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ENVIRONMENTAL CONCEPT PLAN

SQUARE WOODS

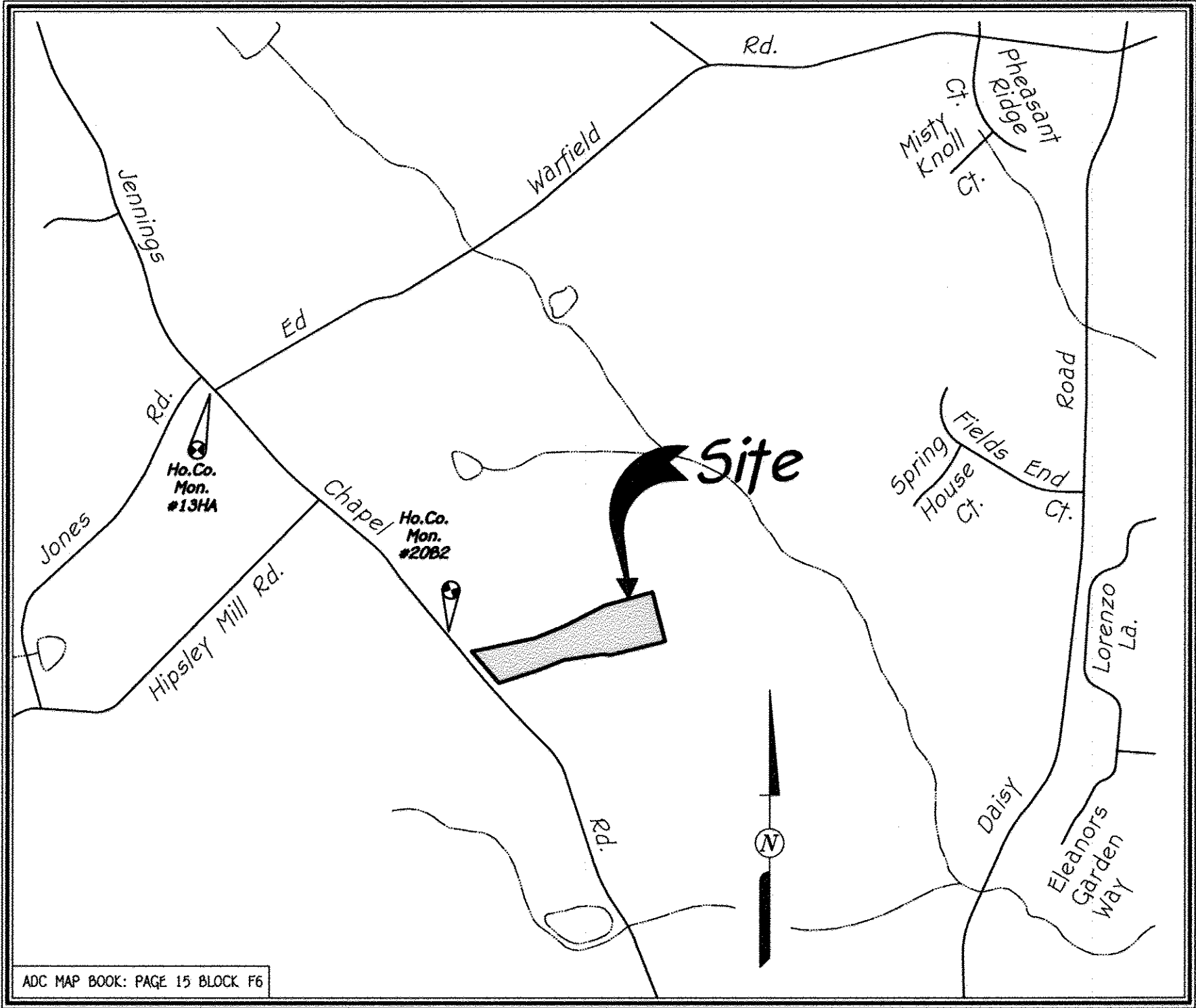
LOTS 1 THRU 3

A Resubdivision of Lot 2, Recorded As "Casasco Property, Lots 1 And 2"
Plat Nos. 24070 Thru 24071

ZONED: RC-DEO
TAX MAP No. 20 PARCEL No. 140

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
<i>John M. ...</i> CHIEF, DIVISION OF LAND DEVELOPMENT	8/8/17 DATE
<i>Paul ...</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	8/14/17 DATE

- MASSATIVE**
Introduction
This report will demonstrate how the criteria set forth in the Maryland Stormwater Design Manual, Volumes 1 and II (effective October 2000, revised May 2009) will be satisfied on this project. The goal of creating hydrology similar to that of Woods in Good Condition will be accomplished through the use of the practices contained within Chapter 5 of said manual. The achievement of this goal will remove the requirement of providing Channel Protection Volume.
- General Site Conditions**
This property is located on Tax Map #20, Parcel #140 and is zoned RC-DEO in accordance with the Howard County Zoning Regulations. The address of this property is known as 3355 Jennings Chapel Road. The property was previously recorded as plat #24071 on 1/27/17. Lot 2 is mostly forested, a portion of the parcel is open fields and does not contain forest on it. The forest is counting as being cleared because there are no retention easements located on the lots. There are not any wetlands, wetland buffer, stream buffer, floodplain's and steep slopes on-site. The proposed houses will be served by private well and septic. The majority of the runoff drains through existing swales located at the rear of lots 1 and 3 from the south toward an existing off-site stream flowing along the northern boundary. The drainage from this area drains into the Cattail Creek Stream located to the northeast of the site which drains into the Patuxent River Watershed Area. We are treating the proposed houses by 13 (M-5) Drywells and the roadway is treated by (N-1) Non-rooftop disconnection and the remaining roadway and 1 portion of the house on lot 3 is treated by a single micro-bioretenion facility. Per the 2004 web soil survey the soils on-site consist of "GyB and GyC" Glenelg loam, Type B soils and "Gmb" Glenelg silt loam, a Type C soil.
- I. Natural Resource Protection**
Wetlands, wetland and stream buffers, floodplain and steep slopes do not exist on this project.
- II. Maintenance of Natural Flow Patterns**
Nature flow patterns will be maintained. Runoff from the proposed house will be treated with 13-dry wells (M-5) before entering the existing swale to the rear.
- III. Reduction of impervious areas through better site design, alternative surfaces and Nonstructural Practices**
A shared driveway is proposed to provide access to the proposed houses. This driveway is treated by a non-rooftop disconnection credit (N-2).
- IV. Integration of Erosion and Sediment Controls into Stormwater Strategy**
Earth Dikes, Stone Outlet Trap and Super Silt Fence will be utilized to provide erosion and sediment control.
- V. Implementation of ESD Planning Techniques and practices to the Maximum Extent Practicable (MEP)**
The full required ESD volume is being provided.
- VI. Request for Design Manual Waiver**
No Waivers are required



VICINITY MAP
SCALE : 1" = 1200'

4th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

LEGEND

- EXISTING 2' CONTOURS
- EXISTING 10' CONTOURS
- ~~~~~ EXISTING TREE LINE
- EXISTING WOOD FENCE
- EXISTING 15% - 24.99% SLOPES
- SOIL LINES AND TYPES
- DENOTES EXISTING WELL
- DENOTES PROPOSED TREETLINE
- DENOTES 1500 Sq.Ft. ALTERNATE WELL SITE
- DF --- DENOTES DIVERSION FENCE
- SF --- DENOTES SILT FENCE
- SSF --- DENOTES SUPER SILT FENCE
- LDB --- DENOTES LIMIT OF DISTURBANCE
- 30' BRL --- DENOTES BUILDING RESTRICTION LINE

SITE ANALYSIS DATA CHART

- A. TOTAL AREA OF THIS SUBMISSION = 9.774 ac.
B. LIMIT OF DEVELOPABLE AREA = 9.774 AC. (LOTS)
C. LIMIT OF DISTURBED AREA = 22,504 Sq. Ft. or 5.108 Ac.
D. PRESENT ZONING DESIGNATION = RC-DEO (PER 10/06/13 COMPREHENSIVE ZONING PLAN).
E. PROPOSED USE: RESIDENTIAL SUBDIVISION (SINGLE FAMILY DETACHED)
F. OPEN SPACE ON SITE: N/A
G. RECREATIONAL AREA PROVIDED: N/A
H. BUILDING COVERAGE OF SITE: 11,590 SQ.FT. OR 0.265 Ac.
I. PREVIOUS HOWARD COUNTY FILES: F-16-120
J. TOTAL AREA OF FLOODPLAIN: 0.00 Ac.
K. TOTAL AREA OF SLOPES: 25% or GREATER = 0.00 Ac.
L. NET TRACT AREA = 9.774 Ac.
M. TOTAL AREA OF FLOODPLAIN - STEEP SLOPES AREA) (TOTAL SITE AREA - FLOODPLAIN - STEEP SLOPES AREA)
N. TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 Ac.
O. TOTAL AREA OF STREAMS (INCLUDING BUFFER) = 0.00 Ac.
P. TOTAL AREA OF FOREST = 3.77 Ac.
Q. TOTAL GREEN OPEN AREA = 8.93 Ac.
R. TOTAL IMPERVIOUS AREA = 0.84 Ac.
S. AREA OF ERODIBLE SOILS = 1.01 Ac.

GENERAL NOTES

- PROPERTY ZONED RC-DEO PER 10/6/13 COMPREHENSIVE ZONING PLAN.
- AREA TABULATION:
A. TOTAL TRACT AREA = 9.774 Ac.
B. AREA OF PROPOSED ROAD R/W = 0.00 Ac.
C. AREA OF PROPOSED BUILDABLE LOTS = 9.774 Ac.
- NUMBER OF LOTS/PARCELS PROPOSED = 3
A. BUILDABLE LOTS = 3
- SOILS INFORMATION TAKEN FROM NRCS WEB SOIL SURVEY. SOILS MAP #9.
- FOREST STAND & WETLANDS DELINEATION REPORT DATED JANUARY, 2017 WAS PREPARED BY ECO-SCIENCE PROFESSIONAL, INC.
- THERE ARE NO STEEP SLOPES OF 25% OR GREATER ON SITE.
- NO CEMETERIES EXIST ON SITE BY VISUAL OBSERVATION OR LISTED IN AVAILABLE HOWARD COUNTY CEMETERY INVENTORY MAP.
- THERE ARE NO HISTORIC HOUSE STRUCTURES ON-SITE.
- SITE IS ADJACENT TO ONE SCENIC ROAD (JENNINGS CHAPEL ROAD. A SCENIC ROADS REPORT HAS BEEN PROVIDED BY FISHER, COLLINS & CARTER, INC. DATED 01/20/17).
- A TRAFFIC STUDY IS NOT REQUIRED FOR THIS MINOR SUBDIVISION.
- THERE IS ONE EXISTING STRUCTURE (SHED) AND WOOD FENCING LOCATED ONSITE. BOTH ARE TO BE REMOVED. 12. ALL LOTS AREAS ARE MORE OR LESS.
- MINIMUM REQUIREMENTS:
A) WIDTH - 12 FEET (16 FEET) SERVING MORE THAN ONE RESIDENCE;
B) SURFACE - 5X (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1 - 1/2" MINIMUM);
C) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45-FOOT TURNING RADIUS;
D) STRUCTURES (CULVERTS/BOXGIRDS) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING);
E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER SURFACE;
F) STRUCTURE CLEARANCES - MINIMUM 12 FEET;
G) MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE;
H) DEED REFERENCE: LIBER 15427, FOLIO 00460.
- ALL EXISTING WELL AND SEPTIC COMPONENTS TO BE ABANDONED OR REPLACED MUST BE PROPERLY ABANDONED AND REPLACEMENT COMPONENTS APPROVED BY THE HEALTH DEPARTMENT PRIOR TO SIGNATURE OF THE FINAL PLAT.
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND ROAD RIGHT-OF-WAY LINE AND NOT TO THE PIPESTEM LOT DRIVEWAY.
- ARTICLES OF INCORPORATION FOR THE SQUARE WOODS PROPERTY HOMEOWNERS ASSOCIATION, INC. WILL BE FILED WITH THE STATE DEPARTMENT OF ASSESSMENTS AND TAXATION PRIOR TO RECORDED OF THE FINAL PLAT.
- A PRE-SUBMISSION COMMUNITY MEETING WAS HELD FOR THIS PROJECT ON AUGUST 22, 2016.
- THERE IS ONE EXISTING SEPTIC SYSTEM LOCATED ONSITE (TO BE USED FOR PROPOSED LOT 3). THERE IS ONE EXISTING WELL LOCATED ON LOT 3 (TO BE USED FOR PROPOSED LOT 3).
- 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 SEWAGE 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. RECORDED OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
- THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
- ANY CHANGES TO THE PRIVATE SEWERAGE AREA SHALL REQUIRE A REVISED PERC CERTIFICATION PLAN.
- 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.
- THERE ARE NO AREAS OF 100-YEAR FLOODPLAIN ON THIS PROJECT.
- FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL FOR THIS SUBMISSION WILL BE FULFILLED BY THE USE OF A FOREST BANK.
- PERIMETER LANDSCAPING FOR THIS DEVELOPMENT SHALL BE IN ACCORDANCE WITH SECTION 16.124 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND LANDSCAPE MANUAL. FINAL LANDSCAPING REVIEW AND SURETY IS DEFERRED UNTIL THE FINAL SUBDIVISION PLAN STAGE.
- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- THE EXISTING TOPOGRAPHY INFORMATION SHOWN IS BASED ON HOWARD COUNTY AERIAL CONTOURS AND SUPPLEMENTED WITH A FIELD RUN TOPOGRAPHIC SURVEY PERFORMED ON OR ABOUT 7/21/16 BY FISHER, COLLINS & CARTER, INC.
- BOUNDARY INFORMATION IS BASED ON A SURVEY PERFORMED ON OR ABOUT FEBRUARY, 2016 BY FISHER, COLLINS & CARTER, INC.
- COORDINATES BASED ON NAD '83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NOS:
CONTROL STATION NO. 2082 N 568,346.30 ELEV. 577.92
E 1,287,505.58
CONTROL STATION NO. 134A N 589,965.19 ELEV. 566.34
E 1,289,964.91
- THIS PROPERTY IS NOT LOCATED WITHIN THE METROPOLITAN DISTRICT. PRIVATE WELL AND SEPTIC WILL BE UTILIZED FOR THIS PROJECT
- STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. STORMWATER MANAGEMENT IS BEING PROVIDED BY THE USE OF THREE AREAS OF (M-5) DRYWELLS, ONE (M-6) MICRO-BIORETENTION FACILITY AND ONE AREA OF (N-1) NON-ROOFTOP DISCONNECTION. FACILITIES TO MEET AND EXCEED THE ESD VOLUME.
- STORM WATER MANAGEMENT DEVICES LOCATED ON INDIVIDUAL LOTS WILL BE OWNED AND MAINTAINED BY THAT PARTICULAR LOT OWNER AND SUBJECT TO THE REQUIREMENTS OF A RECORDED DECLARATION OF COVENANT. SWM DEVICES LOCATED WITHIN THE PUBLIC R/W WILL BE PRIVATELY OWNED AND JOINTLY MAINTAINED, AND SWM DEVICES LOCATED ON PARCELS WILL BE OWNED AND MAINTAINED BY THE H.O.A., SWM FACILITIES SERVING PUBLIC ROADS, BUT LOCATED ON PRIVATE LOTS WILL BE PRIVATELY OWNED AND JOINTLY MAINTAINED.
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- ALL WELLS MUST BE DRILLED PRIOR TO HOWARD COUNTY HEALTH DEPARTMENT SIGNATURE OF THE FINAL PLAT.
- APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN AND/OR REDLINE 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 REDLINE 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.
- THERE IS AN AREA OF ERODIBLE SOILS LOCATED TOWARDS THE REAR OF THE PROPERTY.

TITLE SHEET

ENVIRONMENTAL CONCEPT PLAN

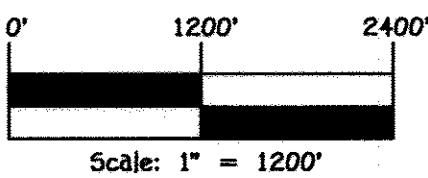
SQUARE WOODS

LOTS 1 THRU 3

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Zoned: RC-DEO
Tax Map: #20 Parcels: #140
Howard County, Maryland 4th Election District
Date: May 11, 2017 Scale: 1"=50'
Sheet 1 Of 5

Owner/Developer

Paul A. Casasco And
Jennifer K. Casasco
3365 Jennings Chapel Road
Woodbine, Maryland 21797
Phone: # 301-529-5728



PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 36366, EXPIRATION DATE: 01/12/2018.

Angela ...
Signature Of Professional Engineer DATE: 7/26/17



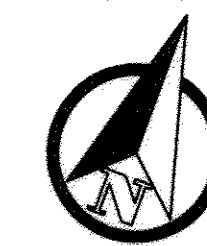
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SOURCE OFFICE PARK - 10722 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461 - 2295

8/18/17

DATE

8/14/17

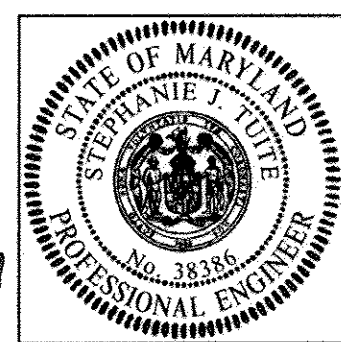
DATE



PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 30306, EXPIRATION DATE: 01/12/2018.

Anthony J. Smith 7/26/17
Signature of Professional Engineer DATE



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10072 BALTIMORE NATIONAL PIKE
ELIJAH CITY, MARYLAND 21042
(410) 461-2895

0' 50' 100' 150'
Scale: 1" = 50'

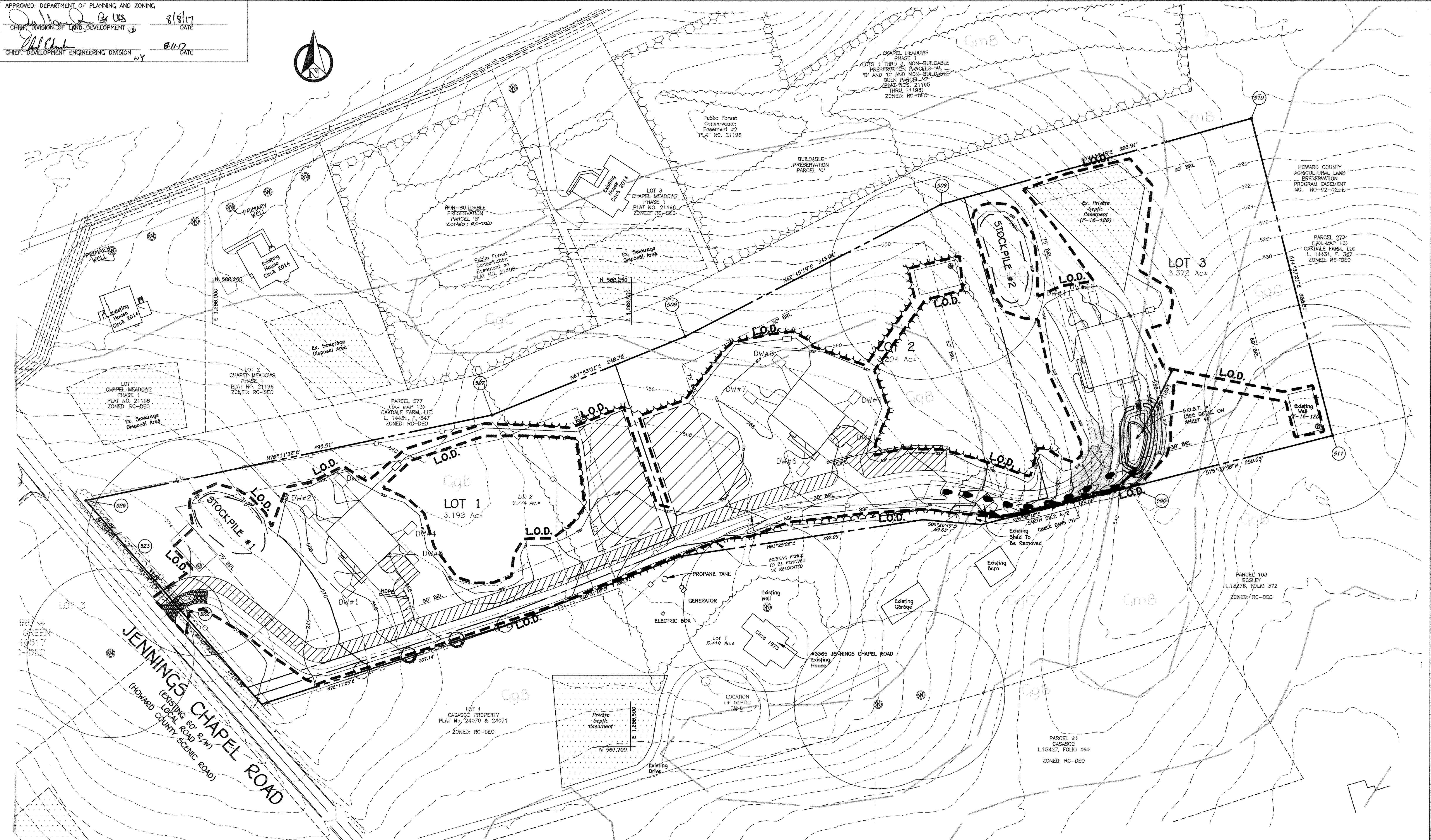
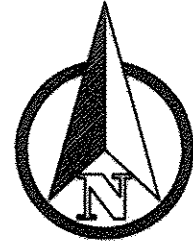
Owner/Developer

Paul A. Casasco And
Jennifer K. Casasco
3365 Jennings Chapel Road
Woodbine, Maryland 21797
Phone: # 301-529-5728

ENVIRONMENTAL CONCEPT PLAN

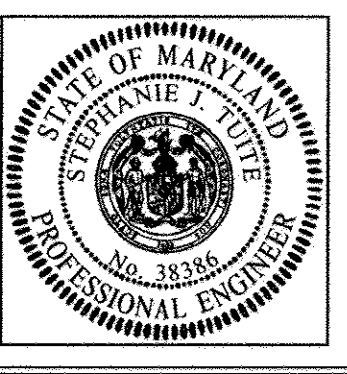
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Sheet 2 of 5



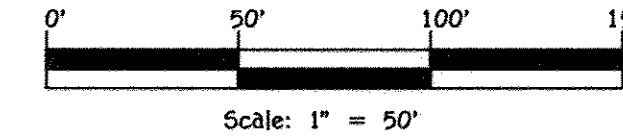
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 451-2895

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME
AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF
THE STATE OF MARYLAND, LICENSE NO. 38386, EXPIRATION DATE: 01/12/2018.
Signature of Professional Engineer
DATE 7/26/17



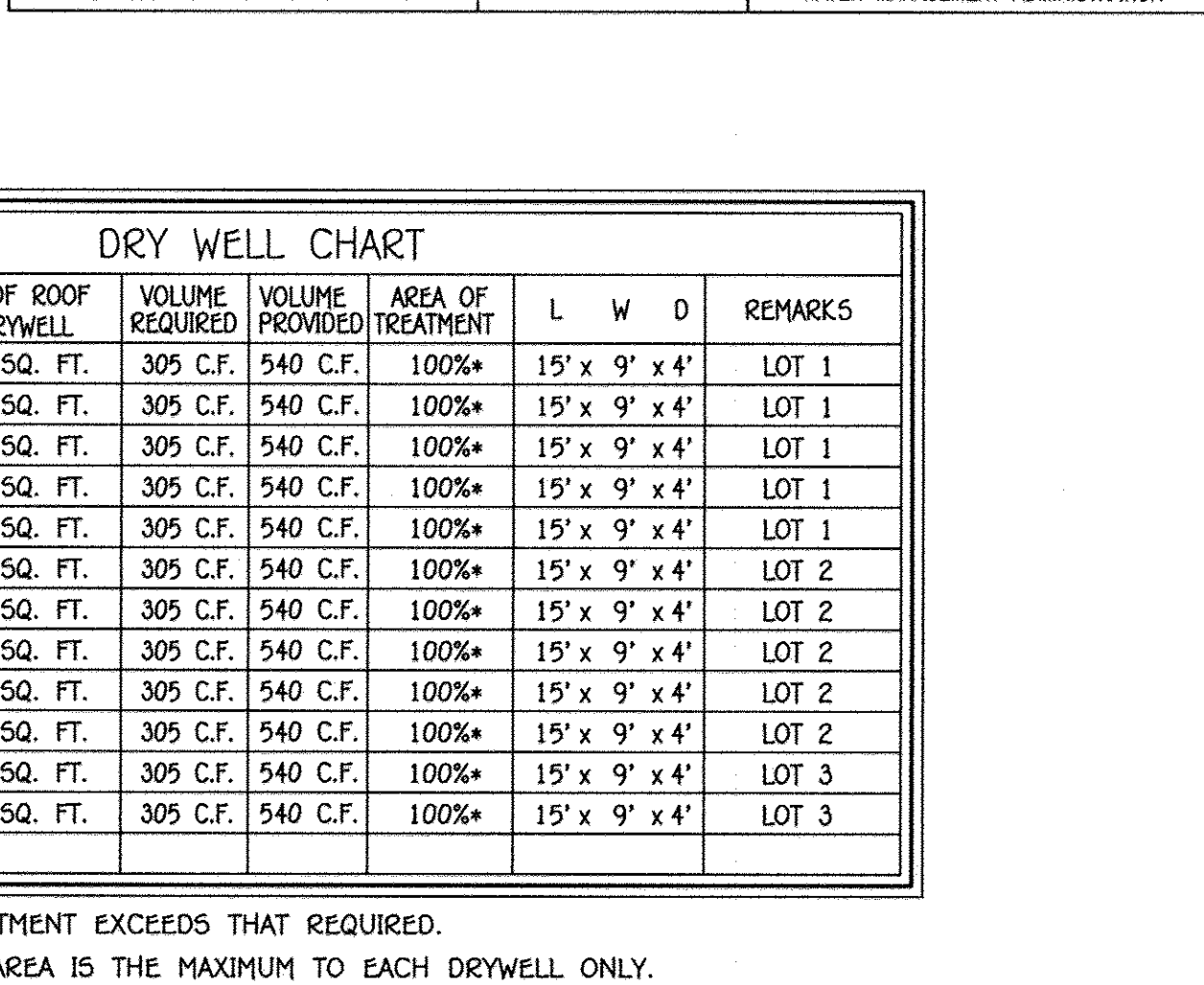
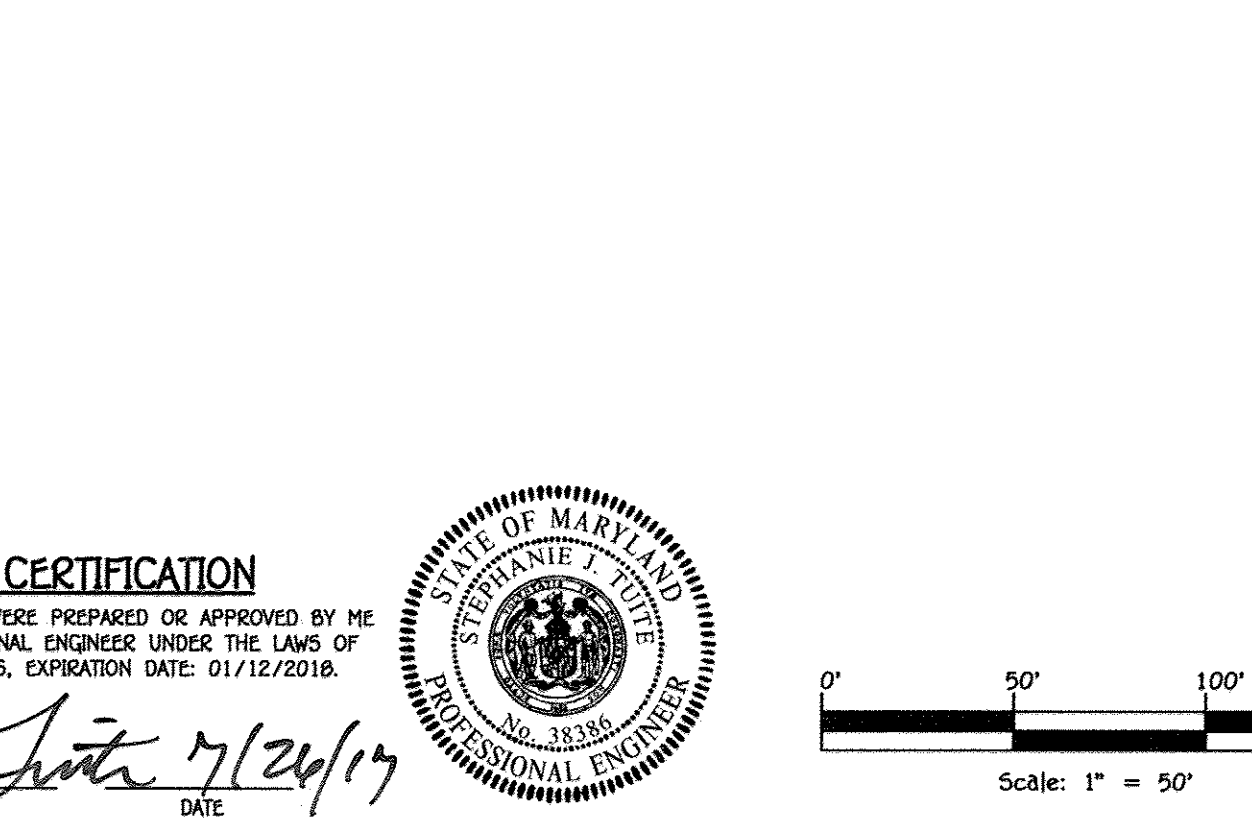
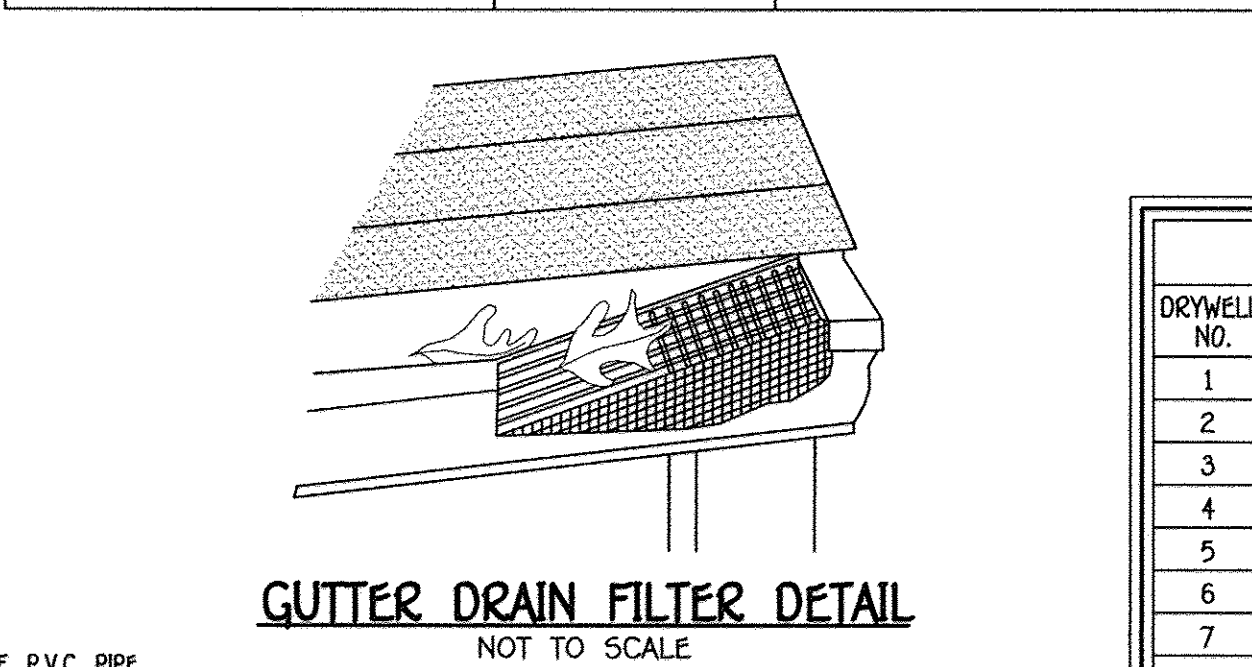
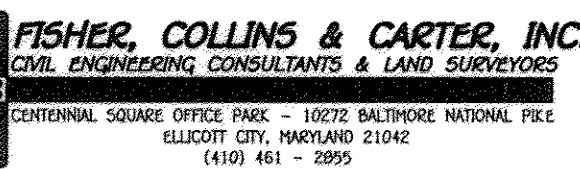
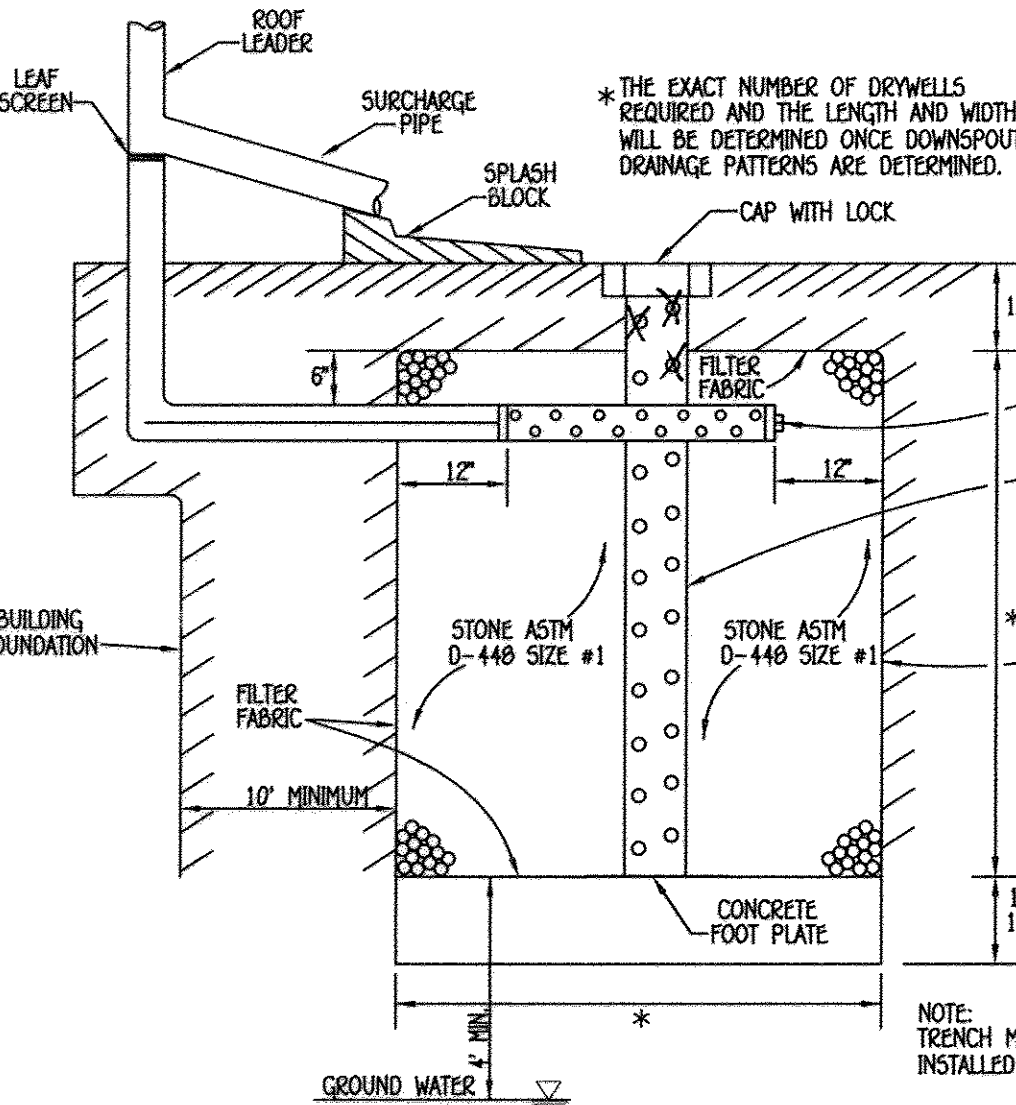
SOILS LEGEND			
SOIL	NAME	CLASS	K FACTOR
GgA	Glenelg loam, 0 to 3 percent slopes	B	0.20
GgB	Glenelg loam, 3 to 8 percent slopes	B	0.20
GgC	Glenelg loam, 8 to 15 percent slopes	B	0.20
GmB	Glenville silt loam, 3 to 8 percent slopes	C	0.37

---Denotes Highly Erodible Soils



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Jennifer E. Casasco
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Phone: 301-529-5728

SCHEMATIC GRADING, SEDIMENT & EROSION CONTROL PLAN
SQUARE WOODS
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Sheet 3 Of 5



**HOWARD SOIL CONSERVATION DISTRICT
STANDARD SEDIMENT CONTROL NOTES**

OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF
KINGS, CONSTRUCTION INSPECTION DIVISION (CID) PRIOR TO THE START OF ANY
TION (410-313-1895).

AND STRUCTURES. PRACTICES ARE TO BE INSTALLED ACCORDING TO THE
OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT
STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
AND THEREOF.

INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT
GRASS STABILIZATION SHALL BE COMPLETED WITHIN:
NDARY DATES FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER
ED AREAS SHALL SLOPES GREATER THAN 3:1.

ED TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
ED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN
CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND
SEDIMENT CONTROL FOR PERIMETER SEEDING (SEC. 8-4-5), TEMPORARY SEEDING (SEC. 8-4-4)
HING (SEC. 8-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE
COMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND
MENT OF GRASSES.

SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN
CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE
COUNTY SEDIMENT CONTROL INSPECTOR.

AREA OF SITE (THIS SUBMISSION) 9.774 ACRES
DISTURBED 5.108 ACRES
TO BE ROOFED OR PAVED 0.04 ACRES
TO BE VEGETATIVELY STABILIZED 4.268 ACRES
TOTAL 9.930 ACRES
ON 5,000 CU.YDS. (unadjusted)
TOTAL 5,000 CU.YDS. (unadjusted)

LOCATION

SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF
MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD
COUNTY SEDIMENT CONTROL INSPECTOR.

ES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION
MAY BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND
CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING
ACTIVITY. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE INSPECTION, UNTIL THIS INITIAL
BY THE INSPECTION AGENCY IS MADE.

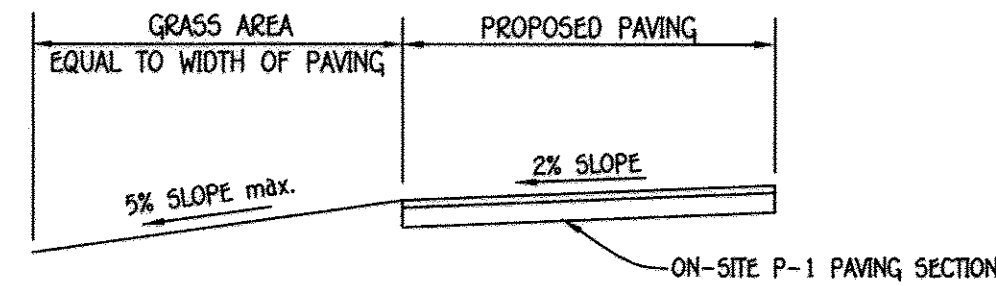
FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT
ALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORK DAY, WHICHEVER IS

IS OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND
BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.

TO BE SEQUENCED TO AVOID THAT GRADING ACTIVITIES THAT EXCEED GRADING UNIT
ACREAGE OF 20 ACRE PER GRADING UNIT) AT A TIME, WORK MAY PROCEED TO A
AT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE
GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT
UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE
ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

DRYWELL NO.	AREA OF ROOF TO DRYWELL	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF TREATMENT	L	W	D	REMARKS
1	1,000 SQ. FT.	305 C.F.	540 C.F.	100%*	15' x	9' x	4' x	LOT 1
2	1,000 SQ. FT.	305 C.F.	540 C.F.	100%*	15' x	9' x	4' x	LOT 1
3	1,000 SQ. FT.	305 C.F.	540 C.F.	100%*	15' x	9' x	4' x	LOT 1
4	1,000 SQ. FT.	305 C.F.	540 C.F.	100%*	15' x	9' x	4' x	LOT 1
5	1,000 SQ. FT.	305 C.F.	540 C.F.	100%*	15' x	9' x	4' x	LOT 1
6	1,000 SQ. FT.	305 C.F.	540 C.F.	100%*	15' x	9' x	4' x	LOT 2
7	1,000 SQ. FT.	305 C.F.	540 C.F.	100%*	15' x	9' x	4' x	LOT 2
8	1,000 SQ. FT.	305 C.F.	540 C.F.	100%*	15' x	9' x	4' x	LOT 2
9	1,000 SQ. FT.	305 C.F.	540 C.F.	100%*	15' x	9' x	4' x	LOT 2
10	1,000 SQ. FT.	305 C.F.	540 C.F.	100%*	15' x	9' x	4' x	LOT 2
11	1,000 SQ. FT.	305 C.F.	540 C.F.	100%*	15' x	9' x	4' x	LOT 3
12	1,000 SQ. FT.	305 C.F.	540 C.F.	100%*	15' x	9' x	4' x	LOT 3

* AREA OF TREATMENT EXCEEDS THAT REQUIRED.
NOTE: ROOFTOP AREA IS THE MAXIMUM TO EACH DRYWELL ONLY.



TYPICAL DRIVEWAY SECTION
FOR NON-ROOFTOP DISCONNECT CREDIT

NOT TO SCALE

OPERATION & MAINTENANCE SCHEDULE
FOR PRIVATELY OWNED AND MAINTAINED,
DISCONNECTION OF NON-ROOFTOP 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.

STORMWATER MANAGEMENT DETAILS,
SEDIMENT & EROSION CONTROL NOTES AND DETAILS

SQUARE WOODS
LOTS 1 THRU 3

A Resubdivision Of Lot 2, Recorded As "Casasco Property, Lots 1 And 2,"

s. 24070 Thru 24079

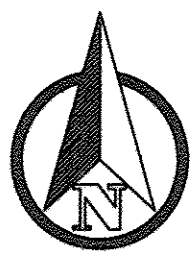
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Tax Map: #20 Parcels: #140
Howard County, Maryland 4th Election District
Date: May 11, 2017 Scale: 1"=50'
Sheet 4 Of 5

Owner/Developer

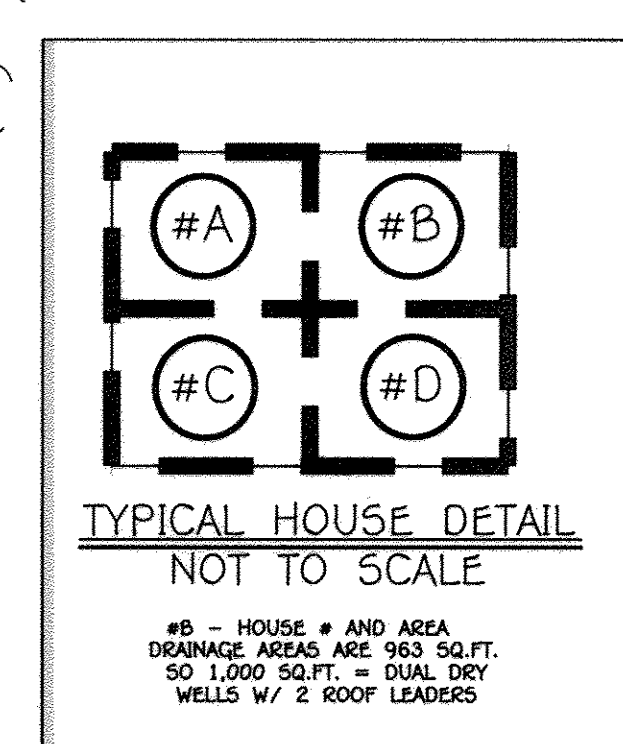
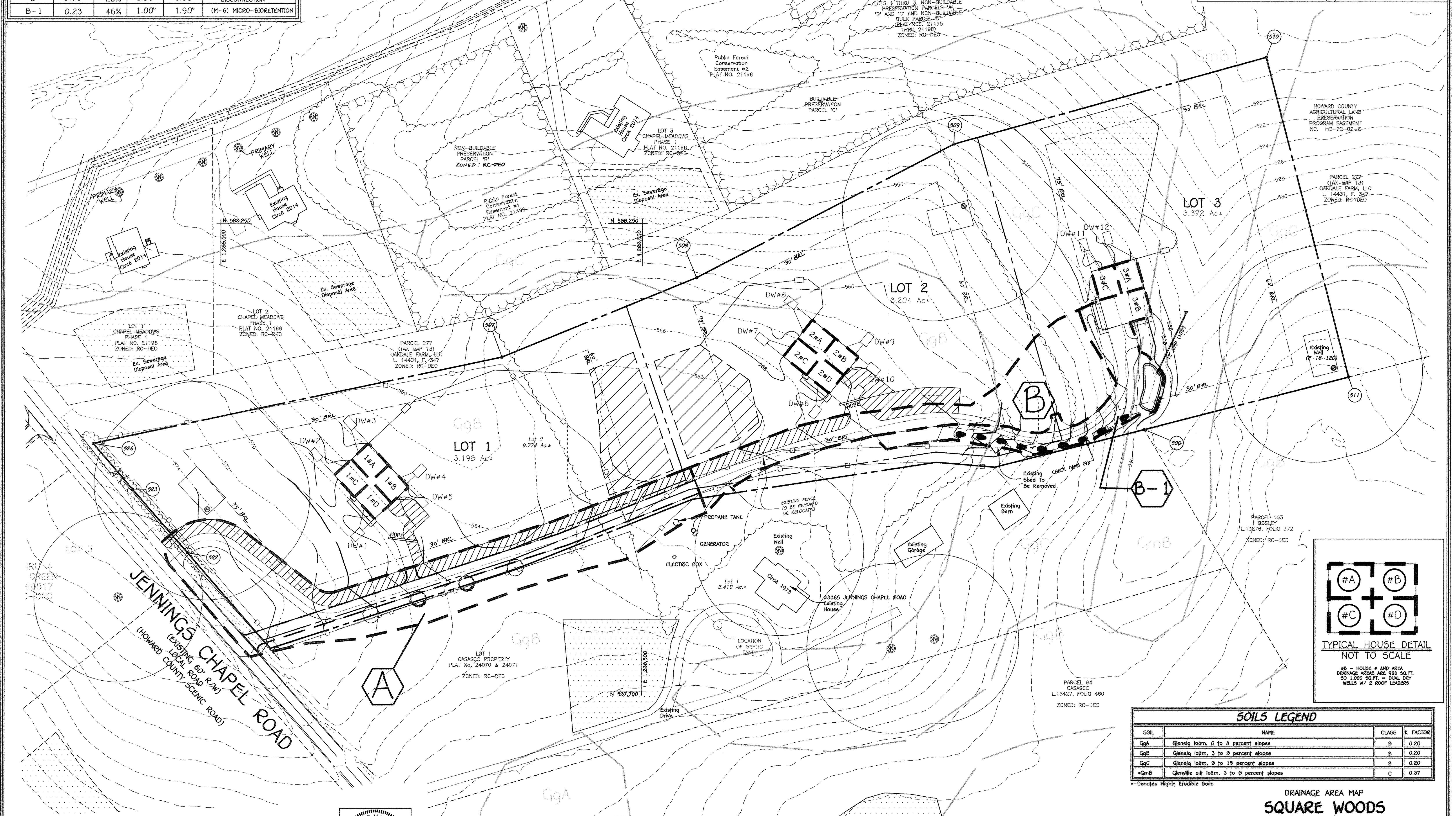
Paul A. Casasco And
Jennifer K. Casasco
3365 Jennings Chapel Road
Woodbine, Maryland 21797
Phone: * 301-529-5720

ECP 17-036

SWM DRAINAGE AREA SUMMARY TABLE					
DRAINAGE AREA	AREA AC. +/-	% IMP.	REQ. Pe	PROV. Pe	REMARKS
A	1.12	22%	1.00"	1.00"	(N-2) NON-ROOFTOP DISCONNECTION
B	0.71	20%	1.00"	1.00"	(N-2) NON-ROOFTOP DISCONNECTION
B-1	0.23	46%	1.00"	1.90"	(M-6) MICRO-BIORETENTION



APPROVED: DEPARTMENT OF PLANNING AND ZONING
8/9/17
DATE
8/14/17
DATE
CHIEF, DIVISION OF LAND DEVELOPMENT, RD
CHIEF, DEVELOPMENT ENGINEERING DIVISION, NY



SOILS LEGEND			
SOIL	NAME	CLASS	C FACTOR
GgA	Glenelg loam, 0 to 3 percent slopes	B	0.20
GgB	Glenelg loam, 3 to 8 percent slopes	B	0.20
GgC	Glenelg loam, 8 to 15 percent slopes	B	0.20
GmB	Glenelg silt loam, 3 to 8 percent slopes	C	0.37

---Denotes Highly Erodible Soils

DRAINAGE AREA MAP
SQUARE WOODS
LOTS 1 THRU 3
A Resubdivision Of Lot 2, Recorded As "Casasco Property, Lots 1 And 2,"
Plat Nos. 24070 Thru 24071
Zoned: RC-DEO
Tax Map: #20 Parcels: #140
Howard County, Maryland 4th Election District
Date: May 11, 2017 Scale: 1"=50'
Sheet 5 of 5

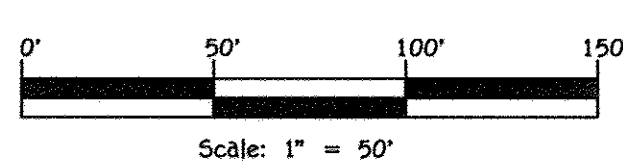
PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME
AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF
THE STATE OF MARYLAND, LICENSE NO. 36386, EXPIRATION DATE: 01/12/2018.

Signature of Professional Engineer
DATE 7/26/17



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 16072 BALTIMORE NATIONAL PIKE
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