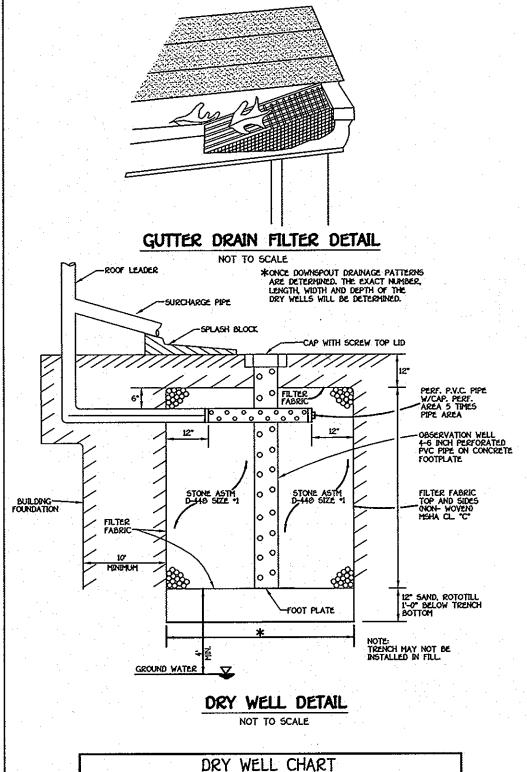


1 THRU 4



STORMWATER MANAGEMENT NOTES

66

8' x 5.5' x 5'

- 1. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010. 2. MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1000
- SQ. FT OR LESS. 3. DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET.

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

a. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT. b. 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. C. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY

d. 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.

e. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA. f. 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.

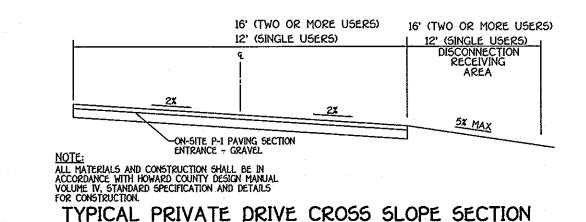
OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF ROOFTOP RUNOFF (N-1), DISCONNECTION OF NONROOFTOP RUNOFF (N-2)

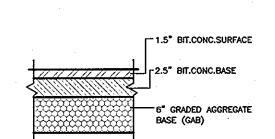
1. MAINTENANCE OF AREAS RECEIVING DISCONNECTION RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED OPEN CHANNEL SYSTEMS GRASS SWALES AND WET SWALES, (M-B)

THE OPEN CHANNE L SYSTEM SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY. . THE OPEN CHANNEL SHALL BE MOWED A MINIMUM OF AS NEEDED DURING THE GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 6 INCHES. 3. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED. 4. VIS IBLE SIGNS OF EROSION IN THE OPEN CHAN NEL SYSTEM SHALL BE RE PAIRED AS SOON AS IT 5. REMOVE SILT IN THE OPEN CHANNEL SYSTEM WHEN IT EXCEEDS 25% OF THE ORIGINAL WQV.

6. INSPECT CHECK, DAMS TWICE A YEAR FOR STRUCTURAL INTEGRITY, RESTORE CHECK, DAMS TO

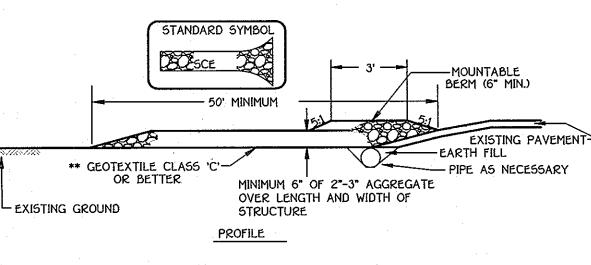


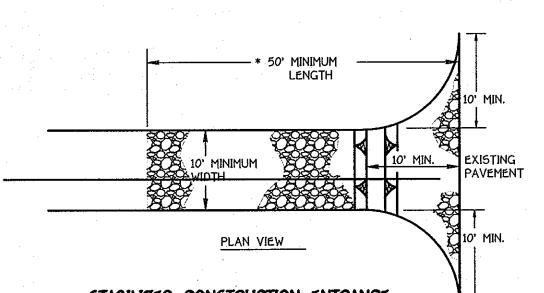


NOT TO SCALE

P-1 DRIVEWAY PAVING SECTION

(N.T.S.)

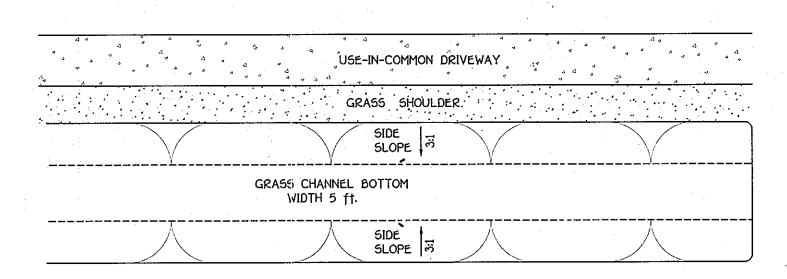




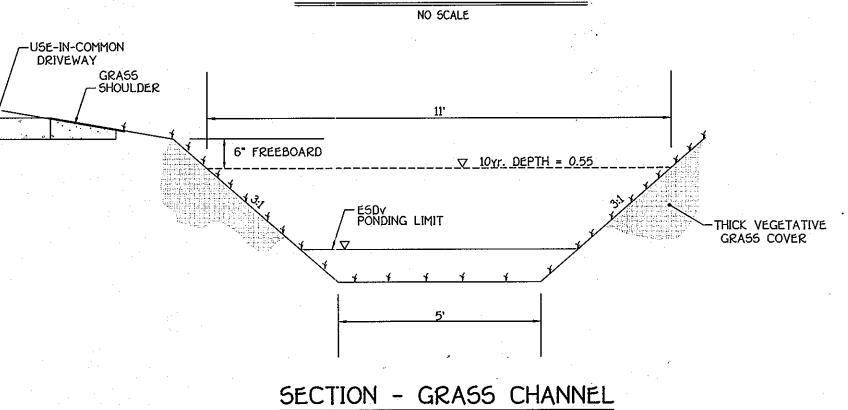
STABILIZED CONSTRUCTION ENTRANCE

FOREST CONSERVATION WORKSHEET

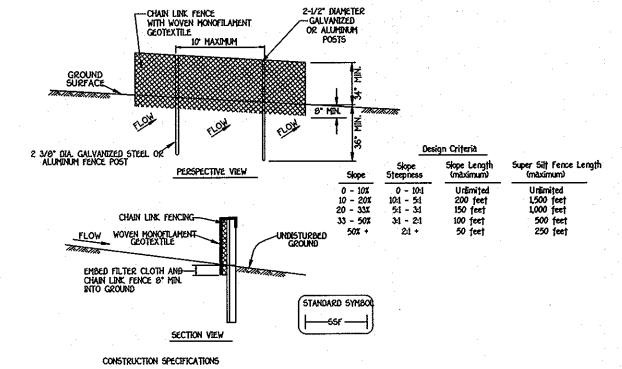
*	FURED! CUNDERVALION WORKSHEE!		
i .			
	NET TRACT AREA	Acres	
	A. TOTAL TRACT AREA= B. AREA WITHIN 100 YEAR FLOODPLAIN= C. AREA TO REMAIN IN AGRICULTURE PRODUCTION= D. NET TRACT AREA=	15.7 0 0 15.7	
	LAND USE CATEGORY: (from table 3.2.1, page40, Manual) ARA MDR IDA HDR MPD CIA x		
	INFORMATION FOR CALCULATIONS:	· .	
	E. AFFORESTATION THRESHOLD	3.1	
	G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN)= H. AREA OF FOREST ABOVE REFORESTATION THRESHOLD: I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD: =	7.9 4.8 4.0	
	BREAK EVEN POINT:		
	J. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION BREAK-EVEN POINT	<u>0.8</u> 4.7	
	K. CLEARING PERMITTED WITHOUT MITIGATION=	3.2	
	PROPOSED FOREST CLEARING:		
	L. TOTAL AREA OF FOREST TO BE CLEARED OR RETAINED OUTSIDE FCE	3.2	
	M. TOTAL AREA OF FOREST TO BE RETAINED IN FCE	_3.2	
14	PLANTING REQUIREMENTS:	· ·	
	N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD	0.8 -0 -0.8 -0 -0	
•	T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED=	<u></u>	



PLAN - GRASS CHANNEL



NO SCALE



1. INSTALL 2 3/8" DIAMETER GALVANIZED STEEL OR ALUMINUM POSTS SIX FEET IN LENGTH, PLACED NO FURTHER THAN 10 FEET APART. DRIVE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND. 2. FASTEN MINIMUM 9 GAUGE CHAIN LINK FENCE (2 3/8" MAX. DIAMOND) 42 INCHES IN HEIGHT SECURELY 2. FASTEN MINIMUM 9 GAUGE CHAIN LINK FENCE (2 378" MAX. DIAMOND) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.

3. FASTEN WOVEN MONOFILAMENT GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE CHAIN LINK WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.

4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BYPASS. FOLDED, AND STAPLED TO PREVENT SEDIMENT BYPASS.

5. REMOVE ACCUMULATED SEDIMENTS WHEN "BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SEDIMENTS REACH 25% OF THE FENCE HEIGHT.

6. EXTEND BOTH ENDS OF THE SUPER-SILT FENCE A MINIMUM OF 5 FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER-SILT 7. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS SET FORTH IN THE MATERIALS SPECIFICATION.

Ø. INSPECT AND PROVIDE NECESSARY MAINTENANCE PERIODICALLY AND AFTER EACH RAIN EVENT.

SUPER SILT FENCE NOT TO SCALE

	SOILS LEGEND			
50ĭL	NAME	CLASS		
GbA ·	Giàdatone loàm, 0 to 3 percent alopes	ß		
GbB	Glädstone loam, 3 to 8 percent slopes	8		
GnB	Glerville-Baile silt loams, 0 to 0 percent slopes	С		

† Generally only within 100-year floodplain areas

SITE ANALYSIS DATA

1. TOTAL AREA OF SUBJECT PROPERTY = 15.86 ACRES 2. DEVELOPABLE AREA (EXCLUDING ROAD DEDICATION): 15.70 ACRES

3. WETLANDS AND THEIR BUFFERS: 7.10 ACRES 4. FLOODPLAIN: NONE

5. FOREST: 7.41 ACRES

6. STEEP SLOPES 25% OR GREATER: NONE

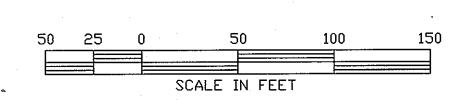
7. ERODABLE SOILS: 2.07 ACRES 8. LIMIT OF DISTURBANCE: 2.32 ACRES

9. PROPOSED SITE USE: RESIDENTIAL

10. GREEN OPEN AREA: 15.31 ACRES 11. STREAMS AND THEIR BUFFERS: 0.00 ACRES

ESD Narrative:

- 1. There are existing Wetlands and their Buffers, as shown in Table 5.1 of the Maryland Stormwater Management (SWM) Design Manual (Manual), located on the site. It is to be noted they will be protected within a Forest Conservation Easement and as such, will not be disturbed by the construction activity connected with this development proposal.
- 2. The existing drainage patterns will maintained as closely as possible during and after the development of the site.
- 3. Efforts have been made to reduce the impervious areas; however, when the final house types is selected, it may be possible to reduce the site imperviousness though better site
- 4. The required Sediment and Erosion control measures consisting of super silt fence; a stabilized construction entrance and Erosion Control Matting have been designed in accordance with the latest Howard County Soil Conservation District and Maryland Department of the Environment regulations. Based on the type and location of the ESD practices, there was no need to incorporate these measures into the SWM strategy.
- 5. The proposed Environmental Site Design measures have been implemented to the Maximum Extent Possible and meet the targeted Pe for this site. As such, no major structural practices as described in Chapter 3 of the above cited Manual will be required.
- 6. There will be no disturbance to the Environmental Feature on-site



SCALE : 1" = 1000'

GENERAL NOTES SUBJECT PROPERTY ZONED: RR-DEO.

PREVIOUS DPZ FILE NUMBERS: NONE. 3. SEPTIC EASEMENT SUBJECT TO HOWARD COUNTY HEALTH DEPARTMENT REVIEW. 4. LENGTH OF TRENCH TO BE DETERMINED AT TIME OF SEPTIC PERMIT ISSUANCE. 5. CONTRACTOR/BUILDER TO VERIFY ELEVATION IN THE FIELD BEFORE BEGINNING

ANY CONSTRUCTION. 6. FIELD RUN TOPOGRAPHIC SURVEY DONE BY FISHER, COLLINS & CARTER, INC.

7. STORMWATER MANAGEMENT (SWM) REQUIREMENTS FOR THIS SITE WILL BE MET USING ENVIRONMENTAL SITE DESIGN TO THE MXIMUM EXTENT POSSIBLE (ESD TO THE MEP) IF ACCORDANCE WITH THE MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I & II, EFFECTIVE MAY, 2010. IT IS TO BE NOTED THE LOT I CONTAINS AN EXISTING HOUSE FOR WHICH SWM IS NOT REQUIRED. RUNOFF FROM THE PROPOSED HOUSES AND INDIVIDUAL DRIVEWAYS ON LOT 2 AND BUILDABLE PRESERVATION PARCEL (BPP) "8" ALONG WITH THE USE-IN-COMMON (UIC) DRIVEWAY WILL BE TREATED USING THE FOLLOWING PRACTICES: LOT 2: DISCONNECTION OF ROOFTOP RUNOFF (N-1) AND TWO (2) DRYWELLS (M-5) FOR THE PROPOSED HOUSE AND DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2) FOR THE PROPOSED DRIVEWAY.

DISCONNECTION OF ROOFTOP RUNOFF (N-1) AND TWO (2) DRYWELLS (M-5) FOR THE PROPOSED HOUSE AND DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2) FOR THE PROPOSED DRIVEWAY. GRASS CHANNEL (M-8) FOR THE PROPOSED DRIVEWAY ADJACENT TO LOT 1 AND

NON-BUILDABLE PRESERVATION PARCEL "A". IT IS TO BE NOTED THAT INDIVIDUAL DECLARATIONS OF COVENANTS ARE REQUIRED FOR THIS PROJECT. 8. A FOREST CONSERVATION AND WETLAND REPORT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. IN SEPTEMBER, 2011. FOREST & WETLANDS EXIST ON SITE.

9. THE EXISTING WELL SHOWN ON THIS PLAN, TAG NO. HO 73-2925 HAS BEEN FIELD LOCATED BY FISHER, COLLINS & CARTER, INC., PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.

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

11. LIMIT OF DISTURBANCE IS 90,169 S.F. OR 2.07 ACRES. 12. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR

13. A FOREST CONSERVATION AND WETLAND REPORT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. IN SEPTEMBER, 2011. FOREST & WETLANDS EXIST ON SITE.

14. APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN AND/OR RED-LINE REVISION PLAN. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SHALL OCCUR AT THE SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN STAGES AND/OR RED-LINE REVISION PROCESS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES THROUGH THE

PLAN REVIEW PROCESS
15. NO STEEP SLOPES 25% OR GREATER ON SUBJECT PROPERTY.

LEGEND			
SYMBOL	DESCRIPTION		
492	EXISTING 2' CONTOURS		
	EXISTING 10' CONTOURS		
102-	PROPOSED CONTOUR		
× 362.5	SPOT ELEVATION		
LOD	LIMITS OF DISTURBANCE		
~~~	EXISTING TREELINE		
~~~~	PROPOSED TREELINE -		
MLCS MLCS	SOILS LINES AND TYPE		
—-55F——	SUPER SILT FENCE		
	STABILIZES CONSTRUCTION ENTRANCE		
WL	LIMIT OF WETLANDS		
WB	25' WETLANDS BUFFER		

STORMWATER MANAGEMENT PRACTICES RAIN GARDENS M-7 (NUMBER) GARDENS M-8 M-9 (NUMBER) GNUMBER) GNUMBER) GNUMBER) DRY WELLS BIO-RETENTION GREEN ROOF PERMEABLE PAVING REINFORCED TURF ROOFTOP RUNOFF ADDRESS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

ORIGINAL CONDITION AS APPLICABLE.

2-16-12 CHIEF, DIVISION OF LAND DEVELOPMENT Willeman CHIEF, DEVELOPMENT ENGINEERING DIVISION 18.

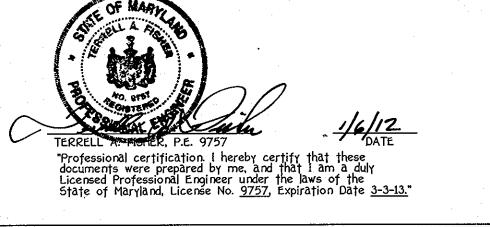


OWNER/DEVELOPER

DAVID J. VAN NOY PATRICIA A. VAN NOY 7319 BROWNS BRIDGE ROAD FULTON, MARYLAND 20759 PHONE No. 515-851-8110



MD DNR Qualified Professional USACOE Wetland Delineator Certification • WDCP93MD0610044E JOHN P. CANOLES



ENVIRONMENTAL CONCEPT PLAN

VAN NOY PROPERTY

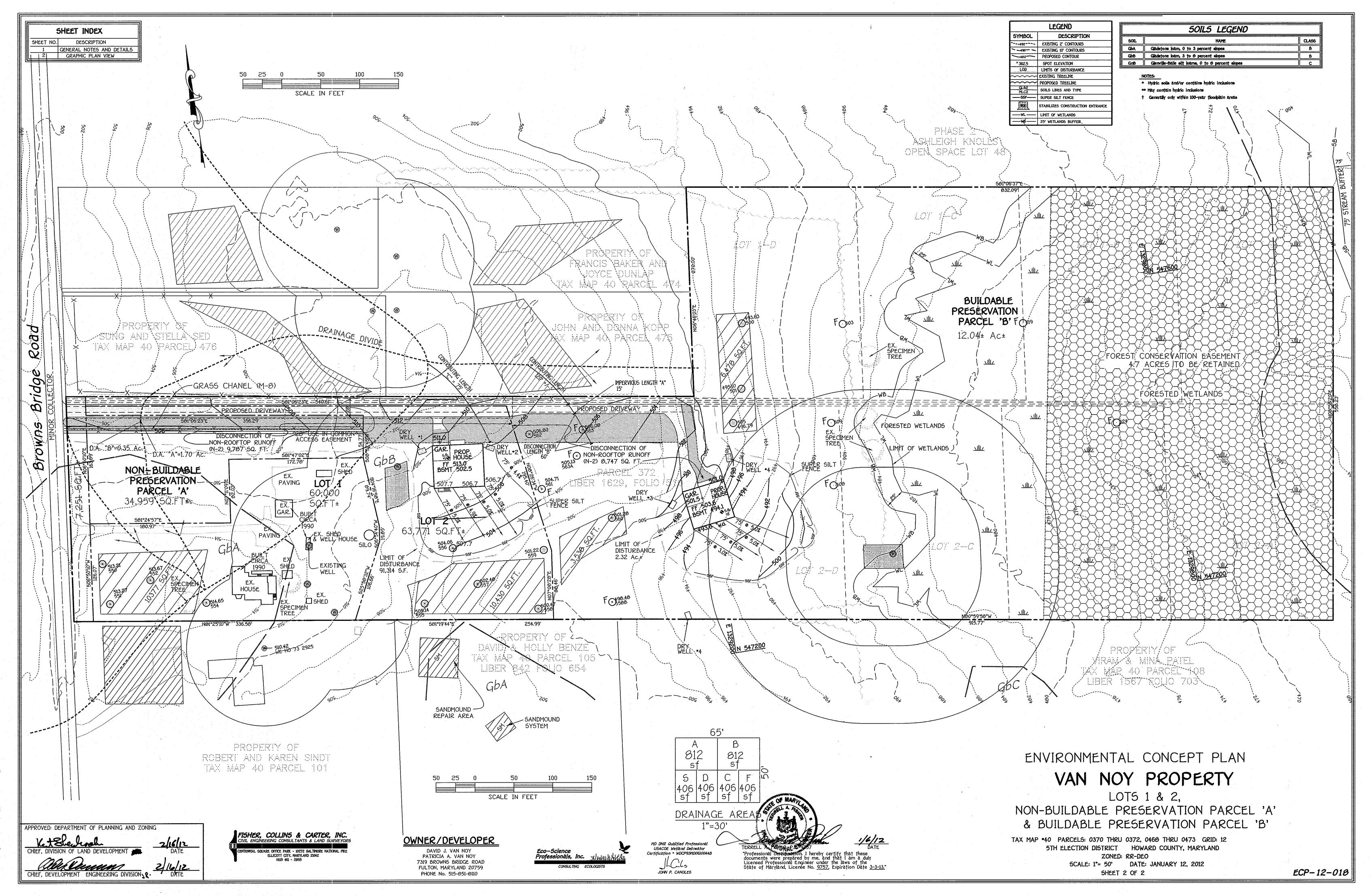
LOTS 1 & 2,

NON-BUILDABLE PRESERVATION PARCEL 'A' & BUILDABLE PRESERVATION PARCEL 'B'

TAX MAP •40 PARCELS: 0370 THRU 0372, 0468 THRU 0473 GRID: 12 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ZONED: RR-DEO SCALE: 1"= 50' DATE: JANUARY 12, 2012 SHEET 1 OF 2

ECP-12-018



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