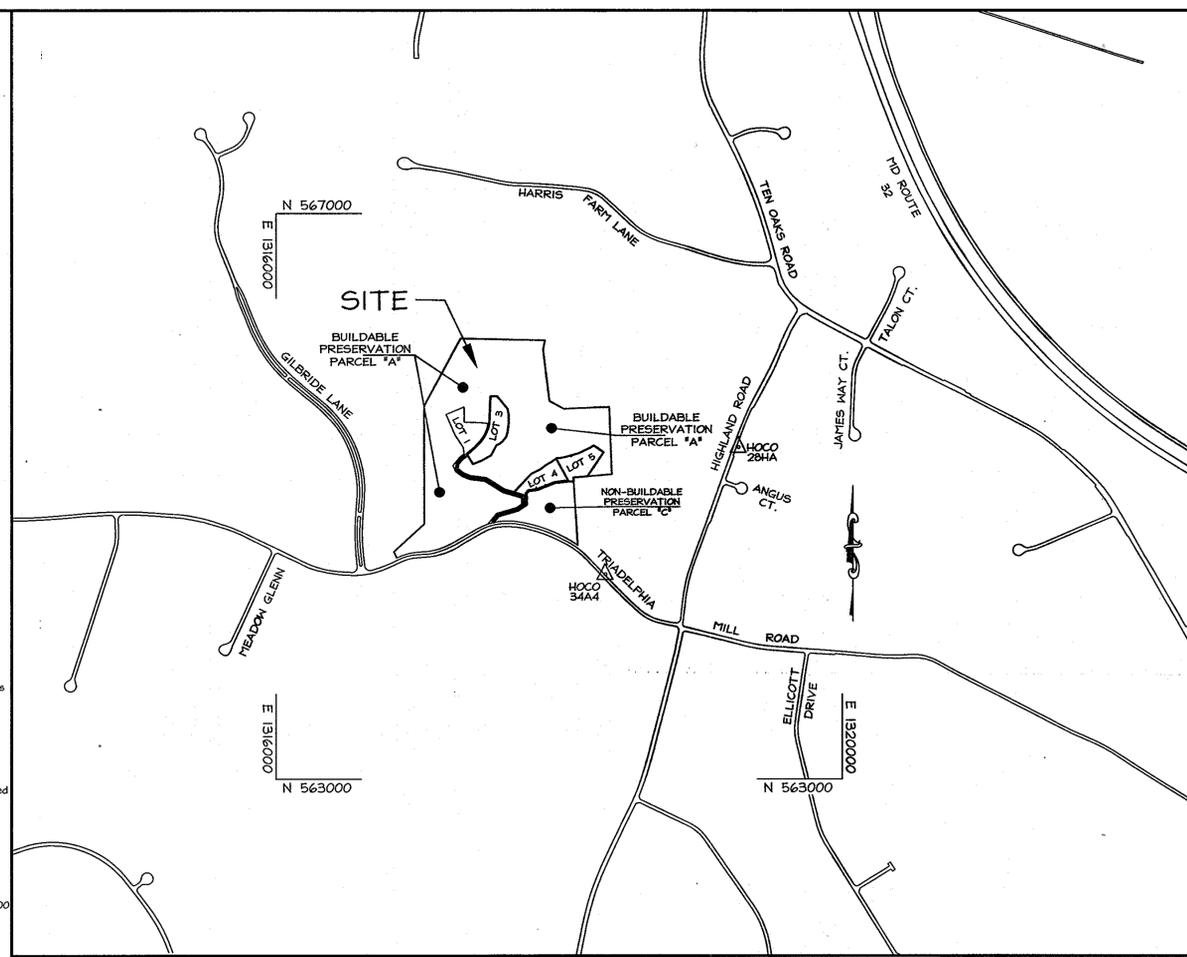


**GENERAL NOTES**

- This project is in conformance with the latest Howard County Standards unless waivers have been approved. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least forty-eight (48) hours prior to any excavation work being done.
- The contractor shall notify the Department of Public Works/Bureau of Engineering /Construction Inspection Division at 410-313-1800 at least five (5) working days prior to the start of work.
- The topography shown on this plan is taken from a previously approved Percolation Certification Plan prepared by NJR & Associates dated 5/14/05 and signed by the County Health Officer on 8/8/05. Topography shown is at two foot contour intervals. The topography within the stream valleys has been amended to reflect field run surveys of January 2010 prepared by LDE, Inc. and merged with topography as described above.
- Soils data shown based on the United States Department of Agriculture National Resources Conservation Service Web Soil Survey - Version 5, Sept 21, 2006 - Howard County.
- The boundary shown herein is based on a field run monumented Boundary Survey performed by Fitzroy Bertrand and Real Estate Surveyors, LLC, on or about July 28, 1999 and updated by NJR & Associates on or about July 2, 2005. These coordinates are based on NAD '83, Maryland State Plane Coordinate System, as projected from Howard County control stations: Station 284A Station 344A.
- Dead Reference: Liber 12246, Folio 274; Lot 3 Liber 13418, folio 461. Plat Reference: Plat # 21590 thru 21592.
- Project Background Information:  
Location: Clarksville, Maryland (Zip Code 21029)  
Subdivision Name: HEDGEROW FARM  
Site Address: 19550 Triadelphia Mill Road  
Tax Map: Map 28  
Parcel: 64  
Existing Zoning: RR-DEO (Residential Single District)  
Election District: 5th  
Total Tract Area: 31,957.2 Acres +/-  
Number of Proposed Lots: 4 Cluster Lots, 1 Buildable Preservation Parcel and 1 Non-Buildable Buildable Preservation Parcel  
DPZ Reference Numbers: F00-58, F00-59, WPO0-65, F01-81, WPO6-58, F 07-44, ECP 10-015, WPO10-172, FII-022, ECP 11-020, WIP 11-141
- Limit of disturbance: 30,400 SF or 0.70 Ac ± Total
- Subject property is zoned RR-DEO per 2/02/2004 Comprehensive Zoning Plan and per the Comp Lite Zoning Regulations effective on 7/28/06.
- BRL denotes Building Restriction Line.
- ESB denotes Environmental Setback.
- All areas shown on this plan are +/-, more or less.
- For flag or pipestem collection, snow removal and road maintenance are provided to the junction of the flag or pipestem and road right-of-way line and not onto the pipestem lot driveway. Refuse collection and recycling collection for all lots and parcels shall be at Triadelphia Mill Road within 5' of the paved roadway.
- Driveway(s) shall be provided prior to residential occupancy to ensure safe access for fire and emergency vehicles per the following minimum requirements and/or as allowed by Design Manual Waiver approved by the Department of Planning & Zoning on July 8, 2010: See Note 42.  
a) Width - 12' (16 feet serving more than one residence).  
b) Surface - 6 inches of compacted crusher run base with tar and chip coating. (1/2" Min.)  
c) Geometry - Maximum 15% grade, with the durable and sustained grade of 8%. Maximum 10% grade change and minimum of 45 foot turning radius.  
d) Structures (overhead/bridges) Capable of supporting 25 gross tons (1425 loading).  
e) Drainage Elements - Capable of safely passing 100 year flood with no more than 1 foot depth over driveway surface.  
f) Structure Clearances - minimum 12 feet.  
g) Maintenance sufficient to ensure all weather use. Where one (1) driveway serves more than one (1) lot, a house number sign must be placed at each lot entrance and a range of street address house numbers sign where the common driveway intersects with the main road.
- Three separate Maintenance Agreements will be required for the shared driveway. One agreement for Lots 1, 3, 4, 5 and Buildable Preservation Parcel "A", one agreement for Lot 1, 3 and Buildable Preservation Parcel "A" and one agreement for Lots 4 and 5. All maintenance agreements will be recorded concurrently with the plats. The shared driveways will be maintained by the Hedgerow Farm Home Owners Association.
- The environmental features which currently exist, are floodplains, steep slopes, wetlands, wetland buffers, streams and their bank buffers. This project does not disturb any steep slopes which are greater than 20,000 square feet of on-site and off-site contiguous area. No grading, removal of vegetative cover or trees, paving and new structures shall be permitted within the limits of wetlands, stream(s) or their required buffers, floodplain and forest conservation easement areas, with the exception of the floodplain and buffer areas associated with the driveway and stone wall extensions approved with Waiver Petition WP 11-141.
- The Wetland study for this property (Thaler Estates / F00-59) was originally conducted by I.P.D.S. dated September, 1999 and January, 2000. LDE Inc. redelineated the wetland areas as part of Thaler Estates (F01-81) dated August, 2005 and confirmed the limit of wetlands under F II-022; January, 2010.
- Landscaping for Lot 1, 3 (former Lot 2-Plat# 21590 thru 21592) and Buildable Preservation Parcel "A" was addressed under F II-022 and landscaping for Lots 4 and 5 is provided in accordance with a certified Landscape Plan on file with this plan. The Landscape Surety of \$480,000 for the 12 shade trees, 30 flowering trees and 17 shrubs has been included with the Surety posted for Forest Conservation.
- The Resubdivision of Non-Buildable Bulk Parcel "B" removes 1,682.5 Acres of Retention Forest from Forest Conservation Easement #8 for the creation of Lots 4 & 5, expansion of Forest Conservation Easements #9 (0.4541 Acres), #10 (0.7117 Acres), Reconfiguration of #8 into #8A (3.7344 Acres) and #8B (1.7196 Acres) and the addition of New Retention Easement #11 (1.6464 Acres). The cumulative additions and adjustments to Easement Acres provides the required replacement for the 1,682.5 Acres removed from Easement #8. This Plat complies with the requirements of Section 16.1200 of the Howard County Code for Forest Conservation by Retention of 12,954.7 Acres of forest in easements #2, 4, 5, 7, 8A, 8B, 9, 10, 11 and Non-Easement Credit Areas located on Lot 2 (F00-59) and Lot 6 (F01-81), Thaler Estates, and 4,787.8 Acres of Retention in Easements #1, 3 and 6 (F00-59). The Surety of \$2,450,000 for supplemental planting within easement #11 and \$4,810,000 for landscape planting on Lots 4 & 5 (\$31,260,000 Total) has been posted with the Developers Agreement.
- The Forest Conservation Easements have been established to fulfill the requirements of Section 16.1200 of the Howard County Code and Forest Conservation Act. No clearing, grading or construction is permitted within the Forest Conservation Easements; however, Forest Management Practices as defined in the deed of Forest Conservation Easement are allowed.
- This subdivision plan is subject to the amended Fifth Edition of the Subdivision and Land Development Regulations per Council Bill No. 45-2003 effective October 2nd, 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 permit applications.
- Stormwater management for Lots 4 & 5 is provided by use of Environmental Site Design by use of Alternative Surfaces - Permeable surfaces, & Micro Scale Practices - Drywell.
- These areas designate a private sewage easement of at least 10,000 square feet as required by the Health Department of the Environment for individual sewage disposal. (COPAR 26.04.02)  
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 sewage system. The County Health Officer shall have the authority to grant variances for encroachments into the private sewage easement. Recordation of a modified sewage easement shall not be necessary.
- The lots shown herein comply with the minimum lot area and ownership width as required by the Maryland Department of the Environment.
- Existing wells, septic systems, and sewage disposal areas within 100' of the property and those wells within 200' down gradient of existing or proposed septic systems or sewage disposal areas have been shown.
- All wells shall be drilled prior to final plat recordation. It is the developer's responsibility to schedule the well drilling prior to final plat submission. It will not be considered "government delay" if the well drilling holds up Health Department signature of the record plat.
- Any changes to a private sewage area shall require a revised percolation certification plan.
- There are existing dwellings and structures located on Buildable Preservation Parcel "A", Lot 1 and Lot 3 (formerly Lot 2) to remain. New buildings, extensions or additions to the existing dwellings and structures shall be constructed in accordance with the Zoning Regulations.
- Existing utilities are based on field surveys and/or plans of public record.
- A Floodplain Study was approved as part of the F II-022 plan submission.
- Sight Distance study for this project was prepared by LDE, Inc., April 2010 and approved by the Department of Planning & Zoning October 2010 under F II-022.
- All construction shall be in accordance with the latest Standards and Specifications of Howard County Design Manual Vol. IV and current MSHA Standards & Specifications if applicable.
- The property is listed in the Historic Sites Inventory as HQ-171 known as 'Hedge Row' or 'Left Over'. The subdivision proposal was presented to the Historic District Commission on 3/4/10 and received advisory approval.
- The Public 100 year Floodplain, Drainage & Utility easement will be owned and maintained by the owner of Buildable Preservation Parcel "A". In accordance with Section 16.115.b.2(ii) of the subdivision regulations, the owner grants Howard County a perpetual easement for right of entry. Refer to Plats 21590-21592.
- A Letter of Exemption Application was filed under F II-022 with the Maryland Department of the Environment for the repair work to the existing driveway stone wall extensions located within the 100 year floodplain and wetland buffer.
- The owner certifies that to the best of his knowledge, there are no cemetery sites or burial grounds on the property to be subdivided.
- Upon building permit review the septic systems for all proposed structures and/or existing structure expansions shall be re-evaluated to determine sufficient system capacity.
- This project is subject to HP-10-172 from the Howard County Subdivision and Land Development Regulations. On October 12, 2010, the Planning Director approved the request to waive Subsections 16.120(b)(4)(iii)(b), 16.132(a)(1)(iv) and 16.144(b) of the Howard County Code. Waiver approval allows environmental features to be located on lots less than 10 acres in size, waives the requirement that the developer provide road improvements and waives the requirement that a sketch plan or preliminary sketch plan be submitted for the subdivision referenced Waiver approval is subject to the following conditions:  
1. Petitioner shall redesignate Lot 2 of Hedgerow Farm, Lots 1 - 3 as "Buildable Preservation Parcel "A". Buildable Preservation Parcel "A" shall have an area sufficient to maintain the base density of the proposed subdivision given the two cluster lots proposed and to support Buildable Preservation Parcel "A" (minimum 10 Acres).  
2. Petitioner shall designate the remaining area of the subdivision not needed to support Buildable Lots 1 and 2 and Buildable Preservation Parcel "A" as Non-Buildable Bulk Parcel "B". At the time of the resubdivision of Non-Buildable Bulk Parcel "B" into two additional cluster lots located to the east side of Lot 3 (future lots 4 & 5 as depicted on waiver exhibit "Percolation Certification Plat, Hedgerow Farm, Lots 4 & 5"), the remaining area of Non-Buildable Bulk Parcel "B" shall be placed into a non-buildable preservation parcel and shall be designated as "Non-Buildable Preservation Parcel "C".  
3. Petitioner shall identify any and all areas of existing forest conservation easements which will no longer qualify toward satisfying the forest conservation obligations of Thaler Estates, Flat Nos. 14436 - 14437, (F 00-094). Any forest conservation deficit shall be corrected by the addition of new forest conservation easements or augmentation of existing easements  
4. Petitioner shall obtain all Federal, State and local permits required for activities in regulated areas.  
5. The Environmental Concept Plan (ECP FII-022) from the Howard County Subdivision and Land Development Regulations and Subdivision and Land Development Regulations have been evaluated and approved under this final plan submission Proposed activities within the environmental buffers were determined essential or necessary disturbance per Subsection 16.116.c of the Subdivision and Land Development Regulations.
- Under ECP 10-015, On July 8, 2010, the Development Engineering Division approved the request to waive Design Manual, Volume III, Section 2.6.B which requires that a 16' wide shared use driveway be provided and Section 4.3.1.a.2 which requires that when a residential driveway crosses a floodplain, a public access place must be provided; based on:  
1. the justification provided by LDE in their letter.  
2. a letter dated 12/16/09 from the Howard County Department of Fire & Rescue Services approving with conditions the use of the existing driveway for access to the proposed structures and addition of proposed forest conservation easements.  
3. the granting of the requested waivers will not impact the County's infrastructure systems.
- Trash and recycling collection will be at Triadelphia Mill Road within 5' of the county roadway for collection.



**LOCATION MAP**

Scale: 1" = 600'

**SUPPLEMENTAL PLANS**  
**HEDGEROW FARM**  
**LOTS 3-5, BUILDABLE PRESERVATION**  
**PARCEL "A" AND NON-BUILDABLE**  
**PRESERVATION PARCEL "C"**

A Resubdivision of Lot 2 & Non-Buildable Bulk Parcel "B" and Forest Conservation Easements on Buildable Preservation Parcel "A" Hedgerow Farm, Plat # 21591 & 21592

Tax Map 28 Grid 20 Parcel 64  
5th Election District - Howard County, Maryland  
Zoned RR-DEO

**GENERAL NOTES (cont)**

- Under ECP 11-020, On March 11, 2011, the Development Engineering Division approved the request to waive Design Manual, Volume III, Section 2.6.B which requires that a 16' wide shared use driveway be provided and Section 4.3.1.a.2 which requires that when a residential driveway crosses a floodplain, a public access place must be provided; based on:  
1. the justification provided by LDE in their letter.  
2. an email dated March 10, 2011 from the Howard County Department of Fire & Rescue Services approving the waiver and,  
3. the granting of the requested waivers will not impact the County's infrastructure systems.
- Buildable Preservation Parcel "A" is encumbered by an easement agreement with HEDGEROW FARM Homeowners Association Inc. and Howard County, Maryland. This agreement prohibits further subdivision of this parcel, outlines the maintenance responsibilities of their owners and enumerates the uses permitted on the parcel. Buildable Preservation Parcel "A" will be owned by HEDGEROW FARM, LLC. (Liber 13246, folio 369)
- Approval of the waiver of subsections 16.116(c)(2)(iii), 16.120(b)(4)(iii)(b), 16.120(e) of the Howard County Code. Waiver of these regulations will: a) allow grading, removal of vegetative cover and trees, and paving within the 100' streambank buffer for the proposed Lot 4 well box, dry well leader, retaining wall, and minor grading and the use-in-common driveway to serve Lots 4 and 5; b) allow environmental features and buffers on lots less than 10 acres in size for Lots 4 and 5 and to reduce the 35' environmental setback from the 100' stream buffer on Lot 4; and c) allow establishment of forest conservation easements at truncated easement corners less than 35' wide for proposed forest conservation Easement Area Numbers 8B(1), 9A, 9B, 10A, 10B, and 10C, respectively.
- Approval is subject to the following conditions:  
1. Petitioner shall submit a Forest conservation plan as part of the final plan application for the resubdivision of F-II-022. The forest conservation plan shall reflect abandonment and augmentation of existing forest conservation easements and addition of proposed forest conservation easements. The plan shall include the addition of signage to forest conservation area perimeters resulting from augmentation and addition. Posting of forest conservation surety will be required prior to subdivision recordation.  
2. Approval of the waiver of subsections 16.116(c)(2)(iii) authorizes encroachments by the limit of disturbance into the 100' streambank buffer to construct the use-in-common driveway for Lots 4 and 5 and the well box, dry well leader, retaining wall, and minor grading on Lot 4 as depicted on the waiver petition exhibit dated July 2011. No additional activities within the 100' streambank buffer are authorized by approval of this waiver.  
3. Petitioner shall submit, as part of the final plan application, a Lot 4 house orientation and location analysis to minimize proposed impacts within the 35' environmental setback. Impacts shall be no greater than those depicted on the waiver exhibit. Upon approval of the study by the Department of Planning and Zoning, the 35' environmental setback will be reduced to allow for construction of the house depicted in the approved analysis. The reduced setback shall be recorded on the plat submitted as part of the final plan.  
4. Petitioner shall submit, as part of the final plan application and forest conservation plan, a plan for mitigating impacts to vegetative cover and trees resulting from activities proposed within the 100' streambank buffer. The forest conservation surety for the proposed subdivision shall include posting of surety for the required mitigation.  
5. A private range of address sign shall be fabricated and installed by Howard County Bureau of Highways at the developers/owners expense. Contact Howard County Traffic Division at 410-313-2430 for details and cost estimate.

**BENCHMARKS:**

- Howard County Control Station 284A  
NAVD 29 Elevation = 568.708  
NAD 83 Coordinates: N565347.937, E1319266.264  
  
Standard stamped disc set on a 3' deep column of concrete located on the Northeast side of Highland Road just north of Angus Ct, 14.2' off edge of paving, 29.0' from GPE Pole #334368.
- Howard County Control Station 344A  
NAVD 29 Elevation = 561.105'  
NAD 83 Coordinates: N564468.943, E1318257.375  
  
Standard stamped disc set on a 3' deep column of concrete located on the South side of Triadelphia Mill Rd, 7.4' from the edge of pavement, 57.2' east from C&P pole and 22' west from a post from a gas pipeline right of way.

**DENSITY SUMMARY**

- Gross Area: 33,1836 Ac ±
- Area of 100 Year Floodplain: 2,8081 Ac ±
- Area of Steep Slopes: 1,0437 Ac ±
- Net Area of Property: 29,3318 Ac ±
- By Right Density: 33,1836 Ac / 4.25 = 7.8 or 7 Units (FII-022 & ECP 11-020)
- The Owner Proposes: 4 Cluster Lots and 1 Buildable Preservation Parcel 1 Non-Buildable Preservation Parcel

LOT NO.	GROSS AREA	PIPESTEM	MINIMUM LOT SIZE	LENGTH
3*	1,554 AC / 66,882 SF	0.993 AC / 43,178 SF	1,514 SF	982±
4	0.959 AC / 41,778 SF	0.040 AC / 1,771 SF	0.983 AC / 40,000 SF	339±
5	1,058 AC / 46,185 SF	0.053 AC / 2,305 SF	1,018 AC / 44,000 SF	662±
Buildable Preservation Parcel	25,4922 AC / 1,107,304 SF	0.205 AC / 9,164 SF	25,2971 AC / 1,098,135 SF	1199±

\* SEE NOTE #52, THIS SHEET. ALL PIPESTEMS MEET SECTION 16.120(b)(6)(ii)(c) OF THE SUBDIVISION REGULATIONS

**MINIMUM LOT SIZE TABULATION**

No.	Description
1	Supplemental Plan - Cover Sheet
2	Supplemental, Grading & Landscape Plan
3	Supplemental, Grading & Landscape Plan
4	Supplemental Plan - Use-In-Common Driveway Details
5	Supplemental Plan - Stormwater Management Plan & Details
6	Forest Conservation Plan
7	Forest Conservation Plan - Notes & Details
8	Forest Conservation Mitigation Plan - Lots 4 & 5
9	Forest Conservation Mitigation Plan - Forest Conservation Esmt. #11

**INDEX OF SHEETS**

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6	Forest Conservation Plan
7	Forest Conservation Plan - Notes & Details
8	Forest Conservation Mitigation Plan - Lots 4 & 5
9	Forest Conservation Mitigation Plan - Forest Conservation Esmt. #11

**GENERAL NOTES (cont)**

- The Articles of Incorporation for the HEDGEROW FARM Home Owners Association, Inc., Identification No: D 13947244 has been accepted and approved by the State Department of Assessment and Taxation on January 4, 2011.
- The purpose of Buildable Preservation Parcel "A" is the preservation of the remaining property residue which will house the pool, barns and pastures of the historic properties, known as "Left Over", "Left Over" or "Hedgerow". The purpose of Non-Buildable Preservation Parcel "C" is the preservation of the remaining environmental features located within the project.
- The Environmental Concept Plan (ECP10-015 & ECP11-020) review was based on ECP checklist requirements. Zoning Regulations and Land Development Regulations have been evaluated and approved under this final plan submission.
- Proposed activities within the environmental buffers were determined essential or necessary disturbance per Subsection 16.116.c of the Subdivision and Land Development Regulations as part of the approval of ECP 10-015.
- Non-Buildable Preservation Parcel "C" is encumbered by an easement agreement with HEDGEROW FARM Home Owners Association, Inc. and Howard County, Maryland. This agreement prohibits further subdivision of this parcel, outlines the maintenance responsibilities of their owners and enumerates the uses permitted on the parcel. Non-Buildable Preservation Parcel "C" will be owned by HEDGEROW FARM, LLC.
- In accordance with Section 105.E.1.c of the Howard County Zoning Regulations, the Health Department supports the recommendation to reduce the maximum lot size on Lot 3 (previously approved as Lot 2/ F II-022) to a maximum of 60,000 square feet. (The 60,000 square feet maximum lot size does not include the pipestem).

LOT NO.	ADDRESS	PERMEABLE PAVEMENT (A-2)	DRYWELL (M-5)
3	19550 TRIADELPHIA MILL RD	N/A	N/A
4	19520 TRIADELPHIA MILL RD	YES	YES
5	19510 TRIADELPHIA MILL RD	YES	NO

**LEGEND**

- 100' STREAM BANK BUFFER
- NON-TIDAL WETLANDS
- 25' WETLAND BUFFER
- 100 YEAR FLOODPLAIN EASEMENT
- PRIVATE ACCESS, DRAINAGE & UTILITY EASEMENT
- PRIVATE STORMWATER MANAGEMENT CREDIT EASEMENT
- EXISTING FOREST CONSERVATION EASEMENT
- EXISTING 10' CONTOURS
- EXISTING 2' CONTOURS
- PROPOSED 10' CONTOURS
- PROPOSED 2' CONTOURS
- PROPOSED PRIMARY WELL SITE
- PROPOSED ALTERNATE WELL SITE
- EXISTING WELL
- PRIVATE SEWAGE DISPOSAL EASEMENT
- EXISTING PRIVATE SEWAGE DISPOSAL EASEMENT
- BUILDING RESTRICTION LINE
- ENVIRONMENTAL SETBACK
- EX. STREAM
- EX. TREELINE
- SOIL BOUNDARY
- PERCOLATION TEST PASSED
- PERCOLATION TEST FAILED
- SLOPES 25% OR GREATER
- OVERHEAD UTILITY LINES

**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: *[Signature]* 11/15/12 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* 12/3/12 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* 1/4/13 DATE

**REVISIONS**

No.	By	Date	Description
DESIGNED			SUPPLEMENTAL PLAN - COVER SHEET
BDB			As Shown
EDS			
DRAWN			LOTS 3-5, BUILDABLE PRESERVATION PARCEL "A" AND NON-BUILDABLE PRESERVATION PARCEL "C" A Resubdivision of Lot 2 & Non-Buildable Bulk Parcel "B" and Forest Conservation Easements on Buildable Preservation Parcel "A"
LDE			Hedgerow Farm, Plat # 21590 - #21592
CHECKED			Triadelphia Mill Road - RR-DEO Zoning
BDB			Tax Map 28 Grid 20 Parcel 64
			5th Election District - Howard County, Maryland
			Previous Submittals: WPO0-65, F00-58, F00-59, F01-81, WPO6-58, F07-44, WPO10-172, ECP 10-015, FII-022, ECP 11-020, WIP 11-141
DATE	OWNER/DEVELOPER:		FILE NO.
11/2012	Hedgerow Farm LLC Robert B. White and Lyn De G. White 19550 Triadelphia Mill Road Clarksville, MD 21029-1025 (301)802-1051		F12-092

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, EXPIRATION DATE: 6/30/13.

SIGNED: *[Signature]* DATE: 1/16/12

PROFESSIONAL CERTIFICATION:  
*[Signature]*  
Steve Heiss, Qualified IPProfessional, MDPCA



THIS AREA DESIGNATES A PRIVATE SEWAGE AREA OF AT LEAST 10,000 SQ.FT. AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWER IS AVAILABLE. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT.

**LANDSCAPING NOTE:**

Compliance with the required landscaping components is met by the retention of the existing landscape specimens / plantings located on Buildable Preservation Parcel "A" (FII-022) adjacent to and located on cluster Lots 4 & 5.

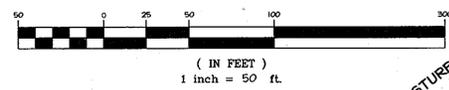
Rather than artificially define proposed lot lines with plants, the plan permits the project to retain the Historic Properties feeling of unity.

Desirable views are retained, wooded areas are to be retained with exception of that required for house construction.

**EASEMENT HATCH LEGEND**

- EXISTING FOREST CONSERVATION EASEMENT - Plot # 14436 & 14337 To Be Abandoned
- EXISTING FOREST CONSERVATION EASEMENT - Plot # 14436 & 14337 To Remain Unchanged
- PRIVATE ACCESS, DRAINAGE & UTILITY EASEMENT
- EXISTING PRIVATE STORMWATER MANAGEMENT CREDIT EASEMENT - Plot # 14436 & # 21591
- EXISTING PUBLIC 100 YEAR FLOODPLAIN, DRAINAGE & UTILITY EASEMENT - Plot # 21591
- PRIVATE SEWAGE DISPOSAL EASEMENT
- PUBLIC FOREST CONSERVATION EASEMENT
- EXISTING PRIVATE SEWAGE DISPOSAL EASEMENT

**GRAPHIC SCALE**



**SOILS LEGEND:**

- GgB - Glenelg Loam, 3 to 8 percent slopes
- GgC - Glenelg Loam, 8 to 15 percent slopes
- 4" - 10" depth to bedrock; 10" to water table; slight to severe limitations for sewage disposal fields and homes w/ basements depending on slopes; erosion hazard.
- GmB - Glenville Silt Loam, 3 to 8 percent slopes
- GnB - Glenville-Baile silt loams, 0 to 8 percent slopes
- 4" - 10" depth to bedrock; 1.5' to 3' to water table; severe limitations for sewage disposal fields; moderate limitations for homes w/ basements; impeded drainage; seasonal wetness; erosion hazard.
- MaC - Manor Loam, 8 to 15 percent slopes
- MaD - Manor Loam, 15 to 25 percent slopes
- 6" - 10" depth to bedrock; 20" to water table; slight to severe limitations for sewage disposal fields and homes w/ basements depending on slopes; erosion hazard.

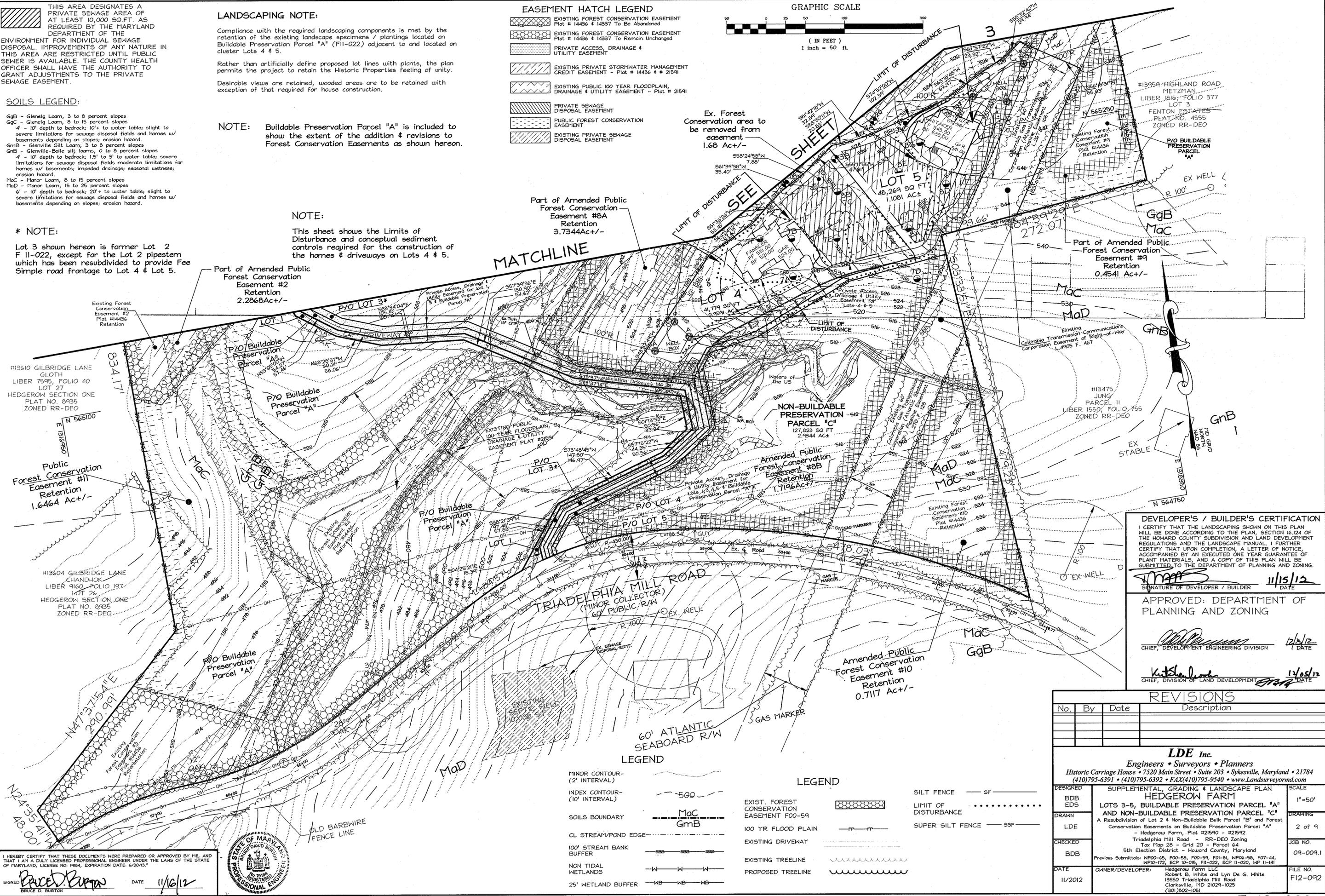
**\* NOTE:**

Lot 3 shown hereon is former Lot 2 F II-022, except for the Lot 2 pipestem which has been resubdivided to provide Fee Simple road frontage to Lot 4 & Lot 5.

**NOTE:** Buildable Preservation Parcel "A" is included to show the extent of the addition & revisions to Forest Conservation Easements as shown hereon.

**NOTE:**

This sheet shows the Limits of Disturbance and conceptual sediment controls required for the construction of the homes & driveways on Lots 4 & 5.



#13610 GILBRIDGE LANE GLOTH LIBER 7595, FOLIO 40 LOT 27 HEDGEROW SECTION ONE PLAT NO. 8935 ZONED RR-DEO

#13604 GILBRIDGE LANE CHANDHOK LIBER 9160, FOLIO 197 LOT 26 HEDGEROW SECTION ONE PLAT NO. 8935 ZONED RR-DEO

**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]* 11/15/12  
 SIGNATURE OF DEVELOPER / BUILDER DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 12/12/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 11/05/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

REVISIONS			
No.	By	Date	Description

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, EXPIRATION DATE: 6/30/13.

SIGNED *[Signature]* DATE 11/16/12  
 BRUCE D. BURTON



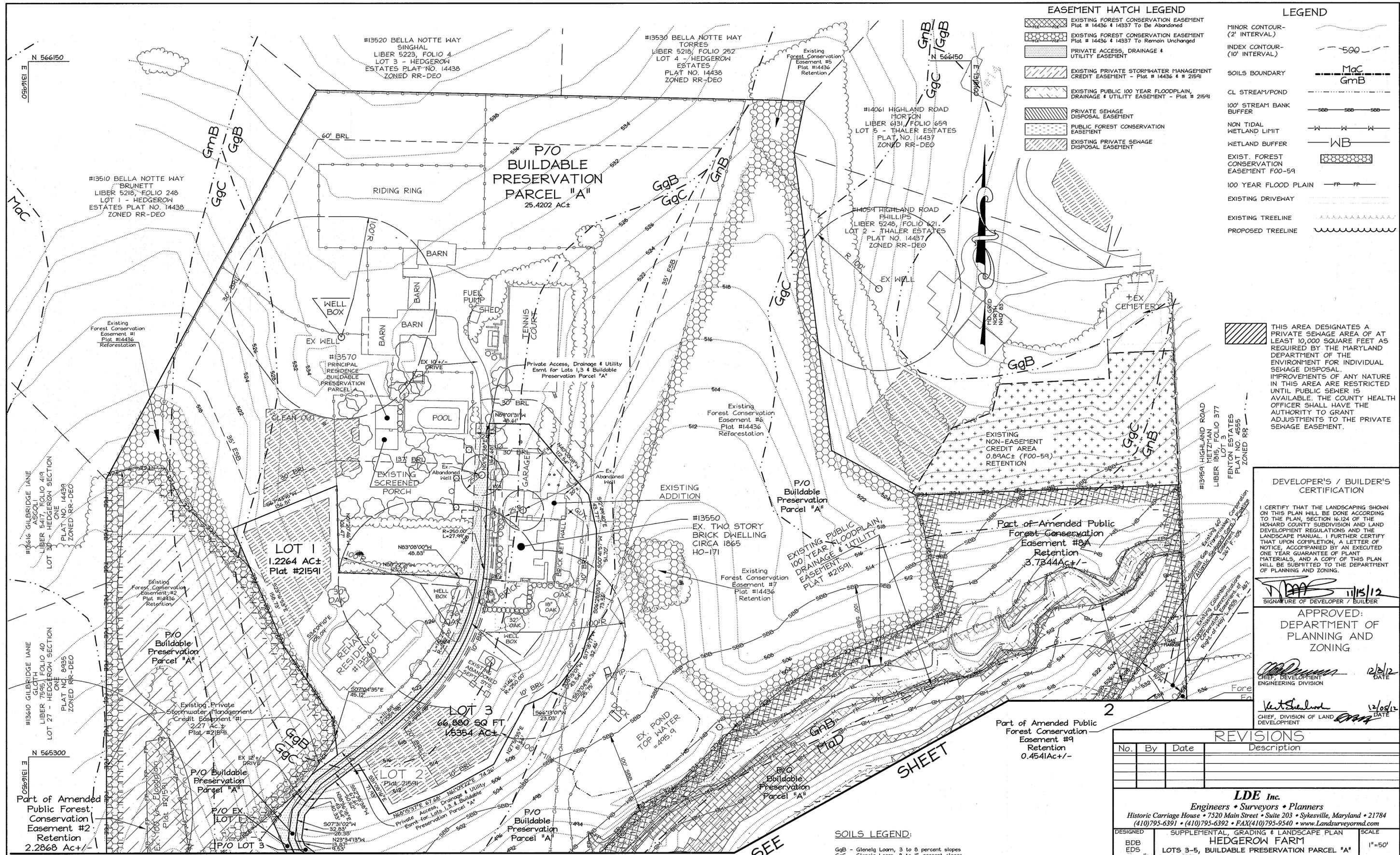
- LEGEND**
- MINOR CONTOUR - (2' INTERVAL) - - - - -
  - INDEX CONTOUR - (10' INTERVAL) - - - - -
  - SOILS BOUNDARY - - - - -
  - CL. STREAM/POND EDGE - - - - -
  - 100' STREAM BANK BUFFER - - - - -
  - NON TIDAL WETLANDS - - - - -
  - 25' WETLAND BUFFER - - - - -

- LEGEND**
- EXIST. FOREST CONSERVATION EASEMENT F00-59
  - 100 YR FLOOD PLAIN
  - EXISTING DRIVEWAY
  - EXISTING TREELINE
  - PROPOSED TREELINE
  - SILT FENCE - SF
  - LIMIT OF DISTURBANCE
  - SUPER SILT FENCE - SSF

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DESIGNED	BDB	EDS	SCALE	1"=50'
DRAWN	LDE	SCALE	SUPPLEMENTAL, GRADING & LANDSCAPE PLAN	
CHECKED	BDB	JOB NO.	HEDGEROW FARM	
DATE	11/2012	FILE NO.	F12-092	

OWNER/DEVELOPER: Hedgerow Farm LLC, Robert B. White and Lyn De G. White, 13550 Triadelphia Mill Road, Clarksville, MD 21024-1025 (301)822-1051



EASEMENT HATCH LEGEND		LEGEND	
[Hatch Pattern]	EXISTING FOREST CONSERVATION EASEMENT Plat # 14436 & 14937 To Be Abandoned	[Symbol]	MINOR CONTOUR- (2' INTERVAL)
[Hatch Pattern]	EXISTING FOREST CONSERVATION EASEMENT Plat # 14436 & 14937 To Remain Unchanged	[Symbol]	INDEX CONTOUR- (10' INTERVAL)
[Hatch Pattern]	PRIVATE ACCESS, DRAINAGE & UTILITY EASEMENT	[Symbol]	500
[Hatch Pattern]	EXISTING PRIVATE STORMWATER MANAGEMENT CREDIT EASEMENT - Plat # 14436 & # 21591	[Symbol]	SOILS BOUNDARY
[Hatch Pattern]	EXISTING PUBLIC 100 YEAR FLOODPLAIN, DRAINAGE & UTILITY EASEMENT - Plat # 21591	[Symbol]	CL STREAM/POND
[Hatch Pattern]	PRIVATE SEWAGE DISPOSAL EASEMENT	[Symbol]	100' STREAM BANK BUFFER
[Hatch Pattern]	PUBLIC FOREST CONSERVATION EASEMENT	[Symbol]	NON TIDAL WETLAND LIMIT
[Hatch Pattern]	EXISTING PRIVATE SEWAGE DISPOSAL EASEMENT	[Symbol]	WETLAND BUFFER
[Hatch Pattern]		[Symbol]	EXIST. FOREST CONSERVATION EASEMENT F00-59
		[Symbol]	100 YEAR FLOOD PLAIN
		[Symbol]	EXISTING DRIVEWAY
		[Symbol]	EXISTING TREELINE
		[Symbol]	PROPOSED TREELINE

THIS AREA DESIGNATES A PRIVATE SEWAGE AREA 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 SEWER IS AVAILABLE. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT.

**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]* 11/15/12  
SIGNATURE OF DEVELOPER / BUILDER

APPROVED:  
DEPARTMENT OF  
PLANNING AND  
ZONING

*[Signature]* 12/1/12  
DATE  
CHIEF, DEVELOPMENT  
ENGINEERING DIVISION

*[Signature]* 12/16/12  
DATE  
CHIEF, DIVISION OF LAND  
DEVELOPMENT

REVISIONS			
No.	By	Date	Description

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DESIGNED	SUPPLEMENTAL, GRADING & LANDSCAPE PLAN	SCALE	1"=50'
BDB	HEDGEROW FARM	DRAWING	3 of 9
EDS	LOTS 3-5, BUILDABLE PRESERVATION PARCEL "A"	JOB NO.	09-009.1
DRAWN	AND NON-BUILDABLE PRESERVATION PARCEL "C"	FILE NO.	F12-092
LDE	A Resubdivision of Lot 2 & Non-Buildable Bulk Parcel "B" and Forest Conservation Easements on Buildable Preservation Parcel "A"		
CHECKED	Hedgerow Farm, Plat #21590 - #21592		
BDB	Triadelphia Hill Road - RR-DEO Zoning		
	Tax Map 23 - Grid 20 - Parcel 64		
	5th Election District - Howard County, Maryland		
DATE	OWNER/DEVELOPER: Hedgerow Farm LLC		
11/2012	Robert B. White and Lynn De G. White		
	13550 Triadelphia Hill Road		
	Clarksville, MD 21029-1025		
	(301)802-1051		

NOTE: No Disturbance is proposed on this sheet. This sheet is included in the set to show the extent of existing Lot 2 (Plat # 21592) being resubdivided into Lot 3, as well as the extent of Buildable Preservation Parcel "A" (Plat # 21591 & 21592) for the addition & revisions to Forest Conservation Easement as shown hereon.

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. 18184, EXPIRATION DATE: 6/30/15.

SIGNED *[Signature]* DATE 11/16/12  
BRUCE D. BURTON

MATCHLINE

GRAPHIC SCALE

( IN FEET )  
1 inch = 50 ft.

SEE SHEET

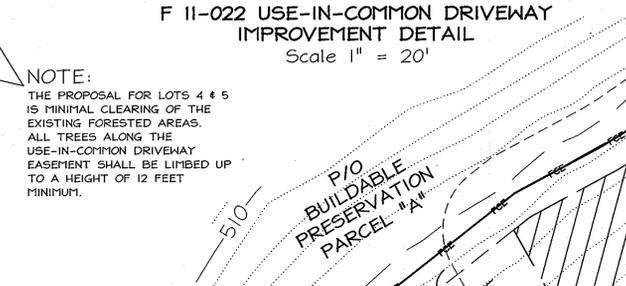
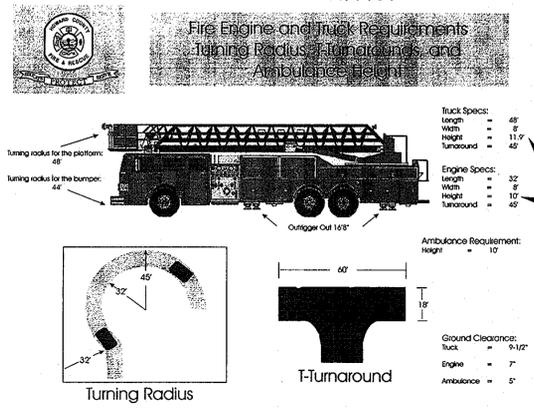
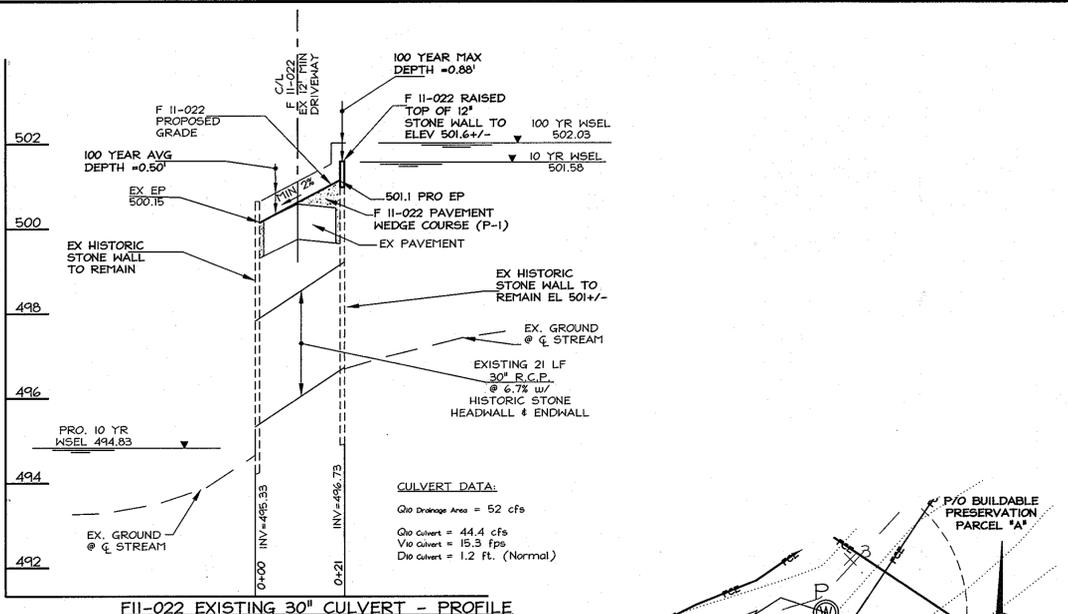
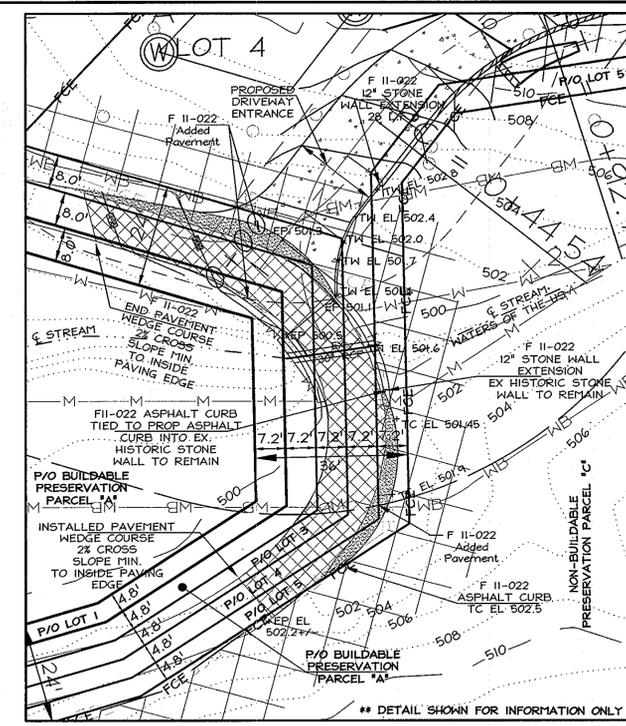
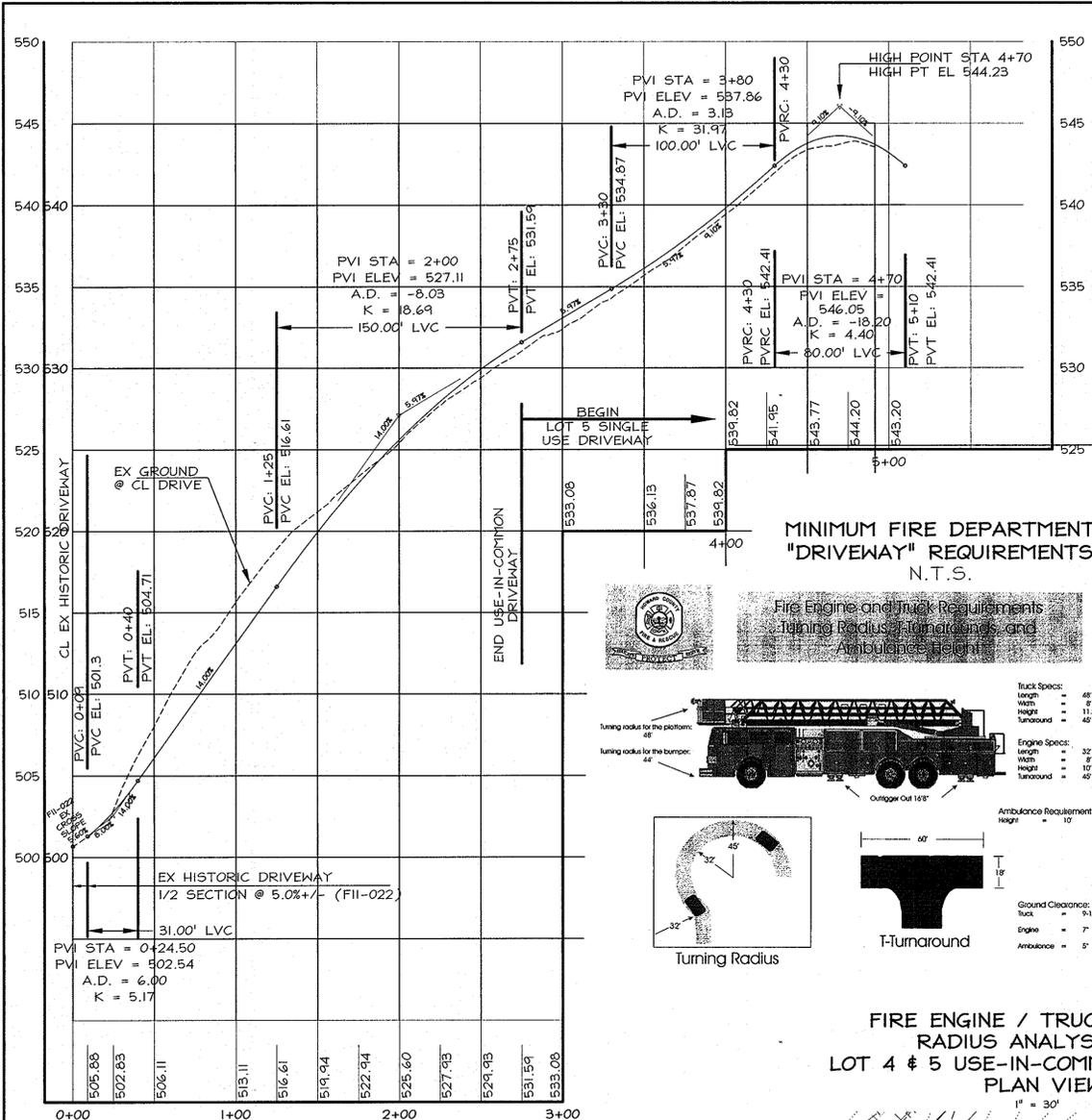
**SOILS LEGEND:**

GgB - Glenelg Loam, 3 to 8 percent slopes  
GgC - Glenelg Loam, 8 to 15 percent slopes  
4" - 10" depth to bedrock; 10" to water table; slight to severe limitations for sewage disposal fields and homes w/ basements depending on slopes; erosion hazard.

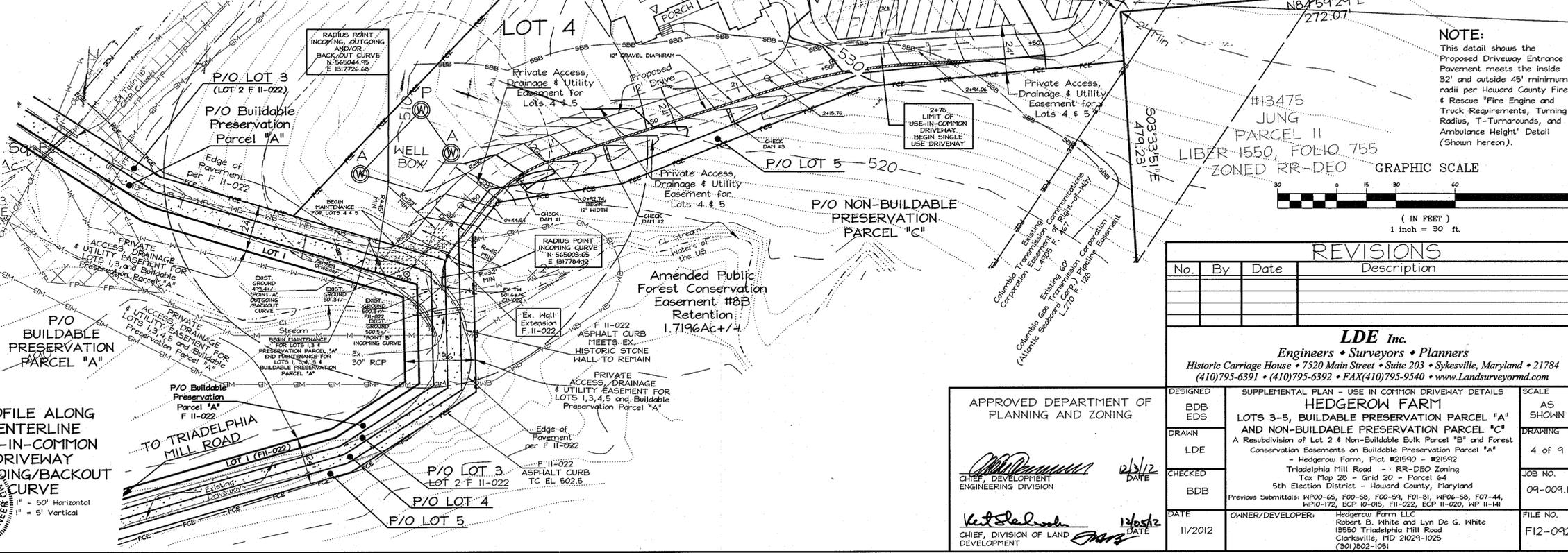
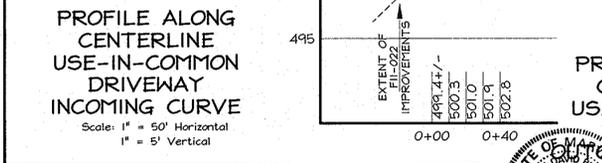
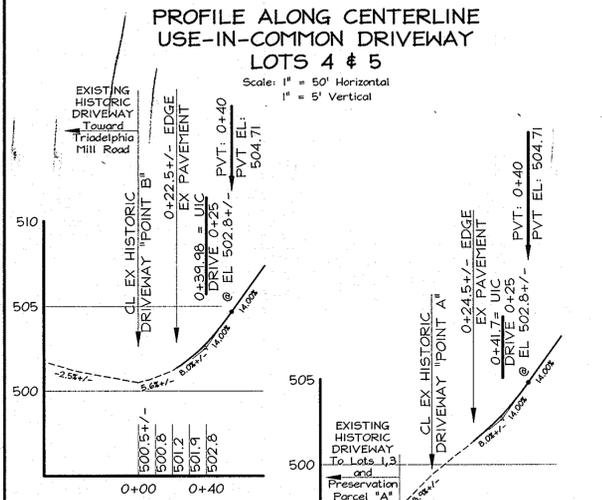
GmB - Glenville Silt Loam, 3 to 8 percent slopes  
GmC - Glenville-Baile silt loams, 0 to 8 percent slopes  
4" - 10" depth to bedrock; 1.5' to 3' to water table; severe limitations for sewage disposal fields moderate limitations for homes w/ basements; impeded drainage; seasonal wetness; erosion hazard.

MdC - Manor Loam, 8 to 15 percent slopes  
MdD - Manor Loam, 15 to 25 percent slopes  
6" - 10" depth to bedrock; 20" to water table; slight to severe limitations for sewage disposal fields and homes w/ basements depending on slopes; erosion hazard.

F:\09-009\09-009.dwg SUP SHEET (D) Aug. ECF 2. 11/16/2012 9:09:32 AM L1



**FIRE ENGINE / TRUCK TURNING RADIUS ANALYSIS FOR LOT 4 & 5 USE-IN-COMMON DRIVEWAY PLAN VIEW**  
Scale 1" = 30'



REVISIONS			
No.	By	Date	Description

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DESIGNED	SUPPLEMENTAL PLAN - USE IN COMMON DRIVEWAY DETAILS	SCALE
BDB EDS	HEDGEROW FARM LOTS 3-5, BUILDABLE PRESERVATION PARCEL "A" AND NON-BUILDABLE PRESERVATION PARCEL "C"	A5 SHOWN
DRAWN	A Resubdivision of Lot 2 & Non-Buildable Bulk Parcel "B" and Forest Conservation Easements on Buildable Preservation Parcel "A"	4 of 9
CHECKED	Triadelphia Mill Road - RR-DEO Zoning Tax Map 23 - Grid 20 - Parcel 64 5th Election District - Howard County, Maryland	JOB NO. 09-009.1
DATE	Previous Submittals: WP00-65, F00-58, F00-54, F01-81, WP06-56, F07-44, WP10-172, ECP 10-015, F11-022, ECP 11-020, WP 11-141	FILE NO. F12-092

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19184, EXPIRATION DATE: 6/30/13.  
SIGNED: *Bruce D. Burton* DATE: 1/16/12  
BRUCE D. BURTON

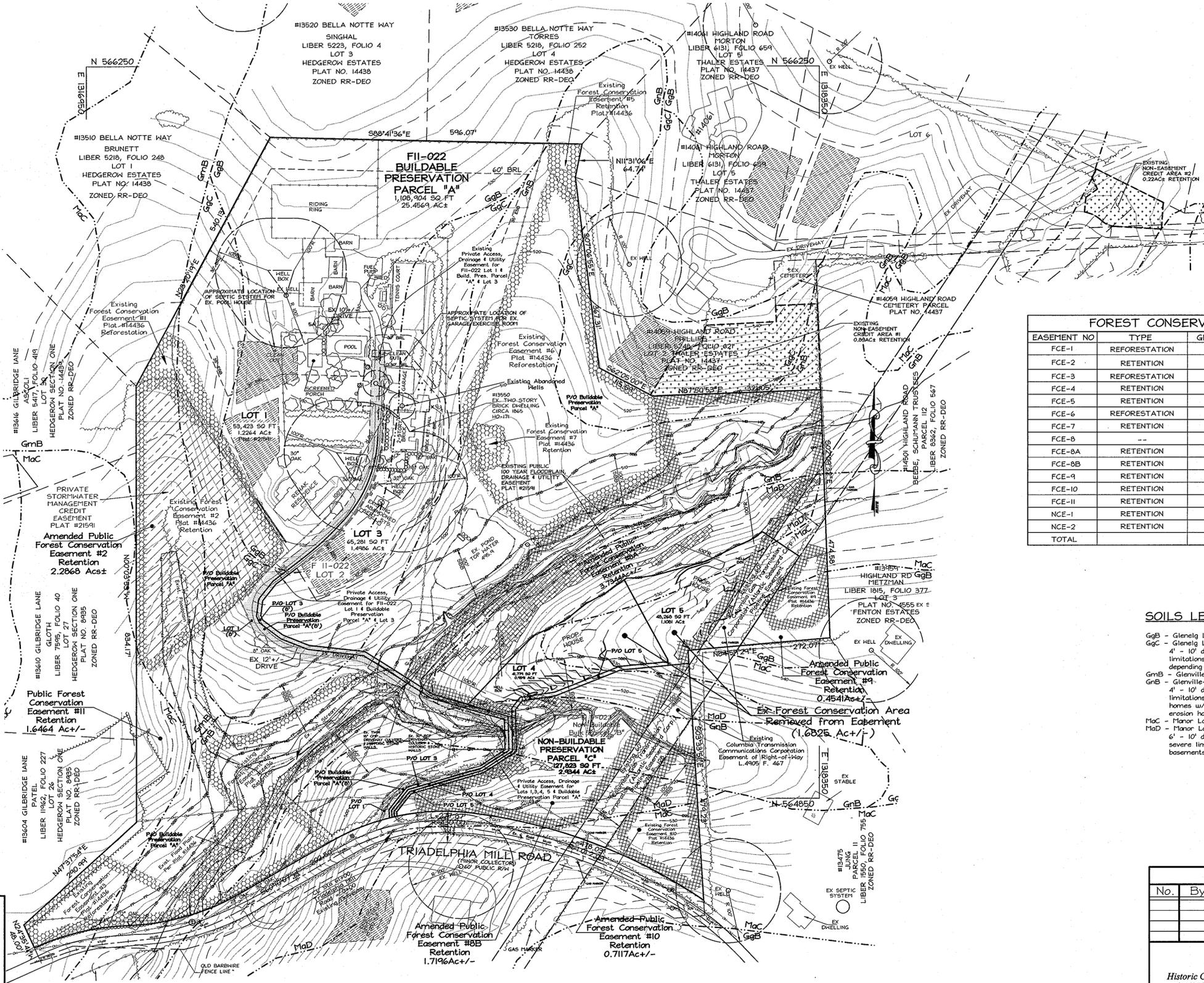
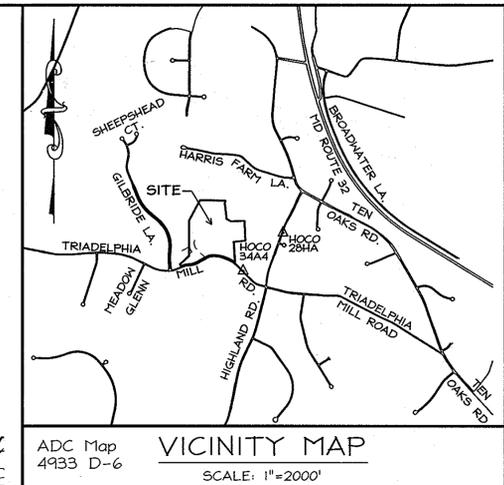
STATE OF MARYLAND  
PROFESSIONAL ENGINEER  
19184

APPROVED DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 1/16/12  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*[Signature]* 1/16/12  
CHIEF, DIVISION OF LAND DEVELOPMENT



**LEGEND**

- MINOR CONTOUR- (2' INTERVAL)
- INDEX CONTOUR- (10' INTERVAL)
- SOILS BOUNDARY
- CL. STREAM/POND
- 100' STREAM BANK BUFFER
- NON TIDAL WETLAND LIMIT
- WETLAND BUFFER
- 100 YR FLOOD PLAIN
- EXISTING DRIVEWAY
- EXISTING TREELINE
- PROPOSED TREELINE
- APPROXIMATE LOCATION EXISTING SEPTIC EASEMENTS



**FOREST CONSERVATION EASEMENT TABULATION**

EASEMENT NO	TYPE	GROSS AREA	FLOODPLAIN	NET AREA	REMARKS
FCE-1	REFORESTATION	0.2364 AC.	--	0.2364 AC.	--
FCE-2	RETENTION	2.2868 AC.	0.1840 AC.	2.1028 AC.	AMENDED
FCE-3	REFORESTATION	1.1996 AC.	0.3290 AC.	0.8766 AC.	--
FCE-4	RETENTION	1.0948 AC.	0.8510 AC.	0.2438 AC.	--
FCE-5	RETENTION	0.1000 AC.	--	0.1000 AC.	--
FCE-6	REFORESTATION	3.3518 AC.	--	3.3518 AC.	--
FCE-7	RETENTION	0.0969 AC.	--	0.0969 AC.	--
FCE-8	--	--	--	--	ABANDONED
FCE-8A	RETENTION	3.7344 AC.	0.3590 AC.	3.3754 AC.	AMENDED
FCE-8B	RETENTION	1.7196 AC.	--	1.7196 AC.	AMENDED
FCE-9	RETENTION	0.4541 AC.	--	0.4541 AC.	AMENDED
FCE-10	RETENTION	0.7117 AC.	--	0.7117 AC.	AMENDED
FCE-11	RETENTION	1.6464 AC.	0.2300 AC.	1.4164 AC.	NEW
NCE-1	RETENTION	0.8900 AC.	--	0.8900 AC.	--
NCE-2	RETENTION	0.2200 AC.	--	0.2200 AC.	--
TOTAL		17.7425 AC.	1.9470 AC.	15.7955 AC.	

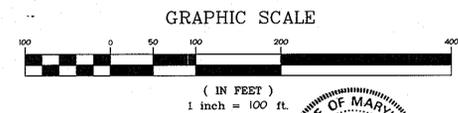
- EASEMENT HATCH LEGEND**
- EXISTING FOREST CONSERVATION EASEMENT Plat # 14436 & 14337 To Be Abandoned
  - EXISTING FOREST CONSERVATION EASEMENT Plat # 14436 & 14337 To Remain Unchanged
  - PRIVATE ACCESS, DRAINAGE & UTILITY EASEMENT
  - EXISTING PRIVATE STORMWATER MANAGEMENT CREDIT EASEMENT - Plat # 14436 & # 21591
  - EXISTING PUBLIC 100 YEAR FLOODPLAIN, DRAINAGE & UTILITY EASEMENT - Plat # 21591
  - PRIVATE SEWAGE DISPOSAL EASEMENT
  - PUBLIC FOREST CONSERVATION EASEMENT
  - EXISTING PRIVATE SEWAGE DISPOSAL EASEMENT

- SOILS LEGEND:**
- GgB - Glenelg Loom, 3 to 8 percent slopes
  - GgC - Glenelg Loom, 8 to 15 percent slopes
  - 4' - 10' depth to bedrock; 10' + to water table; slight to severe limitations for sewage disposal fields and homes w/ basements depending on slopes; erosion hazard.
  - GmB - Glenville Silt Loom, 3 to 8 percent slopes
  - GmC - Glenville-Silt loams, 0 to 8 percent slopes
  - 4' - 10' depth to bedrock; 1.5' to 3' to water table; severe limitations for sewage disposal fields moderate limitations for homes w/ basements; impeded drainage; seasonal wetness; erosion hazard.
  - MaC - Manor Loom, 8 to 15 percent slopes
  - MaD - Manor Loom, 15 to 25 percent slopes
  - 6' - 10' depth to bedrock; 20' + to water table; slight to severe limitations for sewage disposal fields and homes w/ basements depending on slopes; erosion hazard.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Chief, Development Engineering Division* 12/12/12 DATE

*Chief, Division of Land Development* 12/06/12 DATE



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, EXPIRATION DATE: 6/30/13.

SIGNED: *Bruce D. Burton* DATE: 11/16/12

PROFESSIONAL CERTIFICATION:  
*Steve Heiss*  
Steve Heiss, Qualified Professional, MD/FA



**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* 11/15/12 DATE

**REVISIONS**

No.	By	Date	Description

**LDE Inc.**  
Engineers • Surveyors • Planners  
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DESIGNED	FOREST CONSERVATION PLAN	SCALE
BDB	HEDGEROW FARM	1"=100'
EDS	LOTS 3-5, BUILDABLE PRESERVATION PARCEL "A" AND NON-BUILDABLE PRESERVATION PARCEL "C"	DRAWING
DRAWN	A Resubdivision of Lot 2 & Non-Buildable Bulk Parcel "B" and Forest Conservation Easements on Buildable Preservation Parcel "A"	6 of 9
LDE	- Hedgerow Farm, Plat #21590 - #21592	JOB NO.
CHECKED	Triadelphia Mill Road - RR-DEO Zoning	09-009.1
BDB	Tax Map 28 - Grid 20 - Parcel 64	FILE NO.
	5th Election District - Howard County, Maryland	F12-092
DATE	Previous Submittals: WP00-65, F00-58, F00-59, F01-81, WP06-58, F07-44, WP10-172, ECP 10-015, FII-022, ECP 11-020, WP 11-141	OWNER/DEVELOPER:
11/2012	Hedgerow Farm LLC	Robert B. White and Lyn De G. White
	13560 Triadelphia Mill Road	Clarksville, MD 21024-1025
		(301)802-1051

# FOREST CONSERVATION NOTES & DETAILS

## APPENDIX H PLANTING AND MAINTENANCE GUIDELINES REFORESTATION & AFFORESTATION PLANTING

### SITE PREPARATION FOR PLANTING

#### Undisturbed Sites

Soils disturbance should be limited to the planting field for each plant. Planting field is a new term that reflects a change in recommended planting specifications. Research has shown that root systems of trees planted in the traditional holes with amended soils are likely to remain confined to the amended soil area. Such trees have lower survival rates. A planting field of radius = 5 x diameter of the root ball is recommended.

On steep slopes or erodible soils, soil disturbance should be limited to the planting field whose radius is equal to 2.5 diameter of the root ball.

#### Disturbed Areas

Soils should be treated by incorporating natural mulch within the top 12 inches or by amendments as determined by a soils analysis. Soil amendments, by definition, include modifications of soils to improve such structural characteristics as bulk density or porosity. On development sites, the common use of fill materials may increase the need for such amendments. Natural amendments such as organic mulch or leaf mold compost are preferred.

When fill material is used at the planting site, it should be clean fill topped with 12 inches of native soil. Stockpiling of native loess soils must be done in such a way that the height of the pile does not damage the seed bank.

#### Planting Period

Planting windows are the time during the year when, depending on the size stock being used, planting windows differ. Recommended planting windows are shown in Exhibit H-1.

#### Plant Material Storage

Planting should occur within 24 hours of delivery to the site. Plant materials left unplanted for more than 24 hours should be protected from direct sun and weather and kept moist. Bare root stock unplanted should be held in as shown in Exhibit H-2. Nursery stock should be planted within 2 weeks. On-site or local transplanted materials should be stored in tree banks if unplanted for more than 24 hours, following the example in Exhibit H-3.

#### On Site Inspection

Planting stock should be inspected prior to planting. Plants not conforming to standard nurseryman specifications for size, form, vigor, roots, trunk wounds, insects and disease should be replaced.

### PLANT MATERIAL SIZE AND DENSITY

#### Plant Size

Nursery grown plant materials greater than 1" caliper should meet or exceed the requirements of American Association of Nurserymen specifications, i.e. should be typical of the species and variety, have a normal habit of growth, be first quality, sound, vigorous, well-branched, have healthy, well furnished root systems, and be free of disease, insect pests and mechanical injuries.

Planting stock less than 1" caliper should meet the following standards:

- Seedlings/Whips: hardwoods: 1/4" to 1/2" caliper with roots no less than 8" long conifers: 1/8" to 1/4" caliper with roots no less than 8" long and top height of 6" or more
- Shrubs: 1/8" or larger caliper with 8" root system

#### Plant Density

The following densities are required for reforestation and afforestation plant materials:

- 100 2" caliper trees/acre (20' x 20' spacing)
- 200 1" caliper trees/acre (15' x 15' spacing)
- 350 hardwood seedlings or whips/acre with tree shelters (11' x 11' spacing)
- 700 seedlings/acre (8' x 8' spacing)

The spacings identified above are not meant to imply that trees must be planted in a grid pattern. A more natural appearance is desired.

### PLANT INSTALLATION

#### Seedlings/Whips

Small stock, such as seedlings and whips, and ball and burlap stock up to 2" caliper, can be planted by manual methods of planting using shovels, planting or dibble bars, and mattocks (See Exhibit H-4). For large areas, planting machines are occasionally used but have the drawback of creating linear, plantation-type forests.

Extreme care should be taken to insure retained moisture of the roots. When planting seedlings and whips, a moist carrying container should be used to prevent desiccation (See Exhibit H-5). For greater protection, seedlings may be planted with tree shelters.

Areas planted with seedlings or whips should be mulched after planting as shown in Exhibit H-6.

#### Container Grown Stock

Successful planting of container grown stock requires careful site preparation and inspection of the plant material root system. Caution when using plants grown in a soil medium differing from the soil on the planting site. The plant should be removed from the container and the roots gently loosened from the soil. If the roots encircle the root ball, substitution is strongly recommended. J-shaped or knined root systems should also be noted, and the plants replaced if necessary. Roots may not be trimmed on-site, due to the increased chances of soil borne diseases. (See Exhibit H-7.)

#### Balled and Burlapped Trees

Balled and burlapped trees greater than 2" caliper) and usually planted using tree spades. This technique is particularly when suited for transplanting on-site or with local planting materials. For trees larger than 6" caliper, specialized equipment is recommended.

Balled and burlapped trees must be handled with care while planting. Trees should not be picked up by the trunk or dropped; both these practices may separate the trunk from the root ball. Prior to planting, root balls should be kept moist. (See Exhibit H-7.)

#### Planting fields

The planting field should be prepared and native stockpiled soils should be used to backfill the planting field. Rake soils evenly over the planting field and cover with 2 to 4 inches of mulch. Use watering to settle soil backfilled around trees. Amendments are not recommended in the planting field; studies have shown that roots will be encouraged to stay within the amended soils.

### Staking

Staking of larger trees is not recommended except in areas of high winds. Staking may be used for trees larger than 8 feet in height. Movement is necessary to strengthen the trunk of the planted tree. When stakes are used, the post-construction (see management plan should specify their removal after the first growing season (See Exhibit H-8).

### GENERAL GUIDANCE FOR MAINTENANCE OF PLANTED AREAS

#### Watering

A watering plan should only be implemented to compensate for deficient rainfall patterns. Trees can die from too much water as well as too little. Newly planted trees may need water as much as a week for the entire first growing season. The next two years, in contrast, may require watering only a few times a year (one a month during July and August). After that, trees should only need water in severe droughts. Bare root transplants, if sufficiently watered during planting, may not need water for almost 2-4 weeks after growth begins. Balled and burlapped material may require more frequent watering.

**Soil and Watering:** Soil texture influences the downward flow of water. Soils with more clay tend to retain more water and can be watered less often; soils with more sand drain more quickly and need to be watered more often. For examples of on-site evaluation recommendations. If the soil was well prepared before planting, there should be good drainage problems. Restricted downward penetration indicates the soil may have been compacted during construction and not aerated before planting, or there may be a clay hardpan.

**How to Water:** The best way to water is deeply and slowly using a regular hose, a soaker hose, or drip irrigation. For larger trees, start by watering the root ball thoroughly. The wetted area should be enlarged to include the whole root zone. For open grown trees, the dip 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.

#### Fertilizing

Fertilizing is the chemical modification of soils to correct for a specific nutrient deficiency. These deficiencies are most effectively identified in a laboratory soils analysis. Nothing should be added to the soil without first testing to determine any nutrient needs.

**What Nutrients to Apply:** Trees depend on three major nutrients, nitrogen, phosphorus, and potassium and a host of other minor ones (or micronutrients) such as calcium, magnesium and iron. In most soils, most of the micronutrients are available in abundance. Of the major nutrients, nitrogen is usually the limiting one.

**When to Fertilize:** Even when soils are deficient in nitrogen, fertilizing within the first growing season after planting is not recommended. Too much nitrogen may cause a spurt of canopy growth which the roots cannot support. It is, therefore, best to wait until after the end of the first growing season, either in the late fall or early spring.

**What Type of Fertilizer:** Organic fertilizers are preferred to synthetic fertilizers. Bone meal or seaweed based products are available commercially. Organic fertilizers have a slow release effect that can supply nutrients to the plant as needed while minimizing the risk of excess nutrients entering the forest system and the water supply. Some synthetic fertilizers can mimic this slow-release action and may be appropriate for use.

#### Control of Competing Vegetation

Unfortunately, good sites for reforestation and afforestation are generally good sites for unwanted vegetation as well. Unwanted vegetation growing near newly planted trees can take over the site. The need to control this problem depends on the ability of the planted material to withstand the intrusion. Smaller trees may need more care, although some seedlings survive with the overgrowth and will shade it out as the trees grow. As a preventative measure, consider the potential for growth of invasive species while choosing a reforestation or afforestation area.

Mulch is one of the best weed deterrents. Spread a 2" to 4" layer of mulch over the root area of the newly planted trees avoiding direct contact with the trunk, a prime spot for fungal growth. (Mulch also helps maintain the soil moisture level and may provide a buffer for any equipment such as mowers that may be used to maintain the area.) Mulching and manual control of competing vegetation is more compatible with the long term forest health than the use of herbicides.

#### Protection: Pests, Diseases and Mechanical Injury

**Integrated Pest Management (IPM)** is one of the most effective and safest approaches for maintaining a healthy forest. IPM basics include proper species selection for the site, good pruning, mulching and fertilizing practices, regular monitoring, and proper timing of necessary sprays. Good cultural practices will minimize the amount of spraying. Professional IPM programs have reduced pesticide use by 90%. Some aspects of a full IPM program include:

- Elimination of some low vegetation before planting to help control the rodent population which thrives in brushy environments.
- Use of tree shelters to protect the trunks of seedlings or whips from animal damage. The shelters act as mini-greenhouses to speed growth. (These trees need more water than those planted without tree shelters, however.)
- Mulching around the trees to minimize trunk damage from mowers. Wounds provide an entry way for pests.
- Pruning dead and diseased branches with a clean cut to prevent establishment or spreading of disease.

Sunscald is a problem for thin barked young trees. Tree wrap was commonly used to protect trees from sunscald but is no longer recommended due to the increased opportunities for insect infestation and disease. An alternative to wrapping is to allow small non-competitive branches, commonly pruned during or before planting, to grow on the sunny side of the trunk to help shade the trunk.

## 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 on each other for physical support during high winds. Removal of adjacent trees and destruction of roots can 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 and moisture. 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.

- Specimen trees:** the limit of the soil protection zone shall be the area within the drip line of the tree.
- 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 the distance from the trunk of 40 percent of the height of the tree or the limit of the drip line, whichever is greater.
- 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:

- Disturbance does not exceed 20 percent of the original soil protection zone area, and
- 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
- 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.

All reductions to the original soil protection zone shall be deducted from the calculations of the size of the forest retention area.

#### 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:

- The extent of the rooting system with root diameters 1" or greater, as determined by a field root survey.
- The exact species of the tree and the qualified professional's estimation of this species' ability to withstand construction damage.
- The soil texture and the existing bulk density of the soil as measured in grams per cubic centimeter.
- An estimate of soil moisture conditions before and after construction.
- 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 forest 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 herbaceous 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 continuous 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 20" 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.

### 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 round all soil protection zones. This fence shall have 8'-12" x 1" orange signs which shall read "Tree Preservation Area" in 1" high lettering posted every 50'. The fence shall be one of the following:

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

Prior to the start of any grading, all sediment control devices shall be in place to prevent any soil 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. At 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.

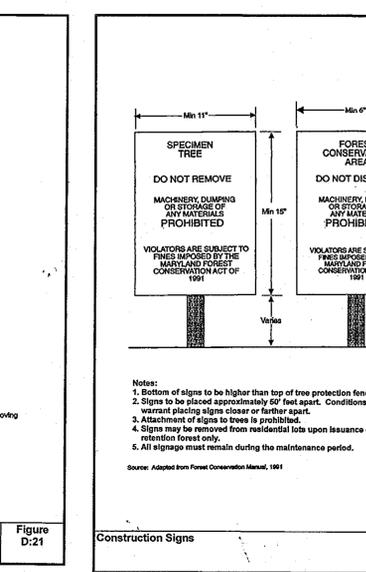
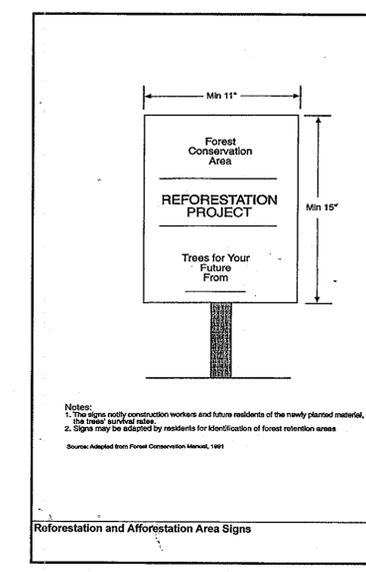
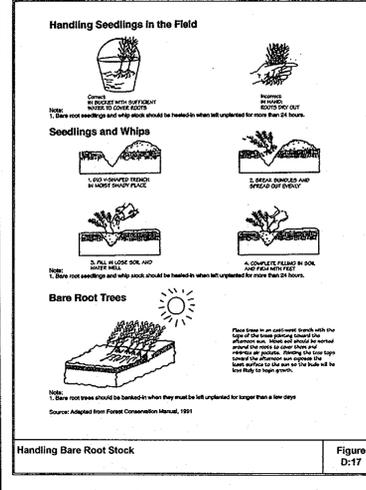
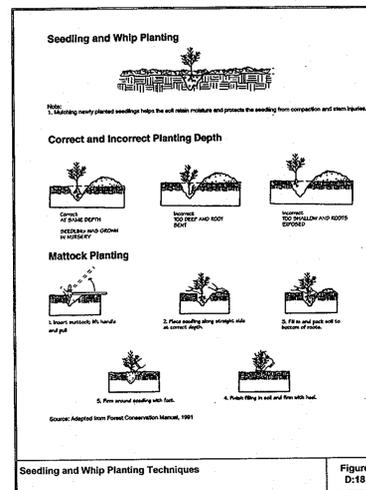
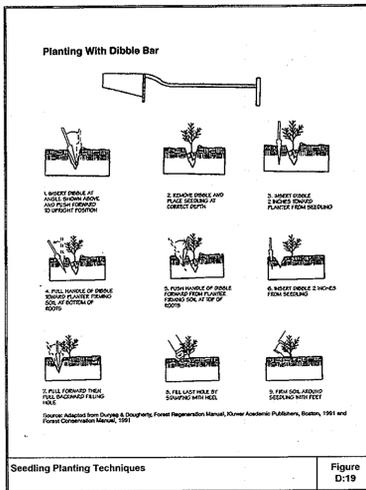
#### Management of the Soil Protection Zone

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 aerated 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.
- Unmown 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.



REVISIONS			
No.	By	Date	Description

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, EXPIRATION DATE: 6/30/13.  
 SIGNED: BRUCE D. BURTON DATE: 11/16/12



PROFESSIONAL CERTIFICATION:  
 Steve Heiss, Qualified Professional, MDFCA

APPROVED DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 12/3/12

DESIGNED: BDB, EDS  
 DRAWN: LDE  
 CHECKED: BDB  
 DATE: 11/20/12

FOREST CONSERVATION PLAN - NOTES & DETAILS  
**HEDGEROW FARM**  
 LOTS 3-5, BUILDABLE PRESERVATION PARCEL "A" AND NON-BUILDABLE PRESERVATION PARCEL "C"  
 A Resubdivision of Lot 2 & Non-Buildable Bulk Parcel "B" and Forest Conservation Easements on Buildable Preservation Parcel "A" - Hedgerow Farm, Plat #21590 - #21592  
 Triadelphia Mill Road - RR-DEO Zoning  
 Tax Map 28 - Grid 20 - Parcel 64  
 5th Election District - Howard County, Maryland  
 Previous Submittals: WPO-65, F00-58, F00-59, F01-81, WPO-58, F07-44, WPO-172, ECP 10-05, F11-022, ECP 11-020, W11-141

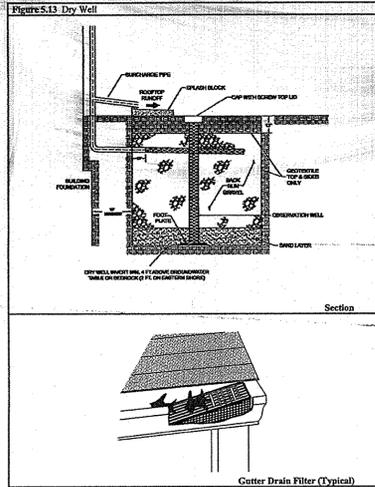
OWNER/DEVELOPER:  
 Hedgerow Farm LLC  
 Robert B. White and Lyn De G. White  
 13550 Triadelphia Hill Road  
 Clarksville, MD 21023-1025  
 (301) 802-1051

SCALE: 1" = 100'  
 DRAWING: 7 of 9  
 JOB NO.: 09-009.1  
 FILE NO.: F12-092

LANDSCAPE SCHEDULE

SYMBOL	QUANT.	COMMON NAME/BOTANICAL NAME	SIZE	REMARKS
⊗	3	BALD CYPRESS/TAXODIUM DISTICHUM	2 1/2"-3" CAL.	B & B
⊗	9	AMERICAN HOLLY/ILEX OPACA	4'-5' HT.	B & B
⊗	3	EASTERN REDBUD/CERCIS CANADENSIS	2 1/2"-3" CAL.	B & B
⊗	5	DOGWOOD/CHEROKEE BRAVE/CORNUS FLORIDA	1 3/4" CAL.	B & B
⊗	10	COMMON WITCH HAZEL/HAMAMELIS VIRGINIANA	3'-4' HT.	B & B
⊗	3	BOTTLEBRUSH BUCKEYE/AESULUS PARVIFLORA	4'-5' HT.	B & B
⊗	14	ARROWWOOD VIBURNUM/VIBURNUM DENTATUM	3'-4' HT.	B & B
⊗	5	SPIKE WINTER HAZEL/CORYLOPSIS SPICATA	3'-4' HT.	5 GAL.
⊗	14	HYDRANGEA 'LIMELIGHT'/HYDRANGEA PANICULATA	2'-3' HT.	5 GAL.
⊗	20	COMMON SWEETSHRUB/CALYCATHUS FLORIDUS	2'-3' HT.	5 GAL.

THE LANDSCAPE SURETY OF \$980,000 FOR THE 12 SHADE TREES, 8 FLOWERING TREES AND 66 SHRUBS WILL BE INCLUDED WITH THE SURETY POSTED FOR FOREST CONSERVATION.

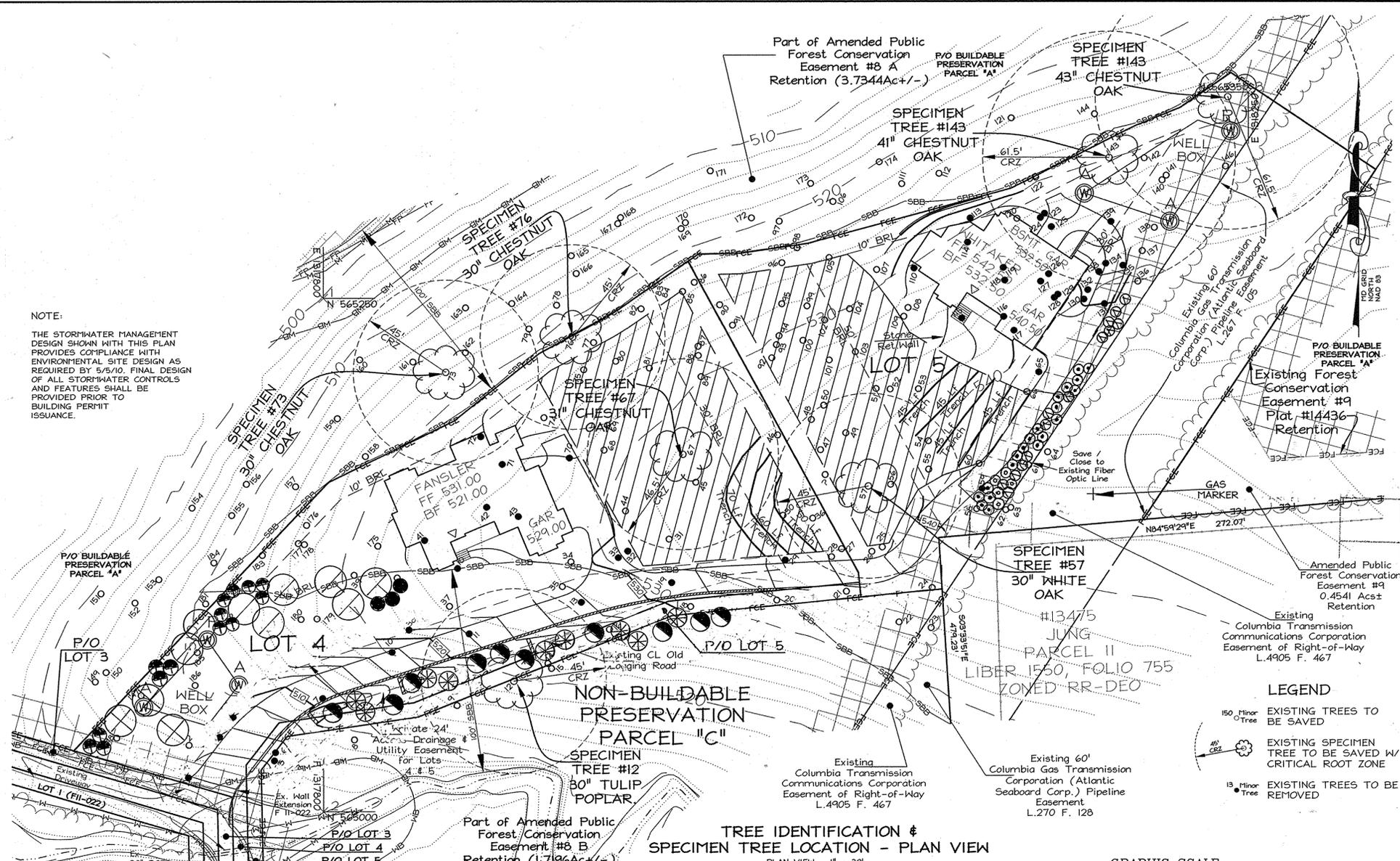


OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAIN STORMWATER INFILTRATION TRENCHES (I-T), DRY WELLS (M-S)

- The Owner shall inspect the monitoring wells and structures on a quarterly basis and after every heavy storm event.
- The Owner shall record the water levels and sediment build up in the monitoring wells over a period of several days to insure trench drainage.
- The Owner shall maintain a log book to determine the rate at which the facility drains.
- When the facility becomes clogged so that it does not drain down within a seventy-two (72) hour time period, corrective action shall be taken.
- The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- Once the performance characteristics of the infiltration facility have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.

NOTE:

THE STORMWATER MANAGEMENT DESIGN SHOWN WITH THIS PLAN PROVIDES COMPLIANCE WITH ENVIRONMENTAL SITE DESIGN AS REQUIRED BY 5/5/10. FINAL DESIGN OF ALL STORMWATER CONTROLS AND FEATURES SHALL BE PROVIDED PRIOR TO BUILDING PERMIT ISSUANCE.



TREE IDENTIFICATION & SPECIMEN TREE LOCATION - PLAN VIEW  
PLAN VIEW - 1" = 30'

GRAPHIC SCALE



- Setbacks:
- Dry wells shall be located down gradient of building structures and shall be setback at least 10 feet from buildings, 50 feet from confined water supply wells, 100 feet from unconfined water supply wells, and 25 feet from septic systems.
  - Dry wells shall be setback a minimum of 100 feet from fill slopes of 15% and 200 feet from fill slopes of 25%.

Observation Wells: An observation well consisting of an anchored, 4 to 6-inch diameter perforated pipe shall be required. The top of the observation well shall be at least six inches above grade.

Underground Distribution Pipe: This pipe (4 to 6 inch diameter) will be perforated to fill the trench along its entire length.

Landscaping: A minimum one-foot of soil cover shall be provided from the top of the trench to the ground surface elevation. The soil should be stabilized with a dense cover of vegetation. In areas where frost heave is a concern, soil cover may need to be as much as four feet. In these cases, a geotechnical engineer should be consulted.

Construction Criteria:

The following items should be addressed during construction of projects with dry wells:

Erosion and Sediment Control: Final grading for proposed dry wells should not take place until the surrounding site is completely stabilized. If this cannot be accomplished, runoff from disturbed areas shall be diverted.

Soil Compaction: Excavation should be conducted in dry conditions with equipment located outside of the practice to minimize bottom and sidewall compaction. Construction of a dry well shall be performed with lightweight, wide-tracked equipment to minimize disturbance and compaction. Excavated materials shall be placed in a contained area.

Underground Chamber: A subsurface prefabricated chamber may be used.

Dry Well Bottom: The bottom shall be as level as possible to minimize pooled water in small areas that may reduce overall infiltration and longevity.

Filter Cloth: Filter cloth shall not be installed on the bottom of the well. Non-woven filter cloth should be used to line the top and sides of the dry well to prevent the pore space between the stones from being blocked by the surrounding native material.

Gravel Media: The aggregate shall be composed of an 18 to 48-inch layer of clean washed, open graded material with 40% porosity (e.g., ASTM D448 4-5, or 6 stone or equal).

Inspection:

Regular inspections shall be made during the following stages of construction:

- During excavation to subgrade.
- During placement of backfill and perforated inlet pipe and observation well.
- During placement of geotextiles and filter media.
- During construction of the permanent conveyance.
- Upon completion of final grading and establishment of permanent stabilization.

Maintenance Criteria:

The following items should be addressed to ensure proper maintenance and long-term performance of dry wells:

Privately owned practices shall have a maintenance plan and shall be protected by easement, deed restriction, ordinance, or other legal measures preventing its neglect, adverse alteration, and removal.

Dry wells shall be inspected and cleaned annually. This includes pipes, gutters, downspouts, and all filters.

Flooding, standing water, or algal growth on the top of a dry well may indicate failure due to sedimentation in the gravel media. If water ponds for more than 48 hours after a major storm or more than six inches of sediment has accumulated, the gravel media should be excavated and replaced.

LOT 4 & 5 - TREE IDENTIFICATION				
Tree No.	Tree Type	Dia @ Breast Height	Condition	
1	White Oak	28"	Fair	
2	Chestnut Oak	29"	Good	
3	Chestnut Oak	26"	Fair	
4	White Oak	7"	Excellent	
5	Scarlett Oak	21"	Fair	
6	Red Maple	6"	Good	
7	Scarlett Oak	17"	Good	
8	Tulip Poplar	9"	Good	
9	White Oak	27"	Fair	
10	Scarlett Oak	17"	Poor	
11	Scarlett Oak	13"	Fair	
* 12	Tulip Poplar	30"	Excellent	
13	White Oak	9"	Good	
14	White Oak	10"	Good	
15	White Oak	8"	Good	
16	White Oak	24"	Good	
17	White Oak	23"	Good	
18	White Oak	26"	Fair	
19	White Oak	10"	Good	
20	Chestnut Oak	14"	Good	
21	White Oak	27"	Good	
22	White Oak	21"	Good	
23	Chestnut Oak	24"	Good	
24	Chestnut Oak	15"	Good	
25	Chestnut Oak	12"	Good	
26	Chestnut Oak	21"	Good	
27	Chestnut Oak	11"	Good	
28	Chestnut Oak	21"	Good	
29	White Oak	22"	Good	
30	Chestnut Oak	27"	Good	
31	White Oak	19"	Fair	
32	White Oak	19"	Fair	
33	White Oak	28"	Fair	
34	Chestnut Oak	18"	Good	
35	Black Oak	13"	Fair	
36	White Oak	24"	Fair	
37	White Oak	17"	Good	
38	White Oak	27"	Good	
39	Scarlett Oak	16"	Good	
40	White Oak	23"	Fair	
41	White Oak	24"	Good	
42	White Oak	25"	Good	
43	White Oak	22"	Fair	
44	White Oak	21"	Fair	
45	DT Chestnut Oak	42"	Good	
46	White Oak	15"	Good	
47	White Oak	15"	Good	
48	White Oak	14"	Good	
49	White Oak	17"	Good	
50	Chestnut Oak	9"	Good	
51	White Oak	26"	Fair	
52	Chestnut Oak	10"	Good	
53	White Oak	20"	Good	
54	White Oak	25"	Good	
55	Scarlett Oak	17"	Good	
56	Chestnut Oak	12"	Excellent	
* 57	White Oak	30"	Good	
58	Scarlett Oak	18"	Fair	
59	Scarlett Oak	11"	Good	
60	Black Oak	14"	Good	
61	Pm Oak	14"	Good	
62	Pm Oak	11"	Good	
63	Pm Oak	23"	Good	
64	Pm Oak	19"	Good	
65	Scarlett Oak	22"	Fair	
66	Black Gum	9"	Good	
* 67	Chestnut Oak	31"	Good	
68	DT Chestnut Oak	52"	Good	
69	White Oak	24"	Good	
70	Chestnut Oak	19"	Good	
71	White Oak	17"	Good	
72	Chestnut Oak	20"	Good	
* 73	Chestnut Oak	30"	Good	
74	Chestnut Oak	25"	Fair	
75	Chestnut Oak	18"	Fair	
* 76	Chestnut Oak	30"	Good	
77	Chestnut Oak	14"	Excellent	
78	Chestnut Oak	27"	Good	
79	Scarlett Oak	15"	Good	
80	Chestnut Oak	15"	Good	
81	Chestnut Oak	18"	Good	
82	Chestnut Oak	22"	Good	
83	Chestnut Oak	27"	Good	
84	Chestnut Oak	24"	Excellent	
85	DT Chestnut Oak	24"	Good	
86	Chestnut Oak	25"	Good	
87	Chestnut Oak	14"	Good	
88	Chestnut Oak	22"	Good	
89	Chestnut Oak	19"	Excellent	
90	Chestnut Oak	16"	Excellent	
91	Chestnut Oak	23"	Poor	
92	Chestnut Oak	18"	Good	
93	Chestnut Oak	19"	Good	
94	Chestnut Oak	18"	Good	
95	Chestnut Oak	23"	Excellent	
96	Chestnut Oak	17"	Good	
97	Chestnut Oak	20"	Good	
98	Chestnut Oak	20"	Good	
99	Chestnut Oak	26"	Good	
100	Chestnut Oak	28"	Fair	
101	Chestnut Oak	17"	Excellent	
102	Chestnut Oak	17"	Good	
103	Chestnut Oak	11"	Excellent	
104	Chestnut Oak	20"	Good	
105	Chestnut Oak	21"	Good	
106	Chestnut Oak	25"	Fair	
107	White Oak	22"	Good	
108	Black Oak	12"	Good	
109	White Oak	27"	Fair	
110	DT Chestnut Oak	48"	Good	
111	Scarlett Oak	15"	Excellent	
112	White Oak	16"	Good	
113	Chestnut Oak	19"	Good	
114	Chestnut Oak	26"	Fair	
115	Chestnut Oak	11"	Good	
116	Chestnut Oak	22"	Fair	
117	Black Oak	22"	Good	
118	Chestnut Oak	11"	Excellent	
119	Black Oak	11"	Excellent	
120	Chestnut Oak	18"	Fair	
121	Black Oak	25"	Fair	
122	Scarlett Oak	22"	Good	
123	Chestnut Oak	9"	Good	
124	Scarlett Oak	15"	Good	
125	Red Maple	17"	Good	
126	Chestnut Oak	19"	Excellent	
127	Chestnut Oak	13"	Excellent	
128	Black Oak	19"	Good	
129	Chestnut Oak	10"	Good	
130	Chestnut Oak	14"	Excellent	
131	Chestnut Oak	19"	Good	
132	Chestnut Oak	15"	Excellent	
133	Chestnut Oak	10"	Good	
134	Chestnut Oak	13"	Good	
135	Chestnut Oak	15"	Excellent	
136	Chestnut Oak	20"	Good	
137	Chestnut Oak	23"	Excellent	
138	White Oak	14"	Good	
139	Chestnut Oak	16"	Good	
140	Chestnut Oak	22"	Good	
141	Tulip Poplar	12"	Good	
142	Chestnut Oak	13"	Good	
* 143	Chestnut Oak	41"	Fair	
144	Red Maple	20"	Good	
* 145	Chestnut Oak	43"	Good	
146	Black Oak	19"	Good	
147	White Oak	25"	Good	
148	Scarlett Oak	17"	Good	
149	Scarlett Oak	29"	Fair	
150	Chestnut Oak	6"	Good	
151	Scarlett Oak	29"	Good	
152	White Oak	19"	Good	
153	Chestnut Oak	16"	Good	
154	Chestnut Oak	17"	Good	
155	Red Oak	19"	Good	
156	Chestnut Oak	17"	Good	
157	Chestnut Oak	11"	Good	
158	Chestnut Oak	25"	Fair	
159	Chestnut Oak	18"	Good	
160	Chestnut Oak	18"	Fair	
161	Chestnut Oak	26"	Good	
162	Chestnut Oak	12"	Good	
163	Chestnut Oak	19"	Fair	
164	Chestnut Oak	22"	Good	
165	Chestnut Oak	13"	Good	
166	Chestnut Oak	24"	Good	
167	Chestnut Oak	22"	Good	
168	Chestnut Oak	23"	Fair	
169	Chestnut Oak	18"	Good	
170	Chestnut Oak	25"	Good	
171	Chestnut Oak	29"	Good	
172	Chestnut Oak	26"	Good	
173	Chestnut Oak	25"	Fair	
174	Chestnut Oak	29"	Fair	
175	Scarlett Oak	20"	Good	
176	Chestnut Oak	9"	Good	
177	Chestnut Oak	25"	Good	
178	Black Gum	10"	Good	
179	Black Gum	9"	Good	
180	Scarlett Oak	23"	Fair	
181	White Oak	12"	Good	
182	Chestnut Oak	16"	Good	
183	Chestnut Oak	23"	Good	
184	Scarlett Oak	19"	Good	
185	White Oak	25"	Poor	
186	Scarlett Oak	16"	Good	

NOTE:  
\* represents Specimen Tree  
DT represents Double Trunk

APPROVED:  
DEPARTMENT OF  
PLANNING AND  
ZONING

PROFESSIONAL CERTIFICATION:  
*Steve Heise*  
Steve Heise, Qualified Professional, MDPCA

12/12/12  
DATE

12/05/12  
DATE

REVISIONS

No.	By	Date	Description
1	LDE	10/29/14	REVISE PLANTING ON LOT 4 AND LOT 5

**LDE Inc.**  
Engineers • Surveyors • Planners  
Historic Carriage House • 7520 Main Street • Suite 203 • Sykesville, Maryland • 21784  
(410)795-6391 • (410)795-6392 • FAX (410)795-9540 • www.Landsurveyormd.com

DESIGNED BY: BDB  
DRAWN BY: LDE  
CHECKED BY: BDB  
DATE: 11/2012

OWNER/DEVELOPER: HEDGEROW FARM  
LOTS 3-5, BUILDABLE PRESERVATION PARCEL "A" AND NON-BUILDABLE PRESERVATION PARCEL "C" A Resubdivision of Lot 2 a Non-Buildable Bulk Parcel "B" and Forest Conservation Easements on Buildable Preservation Parcel "A" - Hedgerow Farm, Plot #21540 - #21542  
Triadelphia Hill Road - RR-DEO Zoning  
Tax Map 28 - Grid 20 - Parcel 64  
5th Election District - Howard County, Maryland  
Previous Submittals: HP00-65, F00-59, F00-59, F01-81, HP06-56, F07-44, HP10-172, ECP 10-015, F11-022, ECP 11-020, NP 11-141

SCALE: AS SHOWN  
DRAWING: 8 of 9  
JOB NO.: 09-009.1  
FILE NO.: F12-092

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, EXPIRATION DATE: 6/30/15.

SIGNED: *Bruce D. Burton* DATE: 11/16/12  
BRUCE D. BURTON



**LEGEND**

- MINOR CONTOUR- (2' INTERVAL)
- INDEX CONTOUR- (10' INTERVAL)
- SOILS BOUNDARY
- CL. STREAM/POND
- 100' STREAM BANK BUFFER
- NON TIDAL WETLAND LIMIT
- WETLAND BUFFER
- 100 YR FLOOD PLAIN
- EXISTING DRIVEWAY
- EXISTING TREELINE
- PROPOSED TREELINE
- APPROXIMATE LOCATION EXISTING SEPTIC EASEMENTS F11-022

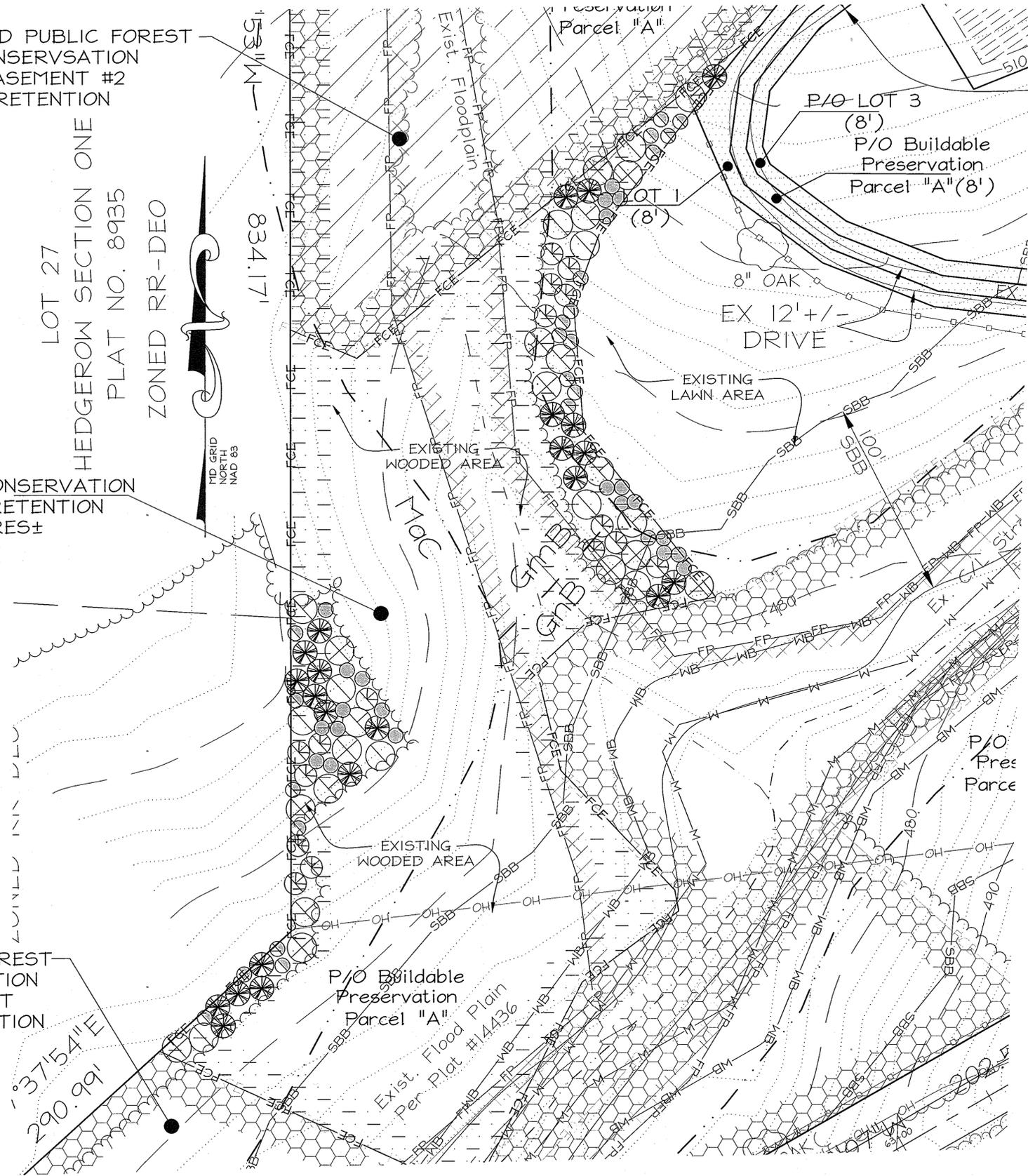
**AMENDED PUBLIC FOREST CONSERVATION EASEMENT #2 RETENTION**

LOT 27  
HEDGEROW SECTION ONE  
PLAT NO. 8935  
ZONED RR-DEO

**PUBLIC FOREST CONSERVATION EASEMENT #11 RETENTION 1.6464 ACRES±**

**EASEMENT HATCH LEGEND**

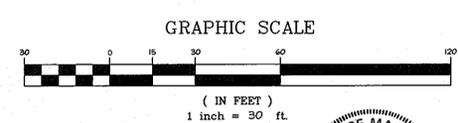
- EXISTING FOREST CONSERVATION EASEMENT Plat # 14436 & 14937 To Be Abandoned
- EXISTING FOREST CONSERVATION EASEMENT Plat # 14436 & 14937 To Remain Unchanged
- PRIVATE ACCESS, DRAINAGE & UTILITY EASEMENT
- EXISTING PRIVATE STORMWATER MANAGEMENT CREDIT EASEMENT - Plat # 14436 & # 21591
- EXISTING PUBLIC 100 YEAR FLOODPLAIN, DRAINAGE & UTILITY EASEMENT - Plat # 21591
- PRIVATE SEWAGE DISPOSAL EASEMENT
- PUBLIC FOREST CONSERVATION EASEMENT
- EXISTING PRIVATE SEWAGE DISPOSAL EASEMENT



**LANDSCAPE SCHEDULE**

SYMBOL	QUANT.	COMMON NAME/BOTANICAL NAME	SIZE	REMARKS
	12	RED MAPLE/ACER RUBRUM	1" CAL.	B & B
	9	BLACK GUM/NYSSA SYLVATICA	1" CAL.	B & B
	9	RED OAK/QUERCUS RUBRA	1" CAL.	B & B
	23	WHITE PINE/PINUS STROBUS	2'-3' HT	4 YR. SEEDLINGS
	16	RED CEDAR/JUNIPERUS VIRGINIANA	1'-2' HT	2 YR. SEEDLINGS
	23	EASTERN REDBUD/CERCIS CANADENSIS	1'-3' HT	2 YR. SEEDLINGS
	21	FLOWERING DOGWOOD/CORNUS FLORIDA	1'-2' HT	2 YR. SEEDLINGS

**EXISTING FOREST CONSERVATION EASEMENT REFORESTATION**



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 12/1/12  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 12/6/12  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

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, EXPIRATION DATE: 6/30/13.

SIGNED *[Signature]* DATE 4/16/12

PROFESSIONAL CERTIFICATION:  
*[Signature]*  
Steve Heiss, Qualified Professional, MDPFA



**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]* 11/15/12  
SIGNATURE OF DEVELOPER / BUILDER DATE

REVISIONS			
No.	By	Date	Description

**LDE Inc.**  
Engineers • Surveyors • Planners  
Historic Carriage House • 7520 Main Street • Suite 203 • Sykesville, Maryland • 21784  
(410)795-6391 • (410)795-6392 • FAX(410)795-9540 • www.Landsurveyormd.com

DESIGNED BDB EDS	FOREST CONSERVATION MITIGATION PLAN <b>HEDGEROW FARM</b> LOTS 3-5, BUILDABLE PRESERVATION PARCEL "A" AND NON-BUILDABLE PRESERVATION PARCEL "C" A Resubdivision of Lot 2 & Non-Buildable Bulk Parcel "B" and Forest Conservation Easements on Buildable Preservation Parcel "A" - Hedgerow Farm, Plat #21590 - #21592 Triadelphia Mill Road - RR-DEO Zoning Tax Map 23 - Grid 20 - Parcel 64 5th Election District - Howard County, Maryland Previous Submittals: WP00-65, F00-50, F00-59, F01-01, WP06-50, F07-44, WP10-172, ECP 10-015, F11-022, ECP 11-020, WP 11-141	SCALE 1"=30'
DRAWN LDE		DRAWING 9 of 9
CHECKED BDB		JOB NO. 09-009.1
DATE 11/2012		OWNER/DEVELOPER: Hedgerow Farm LLC Robert B. White and Lynn De G. White 13550 Triadelphia Mill Road Clarksville, MD 21024-1025 (301)802-1051