHEET NO.
COVER SHEET	1 OF 19
SITE LAYOUT & LANDSCAPE PLAN	2 OF 19
SITE LAYOUT & LANDSCAPE PLAN	3 OF 19
SITE LAYOUT	4 OF 19
SITE LAYOUT & LANDSCAPE PLAN	5 OF 19
SITE LAYOUT & LANDSCAPE PLAN	6 OF 19
SITE LAYOUT & LANDSCAPE PLAN	7 OF 19
GRADING AND SOIL EROSION & SEDIMENT CONTROL PLAN	8 OF 19
GRADING AND SOIL EROSION & SEDIMENT CONTROL PLAN	9 OF 19
GRADING AND SOIL EROSION & SEDIMENT CONTROL PLAN	10 OF 19
GRADING AND SOIL EROSION & SEDIMENT CONTROL PLAN	11 OF 19
GRADING AND SOIL EROSION & SEDIMENT CONTROL PLAN	12 OF 19
GRADING AND SOIL EROSION & SEDIMENT CONTROL PLAN	13 OF 19
GRADING AND SOIL EROSION & SEDIMENT CONTROL NOTES AND DETAILS	14 OF 19
HOUSE TYPES - "BEAZER HOMES"	15 OF 19
GENERIC HOUSE BOXES - "BEAZER HOMES" & DETAILS	16 OF 19
GENERIC HOUSE BOXES & HOUSE TYPES - "PULTE HOMES"	17 OF 19
STORMWATER MANAGEMENT NOTES & DETAILS	18 OF 19
STORMWATER MANAGEMENT NOTES & DETAILS	19 OF 19



VICINITY MAP
SCALE: 1"=2,000'
ADC MAP COORDINATE: 5169 B2, 5169 C2

BENCHMARKS
HOWARD COUNTY BENCHMARK 47H2 (CONC. MON.)
N 529708.4227 E 135445.3364 ELEV. 236.068
LOCATION: ALL SAINTS ROAD, 240' +/- SOUTH OF NORTH LAUREL ROAD 2.89 FEET FROM STORM DRAIN
INLET; 1' EAST OF CURB, 0.6 BELOW SURFACE
HOWARD COUNTY BENCHMARK 47GC (CONC. MON.)
N 528939.7281 E 1354223.5536 ELEV. 226.272
LOCATION: MEDIAN ISLAND 29 FEET WEST OF ALL SAINTS RD / RT 216 INTERSECTION; 1.4 FEET WEST OF SOUTHWEST INLET CORNER

FINAL PLAN #	SECTION	GROSS AREA	FLOODPLAIN	STEEP SLOPES	NET AREA	UNITS ALLOWED	UNITS PROP.	UNITS PER ACRE	UNITS PER ACRE
F14-022	SEC. 1	36.94 ACRES	0.00 ACRES	0.34 ACRES	36.60 ACRES	148	54 SFD	0.92	0.92
F14-023	SEC. 2	12.99 ACRES	0.00 ACRES	0.00 ACRES	12.99 ACRES	27 SFD	48 SFA	0.00	4.65
TOTAL		49.93 ACRES	0.00 ACRES	0.34 ACRES	49.59 ACRES	148	81 SFD	0.24	14.57

** F14-022 - NON-BUILDABLE BULK PARCEL "B" RESUBDIVIDED UNDER F14-023 INTO 27 SFD / 48 SFA

SITE ANALYSIS DATA

- A. TOTAL PROJECT AREA: 36.94 AC
- B. AREA OF PLAN SUBMISSION: SECTION ONE - 23.90 AC
- C. LIMIT OF DISTURBANCE: 9.55 AC
- D. PRESENT ZONING DESIGNATION: R-5C
- E. PROPOSED USES FOR SITE AND STRUCTURES: SINGLE FAMILY DETACHED
- F. FLOOR SPACE ON EACH LEVEL OF BUILDING PER USE: N/A
- G. TOTAL NUMBER OF UNITS ALLOWED FOR PROJECT AS SHOWN ON FINAL PLAN: REFER TO DENSITY TABULATION
- H. TOTAL NUMBER OF UNITS PROPOSED: 54 BUILDABLE LOTS
- I. MAXIMUM NUMBER OF EMPLOYEES, TENANTS ON SITE PER USE: N/A
- J. NUMBER OF PARKING SPACES REQUIRED BY HO.C.D. ZONING REGULATIONS: 2 PER SFD HOUSE
- K. NUMBER OF PARKING SPACES PROVIDED ON SITE: SEE PARKING TABULATION / F14-022 - 2 PER SFD HOUSE
- L. OPEN SPACE ON SITE: REFER TO F14-022
- M. AREA OF RECREATION OPEN SPACE REQUIRED BY SUBDIVISION & LAND DEVELOPMENT REGULATIONS: REFER TO F14-022
- N. BUILDING CODE OF SITE: N/A
- O. APPLICABLE DPZ FILE REFERENCES: SEE TITLE BLOCK
- P. ANY OTHER INFORMATION WHICH MAY BE RELEVANT: TAX MAP 50, GRID 1, PARCELS 363 & 542 6TH ELECTION DISTRICT
- Q. FLOOR AREA RATIO: F-10-065, WP-10-087, ECP-12-047, WP-13-080, SP 13-007, F14-022
- R. DPZ FILE REFERENCES: N/A

SUBDIVISION NAME	SECTION/AREA
HIGH RIDGE MEADOWS - SECTION ONE - F 14-022	N/A
LOT / PARCELS	P/O 363 & 542
LOTS 1-54	
PLAT REF # (F-14-022)	3,300,005
BLOCK NO	1
ZONE	R-5C
TAX MAP	50
ELECT DIST	6TH
CENSUS TR	6069.03
WATER / SEWER #	24-4778-D

PARKING TABULATION:

- TOTAL NUMBER OF DWELLING UNITS PROPOSED = 54
- OFF-STREET PARKING SPACES REQUIRED: 2 SPACES PER UNIT = 108 SPACES
 PARKING SPACES PROVIDED:
 SFD = 1 GARAGE/1 DRIVEWAY
 1 SPACE IN GARAGE = 54 SPACES (FOR 54 UNITS)
 2 SPACES ON DRIVEWAY = 108 SPACES (FOR 54 UNITS)
 TOTAL OFF STREET PARKING SPACES PROVIDED: = 162 SPACES OFF-STREET
 - ON-STREET PARKING REQUIRED:
 0.5 SPACES PER SFD UNIT X 54 = 27 SPACES REQUIRED
 TOTAL OVERFLOW PARKING SPACES PROVIDED: = 54 SPACES (DRIVEWAYS)
 * NOTE: ADDITIONAL UN-CALCULATED PARKING PROVIDED ON-STREET

GENERAL NOTES (CONT)

- THIS PROJECT IS SUBJECT TO WP-13-080. ON MARCH 27, 2013, THE PLANNING DIRECTOR APPROVED THE REQUEST TO WAIVE SECTION 16.116(A) FOR DISTURBANCE TO STREAM, STREAM BUFFERS, WETLANDS AND WETLAND BUFFERS ON THE NORTHEAST PORTION OF THE PROJECT FOR A STORM DRAINAGE PIPE, AND SECTION 16.1205(A)(7) TO REMOVE UP TO 3 SPECIES TREES THE PLANNING DIRECTOR DENIED YOUR REQUEST TO WAIVE SECTION 16.1205(B)(9)(C) TO ALLOW PIPESTEM LOTS ON MULTIPLE SIDES OF A FRONTAGE LOT IN THE SAME SUBDIVISION.
- APPROVAL OF THE WAIVER TO SECTION 16.116(A) AND SECTION 16.1205(A)(7) IS SUBJECT TO THE FOLLOWING CONDITIONS:
 1. ENVIRONMENTAL DISTURBANCE MUST BE LIMITED TO THE AREAS INDICATED ON THE WAIVER PETITION PLAN EXHIBIT, ANY EXPANSION OF THE DISTURBED AREA MAY REQUIRE ADDITIONAL WAIVER APPROVAL IF DETERMINED SIGNIFICANT.
 2. PRIOR TO INITIATING ANY CONSTRUCTION ACTIVITIES THAT RESULT IN THE APPROVED ENVIRONMENTAL DISTURBANCES, ALL APPROVALS FROM MDE, APPLICABLE SRC AGENCIES AND PERMISSIONS FROM ADJOINING/AFFECTED PROPERTY OWNERS MUST BE OBTAINED AND DOCUMENTED. COPIES OF DOCUMENTATION MUST BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING PRIOR TO THE FINAL PLAN APPROVAL (OR PRIOR TO SITE DEVELOPMENT PLAN APPROVAL AT THE DISCRETION OF DPZ).
 3. PRIOR TO REMOVAL OF THE TWO OAK SPECIES TREES, PLEASE REVIEW THE PROPOSED DESIGN ALTERNATIVES RECOMMENDED BY THE DIVISION OF LAND DEVELOPMENT IN THE REVISED SUBMISSION COMMENTS DATED MARCH 28, 2013. INCORPORATE DESIGN RECOMMENDATIONS OR PROVIDE AMPLIFIED JUSTIFICATION TO THE DEPARTMENT OF PLANNING AND ZONING IF NOT FEASIBLE (LOSS OF LOT YIELD ALONE WILL NOT BE CONSIDERED AMPLIFIED JUSTIFICATION).
 4. REMOVAL OF EACH SPECIES TREE WILL REQUIRE MITIGATION WITH THE PLANTING OF TWO NEW NATIVE SHADE TREES (FOR UP TO 6 NEW SHADE TREES) WITH A MINIMUM 2-1/2" CALIPER TRUNK - SURETY OF THESE SHADE TREES SHALL BE INCORPORATED INTO THE LANDSCAPE SURETY WITH THE FINAL ROAD CONSTRUCTION DRAWINGS.
 5. PRIOR TO REMOVING THE SILVER MAPLE SPECIES TREE ON THE NORTH PARCEL, THE DEVELOPER SHALL FIRST ATTEMPT DESIGN ALTERNATIVES THAT WOULD ALLOW PRESERVATION OF THE TREE. IF REMOVED, THE TWO TREES PLANTED FOR MITIGATION SHOULD BE PLACED WITHIN THE PROXIMITY OF THE REMOVED TREE OR AT LEAST ON THE PORTION OF THE PROPERTY BOUNDARY SHARED BY PARCEL 396.
 DENIAL OF THE WAIVER TO SECTION 16.1205(B)(9)(C) WAS BASED ON THE FOLLOWING REASONS:
 1. EXTRAORDINARY CIRCUMSTANCES OR DESIGN CONSTRAINTS RESULTING IN SIGNIFICANT HARDSHIP WERE NOT INDICATED IN THE WAIVER JUSTIFICATION.
 2. DESIGN ALTERNATIVES EXIST THAT WOULD PREVENT THE LOT BEING SURROUNDED ON FOUR SIDES BY PAVED DRIVE LANES. PLEASE SEE DLD COMMENTS DATED MARCH 28, 2013.
 3. THE DESIGN PROPOSAL APPEARS GEARED TO ENSURING AN OPTIMAL LOT YIELD. THE DEVELOPER HAS THE OPTION OF INCORPORATING ADDITIONAL TOWNHOME LOTS TO OBTAIN DESIRED LOT YIELD IN THE PROPOSED SUBDIVISION DESIGN.
 4. THE WAIVER IF APPROVED WOULD NULLIFY THE INTENT AND PURPOSE OF THE REGULATIONS, WHICH IS TO ACHIEVE A WELL THOUGHT-OUT DESIGN THAT PROVIDES ORDERLY SUBDIVISION LAYOUT AND AVOIDS ORIENTATION AND PRIVACY PROBLEMS FOR NEW HOUSES ON PIPESTEM AND FRONTAGE LOTS. AS PROPOSED, LOT 74 WOULD HAVE LIMITED USABILITY AND PRIVACY. DLD RECOMMENDS A SUBMISSION REDESIGN TO REMOVE AND RELOCATE LOTS 72, 73, AND 74 ELSEWHERE IN THE DEVELOPMENT. IN LAYING OUT THE SUBDIVISION DESIGN, THE DEVELOPER SHOULD GIVE MORE CONSIDERATION TO THE ARRANGEMENT OF LOTS SO THAT PROPOSED HOUSES WILL NOT LOOK INTO NEIGHBORING REAR YARDS OF THE FRONT LOTS. EACH NEW LOT IN THE SUBDIVISION SHOULD INCORPORATE GOOD LOT DESIGN AND PLANNED AS TO THE SIZE, SHAPE AND ORIENTATION TO AVOID UNDESIRABLE VIEWS FROM ADJOINING LOTS. WAIVERS SHALL NOT BE USED TO ACHIEVE MAXIMUM LOT YIELD AT THE EXPENSE OF GOOD SUBDIVISION DESIGN.
- ON JUNE 3, 2013, A REQUEST FOR RECONSIDERATION WAS SUBMITTED WHICH AMENDED THE REQUESTED SPECIES TREES TO BE REMOVED. TO SPECIES TREES # 3 AND #4 PREVIOUSLY APPROVED TO BE REMOVED AND IN CONJUNCTION WITH THE REVISED LAYOUT, ARE NOW PROPOSED TO REMAIN. AS A RESULT OF THE REVISED LAYOUT, SPECIES TREE # 15 AND 16 (35' 37" TWIN TRUNK SOUTHERN RED OAK IN FAIR CONDITION) IS PROPOSED TO BE REMOVED.

LOT NO	STREET ADDRESS	LOT NO	STREET ADDRESS
1	9902 TWIN FAWN TRAIL	29	9209 CLARKE SPRINGS RIDGE
2	9906 TWIN FAWN TRAIL	30	9205 CLARKE SPRINGS RIDGE
3	9910 TWIN FAWN TRAIL	31	9201 CLARKE SPRINGS RIDGE
4	9914 TWIN FAWN TRAIL	32	9830 DEER RUN
5	9918 TWIN FAWN TRAIL	33	9834 DEER RUN
6	9922 TWIN FAWN TRAIL	34	9838 DEER RUN
7	9926 TWIN FAWN TRAIL	35	9842 DEER RUN
8	9930 TWIN FAWN TRAIL	36	9846 DEER RUN
9	9934 TWIN FAWN TRAIL	37	9850 DEER RUN
10	9940 TWIN FAWN TRAIL	38	9854 DEER RUN
11	9944 TWIN FAWN TRAIL	39	9858 DEER RUN
12	9948 TWIN FAWN TRAIL	40	9862 DEER RUN
13	9952 TWIN FAWN TRAIL	41	9866 DEER RUN
14	9956 TWIN FAWN TRAIL	42	9870 DEER RUN
15	9960 TWIN FAWN TRAIL	43	9874 DEER RUN
16	9964 TWIN FAWN TRAIL	44	9878 DEER RUN
17	9968 TWIN FAWN TRAIL	45	9882 DEER RUN
18	9972 TWIN FAWN TRAIL	46	9203 DEER VILLAGE DRIVE
19	9976 TWIN FAWN TRAIL	47	9207 DEER VILLAGE DRIVE
20	9980 TWIN FAWN TRAIL	48	9211 DEER VILLAGE DRIVE
21	9984 TWIN FAWN TRAIL	49	9802 DEER RUN
22	9988 TWIN FAWN TRAIL	50	9806 DEER RUN
23	9992 TWIN FAWN TRAIL	51	9810 DEER RUN
24	9996 TWIN FAWN TRAIL	52	9814 DEER RUN
25	9900 TWIN FAWN TRAIL	53	9818 DEER RUN
26	9202 CLARKE SPRINGS RIDGE	54	9822 DEER RUN
27	9206 CLARKE SPRINGS RIDGE	55-68	OPEN SPACE
28	9210 CLARKE SPRINGS RIDGE	0, 5, 60, 9, 203	DEER SPRINGS PLACE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad E. Shuler 3-6-15
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Walter DeLore 3-19-15
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

David A. G. U. 3-6-15
 DIRECTOR DATE

LOT #	GROSS AREA	PIPESTEM AREA	NET AREA
26	7,018 SF	245 SF	6,773 SF
27	7,207 SF	438 SF	6,771 SF
28	7,615 SF	638 SF	6,977 SF
29	7,480 SF	706 SF	6,774 SF
30	7,065 SF	496 SF	6,569 SF
31	6,600 SF	277 SF	6,323 SF

OWNER/DEVELOPER
BUILDER- LOTS 1-31
 PULTE HOMES
 8965 GUILFORD ROAD - SUITE 290
 COLUMBIA, MARYLAND
 21046
 (410) 720-5071

OWNER/DEVELOPER
BUILDER- LOTS 32-54
 BEAZER HOMES
 MARYLAND DIVISION
 8965 GUILFORD ROAD - SUITE 290
 COLUMBIA, MARYLAND
 21046
 (410) 720-5071

SITE DEVELOPMENT PLAN
COVER SHEET
HIGH RIDGE MEADOWS - SECTION ONE
LOTS 1 - 54

6TH ELECTION DISTRICT - TAX MAP 50, GRID 1, PARCELS 363 & 542
 ZONED: R-5C
 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

DESIGN BY: RVE
 DRAWN BY: TJW/RVE/KC
 CHECKED BY: RHV
 DATE: JANUARY 2015
 SCALE: AS SHOWN
 W.O. NO.: 11-28.01

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

1 SHEET OF 19

NOTES:
 1. ALL WATER CONNECTIONS SHALL BE 1-1/2" WITH 1" OUTSIDE METER SETTINGS, UNLESS OTHERWISE NOTED. REFER TO HOWARD COUNTY DETAILS W-3.28 OUTSIDE METER SETTINGS.

NOTE:
 1. HOUSE BOXES ARE GENERIC AND SHOULD NOT BE CONSIDERED LIMITING. ADDITIONAL HOUSE TYPES AND OPTIONS MAY FIT ON ANY GIVEN LOT.
 2. TYPICAL DRIVEWAY WIDTH SHOWN HEREON IS 18 FEET WIDE FOR THE PROPOSED 2 CAR GARAGE. WIDTH SUBJECT TO CHANGE WITH BUILDER RESITE.

LEGEND:

PROPERTY LINE
 RIGHT-OF-WAY LINE
 ADJACENT PROPERTY LINE
 EXISTING CURB AND GUTTER
 EXISTING UTILITY POLE
 EXISTING LIGHT POLE
 EXISTING MAILBOX
 EXISTING SIGN
 EXISTING SANITARY MANHOLE
 EXISTING SANITARY LINE
 EXISTING CLEANOUT
 EXISTING FIRE HYDRANT
 EXISTING WATER LINE
 EXISTING TREELINE
 EXISTING TREES (F-14-022)
 EXISTING STREET TREES (F-14-022)
 EXISTING FENCE
 EXISTING STORMDRAIN
 EXISTING STORMDRAIN INLET
 EXISTING SIDEWALK
 EXISTING PUBLIC DRAINAGE, SWM & UTILITY EASEMENT (F-14-022)
 EXISTING BGE ZONE (F-14-022)
 PROPOSED TREES
 PERMEABLE SURFACE POROUS CONCRETE A-2

PERMEABLE SURFACE NOTE:
 - ALL PERMEABLE CONCRETE THICKNESS AND MIX TO BE DETERMINED BY GEOTECHNICAL ENGINEER ONSITE. SEE DETAIL SHEET 17.
 - LOTS 1, 2 AND 6 SHALL HAVE THE STANDARD 12" SUBBASE
 - LOTS 3, 4, 5 SHALL HAVE THE STANDARD 12" SUBBASE AND AN ADDITIONAL 12" OF #57 BELOW THE STANDARD 12" BASE

NOTES:
 1. REFER TO SHEET 17 FOR DRYWELL (DW) SIZE, NOTES & DETAILS
 2. REFER TO SHEET 17 FOR RAIN BARREL NOTES & DETAILS
 3. REFER TO SHEET 17 FOR PERMEABLE SURFACE (POROUS CONCRETE) NOTES & DETAILS
 4. REFER TO SHEETS 17&18 FOR MICRO-BIORETENTION AND RAINGARDEN NOTES AND DETAILS
 5. REFER TO SHEET 17 FOR ROOFTOP DISCONNECTION CRITERIA. DOWNSPOUTS SHALL BE LOCATED WHERE SHOWN HEREON AT MINIMUM AND DIRECTED AT THE GROUND SURFACE TO FLOW IN THE DIRECTION SHOWN

**OWNER/DEVELOPER
 BUILDER- LOTS 1-31**
 PULTE HOMES
 8965 GUILFORD ROAD - SUITE 290
 COLUMBIA, MARYLAND
 21046
 (410) 720-5071

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN
 LAYOUT & LANDSCAPING
 HIGH RIDGE MEADOWS - SECTION ONE
 LOTS 1 - 54**

8TH ELECTION DISTRICT - TAX MAP: 50 GRID: 1
 SPZ REF: F-10-086, WP-10-087, COP-12-047, PARCELS: 363 & 543
 WP-13-080, SP 13-007, F14-022, HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
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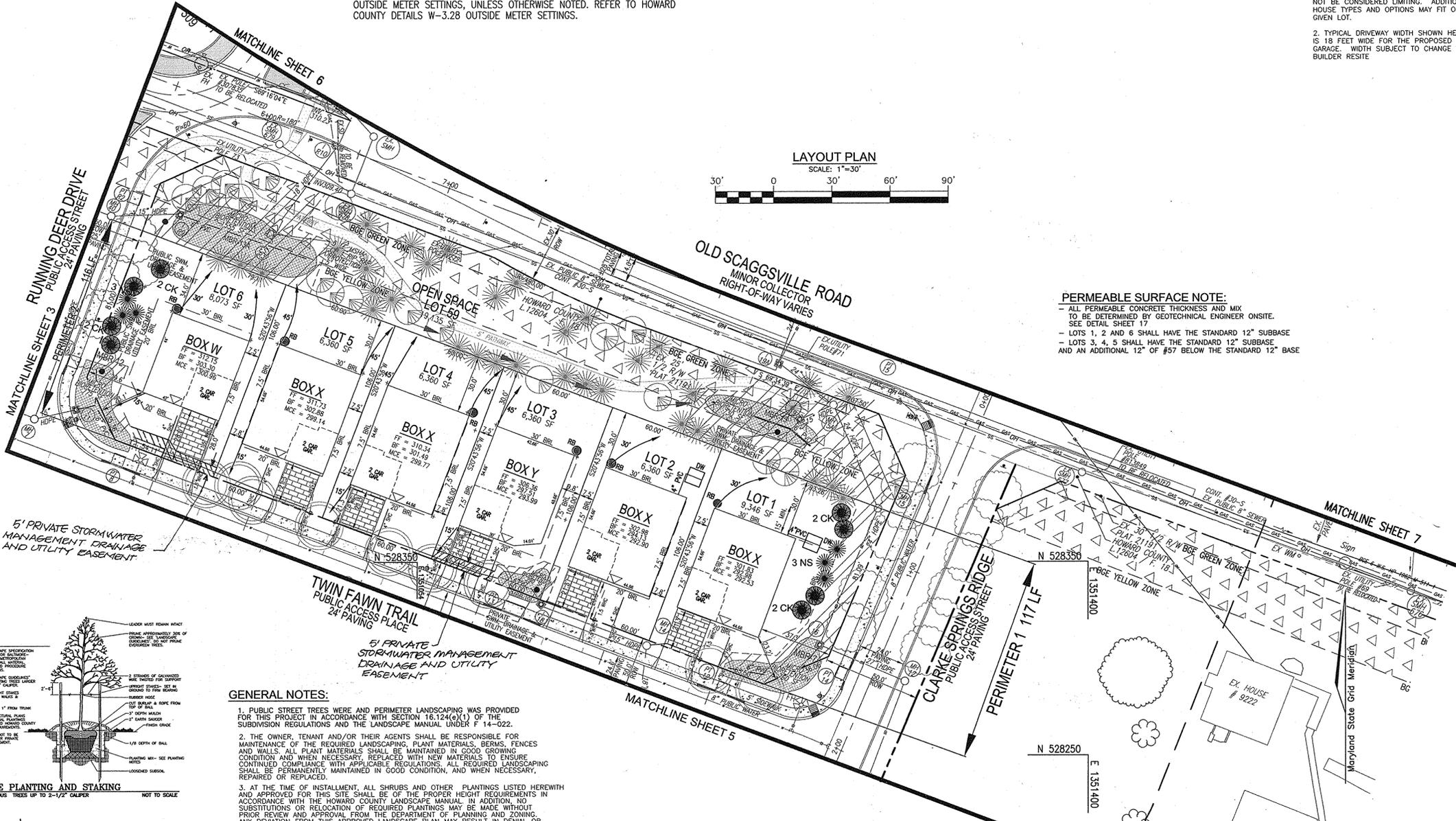
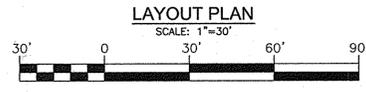
2 SHEET OF 19

LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
CK	8	CORNUS KOUSA KOUSA DOGWOOD	8'-10" HT.	B & B
NS	6	PICEA ABIES NORWAY SPRUCE	6'-8" HT.	B & B

-THE SIDE YARD LANDSCAPING HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR STREET SIDE PLANTINGS IN THE AMOUNT OF \$2,100 FOR THE REQUIRED 4 SHADE TREES, 6 EVERGREENS, SHALL BE POSTED WITH THE GRADING PERMIT FOR SDP 14-081
 -SEE GENERAL NOTE 36, SHEET 1 FOR THE TOTAL PROJECT REQUIREMENT AND SURETY.

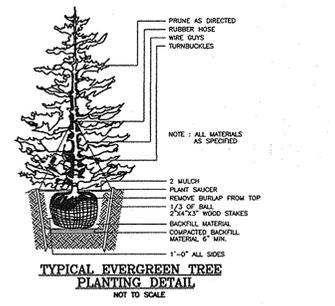
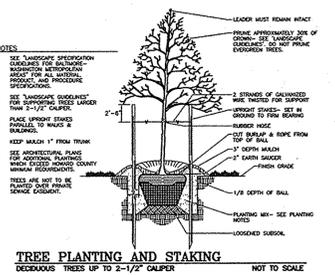
LANDSCAPE SCHEDULE NOTE:
 ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT ANS SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HED PLANTING SPECIFICATIONS.
 CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
 FINAL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



GENERAL NOTES:
 1. PUBLIC STREET TREES WERE AND PERIMETER LANDSCAPING WAS PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124(e)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL UNDER F 14-022.
 2. THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, PLANT MATERIALS, 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 REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
 3. AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS LISTED HERewith AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS 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 APPLICABLE PLANS AND CERTIFICATES.
 4. 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.
 5. PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THE HOMES.
 6. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
 7. A FINANCIAL SURETY FOR STREET AND SIDE PLANTINGS IN THE AMOUNT OF \$9,300 FOR THE REQUIRED 18 SHADE TREES AND 26 EVERGREENS, SHALL BE POSTED WITH THE GRADING PERMIT FOR SDP-14-081.

SCHEDULE A: PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS									TOTAL
	SHEET 2 LOT 1/1	SHEET 3 LOT 6/2	SHEET 3 LOT 7/3	SHEET 4 LOT 12/4	SHEET 5 LOT 25/5	SHEET 6 LOT 32/6	SHEET 6 LOT 45/8	SHEET 6 LOT 46/7	SHEET 6 LOT 54/9	
PERIMETER/FRONTAGE DESIGNATION	8	9	9	9	9	9	9	9	9	
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	117'	116'	116'	110'	61'	121'	115'	117'	126'	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	NO	NO	
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	NO	NO	
NUMBER OF PLANTS REQUIRED (IF REMAINING)	117'	116'	116'	110'	61'	121'	115'	117'	126'	
SHADE TREES	1:50 2	1:50 2	1:50 2	1:50 2	1:50 2	1:50 2	1:50 2	1:50 2	1:50 3	18
EVERGREEN TREES	1:40 3	1:40 3	1:40 3	1:40 3	1:40 2	1:40 3	1:40 3	1:40 3	1:40 3	26
NUMBER OF PLANTS PROVIDED										
SHADE TREES	3	3	3	3	2	3	3	3	3	26
EVERGREEN TREES	4	4	4	4	2	4	4	4	4	36
SHRUBS (1:01 SUBSTITUTION)										
OTHER TREES (2:1 SUBSTITUTION)										
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)										



DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A 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: [Signature] DATE: 1/20/15

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] DATE: 3-6-15
 [Signature] DATE: 3-19-15
 [Signature] DATE: 2/20/15

NOTES:

1. ALL WATER CONNECTIONS SHALL BE 1-1/2" WITH 1" OUTSIDE METER SETTINGS, UNLESS OTHERWISE NOTED. REFER TO HOWARD COUNTY DETAILS W-3.28 OUTSIDE METER SETTINGS.

PERMEABLE SURFACE NOTE:

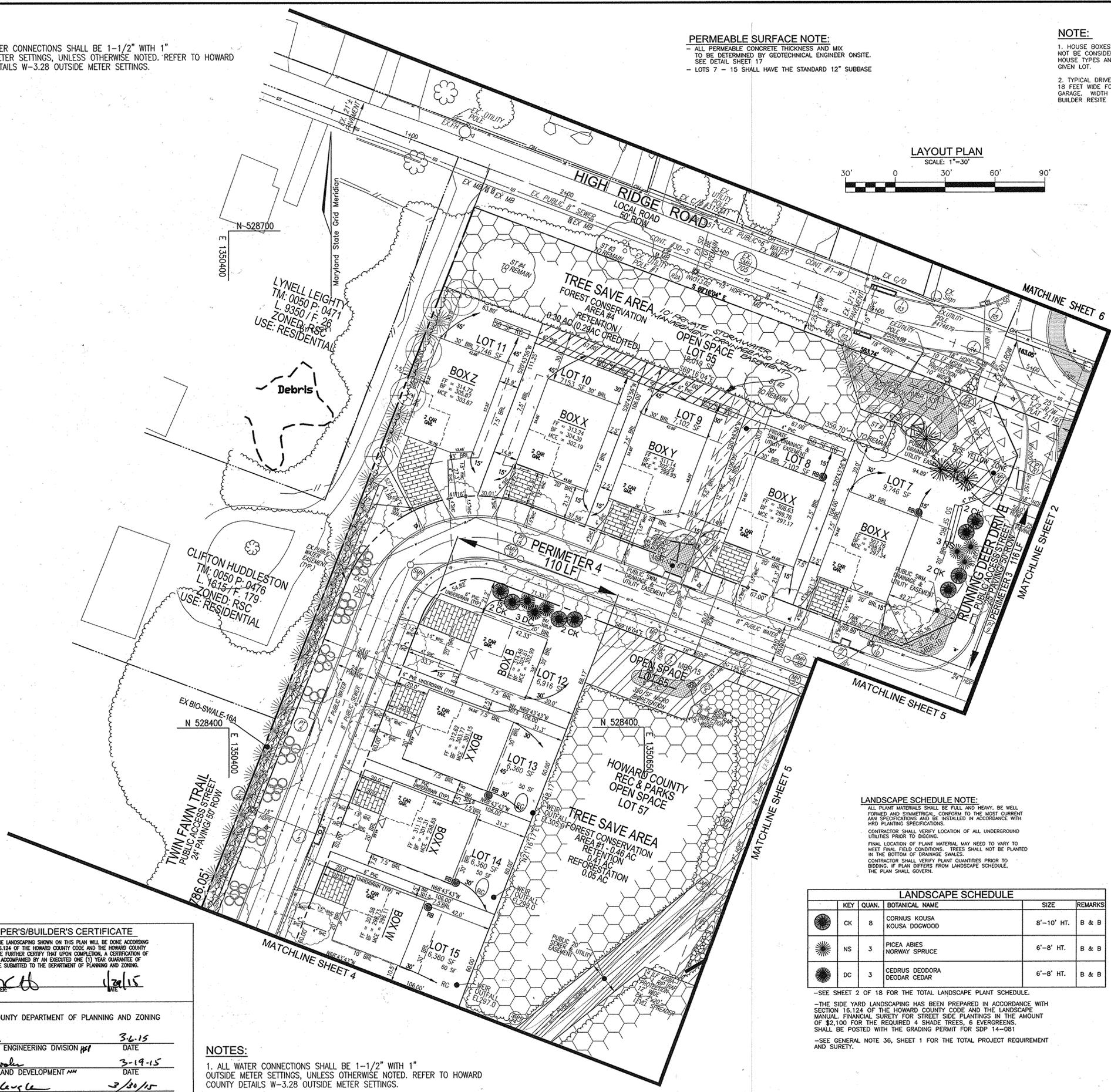
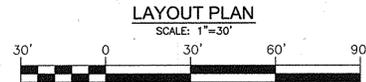
- ALL PERMEABLE CONCRETE THICKNESS AND MIX TO BE DETERMINED BY GEOTECHNICAL ENGINEER ONSITE. SEE DETAIL SHEET 17
- LOTS 7 - 15 SHALL HAVE THE STANDARD 12" SUBBASE

NOTE:

1. HOUSE BOXES ARE GENERIC AND SHOULD NOT BE CONSIDERED LIMITING. ADDITIONAL HOUSE TYPES AND OPTIONS MAY FIT ON ANY GIVEN LOT.
2. TYPICAL DRIVEWAY WIDTH SHOWN HEREON IS 18 FEET WIDE FOR THE PROPOSED 2 CAR GARAGE. WIDTH SUBJECT TO CHANGE WITH BUILDER RESITE

LEGEND:

PROPERTY LINE
RIGHT-OF-WAY LINE
ADJACENT PROPERTY LINE
EXISTING CURB AND GUTTER
EXISTING UTILITY POLE
EXISTING LIGHT POLE
EXISTING MAILBOX
EXISTING SIGN
EXISTING SANITARY MANHOLE
EXISTING SANITARY LINE
EXISTING CLEANOUT
EXISTING FIRE HYDRANT
EXISTING WATER LINE
EXISTING TREE LINE (FIELD LOCATED)
EXISTING TREES (F-14-022)
EXISTING STREET TREES (F-14-022)
EXISTING FENCE
EXISTING STORMDRAIN
EXISTING STORMDRAIN INLET
EXISTING SIDEWALK
EX. PATHWAY APPROVED F-14-022
EXISTING PUBLIC DRAINAGE, SEWER & UTILITY EASEMENT (F-14-022)
EXISTING PUBLIC DRAINAGE, SWM & UTILITY EASEMENT (F-14-022)
EXISTING PRIVATE DRAINAGE, SWM & UTILITY EASEMENT (F-14-022)
EX. FOREST CONSERVATION AREA APPROVED F-14-022
EXISTING BGE ZONE (F-14-022)
PROPOSED TREES
EXISTING MICRO-BIO RETENTION AREA (F-14-022)
PERMEABLE SURFACE POROUS CONCRETE A-2



NOTES:

1. REFER TO SHEET 17 FOR DRYWELL (DW) SIZE, NOTES & DETAILS
2. REFER TO SHEET 17 FOR RAIN BARREL NOTES & DETAILS
3. REFER TO SHEET 17 FOR PERMEABLE SURFACE (POROUS CONCRETE) NOTES AND DETAILS
4. REFER TO SHEETS 17&18 FOR MICRO-BIORETENTION AND RAINGARDEN NOTES AND DETAILS
5. REFER TO SHEET 17 FOR ROOFTOP DISCONNECTION CRITERIA. DOWNSPUTS SHALL BE LOCATED WHERE SHOWN HEREON AT MINIMUM AND DIRECTED AT THE GROUND SURFACE TO FLOW IN THE DIRECTION SHOWN

LANDSCAPE SCHEDULE NOTE:

ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT ANN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HED PLANTING SPECIFICATIONS.
CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
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KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
CK	8	CORNUS KOUSA KOUSA DOGWOOD	8'-10' HT.	B & B
NS	3	PICEA ABIES NORWAY SPRUCE	6'-8' HT.	B & B
DC	3	CEDRUS DEODORA DEODAR CEDAR	6'-8' HT.	B & B

-SEE SHEET 2 OF 18 FOR THE TOTAL LANDSCAPE PLANT SCHEDULE.
-THE SIDE YARD LANDSCAPING HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR STREET SIDE PLANTINGS IN THE AMOUNT OF \$2,100 FOR THE REQUIRED 4 SHADE TREES, 6 EVERGREENS, SHALL BE POSTED WITH THE GRADING PERMIT FOR SDP 14-081
-SEE GENERAL NOTE 36, SHEET 1 FOR THE TOTAL PROJECT REQUIREMENT AND SURETY.

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A 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: *[Signature]* DATE: *[Date]*

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION #1 DATE: 3-6-15
CHIEF, DIVISION OF LAND DEVELOPMENT #11 DATE: 3-19-15
DIRECTOR DATE: 3-30-15

NOTES:

1. ALL WATER CONNECTIONS SHALL BE 1-1/2" WITH 1" OUTSIDE METER SETTINGS, UNLESS OTHERWISE NOTED. REFER TO HOWARD COUNTY DETAILS W-3.28 OUTSIDE METER SETTINGS.

NO.	REVISION	DATE
1	REVISE EASEMENT ON OPEN SPACE LOT 55 AND LOT 7	7/24/15

**SITE DEVELOPMENT PLAN
LAYOUT & LANDSCAPING PLAN
HIGH RIDGE MEADOWS - SECTION ONE
LOTS 1 - 54**

5TH ELECTION DISTRICT - TAX MAP: 50 GRID: 1 PARCELS: 363 & 542
DPZ REF'S: F-10-065, WP-10-087, ECP-12-047, WP-13-060, SP 13-007, F14-022. HOWARD COUNTY, MARYLAND

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DESIGN BY: RVE
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3 OF 19

OWNER/DEVELOPER
BUILDER-LOTS 1-31
PULTE HOMES
8965 GUILFORD ROAD - SUITE 290
COLUMBIA, MARYLAND
21046
(410) 720-5071

LEGEND:

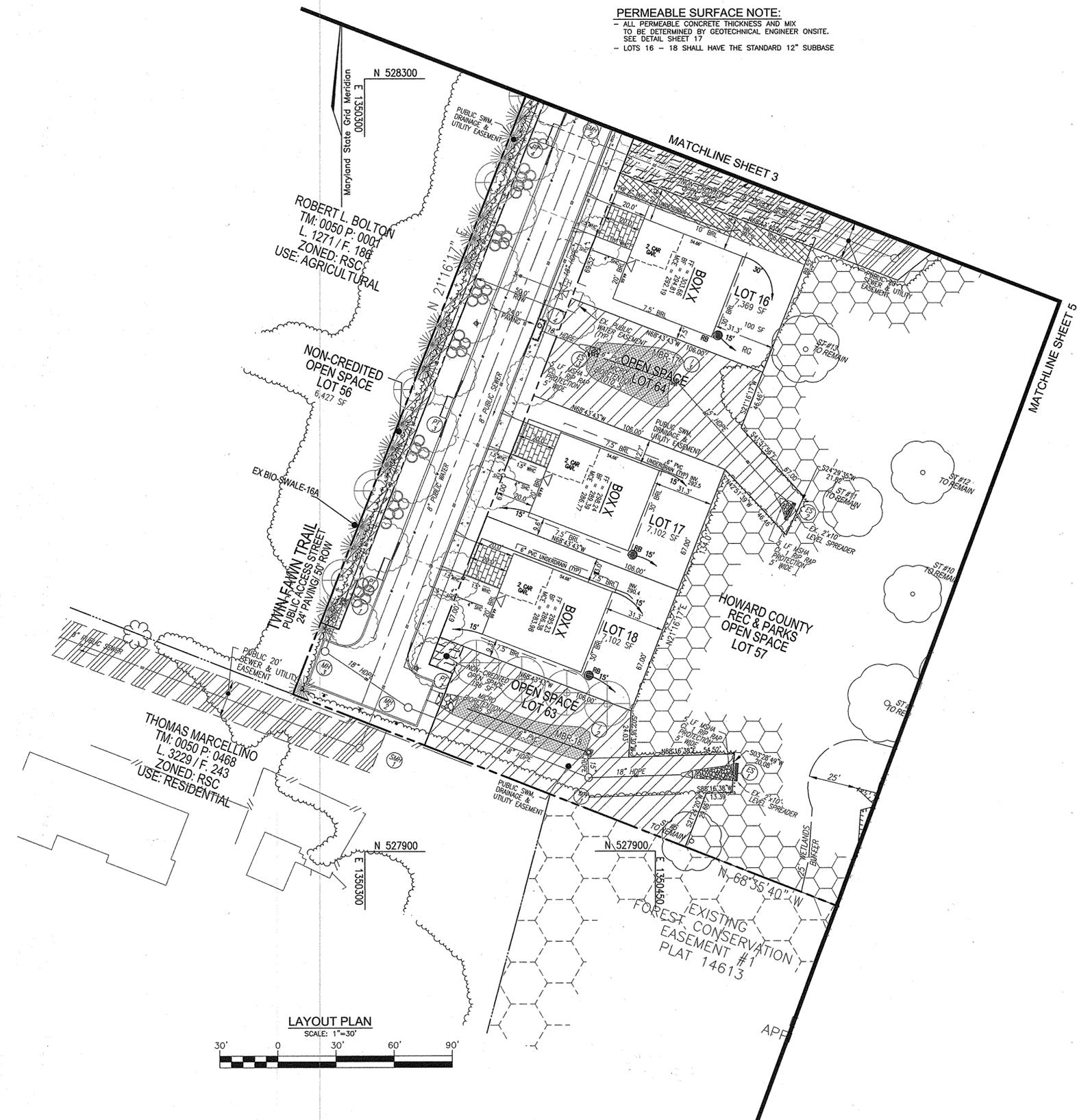
	FRONT GARAGE		PROPERTY LINE
	HOUSE BOX		RIGHT-OF-WAY LINE
	WALKOUT AVAILABLE W/O		ADJACENT PROPERTY LINE
	ON-LOT RAIN GARDEN M-7		EXISTING CURB AND GUTTER
	200 GAL. RAIN BARREL M-1		EXISTING UTILITY POLE
	ROOF LEADER DISCONNECT M-1		EXISTING LIGHT POLE
	ON-LOT DRYWELL (M-5)		EXISTING MAILBOX
			EXISTING SIGN
			EXISTING SANITARY MANHOLE
			EXISTING SANITARY LINE
			EXISTING CLEANOUT
			EXISTING FIRE HYDRANT
			EXISTING WATER LINE
			EXISTING TREE LINE (FIELD LOCATED)
			EXISTING TREES (F-11-064)
			EXISTING STREET TREES (F-11-064)
			EXISTING FENCE
			EXISTING STORMDRAIN
			EXISTING STORMDRAIN INLET
			EXISTING SIDEWALK
			EXISTING MICRO-BIO RETENTION AREA (F-14-022)
			EXISTING NON-CREDITED OPEN SPACE
			EXISTING PUBLIC DRAINAGE, SEWER & UTILITY EASEMENT (F-14-022)
			EXISTING PUBLIC DRAINAGE SWM & UTILITY EASEMENT (F-14-022)
			EX. FOREST CONSERVATION AREA APPROVED F-14-022
			EX. FOREST CONSERVATION AREA PLAT 14613
			PERMEABLE SURFACE POROUS CONCRETE A-2

NOTES:

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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION **3-6-15**
 DATE

 CHIEF, DIVISION OF LAND DEVELOPMENT **3-19-15**
 DATE

 DIRECTOR **3/30/15**
 DATE

OWNER/DEVELOPER
BUILDER- LOTS 1-31
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 COLUMBIA, MARYLAND
 21046
 (410) 720-5071

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
LAYOUT PLAN
HIGH RIDGE MEADOWS - SECTION ONE
LOTS 1 - 54

6TH ELECTION DISTRICT - TAX MAP: 50 GRID: 1
 DPZ REFS: F-10-065, WP-10-087, ECP-12-047, WP-13-020, SP 13-007, F14-022
 ZONED: R-SC
 PARCELS: 363 & 542
 HOWARD COUNTY, MARYLAND

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4 SHEET OF **19**

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LANDSCAPE SCHEDULE				
KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
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PS	2	PINUS STROBUS EASTERN WHITE PINE	6'-8" HT.	B & B

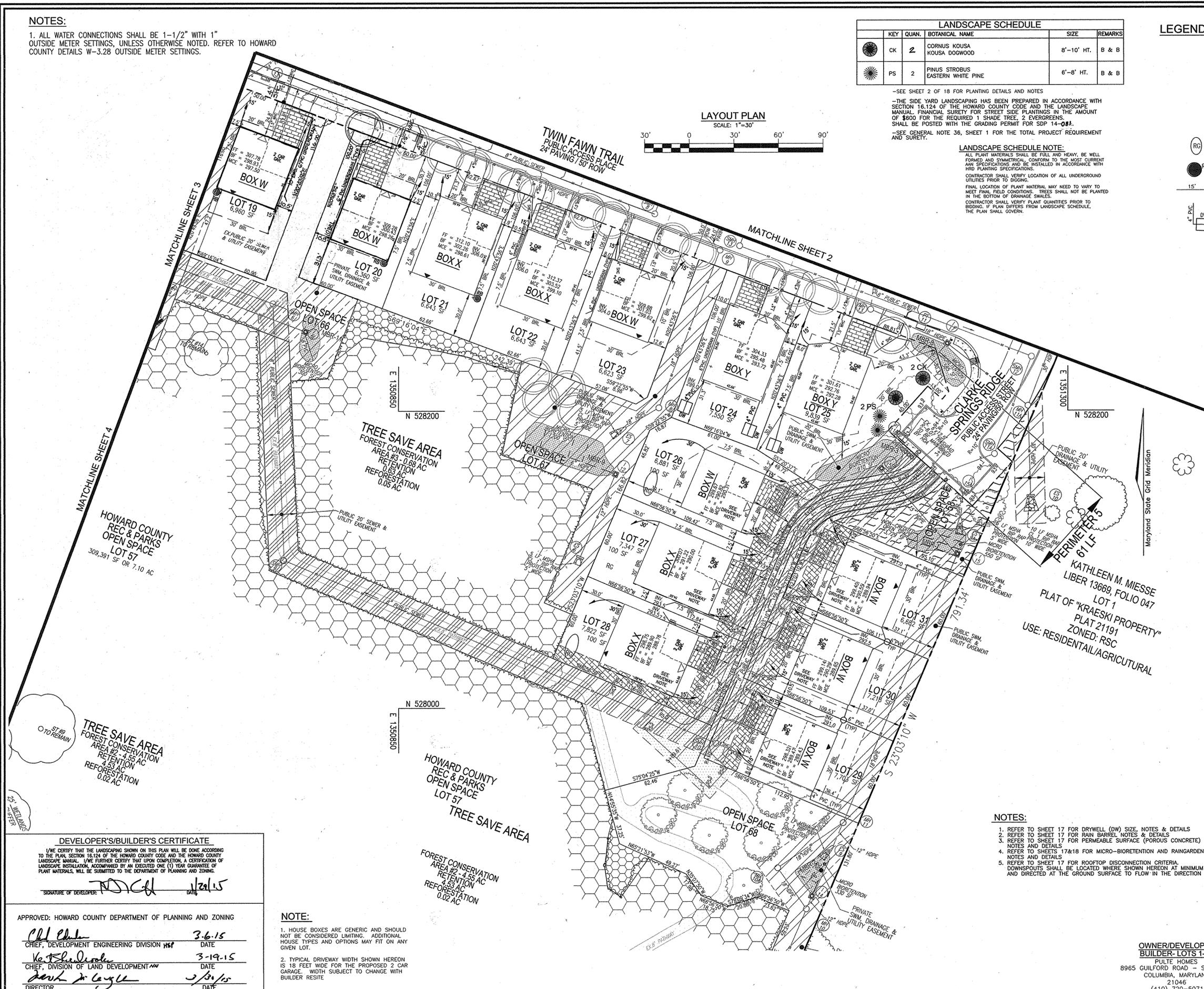
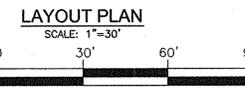
-SEE SHEET 2 OF 18 FOR PLANTING DETAILS AND NOTES
 -THE SIDE YARD LANDSCAPING HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR STREET SIDE PLANTINGS IN THE AMOUNT OF \$800 FOR THE REQUIRED 1 SHADE TREE, 2 EVERGREENS, SHALL BE POSTED WITH THE GRADING PERMIT FOR SDP 14-081.
 -SEE GENERAL NOTE 36, SHEET 1 FOR THE TOTAL PROJECT REQUIREMENT AND SURETY.

LANDSCAPE SCHEDULE NOTE:
 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 AAS PLANTING SPECIFICATIONS.
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LEGEND:

PERMEABLE SURFACE NOTE:
 - ALL PERMEABLE CONCRETE THICKNESS AND MIX TO BE DETERMINED BY GEOTECHNICAL ENGINEER ONSITE. SEE DETAIL SHEET 17
 - LOTS 19 - 31 SHALL HAVE THE STANDARD 12" SUBBASE

DRIVEWAY NOTE:
 INDIVIDUAL HOUSE SITES SHALL PROVIDE PRIVATE DRIVEWAYS A MINIMUM 18 FOOT DEPTH FROM THE FACE OF GARAGE TO THE EDGE OF THE USE-IN-COMMON DRIVEWAY



NOTES:

- REFER TO SHEET 17 FOR DRYWELL (DW) SIZE, NOTES & DETAILS
- REFER TO SHEET 17 FOR RAIN BARREL NOTES & DETAILS
- REFER TO SHEET 17 FOR PERMEABLE SURFACE (POROUS CONCRETE) NOTES AND DETAILS
- REFER TO SHEETS 17&18 FOR MICRO-BIORETENTION AND RAINGARDEN NOTES AND DETAILS
- REFER TO SHEET 17 FOR ROOFTOP DISCONNECT CRITERIA. DOWNSPOUTS SHALL BE LOCATED WHERE SHOWN HEREON AT MINIMUM AND DIRECTED AT THE GROUND SURFACE TO FLOW IN THE DIRECTION SHOWN

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A 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: *[Signature]* DATE: 1/21/15

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 3-6-15
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 3-19-15
 CHIEF, DIVISION OF LAND DEVELOPMENT
[Signature] 3/6/15
 DIRECTOR

NOTE:

- HOUSE BOXES ARE GENERIC AND SHOULD NOT BE CONSIDERED LIMITING. ADDITIONAL HOUSE TYPES AND OPTIONS MAY FIT ON ANY GIVEN LOT.
- TYPICAL DRIVEWAY WIDTH SHOWN HEREON IS 18 FEET WIDE FOR THE PROPOSED 2 CAR GARAGE. WIDTH SUBJECT TO CHANGE WITH BUILDER RESITE

NO.	REMOVE PORTION OF PUBLIC 20" SEWER EASEMENT	7/24/15
	REVISION	DATE

**SITE DEVELOPMENT PLAN
 LAYOUT & LANDSCAPE PLAN
 HIGH RIDGE MEADOWS - SECTION ONE
 LOTS 1 - 54**

6TH ELECTION DISTRICT - TAX MAP: 50 GRID: 1
 DPZ REF'S: F-10-065, WP-10-087, ECP-12-047, WP-13-080, SF 13-007, F14-022

ZONED: R-SC
 PARCELS: 363 & 542
 HOWARD COUNTY, MARYLAND

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

DESIGN BY: RVE
 DRAWN BY: TJW/RVE/KG
 CHECKED BY: RHY
 DATE: JANUARY 2015
 SCALE: AS SHOWN
 W.O. NO.: 11-28.01

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

5 SHEET OF 19

**OWNER/DEVELOPER
 BUILDER- LOTS 1-31**
 PULTE HOMES
 8965 GUILFORD ROAD - SUITE 290
 COLUMBIA, MARYLAND
 21046
 (410) 720-5071

NOTE:

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- TYPICAL DRIVEWAY WIDTH SHOWN HEREON IS 18 FEET WIDE FOR THE PROPOSED 2 CAR GARAGE. WIDTH SUBJECT TO CHANGE WITH BUILDER RESISTE.

NOTES:

- ALL WATER CONNECTIONS SHALL BE 1-1/2" WITH 1" OUTSIDE METER SETTINGS, UNLESS OTHERWISE NOTED. REFER TO HOWARD COUNTY DETAIL W-3.28 OUTSIDE METER SETTINGS.

NOTES:

- REFER TO SHEET 17 FOR DRYWELL (DW) SIZE, NOTES & DETAILS
- REFER TO SHEET 17 FOR RAIN BARREL NOTES & DETAILS
- REFER TO SHEET 17 FOR PERMEABLE SURFACE (POROUS CONCRETE) NOTES AND DETAILS
- REFER TO SHEETS 17&18 FOR MICRO-BIORETENTION AND RAINGARDEN NOTES AND DETAILS
- REFER TO SHEET 17 FOR ROOFTOP DISCONNECTION CRITERIA. DOWNSPOUTS SHALL BE LOCATED WHERE SHOWN HEREON AT MINIMUM AND DIRECTED AT THE GROUND SURFACE TO FLOW IN THE DIRECTION SHOWN

LEGEND:

PROPERTY LINE
 RIGHT-OF-WAY LINE
 ADJACENT PROPERTY LINE
 EXISTING CURB AND GUTTER
 EXISTING UTILITY POLE
 EXISTING LIGHT POLE
 EXISTING MAILBOX
 EXISTING SIGN
 EXISTING SANITARY MANHOLE
 EXISTING SANITARY LINE
 EXISTING CLEANOUT
 EXISTING FIRE HYDRANT
 EXISTING WATER LINE
 EXISTING TREE LINE (FIELD LOCATED)
 EXISTING TREES (F-14-022)
 EXISTING STREET TREES (F-14-022)
 EXISTING FENCE
 EXISTING STORMDRAIN INLET
 EXISTING SIDEWALK
 EXISTING PUBLIC DRAINAGE, SWM & UTILITY EASEMENT (F-14-022)
 EXISTING MICRO-BIO RETENTION AREA (F-14-022)
 EXISTING PRIVATE DRAINAGE, SWM & UTILITY EASEMENT (F-14-022)
 EXISTING PUBLIC SEWER & UTILITY EASEMENT (F-14-022)
 EX. PUBLIC WATER ESMIT APPROVED F-14-022
 EXISTING PUBLIC SEWER & UTILITY EASEMENT (F-14-022)
 EXISTING BEE ZONE (F-14-022)
 PROPOSED TREES
 PERMEABLE SURFACE POROUS CONCRETE A-2

HOUSE BOX
 FRONT ORIENTATION
 GARAGE
 WALKOUT AVAILABLE W/O

ON-LOT RAIN GARDEN
 M-7

200 GAL. RAIN BARREL
 M-1

ROOF LEADER DISCONNECT
 N-1

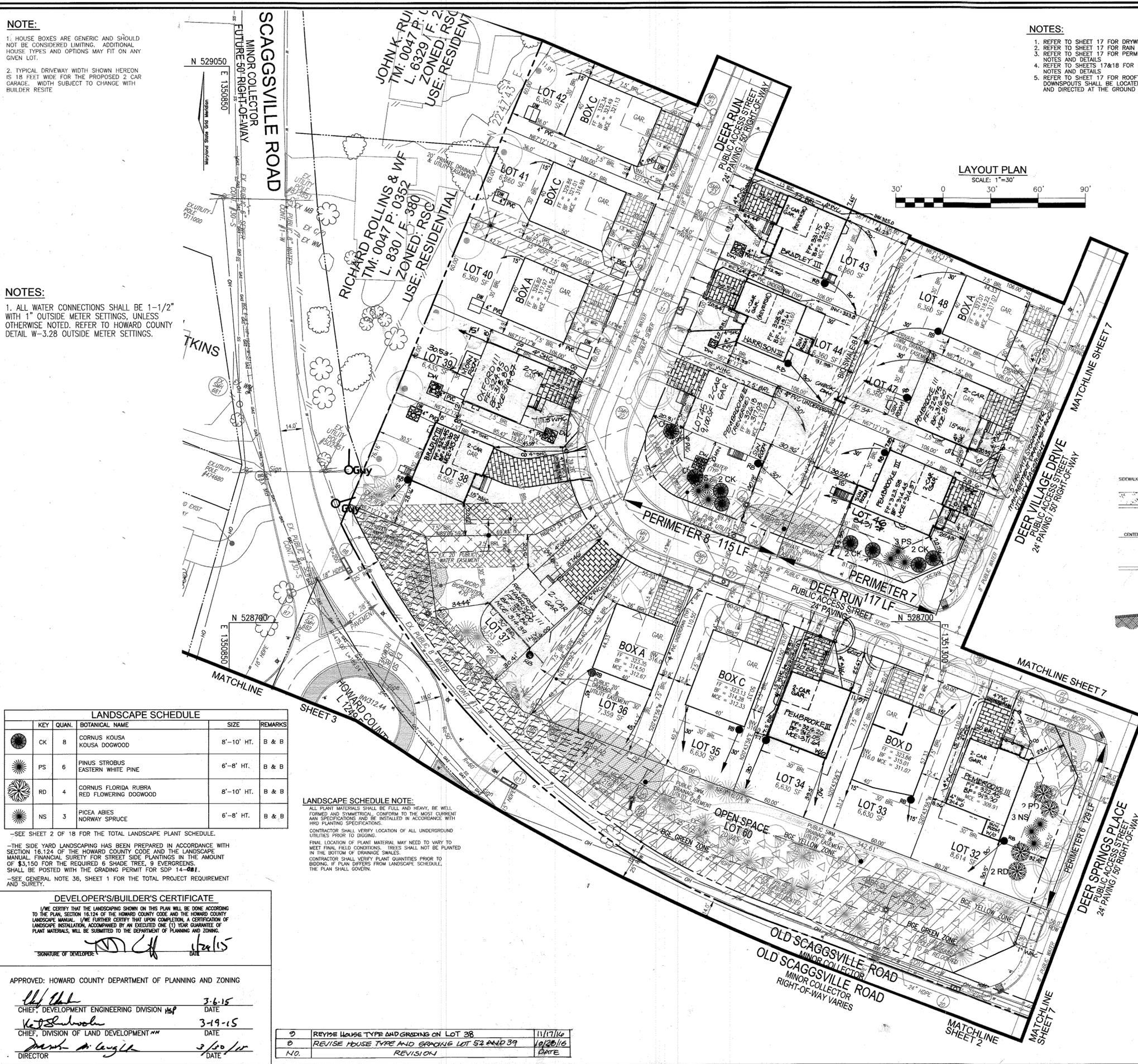
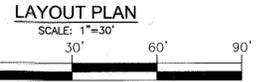
ON-LOT DRYWELL (M-S)

PROPOSED HOUSE
 GARAGE
 PERVIOUS DRIVEWAY
 SIDEWALK
 CENTERLINE OF ROAD
 CURB & GUTTER
 PAVEMENT

MICRO BIORETENTION FACILITY
 GARAGE
 PERVIOUS DRIVEWAY
 SIDEWALK
 CENTERLINE OF ROAD
 CURB & GUTTER
 PAVEMENT

TYPICAL PERVIOUS DRIVEWAY UNDERDRAIN/OVERDRAIN OUTLET TO MBR DETAIL
 NOT TO SCALE
 2" UNDERDRAIN
 PERVIOUS DRIVEWAY
 CLEANOUT
 3" UNDERDRAIN
 MICRO BIORETENTION FACILITY
 DAYLIGHT IN SIDE SLOPE

PERMEABLE SURFACE NOTE:
 ALL PERMEABLE CONCRETE THICKNESS AND MIX TO BE DETERMINED BY GEOTECHNICAL ENGINEER ONSITE. SEE DETAIL SHEET 17
 LOTS 32 - 48 SHALL HAVE THE STANDARD 12" SUBBASE



LANDSCAPE SCHEDULE				
KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
CK	8	CORNUS KOUSA KOUSA DOGWOOD	8'-10" HT.	B & B
PS	6	PINUS STROBUS EASTERN WHITE PINE	6'-8" HT.	B & B
RD	4	CORNUS FLORIDA RUBRA RED FLOWERING DOGWOOD	8'-10" HT.	B & B
NS	3	PICEA ABIES NORWAY SPRUCE	6'-8" HT.	B & B

LANDSCAPE SCHEDULE NOTE:
 ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT ANY SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HED PLANTING SPECIFICATIONS.
 CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
 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.
 CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLANT DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

-SEE SHEET 2 OF 18 FOR THE TOTAL LANDSCAPE PLANT SCHEDULE.
 -THE SIDE YARD LANDSCAPING HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR STREET SIDE PLANTINGS IN THE AMOUNT OF \$3,150 FOR THE REQUIRED 6 SHADE TREE, 9 EVERGREENS, SHALL BE POSTED WITH THE GRADING PERMIT FOR SDP 14-081.
 -SEE GENERAL NOTE 36, SHEET 1 FOR THE TOTAL PROJECT REQUIREMENT AND SURETY.

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A 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: *[Signature]* DATE: 3/6/15

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 3-6-15
 CHIEF, DEVELOPMENT ENGINEERING DIVISION H&P DATE

[Signature] 3-19-15
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 3/20/15
 DIRECTOR DATE

No.	REVISION	DATE
9	REVISE HOUSE TYPE AND GRADING ON LOT 38	11/17/16
8	REVISE HOUSE TYPE AND GRADING LOT 52 AND 39	10/20/16

No.	REVISION	DATE
6	REVISE HOUSE TYPE 1 GRADING LOT 32, REVISE DRIVEWAY UNDERDRAIN FROM 6" TO 4"	6/30/16
7	REVISE HOUSE TYPE AND GRADING ON LOT 32	8/17/16
5	REVISE HOUSE TYPE 1 GRADING LOTS 43 + 44	4/05/16
4	ADD PEMBROKE III TO LOT 47	3/16/15
3	ADD HARRISON III TO LOT 37	2-9-16
2	ADD PEMBROKE III TO LOT 45	12-22-15
1	REVISE HOUSE TYPE D' TO CHOSEN MODEL LOTS 34 + 46	7/24/15

SITE DEVELOPMENT PLAN
LAYOUT PLAN
HIGH RIDGE MEADOWS - SECTION ONE
 LOTS 1 - 54

6TH ELECTION DISTRICT - TAX MAP: 50 GRID: 1
 DPZ REF'S: F-10-065, WP-10-087, EOP-12-047, WP-13-080, SP-13-007, F14-022

ZONED: R-SC
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OWNER/DEVELOPER
BUILDER - LOTS 32-54
 BEAZER HOMES
 MARYLAND DIVISION
 8965 GUILFORD ROAD - SUITE 290
 COLUMBIA, MARYLAND
 21046
 (410) 720-5071

DESIGN BY: RVL
 DRAWN BY: TJW/RVE/KG
 CHECKED BY: RHV
 DATE: JANUARY 2015
 SCALE: AS SHOWN
 W.O. NO.: 11-28.01

PROFESSIONAL CERTIFICATE
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 EXPIRATION DATE: 09-27-2016

6 SHEET OF 19

NOTE:
 1. HOUSE BOXES ARE GENERIC AND SHOULD NOT BE CONSIDERED LIMITING. ADDITIONAL HOUSE TYPES AND OPTIONS MAY FIT ON ANY GIVEN LOT.
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NS	3	PICEA ABIES NORWAY SPRUCE	6'-8' HT.	B & B

-SEE SHEET 2 OF 18 FOR PLANTING DETAILS AND NOTES
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 -SEE GENERAL NOTE 36, SHEET 1 FOR THE TOTAL PROJECT REQUIREMENT AND SURETY.

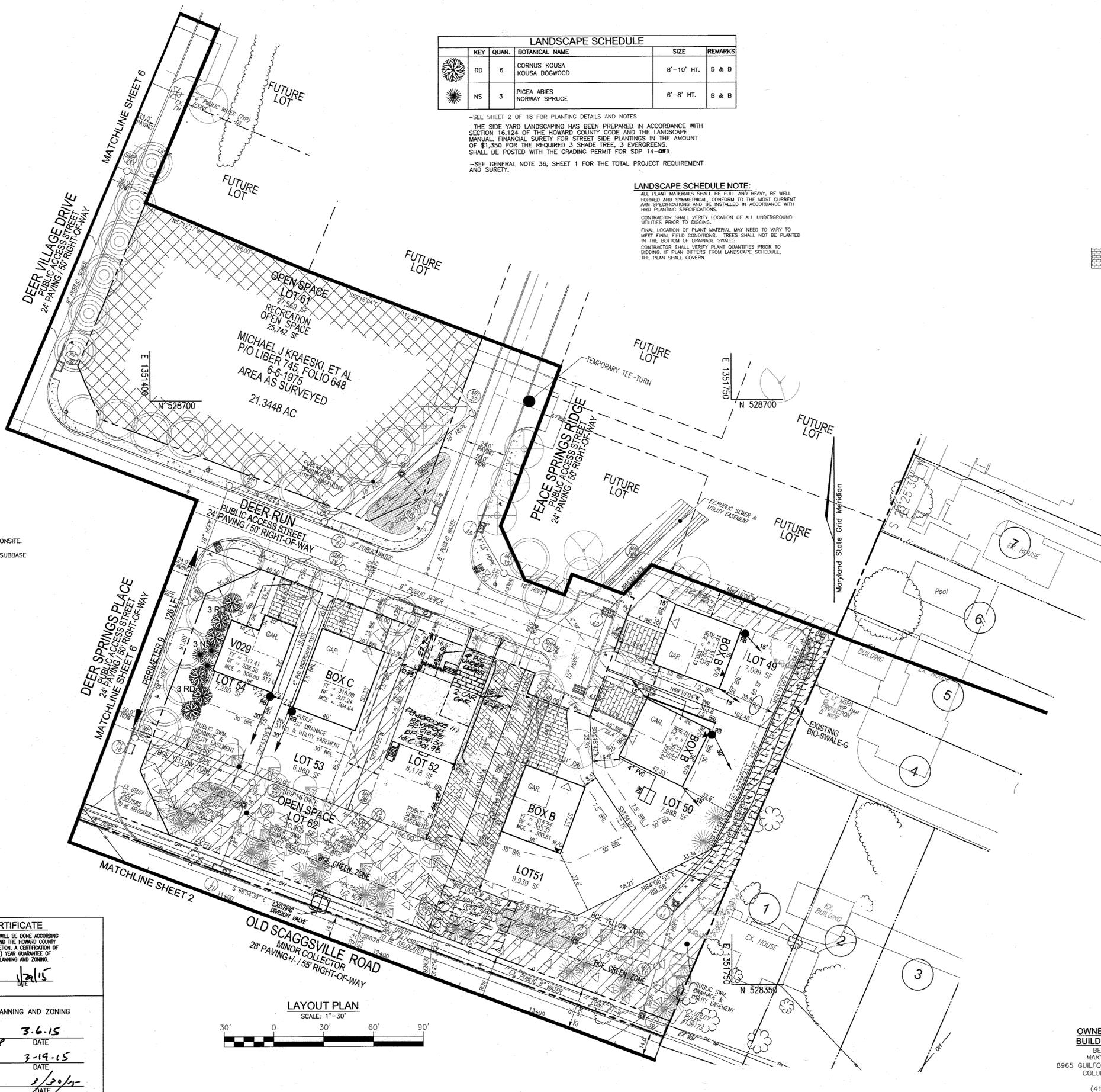
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 EXISTING PUBLIC DRAINAGE, SWM & UTILITY EASEMENT (F-14-022)
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 EX. PUBLIC WATER EASEMENT APPROVED F-14-022
 EXISTING BQE ZONE (F-14-022)
 PROPOSED TREES

PERMEABLE SURFACE NOTE:
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 -LOTS 49 - 54 SHALL HAVE THE STANDARD 12" SUBBASE

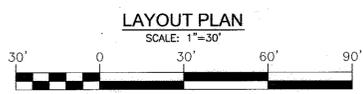
NOTES:
 1. REFER TO SHEET 17 FOR DRYWELL (DW) SIZE, NOTES & DETAILS
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SIGNATURE OF DEVELOPER: *[Signature]* DATE: 3/19/15

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* DATE: 3-6-15
 CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: 3-19-15
 DIRECTOR: *[Signature]* DATE: 3/30/15



NO.	REVISION	DATE
8	REVISE HOUSE TYPE AND GRADING ON LOT 52 AND 39	10/28/16

**SITE DEVELOPMENT PLAN
 LAYOUT & LANDSCAPE PLAN
 HIGH RIDGE MEADOWS - SECTION ONE
 LOTS 1 - 54**

6TH ELECTION DISTRICT - TAX MAP 50, GRID: 1
 DPZ REF'S: F-10-065, WP-10-067, ECP-12-047, WP-13-080, SP 13-007, F14-022

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DESIGN BY: RVE
 DRAWN BY: LJV/RVE/KG
 CHECKED BY: RHY
 DATE: JANUARY 2015
 SCALE: AS SHOWN
 W.O. NO.: 11-28.01

7 SHEET OF 19

Standard Stabilization Note

Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within:

a.) Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and

b.) Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.

Table B.1: Temporary Seeding for Site Stabilization

Plant Species	Seeding Rate *		Recommended Seeding Dates by Plant Hardiness Zone **		
	lb/acre	sq/10000 sq'	5b and 6a	5b	7a and 7b
Cool-Season Grasses					
Annual Ryegrass (E. & W. varieties)	40	1.6	Mar 15 to May 31, Aug 1 to Sep 30	Mar 15 to May 31, Aug 1 to Sep 30	Feb 15 to Apr 30, Aug 1 to Sep 30
Early Hybrid Ryegrass	46	1.8	Mar 15 to May 31, Aug 1 to Sep 30	Mar 15 to May 31, Aug 1 to Sep 30	Feb 15 to Apr 30, Aug 1 to Sep 30
Orchard Grass	72	2.9	Mar 15 to May 31, Aug 1 to Sep 30	Mar 15 to May 31, Aug 1 to Sep 30	Feb 15 to Apr 30, Aug 1 to Sep 30
Orchard Grass (Crested variety)	120	4.8	Mar 15 to May 31, Aug 1 to Sep 30	Mar 15 to May 31, Aug 1 to Sep 30	Feb 15 to Apr 30, Aug 1 to Sep 30
Warm-Season Grasses					
Florida Panic (Crested variety)	30	1.2	Jun 1 to Jul 31	May 15 to Jun 31	May 1 to Aug 14
Panic Mixture (Crested variety)	20	0.8	Jun 1 to Jul 31	May 15 to Jun 31	May 1 to Aug 14

NOTE:

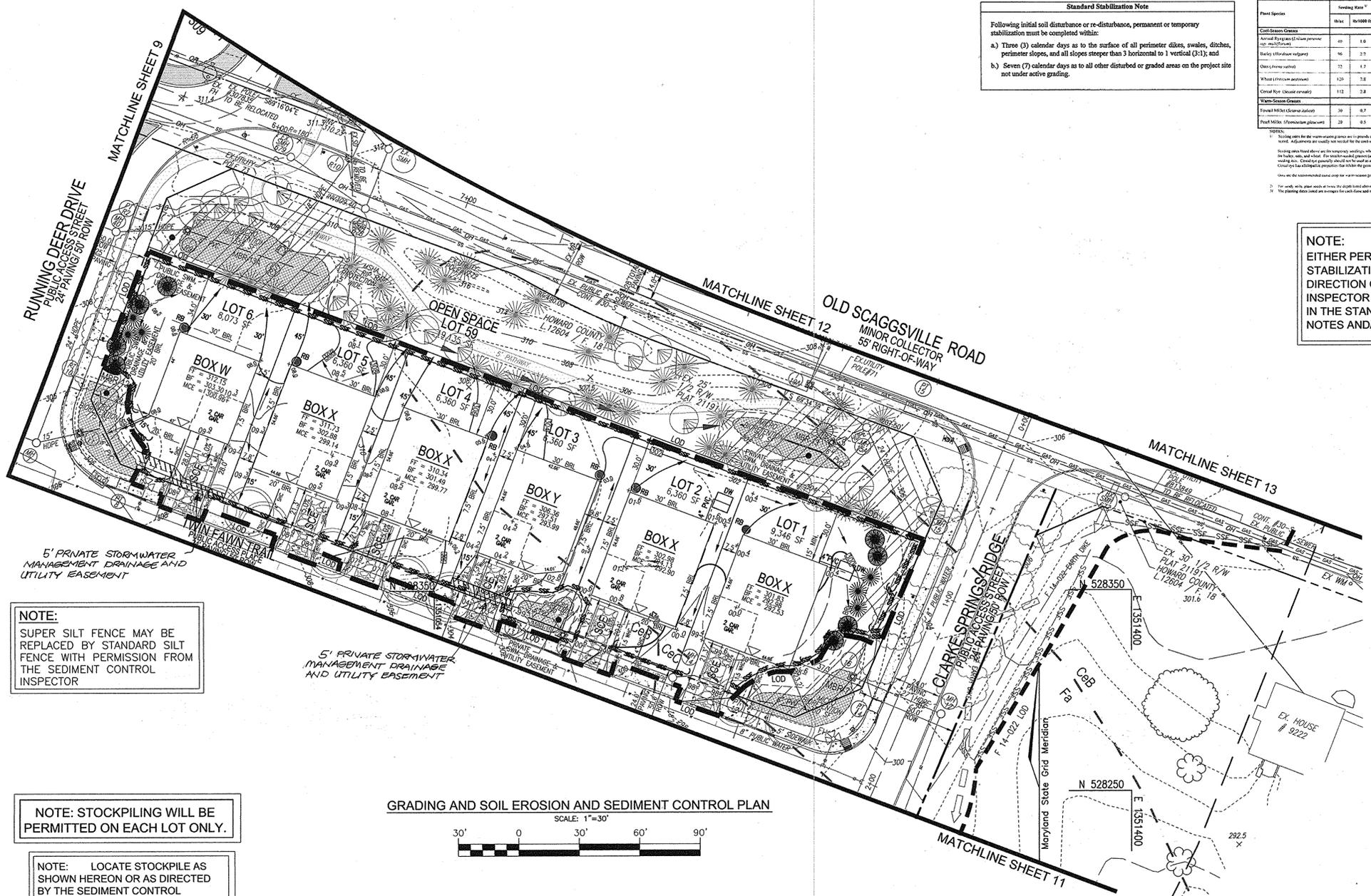
EITHER PERMANENT OR TEMPORARY STABILIZATION IS TO BE APPLIED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR REGARDLESS OF DAYS/DATES IN THE STANDARD SEDIMENT CONTROL NOTES AND/OR SEEDING SPECIFICATIONS.

NOTE:

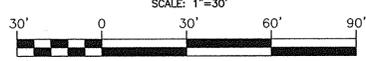
STABILIZATION IS TO BE DONE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE INTERVALS REQUIRED BY THE 2011 STDS. & SPECS. WHICHEVER IS MORE RESTRICTIVE.

LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- EXISTING CONTOUR 02
- EXISTING CONTOUR 10
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING TREE LINE (FIELD LOCATED)
- EXISTING TREES (F-14-022)
- EXISTING STREET TREES (F-14-022)
- EXISTING FENCE
- EXISTING STORMDRAIN
- EXISTING STORMDRAIN INLET
- EXISTING SIDEWALK
- EXISTING MICRO-BIO RETENTION AREA (F-14-022)
- EXISTING PUBLIC DRAINAGE SWIM & UTILITY EASEMENT (F-14-022)
- EX. PATHWAY APPROVED F-14-022
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED SUPER SILT FENCE
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED STABILIZED CONSTRUCTION EASEMENT



GRADING AND SOIL EROSION AND SEDIMENT CONTROL PLAN



NOTE:

SUPER SILT FENCE MAY BE REPLACED BY STANDARD SILT FENCE WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR

NOTE: STOCKPILING WILL BE PERMITTED ON EACH LOT ONLY.

NOTE: LOCATE STOCKPILE AS SHOWN HEREON OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. ANY STOCKPILES EXCEEDING 15 FEET IN HEIGHT SHALL BE BENCHED.

NOTE:

- SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
- SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART
- DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

MAPPED SOILS TYPES

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRO	PERC. INCLUSIONS	Kw RANGE*	PERC. PERMANENT MOISTURE	CRUSTY SOILS
CbC	CHILLUM LOAM, 2 TO 5 PERCENT SLOPES	B	NO	NO	0.15 - 0.37	NO	NO
CcC	CHILLUM LOAM, 5 TO 10 PERCENT SLOPES	B	NO	NO	0.15 - 0.37	PARTIAL	NO
CdC	CHILLUM LOAM, 10 TO 15 PERCENT SLOPES	C	NO	NO	0.28	NO	NO
Fa	FALLSHELL SANDY LOAM, 0 TO 2 PERCENT SLOPES	D	YES	NO	0.02 - 0.24	NO	NO
SrB	SASSAFRAS GRAVELLY SANDY LOAM, 2 TO 5 PERCENT SLOPES	B	NO	NO	0.17 - 0.24	NO	NO
SrD	SASSAFRAS GRAVELLY SANDY LOAM, 10 TO 15 PERCENT SLOPES	B	NO	NO	0.32 - 0.37	PARTIAL	NO
UcB	URBAN LAND-CHILLUM-RELEVANCE COMPLEX, 0 TO 5 PERCENT SLOPES	D	NO	NO	0.37	NO	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
 K-FACTOR = Kw @ 0-4" DEPTH
 * BASED UPON ESTIMATED CUTS

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

John K. Blanton 3-6-15
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

Kate R. ... 3-19-15
 CHIEF, DIVISION OF LAND DEVELOPMENT

David L. ... 3-20-15
 DIRECTOR

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

John K. Blanton 2/9/15
 HOWARD S.C.D. DATE

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SOIL EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AS 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] 1/29/15
 SIGNATURE OF DEVELOPER DATE

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."

[Signature] 2/5/15
 SIGNATURE OF ENGINEER DATE

PERMEABLE SURFACE UNDERDRAIN OUTFALL

LOT #	UNDERDRAIN	OUTFALL LOCATION
1	296.58	UNDERDRAIN TO ENTER MANHOLE 14
2	298.18	UNDERDRAIN SHALL ENTER I-18
3	300.56	UNDERDRAIN TO DAYLIGHT AT MBR 10
4	304.54	UNDERDRAIN TO COMBINE WITH LOT 3 UNDERDRAIN AT COMMON PROPERTY LINE
5	305.93	UNDERDRAIN TO COMBINE WITH LOT 6 UNDERDRAIN AT COMMON PROPERTY LINE
6	306.95	UNDERDRAIN TO DAYLIGHT AT MBR 12

** PROVIDE ADDITIONAL 12" OF STONE UNDER STANDARD PERMEABLE SURFACE BASE

NOTES:

- REFER TO SHEET 17 FOR DRYWELL (DW) SIZE, NOTES & DETAILS
- REFER TO SHEET 17 FOR RAIN BARREL NOTES & DETAILS
- REFER TO SHEET 17 FOR PERMEABLE SURFACE (POROUS CONCRETE) NOTES AND DETAILS
- REFER TO SHEETS 17&18 FOR MICRO-BIORETENTION AND RAINGARDEN NOTES AND DETAILS
- REFER TO SHEET 17 FOR ROOFTOP DISCONNECTION CRITERIA. DOWNSPOUTS SHALL BE LOCATED WHERE SHOWN HEREON AT MINIMUM AND DIRECTED AT THE GROUND SURFACE TO FLOW IN THE DIRECTION SHOWN

OWNER/DEVELOPER
 BUILDER- LOTS 1-31
 PULTE HOMES
 8965 GUILFORD ROAD - SUITE 290
 COLUMBIA, MARYLAND 21046
 (410) 720-5071

NOTES

- REFER TO SHEET 14 FOR STANDARD DETAILS AND STABILIZATION NOTES
- REFER TO SHEET 14 FOR SEQUENCE OF CONSTRUCTION

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
 GRADING AND SOIL EROSION & SEDIMENT CONTROL AND SOILS PLAN
 HIGH RIDGE MEADOWS - SECTION ONE
 LOTS 1 - 54

6TH ELECTION DISTRICT - TAX MAP: 50 GRID: 1
 02Z REF'S: F-10-066, WP-10-067, ECP-12-047, WP-13-080, SP 13-007, F14-022

ZONED: R-5C
 PARCELS: 353 & 542
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
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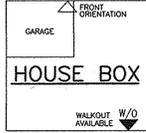
DESIGN BY: RVE
 DRAWN BY: TJW/RVE/KS
 CHECKED BY: RHW
 DATE: JANUARY 2015
 SCALE: AS SHOWN
 W.O. NO.: 11-28.01

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

8 SHEET OF 19

LEGEND:

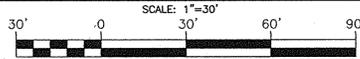
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURB AND GUTTER
	EXISTING CONTOUR 02
	EXISTING CONTOUR 10
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING TREE LINE (FIELD LOCATED)
	EXISTING TREES (F-14-022)
	EXISTING STREET TREES (F-14-022)
	EXISTING FENCE
	EXISTING STORMDRAIN
	EXISTING STORMDRAIN INLET
	EXISTING SIDEWALK
	EX. PATHWAY APPROVED F-14-022
	EXISTING PUBLIC DRAINAGE, SWM & UTILITY EASEMENT (F-12-022)
	EXISTING PRIVATE DRAINAGE, SWM & UTILITY EASEMENT (F-14-022)
	EXISTING PUBLIC DRAINAGE, SEWER & UTILITY EASEMENT (F-14-022)
	EX. FOREST CONSERVATION AREA APPROVED F-14-022
	EX. MICRO-BIO RETENTION AREA APPROVED F-14-022
	PROPOSED LIMIT OF DISTURBANCE
	PROPOSED SUPER SILT FENCE
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR
	PROPOSED STABILIZED CONSTRUCTION ENTRANCE



PERMEABLE SURFACE UNDERDRAIN OUTFALL		
LOT#	UNDERDRAIN	OUTFALL LOCATION
7	302.66	UNDERDRAIN TO DAYLIGHT AT MBR 19
8	303.53	UNDERDRAIN SHALL ENTER I-8
9	306.04	UNDERDRAIN TO DAYLIGHT AT MBR 14
10	308.39	UNDERDRAIN TO COMBINE WITH LOT 9 UNDERDRAIN AT COMMON PROPERTY LINE
11	309.02	UNDERDRAIN TO COMBINE WITH BIO-SWALE 16A UNDERDRAIN
12	309.01	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
13	307.82	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
14	305.43	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
15	302.78	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
16	298.86	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
17	293.44	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
18	290.43	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT

- NOTES:**
- REFER TO SHEET 17 FOR DRYWELL (DW) SIZE, NOTES & DETAILS
 - REFER TO SHEET 17 FOR RAIN BARREL NOTES & DETAILS
 - REFER TO SHEET 17 FOR PERMEABLE SURFACE (POROUS CONCRETE) NOTES AND DETAILS
 - REFER TO SHEETS 17&18 FOR MICRO-BIORETENTION AND RAINGARDEN NOTES AND DETAILS
 - REFER TO SHEET 17 FOR ROOFTOP DISCONNECTION CRITERIA. DOWNSPOUTS SHALL BE LOCATED WHERE SHOWN HEREON AT MINIMUM AND DIRECTED AT THE GROUND SURFACE TO FLOW IN THE DIRECTION SHOWN

GRADING AND SOIL EROSION AND SEDIMENT CONTROL PLAN

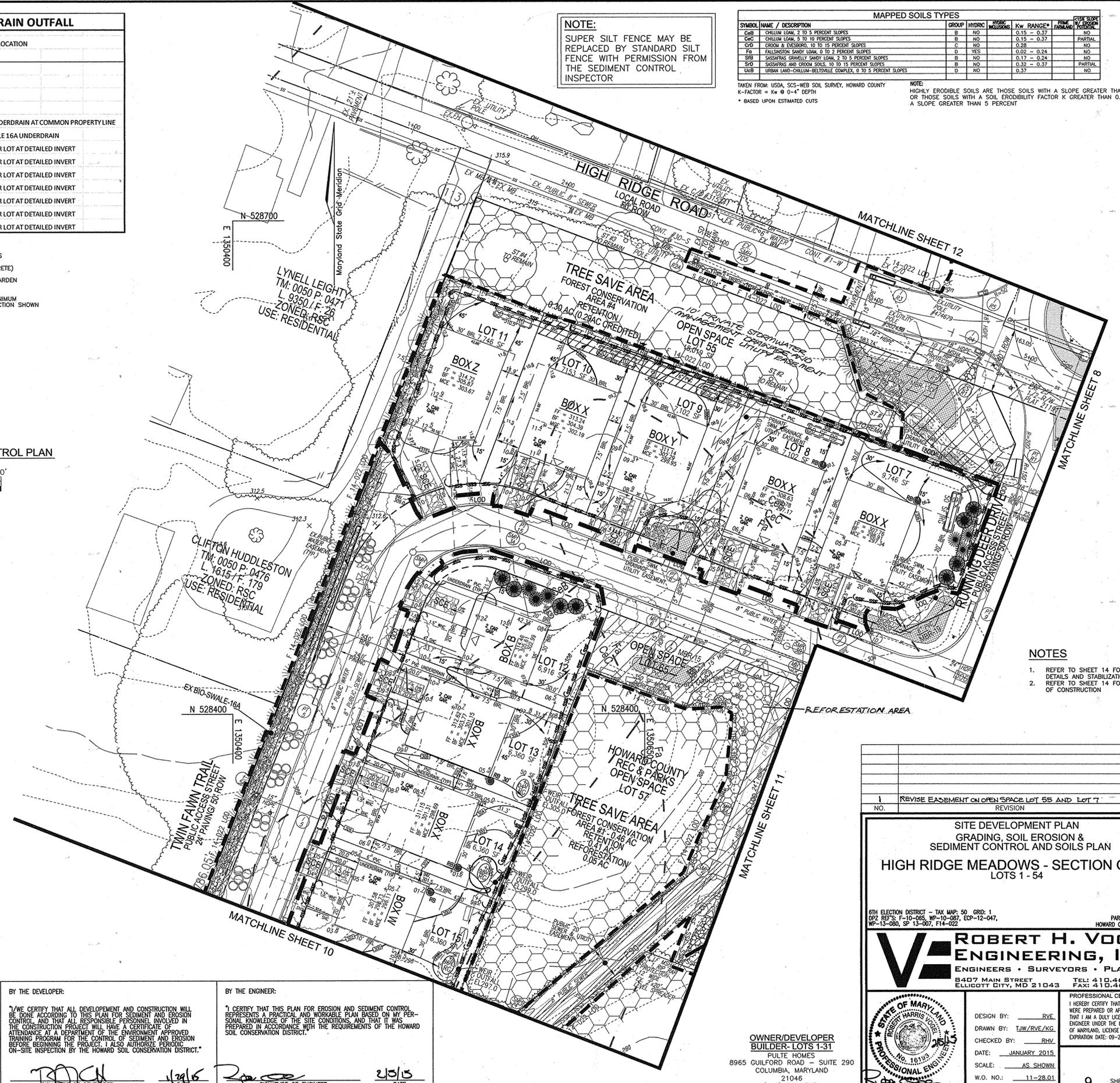


NOTE:
SUPER SILT FENCE MAY BE REPLACED BY STANDARD SILT FENCE WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR

MAPPED SOILS TYPES		GROUP	HYDRO	PERCENT SAND	Kw RANGE*	PERCENT CLAY	PERCENT SILT	PERCENT ORGANIC	PERCENT COBBLES	PERCENT GRAVEL
C8B	CHILLUM LOAM, 2 TO 5 PERCENT SLOPES	B	NO	0.15 - 0.37						
C8C	CHILLUM LOAM, 5 TO 10 PERCENT SLOPES	B	NO	0.15 - 0.37						
C9D	CROOM & EVERSBORO, 10 TO 15 PERCENT SLOPES	C	NO	0.28						
F0	FALGOUTER SANDY LOAM, 0 TO 2 PERCENT SLOPES	D	YES	0.02 - 0.24						
S1B	SASSAPARAS GRAVELLY SANDY LOAM, 2 TO 5 PERCENT SLOPES	B	NO	0.17 - 0.24						
S1D	SASSAPARAS AND CROOM SOILS, 10 TO 15 PERCENT SLOPES	B	NO	0.32 - 0.37						
U6B	URBAN LAND-CHILLUM-BELLEVILLE COMPLEX, 0 TO 5 PERCENT SLOPES	D	NO	0.37						

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
K-FACTOR = Kw @ 0-4" DEPTH
*BASED UPON ESTIMATED CUTS

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



NOTE:
EITHER PERMANENT OR TEMPORARY STABILIZATION IS TO BE APPLIED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR REGARDLESS OF DAYS/DATES IN THE STANDARD SEDIMENT CONTROL NOTES AND/OR SEEDING SPECIFICATIONS.

NOTE:
STABILIZATION IS TO BE DONE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE INTERVALS REQUIRED BY THE 2011 STDS. & SPECS. WHICHEVER IS MORE RESTRICTIVE.

NOTE: LOCATE STOCKPILE AS SHOWN HEREON OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. ANY STOCKPILES EXCEEDING 15 FEET IN HEIGHT SHALL BE BENCHED.

NOTE:
- SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
- SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART
- DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

NOTE: STOCKPILING WILL BE PERMITTED ON EACH LOT ONLY.

- NOTES**
- REFER TO SHEET 14 FOR STANDARD DETAILS AND STABILIZATION NOTES
 - REFER TO SHEET 14 FOR SEQUENCE OF CONSTRUCTION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 3-6-15
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 3-19-15
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 3/19/15
DIRECTOR

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

[Signature] 2/19/15
HOWARD S.C.D. DATE

BY THE DEVELOPER:

I HEREBY 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 FIELD ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 1/21/16
SIGNATURE OF DEVELOPER DATE

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.

[Signature] 2/15/15
SIGNATURE OF ENGINEER DATE

OWNER/DEVELOPER
BUILDER- LOTS 1-31
PULTE HOMES
8965 GULFORD ROAD - SUITE 290
COLUMBIA, MARYLAND 21046
(410) 720-5071

NO.	REVISION	DATE
1	REVISE EASEMENT ON OPEN SPACE LOT 5S AND LOT 7	7/24/15

**SITE DEVELOPMENT PLAN
GRADING, SOIL EROSION &
SEDIMENT CONTROL AND SILT PLAN
HIGH RIDGE MEADOWS - SECTION ONE
LOTS 1 - 54**

6TH ELECTION DISTRICT - TAX MAP: 50 GRID: 1
DPZ REF: F-10-065, WF-10-087, ECP-12-047,
WF-13-060, SF 13-007, F14-022

ZONED: R-SC
PARCELS: 363 & 342
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
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PROFESSIONAL CERTIFICATE
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EXPIRATION DATE: 09-27-2016

DESIGN BY: RVE
DRAWN BY: TJW/RVE/KG
CHECKED BY: RHV
DATE: JANUARY 2015
SCALE: AS SHOWN
W.O. NO.: 11-28.01

9 OF 19

MAPPED SOILS TYPES						
SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	HYDROLOGIC	Kw RANGE*	PERCENT EROSION
CdB	CHILLUM LOAM, 2 TO 5 PERCENT SLOPES	B	NO	NO	0.15 - 0.37	NO
CdC	CHILLUM LOAM, 5 TO 10 PERCENT SLOPES	B	NO	NO	0.15 - 0.37	PARTIAL
CdD	CHILLUM LOAM, 10 TO 15 PERCENT SLOPES	C	NO	NO	0.28	NO
Fs	FALLSINGTON SANDY LOAM, 0 TO 2 PERCENT SLOPES	D	YES	NO	0.02 - 0.24	NO
SdD	SASSAFRAS AND CROOM SOILS, 0 TO 5 PERCENT SLOPES	B	NO	NO	0.17 - 0.24	NO
SdD	SASSAFRAS AND CROOM SOILS, 5 TO 15 PERCENT SLOPES	B	NO	NO	0.32 - 0.37	PARTIAL
UcB	URBAN LAND-CHILLUM-BELTSVILLE COMPLEX, 0 TO 5 PERCENT SLOPES	D	NO	NO	0.37	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
 K-FACTOR = Kw @ 0-4" DEPTH
 * BASED UPON ESTIMATED CUTS

NOTE:
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NOTE: LOCATE STOCKPILE AS SHOWN HEREON OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. ANY STOCKPILES EXCEEDING 15 FEET IN HEIGHT SHALL BE BENCHED.

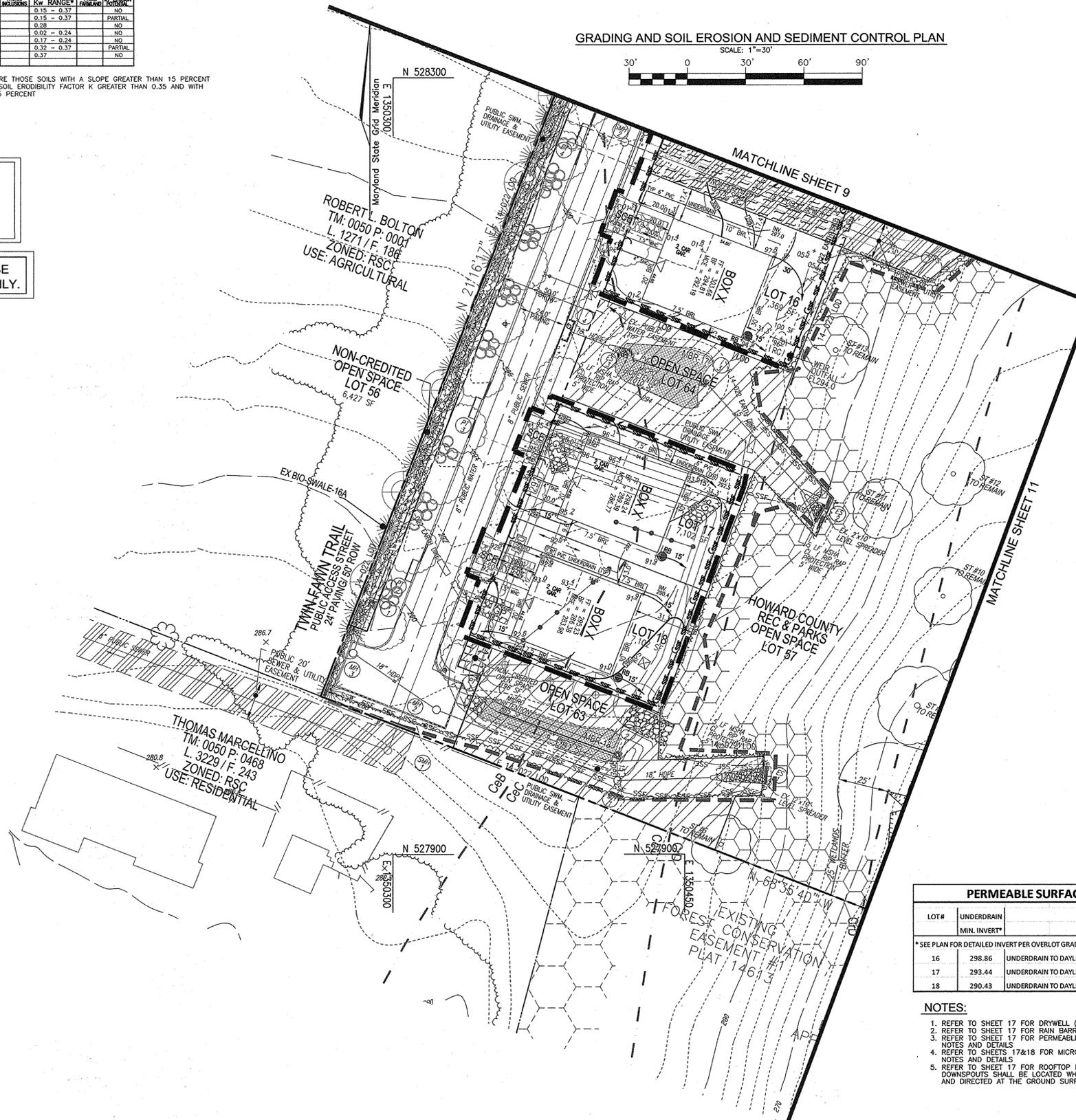
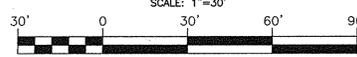
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NOTE:
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 - SILT FENCE SHALL BE CURLED UPHILL. NO MORE THAN 35 FEET APART
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GRADING AND SOIL EROSION AND SEDIMENT CONTROL PLAN



LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- EXISTING CONTOUR 02
- EXISTING CONTOUR 10
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
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- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING TREELINE (FIELD LOCATED)
- EXISTING TREES (F-14-022)
- EXISTING STREET TREES (F-14-022)
- EXISTING FENCE
- EXISTING STORMDRAIN
- EXISTING STORMDRAIN INLET
- EXISTING SIDEWALK
- EXISTING MICRO-BIO RETENTION AREA (F-14-022)
- EXISTING NON-CREDITED OPEN SPACE
- EXISTING PUBLIC DRAINAGE, SEWER & UTILITY EASEMENT (F-14-022)
- EXISTING PUBLIC DRAINAGE, SWM & UTILITY EASEMENT (F-14-022)
- EX. FOREST CONSERVATION AREA APPROVED F-14-022
- EX. PATHWAY APPROVED F-14-022
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED SUPER SILT FENCE
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- EX. FOREST CONSERVATION AREA PLAT # 14613

NOTES

- REFER TO SHEET 14 FOR STANDARD DETAILS AND STABILIZATION NOTES
- REFER TO SHEET 14 FOR SEQUENCE OF CONSTRUCTION

PERMEABLE SURFACE UNDERDRAIN OUTFALL			
LOT#	UNDERDRAIN MIN. INVERT*	OUTFALL LOCATION	
16	298.86	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT	
17	293.44	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT	
18	290.43	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT	

NOTES:

- REFER TO SHEET 17 FOR DRYWELL (DW) SIZE, NOTES & DETAILS
- REFER TO SHEET 17 FOR RAIN BARREL NOTES & DETAILS
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- REFER TO SHEET 17 FOR ROOFTOP DISCONNECTION CRITERIA. DOWNSPOUTS SHALL BE LOCATED WHERE SHOWN HEREON AT MINIMUM AND DIRECTED AT THE GROUND SURFACE TO FLOW IN THE DIRECTION SHOWN

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Ch. E. ... 3-6-15
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
... 3-19-15
 CHIEF, DIVISION OF LAND DEVELOPMENT
... 3/20/15
 DIRECTOR

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

John R. ... 2/19/15
 HOWARD S.C.D.

BY THE DEVELOPER:

I/WE 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.

... 1/29/15
 SIGNATURE OF DEVELOPER

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.

... 2/5/15
 SIGNATURE OF ENGINEER

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
 GRADING AND SOIL EROSION &
 SEDIMENT CONTROL AND SOILS PLAN
 HIGH RIDGE MEADOWS - SECTION ONE
 LOTS 1-54

6TH ELECTION DISTRICT - TAX MAP: 50 GRD: 1
 DPZ REF'S: F-10-065, WP-10-087, ECP-12-047, WP-13-050, SP 13-007, F14-022

ZONED: R-SC
 PARCELS: 363 & 542
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DESIGN BY: RVE
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 CHECKED BY: RHY
 DATE: JANUARY 2015
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 W.O. NO.: 11-28.01

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 EXPIRATION DATE: 09-27-2016

10 SHEET OF 19

OWNER/DEVELOPER
 BUILDER- LOTS 1-31
 PULTE HOMES
 8965 GULFORD ROAD - SUITE 290
 COLUMBIA, MARYLAND
 21046
 (410) 720-5071

NOTE:
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MAPPED SOILS TYPES

SYMBOL	NAME / DESCRIPTION	GROUP	HYDROIC	PERCENT SAND*	PERCENT SILT*	PERCENT CLAY*	PERCENT ORGANIC*	PERCENT ROCK*	PERCENT COBBLES*	PERCENT GRAVEL*	PERCENT STONES*	PERCENT Boulders*
CsB	CHILLUM LOAM, 2 TO 5 PERCENT SLOPES	B	NO	0.15 - 0.37	NO	NO	NO	NO	NO	NO	NO	NO
CsC	CHILLUM LOAM, 5 TO 10 PERCENT SLOPES	B	NO	0.15 - 0.37	PARTIAL	NO	NO	NO	NO	NO	NO	NO
CsD	CROM & EVERSORO, 10 TO 15 PERCENT SLOPES	C	NO	0.28	NO	NO	NO	NO	NO	NO	NO	NO
Fg	FALLSINGTON SANDY LOAM, 0 TO 2 PERCENT SLOPES	D	YES	0.02 - 0.24	NO	NO	NO	NO	NO	NO	NO	NO
SfB	SAGOPANS FINELY SANDY LOAM, 2 TO 5 PERCENT SLOPES	B	NO	0.17 - 0.24	NO	NO	NO	NO	NO	NO	NO	NO
SfD	SAGOPANS AND CROM SANDS, 10 TO 15 PERCENT SLOPES	B	NO	0.32 - 0.37	PARTIAL	NO	NO	NO	NO	NO	NO	NO
UcB	URBAN LAND-CHILLUM-BELTSVILLE COMPLEX, 0 TO 5 PERCENT SLOPES	D	NO	0.37	NO	NO	NO	NO	NO	NO	NO	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY. 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.
 K-FACTOR = $K_w @ 0-4" \text{ DEPTH}$
 * BASED UPON ESTIMATED CUTS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Clark 3-6-15
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Walter S. ... 3-19-15
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

David ... 3-30-15
 DIRECTOR DATE

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

John ... 2/19/15
 HOWARD S.C.D. DATE

BY THE DEVELOPER:

I/WE 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] DATE 2/15/15
 SIGNATURE OF DEVELOPER DATE

BY THE ENGINEER:

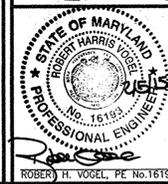
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[Signature] DATE 2/15/15
 SIGNATURE OF ENGINEER DATE

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- REFER TO SHEET 14 FOR SEQUENCE OF CONSTRUCTION

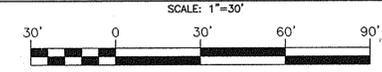
OWNER/DEVELOPER
 BUILDER-LOTS 1-31
 PULTE HOMES
 8965 GUILFORD ROAD - SUITE 290
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 21046
 (410) 720-5071



DESIGN BY: RVE
 DRAWN BY: T/W/RVE/K/S
 CHECKED BY: R/VV
 DATE: JANUARY 2015
 SCALE: AS SHOWN
 W.O. NO.: 11-28.01

PROFESSIONAL CERTIFICATE
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GRADING AND SOIL EROSION AND SEDIMENT CONTROL PLAN



PERMEABLE SURFACE UNDERDRAIN OUTFALL

LOT #	UNDERDRAIN MIN. INVERT*	OUTFALL LOCATION
19	302.73	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
20	303.93	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
21	306.97	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
22	307.27	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
23	305.08	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
24	299.43	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
25	296.71	UNDERDRAIN TO DAYLIGHT AT MBR 8
26	294.62	UNDERDRAIN TO DAYLIGHT AT MBR 3
27	295.02	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
28	294.32	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
29	293.92	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
30	294.62	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
31	295.12	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT

*SEE PLAN FOR DETAILED INVERT PER OVERLOT GRADING CONDITIONS

NOTES:

- REFER TO SHEET 17 FOR DRYWELL (DW) SIZE, NOTES & DETAILS
- REFER TO SHEET 17 FOR RAIN BARREL NOTES & DETAILS
- REFER TO SHEET 17 FOR PERMEABLE SURFACE (POROUS CONCRETE) NOTES AND DETAILS
- REFER TO SHEETS 17&18 FOR MICRO-BIORETENTION AND RAINGARDEN NOTES AND DETAILS
- REFER TO SHEET 17 FOR ROOFTOP DISCONNECTION CRITERIA. DOWNSPOUTS SHALL BE LOCATED WHERE SHOWN HEREON AT MINIMUM AND DIRECTED AT THE GROUND SURFACE TO FLOW IN THE DIRECTION SHOWN

LEGEND:

[Symbol]	PROPERTY LINE
[Symbol]	RIGHT-OF-WAY LINE
[Symbol]	ADJACENT PROPERTY LINE
[Symbol]	EXISTING CURB AND GUTTER
[Symbol]	EXISTING CONTOUR 10
[Symbol]	EXISTING CONTOUR 02
[Symbol]	EXISTING UTILITY POLE
[Symbol]	EXISTING LIGHT POLE
[Symbol]	EXISTING MAILBOX
[Symbol]	EXISTING SIGN
[Symbol]	EXISTING SANITARY MANHOLE
[Symbol]	EXISTING SANITARY LINE
[Symbol]	EXISTING CLEANOUT
[Symbol]	EXISTING FIRE HYDRANT
[Symbol]	EXISTING WATER LINE
[Symbol]	EXISTING TREE LINE (FIELD LOCATED)
[Symbol]	EXISTING TREES (FIELD LOCATED)
[Symbol]	EXISTING STREET TREES (F-14-022)
[Symbol]	EXISTING FENCE
[Symbol]	EXISTING STORMDRAIN
[Symbol]	EXISTING STORMDRAIN INLET
[Symbol]	EXISTING SIDEWALK
[Symbol]	EXISTING USE_IN_COMMON EASEMENT
[Symbol]	EXISTING NON-CREDITED OPEN SPACE
[Symbol]	EXISTING PUBLIC DRAINAGE, SEWER & UTILITY EASEMENT (F-14-022)
[Symbol]	EXISTING PUBLIC DRAINAGE, SWM & UTILITY EASEMENT (F-14-022)
[Symbol]	EXISTING PRIVATE DRAINAGE, SWM & UTILITY EASEMENT (F-14-022)
[Symbol]	EXISTING PUBLIC SEWER & UTILITY EASEMENT (F-14-022)
[Symbol]	EX. FOREST CONSERVATION AREA APPROVED F-14-022
[Symbol]	EX. PATHWAY APPROVED F-14-022
[Symbol]	EXISTING MICRO-BIO RETENTION AREA (F-14-022)
[Symbol]	PROPOSED LIMIT OF DISTURBANCE
[Symbol]	PROPOSED SUPER SILT FENCE
[Symbol]	PROPOSED 10' CONTOUR
[Symbol]	PROPOSED 2' CONTOUR
[Symbol]	PROPOSED STABILIZED CONSTRUCTION ENTRANCE

NOTE:
 SUPER SILT FENCE MAY BE REPLACED BY STANDARD SILT FENCE WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR

NO.	REVISION	DATE
1	REMOVE PORTION OF PUBLIC 20' SEWER EASEMENT	7/24/15

SITE DEVELOPMENT PLAN
 GRADING, SOIL EROSION & SEDIMENT CONTROL AND SOILS PLAN
 HIGH RIDGE MEADOWS - SECTION ONE
 LOTS 1 - 54

6TH ELECTION DISTRICT - TAX MAP: 50 GRID: 1
 DPZ REF'S: F-10-065, WP-10-087, ECP-12-047, WP-13-080, SP-13-007, F14-022

ZONED: R-SC
 PARCELS: 363 & 542
 HOWARD COUNTY, MARYLAND

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

PERMEABLE SURFACE UNDERDRAIN OUTFALL

LOT #	UNDERDRAIN MIN. INVERT*	OUTFALL LOCATION
32	317.57	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
33	319.06	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
34	319.12	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
35	318.33	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
36	318.25	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
37	318.73	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
38	319.24	UNDERDRAIN TO ENTER MANHOLE 20
39	320.04	UNDERDRAIN TO ENTER MANHOLE 20
40	322.02	UNDERDRAIN SHALL ENTER I-30
41	325.06	UNDERDRAIN SHALL ENTER I-30
42	327.54	UNDERDRAIN TO DAYLIGHT FRONT YARD LOT 41/42 COMMON CORNER
43	326.82	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
44	323.86	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
45	321.24	UNDERDRAIN TO DAYLIGHT AT BIOSWALE B
46	318.78	UNDERDRAIN TO DAYLIGHT AT MBR B-1
47	321.22	UNDERDRAIN TO DAYLIGHT FRONT YARD LOT 46/47 COMMON CORNER
48	322.27	UNDERDRAIN TO COMBINE WITH LOT 9 UNDERDRAIN AT COMMON PROPERTY LINE

*SEE PLAN FOR DETAILED INVERT PER OVERLOT GRADING CONDITIONS

- NOTES:**
- REFER TO SHEET 17 FOR DRYWELL (DW) SIZE, NOTES & DETAILS
 - REFER TO SHEET 17 FOR RAIN BARREL NOTES & DETAILS
 - REFER TO SHEET 17 FOR PERMEABLE SURFACE (POROUS CONCRETE) NOTES AND DETAILS
 - REFER TO SHEETS 17&18 FOR MICRO-BIORETENTION AND RAINGARDEN NOTES AND DETAILS
 - REFER TO SHEET 17 FOR ROOFTOP DISCONNECTION CRITERIA. DOWNSPOUTS SHALL BE LOCATED WHERE SHOWN HEREON AT MINIMUM AND DIRECTED AT THE GROUND SURFACE TO FLOW IN THE DIRECTION SHOWN

NOTE:
STABILIZATION IS TO BE DONE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE INTERVALS REQUIRED BY THE 2011 STDS. & SPECS. WHICHEVER IS MORE RESTRICTIVE.

NOTE:
EITHER PERMANENT OR TEMPORARY STABILIZATION IS TO BE APPLIED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR REGARDLESS OF DAYS/DATES IN THE STANDARD SEDIMENT CONTROL NOTES AND/OR SEEDING SPECIFICATIONS.

NOTE:
- SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
- SILT FENCE SHALL BE CURLED UPHILL. NO MORE THAN 35 FEET APART
- DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

MAPPED SOILS TYPES

SYMBOL NAME / DESCRIPTION	GROUP	HYDRIC	EROSION INCLUDING	Kw RANGE*	ERODIBILITY FACTOR	PERCENT EROSION
CeB CHILLUM LOAM, 2 TO 5 PERCENT SLOPES	B	NO		0.15 - 0.37		NO
CeC CHILLUM LOAM, 5 TO 10 PERCENT SLOPES	B	NO		0.15 - 0.37		PARTIAL
CdD CROWN & BUCKSKIN, 10 TO 15 PERCENT SLOPES	C	NO		0.28		NO
Fg FALLSINGTON SANDY LOAM, 0 TO 2 PERCENT SLOPES	D	YES		0.02 - 0.24		NO
SfB SASSAPARAS GROWELLY SANDY LOAM, 2 TO 5 PERCENT SLOPES	B	NO		0.17 - 0.24		NO
SfD SASSAPARAS AND CROWN SOILS, 10 TO 15 PERCENT SLOPES	B	NO		0.32 - 0.37		PARTIAL
UcB URBAN LAND-CHILLUM-BELTSVILLE COMPLEX, 0 TO 5 PERCENT SLOPES	D	NO		0.37		NO

NOTE:
TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
K-FACTOR = Kw @ 0-4° SLOPE
*BASED UPON ESTIMATED CUTS
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

NOTE: LOCATE STOCKPILE AS SHOWN HEREON OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. ANY STOCKPILES EXCEEDING 15 FEET IN HEIGHT SHALL BE BENCHED.

NOTE: STOCKPILING WILL BE PERMITTED ON EACH LOT ONLY.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Johnson 3-6-15
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Robert H. Vogel 3-19-15
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

David McLaughlin 3/30/15
DIRECTOR DATE

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

John R. Rhoton 2/19/15
HOWARD S.C.D. DATE

BY THE DEVELOPER:

I HEREBY 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] 3/24/15
SIGNATURE OF DEVELOPER DATE

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.

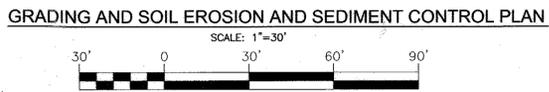
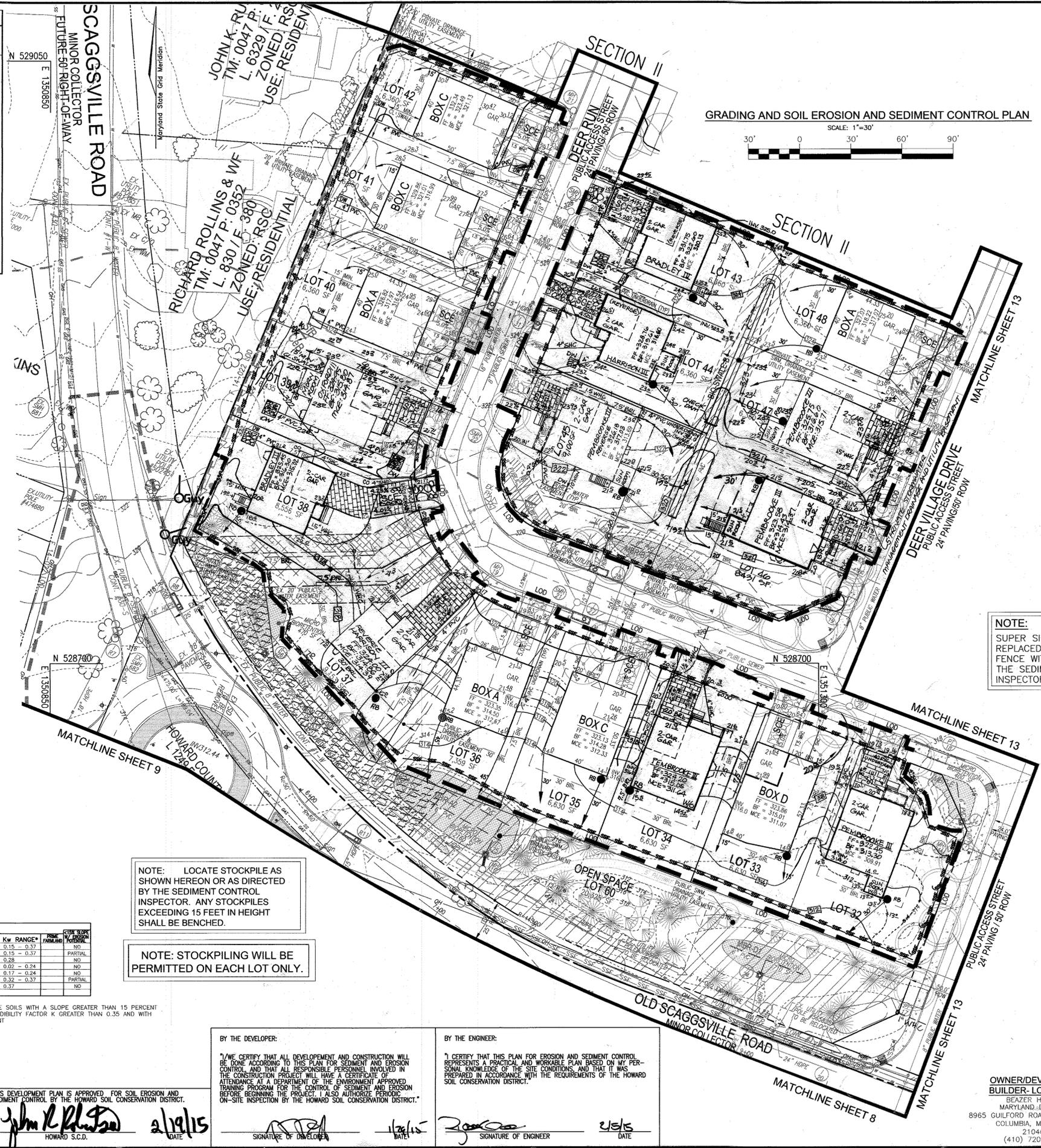
[Signature] 3/24/15
SIGNATURE OF ENGINEER DATE

OWNER/DEVELOPER
BUILDER: LOTS 32-54
BEAZER HOMES
MARYLAND DIVISION
8965 GUILFORD ROAD - SUITE 290
COLUMBIA, MARYLAND
21046
(410) 720-5071

DESIGN BY: RVE
DRAWN BY: TWW/RVE/KG
CHECKED BY: RNV
DATE: JANUARY 2015
SCALE: AS SHOWN
W.O. NO.: 11-28.01

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

12 SHEET OF 19



LEGEND:

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CONTOUR 02
	EXISTING CONTOUR 10
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING TREE LINE (FIELD LOCATED)
	EXISTING TREES (F-14-022)
	EXISTING STREET TREES (F-14-022)
	EXISTING FENCE
	EXISTING STORMDRAIN
	EXISTING STORMDRAIN INLET
	EXISTING SIDEWALK
	EXISTING NON-CREDITED OPEN SPACE
	EXISTING PATHWAY APPROVED F-14-022
	EXISTING PUBLIC DRAINAGE, SWM & UTILITY EASEMENT (F-14-022)
	EXISTING PRIVATE DRAINAGE, SWM & UTILITY EASEMENT (F-14-022)
	EX. PUBLIC WATER EASEMENT APPROVED F-14-022
	EX. MICRO-BIO RETENTION AREA APPROVED F-14-022
	EXISTING PUBLIC DRAINAGE, SEWER & UTILITY EASEMENT (F-14-022)
	PROPOSED LIMIT OF DISTURBANCE
	PROPOSED SUPER SILT FENCE
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR
	PROPOSED STABILIZED CONSTRUCTION ENTRANCE

- NOTES**
- REFER TO SHEET 14 FOR STANDARD DETAILS AND STABILIZATION NOTES
 - REFER TO SHEET 14 FOR SEQUENCE OF CONSTRUCTION

NOTE:
SUPER SILT FENCE MAY BE REPLACED BY STANDARD SILT FENCE WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR

NO.	REVISION	DATE
9	REVISE HOUSE TYPE AND GRADING LOT 38	11/17/10
8	REVISE HOUSE TYPE AND GRADING LOT 52 AND 53	10/28/10
6	REVISE HOUSE TYPE AND GRADING LOT 32, REVISE PRIVATE UNDERDRAIN FROM 6" TO 4"	6/13/14
1	REVISE HOUSE TYPE AND GRADING LOT 32	8/17/10
5	REVISE HOUSE TYPE AND GRADING LOT 45 & 44	4/05/10
4	ADD PEMBROOKE III TO LOT 47	5/16/15
3	ADD HARRISON III TO LOT 37	2-9-16
2	ADD PEMBROOKE III TO LOT 45	12-22-15
1	REVISE HOUSE TYPE TO CHOSEN MODEL, LOT 34 & 40	7/24/15

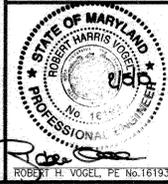
**SITE DEVELOPMENT PLAN
GRADING, SOIL EROSION &
SEDIMENT CONTROL AND SOILS PLAN**

HIGH RIDGE MEADOWS - SECTION ONE
LOTS 1 - 54

5TH ELECTION DISTRICT - TAX MAP: 50 GRD: 1
DPZ REFS: F-10-065, WP-10-087, ECP-12-047,
WP-13-090, SP 13-007, F14-022

ZONED: R-SC
PARCELS: 363 & 542
HOWARD COUNTY, MARYLAND

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



PERMEABLE SURFACE UNDERDRAIN OUTFALL		
LOT #	UNDERDRAIN	OUTFALL LOCATION
	MIN. INVERT*	
* SEE PLAN FOR DETAILED INVERT PER OVERLOT GRADING CONDITIONS		
49	306.32	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
50	306.32	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
51	306.42	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
52	308.63	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
53	311.29	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT
54	312.41	UNDERDRAIN TO DAYLIGHT TOWARDS REAR LOT AT DETAILED INVERT

- NOTES:**
- REFER TO SHEET 17 FOR DRYWELL (DW) SIZE, NOTES & DETAILS
 - REFER TO SHEET 17 FOR RAIN BARREL NOTES & DETAILS
 - REFER TO SHEET 17 FOR PERMEABLE SURFACE (POROUS CONCRETE) NOTES AND DETAILS
 - REFER TO SHEETS 17&18 FOR MICRO-BIORETENTION AND RAINGARDEN NOTES AND DETAILS
 - REFER TO SHEET 17 FOR ROOFTOP DISCONNECTION CRITERIA. DOWNSPOUTS SHALL BE LOCATED WHERE SHOWN HEREON AT MINIMUM AND DIRECTED AT THE GROUND SURFACE TO FLOW IN THE DIRECTION SHOWN

NOTE:
STABILIZATION IS TO BE DONE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE INTERVALS REQUIRED BY THE 2011 STDS. & SPECS. WHICHEVER IS MORE RESTRICTIVE.

NOTE:
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NOTE: LOCATE STOCKPILE AS SHOWN HEREON OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. ANY STOCKPILES EXCEEDING 15 FEET IN HEIGHT SHALL BE BENCHED.

NOTE: STOCKPILING WILL BE PERMITTED ON EACH LOT ONLY.

NOTE:
- SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
- SILT FENCE SHALL BE CURLED UPHILL. NO MORE THAN 35 FEET APART
- DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

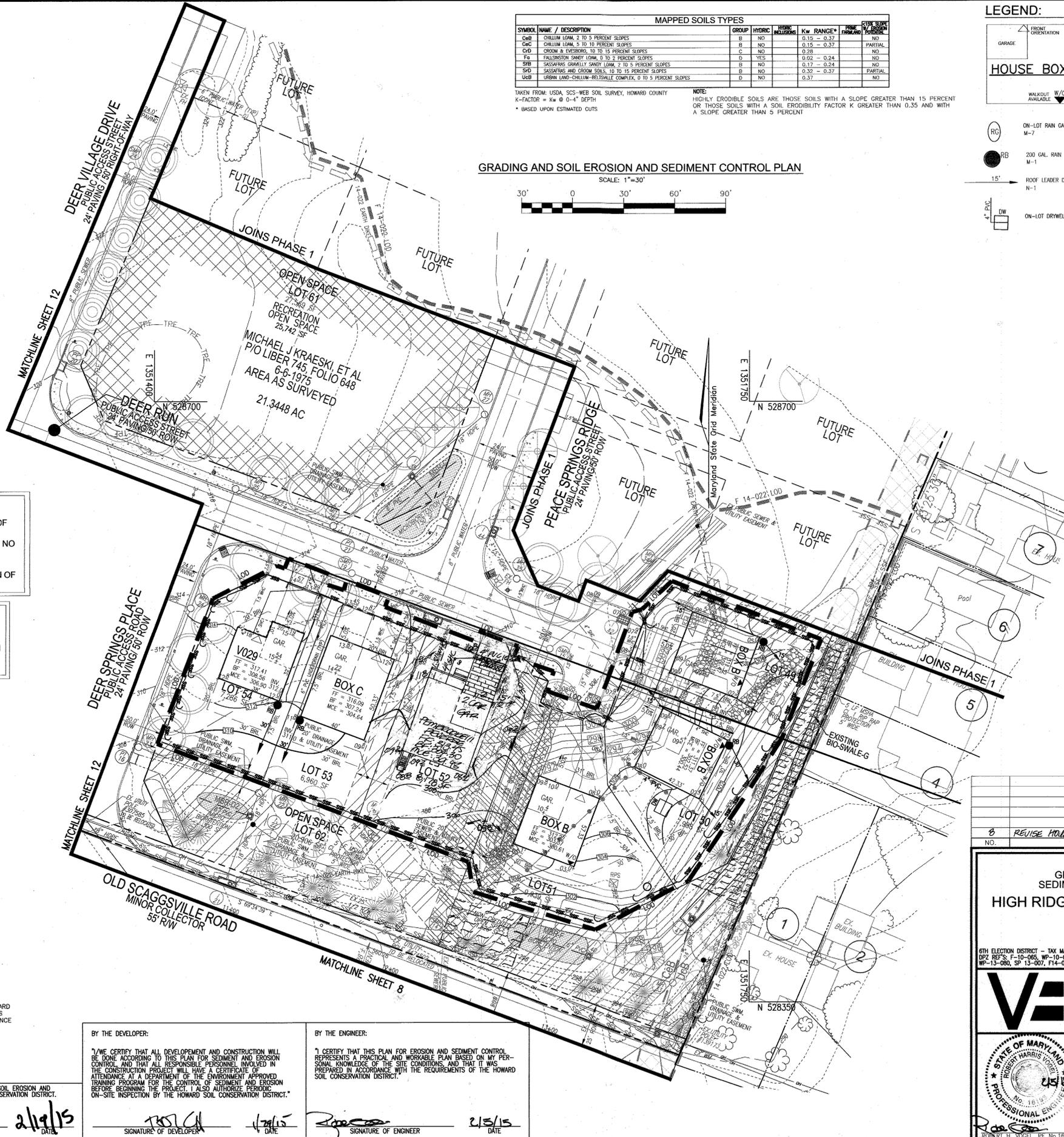
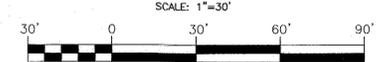
NOTE:
SUPER SILT FENCE MAY BE REPLACED BY STANDARD SILT FENCE WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR

MAPPED SOILS TYPES						
SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT ORGANIC MATTER	Kw RANGE*	CLAY PERCENT
CeB	CHILLUM LOAM, 2 TO 5 PERCENT SLOPES	B	NO	0.15 - 0.37	NO	NO
CcC	CHILLUM LOAM, 5 TO 10 PERCENT SLOPES	B	NO	0.15 - 0.37	PARTIAL	NO
CdD	CHILLUM LOAM, 10 TO 15 PERCENT SLOPES	C	NO	0.28	NO	NO
Fa	FALLSINGTON SANDY LOAM, 0 TO 2 PERCENT SLOPES	D	YES	0.02 - 0.24	NO	NO
SbB	SASAPANS GRANELLY SANDY LOAM, 2 TO 5 PERCENT SLOPES	B	NO	0.17 - 0.24	NO	NO
SdD	SASAPANS AND CHILLUM SOILS, 10 TO 15 PERCENT SLOPES	B	NO	0.30 - 0.37	PARTIAL	NO
UcB	URBAN LAND-CHILLUM-BEYONDALE COMPLEX, 0 TO 5 PERCENT SLOPES	D	NO	0.37	NO	NO

TAKEN FROM: USDA, SCS-WE8 SOIL SURVEY, HOWARD COUNTY
K-FACTOR = Kw @ 2-4" DEPTH
* BASED UPON ESTIMATED CUTS

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

GRADING AND SOIL EROSION AND SEDIMENT CONTROL PLAN



LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- EXISTING CONTOUR 10
- EXISTING CONTOUR 02
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING TREELINE (FIELD LOCATED)
- EXISTING TREES (F-14-022)
- EXISTING STREET TREES (F-14-022)
- EXISTING FENCE
- EXISTING STORMDRAIN
- EXISTING STORMDRAIN INLET
- EXISTING SIDEWALK
- EXISTING NON-CREDITED OPEN SPACE
- EXISTING PUBLIC DRAINAGE, SEWER & UTILITY EASEMENT (F-14-022)
- EXISTING PUBLIC DRAINAGE, SWM & UTILITY EASEMENT (F-14-022)
- EXISTING PRIVATE DRAINAGE, SWM & UTILITY EASEMENT (F-14-022)
- EXISTING MICRO-BIO RETENTION AREA (F-14-022)
- EX. PUBLIC WATER EASEMENT APPROVED F-14-022
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED SUPER SILT FENCE
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE

OWNER/DEVELOPER
BUILDER- LOTS 32-54
BEAZER HOMES
MARYLAND DIVISION
8965 GUILFORD ROAD - SUITE 290
COLUMBIA, MARYLAND
21046
(410) 720-5071

NO.	REVISION	DATE
0	REVISE HOUSE TYPE AND GRADING LOT 52 AND 54	1/28/15

SITE DEVELOPMENT PLAN
GRADING AND SOIL EROSION & SEDIMENT CONTROL AND SOILS PLAN
HIGH RIDGE MEADOWS - SECTION ONE
LOTS 1 - 54

6TH ELECTION DISTRICT - TAX MAP: 50 GRID: 1
DPZ REF'S: F-10-065, WP-10-087, ECP-12-047, WP-13-080, SP 13-007, F14-022
ZONED: R-SC
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HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
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TEL: 410-461-7666
FAX: 410-461-8996

STATE OF MARYLAND
ROBERT H. VOGEL
PROFESSIONAL ENGINEER
No. 16193

DESIGN BY: RVE
DRAWN BY: LJV/RVF/KG
CHECKED BY: RRV
DATE: JANUARY 2015
SCALE: AS SHOWN
W.O. NO.: 11-28.01

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

13 SHEET OF 19

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 3-6-15
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 3-19-15
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 3/30/15
DIRECTOR

- NOTES**
- REFER TO SHEET 14 FOR STANDARD DETAILS AND STABILIZATION NOTES
 - REFER TO SHEET 14 FOR SEQUENCE OF CONSTRUCTION

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

BY THE DEVELOPER:

I/WE 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] 2/19/15
SIGNATURE OF DEVELOPER

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.

[Signature] 2/15/15
SIGNATURE OF ENGINEER

**HOWARD SOIL CONSERVATION DISTRICT
STANDARD SEDIMENT CONTROL NOTES**

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION. (313-1855).

2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL," AND REVISIONS THERETO.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A 3 CALENDAR DAYS FOR ALL PERMETER SEDIMENT CONTROL STRUCTURES, DUES, FENCEMENTS SLOPES AND ALL SLOPES GREATER THAN 3:1. (3) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.

6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

7. SITE ANALYSIS:
TOTAL AREA OF SITE AREA DISTURBED AREA TO BE REEDED OR PAVED AREA TO BE VEGETATED STABILIZED TOTAL CUT TOTAL FILL OPERATE W/SHOULDER AREA LOCATION

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DESTROYED BY GRADING ACTIVITY FOR REPLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL BY THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

11. TECHNIQUES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

12. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MINIMUM ACREAGE OF 20 ACRES PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES COMBINED MAY BE DISTURBED AT ONE TIME.

* ESTIMATE ONLY; CONTRACTOR SHALL VERIFY QUANTITIES TO HIS OWN SATISFACTION.
** AREA INCLUDES EXISTING OLD SCAVVENILLE ROAD RIGHT-OF-WAY

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION
TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE
TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES
EXPOSED SOILS WHERE GRASS COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA

A. SOIL PREPARATION
1. GENERAL USE
D. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3.) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY.

2. TURFGRASS MIXTURES
A. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
B. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITION OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
C. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
D. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3-1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.

3. TURFGRASS MIXTURES
A. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
B. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITION OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
C. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
D. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3-1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.

4. SOIL PREPARATION
I. SOIL TESTS ARE REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
I. SOIL PH BETWEEN 6.0 AND 7.0
II. SOLUBLE SALTS LESS THAN 300 PARTS PER MILLION (PPM)
III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOGGERS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
V. SOIL CONTAINS SUFFICIENT POOR SPACE TO PERMIT AERATE ROLL PENETRATION.
6. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
G. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCORPED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
D. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
E. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDING PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRABLE. SEEDING LOOSENESS MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

7. TOPSOILING AND MULCHING
A. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE SOIL MUST BE PLACED TO A MINIMUM DEPTH OF 4 INCHES. TOPSOIL WITH SOLUBLE SALTS OF CONCENTRATION HIGHER THAN 300 PARTS PER MILLION (PPM), MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRAIN DISTRIBUTION UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
B. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THaws.
C. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER, AND FRESH INOCULANTS AS DIRECTED ON THE PACKAGE USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSCOPIC. NOTE: IF A NEW INOCULANT IS USED AS COOL AS POSSIBLE UNTIL USE. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
D. INOCULANTS MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL. SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

8. SEEDING
1. SPECIFICATIONS
A. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING AT A RECOGNIZED SEED LABORATORY. ALL SEED MUST HAVE BEEN TESTED WITHIN 12 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE.
B. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THaws.
C. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER, AND FRESH INOCULANTS AS DIRECTED ON THE PACKAGE USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSCOPIC. NOTE: IF A NEW INOCULANT IS USED AS COOL AS POSSIBLE UNTIL USE. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
D. INOCULANTS MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL. SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

2. APPLICATION
A. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
I. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON THE PERMANENT SEEDING SUMMARY TABLE B.3. PERMANENT SEEDING SHALL BE PERFORMED IN SUCH A MANNER THAT SEEDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND THUS, ANY IRREGULARITIES IN THE PRACTICE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
C. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MOISTY CONDITION. WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETERMINAL TO PROPER GRADING AND SEEDING PREPARATION.
3. SOIL AMENDMENTS (FERTILIZER AND LIMESTONE)
I. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATES AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSIS.
2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FINE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PROOF APPROVAL FROM THE APPROVED APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME, OR TRADEMARK AND WARRANTY OF THE PRODUCER.
3. LIME MATERIALS MUST BE GROUND LIMESTONE (NORMALLY OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
5. WHERE THE SUBSOIL IS EITHER HEAVY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

4. SOIL INSTALLATION
A. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOIL.
B. LAY THE FIRST ROW OF SOIL IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOIL IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT MOISTURE WHICH WOULD CAUSE AIR DRIVING OF THE ROOTS.
C. WHEREVER POSSIBLE, LAY SOIL WITH LONG EXPOSED EDGES TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PER OR OTHERWISE SECURE THE SOIL TO PREVENT SLIP ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOIL ROOTS AND THE UNDERLYING SOIL SURFACE.
D. WATER THE SOIL IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOIL PAD AND SOIL SURFACE BELOW THE SOIL ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PRICE OF SOIL WITHIN EIGHT HOURS.

5. SOIL MAINTENANCE
A. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOIL DURING THE HEAT OF THE DAY TO PREVENT WILTING.
B. AFTER THE FIRST WEEK, SOIL WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
C. DO NOT MOW UNTIL THE SOIL IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

R-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS

DEFINITION
THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

PURPOSE
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES
WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA

A. SOIL PREPARATION
1. TEMPORARY STABILIZATION
A. SEEDING PREPARATION CONSISTS OF LOOSING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL, PLOW, OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
B. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
C. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
2. PERMANENT STABILIZATION
A. SOIL TESTS ARE REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
I. SOIL PH BETWEEN 6.0 AND 7.0
II. SOLUBLE SALTS LESS THAN 300 PARTS PER MILLION (PPM)
III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOGGERS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
V. SOIL CONTAINS SUFFICIENT POOR SPACE TO PERMIT AERATE ROLL PENETRATION.
6. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
G. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCORPED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
D. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
E. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDING PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRABLE. SEEDING LOOSENESS MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

7. TOPSOILING AND MULCHING
A. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE SOIL MUST BE PLACED TO A MINIMUM DEPTH OF 4 INCHES. TOPSOIL WITH SOLUBLE SALTS OF CONCENTRATION HIGHER THAN 300 PARTS PER MILLION (PPM), MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRAIN DISTRIBUTION UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
B. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THaws.
C. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER, AND FRESH INOCULANTS AS DIRECTED ON THE PACKAGE USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSCOPIC. NOTE: IF A NEW INOCULANT IS USED AS COOL AS POSSIBLE UNTIL USE. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
D. INOCULANTS MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL. SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

8. SEEDING
1. SPECIFICATIONS
A. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING AT A RECOGNIZED SEED LABORATORY. ALL SEED MUST HAVE BEEN TESTED WITHIN 12 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE.
B. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THaws.
C. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER, AND FRESH INOCULANTS AS DIRECTED ON THE PACKAGE USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSCOPIC. NOTE: IF A NEW INOCULANT IS USED AS COOL AS POSSIBLE UNTIL USE. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
D. INOCULANTS MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL. SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

2. APPLICATION
A. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
I. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON THE PERMANENT SEEDING SUMMARY TABLE B.3. PERMANENT SEEDING SHALL BE PERFORMED IN SUCH A MANNER THAT SEEDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND THUS, ANY IRREGULARITIES IN THE PRACTICE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
C. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MOISTY CONDITION. WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETERMINAL TO PROPER GRADING AND SEEDING PREPARATION.
3. SOIL AMENDMENTS (FERTILIZER AND LIMESTONE)
I. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATES AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSIS.
2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FINE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PROOF APPROVAL FROM THE APPROVED APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME, OR TRADEMARK AND WARRANTY OF THE PRODUCER.
3. LIME MATERIALS MUST BE GROUND LIMESTONE (NORMALLY OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
5. WHERE THE SUBSOIL IS EITHER HEAVY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

4. SOIL INSTALLATION
A. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOIL.
B. LAY THE FIRST ROW OF SOIL IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOIL IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT MOISTURE WHICH WOULD CAUSE AIR DRIVING OF THE ROOTS.
C. WHEREVER POSSIBLE, LAY SOIL WITH LONG EXPOSED EDGES TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PER OR OTHERWISE SECURE THE SOIL TO PREVENT SLIP ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOIL ROOTS AND THE UNDERLYING SOIL SURFACE.
D. WATER THE SOIL IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOIL PAD AND SOIL SURFACE BELOW THE SOIL ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PRICE OF SOIL WITHIN EIGHT HOURS.

5. SOIL MAINTENANCE
A. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOIL DURING THE HEAT OF THE DAY TO PREVENT WILTING.
B. AFTER THE FIRST WEEK, SOIL WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
C. DO NOT MOW UNTIL THE SOIL IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION
THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE
TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES
TO THE SURFACE OF ALL PERMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA

A. SEEDING
1. SPECIFICATIONS
A. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING AT A RECOGNIZED SEED LABORATORY. ALL SEED MUST HAVE BEEN TESTED WITHIN 12 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE.
B. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THaws.
C. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER, AND FRESH INOCULANTS AS DIRECTED ON THE PACKAGE USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSCOPIC. NOTE: IF A NEW INOCULANT IS USED AS COOL AS POSSIBLE UNTIL USE. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
D. INOCULANTS MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL. SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

2. APPLICATION
A. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
I. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON THE PERMANENT SEEDING SUMMARY TABLE B.3. PERMANENT SEEDING SHALL BE PERFORMED IN SUCH A MANNER THAT SEEDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND THUS, ANY IRREGULARITIES IN THE PRACTICE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
C. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MOISTY CONDITION. WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETERMINAL TO PROPER GRADING AND SEEDING PREPARATION.
3. SOIL AMENDMENTS (FERTILIZER AND LIMESTONE)
I. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATES AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSIS.
2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FINE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PROOF APPROVAL FROM THE APPROVED APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME, OR TRADEMARK AND WARRANTY OF THE PRODUCER.
3. LIME MATERIALS MUST BE GROUND LIMESTONE (NORMALLY OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
5. WHERE THE SUBSOIL IS EITHER HEAVY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

4. SOIL INSTALLATION
A. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOIL.
B. LAY THE FIRST ROW OF SOIL IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOIL IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT MOISTURE WHICH WOULD CAUSE AIR DRIVING OF THE ROOTS.
C. WHEREVER POSSIBLE, LAY SOIL WITH LONG EXPOSED EDGES TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PER OR OTHERWISE SECURE THE SOIL TO PREVENT SLIP ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOIL ROOTS AND THE UNDERLYING SOIL SURFACE.
D. WATER THE SOIL IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOIL PAD AND SOIL SURFACE BELOW THE SOIL ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PRICE OF SOIL WITHIN EIGHT HOURS.

5. SOIL MAINTENANCE
A. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOIL DURING THE HEAT OF THE DAY TO PREVENT WILTING.
B. AFTER THE FIRST WEEK, SOIL WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
C. DO NOT MOW UNTIL THE SOIL IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

B-4-2 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

DEFINITION
A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.

PURPOSE
TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, STABILIZATION, AND CHANGES TO DRAINAGE PATTERNS.

CONDITIONS WHERE PRACTICE APPLIES
STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

CRITERIA

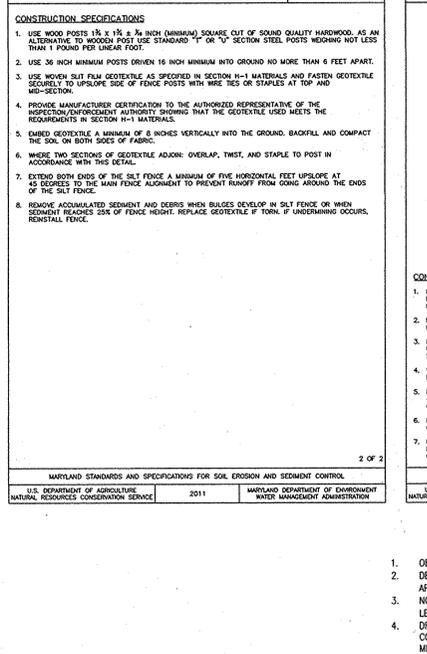
1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.
2. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3.4 LAND GRADING.
3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE.
4. CLEAR THE STOCKPILE AREA FROM THE UPGRADE SIDE.
5. ACCESS WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MANAGED BY USE OF A DRAINAGE DITCH SUCH AS AN EARTH DITCH, TURFGRASS SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.
6. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.
7. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INTERCERIAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.
8. IF THE STOCKPILE IS LOCATED ON AN IMPERMEABLE SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

MAINTENANCE
THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4. VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3.4 LAND GRADING.

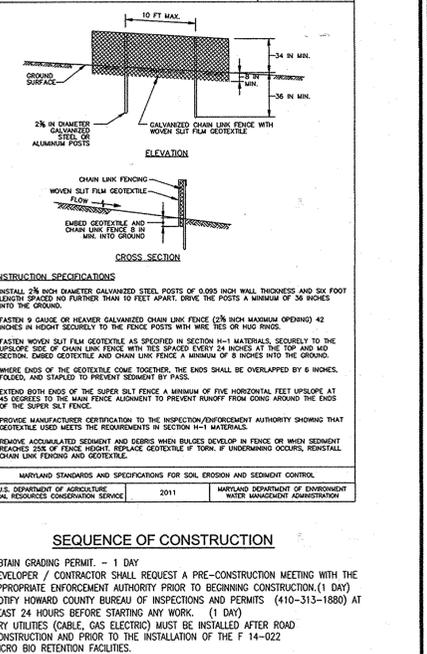
MULCHING
A. MULCH MATERIALS (IN ORDER OF PREFERENCE)
I. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOIST, GREEN, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
II. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
I. WCFM IS TO BE DIED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORM SPREADING SLURRY.
II. WCFM INOCULANTS MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
III. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
IV. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
V. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 1 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MAXIMUM.

2. APPLICATION
A. APPLY MULCH TO ALL SEEDER AREAS IMMEDIATELY AFTER SEEDING.
B. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE TO A UNIFORM SOIL DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
C. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
3. ANCHORING
A. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD.
I. A MULCH ANCHORING TOOL IS A TRACTOR DRIVEN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE. A MINIMUM OF 2 INCHES THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES. WHEDEE EQUIPMENT CAN OPERATE SAFELY IF USED ON SLOPING LAND. THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
II. WOOD CELLULOSE FIBER MULCH CAN BE USED FOR ANCHORING STRAW. APPLY THE FIBER BANDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
III. SHOWNING BUNDLES SUCH AS ACROSS OR (GRO-ROCK), DOCK-70, PETROSET, TERRA TAC, OR OTHER APPROVED EQUIPMENT MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN WALLS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
IV. MULCH AND PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

DETAIL E-1 SILT FENCE



DETAIL E-3 SUPER SILT FENCE



B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION
TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE
TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

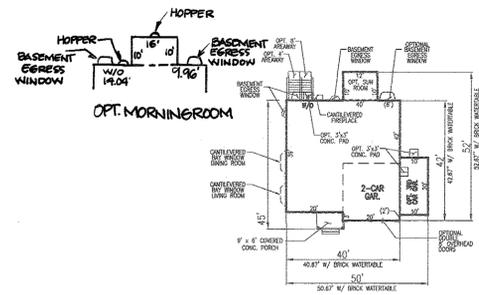
CONDITIONS WHERE PRACTICE APPLIES
EXPOSED SOILS WHERE GRASS COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.4 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3.) AND ENTER THEM IN THE PERMANENT SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3A.1.1 AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

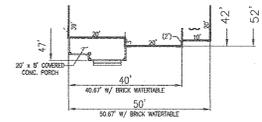
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)		LIME RATE (90
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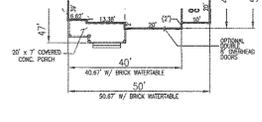
ELEV TRM
W/ OPT. BRICK WATERTABLE
(ALL OPTIONS)



ELEV TRN
W/ OPT. BRICK WATERTABLE



ELEV TRO
W/ OPT. BRICK WATERTABLE



ELEV TRP
W/ OPT. BRICK WATERTABLE



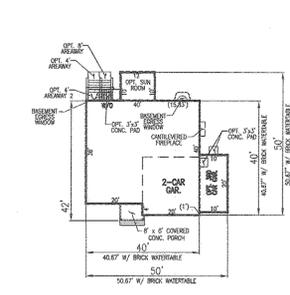
ELEV TRQ
W/ OPT. BRICK WATERTABLE



ELEV TRR
W/ OPT. BRICK WATERTABLE



BMD-V054
OXFORD III - V2.0
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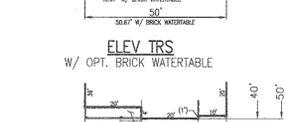
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W/ OPT. BRICK WATERTABLE
(ALL OPTIONS)



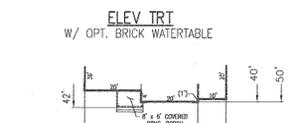
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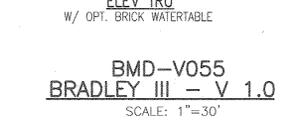
ELEV TRP
W/ OPT. BRICK WATERTABLE



ELEV TRS
W/ OPT. BRICK WATERTABLE



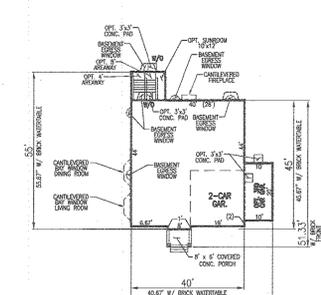
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W/ OPT. BRICK WATERTABLE



ELEV TRU
W/ OPT. BRICK WATERTABLE



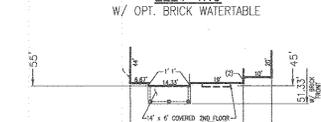
BMD-V055
BRADLEY III - V 1.0
SCALE: 1"=30'



ELEV TRN
W/ OPT. BRICK WATERTABLE
(ALL OPTIONS)



ELEV TRO
W/ OPT. BRICK WATERTABLE



ELEV TRP
W/ OPT. BRICK WATERTABLE



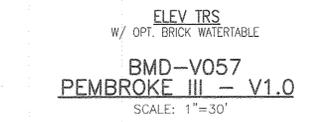
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W/ OPT. BRICK WATERTABLE



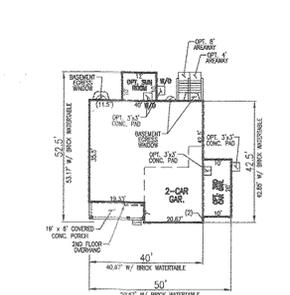
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W/ OPT. BRICK WATERTABLE



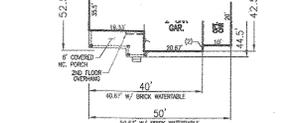
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W/ OPT. BRICK WATERTABLE



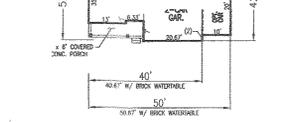
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PEMBROKE III - V1.0
SCALE: 1"=30'



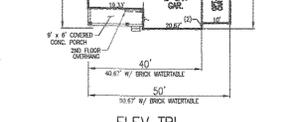
ELEV TRA
W/ OPT. BRICK WATERTABLE
(ALL OPTIONS)



ELEV TRB
W/ OPT. BRICK WATERTABLE



ELEV TRC
W/ OPT. BRICK WATERTABLE



ELEV TRD
W/ OPT. BRICK WATERTABLE



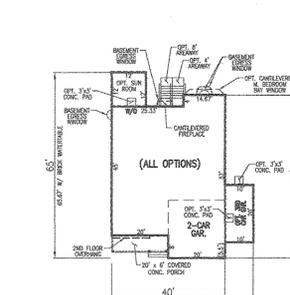
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W/ OPT. BRICK WATERTABLE



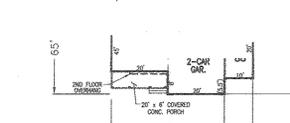
ELEV TRF
W/ OPT. BRICK WATERTABLE



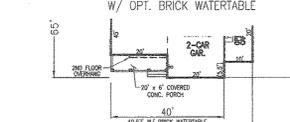
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NOTTINGHAM III - V2.0
SCALE: 1"=30'



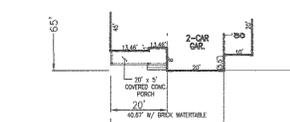
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W/ OPT. BRICK WATERTABLE



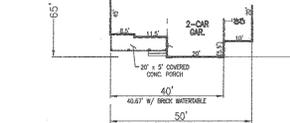
ELEV TRM
W/ OPT. BRICK WATERTABLE



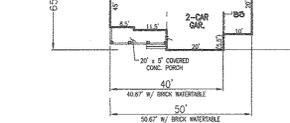
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W/ OPT. BRICK WATERTABLE



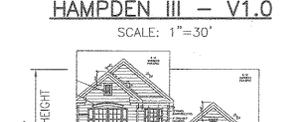
ELEV TRO
W/ OPT. BRICK WATERTABLE



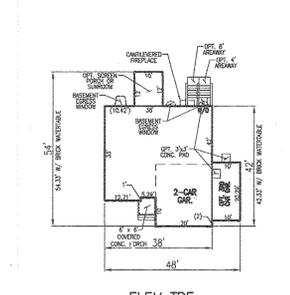
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W/ OPT. BRICK WATERTABLE



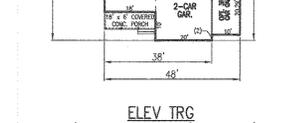
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W/ OPT. BRICK WATERTABLE



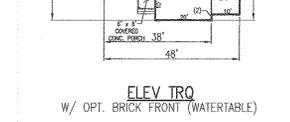
BMD-V060
HAMPDEN III - V1.0
SCALE: 1"=30'



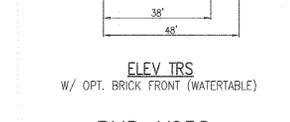
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W/ OPT. BRICK FRONT (WATERTABLE)
(ALL OPTIONS)



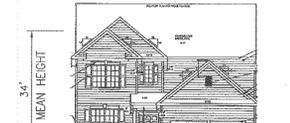
ELEV TRG
W/ OPT. BRICK FRONT (WATERTABLE)



ELEV TRQ
W/ OPT. BRICK FRONT (WATERTABLE)



ELEV TRS
W/ OPT. BRICK FRONT (WATERTABLE)



BMD-V058
HARRISON III - V2.0
SCALE: 1"=30'



OWNER/DEVELOPER
BUILDER- LOTS 32-54
BEAZER HOMES
MARYLAND DIVISION
8965 GUILFORD ROAD - SUITE 290
COLUMBIA, MARYLAND
21048
(410) 720-5071

PURPOSE STATEMENT:
THE PURPOSE OF THIS REDLINE REVISION IS TO ADD SPECIFIC HOUSE TYPES ON LOTS 34 & 46 AS THE CHOSEN MODELS DO NOT FIT IN THEIR RESPECTIVE GENERIC BOXES AND BECAUSE THE BUILDER HAS REVISED THE PROJECT HOUSE MODELS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Plumb
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 9-2-15

Ka. J. Schaefer
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 9-7-15

William Jaffe
DIRECTOR
DATE: 9-4-15

6	ADD MORNING ROOM OPTION TO OXFORD III MODEL	7/2/16
1	REVISE HOUSE ARCHITECTURE / NOMENCLATURE	6 / 2015
NO.	REVISION	DATE

REVISED SITE DEVELOPMENT PLAN
HOUSE TYPES - "BEAZER HOMES"
HIGH RIDGE MEADOWS - SECTION ONE
LOTS 1 - 54

6TH ELECTION DISTRICT - TAX MAP: 50 GRID: 1
UPZ REF'S: F-10-085, WP-10-087, ECP-12-047,
WP-13-080, SP 13-007, F14-022

ZONED: R-5C
PARCELS: 363 & 542
HOWARD COUNTY, MARYLAND

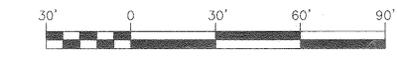
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS

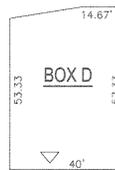
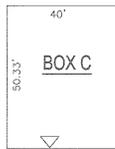
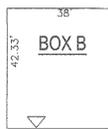
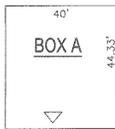
8407 MAIN STREET
ELICOTT CITY, MD 21043
TEL: 410-461-7666
FAX: 410-461-8961

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: RVE
DRAWN BY: T.J.W./R.V./K.G.
CHECKED BY: R.H.V.
DATE: JANUARY 2015
SCALE: AS SHOWN
W.O. NO.: 11-28.01

15 SHEET OF 19





- FITS:
- BMD-V054 - OXFORD III - V2.0
MIN FOOTPRINT 40' X 45'
- DOES NOT FIT
 - BMD-V055 - BRADLEY III - V1.0
MIN FOOTPRINT 40' X 40'
- ALL ELEV
- NO SIDE CHMY
- NO 3 CAR GAR
- NO OPTIONAL PAD
- NO REAR OPTIONS
 - BMD-V057 - PEMBROKE III - V1.0
MIN FOOTPRINT 40' X 51'
- DOES NOT FIT
 - BMD-V056 - NOTTINGHAM III - V2.0
MIN FOOTPRINT 40' X 42.5'
- ELEV TRN, TRC, TRL & TRM
- NO ELEV TRN & TRB
- NO 3 CAR GAR
- NO REAR OPTIONS
- NO OPTIONAL PAD
 - NOTE: FIREPLACE INTERIOR TO MODEL
 - BMD-V060 - HAMPDEN III - V1.0
MIN FOOTPRINT 40' X 57'
- DOES NOT FIT

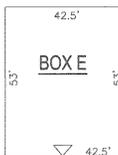
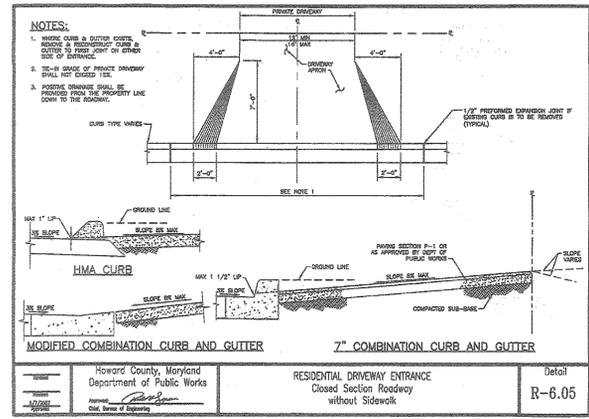
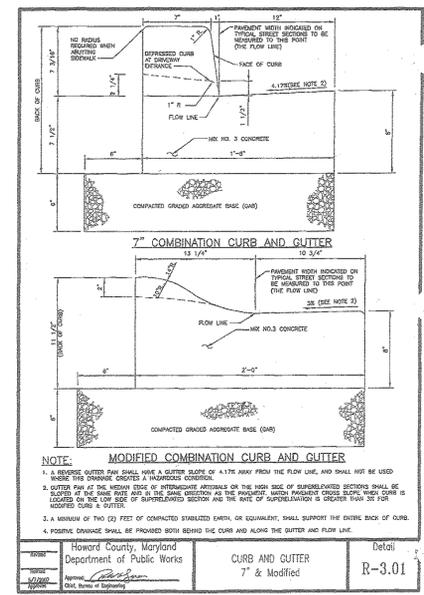
- FITS:
- BMD-V054 - OXFORD III - V2.0
MIN FOOTPRINT 40' X 45'
- DOES NOT FIT
 - BMD-V055 - BRADLEY III - V1.0
MIN FOOTPRINT 40' X 40'
- DOES NOT FIT
 - BMD-V057 - PEMBROKE III - V1.0
MIN FOOTPRINT 40' X 51'
- DOES NOT FIT
 - BMD-V056 - NOTTINGHAM III - V2.0
MIN FOOTPRINT 40' X 42.5'
- DOES NOT FIT
 - BMD-V060 - HAMPDEN III - V1.0
MIN FOOTPRINT 40' X 57'
- DOES NOT FIT
 - BMD-V058 - HARRISON III - V2.0
MIN FOOTPRINT 38' X 42.5'
- ALL ELEV
- NO 3 CAR GAR
- NO SUNROOM OR SCREEN ROOM
- NO REAR OR SIDE OPTIONS

- FITS:
- BMD-V054 - OXFORD III - V2.0
MIN FOOTPRINT 40' X 45'
- ALL ELEV
- NO SIDE BAY WINDOW
- NO 3 CAR GAR
- NO REAR SUNROOM OR MORNING ROOM
- AREAWAY POSSIBLE (STEPS)
- NO OPTIONAL PAD
 - BMD-V055 - BRADLEY III - V1.0
MIN FOOTPRINT 40' X 40'
- ALL ELEV NO SUNROOM
EXCEPT ELEV TRT
- NO SIDE CHMY
- NO 3 CAR GAR
- NO OPTIONAL PAD
 - BMD-V057 - PEMBROKE III - V1.0
MIN FOOTPRINT 40' X 51'
- DOES NOT FIT
 - BMD-V056 - NOTTINGHAM III - V2.0
MIN FOOTPRINT 40' X 42.5'
- ALL ELEV
- NO 3 CAR GAR
- NO SUNROOM OR SCREEN ROOM
- NO REAR OR SIDE OPTIONS

- FITS:
- BMD-V054 - OXFORD III - V2.0
MIN FOOTPRINT 40' X 45'
- ALL ELEV
- NO SIDE BAY WINDOW
- NO 3 CAR GAR
- AREAWAY POSSIBLE (STEPS)
- NO OPTIONAL PAD
- MORNING ROOM ONLY AVAILABLE W/ ELEV. FROM TRN & TRC
 - BMD-V055 - BRADLEY III - V1.0
MIN FOOTPRINT 40' X 40'
- ALL ELEV
- NO SIDE CHMY
- NO 3 CAR GAR
- NO OPTIONAL PAD
 - BMD-V057 - PEMBROKE III - V1.0
MIN FOOTPRINT 40' X 51'
- ALL ELEV
- NO SIDE BAY WINDOW
- NO 3 CAR GAR
- NO SUNROOM
- NO OPTIONAL PAD
 - BMD-V056 - NOTTINGHAM III - V2.0
MIN FOOTPRINT 40' X 42.5'
- ALL ELEV
- NO 3 CAR GAR
- NO OPTIONAL PAD

NOTE:

1. GENERIC HOUSE BOX MODEL FIT SHOWN HEREON
2. HOUSE BOXES ARE GENERIC AND SHOULD NOT BE CONSIDERED LIMITING. ADDITIONAL HOUSE TYPES AND OPTIONS MAY FIT ON ANY GIVEN LOT.
3. IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS, OR EXTERIOR STAIRWAYS 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.
4. MODELS CHOSEN WHICH DO NOT FIT IN THE ABOVE GENERIC BOX, HOWEVER DO FIT ON INDIVIDUAL LOTS, SHALL UTILIZE THE HOWARD COUNTY REDLINE PROCESS.

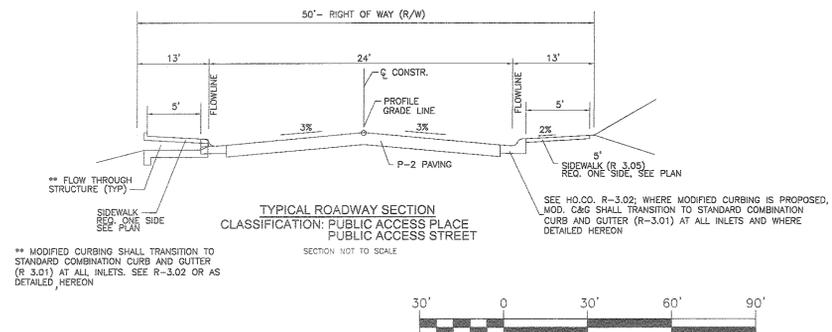


- FITS:
- BMD-V054 - OXFORD III - V2.0
MIN FOOTPRINT 40' X 45'
- ALL ELEV
- NO 3 CAR GAR
- NO SUNROOM OR MORNING ROOM
- NO OPTIONAL PAD
- AREAWAY POSSIBLE (STEPS)
 - BMD-V055 - BRADLEY III - V1.0
MIN FOOTPRINT 40' X 40'
- ALL ELEV
- NO 3 CAR GAR
- NO OPTIONAL PAD
 - BMD-V057 - PEMBROKE III - V1.0
MIN FOOTPRINT 40' X 51'
- ALL ELEV
- NO 3 CAR GAR
- NO SUNROOM
- NO OPTIONAL PAD
 - BMD-V056 - NOTTINGHAM III - V2.0
MIN FOOTPRINT 40' X 42.5'
- ALL ELEV
- NO 3 CAR GAR
- NO OPTIONAL PAD
- ELEV TRN & TRB W/ SUNROOM
 - NOTE: FIREPLACE INTERIOR TO MODEL

- FITS:
- BMD-V054 - OXFORD III - V2.0
MIN FOOTPRINT 40' X 45'
- ALL ELEV
- NO SIDE BAY WINDOW
- NO 3 CAR GAR
- NO REAR SUNROOM OR MORNING ROOM
- AREAWAY POSSIBLE (STEPS)
- NO OPTIONAL PAD
 - BMD-V055 - BRADLEY III - V1.0
MIN FOOTPRINT 40' X 40'
- ALL ELEV
- NO SIDE CHMY
- NO 3 CAR GAR
- NO OPTIONAL PAD
 - BMD-V057 - PEMBROKE III - V1.0
MIN FOOTPRINT 40' X 51'
- ALL ELEV
- NO SIDE BAY WINDOW
- NO 3 CAR GAR
- NO SUNROOM
- NO OPTIONAL PAD
 - BMD-V056 - NOTTINGHAM III - V2.0
MIN FOOTPRINT 40' X 42.5'
- ALL ELEV
- NO 3 CAR GAR
- NO SUNROOM OR SCREEN ROOM
- NO REAR OR SIDE OPTIONS

- FITS:
- BMD-V054 - OXFORD III - V2.0
MIN FOOTPRINT 40' X 45'
- ALL ELEV
- NO SIDE BAY WINDOW
- NO 3 CAR GAR
- NO REAR SUNROOM OR MORNING ROOM
- AREAWAY POSSIBLE (STEPS)
- NO OPTIONAL PAD
 - BMD-V055 - BRADLEY III - V1.0
MIN FOOTPRINT 40' X 40'
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- NO OPTIONAL PAD
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- NO SUNROOM
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 - BMD-V056 - NOTTINGHAM III - V2.0
MIN FOOTPRINT 40' X 42.5'
- ALL ELEV
- NO 3 CAR GAR
- NO OPTIONAL PAD



NO.	REVISION	DATE
6	REVISE HOUSE OPTIONS	7/2/16
1	REVISE HOUSE BOX MATRIX	6 / 2015

REVISED SITE DEVELOPMENT PLAN
GENERIC HOUSE BOXES - "BEAZER HOMES" & DETAILS
 HIGH RIDGE MEADOWS - SECTION ONE
 LOTS 1 - 54

6TH ELECTION DISTRICT - TAX MAP: 50 GRID: 1
 DPZ REFS: F-10-085, WP-10-087, ECP-12-047, WP-13-080, SP 13-007, F14-022

ZONED: R-30
 PARCELS: 363 & 342
 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

OWNER/DEVELOPER
BEAZER HOMES
 MARYLAND DIVISION
 8965 GUILFORD ROAD - SUITE 290 COLUMBIA, MARYLAND 21046 (410) 720-5071

DESIGN BY: RVE
 DRAWN BY: TJW/RVE/KG
 CHECKED BY: RHW
 DATE: JANUARY 2015
 SCALE: AS SHOWN
 W.O. NO.: 11-28.01

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: 09-21-2016

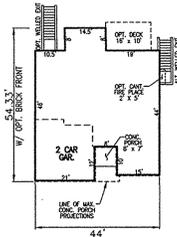
16 SHEET OF 19

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

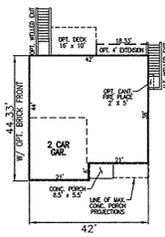
[Signature] 9-2-15
 CHIEF, DEVELOPMENT ENGINEERING DIVISION HP DATE

[Signature] 9-3-15
 CHIEF, DIVISION OF LAND DEVELOPMENT MM DATE

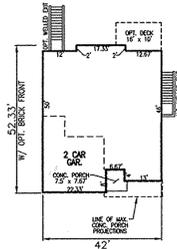
[Signature] 9-4-15
 DIRECTOR DATE



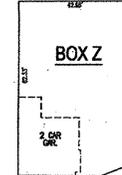
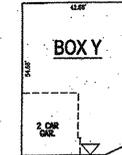
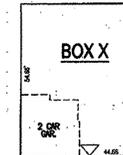
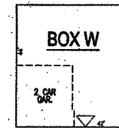
THE CAVANAL
BASE MODEL



THE AVENTINE
w/ OPT. 4' EXTENSION
SCALE: 1"=30'



THE PIEDMONT
BASE PLAN

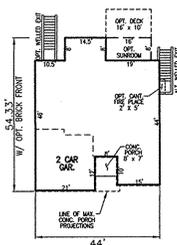


- FITS:
- THE CAVANAL
- HOUSE DOES NOT FIT
- THE AVENTINE
- ALL ELEV
- NO OPTIONAL SUNROOM
- NO OPTIONAL WELLED EXIT
- NO ALT. WELLED EXIT
- NO OPTIONAL 4' EXTENSION
- NO BRICK FRONT
- THE PIEDMONT
- HOUSE DOES NOT FIT

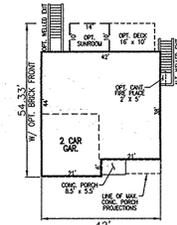
- FITS:
- THE CAVANAL
- ALL ELEV
- NO OPTIONAL WELLED EXIT
- THE AVENTINE
- ALL ELEV
- NO OPTIONAL WELLED EXIT
- THE PIEDMONT
- ALL ELEV
- NO OPTIONAL SUNROOM
- NO OPTIONAL WELLED EXIT

- FITS:
- THE CAVANAL
- HOUSE DOES NOT FIT
- THE AVENTINE
- ALL ELEV
- NO OPTIONAL WELLED EXIT
- THE PIEDMONT
- ALL ELEV
- NO OPTIONAL SUNROOM
- NO OPTIONAL WELLED EXIT

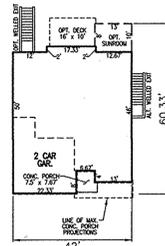
- FITS:
- THE CAVANAL
- HOUSE DOES NOT FIT
- THE AVENTINE
- ALL ELEV
- THE PIEDMONT
- ALL ELEV
- NO OPTIONAL WELLED EXIT



THE CAVANAL
w/ OPT. SUNROOM



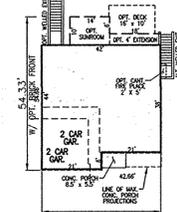
THE AVENTINE
w/ OPT. SUNROOM
SCALE: 1"=30'



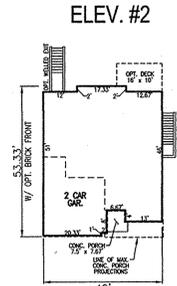
THE PIEDMONT
w/ OPT. SUNROOM



THE CAVANAL
ELEVATION DETAIL
NTS



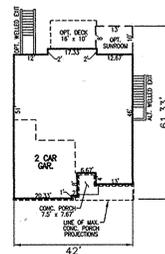
THE AVENTINE
w/ OPT. SUNROOM
& OPT. 4' EXTENSION
SCALE: 1"=30'



THE PIEDMONT
BASE PLAN
ELEV. #2



THE AVENTINE
ELEVATION DETAIL
NTS



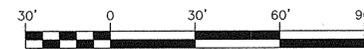
THE PIEDMONT
w/ OPT. SUNROOM
ELEV. #2



THE AVENTINE
ELEVATION DETAIL
NTS



THE PIEDMONT
ELEVATION DETAIL
NTS



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Clark 3-6-15
CHIEF, DEVELOPMENT ENGINEERING DIVISION
Kathleen 3-19-15
CHIEF, DIVISION OF LAND DEVELOPMENT
Mark 3/20/15
DIRECTOR

OWNER/DEVELOPER
BUILDER- LOTS 1-31
PULTE HOMES
8965 GUILFORD ROAD - SUITE 290
COLUMBIA, MARYLAND
21046
(410) 720-5071

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN
GENERIC HOUSE BOXES &
HOUSE TYPES - PULTE HOMES
HIGH RIDGE MEADOWS - SECTION ONE
LOTS 1 - 54**

6TH ELECTION DISTRICT - TAX MAP: 50 GRID: 1
DPZ REF'S: F-10-065, WF-10-087, ECP-12-047,
WP-15-080, SP-13-007, F14-022

ZONED: R-SC
PARCELS: 363 & 542
HOWARD COUNTY, MARYLAND

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CHECKED BY: RHV
DATE: JANUARY 2015
SCALE: AS SHOWN
W.O. NO.: 11-28.01

17 SHEET OF 19

"NORTH AREA 2" SUMMARY

HIGH RIDGE MEADOWS - ESDv COMPUTATIONS

DA #	% IMPERV	Rv	DA (SF)	DA (AC)	MINIMUM VOLUME	MAXIMUM VOLUME	1.6" VOLUME	VOLUME PROVIDED*	IMPERV (SF)	IMPERV (AC)	GREEN AREA	REMARKS
Site Computations: Rv = 0.2887 A = 36.94 Acres Pe = 1.6 inches ESDv = 61940 cuft Rv=0.05+0.009X V min=1.0" rainfall Vmax=1yr rainfall=2.6" (1.0 x Rv x A)/12 (2.6 x Rv x A)/12												
NORTH AREA # 2 - REQUIRED Pe = 1.6" Provided (Underdrains / Outfall Flows Freely)												
* Accounts for 75% Ponding Volume, See Computations												
DA #	% IMPERV	Rv	DA (SF)	DA (AC)	MINIMUM VOLUME	MAXIMUM VOLUME	1.6" VOLUME	VOLUME PROVIDED*	IMPERV (SF)	IMPERV (AC)	GREEN AREA	REMARKS
A-1	24.65	0.2718	27100	0.62	514	1596	982	1054	6680	0.15	0.47	NON-STRUCTURAL, MICRO SCALE & MICRO BIO
A-2	53.62	0.5236	71325	1.64	3166	8231	5065	5075	38246	0.88	0.76	NON-STRUCTURAL, MICRO SCALE, ALT. SURFACE & MICRO BIO
B	21.76	0.2458	22131	0.51	453	1179	725	747	4815	0.11	0.40	NON-STRUCTURAL & MICRO SCALE
B-1	35.85	0.3726	21345	0.49	663	1723	1070	1070	7652	0.18	0.31	NON-STRUCTURAL, ALT. SURFACE & MICRO BIO
C	23.18	0.2586	44240	1.02	954	2479	1526	1532	10256	0.24	0.78	MICRO BIO
D-1	23.44	0.2610	33875	0.78	737	1915	1179	1187	7940	0.18	0.60	NON-STRUCTURAL, MICRO SCALE & MICRO BIO
D-2	34.65	0.3138	16250	0.37	246	640	394	469	2380	0.05	0.32	NON-STRUCTURAL, MICRO SCALE & MICRO BIO
E	56.18	0.6456	7299	0.10	425	1105	680	682	5229	0.12	0.06	NON-STRUCTURAL, ALT. SURFACE & MICRO BIO
F	24.55	0.2709	31000	0.71	700	1820	1136	1136	7610	0.17	0.54	ALT. SURFACE, & MICRO-BIO RETENTION
G	63.08	0.6177	28900	0.64	1446	3760	2314	2340	17719	0.41	0.24	NON-STRUCTURAL, ALT. SURFACE & MICRO SCALE
G-1	15.42	0.1888	5090	0.12	80	208	128	154	785	0.02	0.10	NON-STRUCTURAL & MICRO SCALE
G-2	20.77	0.2369	3780	0.09	75	194	119	122	785	0.02	0.07	NON-STRUCTURAL & MICRO SCALE
G-3	24.62	0.2716	10418	0.24	236	613	377	381	2565	0.06	0.18	NON-STRUCTURAL & MICRO SCALE
NORTH TOTALS												
% IMPERV	Rv	DA (SF)	DA (AC)	MINIMUM VOLUME	MAXIMUM VOLUME	1.6" VOLUME	VOLUME PROVIDED*	IMPERV (SF)	IMPERV (AC)	GREEN AREA	REMARKS	
34.9	0.3644	322544	7.40	9794	25463	15670	15943	112661	2.59	4.82		

"SOUTH AREA" SUMMARY HIGH RIDGE MEADOWS

HIGH RIDGE MEADOWS - ESDv COMPUTATIONS

DA #	% IMPERV	Rv	DA (SF)	DA (AC)	MINIMUM VOLUME	MAXIMUM VOLUME	1.6" VOLUME	VOLUME PROVIDED*	IMPERV (SF)	IMPERV (AC)	GREEN AREA	REMARKS
Site Computations: Rv=0.05+0.009X V min=1.0" rainfall Vmax=1yr rainfall=2.6" (1.0 x Rv x A)/12 (2.6 x Rv x A)/12												
SOUTH AREA - REQUIRED Pe = 1.6" Provided (Underdrains / Outfall Flows Freely)												
* Accounts for 75% Ponding Volume, See Computations												
DA #	% IMPERV	Rv	DA (SF)	DA (AC)	MINIMUM VOLUME	MAXIMUM VOLUME	1.6" VOLUME	VOLUME PROVIDED*	IMPERV (SF)	IMPERV (AC)	GREEN AREA	REMARKS
S-1	31.66	0.3349	16000	0.37	447	1161	714	728	5065	0.12	0.25	MICRO BIORETENTION
S-2	15.11	0.1860	17665	0.41	274	712	438	439	2670	0.06	0.34	MICRO BIORETENTION
S-3A	69.40	0.6746	8365	0.19	470	1223	752	1276	5805	0.13	0.06	NON-STRUCTURAL, ALT. SURFACE & MICRO BIO
S-3B	63.40	0.6206	9156	0.21	474	1231	758	1271	5805	0.13	0.08	NON-STRUCTURAL, ALT. SURFACE & MICRO BIO
S-3C	18.29	0.2146	14000	0.32	250	651	401	505	2560	0.06	0.26	NON-STR & MICROSCALE PRACTICES
S-4A	26.17	0.2855	3000	0.07	71	186	114	149	785	0.02	0.02	NON-STR & MICROSCALE PRACTICES
S-4B	18.34	0.2151	4280	0.10	77	199	123	149	785	0.02	0.08	NON-STRUCTURAL, ALT. SURFACE & MICRO BIO
S-4C	16.63	0.1997	4720	0.11	79	204	126	150	785	0.02	0.09	NON-STR & MICROSCALE PRACTICES
S-7	43.86	0.4447	24780	0.57	918	2388	1469	1472	10868	0.25	0.32	NON-STRUCTURAL, MICRO SCALE, ALT. SURFACE & MICRO BIO
S-8	47.79	0.4801	15772	0.36	631	1641	1010	1013	7537	0.17	0.19	NON-STRUCTURAL, ALT. SURFACE & MICRO BIORETENTION
S-9	47.69	0.4792	29660	0.68	1185	3080	1895	1928	14146	0.32	0.36	NON-STRUCTURAL, ALT. SURFACE & MICRO BIO
S-10	53.35	0.5301	12600	0.29	557	1447	891	932	6722	0.15	0.13	NON-STRUCTURAL, MICRO SCALE, ALT. SURFACE & MICRO BIO
S-11	14.54	0.1869	20422	0.47	308	800	493	503	2970	0.07	0.40	NON-STRUCTURAL, MICRO SCALE & MICRO BIO
S-12	64.06	0.6265	15200	0.39	689	1792	1103	1108	8456	0.19	0.11	NON-STRUCTURAL, ALT. SURFACE & MICRO BIORETENTION
S-13	26.75	0.2928	30220	0.70	740	1923	1188	1188	8165	0.19	0.51	NON-STRUCTURAL, MICRO SCALE & MICRO BIO
S-13A	38.89	0.4000	27540	0.63	918	2387	1469	1470	10710	0.25	0.39	NON-STRUCTURAL, MICRO SCALE & MICRO BIO
S-13B	6.55	0.1089	7563	0.17	178	456	261	261	1718	0.01	0.16	NON-STR & MICROSCALE PRACTICES
S-13C	30.74	0.3267	27590	0.63	751	1953	1202	1211	8481	0.19	0.44	MICRO BIORETENTION
S-13D	52.36	0.5213	14800	0.34	643	1672	1029	1058	7750	0.18	0.16	MICRO BIORETENTION
S-14	56.32	0.5568	12650	0.29	587	1526	939	1042	7124	0.16	0.13	NON-STR, ALT SURFACES & MICRO BIO
S-14A	6.97	0.1127	6384	0.15	106	266	156	166	1107	0.01	0.34	NON-STR & MICROSCALE PRACTICES
S-14B	4.46	0.0901	9985	0.23	75	195	120	120	320	0.01	0.22	NON-STR & MICROSCALE PRACTICES
S-14C	5.48	0.0994	8115	0.19	67	175	106	112	445	0.01	0.18	NON-STR & MICROSCALE PRACTICES
S-14D	5.63	0.1006	7910	0.18	66	172	106	115	445	0.01	0.17	NON-STR & MICROSCALE PRACTICES
S-15	23.05	0.2574	15625	0.31	292	760	468	495	3140	0.07	0.24	NON-STR & MICRO BIORETENTION
S-16	31.19	0.3307	21800	0.50	601	1562	961	1100	6800	0.16	0.34	MICRO SCALE PRACTICE - BIOSWALE
S-17	57.07	0.5637	23960	0.55	1125	2926	1801	1815	13675	0.31	0.24	ALT SURFACES & MICRO BIORETENTION
S-17A	22.01	0.2481	7133	0.16	147	383	236	236	1570	0.04	0.13	NON-STR & MICROSCALE PRACTICES
S-17B	18.02	0.2122	4356	0.10	77	200	123	123	785	0.02	0.08	NON-STR & MICROSCALE PRACTICES
S-17C	15.15	0.1863	6280	0.15	160	402	254	262	179	0.02	0.13	NON-STR & MICROSCALE PRACTICES
S-18	36.52	0.3787	28285	0.64	886	2305	1418	1422	10258	0.24	0.41	NON-STRUCTURAL, MICRO SCALE, ALT. SURFACE & MICRO BIO
S-19	40.51	0.4146	15000	0.34	518	1347	829	830	6076	0.14	0.20	NON-STR, ALT SURFACES & MICRO BIORETENTION
SOUTH TOTALS												
% IMPERV	Rv	DA (SF)	DA (AC)	MINIMUM VOLUME	MAXIMUM VOLUME	1.6" VOLUME	VOLUME PROVIDED*	IMPERV (SF)	IMPERV (AC)	GREEN AREA	REMARKS	
34.8	0.3636	467171	10.72	14153	36799	22645	23848	162758	3.74	6.99		

SECTION ONE - PROJECT TOTALS												
% IMPERV	Rv	DA (SF)	DA (AC)	MINIMUM VOLUME	MAXIMUM VOLUME	1.6" VOLUME	VOLUME PROVIDED*	IMPERV (SF)	IMPERV (AC)	GREEN AREA	REMARKS	
34.9	0.3639	789715	18.13	23947	62262	38315	39791	275419	6.32	11.81		

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION *3-6-15*

CHIEF, DIVISION OF LAND DEVELOPMENT *3-19-15*

DIRECTOR *3/30/15*

OWNER/DEVELOPER
BUILDER: LOTS 1-31
 PULTE HOMES
 8965 GULFORD ROAD - SUITE 290
 COLUMBIA, MARYLAND 21046
 (410) 720-5071

OWNER/DEVELOPER
BUILDER: LOTS 32-54
 BEAZER HOMES
 MARYLAND DIVISION
 8965 GULFORD ROAD - SUITE 290
 COLUMBIA, MARYLAND 21046
 (410) 720-5071

ONLOT STORMWATER MANAGEMENT PRACTICES

Lot	M-7			M-5			M-1			N-1			A-2 Perm. Surface Drive
	Rain Garden	Drywell	Barrel	Disconnect	Disconnect	Disconnect	15'	30'	45'	15'	30'	45'	
Lot 1			1			1			1				1
Lot 2			1			1			1				1
Lot 3			1			1			1				1
Lot 4			1			1			2				1
Lot 5			1			1			2				1
Lot 6			1			1			2				1
Lot 7	1		1			2			1				1
Lot 8	1		1			3			1				1
Lot 9	1		1			1			1				1
Lot 10	1		1			2			1				1
Lot 11	1		1			1			2				1
Lot 12			1			2			1				1
Lot 13			1			1			2				1
Lot 14			1			1			1				1
Lot 15			1			1			1				1
Lot 16			1			1			1				1
Lot 17			1			1			3				1
Lot 18			1			1			3				1
Lot 19			1			1			3				1
Lot 20			1			1			3				1
Lot 21			1			1			3				1
Lot 22			1			2			2				1
Lot 23			1			2			2				1
Lot 24			2			1			1				1
Lot 25			1			2			2				1
Lot 26	1		1			2			1				1
Lot 27	1		1			2			1				1
Lot 28	1		1			2			1				1
Lot 29			1			2			2				1
Lot 30			1			2			2				1
Lot 31			1			2			2				1
Lot 32			1			1			1				1
Lot 33			1			1			3				1
Lot 34			1			1			2				1
Lot 35			1			1			2				1
Lot 36			1			1			2				1
Lot 37			1			1			1				1
Lot 38			1			1			2				1
Lot 39			2			1			1				1
Lot 40			2			1			1				1
Lot 41			2			1			1				1
Lot 42			2			1			1				1
Lot 43			1										