

LEGEND

MINOR CONTOUR- (2' INTERVAL)

INDEX CONTOUR- (10' INTERVAL)

SOILS BOUNDARY

STREAM/POND

75' STREAM BANK BUFFER

WETLAND LIMIT

25' WETLAND BUFFER

EXISTING DRIVEWAY

PROPOSED DRIVEWAY

EXISTING TREELINE

PROPOSED TREELINE

FIELD LOCATED SPECIMEN TREE

PROPOSED SEPTIC EASEMENT

APPROXIMATE LOCATION EXISTING SEPTIC EASEMENT

EXISTING WELL

PROPOSED CONTOURS

STEEP SLOPES

PASSED CONVENTIONAL PERC TEST LOCATION 12/11/07

PASSED SANDMOUND TEST 12/21/07

FAILED CONVENTIONAL PERC TEST ROCK LOCATION 12/11/07

PRIMARY WELL LOCATION PROPOSED

ALTERNATE WELL LOCATION PROPOSED

FOREST CONSERVATION SIGNAGE *

SPECIMEN TREE SIGNAGE *

* SIGNAGE SHALL REMAIN IN PLACE FOR PERPETUITY.

BLAZE ORANGE TREE PROTECTION FENCE

LIMIT OF DISTURBANCE

PRIVATE ADDRESS SIGN

CHECK DAM

SPECIMEN TREE TABLE

DESIGNATION	SPECIES	SIZE (dbh)	CONDITION	REMARKS
A	SILVER MAPLE	41"	FAIR	RETAIN
B	SILVER MAPLE	37"	GOOD	RETAIN
C	SILVER MAPLE	72"	FAIR	RETAIN
D	SILVER MAPLE	60"	GOOD	RETAIN
E	ELM	41"	POOR	RETAIN
F	SCARLETT OAK	32"	GOOD	RETAIN

SOILS LEGEND

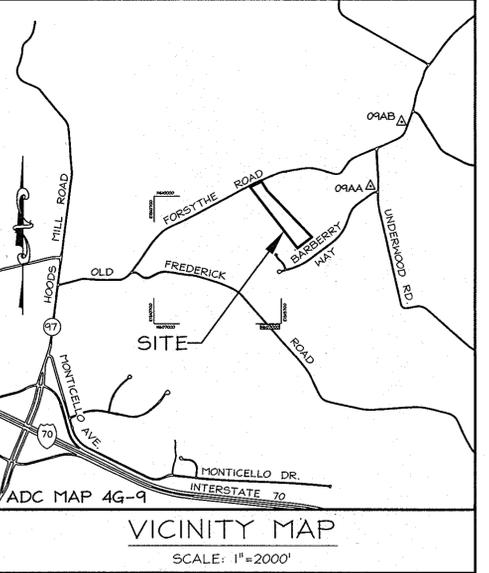
GqB	GLENELG	LOAM	3-8% SLOPES
GqC	GLENELG	LOAM	8-15% SLOPES
MaD	MANOR	LOAM	15-25% SLOPES
McD	MANOR	LOAM	15-25% SLOPES, VERY ROCKY
GnB	GLENVILLE-BAILE	SILT LOAM	0-8% SLOPES

EASEMENT LEGEND

	PRIVATE STORMWATER MANAGEMENT CREDIT EASEMENT
	FOREST CONSERVATION EASEMENT (RETENTION)

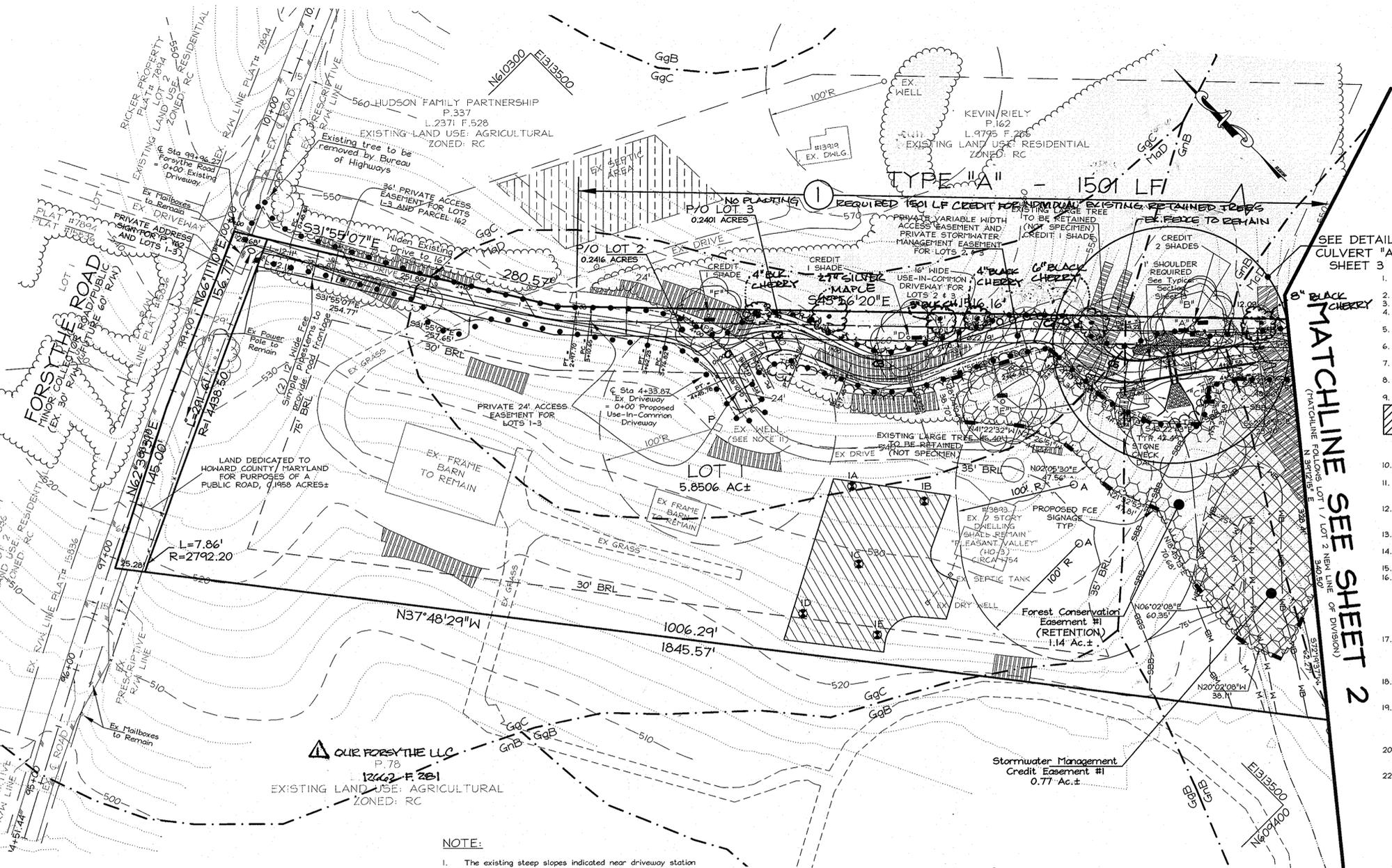
SHEET INDEX

1	SUPPLEMENTAL, LANDSCAPE AND FOREST CONSERVATION PLAN
2	SUPPLEMENTAL, LANDSCAPE AND FOREST CONSERVATION PLAN
3	SUPPLEMENTAL PLAN DETAILS, DRIVEWAY AND STORM DRAIN PROFILES
4	SUPPLEMENTAL, LANDSCAPE AND FOREST CONSERVATION NOTES & DETAILS
5	FOREST STAND DELINEATION PLAN
6	FOREST STAND DELINEATION PLAN



GENERAL NOTES

- Existing Zoning: RC-DEO per 2/2/2004 Comprehensive Zoning Plan and the Comp Lite Zoning Amendments effective 7/28/2009.
- Dead reference: Liber 671, Folio 618
- Total area of property: 14.00 ac ±
- The lots shown hereon comply with the minimum lot area and ownership width as required by the Maryland Department of the Environment (MDE).
- All existing wells and septic systems within 100 feet of the lot which may affect this proposal have been shown.
- The topography shown is taken from Howard County aerial photogrammetry and field run topography within the buildable area of the lots and driveway.
- Any changes to the private sewage easements shall require a revised percolation certification plan.
- There is a historic house located on lot 1 identified on the Historic Register as HO-3, "Pleasant Valley" circa 1754, this house is to remain.
- This area designates a private sewage easement of at least 10,000 square feet as required by the Maryland Department of the Environment for individual sewage disposal. Improvements of any nature in this area are restricted until public sewage is available. These easements shall become null and void upon connection to a public system. The County Health Officer shall have the authority to grant adjustments to the private sewage easement. Recordation of a modified sewage easement shall not be necessary.
- All wells shall be drilled and all well completion reports shall be submitted to the Health Department prior to final plat signature approval. (Lot 2 & 3)
- The existing well serving the existing dwelling on Lot 1 (418949 Forsythe Road) has been upgraded (8/20/2008) to current Health Department standards.
- The Howard County Health Department approved the percolation certification plan for these lots on 4/11/08 and Revised Percolation Certification Plat on 7/28/2009.
- All wells shall be located a minimum of 15' from the road or use-in-common driveway and 30 feet from any dwelling.
- Soils data shown based on USDA National Resources Conservation Service - Web Soil Survey 2.0 - Version 5, Sept 21, 2006 - Howard County.
- Limit of disturbance: 2.25 ac total
- This parcel, Parcel 92 (L. 671 / F. 618), and adjoining Parcel 162 "Kevin P. Riely" (L. 9795 / F. 256) utilize an existing "gravel road" for access to Forsythe Road. This gravel road is intended to be a "use-in-common" road. Both above referenced reference a previous deed: L. 617 / F. 694 dated November 24, 1972 which describes a "gravel road, use in common". This plat will record a 36' private access easement for Lots 1-3 and Parcel 162 over the existing gravel road (shared driveway) to Forsythe Road. Three separate maintenance agreements are required for the shared driveway. One agreement for Lots 1-3 and Parcel 162, one agreement for the shared driveway for Lots 1 - 3 and one agreement for the shared driveway for Lots 2 & 3. All of the maintenance agreements will be recorded concurrently with the F09-074 plat.
- The pipestream for Lot 2 is 880 feet +/- long and the pipestream for Lot 3 is 1,286 feet +/- in length. Both pipestreams meet Section 16.120(b)(6)(ii) of the Subdivision Regulations.
- The environmental features which currently exist on steep slopes, wetlands, wetland buffers, a stream and its bank buffer. This project does not disturb any steep slopes which are greater than 20,000 square feet of on-site and offsite contiguous area, wetlands, wetland buffer, streams and stream bank buffers.
- For flag or pipestream lots, refuse collection, snow removal and road maintenance are provided to the junction of the flag or pipestream and road right-of-way line and not onto the pipestream lot driveway.
- Driveway(s) shall be provided prior to residential occupancy to insure safe access for fire and emergency vehicles per the following minimum requirements:
 - Width - 12' (16 feet serving more than one residence).
 - Surface - 6 inches of compacted crusher run base with tar and chip coating (1 1/2" Min).
 - Geometry - Maximum 14% grade, maximum 10% grade change and minimum of 45 foot turning radius.
 - Structures (culverts/bridges) capable of supporting 25 gross tons (H25 loading).
 - Drainage Elements - Capable of safely passing 100 year flood with no more than 1 foot depth over driveway surface.
 - Structure Clearances - minimum 12 feet.
 - Maintenance sufficient to insure all weather use.
- The Wetland Investigation was completed by LDE, Inc. dated June, 2008 and one (1) onsite wetland area was revealed from the investigation.
- Open Space for this project has been provided by a payment of fee-in-lieu in the amount of \$ 3,000 for Lots 2 & 3.
- On Lots 2 and 3, the limitations of soil properties and available area are such that a house with no more than four bedrooms could be supported by the described easement on each. If more bedrooms are desired the Health Department will consider a technical design showing that the sand mound area will accommodate a system design adequate for the amount of wastewater discharge from the proposed structure.



CURVE TABLE - PROPOSED USE-IN-COMMON DRIVE.

CURVE	CURVE STA TO STA	RADIUS	LENGTH	DELTA	TANGENT	CHORD DIST	CHORD	LOCATION
C1	0+01.93 - 0+09.15	150.00	17.22	6°34'37"	8.62	17.21	N75°36'48"W	PC 0+01.93 N 60°49'56.74 E 1382428.56
C2	0+29.31 - 0+74.76	53.00	45.45	49°07'54"	24.23	44.07	N47°45'33"E	PC 0+29.31 N 60°49'56.74 E 1382428.56
C3	1+17.48 - 1+64.80	70.00	47.33	38°44'20"	24.61	46.43	S42°33'46"E	PC 1+17.48 N 60°49'56.74 E 1382428.56
C4	2+66.47 - 3+13.00	45.00	46.53	59°14'58"	25.59	44.49	N82°18'27"W	PC 2+66.47 N 60°49'56.74 E 1382428.56
C5	3+29.22 - 3+78.85	55.00	49.63	51°42'17"	26.65	47.97	S28°32'06"E	PC 3+29.22 N 60°49'56.74 E 1382428.56
C6	4+67.58 - 4+92.06	208.00	25.29	6°57'57"	12.66	25.27	N50°54'16"W	PT 4+67.58 N 60°49'56.74 E 1382428.56
C7	6+34.71 - 6+47.35	208.00	12.64	3°28'57"	6.32	12.64	N45°40'49"W	PT 6+34.71 N 60°49'56.74 E 1382428.56

CURVE TABLE - EXISTING DRIVEWAY

CURVE	CURVE STA TO STA	RADIUS	LENGTH	DELTA	TANGENT	CHORD DIST	CHORD	LOCATION
C8	0+48.89 - 2+97.70	1318.00	248.81	10°48'58"	124.78	248.44	S31°58'33"E	PC 0+48.89 N 60°49'56.74 E 1382428.56
C9	3+10.65 - 3+62.23	798.00	51.58	3°42'13"	25.80	51.57	N35°31'56"W	PC 3+10.65 N 60°49'56.74 E 1382428.56
C10	3+76.82 - 4+45.78	73.00	68.96	54°07'19"	37.29	66.42	N06°37'10"W	PT 4+45.78 N 60°49'56.74 E 1382428.56

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy Hanna 9/2/09
CHIEF, DIVISION OF LAND DEVELOPMENT

Chris Demas 9/2/09
CHIEF, DEVELOPMENT ENGINEERING DIVISION

DEVELOPER'S / BUILDER'S CERTIFICATION

I CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. I FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF NOTICE, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, AND A COPY OF THIS PLAN WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Bruce D. Burton 8-12-09
SIGNATURE OF DEVELOPER / BUILDER

PROFESSIONAL CERTIFICATION

"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19184, EXPIRES 06/30/11."

Bruce D. Burton 9/2/09
SIGNED: BRUCE D. BURTON

PROFESSIONAL CERTIFICATION:

Steve Heiss
Steve Heiss, Qualified Professional, MDFCA

- GENERAL NOTES (Con't)**
- This project is subject to WP-09-130 from the Howard County Subdivision and Land Development Regulations. On May 27, 2009, the Planning Director approved the request to waive Section 16.120(b)(4)(iii) which states for a lot or buildable preservation parcel of 10 acres or greater in size floodplain, wetlands, streams, their buffers and forest conservation easements for afforestation, restoration, or retention may be located on the lot or parcel if the building envelope is no closer than 35 feet from these environmental features. WP-09-130 Approval is subject to the following conditions:
 - The LOD (as shown on the supplemental plan) must be respected on the grading and construction plans for the driveway and the two new homes planned for Lots 2 & 3.
 - On the plat, as well as all other DPZ plans for this site, provide a brief description of the waiver petition (WP-09-130), as a general note to include request(s), section(s) of the regulations, and action and date.
 - Stormwater management for the development of Lot 2 and 3 is provided by use of the Environmentally Sensitive Development and sheet flow to buffer stormwater management credits.
 - The sand mound areas delineated and identified on Lots 2 & 3, respectively, must be protected by a fixed barrier at all times during grading and construction activities. Thereafter protective measures should be implemented to protect these areas from erosion, particularly due to concentrated flow or encroachment by wheeled vehicles while soil is saturated. Subsequent building permit applications may be denied should a sand mound area be evaluated and found to be unsatisfactory for the intended use.
 - Prior to building permit approval for Lots 2 or 3 respectively, the primary sand mound and gravel bed corners must be staked for field review. The primary mound for Lot 3 is mound site #3, the lowest one.

REVISIONS

NO.	DATE	REVISIONS
1	6/12/12	REVISE ADJACENT OWNERSHIP, REVISE LANDSCAPE PERIMETER #1

LDE Inc.
Engineers, Surveyors, Planners
9220 Ramsay Road, Suite 106 Columbia, Maryland - 21045
(410) 715-1070 - (301) 596-3424 - FAX (410) 715-9340

DESIGNED: BDB
EDS
DRAWN: MDL
LDE
CHECKED: BDB

PLEASANT VALLEY FARM
LOTS 1-3

TAX MAP 9 GRID 7 P/O PARCEL 92
4th ELECTION DISTRICT HOWARD COUNTY, MD

Previous Submittals: WP-09-130, F-09-074

OWNER: KENNETH L. WHEELER, JR.
13993 Forsythe Road
Sykesville, MD 21784
410-442-2678

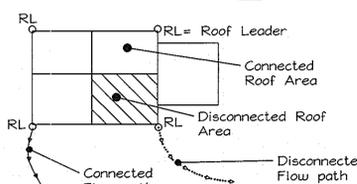
DEVELOPER: CHRISTOPHER WHEELER RIZZUTO
707 Eastshire Drive
Cotonsville, MD 21228
410-719-7663

SCALE: 1"=50'
DRAWING: 1 OF 6
JOB NO.: 07-017
FILE NO.: F 09-079

DATE: 8/2009

LEGEND

- MINOR CONTOUR- (2' INTERVAL)
- INDEX CONTOUR- (10' INTERVAL)
- SOILS BOUNDARY
- STREAM/POND
- STREAM BANK BUFFER
- WETLAND LIMIT
- WETLAND BUFFER
- EXISTING DRIVEWAY
- PROPOSED DRIVEWAY
- EXISTING TREELINE
- PROPOSED TREELINE
- FIELD LOCATED SPECIMEN TREE
- APPROXIMATE LOCATION EXISTING SEPTIC EASEMENT
- PROPOSED SEPTIC EASEMENT
- EXISTING WELL
- PROPOSED CONTOURS
- STEEP SLOPES
- PASSED CONVENTIONAL PERC TEST LOCATION 12/11/07
- PASSED SANDMOUND TEST 12/21/07
- FAILED CONVENTIONAL PERC TEST LOCATION 12/11/07
- PRIMARY WELL LOCATION
- ALTERNATE WELL LOCATION
- FOREST CONSERVATION SIGNAGE
- SPECIMEN TREE SIGNAGE *
- * SIGNAGE SHALL REMAIN IN PLACE FOR PERPETUITY.
- BLAZE ORANGE TREE PROTECTION FENCE
- LIMIT OF DISTURBANCE
- TYPICAL ROOF LEADER OVERLAND FLOW PATH
- CHECK DAM



SOILS LEGEND

GgB	GLENELG	LOAM	3-8% SLOPES
GgC	GLENELG	LOAM	8-15% SLOPES
MaD	MANOR	LOAM	15-25% SLOPES
McD	MANOR	LOAM	15-25% SLOPES, VERY ROCKY
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EASEMENT LEGEND

- PRIVATE STORMWATER MANAGEMENT CREDIT EASEMENT
- FOREST CONSERVATION EASEMENT (RETENTION)

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C2	0+29.31 - 0+74.76	53.00	45.45	44°07'54"	24.23	44.07	N47°45'33"W	
C3	1+17.48 - 1+64.80	70.00	47.33	38°44'20"	24.61	46.43	S42°33'46"E	
C4	2+66.47 - 3+13.00	45.00	46.53	59°14'58"	25.59	44.49	N32°18'27"W	
C5	3+29.22 - 3+78.85	55.00	49.63	51°42'17"	26.65	47.97	S28°32'06"E	
C6	4+67.58 - 4+92.86	208.00	25.29	6°57'57"	12.66	25.27	N50°54'16"W	
C7	6+34.71 - 6+47.35	208.00	12.64	3°28'57"	6.32	12.64	N45°40'49"W	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Andy Hart 9/4/09
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE

Chris Deanna 8/2/09
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE

DEVELOPER'S / BUILDER'S CERTIFICATION

I CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. I FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF NOTICE, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, AND A COPY OF THIS PLAN WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

SIGNATURE OF DEVELOPER / BUILDER: *Chris Deanna* DATE: 8-2-09

PROFESSIONAL CERTIFICATION

"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19184, EXPIRES 12/31/11."

SIGNED: BRUCE D. BURTON DATE: 9/12/09

NOTES:

- The existing steep slopes indicated near driveway station 5+00 is part of a contiguous onsite & offsite 13,200+- square foot area which crosses from Parcels 162 & 337 and onto proposed Lot 1 & Lot 2. Grading and clearing across this area is permitted under Section 16.116(b)(1).
- The existing steep slopes indicated within Forest Conservation Easement #2 is part of a contiguous onsite & offsite 21,900+- square foot area which crosses from Parcel 337 onto proposed Lot 3 and onto Parcel 78. No Disturbance is proposed to this Steep Slope.
- Blaze Orange Tree Protection Fence (TPF) shall be installed at the Limits of Disturbance along the south side of the proposed use-in-common driveway alignment 5+00 thru 6+00 (This Sheet) where shown hereon. Additionally, TPF shall be placed along the western edge of Forest Conservation Area #2 as shown hereon.

THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A MODIFIED SEWAGE EASEMENT SHALL NOT BE NECESSARY.

NO.	DATE	REVISIONS
1	5/12/12	REVISE ADJACENT OWNERSHIP, REVISE LANDSCAPE PERIMETER 1 & 3

LDE Inc.
 Engineers, Surveyors, Planners
 9250 Ramsay Road, Suite 106 Columbia, Maryland - 21045
 (410)715-1070 - (301)596-3424 - FAX (410)715-8140

DESIGNED: BDB
 ED S
 DRAWN: MDL
 LDE
 CHECKED: BDB
 DATE: 8/2009

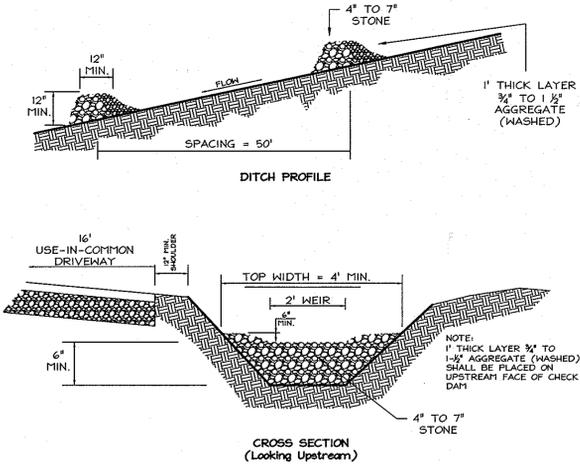
SUPPLEMENTAL, LANDSCAPE AND FOREST CONSERVATION PLAN
PLEASANT VALLEY FARM
 LOTS 1-3

TAX MAP 9 GRID 7 P/O PARCEL 92
 4th ELECTION DISTRICT HOWARD COUNTY, MD

Previous Submittals: WP 09-130, F 09-079
 OWNER: KENNETH L. WHEELER, JR. 13945 Forsythe Road, Sykesville, MD 21284 410-442-2678
 DEVELOPER: CHRISTINA WHEELER RIZZUTO 707 Eastshire Drive, Cotonsville, MD 21228 410-719-7663

SCALE: 1"=50'
 DRAWING: 2 OF 6
 JOB NO.: 07-017
 FILE NO.: F 09-079

STONE CHECK DAM



CHECK DAM NO.	DRIVEWAY STATION	OFFSET
1	3+42	14.5' RT
2	3+74	23.5' RT
3	4+32	16.5' RT
4	4+92	12' RT
5	5+34	12' RT
6	5+84	12' RT
7	6+34	12' RT

CONSTRUCTION SPECIFICATIONS:

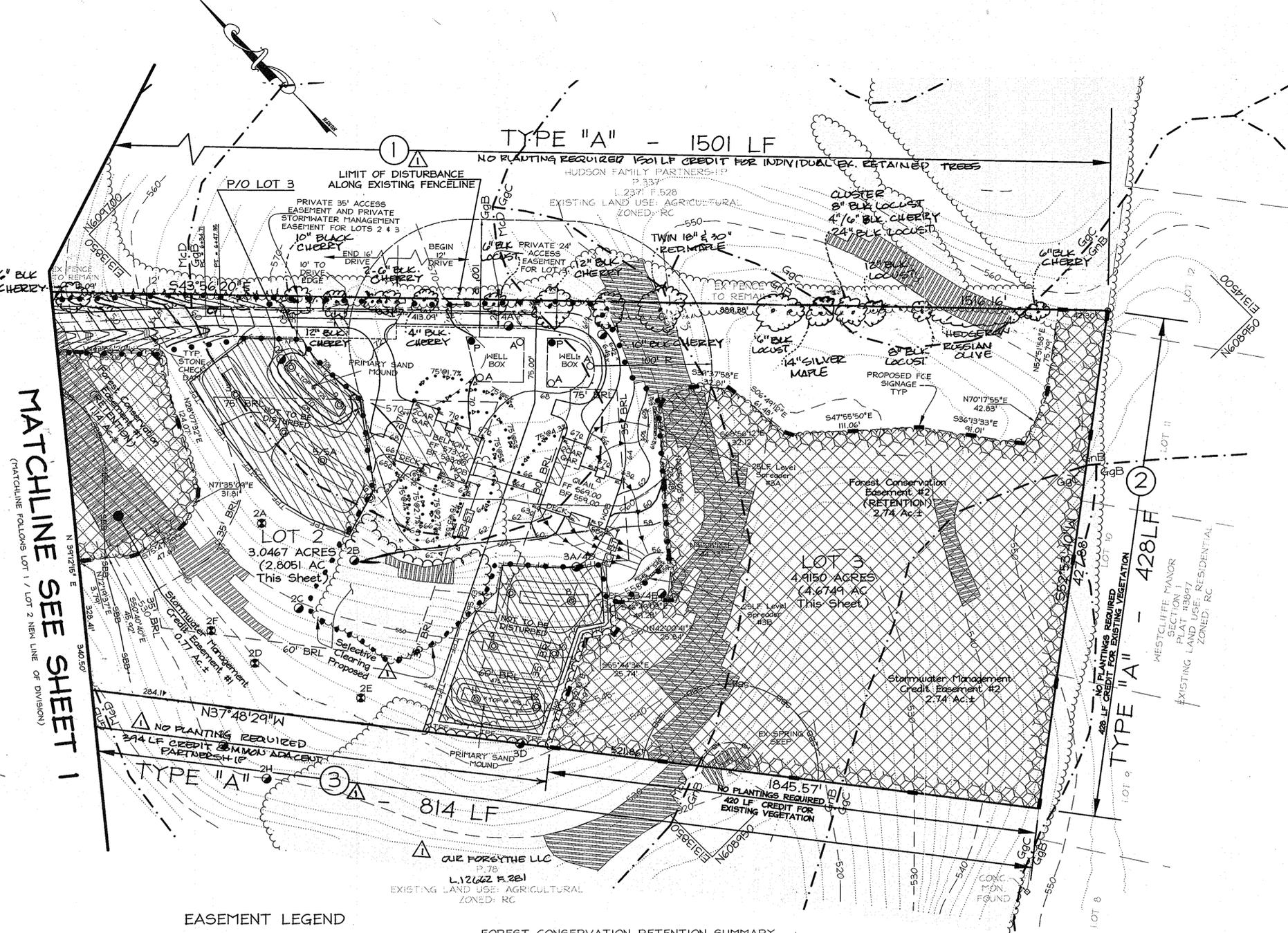
- Swales / open section use in common driveway ditch shall be constructed in accordance with the Typical Section details on Sheet 3.
- The check dam shall be constructed as shown above, with 4" to 7" stone with the upstream face lined with 1" of 3/4" to 1-1/2" aggregate (washed).
- The 4" to 7" stone shall be kept into the bottom & sides of the swale and shall be 4" wide at the top width.
- A 2' weir should be centered in the swale a minimum of 6" above invert of swale. The stone should line the swale sides for an additional 6" above weir elevation.

MAINTENANCE SCHEDULE:

- Check Dams are to reduce runoff velocities.
- Stone check dams shall be inspected after each major rainfall event.
 - Any accumulated sediment behind each check dam should be removed when it reaches 1/2 the original height of the check dam (3").
 - Any accumulated debris & litter behind the stone check dam shall be removed during regular swale mowing.
 - Signs of erosion around stone check dam shall be repaired as soon as it is noticed ensure proper functioning of the check dam.

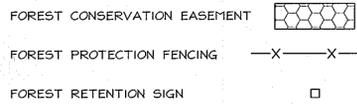
NOTE:
 SEE GENERAL NOTES #27 AND #28 ON SHEET 1 CONCERNING PROTECTION OF SEWAGE DISPOSAL EASEMENTS FOR THE SAND MOUNDS ON LOTS 2 AND 3 DURING HOUSE AND DRIVEWAY CONSTRUCTION.

MATCHLINE SEE SHEET 1



FOREST CONSERVATION NOTES & DETAILS

FOREST CONSERVATION LEGEND:



02/04/09

**FOREST CONSERVATION WORKSHEET
VERSION 1.0
(Enter in Yellow Cells)**

NET TRACT AREA:

A. Total tract area.....	14.01
B. Area within 100 year floodplain.....	0.00
C. Area to remain in agricultural production.....	0.00
D. Net tract area.....	14.01

LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)

Input the number "1" under the appropriate land use zoning, and limit to only one entry.

ARA	MDR	IDA	HDR	MPD	CA
0	1	0	0	0	0

E. Afforestation Threshold.....	20% x D =	2.80
F. Conservation Threshold.....	25% x D =	3.50

EXISTING FOREST COVER:

G. Existing forest cover (excluding floodplain).....	5.29
H. Area of forest above afforestation threshold.....	2.49
I. Area of forest above conservation threshold.....	1.79

BREAK EVEN POINT:

J. Forest retention above threshold with no mitigation.....	3.86
K. Clearing permitted without mitigation.....	1.43

PROPOSED FOREST CLEARING:

L. Total area of forest to be cleared.....	1.12
M. Total area of forest to be retained.....	4.17

PLANTING REQUIREMENTS:

N. Reforestation for clearing above conservation threshold.....	0.28	0.0*	0.0*
P. Reforestation for clearing below conservation threshold.....	0.00		
Q. Credit for retention above conservation threshold.....	0.67		
R. Total reforestation required.....	0.00	0.0*	0.0*
S. Total afforestation required.....	0.00		
T. Total reforestation and afforestation required.....	0.00		

3.88 acres of Forest Conservation Easement (Retention) has been provided onsite.

* THE REMAINING 0.29 ACRES OF EXISTING FOREST IS NOT BEING PLACED UNDER FOREST CONSERVATION EASEMENT.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Bruce D. Burton 8/31/09
CHIEF, DEVELOPMENT ENGINEERING DIVISION (DATE)

Cindy Harmon 9/2/09
CHIEF, DIVISION OF LAND DEVELOPMENT (DATE)

**APPENDIX G
SOIL AND FOREST PROTECTION TECHNIQUES
FOR FOREST RETENTION AREAS**

SOIL PROTECTION ZONE

The soil protection zone is that area which must be protected from construction activity and other stresses (e.g. flooding) to protect a forest retention stand from construction damage. Protecting trees from construction damage means protecting sufficient roots to provide the trees with adequate water and nutrient uptake for the existing leaf area and to maintain the physical stability of the tree. Trees in forest stands become interdependent as each tree's roots cause windthrow long after the completion of construction.

The extent of a tree's root system can be quite large. The ratio of root expansion to crown spread can be 2:1 for large open grown specimen trees and can be significantly larger (up to 5:1) for trees growing in the interior of forest stands. The increase of root expansion in forest stands stems from adjacent trees restricting the crown spread of a tree while its roots can constantly grow through the soil medium.

The minimum requirement for root protection varies from species to species and from soil type to soil type. The soil protection zone changes with the proximity of other trees, the amount of past human influence (agriculture or construction) in the vicinity of the tree and changes in soil type or ground water. For open grown trees, protecting the soil within the drip line of the tree is adequate to save the tree in most cases. For trees that have been part of forest communities, however, the soil protection zone must reflect a more complex relationship between crown spread and root growth.

Calculating the Soil Protection Zone
A workable set of criteria for determining the limit of the soil protection zone is needed. In general, the soil protection zone is easier to define as a relationship to tree height. The following guidelines will protect most of the trees, most of the time, from construction damage.

1. **Specimen trees:** the limit of the soil protection zone shall be the area within the drip line of the tree.
2. **Clusters of trees:** i.e., groups of trees which are open grown, but growing close enough so that the individual crowns have grown together. For trees on the exterior of the group, the limit of the soil protection zone shall be a distance from the trunk of 40 percent of the height of the tree or the limit of the drip line, whichever is greater.
3. **Forest stands:** trees with a continuous canopy and an undisturbed ground plane. The limit of the soil protection zone for an individual tree shall be a distance from the trunk of 40 percent of the height of the tree or the limit of the drip line, whichever is greater.

Modifications to the Soil Protection Zone

When disturbance of the soil protection zone is unavoidable, tree survival remains probable provided:

1. Disturbance does not exceed 20 percent of the original soil protection zone area, and
2. A protected area of equal size and contiguous to the remaining soil protection zone is added back so that the final soil protection zone area is not decreased, and
3. The new limit of the soil protection zone is no closer to the center of any tree to be protected than 20 percent of the tree's height.

Reduction to the Soil Protection Zone for Individual Trees

The soil protection zone for a specific tree may be reduced if it can be demonstrated that a smaller area will have no less impact on the tree's health than the size of the soil protection zone which would have resulted using the standard calculation. Requests for such reductions should include the following information:

1. The extent of the rooting system with root diameters 1" or greater; as determined by a field root survey.
2. The exact species of the tree and the qualified professional's estimation of this species' ability to withstand construction damage.
3. The soil texture and the existing bulk density of the soil as measured in grams per cubic centimeter.
4. An estimate of soil moisture conditions before and after construction.
5. A list of construction impact mitigation practices to be performed before, during, and after construction.

Upon determination that the request does not pose any significant threat to the tree, reductions of the allowable soil protection zone may be made up to the following maximum amounts:

10" db or less	50 percent
10" - 15" db	40 percent
15" - 25" db	30 percent
25" db or larger	20 percent

Requirements for the Soil Protection Zone

Unless specifically approved by the forest conservation plan, no construction activity shall be permitted within the soil protection zone. This includes:

- Grading cut or fill.
- Removal of existing ground plane vegetation or organic leaf layers.
- Roads or parking.
- Walks, patios or decks.
- Foundations, walls, or building footprints.
- Underground utilities.
- Temporary stormwater or sediment control structures.
- Storage or stock piling of construction supplies and equipment, including machinery, construction trailers, fill, topsoil, trash, etc.
- Disposal of construction waste, including concrete truck wash off, paints, solvents, contaminated runoff, oils, fuels, or any other substances which are harmful to plants or animals.

The following activities are permitted within the soil protection zone:

- Removal of tree limbs which are outside of the soil protection zone and interfere with construction.
- Removal of dead or dying trees within the soil protection zone.
- Forest thinning or tree removal which is consistent with recognized forestry practices.
- Removal of trees on the edges of tree groups or forest stands whose trunks are within the soil protection zone of other trees, but which do not have sufficient soil protection zones of their own to allow them to survive. Note that trees which have a remaining soil protection zone of less than 50 percent of the limit required by these specifications must be removed.
- Removal of vines or other hazardous plants which threaten the ecological balance of the remaining plants in the soil protection zone.
- Below ground utilities that can be placed by the use of a tunneling machine.
- Fences which do not require contiguous footings or which have posts no closer than 6'-0" o.c. and which can be manually installed.
- Walks and paths that meet the following requirements:
 - They are constructed of materials that can be installed using equipment with a maximum weight of 1/2 ton.
 - They are no wider than 6'-0".
 - They are placed no closer than 6' from the base of the trunk of any tree over 12" D.B.H.
 - Are constructed without filling greater than 6".
- Removal of any existing walks, walls, roads, or other structures as required. These items should be removed without the use of heavy equipment.

PROFESSIONAL CERTIFICATION:

Steve Heiss
Steve Heiss, Qualified Professional, MDFCA

Construction Adjacent to Soil Protection Zone

Prior to the start of any construction (including clearing) adjacent to the soil protection zone, a fence must be erected along the boundary around all soil protection zones. This fence shall have 6" x 12" x 1" galvanized steel pipe posts set 10' o.c. max. No fencing or wire shall be attached to any fence.

- 3 strands of barbed wire spaced 18" apart - 4' high.
- 4' high wood and wire "snow fencing".
- 4' high chain link fence.
- 4' high welded wire fence.

All fencing shall be attached to "U" Channel metal posts set 10' o.c. max. No fencing or wire shall be attached to any fence.

Prior to the start of any grading, all sediment control devices shall be in place to prevent any silt or sediment from entering the soil protection zone. A synthetic filter fabric silt fence of a type acceptable to the U.S.D.A. Soil Conservation Service shall be installed on the uphill side of all soil protection zones. This fence shall be cleaned and maintained on a regular basis through the construction period. All drainage devices, inlets, or swales required to maintain existing surface and subsurface groundwater conditions within the soil protection zone must also be installed and operational prior to grading.

Management of the Soil Protection Zone

Forest retention stands, smaller tree stands, and individual trees that the Forest Conservation Plan specifies must be protected and require careful management during and after construction.

Specimen trees and groups of trees are nearly always growing on soils previously influenced by human activity. If the soils under these trees are already compacted, they should be core aeration prior to construction and again after construction. Light spring and fall low nitrogen fertilizations will also help these trees adjust to the new environment. Very old trees (30' or larger D.B.H.) should be manually irrigated several times during the first two summers following grading in their vicinity. Each group of trees must also be monitored for disease and insect problems during and after construction. Trees in construction zones are more susceptible to attack by pests than trees in undisturbed conditions.

Landscape practices under trees are as critical to tree survival as how much construction occurs around them. The following management practices must occur in the soil protection zone:

- Bare soil: prior to construction, core aerate. Hand scarify with a steel rake to a depth of 1" max. Top dress with 1"-2" shredded bark mulch.
- Mown lawn: prior to construction, core aerate. Keep grass mowed during construction.
- Unknown grass: leave undisturbed during construction. After construction, mow grass and core aerate.
- Landscape shrubs and/or groundcovers: leave undisturbed during construction. Hand scarify and mulch any area with bare soil. Leave any paved areas, walks, drives, etc. in place within the drip line until other construction is nearly completed. Fill voids from removed objects with light top soil.
- Natural occurring ground plane growth: leave undisturbed except for invasive vines or small trees which could affect growth habits of specimen trees.

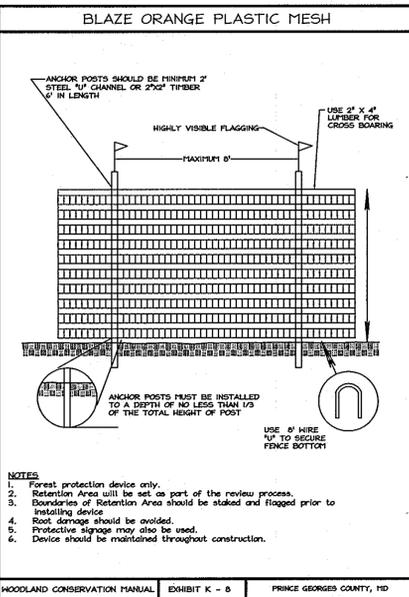
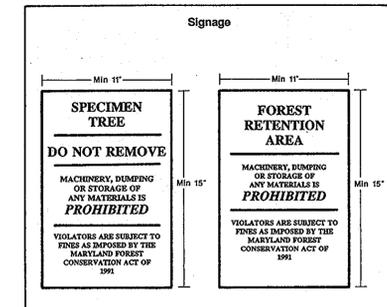


EXHIBIT G-17



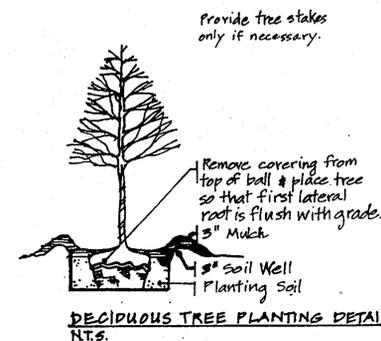
GENERAL NOTES

1. This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code, Landscape Manual and Forest Conservation Manual.
2. The Owner/Developer is responsible for the planting of all plant material required to meet the standards established by the Howard County Landscape Manual.
3. **Financial Surety of \$ 7,500.00 shall be released upon the approval of an Inspector of the existing trees to be retained, as amended on the Schedule and Landscape Chart.**
4. Should any tree designated for preservation for which landscaping credit is given, die prior to release of bonds, the owner will be required to replace the tree with the equivalent species or with a tree which will obtain the same height, spread and growth characteristics. The replacement tree must be a minimum of 3 inches in caliper and installed as required in the Howard County Landscape Manual.
5. The owner, tenant and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant material 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 and replaced.
6. At the time of installment, all shrubs and other plantings herewith listed and approved for this site, shall be of the proper height requirements in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocation of required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviation from this approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revision made to applicable plans and certificates.

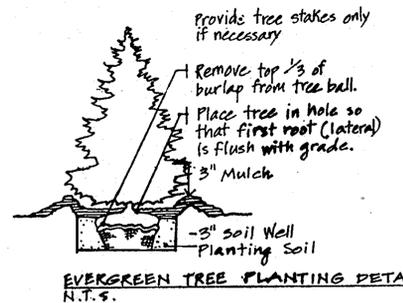
TREE PLANTING NOTES

1. Notify "Miss Utility" 72 hours prior to installation of all plant material.
2. Plant installation must conform to the minimum standards cited in the latest edition of Landscape Specification Guidelines, published by the Landscape Contractors Association.
3. Plants to be located in the field by the owner or owner's representative. Notify owner 72 hours in advance of planting.
4. A Certification of Landscape Installation is required as per the Howard County Landscape Ordinance.
5. The number, size, location of plants shall not be changed without the approval of the Landscape Architect. Substitutions must be included in the recommended plant list in the Howard County Landscape Ordinance.
6. Trees may not be planted within 5 feet of drain inlets, 5 feet of an open space access strip and 10 feet of a driveway.
7. Balled and burlapped plant material shall not be accepted if ball is cracked or broken before or during planting. Protect all plants from drying by either sun or wind.
8. Tree pits shall be backfilled with 50% topsoil, 25% peat 25% sand with one pound of 10-10-10 fertilizer per pit.
9. Top soil shall be sandy loam soil free from noxious weeds or grasses, roots, clay clumps, stones, sticks, etc. Peat moss shall be commercial with ph 4.5 to 5.5, free of woody material or harmful minerals.
10. All plants shall be watered at planting with weekly watering thereafter for the first 60 days. Watering shall continue bi-monthly or as necessary to maintain plants in a healthy condition during the guarantee period.
11. Maintain the site in an orderly manner. Streets and sidewalks shall be swept clean. All rejected or dead materials shall be immediately removed from the site.
12. Plant material to be alive and healthy at the time of the guarantee period (one year), as specified in the Howard County Landscape Ordinance.
13. Maintenance shall begin immediately after planting and continue to the end of guaranteed period.
14. Maintenance consists of pruning, watering, weeding, re-mulching, resetting plants to proper grades as needed and repairing galls and stakes as needed.

TREE PLANTING DETAILS



DECIDUOUS TREE PLANTING DETAIL N.T.S.



EVERGREEN TREE PLANTING DETAIL N.T.S.

NOTES:

1. Should any tree designated for preservation for which landscaping credit is given, die prior to release of bonds, the owner will be required to replace the tree with the equivalent species or with a tree which will obtain the same height, spread and growth characteristics. The replacement tree must be a minimum of 3 inches in caliper and installed as required in the Howard County Landscape Manual.
2. The owner, tenant and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant material 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 and replaced.
3. At the time of installment, all shrubs and other plantings herewith listed and approved for this site, shall be of the proper height requirements in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocation of required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviation from this approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revision made to applicable plans and certificates.

DEVELOPER'S / BUILDER'S CERTIFICATION

I certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I further certify that upon completion a Letter of Landscape Installation, accompanied by an executed One Year Guarantee of Plant Materials will be submitted to the Department of Planning and Zoning.

Bruce D. Burton 8-2-09
SIGNATURE OF DEVELOPER / BUILDER DATE

REVISIONS

No.	Date	Description
1	5-12-12	REVISE LANDSCAPE SCHEDULES

DATE: 8/2009

FILE NO: F-09-079

OWNER: KENNETH L. WHEELER, JR. 13943 Forsythe Road Sykesville, MD 21288 410-442-2678

DEVELOPER: CHRISTINA WHEELER RIZZUTO 707 Eastshire Drive Catonsville, MD 21228 410-719-7663

SCALE: AS SHOWN DRAWING: 4 OF 6 JOB NO.: 07-017

TAX MAP 9 GRID 7 P/O PARCEL 92 4th ELECTION DISTRICT HOWARD COUNTY, MD

Previous Submittals: WP 09-130, F 09-079

DATE: 8/2009

FILE NO: F 09-079

F-09-079

REVISIONS

REVISE LANDSCAPE SCHEDULES

8-2-09

DATE

FILE NO

OWNER

DEVELOPER

SCALE

DRAWING

JOB NO.

TAX MAP

DATE

FILE NO

OWNER

DEVELOPER

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FILE NO

OWNER

LEGEND

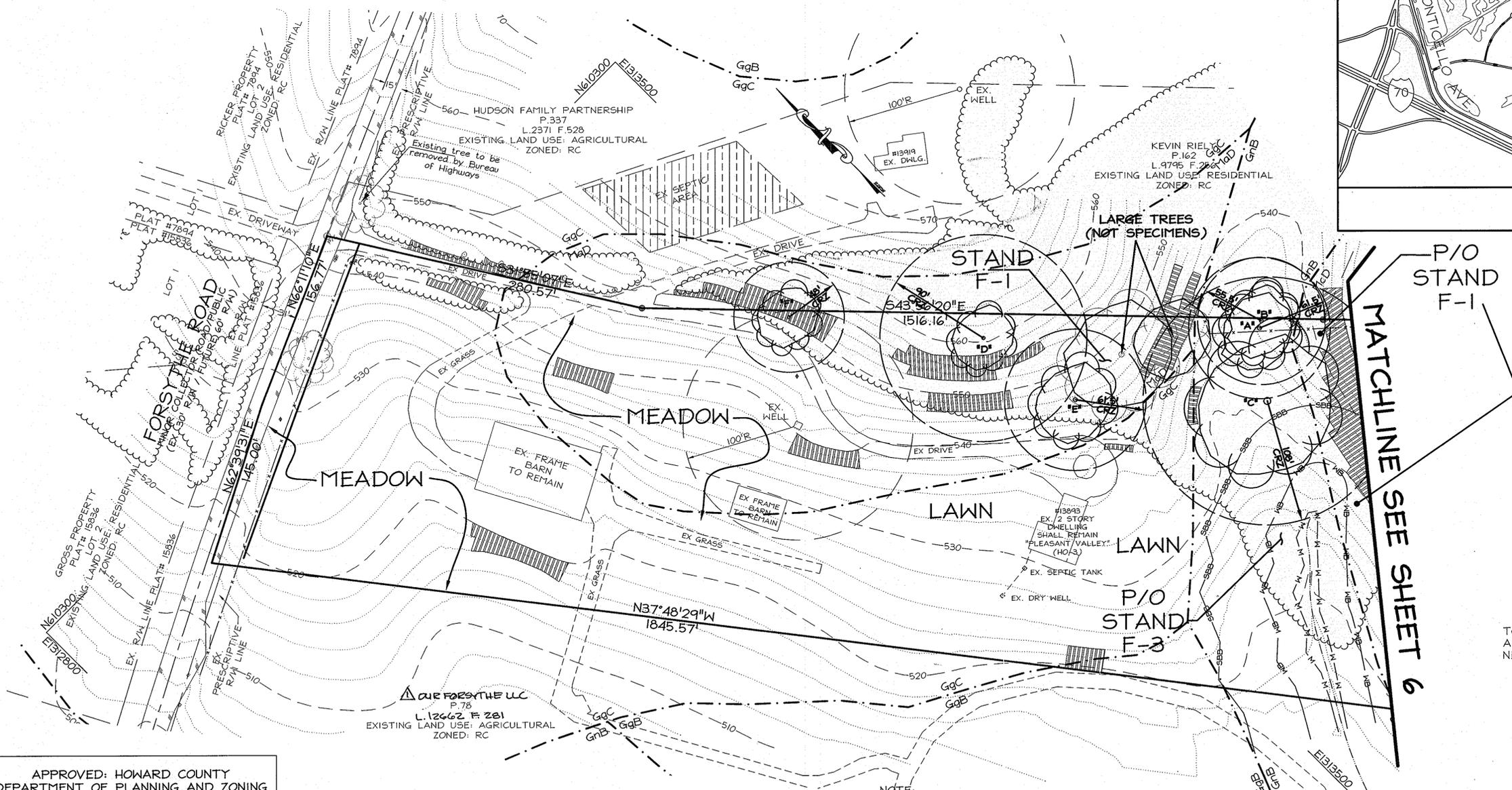
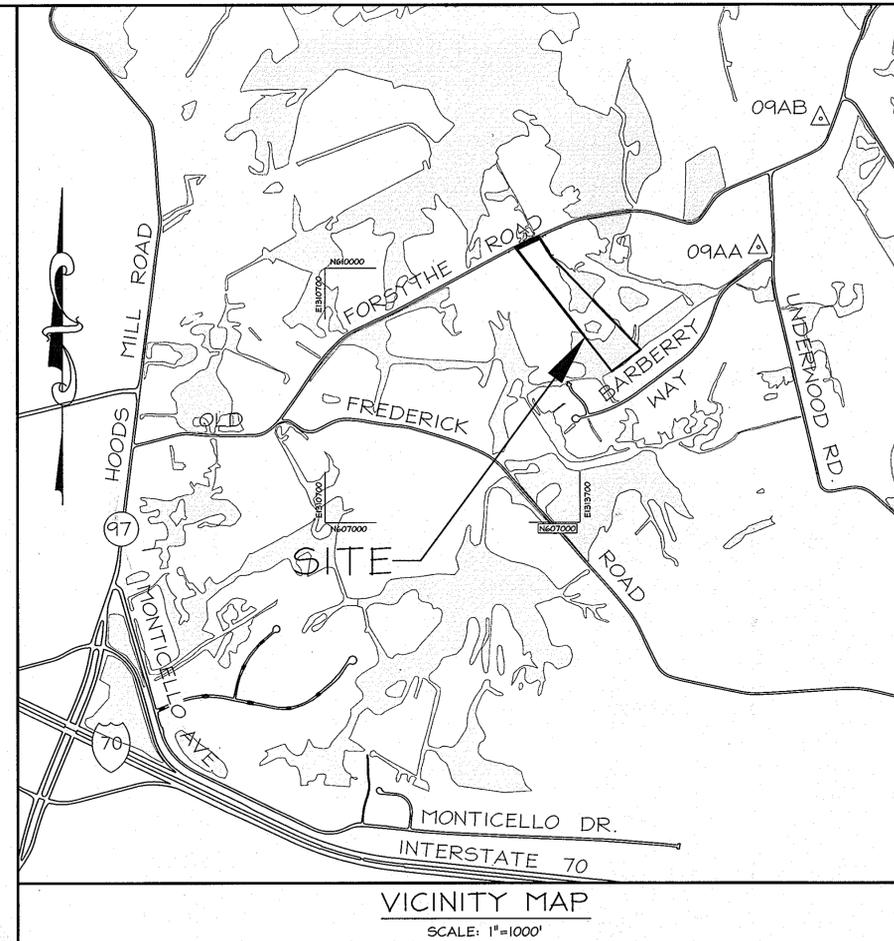
- MINOR CONTOUR- (2' INTERVAL)
- INDEX CONTOUR- (10' INTERVAL)
- SOILS BOUNDARY
- STREAM/POND
- 75' STREAM BANK BUFFER
- WETLAND LIMIT
- WETLAND BUFFER
- EXISTING DRIVEWAY
- PROPOSED DRIVEWAY
- EXISTING TREELINE
- PROPOSED TREELINE
- FIELD LOCATED SPECIMEN TREE
- APPROXIMATE LOCATION EXISTING SEPTIC EASEMENT
- PROPOSED SEPTIC EASEMENT

- PROPOSED WELL
- EXISTING WELL
- PROPOSED CONTOURS
- STEEP SLOPES
- EXISTING TREE
- SPECIMEN TREE & CRITICAL ROOT ZONE

SPECIMEN TREE TABLE				
DESIGNATION	SPECIES	SIZE (dbh)	CONDITION	LOCATION
A	SILVER MAPLE	41"	FAIR	"F-3"
B	SILVER MAPLE	37"	GOOD	"F-3"
C	SILVER MAPLE	72"	FAIR	"F-3"
D	SILVER MAPLE	60"	GOOD	"F-1"
E	ELM	41"	POOR	"F-1"
F	SCARLETT OAK	32"	GOOD	"F-1"

NOTE:

1. FOREST STAND F-1 IS ALONG STEEP SLOPES AND RIDGES
2. FOREST STAND F-2 IS AN ISOLATED STAND.
3. FOREST STAND F-3 IS LOCATED IN BOTTOMLAND AREAS.
4. FOREST STAND F-4 IS DOMINATED BY RED MAPLE TREES



SOILS LEGEND

GqB	GLENELG	LOAM	3-8% SLOPES
GqC	GLENELG	LOAM	8-15% SLOPES
MxD	MANOR	LOAM	15-25% SLOPES
McD	MANOR	LOAM	15-25% SLOPES, VERY ROCKY
GmB	GLENVILLE-BAILE	SILT LOAM	0-8% SLOPES

TOTAL SITE AREA: 14.0 ACRES
 AREA OF ONSITE FLOODPLAIN: 0.0 ACRES
 NET TRACT AREA: 14.0 ACRES

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Candy Ham 2/2/09
 CHIEF, DIVISION OF LAND DEVELOPMENT

Bruce D. Burton 2/2/09
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

DEVELOPER'S / BUILDER'S CERTIFICATION

I CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. I FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF NOTICE, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, AND A COPY OF THIS PLAN WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Bruce D. Burton 2/2/09
 SIGNATURE OF DEVELOPER / BUILDER DATE

PROFESSIONAL CERTIFICATION

"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19184, EXPIRES 6/30/11."

Bruce D. Burton 2/2/09
 SIGNED: BRUCE D. BURTON

PROFESSIONAL CERTIFICATION:

NO RARE, THREATENED OR ENDANGERED PLANT OR ANIMAL SPECIES WERE FOUND DURING MR. HEISS' FIELD RECONNAISSANCE.

Steve Heiss 2/2/09
 Steve Heiss, Qualified Professional, MDPCA

NO.	DATE	REVISIONS
1	5/12/12	REVISE ADJACENT OWNERSHIP

LDE Inc.
 Engineers, Surveyors, Planners
 9250 Ramsey Road, Suite 106 Columbia, Maryland - 21045
 (410)715-1070 - (301)596-3424 - FAX(410)715-9340

DESIGNED SDH	FOREST STAND DELINEATION PLAN	SCALE 1"=50'
DRAWN LDE	PLEASANT VALLEY FARM LOTS 1-3	DRAWING 5 OF 6
CHECKED BDB	TAX MAP 9 GRID 7 P/O PARCEL 92 4th ELECTION DISTRICT HOWARD COUNTY, MD	JOB NO. 07-017
DATE 8/2009	Previous Submittals: WP 09-130, F 09-079 OWNER: KENNETH L. WHEELER, JR. 13843 Forsythe Road Sykesville, MD 21784 410-442-2678	DEVELOPER: CHRISTINA WHEELER RIZZUTO 707 Eastshire Drive Cotonsville, MD 21228 410-714-7663
		FILE NO. F 09-079

NARRATIVE FOR FOREST STAND 'F-1'

Forest stand 'F-1' is one of four (4) forest stands identified on the Wheeler Property. Forest stand 'F-1' is located on the steep slopes and along the natural ridge located north of the existing historic house. Steep slopes were the only environmentally sensitive feature identified within stand 'F-1'. Elevations within this stand range from 530 to 565. Stand 'F-1' is underlain by Manor Loam, 15% - 25% slopes, rocky. The approximate onsite area of stand 'F-1' is 1.5 acres.

Forest stand 'F-1' is dominated by black walnut and mulberry. Co-dominant species include hickory, black cherry, and black locust. Other species identified within stand 'F-1' include flowering dogwood, silver maple, honey locust, choke cherry, red maple, and sassafras. The understory of stand 'F-1' consists primarily of poison ivy, pokeweed, multiflora rose, greenbriar, nettles, raspberry, brambles and shrub sized trees derived from the larger trees that make up the forest canopy. Three of the six specimen trees identified onsite are located within this stand. Other than the three specimen trees identified, most of the trees are in the 6 inch to 15 inch diameter size range. The canopy was found to be approximately 85% closed.

This forest appears to be in an early to mid successional stage. Invasive multiflora rose and honeysuckle was found throughout this stand. No rare, threatened or endangered plant or animal species were found during the field reconnaissance. Forest Stand 'F-1' can be classified as being in fair condition. Because this stand is located on steep slopes, its retention priority is high.

Forest stand 'F-1' is approximately 65,300 square feet in size

NARRATIVE FOR FOREST STAND 'F-2'

Forest stand 'F-2' is associated with an isolated forest area located in the middle of fallow agricultural fields. This stand has a total area of approximately 0.45 acres. The interior of this stand is dominated by hickory sp. and co-dominated by black walnut and black locust. Other species identified within this stand include silver maple, summer grape, black cherry, mulberry, tear thorn, mayapple, sassafras and raspberry. The forest floor was found to be extremely rocky. The rockiness of this forested area likely prevented past clearing of the forest for agricultural purposes. This stand is located on top of a natural ridge and has elevations between 540 and 565. This forest can be categorized as being in a mid-successional stage. Most of the tree diameters (dbh) were found to be between 3 inches and 24 inches. The median tree diameter was 10 inches. The canopy in the interior of forest stand 'F-2' had a 95% closed canopy. The forest fringes were more open allowing more herbaceous and shrub growth.

According to the latest version of the S.C.S. Howard County Soil Survey, Stand 'F-2' is underlain by Manor and Glenelg Loams, 8% - 15%. Stand 'F-2' had an understory consisting of seedlings from the taller parent trees, mayapple, and invasive multi-flora rose and honeysuckle. No rare, threatened or endangered plant or animal species were found within Stand 'F-2' during the field reconnaissance. This forest is a small isolated forested area which was clearly attached to Stand 'F-1' at one time in the past. This stand is in fair condition but has a minimum retention priority.

Forest stand 'F-2' is approximately 19,400 square feet in size

NARRATIVE FOR FOREST STAND 'F-3'

Forest stand 'F-3' is one of four (4) forest stands identified on the Wheeler Property. Forest stand 'F-3' is located in the bottomland area of the site. One spring feed wetland area was found to originate within the western portion of stand 'F-3'. Elevations within this stand range from 530 to 565. Stand 'F-3' is underlain by Glenville and Baile Silt Loams, 0% - 8% slopes. Stand 'F-3' has an approximate onsite area of 1.8 acres.

Forest stand 'F-3' is dominated by black walnut and mulberry. Co-dominant species include black locust, silver maple, black cherry, red maple and hickory. Other species identified within stand 'F-3' include alder sp., white oak, spicebush, flowering dogwood, and elderberry. The understory of stand 'F-3' consists primarily of spicebush, jewelweed, skunk cabbage, spicebush and alder. Three (3) of the six specimen trees identified onsite are located within this stand. Each specimen was located in the western portion of stand 'F-3'. All specimens were silver maples. Other than the three specimen trees identified, most of the trees are in the 4 inch - 15 inch diameter size range. The canopy was found to be approximately 85% closed.

This forest appears to be in an early to mid successional stage. Invasive multiflora rose and honeysuckle was found throughout this stand. No rare, threatened or endangered plant or animal species were found during the field reconnaissance. Forest Stand 'F-3' can be classified as being in good condition. Because this stand is located in bottomland / wetland areas, its retention priority is high.

Forest stand 'F-3' is approximately 78,400 square feet in size

NARRATIVE FOR FOREST STAND 'F-4'

Forest stand 'F-4' is one of four (4) forest stands identified on the Wheeler Property. Forest stand 'F-4' is located in the far southeastern corner of the site. This stand was identified as a separate stand due to the forest being so homogenous in this area. The stand is located on a moderately sloping area above stand 'F-4' site. Elevations within this stand range from 520 to 566. According to the latest version of the S.C.S. Howard County Soil Survey, Stand 'F-4' is underlain by Glenelg Loam, 8% - 15% slopes. Stand 'F-4' has an approximate onsite area of 0.91 acres.

Forest stand 'F-4' is completely dominated by red maple. Co-dominant species include black walnut and hickory. Understory species identified include mayapple, flowering dogwood, pin oak and spicebush. Based on past experience, the dominance of red maples and spicebush on the moderate slopes likely indicates either a perched or shallow water table underlying stand 'F-4'. No specimen trees were identified within stand 'F-4'. Most of the trees in this stand are in the 4 inch - 12 inch diameter size range. The canopy was found to be approximately 95% closed.

This forest appears to be in an early to mid successional stage. Invasive multiflora rose and honeysuckle was found throughout this stand. No rare, threatened or endangered plant or animal species were found during the field reconnaissance. Forest Stand 'F-4' can be classified as being in good condition. Since this stand stabilizes a moderately sloping area above a bottomland / wetland area, and it appears to be underlain by a shallow water table, its retention priority is moderate.

Forest stand 'F-4' is approximately 39,600 square feet in size

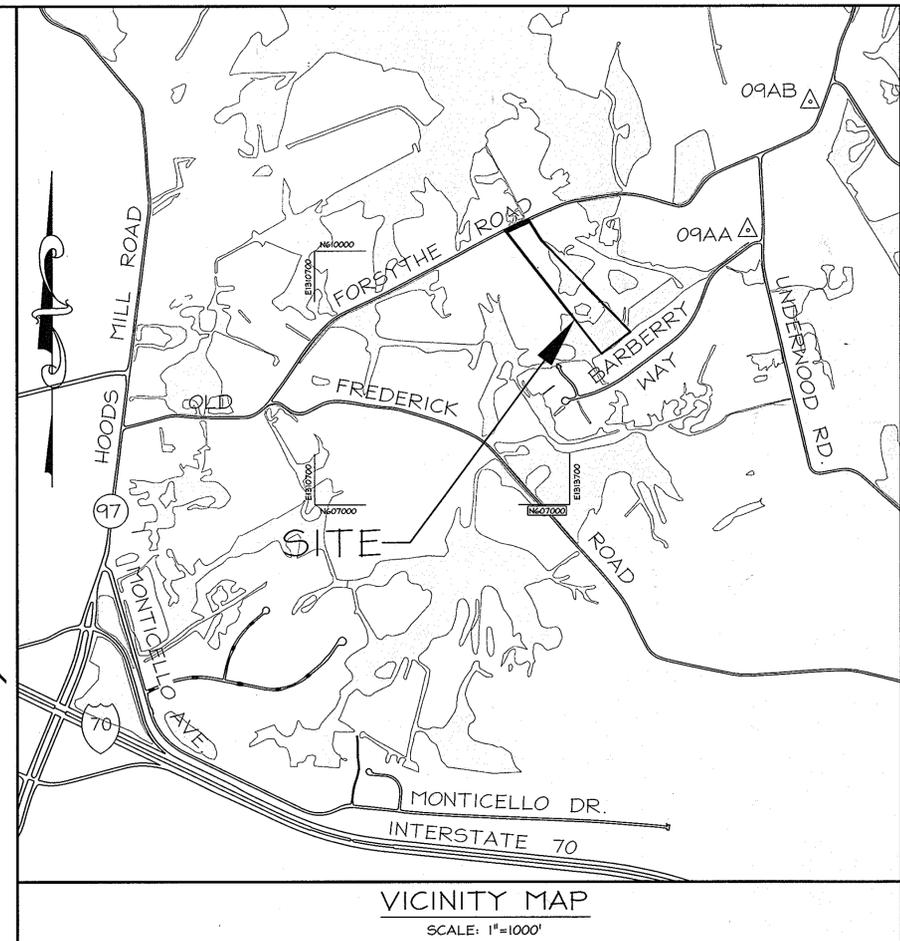
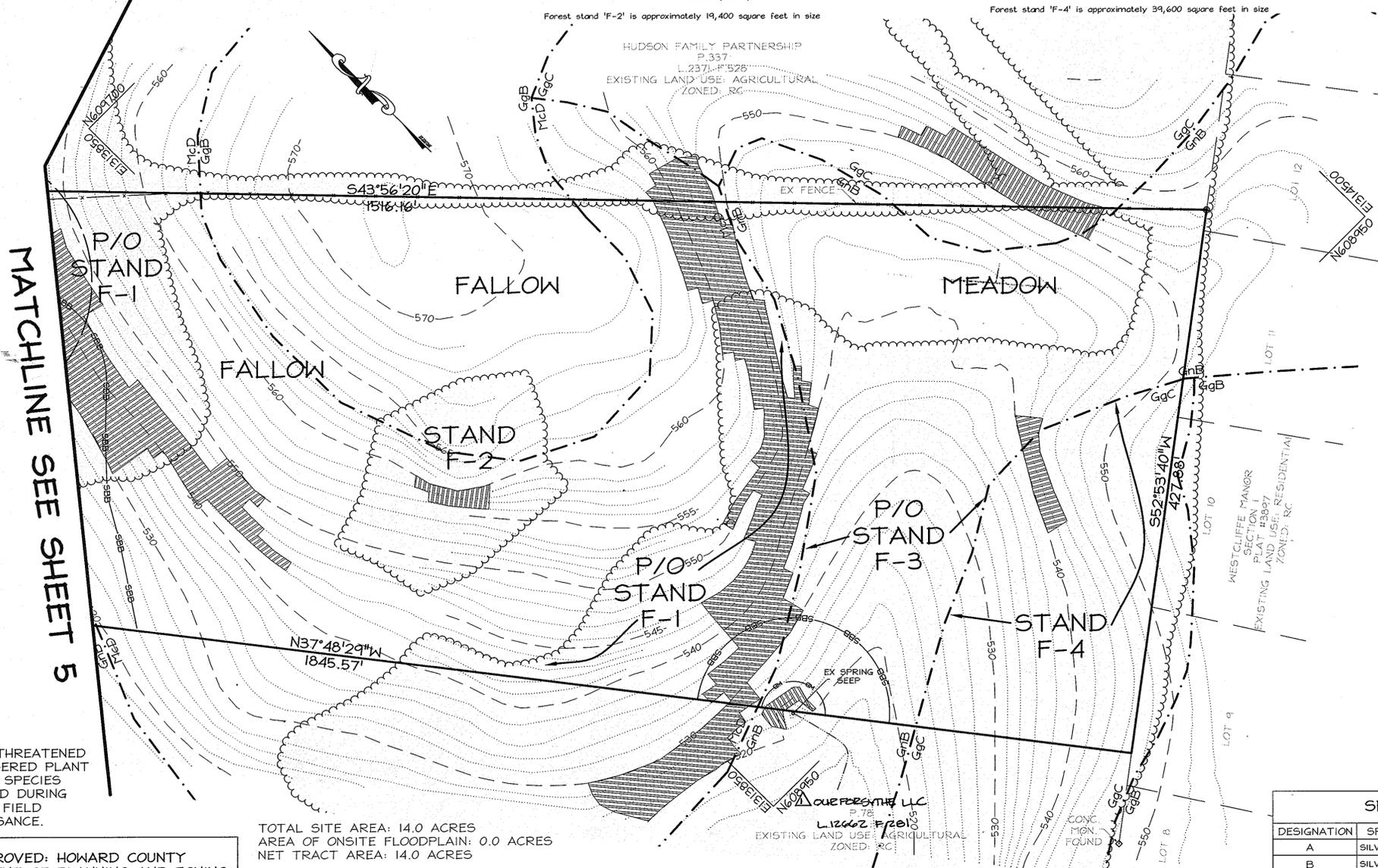
LEGEND

- MINOR CONTOUR- (2' INTERVAL)
- INDEX CONTOUR- (10' INTERVAL)
- SOILS BOUNDARY
- STREAM/POND
- STREAM BANK BUFFER
- WETLAND LIMIT
- WETLAND BUFFER
- EXISTING DRIVEWAY
- PROPOSED DRIVEWAY
- EXISTING TREELINE
- PROPOSED TREELINE
- FIELD LOCATED SPECIMEN TREE
- APPROXIMATE LOCATION EXISTING SEPTIC EASEMENT
- PROPOSED SEPTIC EASEMENT
- PROPOSED WELL
- EXISTING WELL
- PROPOSED CONTOURS
- STEEP SLOPES

SOILS LEGEND

- GqB GLENELG LOAM 3-8% SLOPES
- GqC GLENELG LOAM 8-15% SLOPES
- MaD MANOR LOAM 15-25% SLOPES
- MaC MANOR LOAM 15-25% SLOPES, VERY ROCKY
- GnB GLENVILLE-BAILE SILT LOAM 0-8% SLOPES

MATCHLINE SEE SHEET 5



APPENDIX E FOREST STAND ANALYSIS TABLE

Applicant: Kenneth L. Wheeler, Jr. Project Name: Pleasant Valley Farm Submission No. F-09-079
Lots 1-3

KEY	A. TYPE OF COMMUNITY (Forest Association, P/0, etc.)	B. AREA*	C. SOIL INFORMATION**				D. EXISTING VEGETATION (Dominant Species and Approx. %)	E. STAND CHARACTERISTICS			F. FOREST AREA IN SENSITIVE ENVIRONMENTS* (Acres)
			1. Soil Type	2. Typical forest cover for soil type	3. Woodland Suitability Index	4. Habitat Value for soil type		1. Size (Diam)	2. Age	3. Overall Condition	
F-1	Transitional Steeply Sloping	1.5 Ac	Manor Loam 15%-25% slopes, rocky	Mixed upland hardwood Oaks	Group 44	2	Black Walnut 40% Mulberry 30%	6"-15"	20-35 Years 10-25 Years	Fair Condition	0.82 Ac steep Slopes
F-2	Upland Forest	0.45 Ac	Manor Loam 15%-25% slopes, rocky Glenelg Loam 8%-15% slopes	Mixed upland hardwoods, mainly Oaks	Group 44	2	Hickory 45%	3"-24"	15-40 years	Fair Condition	None
F-3							Black Walnut 20%				
F-3	Bottomland Forest	1.8 Ac	Glenville-Baile Silt Loams 0%-8% slopes	Water Tolerant Hardwoods Wetland Hardwoods	Group 12	1	Black Walnut 40%	4"-15"	15-35 years	Good Condition	1.8 Ac Bottomland Hydric Soils Wetland Buffer
F-4	Transitional Mod. Sloping	0.91 Ac	Glenelg Loam 8%-15% slopes	Mixed upland hardwoods, mainly Oaks	Group 30	1	Red Maple 65%	4"-12"	15-30 years	Good Condition	None

* Area measured to the nearest 1/10 acre
** Source: Howard County Soil Survey, USDA
Note: The larger specimen trees exceed 75 years of age.

NOTE:
NO RARE, THREATENED OR ENDANGERED PLANT OR ANIMAL SPECIES WERE FOUND DURING MR. HEISS' FIELD RECONNAISSANCE.

TOTAL SITE AREA: 14.0 ACRES
AREA OF ONSITE FLOODPLAIN: 0.0 ACRES
NET TRACT AREA: 14.0 ACRES

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy Ham
CHIEF, DIVISION OF LAND DEVELOPMENT
9/2/09 DATE

Steve Heiss
CHIEF, DEVELOPMENT ENGINEERING DIVISION
8/2/09 DATE

DEVELOPER'S / BUILDER'S CERTIFICATION
I CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. I FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF NOTICE, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, AND A COPY OF THIS PLAN WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Bruce D. Burton
SIGNATURE OF DEVELOPER / BUILDER
8-2-09 DATE

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19184, EXPIRES DATE: 6/30/11.

Bruce D. Burton
SIGNED: BRUCE D. BURTON
12/09

PROFESSIONAL CERTIFICATION:
Steve Heiss
Steve Heiss, Qualified Professional, MDPCA

SPECIMEN TREE TABLE

DESIGNATION	SPECIES	SIZE (dbh)	CONDITION	LOCATION
A	SILVER MAPLE	41"	FAIR	"F-3"
B	SILVER MAPLE	37"	GOOD	"F-3"
C	SILVER MAPLE	72"	FAIR	"F-3"
D	SILVER MAPLE	60"	GOOD	"F-1"
E	ELM	41"	POOR	"F-1"
F	SCARLETT OAK	32"	GOOD	"F-1"

REVISIONS

NO.	DATE	REVISIONS
1	8/2/09	REVISE ADJACENT OWNERSHIP

LDE Inc.
Engineers, Surveyors, Planners
9250 Ramsey Road, Suite 106 Columbia, Maryland - 21045
(410)715-1070 - (301)596-3424 - FAX (410)715-9340

DESIGNED: BDB
DRAWN: LDE
CHECKED: BDB
DATE: 8/2009

SCALE: 1"=50'
DRAWING: PLEASANT VALLEY FARM LOTS 1-3
JOB NO.: 07-017
FILE NO.: F-09-079

TAX MAP 9 GRID 7 P/O PARCEL 92
4th ELECTION DISTRICT HOWARD COUNTY, MD
Previous Submittals: WP 09-130, F 09-079
OWNER: KENNETH L. WHEELER, JR.
13943 Forsythe Road
Sykesville, MD 21284
410-442-2678
DEVELOPER: CHRISTINA WHEELER RIZZUTO
707 Eastshire Drive
Cotonaville, MD 21228
410-719-7663