SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	SUPPLEMENTAL TOPOGRAPHY & GRADING, STORMWATER MANAGEMENT AND SOILS
4-5	SEDIMENT CONTROL PLAN
6	SEDIMENT AND EROSION CONTROL NOTES & DETAILS
7	STORMWATER MANAGEMENT DETAILS & SOIL BORINGS
6	DETAIL SHEET
7	DRAINAGE AREA & SOILS MAP

SUPPLEMENTAL PLAN
TOPOGRAPHY, GRADING AND STORMWATER MANAGEMENT
FULTON MANOR VALLEY-PART TWO
LOTS 6 THRU 9
ZONING: RR-DEO
TAX MAP No. 41 GRID No. 19 PARCEL Nos. 78 AND 456

U.S. Equivalent Coordinate Table			Metric Coordinate Table		
POINT	NORTH	EAST	POINT	NORTH	EAST
126	542346.9524	1331595.2757	126	165307.681738	405871.051814
406	541778.3431	1331359.3251	406	165134.369265	405799.133919
408	542108.1161	1331185.8211	408	165234.884277	405746.249810
439	541822.0934	1332353.3929	439	165147.704380	406102.126408
440	541766.2401	1332259.6518	440	165130.680268	406073.554048
441	541811.9757	1332198.8979	441	165144.620513	406055.036218
442	541866.4924	1332168.0469	442	165161.237232	406045.632837
443	541942.4991	1332067.0818	443	165184.404111	406014.858605
445	542265.9481	1331696.9655	445	165282.991567	405902.046931
446	541960.4777	1331726.7483	446	165189.884014	405911.124738
447	541783.9734	1331683.9953	447	165136.085372	405898.093603
455	542095.0515	1331173.8696	455	165230.902163	405742.606953
456	541871.1217	1331457.5859	456	165162.648227	405829.083826
457	541706.4756	1331408.5856	457	165112.463990	405814.148528
458	541710.0207	1331376.4464	458	165113.544547	405804.352485
459	542594.2351	1332522.0341	459	165383.053635	406153.528314
460	542582.5787	1332538.2882	460	165379.500761	406158.482550
461	542173.2456	1332252.5481	461	165254.735767	406071.388814
462	542010.2808	1332476.9269	462	165205.063985	406139.779598

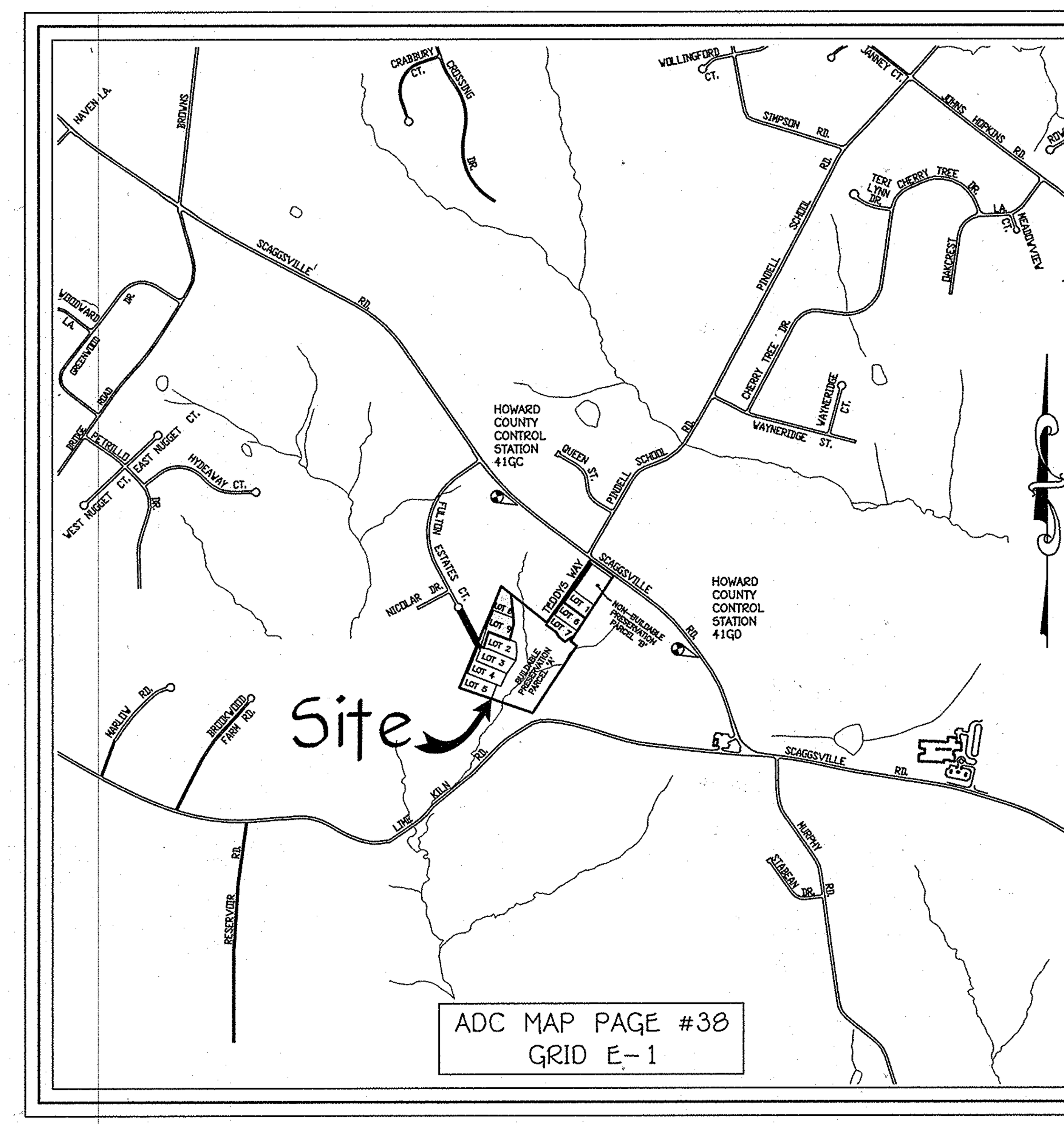
Minimum Lot Size Tabulation			
Lot No.	Gross Area	Pipestem Area	Minimum Lot Size
6	51,103 Sq. Ft.±	4,993 Sq. Ft.±	46,110 Sq. Ft.±
7	50,224 Sq. Ft.±	6,602 Sq. Ft.±	43,622 Sq. Ft.±
8	57,629 Sq. Ft.±	13,214 Sq. Ft.±	44,415 Sq. Ft.±
9	67,019 Sq. Ft.±	8,521 Sq. Ft.±	58,498 Sq. Ft.±

ROADWAY INFORMATION CHART			
ROAD NAME	CLASSIFICATION	DESIGN SPEED	R/W WIDTH
TEDDYS WAY	USE-IN-COMMON	-	24'
FULTON ESTATES COURT	USE-IN-COMMON	-	35'

Density Exchange Chart			
Description	Part One F-14-014	Part Two F-14-043	Total Site
Receiving Parcel Information	-------	Fulton Manor Valley, F-14-014 And F-14- T.M. 41, Grid 19, Parcel 78 & 456	Fulton Manor Valley, F-14-014 And F-14- T.M. 41, Grid 19, Parcel 78 & 456
Gross Area	26.372 Ac.	26.372 Ac.	26.372 Ac.
Area Of Steep Slopes	-------	0.440 Ac.	0.440 Ac.
Area Of Floodplain	-------	1.208 Ac.	1.208 Ac.
Net Tract Area	-------	24.724 Ac.	24.724 Ac.
Allowed Base Density	6 Units (26.372 Ac. x 1 Unit/4.25)=6.205	0 Units	6 Units
Total Number Of Proposed Units	6 Units	4 Units	10 Units
Total Number Of Density Rights Required To Be Transferred	0 Units	4 Units (Proposed Units - Allowed Units) (10 Units - 6 Units)	4 Units
Sending Parcel Information	-------	2 DEO Units - T.M. 13, Par. 110 Property Of Kathy And Kevin Vasquez 2 DEO Units - T.M. 12, Par. 78 Chelsea Knolls, Buildable Preservation Parcel 'D', F-14-056	2 DEO Units - T.M. 13, Par. 110 Property Of Kathy And Kevin Vasquez 2 DEO Units - T.M. 12, Par. 78 Chelsea Knolls, Buildable Preservation Parcel 'D', F-14-043 (91)

DENSITY TABULATIONS

1. BASE DENSITY: 26.372 ACRES / 4.25 = 6.205 UNITS OR 6 SINGLE FAMILY DETACHED HOMES
2. MAXIMUM DENSITY (1 LOT PER 2 NET ACRES): 24.724 NET ACRES / 2 = 12.362 UNITS OR 12 SINGLE FAMILY DETACHED HOMES.
   NET TRACT AREA = GROSS AREA - FLOODPLAIN - STEEP SLOPES
   NET TRACT AREA = 26.372 ACRES - 1.208 AC. - 0.440 AC.
   NET TRACT AREA = 24.724 AC.±
3. TOTAL NUMBER OF PROPOSED DWELLING UNITS = 9 CLUSTER LOTS + 1 BUILDABLE PRESERVATION PARCEL = 10 UNITS.
4. DEVELOPMENT RIGHTS WILL BE TRANSFERRED TO THIS SUBDIVISION PURSUANT TO THE DEO DENSITY TRANSFER PROVISION OF SECTION 106.B.2 OF THE ZONING REGULATIONS FOR THIS PROPERTY'S UNDERLYING RR ZONING DISTRICT. (10 PROPOSED - 6 BY-RIGHT = 4 DEO RIGHTS REQUIRED)



VICINITY MAP
SCALE: 1" = 1200'

FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

GENERAL NOTES

1. THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 2004 ZONING REGULATIONS PER COUNCIL BILL NO. 45-2003 AND THE ZONING REGULATIONS AS AMENDED BY COUNCIL BILL NO. 75-2003. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF A BUILDING OR GRADING PERMIT APPLICATION.
2. THE SUBJECT PROPERTY IS ZONED RR-DEO AND IS CONSIDERED TO BE "GRANDFATHERED" TO THE 2/2/04 COMPREHENSIVE ZONING PLAN AND THE "COMP LITE" ZONING AMENDMENTS EFFECTIVE 7/28/06. THE GRANDFATHERING OF THIS MAJOR SUBDIVISION PLAN IS IN ACCORDANCE WITH SECTION 100.0.E.b. OF THE NEW ZONING REGULATIONS (EFFECTIVE 10/6/13) SINCE THE INITIAL PLAN SUBMISSION OF THE PRELIMINARY EQUIVALENT SKETCH PLAN WAS GRANTED A "TECHNICALLY COMPLETE" STATUS PRIOR TO THE ENACTMENT DATE OF THE NEW REGULATIONS.
3. TOTAL PROJECT AREA TABULATION:
   a. GROSS AREA OF TRACT = 26.372 AC.±
   b. AREA OF FLOODPLAIN = 1.208 AC.±
   c. AREA OF 25% OR GREATER SLOPES = 0.440 AC.± (OUTSIDE FLOODPLAIN)
   d. NET AREA OF TRACT = 24.724 AC.±
   e. AREA OF PROPOSED ROAD R/W (PART TWO) = 0.000 AC.±
   f. AREA OF PROPOSED BUILDABLE LOTS (PART TWO) = 5.188 AC.±
   g. AREA OF PROPOSED BUILDABLE PRESERVATION PARCELS (PART TWO) = 0.000 AC.±
   h. AREA OF PROPOSED NON-BUILDABLE PRESERVATION PARCELS (PART TWO) = 0.000 AC.±
   i. AREA OF PROPOSED BULK PARCELS (PART TWO) = 0.000 AC.±
   j. TOTAL AREA PART TWO = 5.188 AC.±
4. NUMBER OF LOTS PROPOSED: (PART TWO) = 4
   a. BUILDABLE LOTS = 4
   b. BUILDABLE PRESERVATION PARCELS = 0
   c. NON-BUILDABLE PRESERVATION PARCELS = 0
5. PRIOR DPZ FILE NUMBERS : ECP-12-040, WP-13-092, SP-13-003 AND F-14-014.
6. PRIVATE WATER AND SEWER SHALL BE UTILIZED WITHIN THIS DEVELOPMENT.
7. SOILS INFORMATION TAKEN FROM SOIL MAP No. 12, SOIL SURVEY, HOWARD COUNTY, MARYLAND, JULY, 1968 ISSUE.
8. ▨ THIS AREA DESIGNATES A PRIVATE EASEMENT OF AT LEAST 10,000 SQ.FT. AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENT OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE AUTHORITY TO GRANT VARIANCES FOR ADJUSTMENTS TO THE PRIVATE SEWERAGE EASEMENT. RECORDATION OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
9. BOUNDARY OUTLINE BASED ON FIELD RUN SURVEY PERFORMED BY FISHER, COLLINS & CARTER, INC. DATED MAY, 2011.
10. TOPOGRAPHY SHOWN IS FROM HOWARD COUNTY GIS AND SUPPLEMENTED WITH FIELD RUN TOPO BY FISHER, COLLINS AND CARTER, INC. DATED MAY, 2011.
11. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT BECAUSE PROPOSED HOUSES ARE GREATER THAN 250 FEET FROM SCAGGSVILLE ROAD.
12. STORMWATER MANAGEMENT WILL BE IN ACCORDANCE WITH MDE STORM DRAIN DESIGN MANUAL, VOLUMES I & II, REVISED 2009. USE OF FOUR (4) M-6 MICRO BIO-RETENTION AND N-2 DISCONNECTION OF NON-ROOFTOP RUNOFF ARE PROPOSED FOR THIS PROJECT.
13. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP DATED JUNE 25, 2012 AND WAS APPROVED ON SEPTEMBER 18, 2012.
14. THE FOREST STAND DELINEATION AND WETLAND DELINEATION FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DURING DECEMBER, 2011 WITH REPORT DATED JANUARY 30, 2012.
15. THIS PROPERTY IS LOCATED OUTSIDE OF THE METROPOLITAN DISTRICT.
16. 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 PIPESTEM LOT DRIVEWAY. HOWEVER, THE DEVELOPER HAS ELECTED TO PROVIDE PRIVATE TRASH REMOVAL TO LOTS 2, 3, 4, 5, 8 AND 9 WHICH DOES NOT REMOVE HOWARD COUNTY PROPERTY ASSESSMENT FOR THIS SERVICE.
    A. REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE FOR LOTS 1, 6, 7 AND BUILDABLE PRESERVATION PARCEL 'A' ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM(S), AND ROAD RIGHT-OF-WAY LINE AND NOT ONTO THE PIPESTEM LOT DRIVEWAY.
    B. SNOW REMOVAL AND ROAD MAINTENANCE FOR LOTS 2, 3, 4, 5, 8 AND 9 ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM(S) AND ROAD RIGHT-OF-WAY LINE AND NOT ONTO THE PIPESTEM LOT DRIVEWAY. REFUSE AND RECYCLING COLLECTION IS PROVIDED BY A PRIVATE COLLECTION COMPANY PAID BY THE INDIVIDUAL LOT OWNER FOR LOTS 2 THRU 5, 8 AND 9.
17. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY HORIZONTAL AND VERTICAL CONTROL DATUM IS BASED ON HOWARD COUNTY GEODETIC CONTROL STATIONS:
    HOWARD COUNTY MONUMENT NO. 41GC N 543290.6303 E 1331697.8125
    HOWARD COUNTY MONUMENT NO. 41GD N 541496.6266 E 1333747.1759
18. SITE IS NOT ADJACENT TO A SCENIC ROAD.
19. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
20. ALL EXISTING WELLS AND SEPTIC FIELDS WITHIN 100 FEET OF SUBJECT PROPERTY HAVE BEEN SHOWN.
22. ALL WELLS SHALL BE DRILLED PRIOR TO FINAL PLAT RECORDATION. IT IS THE DEVELOPER'S RESPONSIBILITY TO SCHEDULE THE WELL DRILLING PRIOR TO FINAL PLAT SUBMISSION. IT WILL NOT BE CONSIDERED 'GOVERNMENT DELAY' IF THE WELL DRILLING HOLDS UP HEALTH DEPARTMENT SIGNATURE OF THE RECORD PLAT.
23. ANY CHANGES TO A PRIVATE SEWAGE AREA SHALL REQUIRE A REVISED PERC CERTIFICATION PLAN.
24. THE FOREST CONSERVATION OBLIGATION FOR THIS PLAT WAS PROVIDED WITH THE DEVELOPER'S AGREEMENT, F-14-014, FULTON MANOR VALLEY, LOTS 1 THRU 5, BUILDABLE PRESERVATION PARCEL 'A', NON-BUILDABLE PRESERVATION PARCEL 'B' AND BULK PARCELS 'C' AND 'D'.
25. NO CEMETERIES OR HISTORIC SITES ARE LOCATED ON THIS PROPERTY.
26. AN ADDRESS RANGE SIGN SHALL BE PROVIDED FOR LOTS 6 AND 7 AT THE INTERSECTION OF SCAGGSVILLE ROAD AND THE USE-IN-COMMON DRIVEWAY AND FOR LOTS 8 THRU 9 AT THE INTERSECTION OF FULTON ESTATES COURT AND THE USE-IN-COMMON DRIVEWAY. THE PRIVATE RANGE OF ADDRESS SIGNS SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-2430 FOR DETAILS AND COST ESTIMATE. THERE SHALL BE AN ADDRESS SIGN AT THE POINT WHERE EACH INDIVIDUAL DRIVEWAY INTERSECTS WITH THE USE-IN-COMMON DRIVEWAY.
27. ALL LOT/PARCEL AREAS ARE MORE OR LESS.
28. DISTANCES SHOWN ARE BASED ON SURFACE MEASUREMENT AND NOT REDUCED TO NAD '83 GRID.
29. DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM) REQUIREMENTS:
    A) WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE);
    B) SURFACE - SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1 -1/2" MINIMUM);
    C) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45-FOOT TURNING RADIUS;
    D) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING);
    E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER SURFACE;
    F) STRUCTURE CLEARANCES - MINIMUM 12 FEET;
    G) MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.
30. THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY FISHER, COLLINS & CARTER, INC. ON NOVEMBER 14, 2011. AND WAS APPROVED ON OCTOBER 17, 2012.
31. ARTICLES OF INCORPORATION FOR THE FULTON MANOR VALLEY HOMEOWNERS ASSOCIATION, INC. ARE FILED WITH THE STATE DEPARTMENT OF ASSESSMENTS AND TAXATION ON JANUARY 29, 2014 WITH RECEIPT NO. D15672700.
32. A LANDSCAPING SURETY IN THE AMOUNT OF $19,800.00 FOR PERIMETER LANDSCAPE REQUIREMENTS 61 SHADE THE PERIMETER LANDSCAPE OBLIGATIONS FOR FULTON MANOR VALLEY, SP-13-003, WERE PROVIDED WITH THE DEVELOPER'S AGREEMENT, F-14-014, FULTON MANOR VALLEY, LOTS 1 THRU 5, BUILDABLE PRESERVATION PARCEL 'A', NON-BUILDABLE PRESERVATION PARCEL 'B' AND BULK PARCELS 'C' AND 'D'.
33. THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
34. A PRE-SUBMISSION COMMUNITY MEETING WAS HELD FOR THIS PROJECT ON JUNE 16, 2011.
35. TRASH AND RECYCLING COLLECTION WILL BE PROVIDED ON LOTS 6 THRU 9 BY A PRIVATE TRASH COLLECTION COMPANY PAID BY THE FULTON MANOR VALLEY HOMEOWNERS ASSOCIATION, INC.
36. ON JANUARY 22, 2013 THE PLANNING DIRECTOR APPROVED A WAIVER (WP-13-092) TO SECTION 16.1205(a)(7) FOR REMOVAL OF FIVE (5) OF THE SIXTEEN (16) SPECIMEN TREES IDENTIFIED ON THE PROPERTY SUBJECT TO THE FOLLOWING CONDITIONS.
    1) THE DEVELOPER SHALL PLANT A TOTAL OF TEN (10) EVERGREEN TREES ALONG LANDSCAPE PERIMETERS P-8 AND P-12 (SEE PERIMETER AS IDENTIFIED ON THE LANDSCAPE PLAN, SP-13-003) AS REPLACEMENT MITIGATION FOR THE REMOVAL OF THE FIVE (5) SPECIMEN TREES (TREES H, I, J, K & L) AS IDENTIFIED ON THE FOREST STAND DELINEATION PLAN AND THE WAIVER PETITION EXHIBIT AS "TO BE REMOVED". THESE TEN (10) EVERGREEN TREES WILL AUGMENT THE REQUIRED 18 PERIMETER SHADE TREES REQUIRED ALONG THESE PERIMETERS. THIS ADDITIONAL LANDSCAPING WILL PROVIDE AN ENHANCED LANDSCAPE BUFFER BETWEEN THE EXISTING 3 ACRE LOTS AND THE PROPOSED 1 ACRE CLUSTER LOT.
    2) THE REMOVAL OF ANY OF THE REMAINING ELEVEN (11) SPECIMEN TREES (TREES A, B, C, D, E, F, G, M, N, O & P) NOT DESIGNATED FOR REMOVAL UNDER THIS WAIVER PETITION WP-13-092, WOULD REQUIRE WAIVER PETITION APPROVAL IN ACCORDANCE WITH SECTION 16.1205.(a00.7 OF THE SUBDIVISION AND THE LAND DEVELOPMENT REGULATIONS
37. NO VIABLE ANIMAL FARMING OPERATIONS WILL BE POSSIBLE ON PRESERVATION PARCEL 'A'.
38. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAM(S), OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS.
39. DENSITY CALCULATIONS: SEE DENSITY CHART THIS SHEET.
40. DECLARATIONS OF COVENANTS IS RECORDED WITH FINAL PLAT, F-14-014.
41. THE PRIVATE USE-IN-COMMON ACCESS AND STORMWATER MANAGEMENT EASEMENT FOR THE USE AND BENEFIT OF LOTS 2 THRU 5 IS RECORDED WITH FINAL PLAT, F-14-014.
42. THE PRIVATE USE-IN-COMMON ACCESS AND STORMWATER MANAGEMENT EASEMENT FOR THE USE AND BENEFIT OF LOT 1, BUILDABLE PRESERVATION PARCEL 'A', NON-BUILDABLE PRESERVATION PARCEL 'B' AND LOTS 6 AND 7 (FORMERLY BULK PARCEL 'C') IS RECORDED
43. THERE ARE NO EXISTING STRUCTURES LOCATED ON LOTS 6 THRU 9.
44. THERE ARE NO STEEP SLOPES GREATER THAN 25% LOCATED ON LOTS 6 THRU 9.
45. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
46. 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.
47. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOT TO ANY EXCAVATION WORK BEING DONE.
48. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
49. ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2 INCH GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2 INCH GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) 3 FEET LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
50. WATER AND SEWER FOR THIS SITE ARE PRIVATE.
51. EXISTING UTILITIES (PRIVATE WELL AND SEPTIC) ARE BASED ON AVAILABLE RECORDS FROM THE HOWARD COUNTY HEALTH DEPARTMENT.
52. THE DEVELOPMENT PROPOSAL FOR THIS PROPERTY IS A MAJOR SUBDIVISION WITHIN THE RC-DEO ZONING DISTRICT. HOWEVER, THE SITE HAS BEEN DESIGNATED AS A TIER III GROWTH AREA OF HOWARD COUNTY PER THE PLANHOWARD 2030 TIER MAP DUE TO BEING GRANDFATHERED TO SB-236 SINCE THE PROPERTY OWNER HAD APPLIED FOR A SOIL PERCOLATION TEST APPLICATION AND HAD SUBMITTED A PERCOLATION TEST PLAN TO THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO JULY 1, 2012.
53. THE PRIVATE USE-IN-COMMON ACCESS AND STORMWATER MANAGEMENT EASEMENT FOR THE USE AND BENEFIT OF LOTS 8 AND 9 WILL BE RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, MARYLAND SIMULTANEOUSLY WITH THE RECORDATION OF THE FINAL PLAT, F-14-043.
54. THE EXISTING FOREST CONSERVATION EASEMENT AREAS WITHIN THIS SUBDIVISION HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION ACT. 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.
55. SHOULD DISTURBANCE OCCUR IN THE FOREST CONSERVATION EASEMENT AREAS DURING OR AFTER CONSTRUCTION, CIVIL PENALTIES OR MITIGATION MAY BE IMPOSED.
56. THE FOREST CONSERVATION REFORESTATION EASEMENT PLANTINGS ARE NOT TO BE CONSIDERED LANDSCAPING, AS IT IS USUALLY PRACTICED. THE AFFORESTATION PLANTINGS ARE TO CREATE NEW FOREST COMMUNITIES THAT WILL REPLACE TO SOME DEGREE THE FOREST RESOURCES THAT HAVE BEEN LOST DURING RECENT DECADES OF FARMING AND LAND DEVELOPMENT. THEIR PRIMARY PURPOSE IS ENVIRONMENTAL AND NOT AESTHETIC. THESE REFORESTATION STANDS WILL REQUIRE SPECIAL MANAGEMENT AND INITIALLY MAY NOT LOOK ATTRACTIVE.

LEGEND	
SYMBOL	DESCRIPTION
---492---	EXISTING 2' CONTOURS
—490—	EXISTING 10' CONTOURS
—482—	PROPOSED CONTOUR
+362.5	SPOT ELEVATION
LOD	LIMITS OF DISTURBANCE
	EXISTING TREELINE
	PROPOSED TREELINE
	PROPOSED PAVING
▨	EXISTING PAVING to be removed
GLB2 / MLC2	SOILS LINES AND TYPE
—SSF—	SUPER SILT FENCE
	STABILIZES CONSTRUCTION ENTRANCE
⊠	PROPOSED SWM DRYWELL (M-5)
	PROPOSED MICRO BIORETENTION (M-6)
	GRASS SWALE (M-8)
	NON-ROOFTOP DISCONNECTION (N-2)
RL	ROOFLEADERS
UD	UNDERDRAIN PIPE
	15% TO 24.9% STEEP SLOPES
	25% AND GREATER STEEP SLOPES
	DRAINAGE AREA FOR MICRO-BIORETENTION AND BIORETENTION FACILITIES
	DRAINAGE AREA FOR STORM DRAIN
—TP—	TREE PROTECTION
	FOREST CONSERVATION EASEMENT
▲	FOREST CONSERVATION SIGNAGE PROVIDED UNDER PART ONE, F-14-014
●	PERIMETER LANDSCAPE TREES PROVIDED UNDER PART ONE, F-14-014

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[illegible] 6-16-14
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

[illegible] 5.30.14
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

OWNER
DEBRA E. TAYLOR
P.O. BOX 535
FULTON, MARYLAND 21044
410-977-1327

DEVELOPER
PLEASANT PROSPECT FARM, INC.
4401 JENNINGS CHAPEL ROAD
DAISY, MD 20833
ATTN: MR. DONALD R. REUWER, JR., PRESIDENT
443-367-0422

STATE OF MARYLAND
FRANK JOHN MANALANSAN II
No. 21476
PROFESSIONAL LAND SURVEYOR

[illegible] 5-20-14
FRANK J. MANALANSAN, II, L.S. 21476 — DATE
"Professional certification. I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Surveyor under the laws of the State of Maryland, License No. 21476, Expiration Date 7-14-15."

0' 50' 100' 150'
Scale: 1" = 50'

FULTON MANOR VALLEY PART TWO
LOTS 6 THRU 9
ZONED: RR-DEO
TAX MAP No. 41 GRID No. 19 PARCEL No. 78 AND 456
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY 20, 2014
SHEET 1 OF 7

F-14-043

I:\2011\11015\dwg\2nd 3D SUPPLEMENTAL PLAN lots 6 thru 9\11015-3001 Supplemental Plan.dwg, SHEET 1, 5/20/2014 11:00:59 AM, 1:1

SCHEDULE A PERIMETER LANDSCAPE EDGE (PROVIDED WITH PART ONE (F-14-014))

PERIMETER	CATEGORY (PROPERTIES/ ROADWAYS)	LANDSCAPE TYPE	LINEAR FEET OF OF ROADWAY FRONTAGE PERIMETER	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NUMBER OF PLANTS REQUIRED		
						SHADE TREES	EVERGREEN TREES	SHRUBS
P-1	ADJACENT TO PERIMETER	A	336.31'	NO	NO	6	–	–
P-2	ADJACENT TO PERIMETER	A	262.76'	NO	NO	4	–	–
P-3	ADJACENT TO PERIMETER	A	495.83'	YES – 100%	NO	0	–	–
P-4	ADJACENT TO PERIMETER	A	258.96'	YES – 45'	NO	4	–	–
P-5	ADJACENT TO PERIMETER	A	772.83'	NO	NO	13	–	–
P-6	ADJACENT TO ROADWAY	N/A	40'	NO	NO	–	–	–
P-7	ADJACENT TO PERIMETER	A	372.63'	YES – (3 EX. TREES)	NO	3	–	–
P-8	ADJACENT TO PERIMETER	A	615.62'	NO	NO	10	5 (SEE NOTE 1)	–
P-9	ADJACENT TO PERIMETER	A	130.01'	YES – 100%	NO	0	–	–
P-10	ADJACENT TO PERIMETER	A	1262.50'	YES – 100% (F.C.E.)	NO	0	–	–
P-11	ADJACENT TO PERIMETER	A	354.18'	NO	NO	6	–	–
P-12	ADJACENT TO PERIMETER	A	466.56'	NO	NO	8	5 (SEE NOTE 1)	–
P-13	ADJACENT TO PERIMETER	A	414.16'	NO	NO	7	–	–
P-14	ADJACENT TO ROADWAY	N/A	52.35'	NO	NO	–	–	–

NOTE: A TOTAL OF TEN (10) EVERGREEN TREES ALONG P-8 AND P-12 ARE REPLACEMENT FOR THE REMOVAL OF FIVE (5) SPECIMEN TREES (H, I, J, K, AND L) AS A CONDITION OF APPROVAL OF WP-13-092

Stormwater Management Summary Table

Total Site Area=Developable Area=12.506 acre/Impervious Area=1.39 acre
Target RCN=55
Target Pe=1.00 inches

ESDV Summary Table				
AREA ID	ESDv Req. Cu.Ft.	ESDv Pvd. Cu.Ft.	% Impervious	Remarks
Lot 6	305	554	20%	Micro-Bioretention
Lot 7	295	623	20%	Micro-Bioretention
Lot 8	195	505	54%	Micro-Bioretention Non-Rooftop Disconnection
Lot 9	306	619	59%	Micro-Bioretention Non-Rooftop Disconnection
Portion of UIC Driveway which serves Lots 8 And 9	514	514	100%	Non-Rooftop Disconnection
Totals	1,615	2,815		

M-6 (5) BORING #2

EXISTING ELEV.	444.00
MICRO-BIO. TOP	441.00
MICRO-BIO. BOTTOM	437.17
BORING BOTTOM	430.00

M-6 (6) BORING #3

EXISTING ELEV.	438.00
MICRO-BIO. TOP	434.50
MICRO-BIO. BOTTOM	431.67
BORING BOTTOM	424.00

NO.	BY	REVISION	DATE
1	RHV	REVISE THE HOUSE, GRADING AND BIO-RETENTION FACILITY on LOT 7	6/22/16

Specimen Tree Chart

Key	Species, Size (dbh)	Comment	Status
A	Quercus rubra, 35"	good condition	to remain
B	Quercus rubra, 33"	good condition	to remain
C	Quercus falcata, 31.5"	good condition	to remain
D	Quercus alba, 33.5"	good condition	to remain
E	Quercus velutina, 33.5"	good condition	to remain
F	Quercus velutina, 31.5"	good condition	to remain

FISHER, COLLINS & CARTER, INC.
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CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/16/14

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 5.30.14

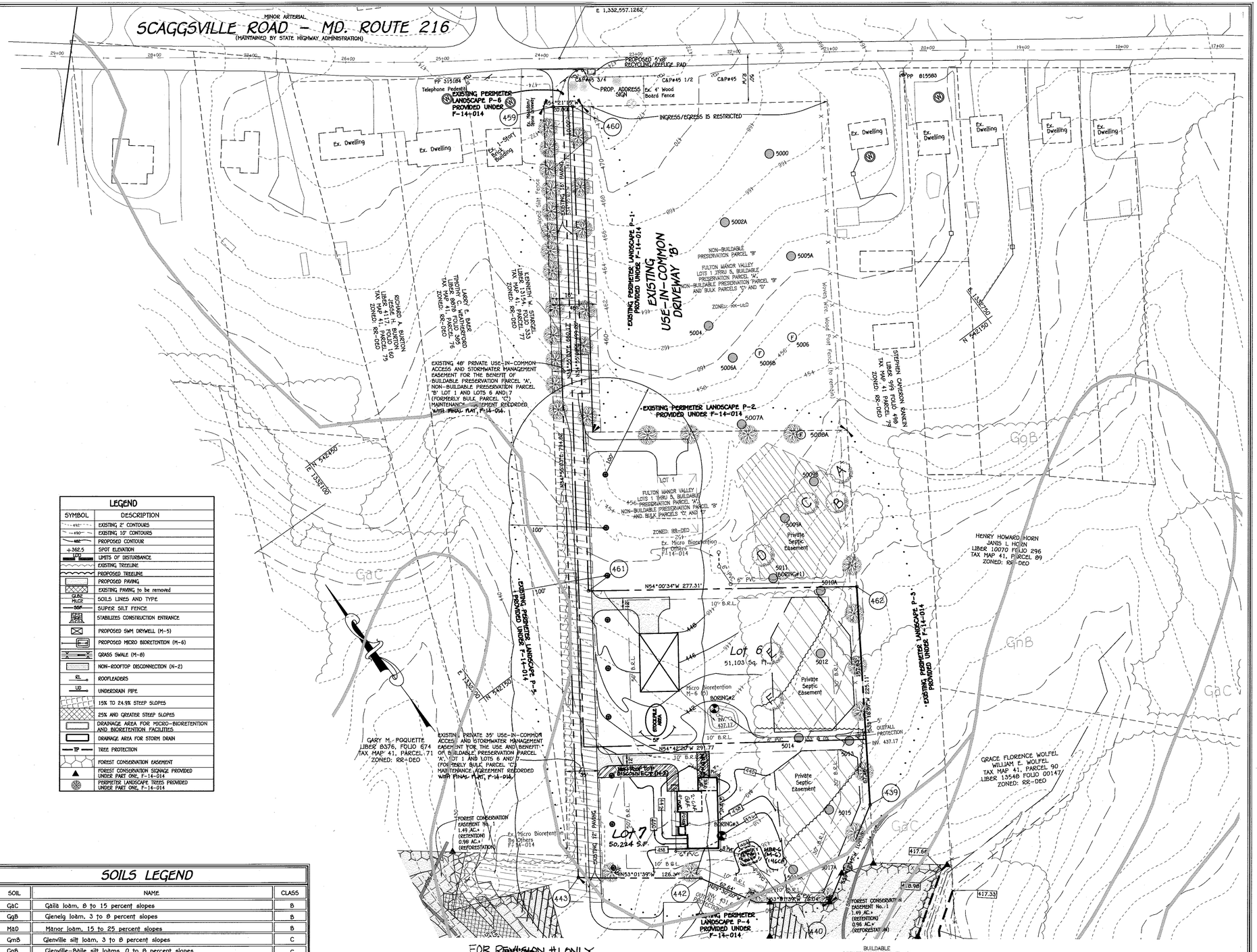
LEGEND

SYMBOL	DESCRIPTION
492	EXISTING 2' CONTOURS
490	EXISTING 10' CONTOURS
482	PROPOSED CONTOUR
+362.5 TP	SPOT ELEVATION
	LIMITS OF DISTURBANCE
	EXISTING TREELINE
	PROPOSED TREELINE
	PROPOSED PAVING
	EXISTING PAVING to be removed
GLAC MLC2	SOILS LINES AND TYPE
SSF	SUPER SILT FENCE
SCE	STABILIZED CONSTRUCTION ENTRANCE
	PROPOSED SWM DRYWELL (M-5)
	PROPOSED MICRO BIORETENTION (M-6)
	GRASS SWALE (M-8)
	NON-ROOFTOP DISCONNECTION (N-2)
RL	ROOFLEADERS
UD	UNDERDRAIN PIPE
	15% TO 24.9% STEEP SLOPES
	25% AND GREATER STEEP SLOPES
	DRAINAGE AREA FOR MICRO-BIORETENTION AND BIORETENTION FACILITIES
	DRAINAGE AREA FOR STORM DRAIN
TP	TREE PROTECTION
	FOREST CONSERVATION EASEMENT
	FOREST CONSERVATION SIGNAGE PROVIDED UNDER PART ONE, F-14-014
	PERIMETER LANDSCAPE TREES PROVIDED UNDER PART ONE, F-14-014

SOILS LEGEND

SOIL	NAME	CLASS
GaC	Gaila loam, 8 to 15 percent slopes	B
GgB	Glenelg loam, 3 to 8 percent slopes	B
MaD	Manor loam, 15 to 25 percent slopes	B
GmB	Glenville silt loam, 3 to 8 percent slopes	C
GnB	Glenville-Baile silt loams, 0 to 8 percent slopes	C

NOTES:
- * Hydric soils and/or contains hydric inclusions
- ** May contain hydric inclusions
- † Generally only within 100-year floodplain areas



FOR REVISION #1 ONLY

ROBERT H. VOGEL PE NO 16193 — 6/22/16

BUILDABLE PRESERVATION PARCEL 'A'
FULTON MANOR VALLEY LOTS 1 THRU 5, BUILDABLE PRESERVATION PARCEL 'A', NON-BUILDABLE PRESERVATION PARCEL 'B' AND BULK PARCELS 'C' AND 'D'
ZONED: RR-DEO

PLAN
SCALE: 1" = 50'
0' 50' 100' 150'
Scale: 1" = 50'

NOTE: THE LOCATION FOR THE PROPOSED DWELLING ON LOT 7 WITH RESPECT TO BRL'S AND LOT LINES WILL BE REVIEWED AND APPROVED AT THE TIME OF THE BUILDING PERMIT.

OWNER
DEBRA E. TAYLOR
P.O. BOX 535
FULTON, MARYLAND 21044
410-977-1327

DEVELOPER
PLEASANT PROSPECT FARM, INC.
4401 JENNINGS CHAPEL ROAD
DAISY, MD 20833
ATTN: MR. DONALD R. REUWER, JR., PRESIDENT
443-367-0422

FRANK J. MANALANSAN, II, L.S. 21476 — DATE 5-20-14

"Professional certification. I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Surveyor under the laws of the State of Maryland, License No. 21476, Expiration Date 7-14-15."

SUPPLEMENTAL PLAN
TOPOGRAPHY, GRADING, STORMWATER MANAGEMENT AND SOILS

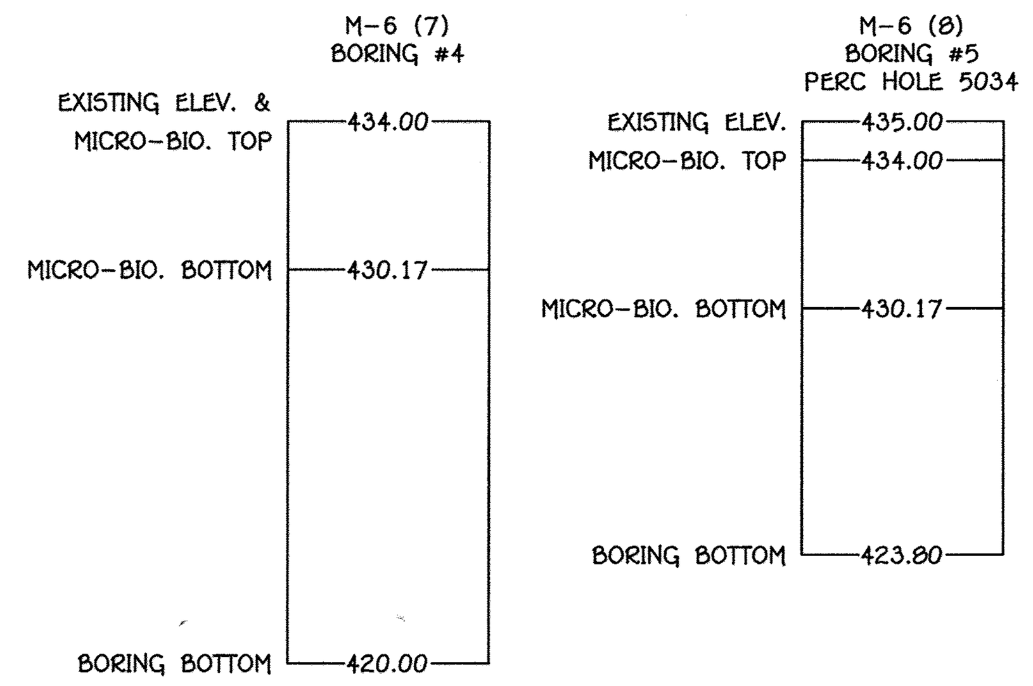
FULTON MANOR VALLEY PART TWO

LOTS 6 THRU 9
ZONED: RR-DEO
TAX MAP No. 41 GRID No. 19 PARCEL No. 78 AND 456
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY 20, 2014

SHEET 2 OF 7

F-14-043

1:\2011\11015\dwg\2nd SD SUPPLEMENTAL PLAN lots 6 thru 9\11015-3001 Supplemental Plan.dwg, SHEET 2, 5/20/2014 11:02:49 AM, 1:1



SOILS LEGEND

SOIL	NAME	CLASS
GaC	Gaila loam, 8 to 15 percent slopes	B
GgB	Glenelg loam, 3 to 8 percent slopes	B
MaD	Manor loam, 15 to 25 percent slopes	B
GmB	Glenville silt loam, 3 to 8 percent slopes	C
GnB	Glenville-Baile silt loams, 0 to 8 percent slopes	C

NOTES:

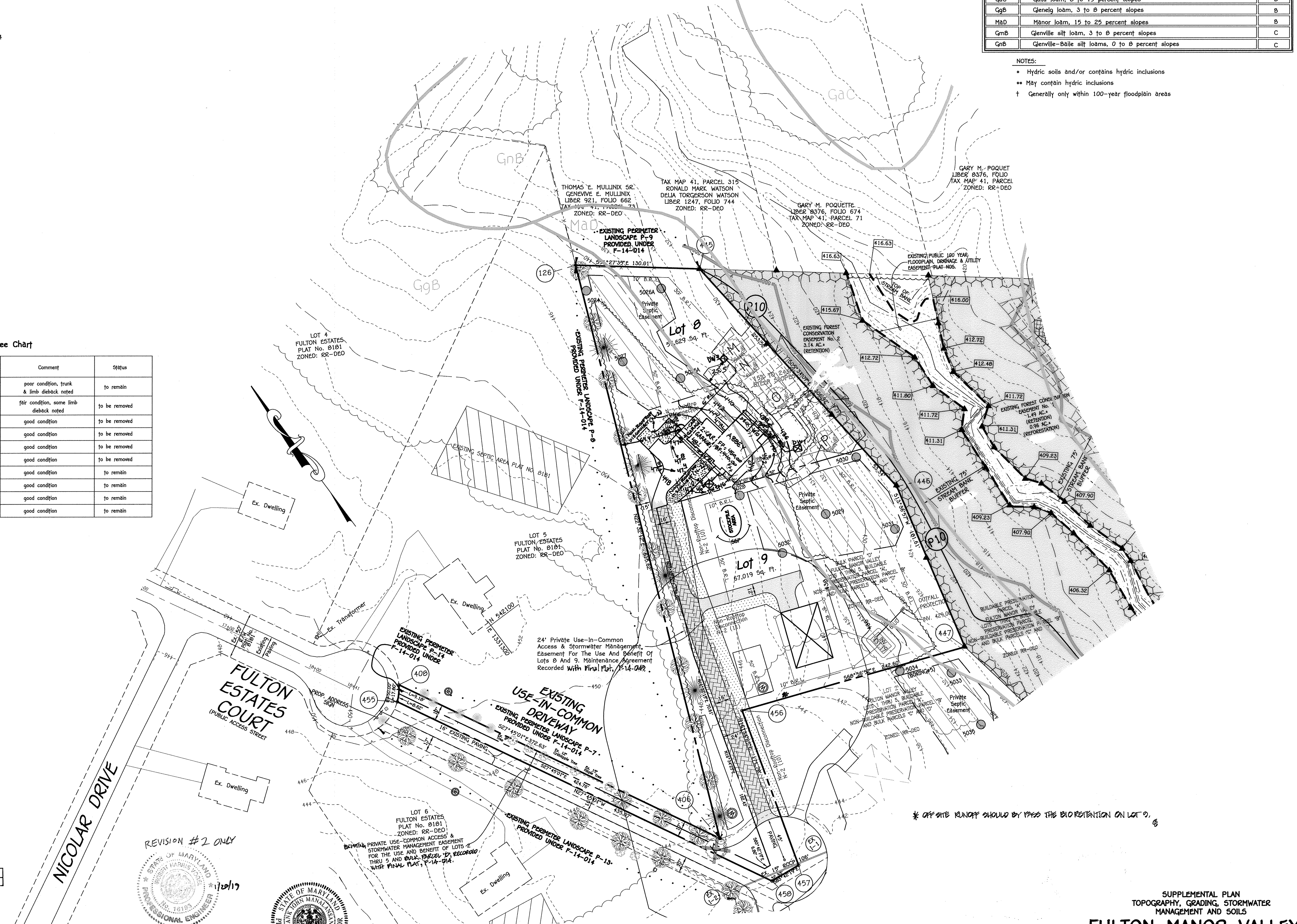
* Hydric soils and/or contains hydric inclusions

** May contain hydric inclusions

† Generally only within 100-year floodplain areas

Specimen Tree Chart

Key	Species, Size (dbh)	Comment	Status
G	Quercus alba, 31"	poor condition, trunk & limb dieback noted	to remain
H	Liriodendron tulipifera, 36.5"	fair condition, some limb dieback noted	to be removed
I	Liriodendron tulipifera, 35"	good condition	to be removed
J	Quercus velutina, 33"	good condition	to be removed
K	Liriodendron tulipifera, 42"	good condition	to be removed
L	Liriodendron tulipifera, 36.5"	good condition	to be removed
M	Liriodendron tulipifera, 37"	good condition	to remain
N	Liriodendron tulipifera, 35"	good condition	to remain
O	Liriodendron tulipifera, 34"	good condition	to remain
P	Liriodendron tulipifera, 31"	good condition	to remain



* OFF SITE RUNOFF SHOULD BY PASS THE BIO RETENTION ON LOT 9.

LEGEND

SYMBOL	DESCRIPTION
492	EXISTING 2' CONTOURS
490	EXISTING 10' CONTOURS
482	PROPOSED CONTOUR
+362.5	SPOT ELEVATION
LOD	LIMITS OF DISTURBANCE
	EXISTING TREELINE
	PROPOSED TREELINE
	PROPOSED PAVING
	EXISTING PAVING to be removed
GLB2 MLC2	SOILS LINES AND TYPE
SSF	SUPER SILT FENCE
SCE	STABILIZES CONSTRUCTION ENTRANCE
	PROPOSED SWM DRYWELL (M-5)
	PROPOSED MICRO BIORETENTION (M-6)
	GRASS SWALE (M-8)
	NON-ROOFTOP DISCONNECTION (N-2)
RL	ROOFLEADERS
UD	UNDERDRAIN PIPE
	15% TO 24.9% STEEP SLOPES
	25% AND GREATER STEEP SLOPES
	DRAINAGE AREA FOR MICRO-BIORETENTION AND BIORETENTION FACILITIES
	DRAINAGE AREA FOR STORM DRAIN
TP	TREE PROTECTION
	FOREST CONSERVATION EASEMENT
▲	FOREST CONSERVATION SIGNAGE PROVIDED UNDER PART ONE, F-14-014
	PERIMETER LANDSCAPE TREES PROVIDED UNDER PART ONE, F-14-014

2	VTG	REVISE THE PLAN TO SHOW THE NEW HOUSE TYPE AND GRADING ON LOT 8 WITH REVISED SWM	1-14-19
No.	BY	REVISION	DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — 6/16/14 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 5-30-14 DATE

REVISION #2 ONLY

STATE OF MARYLAND — ROBERT HARRIS VOGEL — No. 16193 — PROFESSIONAL ENGINEER — 1/20/19

OWNER
DEBRA E. TAYLOR
P.O. BOX 535
FULTON, MARYLAND 21044
410-977-1327

DEVELOPER
PLEASANT PROSPECT FARM, INC.
4401 JENNINGS CHAPEL ROAD
DAISY, MD 20833
ATTN: MR. DONALD R. REUWER, JR., PRESIDENT
443-367-0422

STATE OF MARYLAND — FRANK JOHN MANALANSAN II — No. 21476 — PROFESSIONAL LAND SURVEYOR

FRANK J. MANALANSAN, II, L.S. 21476 — 5-20-14 DATE

"Professional certification. I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Surveyor under the laws of the State of Maryland, License No. 21476, Expiration Date 7-14-15."

PLAN
SCALE: 1" = 50'

0' 50' 100' 150'
Scale: 1" = 50'

SUPPLEMENTAL PLAN
TOPOGRAPHY, GRADING, STORMWATER MANAGEMENT AND SOILS

FULTON MANOR VALLEY PART TWO

LOTS 6 THRU 9
ZONED: RR-DEO
TAX MAP No. 41 GRID No. 19 PARCEL No. 78 AND 456
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY 20, 2014

F-14-043

LEGEND

SYMBOL	DESCRIPTION
410'	EXISTING 2' CONTOURS
410'	EXISTING 10' CONTOURS
410'	PROPOSED CONTOUR
+362.5	SPOT ELEVATION
LOD	LIMITS OF DISTURBANCE
	EXISTING TREELINE
	PROPOSED TREELINE
	PROPOSED PAVING
	EXISTING PAVING to be removed
CL/BC MH/CB	SOILS LINES AND TYPE
SSF	SUPER SILT FENCE
	STABILIZED CONSTRUCTION ENTRANCE
	PROPOSED SWM DRYWELL (M-5)
	PROPOSED MICRO BIORETENTION (M-6)
	GRASS SWALE (M-8)
	NON-ROOFTOP DISCONNECTION (N-2)
RL	ROOFLEADERS
UD	UNDERDRAIN PIPE
	15% TO 24.9% STEEP SLOPES
	25% AND GREATER STEEP SLOPES
	DRAINAGE AREA FOR MICRO-BIORETENTION AND BIORETENTION FACILITIES
	DRAINAGE AREA FOR STORM DRAIN
TP	TREE PROTECTION
	FOREST CONSERVATION EASEMENT
	FOREST CONSERVATION SIGNAGE PROVIDED UNDER PART ONE, F-14-014
	PERIMETER LANDSCAPE TREES PROVIDED UNDER PART ONE, F-14-014

NO.	BY	REVISION	DATE
1	RHV	REVISE THE HOUSE, GRADING AND BIO RETENTION FACILITY ON LOT 7	6/22/16

FOR REVISION #1 ONLY

STATE OF MARYLAND — ROBERT HARRIS VOGEL — No. 16193 — PROFESSIONAL ENGINEER — 6/22/16

ROBERT H. VOGEL, PE NO 16193

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Valdis Lazdins — 6/6/14
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

Chad Edmondson — 5.30.14
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

OWNER
DEBRA E. TAYLOR
P.O. BOX 535
FULTON, MARYLAND 21044
410-977-1327

DEVELOPER
PLEASANT PROSPECT FARM, INC.
4401 JENNINGS CHAPEL ROAD
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443-367-0422

STATE OF MARYLAND — FRANK J. MANALANSAN, II — No. 21476 — PROFESSIONAL LAND SURVEYOR

Frank J. Manalansan II — 5-20-14
FRANK J. MANALANSAN, II, L.S. 21476 — DATE

"Professional certification. I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Surveyor under the laws of the State of Maryland, License No. 21476, Expiration Date 7-14-15."

NOTE: THE LOCATION FOR THE PROPOSED DWELLING ON LOT 7 WITH RESPECT TO THE BRL'S AND LOT LINES WILL BE REVIEWED AND APPROVED AT THE TIME OF THE BUILDING PERMIT.

PLAN
SCALE: 1" = 50'

0' 50' 100' 150'
Scale: 1" = 50'

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
Approved: John R. Robertson
Howard SCD 6/3/14

SEDIMENT CONTROL PLAN

FULTON MANOR VALLEY PART TWO

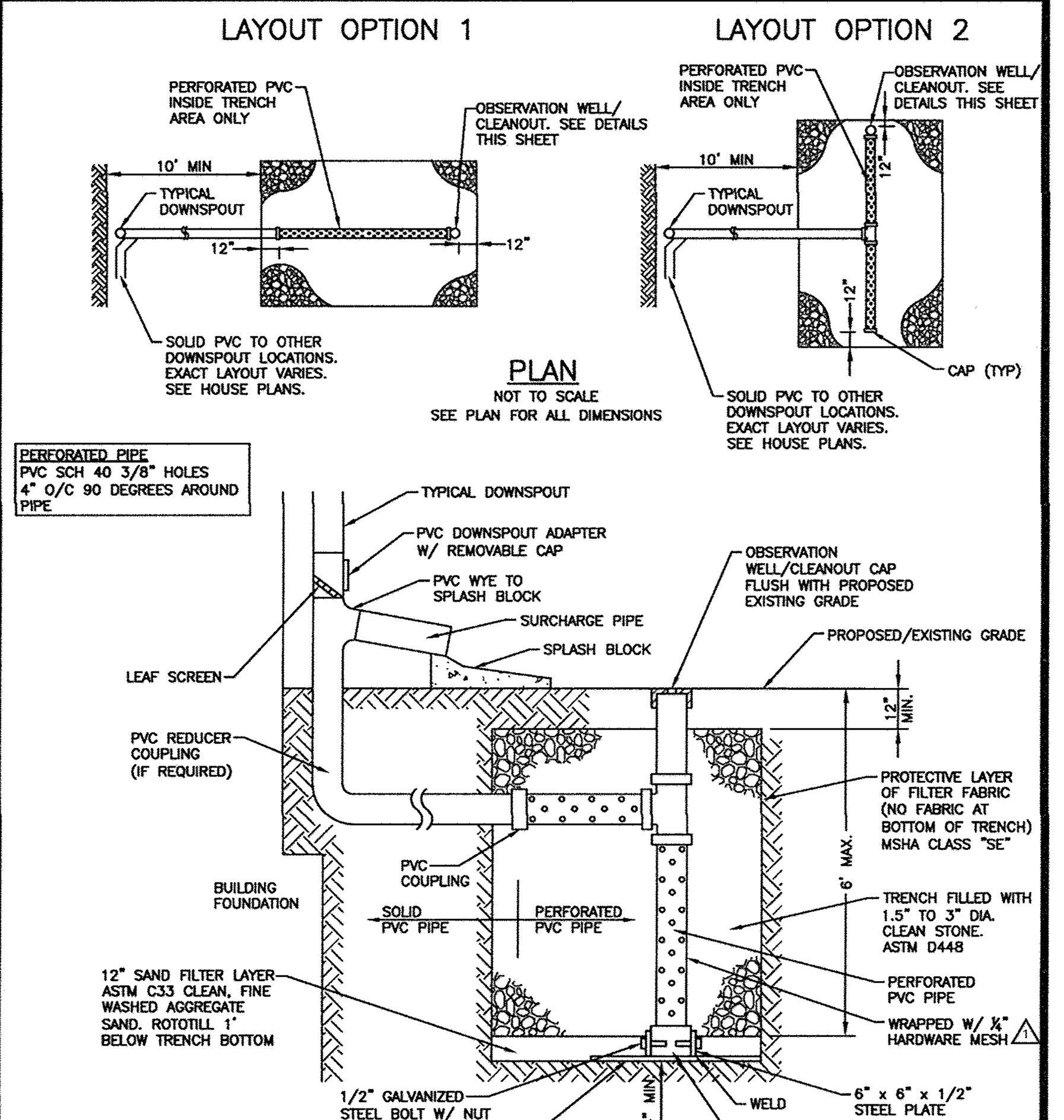
LOTS 6 THRU 9

ZONED: RR-DEO
TAX MAP No. 41 GRID No. 19 PARCEL No. 78 AND 456
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY 20, 2014

SHEET 4 OF 7

F-14-043

I:\2011\11015\dwg\2nd 3D SUPPLEMENTAL PLAN lots 6 thru 9\11015-3001 Supplemental Plan.dwg, SHEET 4, 5/20/2014 11:08:35 AM, 1:1

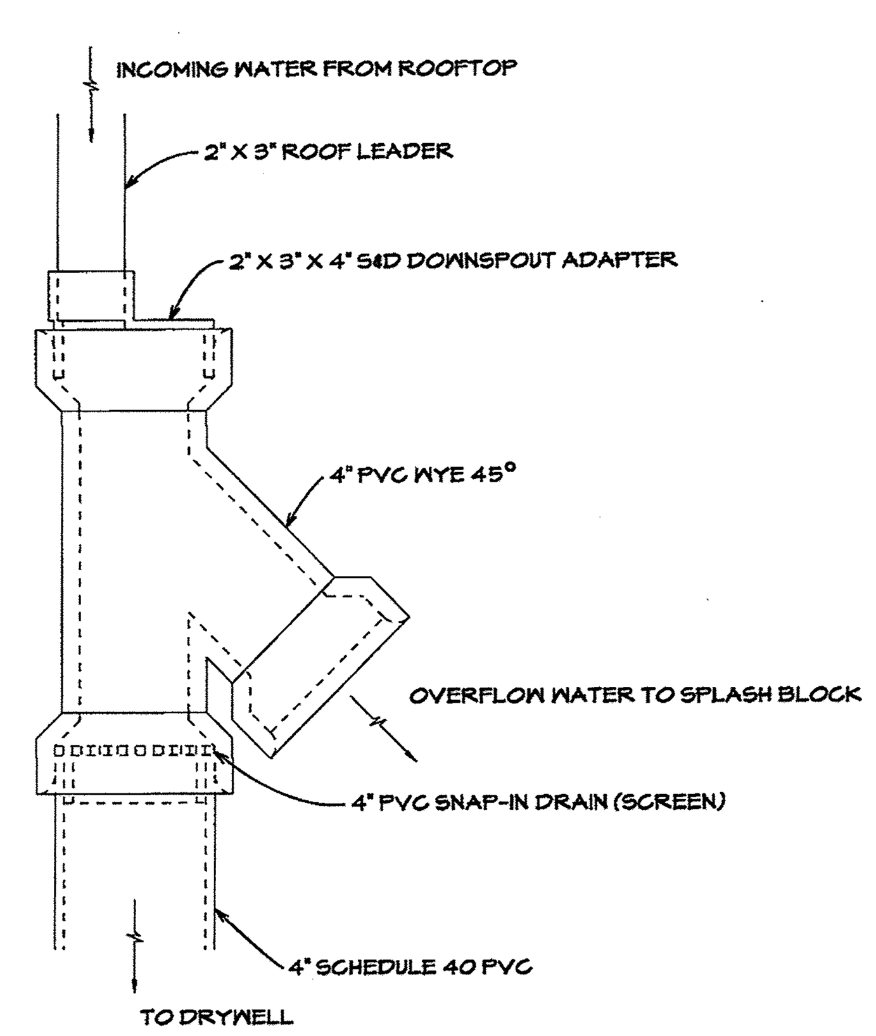


NOTES ⚠

1. MANUFACTURED SAND IS NOT ACCEPTABLE IN DRYWELLS.
2. ALL PIPES SHOULD BE SCH 40 PVC 4" MIN
3. DRYWELLS MUST BE A MINIMUM OF
   - 10' FROM BUILDING FOUNDATION
   - 30' FROM SEPTIC FIELD
   - 100' FROM WELL LOCATION
   AND SHOULD BE LOCATED TO MINIMIZE ANY BASEMENT SEEPAGE.
4 TRENCH MAY NOT BE INSTALLED IN FILL.

Revised ⚠ 5/30/2017 Revised 5/7/2007 Approved	Howard County, Maryland Department of Public Works Approved: [illegible] Chief, Bureau of Engineering	ROOF DRAIN DRYWELL Private	Detail D-9.01

FIGURE 3
STANDARD DRYWELL DOWNSPOUT FITTINGS



NOTES:
1. THE SNAP IN SCREEN IS REQUIRED TO PREVENT CLOGGING OF THE DRYWELL WITH DEBRIS.
2. SEE FIGURE 3a "LIST OF POTENTIAL SUPPLIERS TO ACCOMPANY FIGURE 3 STANDARD DRYWELL DOWNSPOUT FITTINGS" FOR INFORMATION ON SOME LOCAL RETAILERS THAT SUPPLY COMPONENTS FOR THIS SYSTEM.

LEGEND

SYMBOL	DESCRIPTION
- - -492- - -	EXISTING 2' CONTOURS
— 490 —	EXISTING 10' CONTOURS
—482—	PROPOSED CONTOUR
+362.5	SPOT ELEVATION
LOD	LIMITS OF DISTURBANCE
︵︵︵	EXISTING TREELINE
︵︵︵	PROPOSED TREELINE
▨	PROPOSED PAVING
▨	EXISTING PAVING to be removed
GLB2 MLC2	SOILS LINES AND TYPE
—SSF—	SUPER SILT FENCE
▨	STABILIZES CONSTRUCTION ENTRANCE
⊠	PROPOSED SWM DRYWELL (M-5)
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▨	25% AND GREATER STEEP SLOPES
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—TP—	TREE PROTECTION
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●	PERIMETER LANDSCAPE TREES PROVIDED UNDER PART ONE, F-14-014

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(410) 461 - 2855

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[illegible] 6/16/14
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

[illegible] 5.30.14
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

No.	BY	REVISION	DATE
2	VTG	REVISE THE PLAN TO SHOW THE NEW HOUSE TYPE AND GRADING ON LOT 8 WITH REVISED SWM	1-14-19

OWNER
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410-977-1327

DEVELOPER
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ATTN: MR. DONALD R. REUWER, JR., PRESIDENT
443-367-0422

STATE OF MARYLAND FRANK JOHN MANALANSAN, II No. 21476 PROFESSIONAL LAND SURVEYOR

[illegible] 5-30-14
FRANK J. MANALANSAN, II, L.S. 21476 — DATE
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0' 50' 100' 150'
Scale: 1" = 50'

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
Approved: [illegible] Howard SCD 6/3/14

SEDIMENT CONTROL PLAN
FULTON MANOR VALLEY PART TWO
LOTS 6 THRU 9
ZONED: RR-DEO
TAX MAP No. 41 GRID No. 19 PARCEL No. 78 AND 456
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY 20, 2014
SHEET 5 OF 7

F-14-043

SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

A. Soil Preparation

1. Temporary Stabilization

a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows 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. A soil test is 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 500 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 lovegrass 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 pore space to permit adequate root penetration.

b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.

c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified 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 seedbed 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 friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.

3. Topsoiling is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible.

4. Areas having slopes steeper than 2:1 require special consideration and design.

5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:

a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter.

b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.

c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

6. Topsoil Application

a. Erosion and sediment control practices must be maintained when applying topsoil.

b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface 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 muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios 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 analyses.

2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate 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 (hydrated 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 highly 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.

TEMPORARY SEEDING NOTES (B-4-4)

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 ground 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.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary 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-4-3.A.1.b and maintain until the next seeding season.

Temporary Seeding Summary

Hardiness Zone (from Figure B.3): 6b Seed Mixture (from Table B.1):				Fertilizer Rate (10-20-20)	Lime Rate
Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
BARLEY	96	3/1 - 5/15, 8/15 - 10/15	1"	436 lb/ac (10 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
OATS	72		1"		
RYE	112		1"		

SECTION 3 - PERMANENT SEEDING

Seeding grass and legumes to establish groung cover for a minimum of one year on disturbed areas generally receiving low maintenance.

A. Seed mixtures - Permanent Seeding
i. Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Techinical Field Office Guide, Section 342 - Critical Area Planting. For special lawn maintenance areas, see Sections IV Sod and V Turfgrass.
ii. For sites having disturbed area over 5 areas, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in.
iii. For areas receiving low maintenance, apply ureaform fertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil amendments shown in the table below, to be performed at the time of seeding.

Seed Mixture (Hardiness Zone 6b) From Table 25					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P205	K20	
3	TALL FESCUE (85%) PERENNIAL RYE GRASS (10%) KENTUCKY BLUEGRASS (5%)	125 15 10	3/1 - 5/15, 8/15 - 10/15	1" - 2"	90 lb/ac (2.0 lb/ 1000sf)	175 lb/ac (4 lb/ 1000sf)	175 lb/ac (4 lb/ 1000sf)	2 tons/ac (100 lb/ 1000sf)
10	TALL FESCUE (80%) HARD FESCUE (20%)	120 30	3/1 - 5/15, 8/15 - 10/15	1" - 2"				

SEDIMENT & EROSION CONTROL NOTES

1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LISCENSES 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) ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
4) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
5) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
6) SITE ANALYSIS:

TOTAL AREA OF SITE	26.372	ACRES
AREA DISTURBED	3.2	ACRES
AREA TO BE ROOFED OR PAVED	0.5	ACRES
AREA TO BE VEGETATIVELY STABILIZED	2.7	ACRES
TOTAL CUT	1,428	CU.YDS.
TOTAL FILL	1,508	CU.YDS.
OFFSITE WASTE/BORROW AREA LOCATION		CU.YDS.

7) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
8) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
9) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER 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.
10) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGHTS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

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.

SEQUENCE OF CONSTRUCTION

1. OBTAIN A GRADING PERMIT. (2 WEEKS)
2. NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 AT LEAST 24 HOURS BEFORE STARTING WORK.
3. REQUEST A PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AUTHORITY.
4. CLEAR AND GRUBBING AS NECESSARY FOR THE SUBSEQUENT INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCES AND SUPER SILT FENCE AS INDICATED ON THE PLANS. (1 WEEK)
5. REMAINING CLEARING AND GRUBBING WITHIN INSTALLED PERIMETER CONTROLS.
6. MASS GRADE AREA WITHIN LOD, INSTALL PRIVATE STORM DRAIN SYSTEM AND BASE COURSE FOR USE-IN-COMMON DRIVES. AFTER SITE HAS BEEN STABILIZED INSTALL PRIVATE SEPTIC FIELDS AND BIO-RETENTION FACILITIES. (1 MONTH)
7. INSTALL FINISHED SURFACE COURSE, AND PERIMETER LANDSCAPING. (2 WEEKS)
8. CONTRACTOR SHALL REMOVE ALL OLD AND NEW JUNK, TRASH, AND DEBRIS FROM FORESTS, FLOODPLAIN, STREAMS, WETLANDS AND THEIR BUFFERS.
9. OBTAIN APPROVAL OF APPROPRIATE ENFORCEMENT AUTHORITY PRIOR TO REMOVAL OF SEDIMENT CONTROLS. (3 DAYS)
10. REMOVAL OF CONTROLS AND STABILIZATION OF AREAS THAT ARE DISTURBED BY REMOVAL OF SEDIMENT CONTROLS.
11. NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE AFTER EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENT FROM ALL SEDIMENT AND EROSION CONTROL DEVICES SHOWN HEREON.

PERMANENT SEEDING NOTES (B-4-5)

A. Seed Mixtures

1. General Use

a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness 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. The Summary is to be placed on the plan.

b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.

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 .

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 conditions 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.

i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.

iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.

Notes:
Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland"

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

c. Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a) Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 1/2 inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.

e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): 6b Seed Mixture (from Table B.3): 8					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P_2O_5	K_2O	
8	TALL FESCUE	100	Mar. 1-May 15 Aug. 15-Oct. 15	1/4-1/2 in.	45 lbs. per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)

B-4-8 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, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

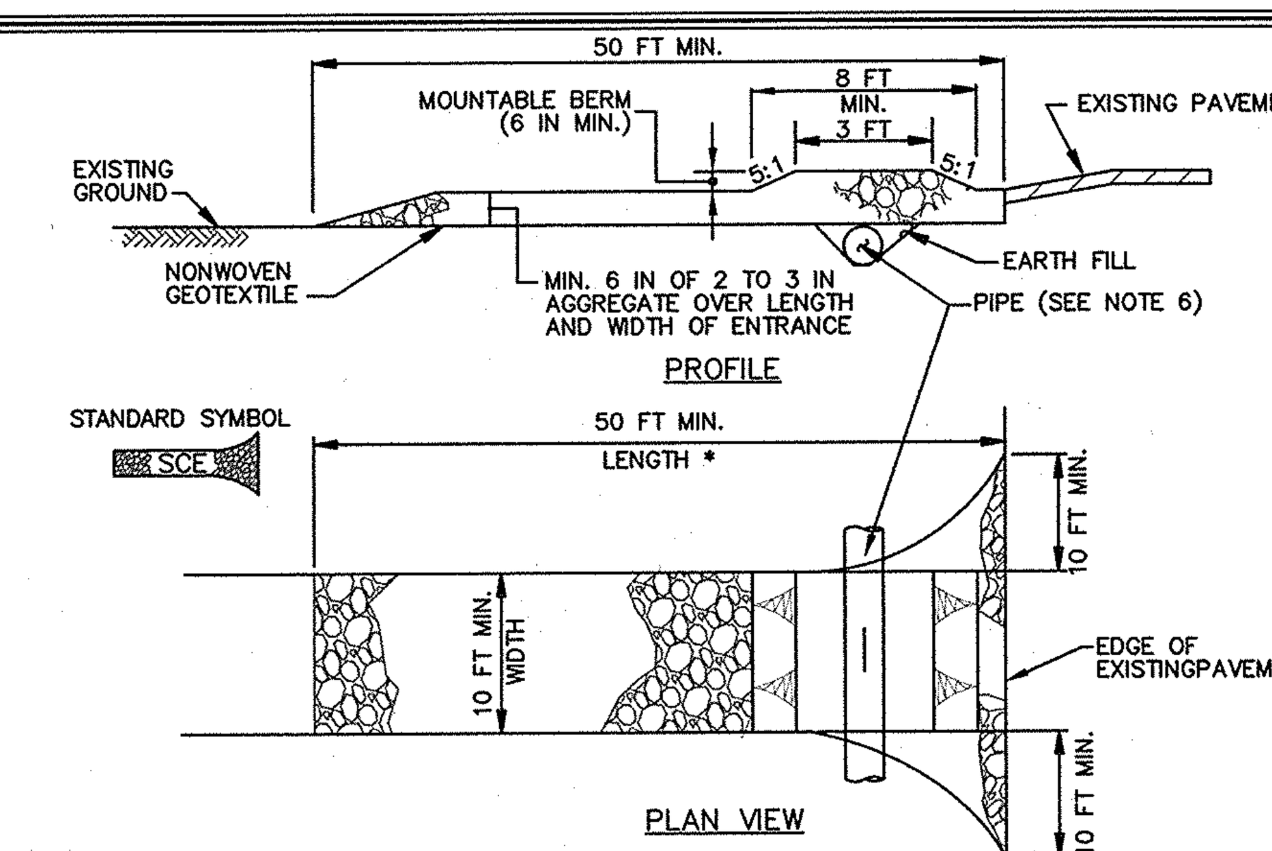
Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

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 Land Grading.
3. Runoff from the stockpile area must drain to a suitable sediment control practice.
4. Access the stockpile area from the upgrade side.
5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary 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 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. 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 Land Grading.

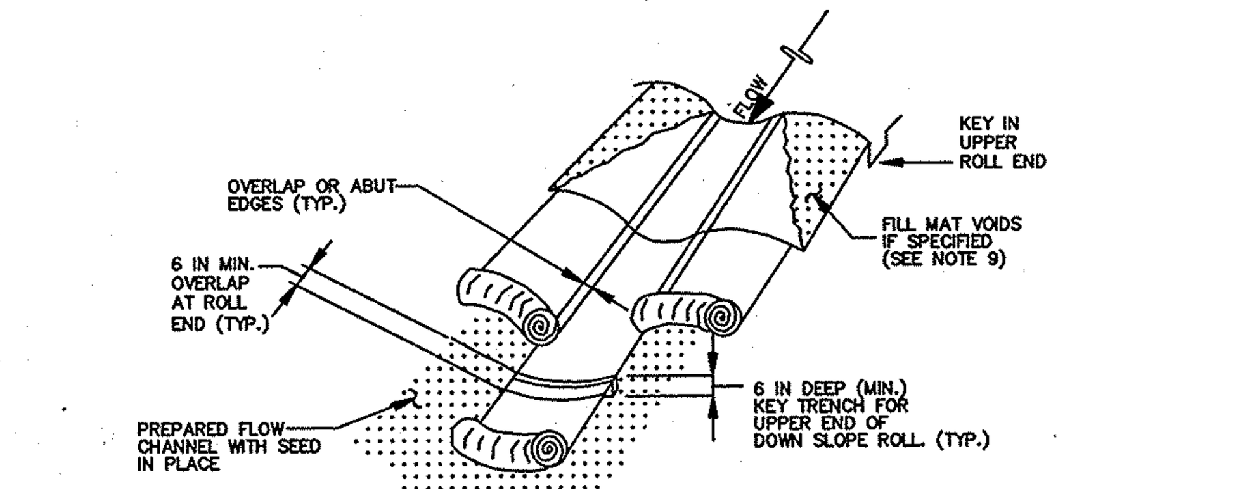


CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

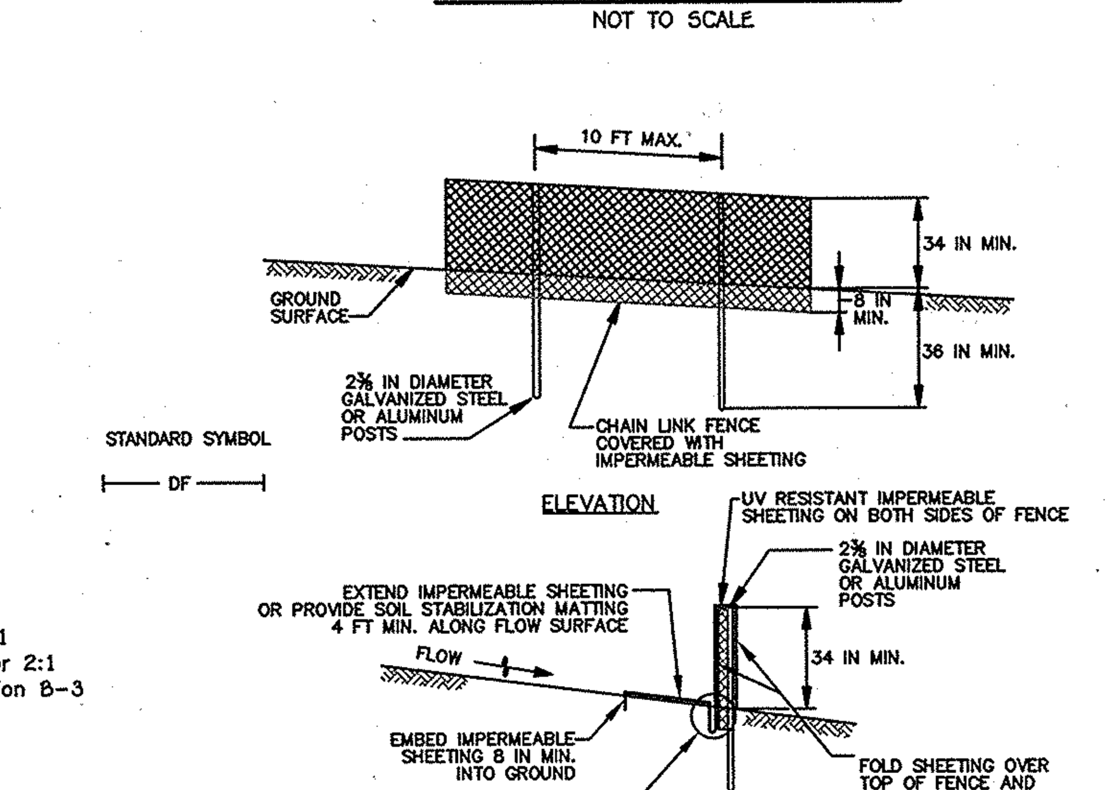


CONSTRUCTION SPECIFICATIONS

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

EROSION CONTROL MATTING

NOT TO SCALE

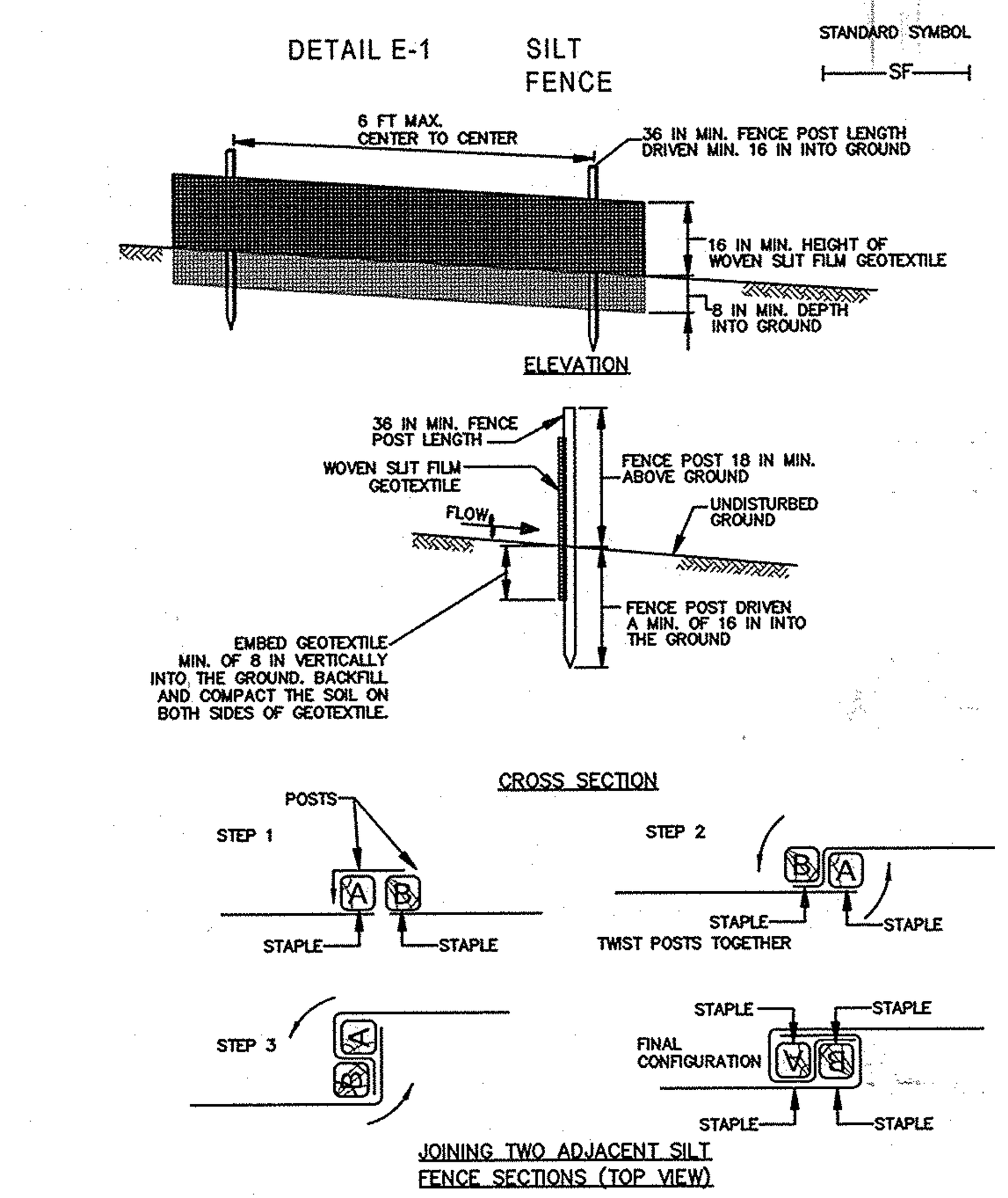


CONSTRUCTION SPECIFICATIONS

1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2⅜ INCH MAXIMUM OPENING).
2. USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

C-9 DIVERSION FENCE

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

Definition

1. USE WOOD POSTS 1¾ X 1¾ ± 1/16 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

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

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 perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

A. Seeding
1. Specifications
a. All seed must meet the requirement of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 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 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. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keetp inoculant as cook as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weedcontrol until 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 Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with weighted roller to provide good seed to soil contact.
b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P O (phosphorus), 200 pounds per acre; K O (potassium), 200 pounds per acre.
ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
iii. Mix seed and fertilizer on site and seed immediately and without interruption.
iv. When hydroseeding do not incorporate seed into the soil.

B. Mulching
1. Mulch Materials (in order of preference)
a. 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, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into uniform fibrous physical state.
i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate colot to facilitate visual inspection of the uniformly spread slurry.
ii. WCFM, including dye, 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 percolation 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 by phyto-toxic.
v. WCFM must conform to the following physical requirements: fiber length of approximately 10 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 minimum.
2. Application
a. Apply mulch to all seeded areas immediately after seeding.
b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose 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 a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
c. Wood cellulose fiber used as mulch must be applied to 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 drawn 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 where equipment can operate safely. If used on sloping land, this practice should follow the contour.
ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder 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. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal 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 valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4-15 feet wide and 300 to 3,000 feet long.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT	6/16/14 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	5.30.14 DATE

0' 30' 60' 120'
SCALE: 1" = 30'

NOTE:
THIS PLAN IS NOT FOR THE CONSTRUCTION OF HOUSES

OWNER
DEBRA E. TAYLOR
P.O. BOX 535
FULTON, MARYLAND 21044
410-977-1327

DEVELOPER
PLEASANT PROSPECT FARM, INC.
4401 JENNINGS CHAPEL ROAD
DAISY, MD 20833
ATTN: MR. DONALD R. REUWER, JR., PRESIDENT
443-367-0422

STATE OF MARYLAND
FRANK JOHN MANALANSAN II
No. 21476
PROFESSIONAL LAND SURVEYOR

FRANK J. MANALANSAN, II, L.S. 21476 — 5-20-14 DATE

"Professional certification. I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Surveyor under the laws of the State of Maryland, License No. 21476, Expiration Date 7-14-15."

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
Approved — Howard SCD 6/3/14

SEDIMENT AND EROSION CONTROL NOTES & DETAILS

FULTON MANOR VALLEY PART TWO

LOTS 6 THRU 9
ZONED: RR-DEO
TAX MAP No. 41 GRID No. 19 PARCEL No. 78 AND 456
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY 20, 2014

F-14-043

I:\2011\11015\dwg\2nd 3D SUPPLEMENTAL PLAN lots 6 thru 9\11015-3001 Supplemental Plan.dwg, SHEET 6, 5/20/2014 3:57:55 PM, 1:1

Infiltration and Filter System Construction Specifications

Infiltration and filter systems either take advantage of existing permeable soils or create a permeable medium such as sand for WC), and Re v. In some instances where permeability is great, these facilities may be used for Qp as well. The most common systems include infiltration trenches, infiltration basins, sand filters, and organic filters.

When properly planted, vegetation will thrive and enhance the functioning of these systems. For example, pre-treatment buffers will trap sediments that often are bound with phosphorous and metals. Vegetation planted in the facility will aid in nutrient uptake and water storage. Additionally, plant roots will provide arteries for stormwater to permeate soil for groundwater recharge. Finally, successful plantings provide aesthetic value and wildlife habitat making these facilities more desirable to the public.

Design Constraints:

> Planting buffer strips of at least 20 feet will cause sediments to settle out before reaching the facility, thereby reducing the possibility of clogging.
> Determine areas that will be saturated with water and water table depth so that appropriate plants may be selected (hydrology will be similar to bioretention facilities, see figure A.5 and Table A.4 for planting material guidance).
> Plants known to send down deep taproots should be avoided in systems where filter fabric is used as part of facility design.
> Test soil conditions to determine if soil amendments are necessary.
> Plants shall be located so that access is possible for structure maintenance.
> Stabilize heavy flow areas with erosion control mats or sod.
> Temporarily divert flows from seeded areas until vegetation is established.
> See Table A.5 for additional design considerations.

Bio-retention

Soil Bed Characteristics

The characteristics of the soil for the bioretention facility are perhaps as important as the facility location, size, and treatment volume. The soil must be permeable enough to allow runoff to filter through the media, while having characteristics suitable to promote and sustain a robust vegetative cover crop. In addition, much of the nutrient pollutant uptake (nitrogen and phosphorus) is accomplished through absorption and microbial activity within the soil profile. Therefore, soils must balance their chemical and physical properties to support biotic communities above and below ground.

The planting soil should be a sandy loam, loamy sand, loam (USDA), or a loam/sand mix (should contain a minimum 35 to 60% sand, by volume). The clay content for these soils should be less than 25% by volume [Environmental Quality Resources (EQR), 1996; Engineering Technology Inc. and Biohabitats, Inc. (ETAB), 1993]. Soils should fall within the SM, ML, SC classifications or the Unified Soil Classification System (USCS). A permeability of at least 1.0 feet per day (0.5"/hr) is required (a conservative value of 0.5 feet per day is used for design). The soil should be free of stones, stumps, roots, or other woody material over 1" in diameter. Brush or seeds from noxious weeds (e.g., Johnson Grass, Mugwort, Nutsedge, and Canada Thistle or other noxious weeds as specified under COMAR 15.08.01.05.) should not be present in the soils. Placement of the planting soil should be in 12 to 18 lifts that are loosely compacted (tamped lightly with a backhoe bucket or traversed by dozer tracks). The specific characteristics are presented in Table A.3.

Table A.3 Planting Soil Characteristics

Parameter	Value
pH range	5.2 to 7.00
Organic matter	1.5 to 4.0% (by weight)
Magnesium	35 lbs. per acre, minimum
Phosphorus (phosphate - P205)	75 lbs. per acre, minimum
Potassium (potash -1(K20)	85 lbs. per acre, minimum
Soluble salts	500 ppm
Clay	10 to 25 %
Silt	30 to 55 %
Sand	35 to 60%

Mulch Layer

The mulch layer plays an important role in the performance of the bioretention system. The mulch layer helps maintain soil moisture and avoids surface sealing, which reduces permeability. Mulch helps prevent erosion, and provides a microenvironment suitable for soil biota at the mulch/soil interface. It also serves as a pretreatment layer, trapping the finer sediments, which remain suspended after the primary pretreatment.

The mulch layer should be standard landscape style, single or double shredded hardwood mulch or chips. The mulch layer should be well aged (stockpiled or stored for at least 12 months), uniform in color, and free of other materials, such as weed seeds, soil, roots, etc. The mulch should be applied to a maximum depth of three inches. Grass clippings should not be used as a mulch material.

Planting Guidance

Plant material selection should be based on the goal of simulating a terrestrial forested community of native species. Bioretention simulates an upland-species ecosystem. The community should be dominated by trees, but have a distinct community of understory trees, shrubs and herbaceous materials. By creating a diverse, dense plant cover, a bioretention facility will be able to treat stormwater runoff and withstand urban stresses from insects, disease, drought, temperature, wind, and exposure.
The proper selection and installation of plant materials is key to a successful system. There are essentially three zones within a bioretention facility (Figure A.5). The lowest elevation supports plant species adapted to standing and fluctuating water levels. The middle elevation supports plants that like drier soil conditions, but can still tolerate occasional inundation by water. The outer edge
is the highest elevation and generally supports plants adapted to dryer conditions. A sample of appropriate plant materials for bioretention facilities are included in Table A.4. The layout of plant material should be flexible, but should follow the general principals described in Table A.5. The objective is to have a system, which resembles a random, and natural plant layout, while maintaining optimal conditions for plant establishment and growth. For a more extensive bioretention plan, consult ETAB, 1993 or Claytor and Schueler, 1997.

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

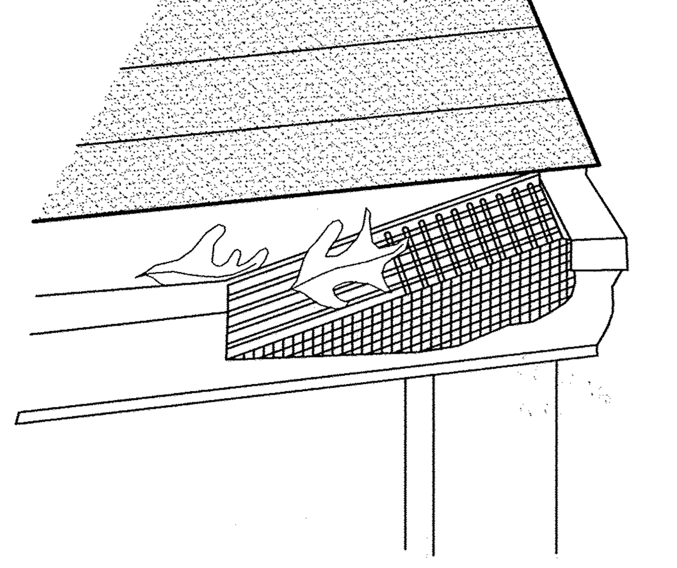
1. THE MONITORING WELLS AND STRUCTURES SHALL BE INSPECTED ON A QUARTERLY BASIS AND AFTER EVERY LARGE STORM EVENT.
2. WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS SHALL BE RECORDED OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
3. A LOG BOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
4. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN THE 72 HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
5. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
6. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/16/14

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 5.30.14

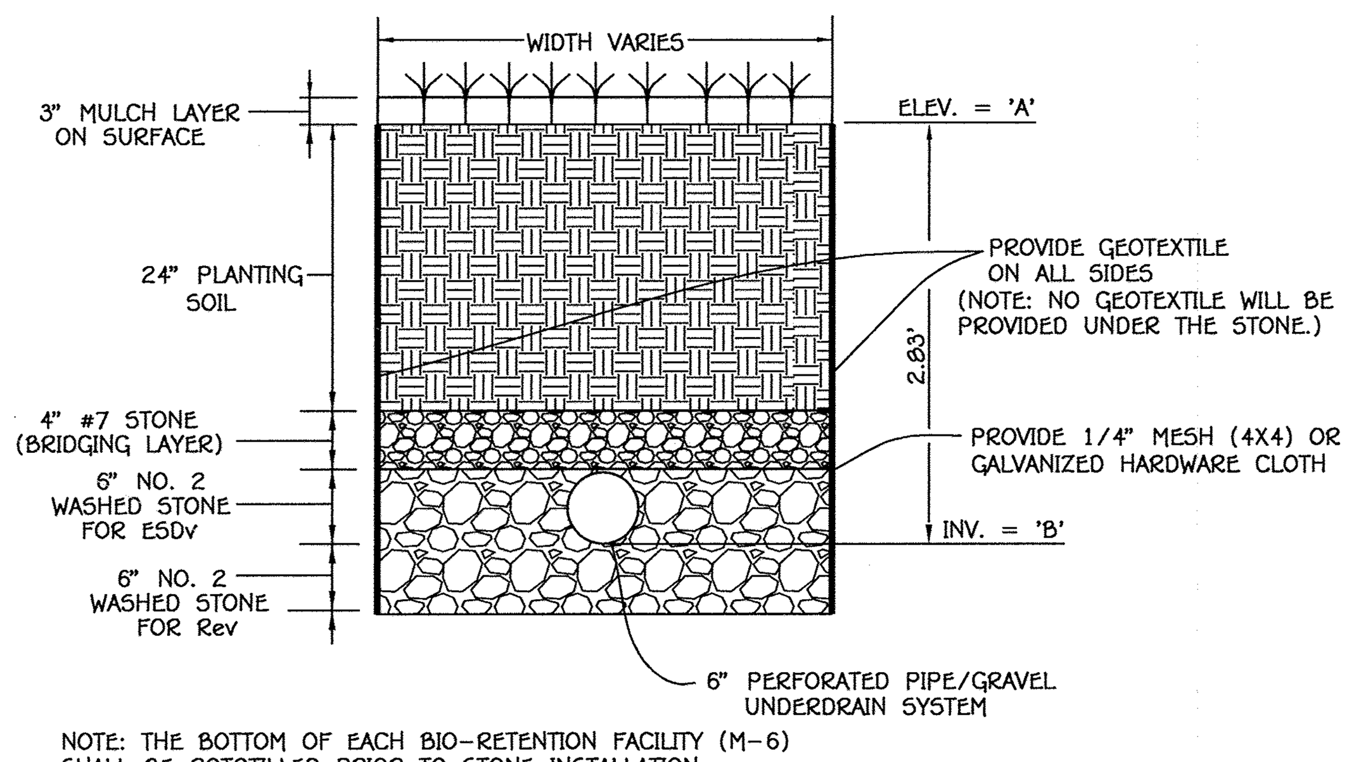


GUTTER DRAIN FILTER DETAIL

NOT TO SCALE

OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS (M-6)

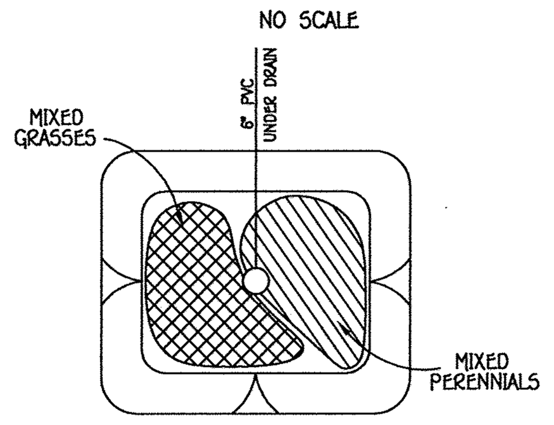
1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.
2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDER BEYOND TREATMENT. TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS. WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.



NOTE: THE BOTTOM OF EACH BIO-RETENTION FACILITY (M-6) SHALL BE ROTOTILLED PRIOR TO STONE INSTALLATION.

TYPICAL SECTION - BIO-RETENTION FACILITY (M-6)

NO SCALE



MICRO-BIORETENTION PLANTING DETAIL

NOT TO SCALE

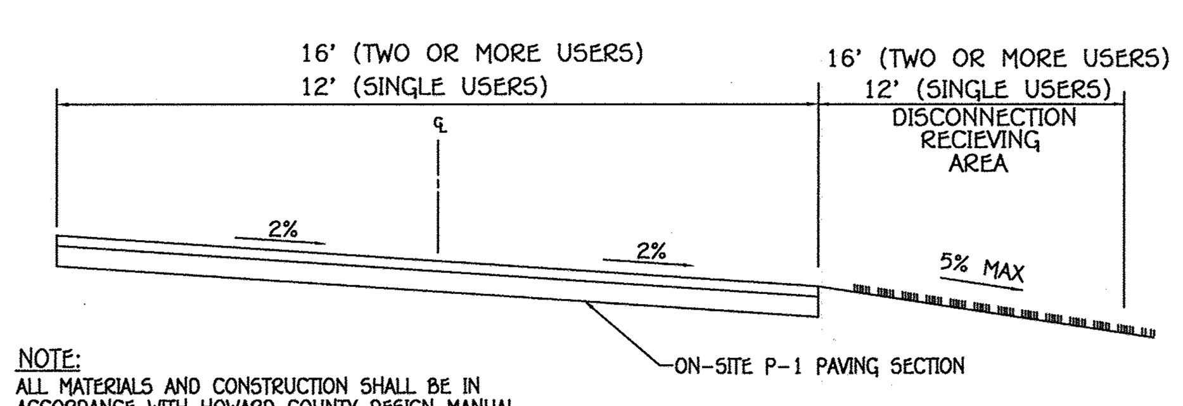
MIXED PERENNIALS* — CUT-LEAF CONEFLOWER, CARDINAL FLOWER, TRADUSCANT ASTER

SHRUBS* — INK BERRY, ARROWWOOD, BAYBERRY / MIXED GRASSES* — VIRGINIA SWITCHGRASS, PENDULOUS SEDGE, LITTLE BLUESTEM

*SEE PLANT MATERIAL CHARTS FOR QUANTITIES AND SPACING

NOTE: PLANT MATERIAL MUST COVER AT LEAST 50% OF THE SURFACE AREA OF THE MICRO-BIORETENTION

(MICRO - BIORETENTION FACILITIES)



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

Typical Private Drive Cross Slope Section

NOT TO SCALE

Operation & Maintenance Schedule For Privately Owned And Maintained Disconnection Of Rooftop Runoff (N-1) And Nonrooftop Runoff (N-2)

1. MAINTENANCE OF AREAS RECEIVING DISCONNECTION RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.
2. OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OR ROOFTOP RUNOFF (N-1), DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)
a. MAINTENANCE OF AREAS RECEIVING DISCONNECTION RUNOFF IS GENERAL NO DIFFERENT THAN THAT REQUIRED FOR LAWN OR LANDSCAPE AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS FOOT TRAFFIC SHOULD BE DISCOURAGES AS WELL.

FOR REVISION #1-2

ROBERT H. VOGEL PE NO 16193 — 1/20/19

DEVELOPER
PLEASANT PROSPECT FARM, INC.
4401 JENNINGS CHAPEL ROAD
DAISY, MD 20833
ATTN: MR. DONALD R. REUWER, JR., PRESIDENT
443-367-0422

OWNER
DEBRA E. TAYLOR
P.O. BOX 535
FULTON, MARYLAND 21044
410-977-1327

FRANK J. MANALANSAN, II, L.S. 21476 — DATE 5/20/14

"Professional certification. I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Surveyor under the laws of the State of Maryland, License No. 21476, Expiration Date 7-14-15."

STORMWATER MANAGEMENT PRACTICIES

LOT NO.	ADDRESS	DISCONNECTION OF NON-ROOFTOP RUNOFF N-2 Y/N	MICRO BIO-RETENTION M-6 Y/N	BIO-RETENTION F-6 Y/N
1	11805 TEDDYS WAY	N	Y	N
2	12163 FULTON ESTATES COURT	Y	N	Y
3	12167 FULTON ESTATES COURT	Y	N	Y
4	12171 FULTON ESTATES COURT	Y	Y	N
5	12175 FULTON ESTATES COURT	Y	Y	N
6	11809 TEDDYS WAY	N	Y	N
7	11813 TEDDYS WAY	N	Y	N
8	12155 FULTON ESTATES COURT	Y	N*	N
9	12159 FULTON ESTATES COURT	Y	Y	N
Pres A	12821 TEDDYS WAY	N	N	N
Par B	11813 SCAGGSVILLE ROAD	Y	N	N

* PRIVATE ROOF DRAIN DRYWELLS (M-5)

DRAINAGE AREA M-6 (5)
MICRO-BIORETENTION PLANT MATERIAL

QUANTITY	NAME	MAXIMUM SPACING (FT.)
110	MIXED PERENNIALS	1 FT.
55	SHRUBS / MIXED GRASSES	2 FT.

DRAINAGE AREA M-6 (6)
MICRO-BIORETENTION PLANT MATERIAL

QUANTITY	NAME	MAXIMUM SPACING (FT.)
109	MIXED PERENNIALS	1 FT.
54	SHRUBS / MIXED GRASSES	2 FT.

~~DRAINAGE AREA M-6 (7)
MICRO-BIORETENTION PLANT MATERIAL~~

QUANTITY	NAME	MAXIMUM SPACING (FT.)
33	MIXED PERENNIALS	1 FT.
16	SHRUBS / MIXED GRASSES	2 FT.

DRAINAGE AREA M-6 (8)
MICRO-BIORETENTION PLANT MATERIAL

QUANTITY	NAME	MAXIMUM SPACING (FT.)
108	MIXED PERENNIALS	1 FT.
54	SHRUBS / MIXED GRASSES	2 FT.

FACILITY NO.	A	B
M-6 (5)	440.00	437.17
M-6 (6)	432.05	429.22
M-6 (7)	433.00	430.17
M-6 (8)	433.00	430.17

LOT 8

ESDV
HOUSE: 2,820 SF, DRIVEWAY: 1963 SF, TOTAL IMPERVIOUS = 4,783 SF
ESDV = A(Pe)(Rv)/12 =
ESDV = (29243)(0.19)(1.0)/12 = 463 CF

ROOFTOP (100% IMPERVIOUS) 2,820 SF
DW1 (991)(0.95)(1.0)/12 = 78 CF (MIN)
SIZE 8.0'x8.0'x4' STONE VOLUME = 256 CF

DW2 (901)(0.95)(1.0)/12 = 71 CF (MIN)
SIZE 7.5'x7.5'x4' STONE VOLUME = 225 CF

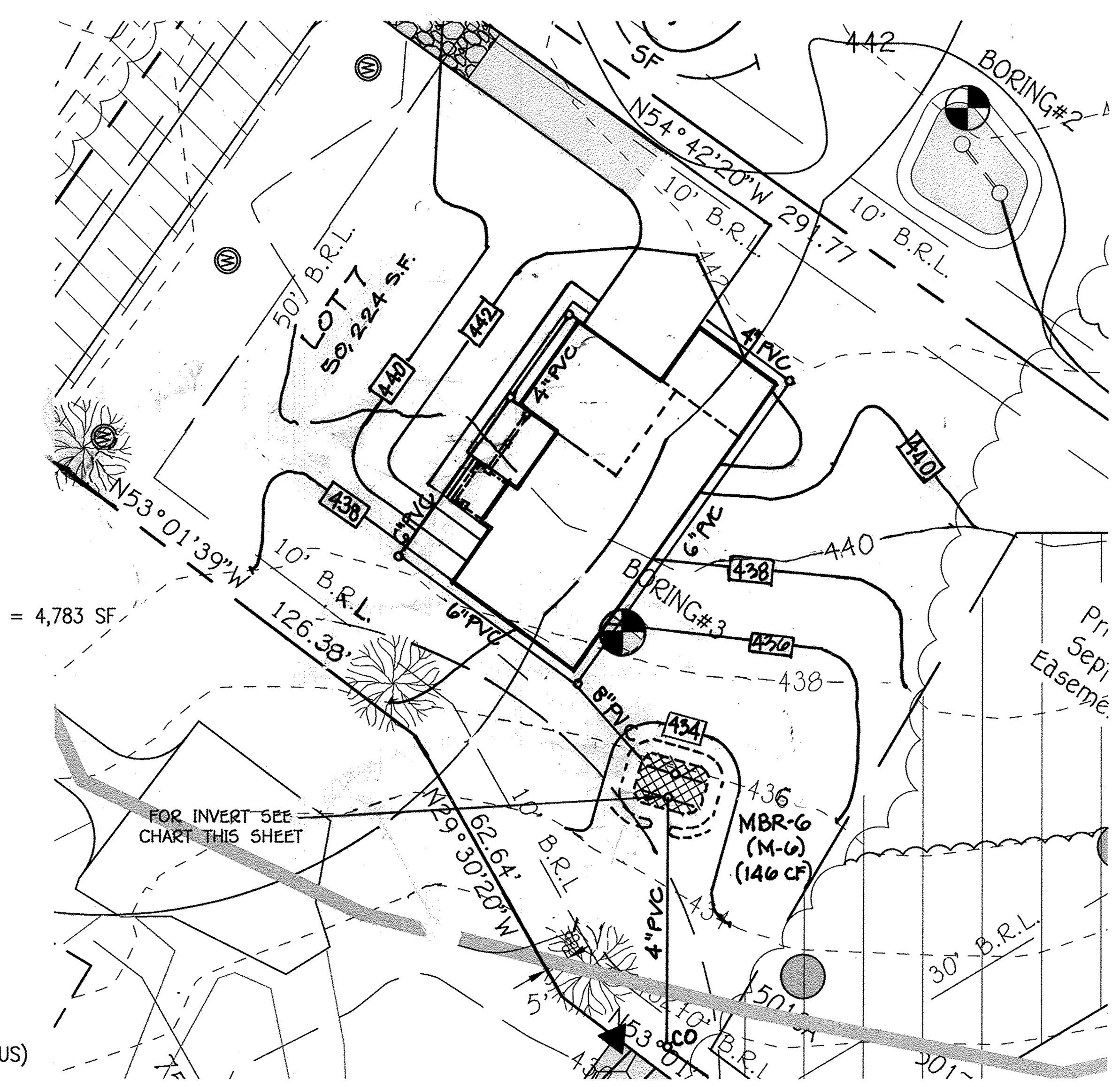
DW3 (460)(0.95)(1.0)/12 = 36 CF (MIN)
SIZE 6.0'x6.0'x4' STONE VOLUME = 144 CF

DW4 (475)(0.95)(1.0)/12 = 37.6 CF (MIN)
SIZE 6.0'x6.0'x4' STONE VOLUME = 144 CF

NON-ROOFTOP DISCONNECTION, DRIVEWAY (100% IMPERVIOUS)
A=1,963 SF
ESDV = (1.0)(0.95)(1963)/12 = 155 CF

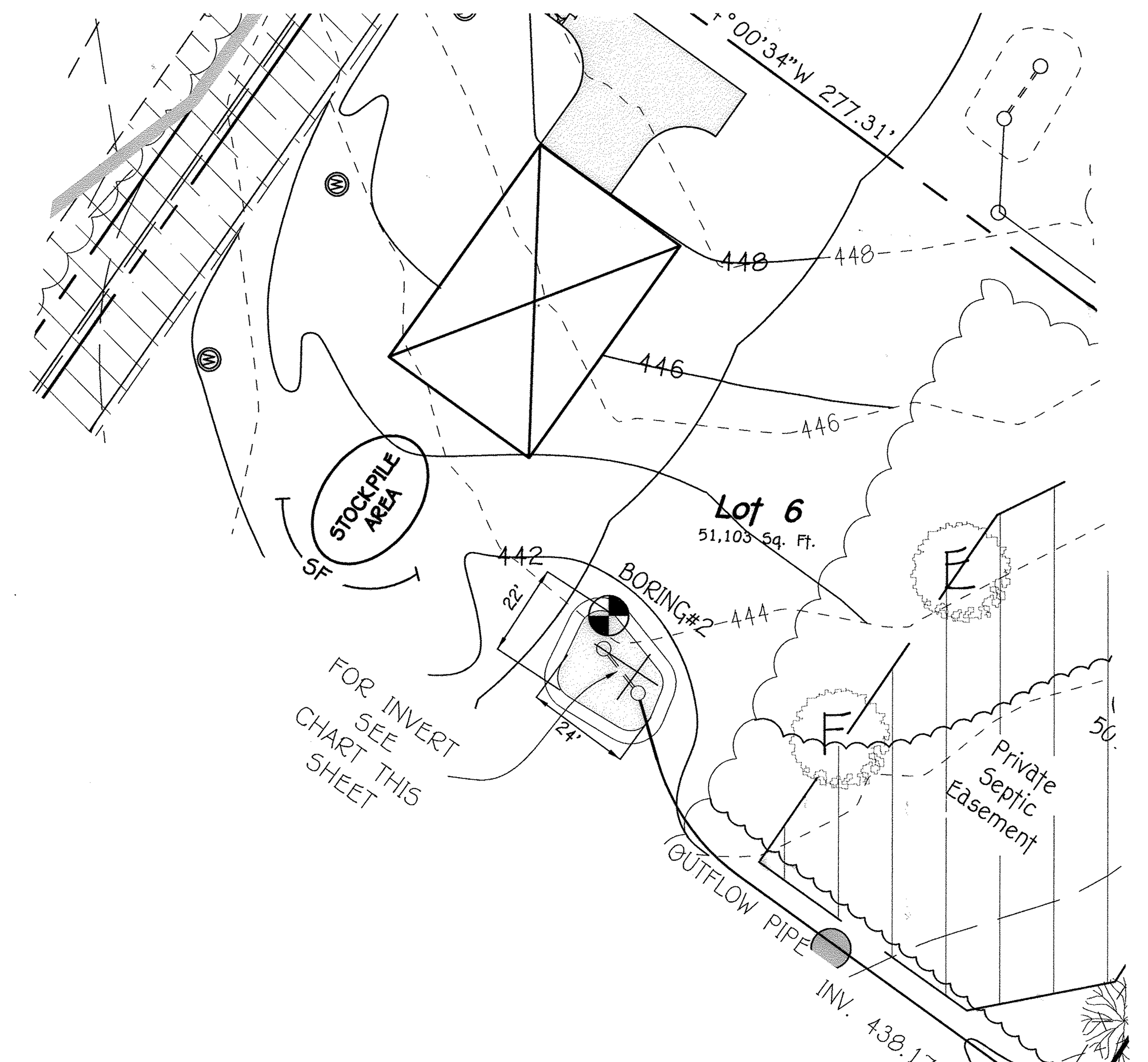
M-6 (6)

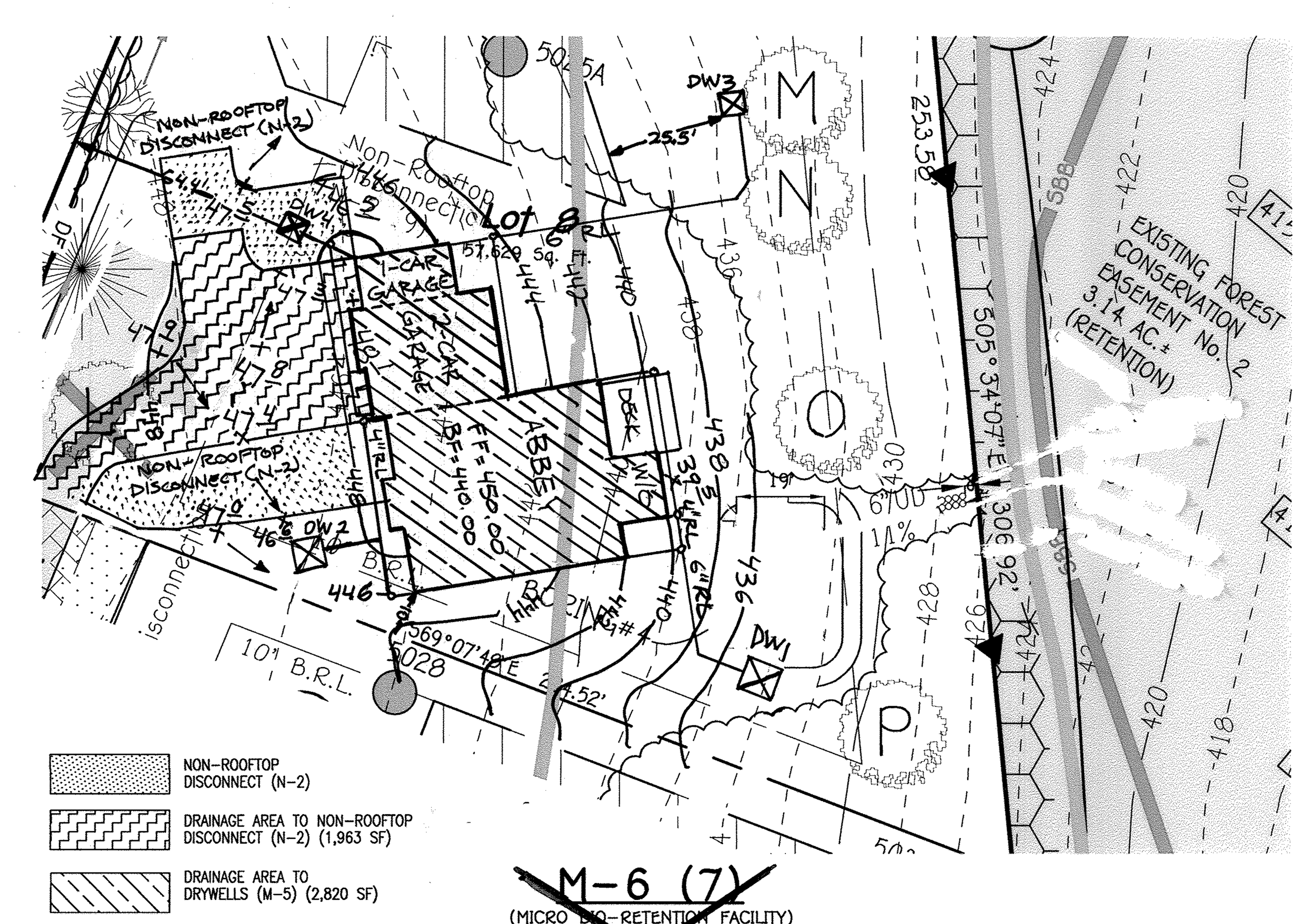
(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 30'
DRAINAGE AREA: 2,449 SF (IMPERVIOUS AREA)
FILTER AREA: 146 SF (AREA OF MULCH)
ELEVATION 432.30 (TOP OF MULCH)
PERIMETER 45
WEIR ELEVATION 433.30



M-6 (5)

(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 30'
DRAINAGE AREA: 21,201 SqFt.
FILTER AREA: 437 SqFt.
ELEVATION 440.00
PERIMETER 78
WEIR ELEVATION 441.00





NON-ROOFTOP DISCONNECT (N-2)

DRAINAGE AREA TO NON-ROOFTOP DISCONNECT (N-2) (1,963 SF)

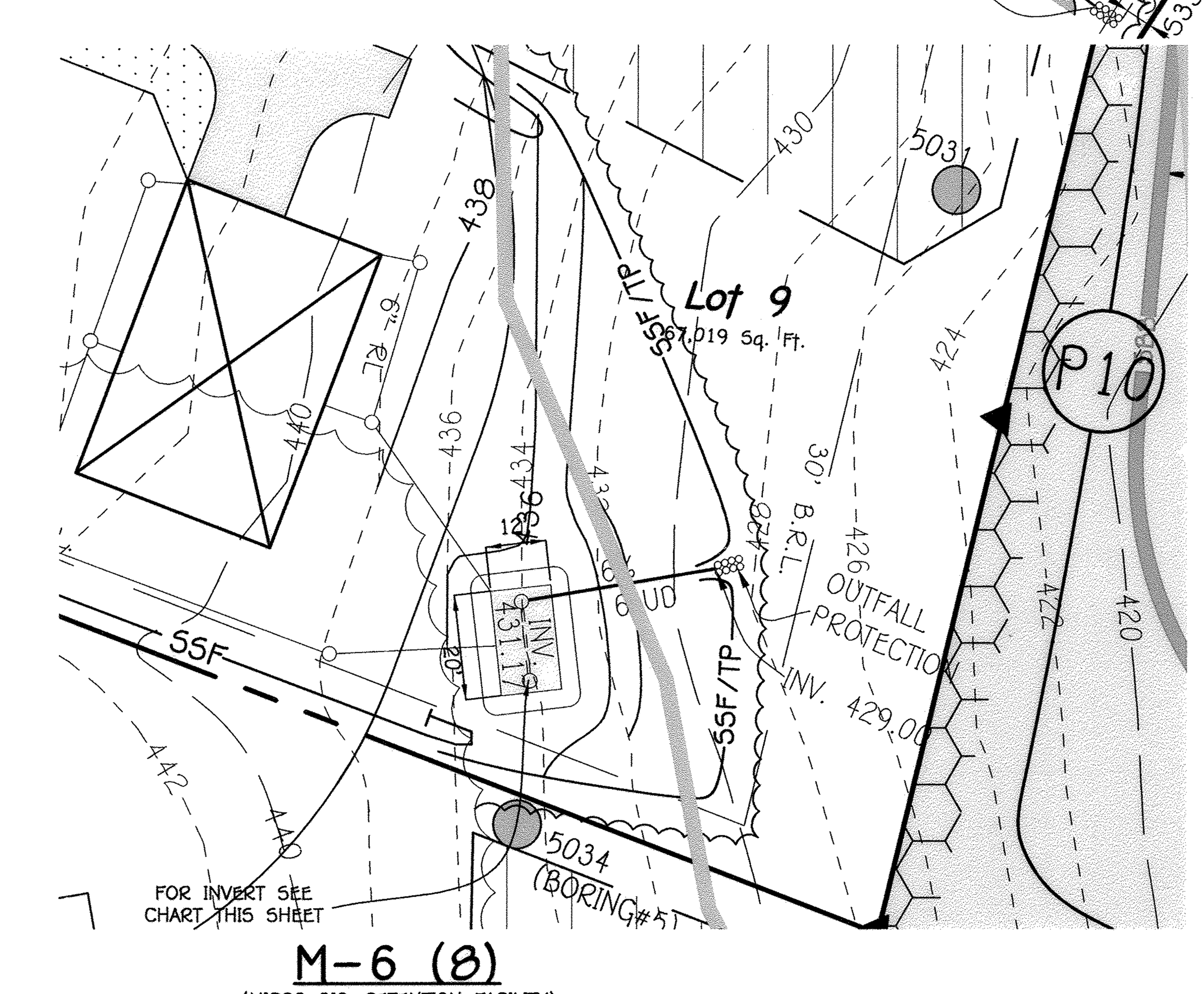
DRAINAGE AREA TO DRYWELLS (M-5) (2,820 SF)

~~M-6 (7)~~

~~(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 30'
DRAINAGE AREA: 4,429 SqFt.
FILTER AREA: 344 SqFt.
ELEVATION 433.00
PERIMETER 77'
WEIR ELEVATION 434.00~~

NOTE: THE LOCATION FOR THE PROPOSED DWELLING ON LOT 7 WITH RESPECT TO THE BRL'S AND LOT LINES WILL BE REVIEWED AND APPROVED AT THE TIME OF THE BUILDING PERMIT.

Scale: 1" = 50' (0', 50', 100', 150')



M-6 (8)

(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 30'
DRAINAGE AREA: 4,055 SqFt.
FILTER AREA: 344 SqFt.
ELEVATION 433.00
PERIMETER 77'
WEIR ELEVATION 434.00

NO.	BY	REVISION	DATE
2	VTG	REVISE THE PLAN TO SHOW THE NEW HOUSE TYPE AND GRADING ON LOT 8 WITH REVISED SWM	1-14-19
1	RHV	REVISE THE HOUSE, GRADING AND BIO-RETENTION FACILITY LOT 7	6/14/16

STORMWATER MANAGEMENT NOTES & DETAILS

FULTON MANOR VALLEY PART TWO

LOTS 6 THRU 9
ZONED: RR-DEO
TAX MAP No. 41 GRID No. 19 PARCEL No. 78 AND 456
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY 20, 2014
SHEET 7 OF 7

F-14-043