		SHEET INDEX	
SHEE	r no.	DESCRIPTION	
1		TITLE SHEET	V
2		ENVIRONMENTAL CONCEPT PLAN	

	SOILS LEGEND		
50IL	NAME	CLASS	K FACTOR
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	В	0.20
MaC	Manor loam, 8 to 15 percent slopes	В	0.24
50IL M	AP NUMBER 14 ELLICOTT CITY SE		

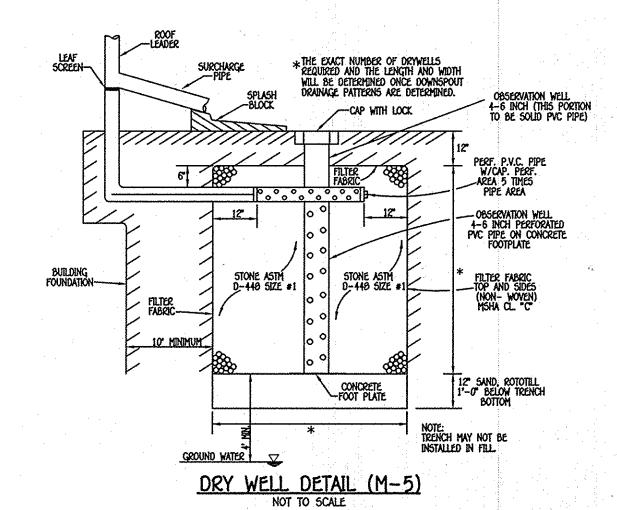
STORMWATER MANAGEMENT SUMMARY											
AREA ID.	ESDV REQUIRED CU.FT.	ESDV PROVIDED CU.FT.	REMARK5								
LOT 7	246	280	DRY WELLS (3) (M-5)								
LOT 7	84.65	<i>8</i> 6	ROOFTOP DISCONNECTIONS (2) (N-1)								
LOT 7	138	213	NON-ROOFTOP DISCONNECTION (N-2)								
TOTAL	468.65	387									

GROSS AREA = 0.758 ACRES LOD = 0.54 ACRES RCN = 55TARGET Pe = 1.2"

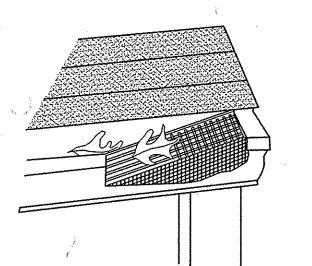
#### DRY WELL CHART

DRYWELL NO.	AREA OF ROOF PER DOWN SPOUT	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF TREATMENT	L W D
1	372 5Q. FT.	41.5 C.F.	50 C.F.	100%*	9.6'x 5' x 5'
1	372 5Q. FT.	41.5 C.F.	50 C.F.	100%*	9.6'x 5' x 5'
2	494 5Q. FT.	56.7 C.F.	61.5 C.F.	100%*	9.5'x 4.5'x 5'
2	342 5Q. FT.	37.5 C.F.	40.6. C.F.	100%*	9.5'x 4.5' x 5'
2 (	123 5Q. FT.	12.8 C.F.	13.9 C.F.	100%*	9.5'x 4.5' x 5'
3 ,	500 SQ. FT.	56 C.F.	64 C.F.	100%*	7' x 3.5' x 5'

\* AREA OF TREATMENT EXCEEDS THAT REQUIRED.



Material	Specification	Size	Notes
Plantings	see Appendix A: Table A.4	n/a	plantings are site-specific
Planting soil 12' to 4' deep)	ioamy sand 60-65% compost 35-40% or sandy loam 30% coarse sand 30% compost 40%		USOA soil types loamy sand or sandy loam; clay content <5%
Organic Content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum
Pea gravel diaphragm	pea gravel: ASTM-D-440	No. 0 or No. 9 (1/0 to 3/0)	
Curtain drain	ornámentál stone: wáshed cobbles	stone: 2" to 5"	
Geoteofile		n/ā	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	ASHTO M-43	No. 57 or No. Aggregate (3/8 to 3/4)	
Underdräin piping	F 758, Type P5 28 or AASHTO H-278	f to 6° rigid schedule 40 PVC or 50R35	Stofted or perforated pipe; 3/8" pert. • 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4 inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; f = 3500 psi at 29 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n.ā	on-site testing of poured-in-place concrete required:  20 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Haryland - design to include meeting ACI Code 350.R/89; vertical loading IH-10 or H-20; allowable horizontal loading (based on soil pressures); and analysis of potential cracking
Sånd	AASHTO-M-6 or ASTM-C-33	0.02° to 0.04°	Sand substitutions such as Diabase and Graystone (MSHTO) e10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.



GUTTER DRAIN FILTER DETAIL

#### STORMWATER MANAGEMENT NOTES 1. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH 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 500 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
- 4. FINAL GRADING IS SHOWN ON THIS SITE DEVELOPMENT PLAN.

AFTER EVERY HEAVY STORM EVENT.

OVER A PERIOD OF SEVERAL DAYS TO ENSURE TRENCH DRAINAGE.

(72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.

COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.

INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

BENCHMARK INFORMATION

E 1.367.562.291

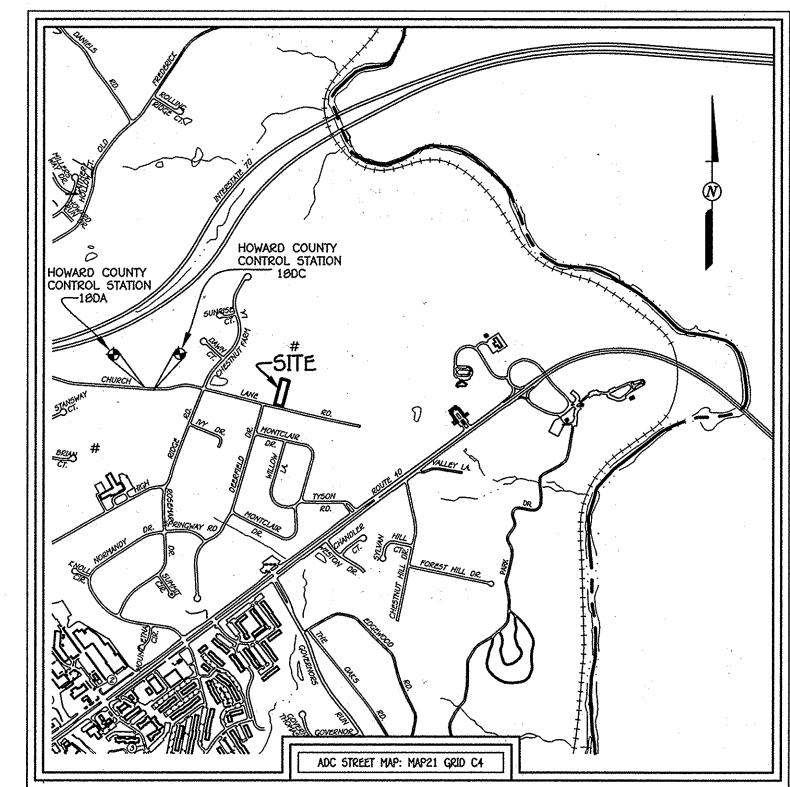
ELEVATION = 485.474 - VERTICAL - (NAVD '88)

ELEVATION = 483.158 - VERTICAL - (NAVD '08)

18DA - HOWARD COUNTY CONTROL STATION #18DA - HORIZONTAL - (NAD '83)

# ENVIRONMENTAL CONCEPT PLAN CHURCH RIDGE

TAX MAP No. 18 GRID No. 13 PARCEL NOS. 33 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND



VICINITY MAP 5CALE: 1" = 1200'

## OPERATION & 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 B. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS C. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS. D. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY-TWO E. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE 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 18DC - HOWARD COUNTY CONTROL STATION #18DC - HORIZONTAL - NAD '83) N 593,293.581

#### DESIGN NARRATIVE

No environmentally sensitive features such as wetlands, streams, their buffers, steep slopes, or floodplain exist on the lot. There is no forest on this lot.

II. Maintenance of Natural Flow Patterns:

Nature flow patterns will be maintained. Runoff from the front and rear areas of the proposed house will flow toward the rear of the property, towards the adjacent forest offsite (State of Maryland property).

V. Implementation of ESD Planning Techniques and practices to the Maximum Extent Practicable (MEP)
The full required ESD volume is being provided.

<u>Troa</u>																						
77	nis	report	will	demo	nstrate i	how th	he crite	ria set	forth in	the i	Maryland	Stormw	ater Desi	ign Manu	al, Volun	nes I ànd	1 II (e)	ffective	October	2000,	revised N	1ay
2	2009	) will	be :	sațisfie	d on th	is pro	Ject. Th	e goal	of creat	ing h	ydrology	similar	to that	of "Wood	s in Goo	d Condiți	ion" will	be acc	complish	ed thro	ugh the	use of
†	he j	practic	es c	contain	ed within	n Chaj	pter 5	of said	manual.	The	achievem	ent of	this goa	i will ren	nove the	requirem	ent of	f providi	ng Chai	nnel Pro	otection V	olume.
						•		-				•				•	·	-	•			
		Site Co																				
Lo	of 7	'is pa	art o	of the	subdivisi	on of	Church	Ridge,	which is	s zon	ed R-20.	. It is	located	on Tax	Map 18,	Parcel	No. 3.	3 of the	Howard	d Coun	ry. Maryla	nd Tax

General Site Conditions:	
Lot 7 is part of the subdivision of Church Ridge, which is zoned R—20. It is located on Tax Map 10, Parcel No. 33 of t	ne Howard County, Maryland Tax
Map Dafabase System and known as 8250 Church Lane Road. The property was recorded as plat #8559. Lot 7 is dominat	ed by lawn. Along the rear
property line there are some woody plants and canopy of a mature forest offsite. The adjacent forest consists of red may	le, tulip poplar, and black cherry
and the diameter of those offsite trees are generally 6" to 14" in size. There are no wetlands, streams or 100 year flood	plain present on the property.
The property is located within the Use I watershed of the Patapsco River. There is no forest on this site. A short segmen	t of privet hedge is present
along the road frontage and a mature red maple is located just inside the southwest corner of the property. This tree is	33.5" in diameter, but it is in
poor condition with notable limb dieback. The proposed house will be served by public water and sewer via connections pro	vided under contract #W5. The
majority of the runoff from the lot is from south to north toward the State of Maryland property, but a minute portion at	he front of the lot flows toward
Church Lane Road. Per the 2004 Web Soil Survey, soils on-site consist of "GhB" Glenelg - Urban land complex, a type	
also a B soil.	

#### Nățurăi Resource Proțecțion:

#### III. Reduction of impervious areas through better site design, alternative surfaces and Nonstructural Practices

#### A single driveway is proposed to provide access to the proposed house

### IV. Integration of Erosion and Sediment Controls into Stormwater Strategy: Silf Fence and Super Silf Fence will be utilized to provide erosion and sediment control.

VI. Request for a Design Manual Waiver: No waivers are required.

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FISHER, COLLINS & CARTER, INC.					
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS					•
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE					. •
ELLICOTT CITY, MARYIAND 21042 (410) 461 - 2055	1	·			
(410) 461 - 2 <del>055</del>					
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	1 11				
	NO.		REVISION	DATE	X

PROFESSIONAL CERTIFICATION 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. 20748, EXPIRATION

SITE ANALYSIS DATA CHART

(PER 10/06/2013 COMPREHENSIVE ZONING PLAN)

TOTAL AREA OF STREAM (INCLUDING BUFFER) = 0.00 AC.

TOTAL AREA OF EXISTING FOREST = 0.00 AC

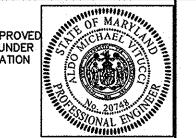
TOTAL IMPERVIOUS AREA = 0.11 AC\*
TOTAL AREA OF ERODIBLE SOILS = 0.00 AC.
TOTAL AREA OF ROAD DEDICATION = 0.00 AC.

PROPOSED USE: RESIDENTIAL

TOTAL AREA OF THIS SUBMISSION = 33,000 SQ.FT. OR 0.75756 AC.±. LIMIT OF DISTURBED AREA = 23,540 SQ.FT. OR 0.54 Ac.± PRESENT ZONING DESIGNATION = R-20

PREVIOUS HOWARD COUNTY FILES: WP-80-09; F-09-110, & F-07-140. TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0.00 AC TOTAL AREA OF SLOPES IN EXCESS OF 15% = 0.00 AC TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 AC.

TOTAL GREEN OPEN AREA = EXISTING=0.75 AC+ PROP.=0.64 AC+



OWNERS JAMES & KATHERINE LANCELOTTA 8244 CHURCH LANE ROAD ELLICOTT CITY MD 21043 C\O JIM GREENFIELD

BUILDER

1741/ 706

6-2-16 PARCEL NO. CHURCH RIDGE - LOT 7 BLOCK NO. ZONE TAX/ZONE ELEC. DIST. CENSUS TR.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

LEGEND 5YMBOL SYMBOL DESCRIPTION DESCRIPTION --492---- EXISTING 2' CONTOURS 162 PROPOSED CONTOUR -490- EXISTING 10' CONTOURS +362.5 SPOT ELEVATION LOD LIMITS OF DISTURBANCE ---- SOILS LINES AND TYPE EXISTING TREELINE PROPOSED TREELINE -SF- SILT FENCE --- ×- Existing Fence Line EROSION CONTROL MATTING -SSF- SUPER SILT FENCE — — — DRAINAGE AREA DIVIDE STABILIZES CONSTRUCTION ENTRANCE

#### GENERAL NOTES

- 1. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT
- 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.

  2. THE CONTRACTOR SHALL NOTIFY (MISS UTILITY) AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING
- DONE.
  3. BOUNDARY SHOWN HEREON IS BASED ON RECORD PLAT NO. 8559, RECORDED ON APRIL 24, 1989. PROPERTY CORNERS LOCATED & VERIFIED, AND TOPOGRAPHY OBTAINED BY FIELD SURVEY BY FISHER, COLLINS, & CARTER, INC. ON JANUARY 21, 2016.
  4. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON NAD 83
- COORDINATE SYSTEM. HOWARD COUNTY CONTROL STATION NOS. 180C & 180A. . Previous DPZ file numbers: WP-00-09, F-07-140, & F-09-110. . Stormwater management is in accordance with the M.D.E. Storm water design manual, volumes 1 & 11, (effective october
- 2000, REVISED MAY 2009). 7. THIS PROPERTY IS LOCATED INSIDE THE METROPOLITAN DISTRICT. LOT IS TO BE SERVED PUBLIC WATER AND PUBLIC SEWER, CONTRACT
- NO.'S 70W AND W&S 20.

  8. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.

  9. THE SUBJECT PROPERTY IS ZONED R-20 (PER DATE 10/06/2013 COMPREHENSIVE ZONING PLAN).
- 10. NO 100 YEAR FLOODPLAIN, WETLANDS, STREAM(S) AND/OR THEIR BUFFERS, NOR STEEP SLOPES EXIST ON-SITE.
  11. NO FOREST STANDS EXIST ON-SITE. SEE ENVIRONMENTAL FINDINGS LETTER PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED
- CONSERVATION ACT (FCA) BECAUSE IT IS LESS THAN 10,000 S.F., THE MINIMUM SIZE THRESHOLD REQUIRING FCA COMPLIANCE.

  13. SOIL BORINGS WILL BE REQUIRED FOR THE PROPOSED STORMWATER MANAGEMENT DEVICES.

  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 REQULATIONS AND THE HOWARD COUNTY ZONING REQULATIONS SHALL OCCUR AT THE SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN STAGES AND/OR RED-LINE REVISION PROCESS. THE APPLICANT AND CONSULTANT SHOULD
- THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS. 15. NO STRUCTURES EXIST ON THIS PROPERTY.

  16. THIS PROJECT IS EXEMPT FROM FOREST CONSERVATION IN ACCORDANCE WITH SECTION 16-1202(1)(2)(1) SINCE IT IS LESS THAN 40,000 S.F. IN SIZE.

EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN) AS

COLUMBIA BUILDERS INC. C\O JAMES GREENFIELD 8244 CHURCH LANE ROAD ELLICOTT CITY MD 21043 (443)324-4732

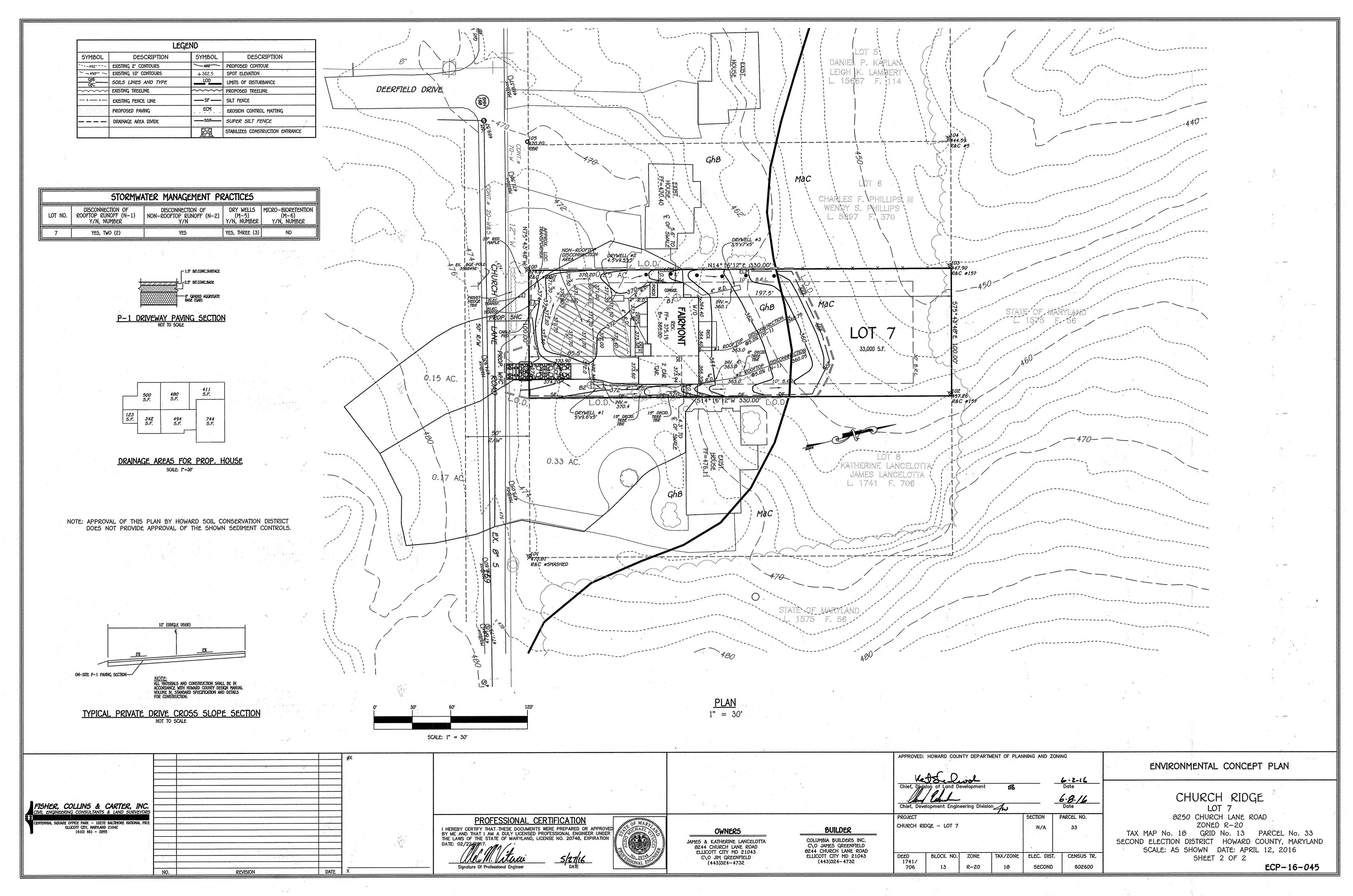
TITLE SHEET

CHURCH RIDGE

LOT 7 8250 CHURCH LANE ROAD

ZONED R-20 TAX MAP No. 18 GRID No. 13 PARCEL No. 33 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: APRIL 12, 2016

> SHEET 1 OF 2 ECP-16-045



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