FOREST PROTECTION PROCEDURES - Construction Phase

Forest and tree conditions should be monitored during construction and corrective measures taken when appropriate.

The following shall be monitored:

a.) Soil compaction
b.) Root injury - prune and monitor; consider crown reduction
c.) Limb injury - prune and monitor
d.) Flooded conditions - drain and monitor; correct problem
e.) Drought conditions - water and monitor; correct problem
f.) Other stress signs - determine reason, correct and monitor

FOREST PROTECTION PROCEDURES - Post-Construction Phase

The following measures shall be taken:

1.) Corrective measures if damages were incurred due to negligence:
   a.) Stress reduction
   b.) Removal of dead or dying trees. This may be done only if trees pose an immediate safety hazard.

2.) Removal of temporary structures:
   a.) No burial of discarded materials will occur on-site within the conservation area.
   b.) No open burning within 100 feet of a wooded area.
   c.) All temporary forest protections structures will be removed after construction.
   d.) Remove temporary roads by removing stone or broadcasting mulch; pre-construction elevation should be maintained.
   e.) Aerate compacted soil.
   f.) Replant disturbed sites with trees, shrubs and/or herbaceous plants.
   g.) Retain signs for retention areas or specimen trees.
   h.) A county official shall inspect the entire site.

FCE NOTES

1. ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS SUBJECT TO PROTECTIVE COVENANTS WHICH MAY BE FOUND IN THE LAND RECORDS OF HOWARD COUNTY WHICH RESTRICT THE DISTURBANCE AND USE OF THESE AREAS.
2. FORESTED AREAS OCCURRING OUTSIDE OF THE FCE SHALL NOT BE CONSIDERED PART OF THE FCE AND SHALL NOT BE SUBJECT TO PROTECTIVE LAND COVENANTS.
3. LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO AREAS OUTSIDE THE LIMIT OF TEMPORARY FENCING OR THE FCE BOUNDARY, WHICHEVER IS GREATER.
4. THERE SHALL BE NO CLEARING,GRADING ,CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS PERMITTED BY HOWARD COUNT DPZ.
5. NO STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION EASEMENTS.
6. TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION. THE FENCING SHALL BE PLACED ALONG ALL FCE BOUNDARIES WHICH OCCUR WITHIN 15 FEET OF THE PROPOSED LIMITS OF DISTURBANCE.
7. PERMANENT SIGNAGE SHALL BE PLACED 50-100' APART ALONG THE BOUNDARIES OF ALL AREAS INCLUDED IN FOREST CONSERVATION EASEMENTS.

FOREST CONSERVATION EASEMENT STANDARD NOTES:

The forest Conservation Easement has been established to fulfill the requirements of Section 16.1200 of the Howard County Code, Forest Conservation Act. No Clearing, grading or construction is permitted within the Forest Conservation Easement; however forest management practices as defined in the Deed of Forest Conservation Easement are allowed.

The area of stream buffer/reforestation planting shall be protected during construction per the following:

FOREST PROTECTION PROCEDURES - Preconstruction Phase

Stress Reduction and Protection of Specimen Trees Isolated from Forest Retention Areas and General Forest Retention Areas (As They May Apply)

1.) The edge of the woods to be protected will be marked (staked or flagged) in the field per the limits of disturbance shown in the approved final construction plan prior to the start of construction activity. All areas within protective fences are to be considered "off limits" to any construction activities. The protective fencing shall be installed at the outside edge of forested areas and specimen trees to be retained and should be combined with sediment control devices when possible. The limit of the critical root zone and therefore the location of the protective devices is to be determined as follows:

Isolated Specimen Trees - 1.5 feet of protective radius per inch of DBH

Edge of Forested Area - 1 foot of protective radius/inch of DBH or an eight foot protective radius, whichever is greater.

2.) Construction activities expressly prohibited within the preservation areas are:

Placing or stockpiling backfill or top soil in protected areas
Felling trees into protected areas
Driving construction equipment into or through protected areas
Burning in or in close proximity to protected areas
Stacking or storing supplies of any kind
Concrete wash-off areas
Conducting trenching operations
Grading beyond the limits of disturbance
Parking vehicles or construction equipment
Removal of root mat or topsoil
Sitting and construction of: Utility lines
Access roads
Impervious surfaces
Storm water management
Devices
Staging Areas

3.) Protective fencing (see Figure "Protective Fencing") shall be the responsibility of the general contractor. The general contractor shall affix signs to the fencing at 25' minimum intervals indicating that these areas are "Forest Retention Area" or Specimen Tree" (see Figure "Signage"). The general contractor shall take great care to assure the restricted areas are not violated and that root systems are protected from smothering, flooding, excessive wetting from de-watering operations, off-site run-off, spillage and drainage or solutions containing materials hazardous to tree roots.

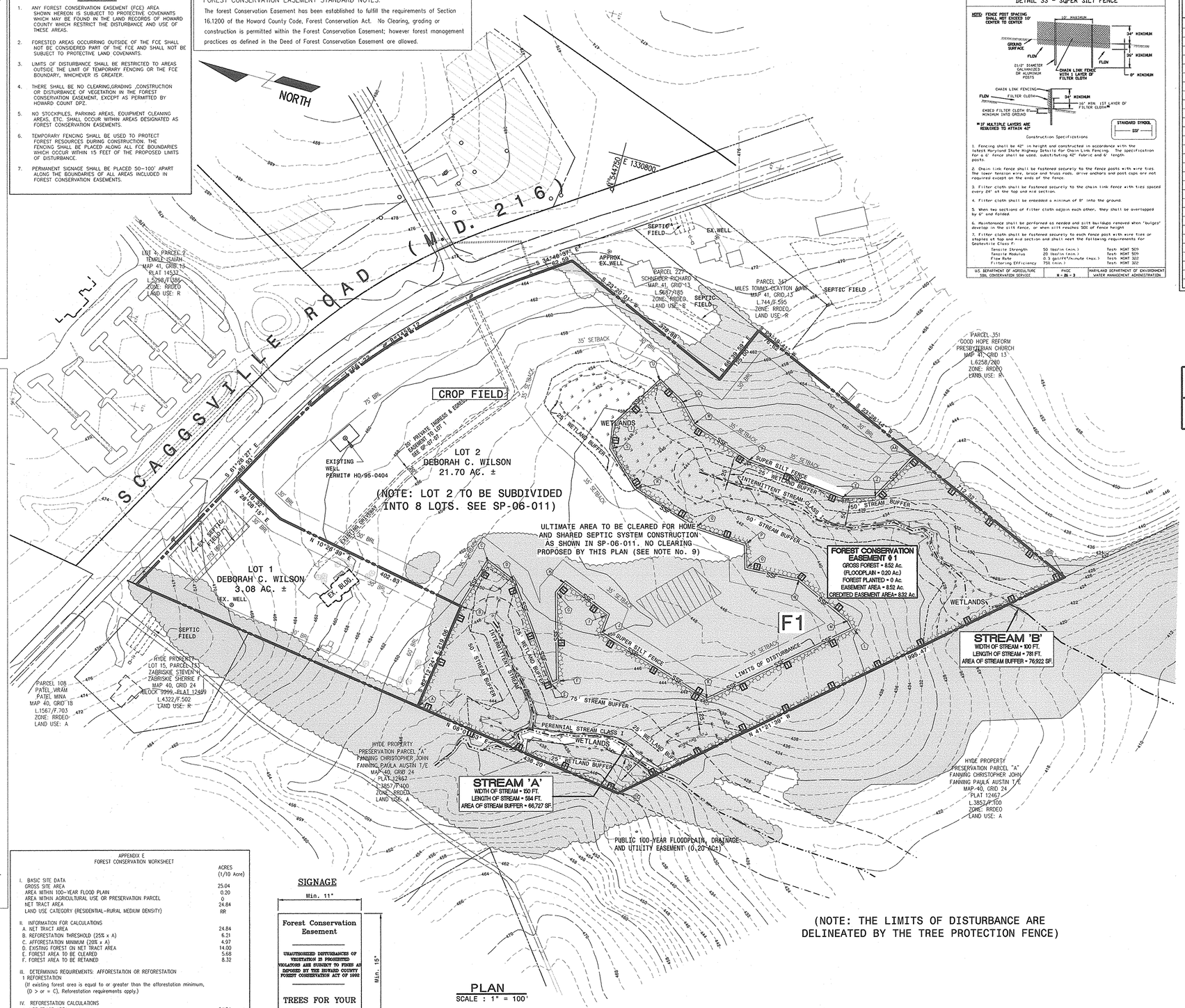
4.) The general contractor shall be responsible for any tree damaged or destroyed within the preservation areas whether caused by the contractor, his agents, employees, sub-contractors, or licensees.

5). Foot traffic shall be kept to a minimum in the protective areas.

6). All trees which are not to be preserved within fifty feet of any tree preservation areas are to be removed in a manner that will not damage those trees that are designated for preservation. It is highly recommended that tree stumps within this fifty foot area be ground out with a stump grinding machine to minimize damage.

7.) The general contractor shall designate a "wash out" area on-site for concrete trucks which will not drain toward a protected area.

8.) A pre-construction meeting shall be held with local authorities before any disturbance has taken place on site.



(NOTE: THE LIMITS OF DISTURBANCE ARE DELINEATED BY THE TREE PROTECTION FENCE)

PLAN
SCALE : 1" = 100'

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

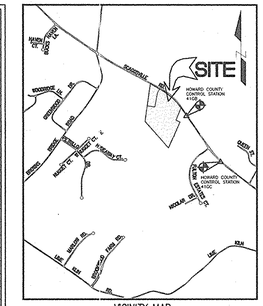
7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

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 N - 86 - 3 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

F.C.E. DESCRIPTION

LINE	BEARING	DISTANCE
A-B	S82°12'24"E	219.06
B-C	S73°58'00"E	104.24
C-D	S22°20'39"W	64.30
D-E	S54°09'04"W	220.66
E-F	S43°02'50"E	15.00
F-G	N73°51'15"E	177.87
G-H	S64°49'52"E	25.00
H-I	S21°47'58"W	105.35
I-J	N83°56'28"W	39.20
J-K	S16°41'17"W	253.10
K-L	S4°21'39"E	327.43
L-M	N45°07'38"E	20.00
M-N	N24°30'11"E	129.54
N-O	N03°11'19"W	107.66
O-P	N73°12'35"E	47.85
P-Q	N03°22'58"E	105.24
Q-R	N17°27'06"E	145.44
R-S	N42°52'04"E	92.27
S-T	N81°09'24"E	48.44
T-U	S58°39'03"E	126.02
U-V	S29°31'36"W	59.19
V-W	S45°34'23"W	51.25
W-X	S18°13'00"W	131.63
X-Y	S06°18'37"W	201.93
Y-Z	S16°44'03"E	67.97
Z-AA	S67°35'16"E	114.51
AA-BB	S23°28'14"W	385.69
BB-CC	N41°21'39"W	995.47
CC-A	N08°01'53"E	438.20



VICINITY MAP
SCALE : 1" = 2000'

Forest Stand Data

Key	Community Type	Acreage	Dominant Vegetation	General Condition	Priority Acreage
F1	Oak-Poplar	14.2 (nta)	Liriodendron tulipifera, Quercus alba, Quercus rubra, Acer rubrum, Lindera benzoin	Good	2.0± wetlands/ buffers

See accompanying report for complete stand descriptions

NOTES:

1. No rare, threatened or endangered species were observed on the property.
2. Surrounding land use is low density residential and agricultural.
3. All forest on the site is within Stand F-1.
4. Watershed Number 2131107 -Rocky Gorge Dam
5. Total area of existing forest on site = 14.2 Acres
6. 100 year Flood Plain = 0.20 Acres
7. There are no slopes 25% or greater on site.
8. No State Champion trees exist on site.
9. No clearing is proposed under F-06-096. It is the FCE worksheet calculation that requires those forest not encumbered by easement to be "considered cleared".
10. No development of Lot #2 is proposed under F-06-096. The development of Lot #2 into 8 building lots, and the resulting clearing will be under SP-06-011.
11. F-06-096 will be recorded after SP-06-011 is approved. The FCE recorded will satisfy the Forest Conservation ordinance requirements for both plans.

LEGEND:

- 325 / 330 — EXISTING CONTOURS
- PROPERTY LINE
- EXISTING TREELINE
- WETLANDS
- EX. SEPTIC FIELD
- FOREST CON. EASEMENT
- 1 — FOREST CON. EASEMENT SIGN
- SSF — SUPER SILT FENCE / LIMITS OF DISTURBANCE
- CL STREAM
- STREAM BUFFER
- WETLAND BUFFER

APPENDIX E
FOREST CONSERVATION WORKSHEET

	ACRES (1/10 Acre)
I. BASIC SITE DATA	
GROSS SITE AREA	25.04
AREA WITHIN 100-YEAR FLOOD PLAIN	0.20
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL	0
NET TRACT AREA	24.84
LAND USE CATEGORY (RESIDENTIAL-RURAL MEDIUM DENSITY)	RR
II. INFORMATION FOR CALCULATIONS	
A. NET TRACT AREA	24.84
B. REFORESTATION THRESHOLD (25% x A)	6.21
C. AFFORESTATION MINIMUM (20% x A)	4.97
D. EXISTING FOREST ON NET TRACT AREA	14.00
E. FOREST AREA TO BE CLEARED	5.68
F. FOREST AREA TO BE RETAINED	8.32
III. DETERMINING REQUIREMENTS: AFFORESTATION OR REFORESTATION	
1 REFORESTATION (If existing forest area is equal to or greater than the afforestation minimum, (D > or = C), Reforestation requirements apply.)	
IV. REFORESTATION CALCULATIONS	
A. NET TRACT AREA	24.84
B. REFORESTATION THRESHOLD (25%)	6.21
C. EXISTING FOREST ON NET TRACT AREA	14.00
D. FOREST AREAS TO BE CLEARED	5.68
E. FOREST AREA TO BE RETAINED	8.32
F. FOREST AREA CLEARED ABOVE REFORESTATION THRESHOLD	5.68
G. FOREST AREA CLEARED BELOW REFORESTATION THRESHOLD	0
H. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD	2.11
ALTERNATE #1 APPLIES CLEARING ABOVE THE THRESHOLD (E>B) If Forest areas to be retained are greater than the reforestation threshold, (if E > B), the following calculations apply:	
REFORESTATION FOR CLEARING ABOVE THE THRESHOLD (F x 1/4)	1.42
CREDIT FOR FOREST RETAINED ABOVE THRESHOLD (H)	2.11
TOTAL REFORESTATION REQUIRED (F x 1/4) - H	0

SIGNAGE

Min. 11"

Forest Conservation Easement

UNAUTHORIZED DISTURBANCES OF VEGETATION IS PROHIBITED
VIOLATORS ARE SUBJECT TO FINES AS DEPOSED BY THE HOWARD COUNTY FOREST CONSERVATION ACT OF 1992

TREES FOR YOUR FUTURE

Min. 15"

SEE SYMBOL 1

FOREST CONSERVATION AREA TABULATION

Easement No.	Gross Forest Area #	Forest Area Floodplain	Net Forest (Retained)	Planted Area (Afforestation)#	Total Easement Area
FCE # 1	8.52Ac.±	0.20Ac.±	0 Ac.±	0 Ac.±	8.32 Ac.±
TOTAL	8.52Ac±	0.20Ac±	0 Ac±	0 Ac±	8.32 Ac.±

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/12/07

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 3/9/07

Eco-Science Professionals, Inc.
Consulting Ecologists
P.O. Box 5006 Glen Arm, Maryland 21057
Telephone (410) 592-6752 Fax (410) 832-2483

MD DNR Qualified Professional
USACOE Wetland Delineator
Certification # WDCP93MD0610044D2
John P. Canales

STATE OF MARYLAND — JOHN CHRISTOPHER CANALES — REGISTERED PROFESSIONAL ENGINEER

PREPARED BY :
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
TEL. (410) 465-7903 FAX. (410) 465-3845

OWNER:
DEBORAH C. WILSON
12276 ROUTE 216
FULTON, MD. 20759

DEVELOPER :
FULTON, LLC.
7017 MEANDERING STREAM WAY
FULTON, MD. 20759

FINAL FOREST CONSERVATION PLAN
FULTON WOODS
LOTS 1 AND 2
PARCEL 199, TAX MAP 41, GRID 13
5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

DATE : AUG. 15, 2006 SHEET 1 OF 1

F-06-096 (FC)