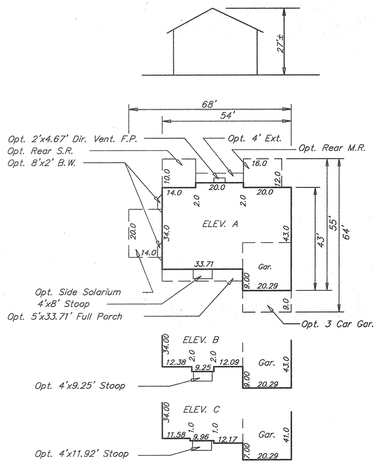
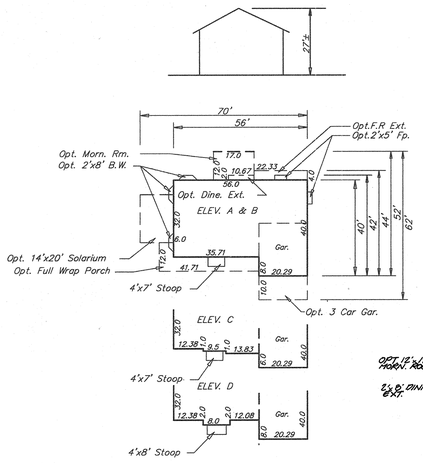
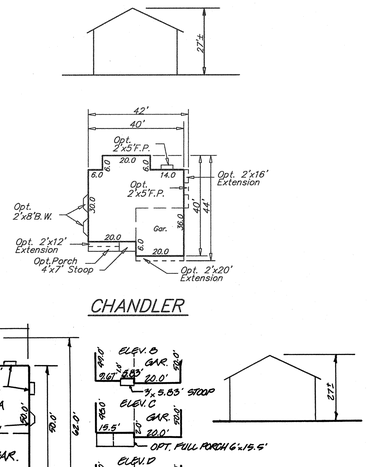


AVALON

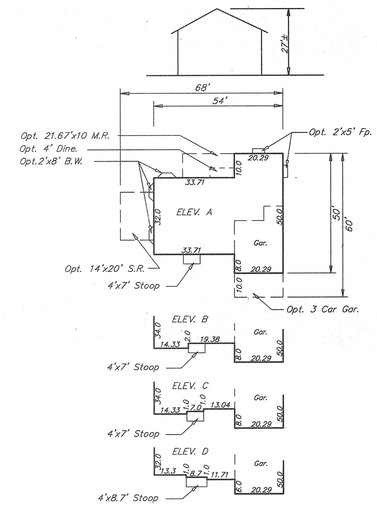


COURTLAND

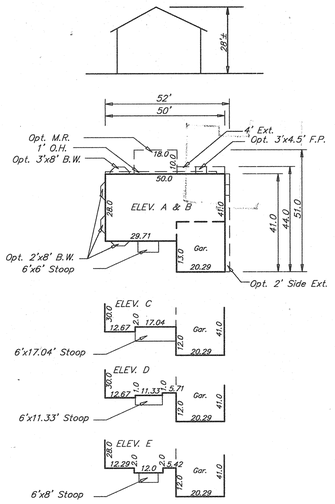


CHANDLER

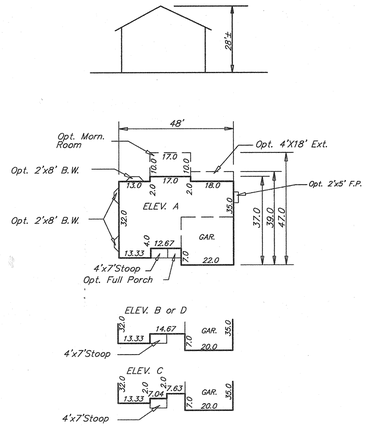
TAYLOR



WAVERLY

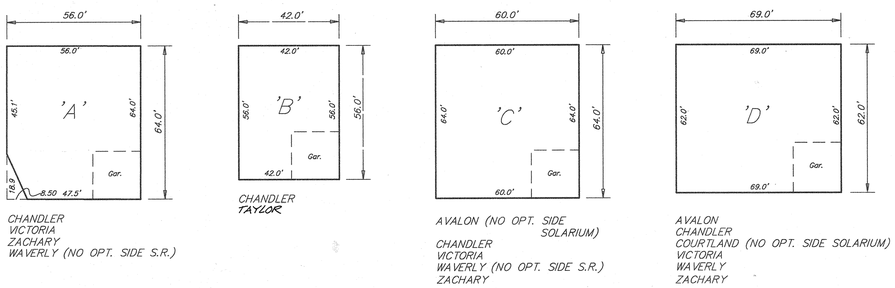


VICTORIA



ZACHARY

GENERIC BOXES



CHANDLER
VICTORIA
ZACHARY
WAVERLY (NO OPT. SIDE S.R.)

CHANDLER
TAYLOR

AVALON (NO OPT. SIDE SOLARIUM)
CHANDLER
VICTORIA
WAVERLY (NO OPT. SIDE S.R.)
ZACHARY

AVALON
CHANDLER
COURTLAND (NO OPT. SIDE SOLARIUM)
VICTORIA
WAVERLY
ZACHARY

SHEET INDEX	
SHEET	DESCRIPTION
1	SITE DEVELOPMENT PLAN SHEET 1 of 2
2	SITE DEVELOPMENT PLAN SHEET 2 of 2
3	SEDIMENT AND EROSION CONTROL
4	SEDIMENT AND EROSION CONTROL DETAILS

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
5	7811 Gregamin Court
6	7819 Gregamin Court
7	7823 Gregamin Court
8	7827 Gregamin Court
10	7831 Gregamin Court
11	7835 Gregamin Court
12	7838 Gregamin Court
13	7834 Gregamin Court
14	7830 Gregamin Court
15	7826 Gregamin Court

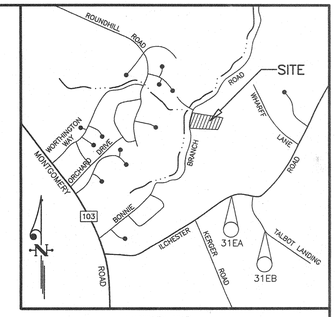
LEGEND

CONTOUR INTERVAL 2 FT.
EXISTING CONTOUR 348
PROPOSED CONTOUR 348
DIRECTION OF DRAINAGE
WALK OUT BASEMENT W.O.B.
SPOT ELEVATION +78
FOREST CONSERVATION EASEMENT

BENCHMARKS:

Howard County Monument #31EA
#31EA – Concrete Monument
Elevation: 469.603
Location: N569641.123 E1,374,815.935

Howard County Monument #31EB
#31EB – Concrete Monument
Elevation: 453.396
Location: N568730.984 E1,376,273.491



VICINITY MAP
Scale : 1"=2000'

21. The Forest Conservation requirement of section 16.1200 of the Howard County Code: Forest Conservation Act, has been met by the reforestation of 1.26 acres offsite. Financial surety for the onsite Forest Conservation obligations for this subdivision are $8,189.00 for retention of 0.94 acres of forest and $2,396.00 for onsite reforestation of 0.11 acres. Financial surety for off–site reforestation is $27,443.00. Financial Surety for the required Forest Conservation has been posted part of Devloper Agreement, F–01–208.

22. This plan is subject to the Amended 5th Edition of the Subdivision and Land Development Regulations per Council Bill No. 45–2003 and the Zoning Regulations as amended by Council Bill 45–2003. Development or construction on these lots must comply with setback and buffer regulations in effect at the time of submission of the site development plan, waiver petition application, or building/grading permit.

23. SHC Elevations shown are at the Property lines.

24. Driveways shall be provided prior to issuance of a use and occupancy permit for any new dwellings to insure safe access for fire and emergency vehicles per the minimum requirements:
(a) Width–12' (14' serving more than one residence);
(b) Surface–6" of compacted crusher run base with tar and chip coating (1–1/2" min.);
(c) Geometry–max. 15% grade, max. 10% grade change and min. 45' turning radius;
(d) Structures (culverts/bridges) – capable or supporting 25 gross tons (H25 loading);
(e) Drainage elements–capable of safely passin 100–year flood with no more than 1 foot depth over driveway surface;
(f) Maintenance–sufficient to insure all weather use.

25. Stormwater management is provided by onsite facilities. Stormwater management facility 1 and 2 is a detention/retention (wet pond) facility.

26. Open space requirements for these lots have been provided under F–01–208.

27. No clearing, grading or construction is permitted within the required wetland, stream buffers or forest conservation areas except for the work associated with the approved construction plans. All forest to remain within the areas shown as "Forest Conservation" Easement" meet the minimum requirements of the forest conservation act.

28. No clearing, grading, or construction is permitted within the forest conservation easement. However, forest management practices as defined in the deed of forest conservation are allowed.

29. Storm Water Management facilities will be required on the parcels shown on this plat in accordance with the design manuals prior to signature approval of the Site Development Plan. The developer will be required to execute the Developer's Agreement for the construction of the Storm Water Management Facility and a Maintenance Agreement. The Stormwater Management Facilities are to be constructed as a part of this Subdivision. Construction may only begin after the approval of the construction drawings for the further subdivision of lot 3.

30. The 4'x10' concrete and refuse recycle pad (6 inches in depth) located in Bonnie Branch Road Public Right of Way, will be maintained by the Homeowner's Association.

31. This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual. Financial surety for the required perimeter landscaping for twelve (12) shade trees and four (4) evergreen trees in the amount of $2700.00 is part of the builders grading permit application for Lots 5–8 and 10–15. Refer to sheet 3 of 5 for individual lot landscaping and surety amounts required per lot.

GENERAL NOTES:

1. Subject property is zoned R–20 per the Feburary 2, 2004 Comprehensive Zoning Plan, and in accordance with the '2004 Zoning Regulations.
2. The total area included in this submission is : 3.1895 Acres.
3. The total number of lots included in this submission is : 9.
4. Improvement to property : Single Family Detached
5. Department of Planning and Zoning reference file numbers : WP–01–139; F–01–208; SP–02–02; F–04–078; F05–028.
6. Utilities shown as existing are taken from approved Water and Sewer plans Contract #14–4210–D, approved Road Construction plans F–01–208, and actual field survey.
7. Any damage to county owned rights–of–way shall be corrected at the developer's expense.
8. All roadways are existing per F–01–208.
9. The existing topography was taken from Clark, Finefrock, & Sackett dated July 2000.
10. The coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System – Howard County Monuments Numbers : 31EA & 31EB
11. The contractor shall notify the Department of Public Works/ Division of Construction Inspection at (410) 313–1880 at least twenty–four (24) hours prior to the start of work.
12. The contractor shall notify "Miss Utility" at 1–800–257–7777 at least 48 hours prior to any excavation work.
13. For driveway entrance details, refer to Ho. Co. Design Manual Volume IV details R.6.03 & R.6.05.
14. In accordance with Section 128 of the Ho. Co. zoning regulations, bay windows or chimneys not more than 16 feet in width may project not more than 4 feet into any setbacks; porches or decks, opened or enclosed, may project not more than 10 feet into the front or rear setbacks.
15. Stormwater Management is provided per F–01–208. The developer will be required to execute the Developers Agreement for the construction of the Stormwater Management facility and a Maintainance Agreement.
16. There are no wetlands or stream buffers on this site.
17. For flag or pipestem lots, refuse collection, snow removal and road maintenance are provided to the junction of the flag or pipestem and the road right–of–way only, and not onto the flag or pipestem lot driveway.
18. All driveways will be private and all maintenance will be shared with each homeowner using the driveway . Maintenance agreements for the shared access easements are recorded in the land records of Howard County, Maryland.
19. Waiver Petition, WP–01–139, was granted per letter dated August 2, 2001. action was taken to waive section 16.121(e), requiring 40' fronting on a public road for open space lots.
20. The Homeowners Association Articles of Incorporation have been accepted by the State of Department of Assessment and Taxation on the 4th day of August, 2003.

OWNER / DEVELOPER

BONNIELASS, LLC
8835–P COLUMBIA 100 PARKWAY
COLUMBIA, MARYLAND 21045

SPECIAL NOTES:

This plan is for house siting and lot grading only. Improvements shown within the rights–of–way on this S.D.P. are not to be used for construction. For construction, see approved Road Construction Plans F–01–208 and/or approved Water and Sewer Plans Contract #14–4210–D.

NO	REVISION	DATE
1	ADD TAYLOR HOUSE TYPE TO PLAN	7-25-05

APPROVED: DEPARTMENT OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 5/16/05
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 5/25/05
DIRECTOR — DATE 6/1/05

SUBDIVISION NAME: BONNIELASS	SECTION/AREA: N/A	LOTS/PARCELS: 5-8 AND 10-12 AND 14-15
PLAT NO.: 17058/16381	BLOCK NO.: N/A	ZONE: R-20
TAX MAP NO.: 31	ELECTION DIST.: 1st	CENSUS TRACT: #6011.01
WATER CODE: #34–W	SEWER CODE: #S–6127	

CLARK · FINEFROCK & SACKETT, INC.
ENGINEERS · PLANNERS · SURVEYORS
7135 MINSTREL WAY · COLUMBIA, MD 21045 · (410) 381–7500 BALT. · (301) 621–8100 WASH.

DESIGNED: R.L.	SINGLE FAMILY DETACHED SITE DEVELOPMENT PLAN LOTS 5–8 AND 10–15 AND 14–15 BONNIELASS TAX MAP #31 GRID 9 PARCEL 254 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE: 1" = 30'
DRAWN: R.L.		DRAWING: 1 of 5
CHECKED: D.A.R.		JOB NO.: 03–066
DATE: 12–07–04	FOR : RYAN HOMES P.O. BOX 1018 Columbia, Maryland 21044	FILE NO.: 03–066–X

#13 J:\CHARLES DRAWINGS\00–098BONNIELASS\SITE DEV PLAN\03066X.DWG

SDP–05–014

Nº	REVISION	DATE
1	REV. HSE. AND GRADE LOT 12 FROM GENERIC BOX 'D' TO WAVERLY EL. D	7-25-05
2	REV. HSE. AND GRADE LOT 13 FROM GENERIC BOX B TO ZACHARY EL. A	11-09-05

LEGEND

CONTOUR INTERVAL	2 FT.
EXISTING CONTOUR	348
PROPOSED CONTOUR	348
DIRECTION OF DRAINAGE	
WALK OUT BASEMENT	W.O.B.
SPOT ELEVATION	+78 4
STABILIZED CONSTRUCTION ENTRANCE	S.C.E.
EROSION CONTROL MATTING	ECM
SUPER SILT FENCE	SSF
LIMIT OF DISTURBED AREA	LOD
TREE PROTECTION FENCE	
EXISTING TREES TO REMAIN	
INLET PROTECTION	
FOREST CONSERVATION EASEMENT	

OWNER / DEVELOPER

BONNIELASS, LLC
8835-P COLUMBIA 100 PARKWAY
COLUMBIA, MARYLAND 21045

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development and 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 or their authorized agents, as are deemed necessary".

[signature] 12-15-04
NAME DATE

ENGINEER'S CERTIFICATE

I hereby certify that this plan for Sediment and Erosion 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] 12-15-04
G. NELSON CLARK DATE

STATE OF MARYLAND — G. NELSON CLARK — NO. 7139 — PROFESSIONAL ENGINEER
12-15-04

APPROVED: DEPARTMENT OF PLANNING & ZONING

[signature] CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ	5/16/05 DATE
[signature] CHIEF, DIVISION OF LAND DEVELOPMENT	5/25/05 DATE
[signature] DIRECTOR	6/1/05 DATE

#13 J:\CHARLES DRAWINGS\00-098BONNIELASS\SITE DEV PLAN\03066X.DWG

CLARK · FINEFROCK & SACKETT, INC.
ENGINEERS · PLANNERS · SURVEYORS
7135 MINSTREL WAY · COLUMBIA, MD 21045 · (410) 381-7500 BALT. · (301) 621-8100 WASH.

DESIGNED R.L.	SINGLE FAMILY DETACHED SITE DEVELOPMENT PLAN	SCALE 1" = 30'
DRAWN R.L.	LOTS 5-8 AND 10-13 AND 14-15 **BONNIELASS**	DRAWING 2 of 5
CHECKED D.A.R.	TAX MAP #31 GRID 9 PARCEL 254 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 03-066
DATE 12-07-04	FOR : RYAN HOMES P.O. BOX 1018 Columbia, Maryland 21044	FILE NO. 03-066-X

SDP 05-014

NO	REVISION	DATE
1	REV. HSE. AND GRADE LOT 13 FROM GENERIC BOX "B" TO ZACHARY EL.A	11-09-05

LEGEND

CONTOUR INTERVAL	2 FT.
EXISTING CONTOUR	348
PROPOSED CONTOUR	348
DIRECTION OF DRAINAGE	
WALK OUT BASEMENT	W.O.B.
SPOT ELEVATION	+ 78.4
STABILIZED CONSTRUCTION ENTRANCE	SCE
EROSION CONTROL MATTING	ECM
SUPER SILT FENCE	SSF
LIMIT OF DISTURBED AREA	LOD
TREE PROTECTION FENCE	
EXISTING TREES TO REMAIN	
INLET PROTECTION	
FOREST CONSERVATION EASEMENT	

BONNIE BRANCH OVERLOOK
PLATS 14557–14561

BONNIE BRANCH ROAD
MINOR COLLECTOR (SCENIC ROAD)
EX. 12'W CONT. NO 266–W PUBLIC ROAD

EX. 8"S
EX. 10"S
CONT. # 14–3823–D
EX. 8"S CONT. # 14–3823–D
EX. 8"S CONT. # 417–S

PARCEL 253
N/F ROBERT J. KYLER, ET UX
L. 294 F. 374
R–20

EX. OPEN SPACE LOT 1
F–07–208
1.2634 ACRES
BONNIELASS HOA, INC.
PLAT #16381

EX. FOREST CONSERVATION AREA #1
0.1190 AC.
RETENTION
PLAT #16381

EX. FOREST CONSERVATION AREA #2
0.1143 AC.
PLANTING
PLAT #16381

SWM, DRAINAGE AND UTILITY EASEMENT
DETENTION FACILITY

EX. FOREST CONSERVATION AREA #3
0.1299 AC.
RETENTION
PLAT #16381

EX. FOREST CONSERVATION AREA #4
0.6941 AC.
RETENTION
PLAT #16381

BONNIELASS
EX. OPEN SPACE LOT 14
1.0340 AC.
F–07–208

BONNIELASS HOA, INC.

GRESAMIN COURT
PRIVATE ACCESS PLACE

20'x30' TURN AROUND

10' MAINTENANCE ACCESS

12' MAINTENANCE ACCESS

10' TREE MAINTENANCE EASEMENT

EX. 10'x10' PUBLIC WATER & UTILITY EASEMENT PLAT #16381

EX. 30' PUBLIC WATER, SEWER & UTILITY EASEMENT PLAT #16381

EX. STORM WATER MANAGEMENT CREDIT EASEMENT #2 AND NATURAL AREA CONSERVATION #2
0.4236 AC.
PLAT #16381

EXISTING 20' PRIVATE STORM DRAIN EASEMENT PLAT #16381

EX. 24' PRIVATE ACCESS PLACE EASEMENT PLAT #16381

EX. 30' PUBLIC WATER, SEWER & UTILITY EASEMENT PLAT #16381

SWM, DRAINAGE, AND UTILITY EASEMENT PLAT #16381

STORM WATER MANAGEMENT CREDIT EASEMENT #1 AND NATURAL AREA CONSERVATION #1
0.5299 AC.
PLAT #16381

EX. PRIVATE DRIVEWAY EASEMENT PLAT #16381

EX. 20' PRIVATE STORM DRAIN EASEMENT

15' NON-WOODY VEGETATIVE BUFFER

EX. 18"S

EX. INLET

4'x10' REFUSE/RECYCLING PAD

15'x20' STANDING PAD

STREET LIGHT

WHC

WV

PARCEL 240
N/F BENJAMIN H. VESTER, JR. ET UX
L. 481 F. 73
R–20

BG&E #202298
BG&E #213685
BG&E #238994
BG&E #243359

LOT 35
LOT 36
LOT 37
R–20
LOT 14
R–20
LOT 13
R–20

EXISTING FOREST CONSERVATION EASEMENT PLAT NO. 12567

BRYAN/BRADY PROPERTY
PLAT No. 12567

EXISTING FOREST CONSERVATION EASEMENT PLAT NO. 13524

CRESTWOOD
PLAT No. 13524

ED A–2

ARC=2.45'
ARC=2.45'
ARC=2.45'
ARC=2.44'
ARC=2.44'
ARC=2.44'
ARC=2.43'
ARC=2.43'
ARC=2.43'
ARC=2.43'

LOT 6
LOT 7
LOT 8
LOT 10
LOT 11
LOT 12
LOT 13
LOT 14
LOT 15

APPROVED: DEPARTMENT OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION	5/16/05 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	5/25/05 DATE
DIRECTOR	6/1/05 DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development and 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 or their authorized agents, as are deemed necessary".

NAME — DATE 12-15-04

ENGINEER'S CERTIFICATE

I hereby certify that this plan for Sediment and Erosion 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.

G. NELSON CLARK — DATE 12-15-04

STATE OF MARYLAND · G. NELSON CLARK · NO. 7218 · REGISTERED PROFESSIONAL ENGINEER

12-15-04

#13 J:\CHARLES DRAWINGS\00–098BONNIELASS\SITE DEV PLAN\03066X.DWG

OWNER / DEVELOPER

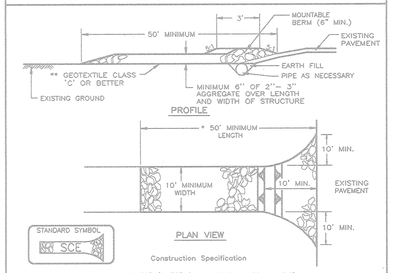
BONNIELASS, LLC
8835–P COLUMBIA 100 PARKWAY
COLUMBIA, MARYLAND 21045

CLARK · FINEFROCK & SACKETT, INC.
ENGINEERS · PLANNERS · SURVEYORS
7135 MINSTREL WAY · COLUMBIA, MD 21045 · (410) 381–7500 BALT. · (301) 621–8100 WASH.

DESIGNED R.L.	SINGLE FAMILY DETACHED SEDIMENT AND EROSION CONTROL PLAN LOTS 5–8 AND 10–13 AND 14–15 BONNIELASS TAX MAP #31 GRID 9 PARCEL 254 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE 1" = 30'
DRAWN R.L.		DRAWING 3 of 5
CHECKED D.A.R.		JOB NO. 03–066
DATE 12–07–04	FOR : RYAN HOMES P.O. BOX 1018 Columbia, Maryland 21044	FILE NO. 03–066–SE

SDP–05–014

DETAIL 24 – STABILIZED CONSTRUCTION ENTRANCE

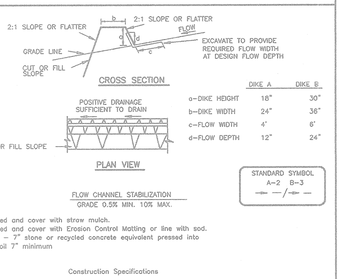


Construction Specification

1. Length – minimum of 50' (* 30' for a single residence lot).
2. Width – 10' minimum, should be flared at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. ** The plan approval authority may not require single family residences to use geotextile.
4. Stone – crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. Surface Water – all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey, a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
6. Location – A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 1 – EARTH DIKE



	DIKE A	DIKE B
a–DIKE HEIGHT	18"	30"
b–DIKE WIDTH	24"	36"
c–FLOW WIDTH	4'	6'
d–FLOW DEPTH	12"	24"

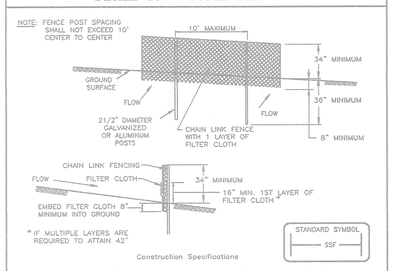
1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4" – 7" stone or recycled concrete equivalent pressed into the soil 7" minimum

Construction Specifications

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.
4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
6. Fill shall be compacted by earth moving equipment.
7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
8. Inspection and maintenance must be provided periodically and after each rain event.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE A – 1 – 6	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 33 – SUPER SILT FENCE



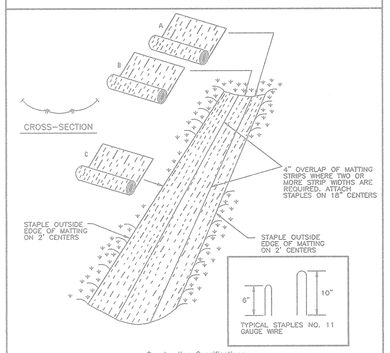
Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
4. Filter cloth shall be embedded a minimum of 8" into the ground.
5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height
7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft²/minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E – 18 – 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 30 – EROSION CONTROL MATTING



Construction Specifications

1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
2. Staple the 4" overlap in the channel center using an 18" spacing between staples.
3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

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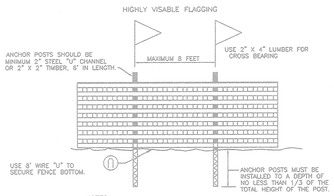


NOTES:
1. Forest protection device only.
2. Retention area will be set as part of the review process.
3. Boundaries of retention area should be staked and flagged prior to installing device.
4. Root damage should be avoided.
5. Protection signage should be used.
6. Device should be maintained throughout construction.

BLAZE ORANGE PLASTIC MESH
TYPICAL TREE PROTECTION FENCE DETAIL
NO SCALE

APPROVED: DEPARTMENT OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 5/16/05
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 5/25/05
DIRECTOR — DATE 6/1/05

Reviewed for HOWARD S.C.D. and found to meet Technical Requirements
Signature — Date
U.S. Natural Resources Conservation Service

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

Howard S.C.D. — Date 5/16/05

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

Definition

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose

To provide a suitable soil medium for vegetable growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

I. This practice 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.

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

I. Topsoil salvaged from the existing site may be used provided that 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–SCS in cooperation with Maryland Agricultural Experimental Station.

II. Topsoil Specifications – Soil to be used as topsoil must meet the following:
   i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or a soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
   ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
   iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4–8 tons/acre (200–400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

III. For sites having disturbed areas under 5 acres:
   i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization – Section I – Vegetative Stabilization Methods and Materials.

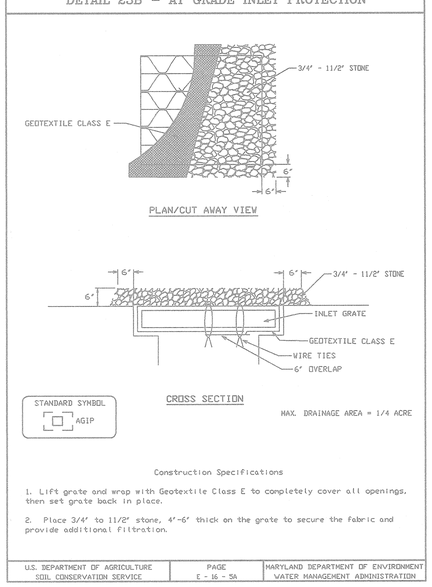
IV. For sites having disturbed areas over 5 acres:
   i. On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
      a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
      b. Organic content of topsoil shall be not less than 1.5 percent by weight.
      c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
      d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

NOTE: 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.

   ii. Place topsoil (if required) and apply soil amendments specified in 20.0 Vegetative Stabilization–Section I– Vegetative Stabilization Methods and Materials.

V. Topsoil Application
   i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
   ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" – 8" higher in elevation.
   iii. Topsoil shall be uniformly distributed in a 4"–8" layer and lightly compacted to a minimum thickness of 4". Spreading shall 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 shall be corrected in order to prevent the formation of depressions or water pockets.
   iv. Topsoil shall not be place while 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.

DETAIL 23B – AT GRADE INLET PROTECTION



Construction Specifications

1. Lift grate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.
2. Place 3/4" to 11/2" stone, 4"–6" thick on the grate to secure the fabric and provide additional filtration.

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DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development and 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 or their authorized agents, as are deemed necessary".

NAME — DATE 12-15-04

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG–LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

SOIL AMENDMENTS: In lieu of soil test recommendations, use one of the following schedules:

1) Preferred–Apply 2 tons per acre dolomitic limestone (92 lbs/ 100 sq.ft.) and 600 lbs per acre 10–10–10 fertilizer (14 lbs./ 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At the time of seeding, apply 400 lbs. per acre 30–0–0 ureaform fertilizer (9 lbs/1000 sq.ft.)
2) Acceptable–Apply 2 tons per acre dolomatic limestone (92 lbs/ 1000 sq.ft.) and apply 1000 lbs. per acre 10–10–10– fertilizer (23 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

SEEDING: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs/1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 sq.ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq.ft.) for anchoring.

MAINTENANCE: Inspect all seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

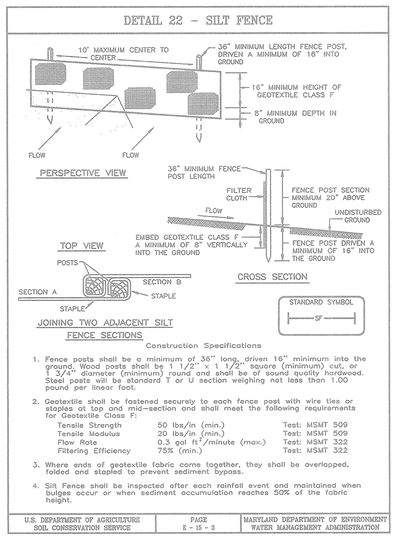
SOIL AMENDMENTS: Apply 600 lbs. per acre 10–10–10 fertilizer (14 lbs./1000 sq.ft).

SEEDING: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual rye (3.2 lbs./1000 sq.ft.) For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs 1000 sq.ft.). For the period November 1 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq.ft.) for anchoring.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

DETAIL 22 – SILT FENCE



Construction Specifications

1. Fence posts shall be a minimum of 36" long, driven 16" minimum into the ground. Wood posts shall be 1 1/2" × 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighing not less than 1.00 pound per linear foot.
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid–section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft²/minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric height.

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ENGINEER'S CERTIFICATE

I hereby certify that this plan for Sediment and Erosion 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.

G. NELSON CLARK — DATE 12-15-04

STATE OF MARYLAND — G. NELSON CLARK — No. 8008 — PROFESSIONAL ENGINEER
12-15-04

SEDIMENT AND EROSION 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 1994 MARYLAND STANDARDS AND SPECS. 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) 7 calendar days for all perimeter sediment control stuctures, dikes, perimeter slopes and all slopes greater than 3:1
   b) 14 days as to all other disturbed or graded areas on the project as a whole.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeters in accordance with Vol.1, Chapter 7, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5. 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 seedings, sod, temporary seeding and mulching (Sec 9).
   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 permission for their removal has been obtained from the Howard County Sediment Control Inspector.
7. SITE ANALYSIS:

Total Area of Site:	3.1895 Acres
Area Disturbed:	2.3578 Acres
Area to be roofed or paved:	1.1177 Acres
Area to be vegetatively stabilized:	1.2401 Acres
Total Cut:	____ CY
Total Fill:	____ CY
Offsite Waste/Borrow Area Location:	*

8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment control must be provided, if deemed necessary by the Howard County DPW Sediment Control Inspector.
10. 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.
11. Trenches for the construction of utilities shall be backfilled and stabilized within one working day, or is limited to three pipe lengths.
12. The total amount of earth dike = ____ LF
13. The total amount of super silt fence = ____ LF
14. The total amount of super diversion fence: ____ LF

* It is the responsibility of the contractor to identify the spoil/borrow site and notify and gain approval from the sediment control inspector of the site and it's grading permit number at the time of construction.

CONSTRUCTION SEQUENCE:

	NO. OF DAYS
1. Obtain grading permit.	7
2. Install tree protection fence.	7
3. Install sediment and erosion control devices and stabilize.	14
4. Excavate for foundations, rough grade and temporarily stabilize.	30
5. Construct structures, sidewalks and driveways.	60
6. Final grade, install Erosion Control Matting and stabilize in accordance with standards and specifications.	14
7. Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize.	7

* Delay construction of houses on lots: N/A

OWNER / DEVELOPER

BONNIELASS, LLC
8835–P COLUMBIA 100 PARKWAY
COLUMBIA, MARYLAND 21045

#13 J:\CHARLES DRAWINGS\00–098BONNIELASS\SITE DEV PLAN\S&E PLAN\03066SE.DWG

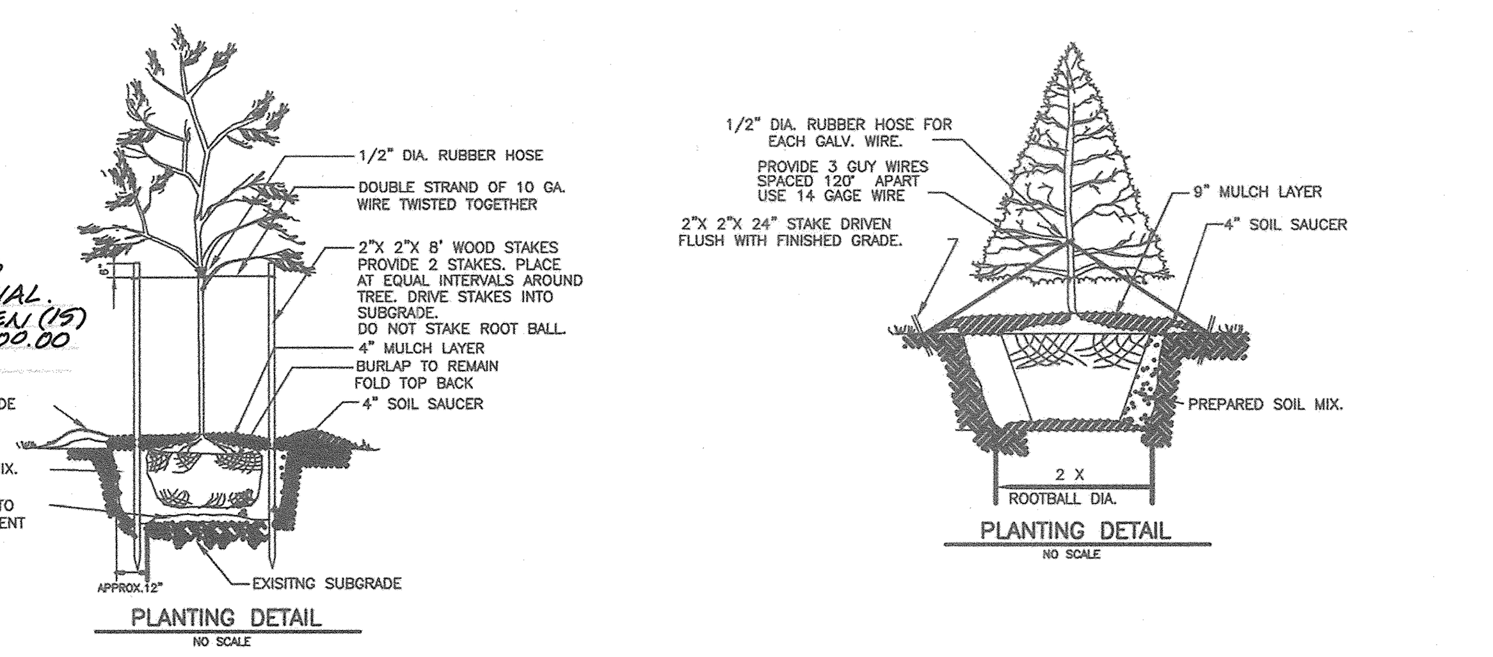
CLARK · FINEFROCK & SACKETT, INC.
ENGINEERS · PLANNERS · SURVEYORS
7135 MINSTREL WAY · COLUMBIA, MD 21045 · (410) 381–7500 BALT. · (301) 621–8100 WASH.

DESIGNED R.L.	SINGLE FAMILY DETACHED SEDIMENT AND EROSION CONTROL DETAILS LOTS 5–8 AND 10–12 AND 14–15 BONNIELASS TAX MAP #31 GRID 9 PARCEL 254 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE 1" = 30'
DRAWN R.L.		DRAWING 4 of 5
CHECKED D.A.R.		JOB NO. 03–066
12–07–04	FOR : RYAN HOMES P.O. BOX 1018 Columbia, Maryland 21044	FILE NO. 03–066–SE

SDP–05–014

GENERAL NOTES:

1. 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 other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.
2. All plant materials shall be full and heavy, be well formed and symmetrical, conform to the most current AAN specifications and be installed in accordnace with HRD planting specifications.
3. Contractor shall verify location of all underground utilities prior to digging.
4. 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.
5. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED PERIMETER LANDSCAPING FOR FIFTEEN (15) SHADE TREES AND FOUR (4) EVERGREEN TREES IN THE AMOUNT OF $5,100.00 IS PART OF THE BUILDERS GRADING PERMIT APPLICATION FOR LOTS 5-8 AND 10-12 AND 14-15.



LEGEND

STREET TREES

STORMWATER MANAGEMENT AREA

STORMWATER MANAGEMENT AREA

NOTE: PROVIDED UNDER F-01-208

CONTOUR INTERVAL 2 FT.
EXISTING CONTOUR
PROPOSED CONTOUR
DIRECTION OF DRAINAGE
WALK OUT BASEMENT
SPOT ELEVATION
STABILIZED CONSTRUCTION ENTRANCE
EROSION CONTROL MATTING
SUPER SILT FENCE
LIMIT OF DISTURBED AREA
TREE PROTECTION FENCE
EXISTING TREES TO REMAIN
INLET PROTECTION
FOREST CONSERVATION EASEMENT

* LOT 6 IS LANDSCAPE TYPE 'A', HAS A FRONTAGE OF 67', HAS ONE SHADE TREE, HAS TWO EVERGREEN TREES, REQUIRES A SURETY OF $600.00. LOT 7 IS LANDSCAPE TYPE 'A', HAS FRONTAGE OF 80', HAS ONE SHADE TREE, TWO EVERGREEN TREES, REQUIRES A SURETY OF $600.00. LOT 8 IS A LANDSCAPE TYPE 'A', HAS FRONTAGE OF 86', HAS ONE SHADE TREE AND REQUIRES SURETY OF $300.00. LOT 10 IS A LANDSCAPE TYPE 'A', HAS A FRONTAGE OF 90', HAS TWO SHADE TREES, AND REQUIRES SURETY OF $600.00. LOT 11 IS LANDSCAPE TYPE 'A', HAS A TOTAL FRONTAGE OF 273', HAS 3 SHADE TREES AND REQUIRES SURETY OF $900.00. LOT 12 IS LANDSCAPE TYPE 'A', HAS A FRONTAGE OF 89', HAS ONE SHADE TREE AND REQUIRES SURETY OF $300.00. ~~LOT 13 IS LANDSCAPE TYPE 'A', HAS A FRONTAGE OF 200', HAS 3 SHADE TREES AND REQUIRES SURETY OF $900.00.~~ LOT 14 IS A LANDSCAPE TYPE 'A', HAS A FRONTAGE OF 76', HAS ONE SHADE TREE, REQUIRES SURETY OF $300.00. LOT 15 IS LANDSCAPE TYPE 'A', HAS FRONTAGE OF 75', HAS 2 SHADE TREES AND REQUIRES SURETY OF $600.00. LOTS 6 THROUGH 8 AND 10 THROUGH 15 HAVE A TOTAL REQUIRED SURETY OF $4,200.00

Nº	REVISION	DATE
1	REV. HSE. AND GRADE LOT 13 FROM GENERIC BOX "B" TO ZACHARY EL. A	11-09-05

PLANT SCHEDULE

KEY	PLANT NAME	SIZE	QUAN.	REMARK
AR	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE	2 1/2"-3" CAL. 6'-8' HT.	12	B&B
PS	PINUS STROBUS WHITE PINE	6'-8' HT.	4	B&B

SCHEDULE A PERIMETER LANDSCAPE EDGE Category: Adjacent to Roadways	1	2	3
Landscape Type	A	A	A
Frontage/Perimeter	503.08'	299.5'	232.3'
Number of Plants Required (1/60) Shade Trees Evergreen Trees Shrubs	8	2	4
Number of Plants Provided Shade Trees Evergreen Trees	6 4	2 0	4 0
Surety Amounts	$2,400	$600	$1,200

* Comments: Four(4) evergreen trees have been substituted for two(2) shade trees along P-1.

OWNER / DEVELOPER

BONNIELASS, LLC
8835-P COLUMBIA 100 PARKWAY
COLUMBIA, MARYLAND 21045

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development and 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 or their authorized agents, as are deemed necessary".

NAME ______ DATE 12-15-04

ENGINEER'S CERTIFICATE

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G. NELSON CLARK — DATE 12-15-04

STATE OF MARYLAND — G. NELSON CLARK — 12-15-04

APPROVED: DEPARTMENT OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ	DATE 5/10/05
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE 5/25/05
DIRECTOR	DATE 6/1/05

#13 J:\CHARLES DRAWINGS\00-098BONNIELASS\SITE DEV PLAN\03066X.DWG

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DESIGNED R.L.	SINGLE FAMILY DETACHED LANDSCAPE PLAN	SCALE 1" = 30'
DRAWN R.L.	LOTS 5-8 AND 10-13 AND 14-15 **BONNIELASS**	DRAWING 5 of 5
CHECKED D.A.R.	TAX MAP #31 GRID 9 PARCEL 254 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 03-066
DATE 12-07-04	FOR : RYAN HOMES P.O. BOX 1018 Columbia, Maryland 21044	FILE NO. 03-066-LS

SDP-05-014