► AA 689-06 SUB Maio, Christopher 06-0120

CH Converts
II/20/26
NS converts
NS converts
NS converts
Le 107

MSA_S_1829-5517

Anthony G. Brown Lt. Governor



Margaret G. McHale Chair

Ren Serey
Executive Director

STATE OF MARYLAND CRITICAL AREA COMMISSION CHESAPEAKE AND ATLANTIC COASTAL BAYS

1804 West Street, Suite 100, Annapolis, Maryland 21401 (410) 260-3460 Fax: (410) 974-5338 www.dnr.state.md.us/criticalarea/

May 28, 2009

Mr. Tom Burke Anne Arundel County Office of Planning and Zoning 2664 Riva Road, MS 6301 Annapolis, Maryland 21401

Re: Maio, Christopher, Lot 6 & Open Space

P 06-0120 00NF, S 99-130

Dear Mr. Burke:

Thank you for forwarding the above-referenced subdivision application for review and comment. The applicant is proposing to subdivide an existing lot with a dwelling and open space parcel into four lots and two open space parcels with construction of three new dwellings, driveways and septic systems on the three new proposed lots. The majority of the property is within the Critical Area and is designated as a Limited Development Area (LDA). I have outlined this office's comments on the proposal below:

- 1) Please have the applicant obtain and submit a revised letter of review from the Maryland Department of Natural Resources' Wildlife and Heritage Service (WHS) stating whether any known protected species will be impacted by the proposed development on the property. This office requires a letter no older than two years be on file and the letter with this application is dated 11/24/2006.
- 2) It appears that there are existing structures on the property that are not identified on the plans. Please provide an existing conditions plan showing existing structures that will be removed. These structures and any other existing lot coverage should be incorporated into the lot coverage tables as existing lot coverage, and existing lot coverage to be removed, or existing lot coverage to remain, as applicable.
- 3) The plat and plans label the expanded Buffer as two arrows pointing to an open area in the middle of lot nine. It is unclear what this is meant to show. The expanded Buffer must be shown as a line. Where the 100-foot Buffer is contiguous to slopes 15% or greater as it is on this property, this line is determined by expanding the Buffer either four feet for every percent of slope, or fifty feet from the top of the slope, whichever is greater. Please have the applicant map the expanded Buffer correctly on the plat and plans. Also, the slopes 15% or greater should be shown on the plat as well.

- 4) Please have the applicant clarify the purpose of the box that is attached to the northern end of proposed Open Space A, and to the east of lot nine's driveway, and to the east of open space lot B.
- 5) Please have the applicant provide an explanation for the proposed division of Open Space A into two sections connected by a long six-foot wide corridor which will run along the property boundary of lots 6, 7 and 8.
- 6) Please have the applicant provide information regarding the necessity of the proposed rain garden within the existing forested area in proposed Open Space A. We question whether an alternate stormwater management measure may be feasible that would create less of an impact to the existing forested area, which itself provides a stormwater benefit.
- 7) Please have the applicant provide additional information with reference to the clearing calculations as described below:
- Provide information explaining the proposed path of clearing shown through the septic area on lot 8.
- Confirm that the proposed clearing calculations include the clearing that will be done for the proposed septic systems on all of the lots.
- Clarify whether the proposed clearing amount on lot 8 of 1,446 square feet includes the clearing shown that will be done along the shared use drive.
- Clarify why no clearing is calculated for lot 6, even though it appears that some clearing will be done within the existing treeline for the proposed shared use driveway within the lot lines for proposed lot 6.
- Please correct the existing forest calculations for lot 6, and the existing open space area. Currently, the plans show that this number is 0 square feet which conflicts with the existing treeline that is shown within these areas on the plans.
- Identify where the clearing that will be necessary to be done to construct the proposed rain garden has been accounted for in the clearing calculations.
- 8) Please have the applicant confirm that the area of the proposed shared use driveway has been incorporated into the lot coverage calculations.
- 9) There is a note on the plans that identifies a stream buffer outside of the Critical Area. Please have the applicant show this stream on future plans.
- 10) We note that the applicant has provided a Critical Area Reforestation Planting List. Please have the applicant provide a planting plan showing the location and configuration of any mitigation plantings that will be located on site, if applicable. Also, we note that there is an error in the planting calculations, and one two-inch caliper tree planted in a cluster with **three** two to three

Mr. Burke May 28, 2009 Page 3 of 3

gallon shrubs equals 400 square feet of planting credit, not, one tree with two shrubs, as is currently shown on the plans.

- 11) There appears to be a math error in the lot area calculations on the plat and plans. When adding the area of the proposed lots under the area tabulations, the sum is 232,770 square feet. However, the total lot area provided on the plat and plans is 209,037 square feet. Please have the applicant correct this error.
- 12) There is conflicting information on the plat and plans with reference to how much of the property will be placed in a forest conservation easement. The note under the "tree bill summary" table indicates that the total easement area within the Critical Area will be 2.283 acres. However, the Forest Conservation Easement note under "Area Tabulations" indicates that 69,539 square feet of Forest Conservation Easement #1 is in the Critical Area, and 40,570 square feet of Forest Conservation Easement #2 is in the Critical Area. This adds up to 2.53 acres. Please have the applicant resolve or explain the inconsistency in the two different stated total easement areas within the Critical Area.

Thank you for the opportunity to comment. Please telephone me if you have any questions at (410) 260-3481.

Sincerely,

Amber Widmayer

Natural Resources Planner

cc:

AA 689-06

Martin O'Malley

Governor

Anthony G. Brown Lt. Governor



Margaret G. McHale Chair

Ren Serey Executive Director

STATE OF MARYLAND CRITICAL AREA COMMISSION CHESAPEAKE AND ATLANTIC COASTAL BAYS

1804 West Street, Suite 100, Annapolis, Maryland 21401 (410) 260-3460 Fax: (410) 974-5338 www.dnr.state.md.us/criticalarea/

July 2, 2007

Mr. Thomas Burke Anne Arundel County Office of Planning and Zoning 2664 Riva Road, MS 6301 Annapolis, Maryland 21401

Re: Cl

Christopher Maio

S 99-130, P 06-0120

Dear Mr. Burke:

I have received the resubmittal for the above-referenced subdivision request. It appears the applicant has addressed all of the comments of the last letter from this office dated February 12, 2007; therefore, we have no further comments.

Thank you for the opportunity to comment. Please telephone me at (410) 260-3481 or Lisa Hoerger at (410) 260-3478 if you have any questions.

Sincerely,

Megan J. Sines

Natural Resources Planner

cc:

AA 207-07

SURVEYOR:

SEE SURVEYOR'S CERTIFICATE BELOW OWNER'S DEDICATION.

SURVEYOR'S SIGNATURE

DATE

SURVEYOR'S TYPED NAME AND ADDRESS:

SURVEYOR'S PROFESSIONAL SEAL:

CARL A. STEVENSON RONALD W. JOHNSON ASSOCIATES, INC. 2661 RIVA ROAD, BLDG 400, STE 420 ANNAPOLIS, MD 21401

SEAL

DEDICATION BY OWNERS

THE UNDERSIGNED, BEING ALL OWNERS OF THE PROPERTY SHOWN AND DESCRIBED ON THIS RECORD PLAT, ADOPT THIS RECORD PLAT; ESTABLISH THE MINIMUM BUILDING RESTRICTION LINES; AND DEDICATE ALL PUBLIC ROADS, WIDENING STRIPS, FLOODPLAINS, EASEMENTS AND RIGHTS-OF-WAY TO PUBLIC USE; SUCH LANDS BEING DEEDED TO ANNE ARUNDEL COUNTY, MARYLAND OR TO THE STATE AS MAY BE APPROPRIATE, PRIOR TO OR CONTEMPORANEOUS WITH THE RECORDATION OF THIS PLAT.

TO THE BEST OF OUR KNOWLEDGE, INFORMATION, AND BELIEFS, THE REQUIREMENT OF §3-108 OF THE REAL PROPERTY ARTICLE OF THE STATE CODE, CONCERNING THE MAKING OF PLATS AND SETTING OF MARKERS, HAVE BEEN SATISFIED. THERE ARE NO SUITS, ACTIONS AT LAW, LEASES, LIENS, MORTGAGES, TRUSTS, EASEMENTS, OR RIGHTS-OF-WAY, AFFECTING THE PROPERTY INCLUDED IN THIS RECORD PLAT EXCEPT THE FOLLOWING:

THE OPEN SPACE SHOWN ON THIS RECORD PLAT IS SET ASIDE FOR THE USE OF THE RESIDENTS OF THE SUBDIVISION AND IS CONVEYED TO THE "CHRISTOPHER A. MAIO PROPERTY," HOMEOWNERS ASSOCIATION WITH THE RECORDATION OF THIS PLAT.

AND ALL OWNERS OF THE PROPERTY HAVE AFFIXED THEIR SIGNATURES AND SEALS ON THIS RECORD PLAT.

WITNESS AND DATE:

OWNER AND DATE:

CHRISTOPHER A. MAIO

SURVEYOR'S CERTIFICATE

I CERTIFY THAT THE PROPERTY ON THESE RECORD PLATS IS CORRECT; THAT IT IS A SUBDIVISION OF ALL OF THE LANDS CONVEYED BY EMILY C. NOEL, SURVIVING TENANT BY THE ENTIRETY OF THOMAS L. NOEL WHO DIED ON OR ABOUT NOVEMBER 6, 1993, TO CHRISTOPHER A. MAIO, BY DEED DATED MAY 3, 1996 AND RECORDED IN THE LAND RECORDS OF ANNE ARUNDEL COUNTY, MARYLAND IN LIBER 10480, FOLIO 784; AND THAT THE REQUIREMENTS OF §3-108 OF THE REAL PROPERTY ARTICLE OF THE STATE CODE, CONCERNING THE MAKING OF PLATS AND SETTING OF MARKERS, HAVE BEEN SATISFIED.

DATE

SURVEYOR'S SIGNATURE

SURVEYOR'S TYPED NAME AND ADDRESS:

SURVEYOR'S PROFESSIONAL SEAL:

CARL A. STEVENSON, PROPERTY LINE SURVEYOR NO. 149 RONALD W. JOHNSON ASSOCIATES, INC. 2661 RIVA ROAD, BLDG. 400, STE. 420 ANNAPOLIS, MD 21401

PERPETUAL RIGHT-TO-DISCHARGE STATEMENT

I, CHRISTOPHER A. MAIO, FOR MYSELF AND MY HEIRS, LEGAL REPRESENTATIVES, PERSONAL REPRESENTATIVES, SUCCESSORS, AND ASSIGNS HEREBY GRANT THE PERPETUAL RIGHT-TO-DISCHARGE THE FLOW OF STORMWATER FROM SUCH NECCESSARY DRAINAGE FACILITIES AND APPURTENANCES TO ADEQUATELY DRAIN THE NATURAL WATERSHED AND ADJACENT PROPERTIES INTO EXISTING WATERWAYS AND/OR UPON EXISTING GROUND. SUCH DISCHARGE ARE INDICATED BY THE SYMBOLS •--AND , PUBLIC AND , PRIVATE RESPECTIVELY AS SHOWN GRAPHICALLY ON THESE PLANS.

OWNER(S)

WITNESS

DATE

CHRISTOPHER A. MAIO

DATE

STORMWATER MANAGEMENT PRACTICE NOTE

STORMWATER MANAGEMENT PRACTICES HAVE BEEN PROVIDED FOR THIS SUBDIVISION IN ACCORDANCE WITH ARTICLE 16, SECTION 3-301 OF THE ANNE ARUNDEL COUNTY CODE AND IN KEEPING WITH THE PLAN ON FILE WITH THE ANNE ARUNDEL COUNTY OFFICE OF PLANNING AND ZONING. THE NATURAL AREA CREDIT AS FOUND IN THE "MARYI AND STORMWATER DESIGN MANUAL." WAS UTILIZED IN THE PREPARATION OF THE PLAN. A CONSERVATION EASEMENT HAS BEEN ESTABLISHED AS CREDIT FOR PRACTICE, IS RECORDED, AND CAN BE FOUND IN THE LAND RECORDS OF ANNE ARUNDEL COUNTY, MARYLAND (SEE L/F IN TREE BILL NOTE 2. PLAT 1).

SUBDIVISION POTENTIAL NOTE

THERE IS NO FURTHER SUBDIVISION POTENTIAL FOR THIS PROPERTY

PREVIOUSLY RECORDED PLAT NOTE

THIS SUBDIVISION (EXISTING OPEN SPACE AND LOT 6) WERE PREVIOUSLY PLATTED ON THE PLAT OF THE "CHRISTOPHER A. MAIO PROPERTY," AND RECORDED AMONG THE LAND RECORDS OF ANNE ARUNDEL COUNTY, MARYLAND IN PLAT BOOK 237, PAGES 34-37, AND IS SUBJECT TO ALL PREVIOUS PLAT NOTES, EXCEPT AS AMENDED, REVISED, UPDATED, OR OTHERWISE CHANGED HEREON.

DENSITY CALCULATION

300,673 S.F. AC. TOTAL THIS SUBDIVISION AREA - 30,107 S.F. (IN STEEP SLOPES, WETLANDS AND/OR 100 YR. FLOODPLAIN) 270,566 S.F. NET AREA FOR DENSITY

R1 PERMITTED DENSITY = 1 LOT PER 40,000 S.F.

270,566 S.F. /40,000 S.F. = 6.76 = 6 LOTS PERMITTED LOTS PROVIDED = 4, SO DENSITY IS OK

AS A CHECK OF OVERALL DENSITY:

12 AC.± IN TOTAL ORIGINAL TRACT PRIOR TO SUBDIVISION -0.691 AC. STEEP SLOPES/WETLANDS AND/OR FLOODPLAIN 11.309 AC. NET AREA FOR DENSITY R1 PERMITTED DENSITY = 1 LOT PER 40,000 S.F.

12 AC. / 40,000 S.F. OR 0.918 AC. = 13 LOTS PERMITTED TOTAL LOTS PROVIDED ALL SUBDIVISIONS = 9 LOTS

11

65 7.7

1

THE STATE OF THE S

Carl.

MARIE

Salah

MINE S

RECREATION AREA REQUIREMENTS/PROVISIONS

IN ACCORDANCE WITH ARTICLE 17, SECTION 3-506 (b) AND (c) OF THE A.A.Co. CODE THE REQUIRED RECREATION AREA HAS BEEN PROVIDED AS FOLLOWS:

RECREATION AREA REQUIRED - 3 LOTS X 1,000 S.F. = 3,000 S.F. DRY GROUND (ACTIVE) AREA REQUIRED 75% = 2,250 S.F.

RECREATION AREA PROVIDED = 3,000 S.F. DRY GROUND AREA PROVIDED = 3,000 S.F.

FEE IN LIEU WAS PAID FOR LOT 9 BY CASH RECEIPT #2241957 ON 6/29/2001 THEREFORE, RECREATION AREA IS ONLY REQUIRED FOR LOTS 6, 7 AND 8. AND IS COUNTED TOWARD REQUIRED OPEN SPACE. (SEE OPEN SPACE STATEMENT/ CALCULATION).

OPEN SPACE STATEMENT/CALCULATION

IN ACCORDANCE WITH ARTICLE 17, SECTION 3-506 (b) OF THE A.A.Co. CODE, 30% OF THE SUBDIVISION AREA IS REQUIRED TO BE IN OPEN SPACE INCLUSIVE OF THE REQUIRED RECREATION AREA. OPEN SPACE HAS BEEN PROVIDED AS FOLLOWS:

TOTAL SITE AREA -REQUIRED OPEN SPACE (30%) - 300,673 S.F. or 6.902 AC. 90,202 S.F. or 2.071 AC.

TOTAL OPEN SPACE PROVIDED -(30.5%)

91,636 S.F. or 2,103 AC.

PRIVATE ACCESS EASEMENT STATEMENT

W/I LOTS 6-8 FOR LOTS 6-9 & REC. AREA

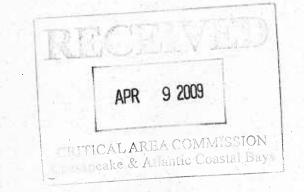
THE 30' WIDE PRIVATE USE-IN-COMMON ACCESS EASEMENT WITHIN LOT 6, 7 & 8 IS INTENDED TO PROVIDE ACCESS TO AND FROM LOTS 6, 7, 8, 9 AND THE RECREATION AREA. THE OWNERS OF THESE LOTS ARE RESPONSIBLE FOR THE MAINTENANCE OF THE ACCESS EASEMENT AND ARE NOT ELIGIBLE TO RECEIVE COUNTY SERVICES PROVIDED TO THE OWNERS OF LOTS ABUTTING COUNTY ROADS AS MORE FULLY SET FORTH IN A DECLARATION OF ACCESS EASEMENT AND MAINTENANCE AGREEMENT RECORDED AMONG THE LAND RECORDS OF ANNE ARUNDEL COUNTY MARYLAND IN LIBER FOLIO

DENIED ACCESS STATEMENT

LOTS 6, 7, AND 8 SHALL GAIN ACCESS VIA CHRISTOPHERS WAY AND THE PRIVATE 30' ACCESS EASEMENT WITHIN LOT 9. ACCESS SHALL NOT BEOBTAINED VIA SOUTHVIEW DRIVE.

MODIFICATION NOTE

MODIFICATION NO.



(PUBLIC SEWER & WATER)

(PRIVATE INDIVIDUAL WELLS AND SEPTIC SYSTEMS)

DATE

1.682 AC. 5.220 AC.

300,673 S.F./6.902 AC.

209,037 S.F./4.799 AC.

(SUBJECT TO CRITICAL AREA LAW) FIRM ZONE (MAP 38) C/A6(el.7.0) IN C - 6.792 AC.±

IN A6(el.7.0) - 0.11 AC.± TOTAL FOREST CONSERVATION EASEMENT 3.135 AC. (PROVIDES NATURAL AREA FOR SWM) F.C.E. #1 - 95,995 S.F. OR 2.204 AC. IN CRITICAL AREA — 69,539 S.F. OR 1.505 AC.
OUT OF CRITICAL AREA — 26,456 S.F. OR 0.699 AC.

F.C.E. # 2 - 40,570 S.F. OR 0.931 AC. (ENTIRELY W/I CRITICAL AREA)

PLAT 1 OF 4

Ronald W. Johnson Associates, Inc.

Consulting Engineers. Land Planners. Surveyors

2661 Riva Road Building 400, Suite 420 Annapolis, MD 21401 Phone: 410.841.5221 410.266.6612 Fax: 410.841.5124 Email: StacyK@RWJAI.com

ANNE ARUNDEL COUNTY OFFICE OF PLANNING & ZONING APPROVED FOR PLANNING & ZONING AND FOR THE ANNE ARUNDEL COUNTY HEALTH DEPARTMENT

APPROVED BY: LARRY R. TOM

PLAT BOOK

PLANNING AND ZONING OFFICER

PLAT NO.

A SINGLE-FAMILY RESIDENTIAL MINOR SUBDIVISION

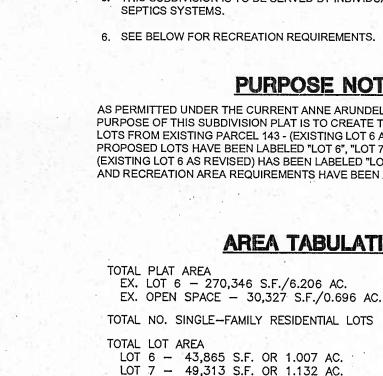
CHRISTOPHER A MAIO PROPERTY LOT 6 AND OPEN SPACE -REVISED - P.B. 237, PG. 34

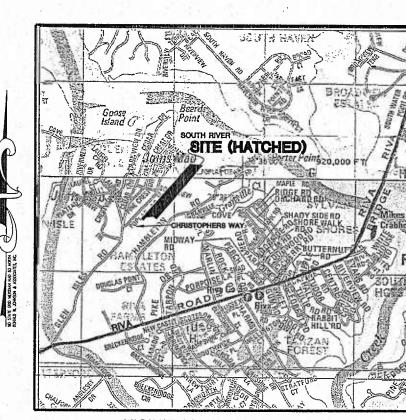
T.M. 50, BLK. 21, P. 143

OWNER: CHRISTOPHER A. MAIO ZIP CODE: 21140 / ZONING: R1 / MD NAD 83
ANNE ARUNDEL CO., MD 2ND TAX DISTRICT SCALE: AS SHOWN S#1999-130, P#2006-120



PAGE NO.





VICINITY MAP - SCALE:1"=2000 Copyright ADC The Map People Permitted Use Number 203011635

GENERAL NOTES

- 1. ALL UTILITIES INCLUDING GAS, ELECTRIC, AND COMMUNICATIONS SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE WITH THE PUBLIC SERVICE COMMISSIONS STATEWIDE RULES OF JULY 14, 1968.
- 2. COORDINATES AS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83).
- 3. THIS SUBDIVISION LIES WITHIN ZONE C, AN AREA OF MINIMAL FLOODING AND ZONE A6(el.7.0), AN AREA OF 100 YEAR FLOODPLAIN AS SHOWN ON
- 4. NO DISTURBANCE TO STEEP SLOPES OR THEIR BUFFERS SHALL OCCUR.
- 5. THIS SUBDIVISION IS TO BE SERVED BY INDIVIDUAL PRIVATE WELLS AND
- 6. SEE BELOW FOR RECREATION REQUIREMENTS.

LOT 8 - 47,385 S.F. OR 1.088 AC.

LOT 9 - 92,207 S.F. OR 2.117 AC.

AREA OUTSIDE OF THE CRITICAL AREA

CRITICAL AREA DESIGNATION- LDA

(SUBJECT TO TREEBILL)

EXISTING ZONING

PURPOSE NOTE

AS PERMITTED UNDER THE CURRENT ANNE ARUNDEL COUNTY ORDINANCE, THE PURPOSE OF THIS SUBDIVISION PLAT IS TO CREATE THREE (3) ADDITIONAL (3) DENSITY LOTS FROM EXISTING PARCEL 143 - (EXISTING LOT 6 AND EXISTING OPEN SPACE). THE PROPOSED LOTS HAVE BEEN LABELED "LOT 6", "LOT 7", "LOT 8", AND THE RESIDUAL LOT (EXISTING LOT 6 AS REVISED) HAS BEEN LABELED "LOT 9". IN ADDITION, OPEN SPACE AND RECREATION AREA REQUIREMENTS HAVE BEEN ADDRESSED

AREA TABULATIONS

TOTAL OPEN SPACE/RECREATIONAL AREA(22.6%) 67,903 S.F. OR 1.559 AC.

REVISED OPEN SPACE "A" - 53,280 S.F. OR 1.223 AC.

(CONTAINS 3,000 S.F. OF ACTIVE RECREATION AREA)

OPEN SPACE "B" - 14,623 S.F. OR 0.336 AC.

SURVEYOR:

SEE SURVEYOR'S CERTIFICATE ON PLAT 1 OF 3. SEE SURVEYOR'S CERTIFICATE BELOW OWNER'S DEDICATION.

SURVEYOR'S	SIGNATURE

DATE

SURVEYOR'S TYPED NAME AND ADDRESS:

SURVEYOR'S PROFESSIONAL SEAL:

CARL A. STEVENSON RONALD W. JOHNSON ASSOCIATES, INC. 2661 RIVA ROAD, BLDG 400, STE 420 ANNAPOLIS, MD 21401

<u>OWNERS:</u>

I HEREBY ASSENT TO AND DO HEREBY JOIN IN THIS PLAN OF SUBDIVISION (SEE PLAT 1 FOR OWNERS DEDICATION, SURVEYOR'S CERTIFICATE, AND OTHER NOTES).

WITNESS:

OWNER(S):

WITNESS

CHRISTOPHER A. MAIO

DATE

FOREST CONSERVATION & CRITICAL AREA NOTES

- 1. A PORTION OF THIS SUBDIVISION IS SUBJECT TO TREE BILL 71-94. THIS INCLUDES ALL OF OPEN SPACE "A" AND PART OF LOT 6 & LOT 9. THESE AREAS ARE SUBJECT TO AN UPDATED INTERMEDIATE FOREST STAND DELINEATION DATED MAY, 2007 ON FILE WITH THE OFFICE OF PLANNING AND ZONING. THE REMAINDER OF LOTS 6 & 9 AND ALL OF LOT 7 & LOT 8 ARE WITHIN THE LDA DESIGNATION OF THE CRITICAL AREA AND ARE SUBJECT TO AN UPDATED CRITICAL AREA REPORT DATED MAY, 2007 ON FILE WITH THE OFFICE OF PLANNING AND ZONING.
- 2. DEVELOPMENT OF LOTS 6 THROUGH 9 AND THE OPEN SPACE AREA SHALL ONLY BE UNDERTAKEN IN ACCORDANCE WITH THE APPROVED FOREST CONSERVATION/CRITICAL AREA PLAN ON FILE WITH THE OFFICE OF PLANNING AND ZONING AND THE CALCULATIONS PROVIDED BELOW OR ADDITIONAL MITIGATION WILL BE REQUIRED.
- 3. THE NATURAL AREA EASEMENTS ARE SUBJECT TO A REVISED DEED OF EASEMENT AND AGREEMENT (REVISED NATURAL AREA EASEMENT) RECORDED AMONG THE LAND RECORDS OF ANNE ARUNDEL COUNTY, MARYLAND IN LIBER , FOLIO

FORESTATION NOTES & CALCULATION

IN ACCORDANCE WITH THE FORESTATION AGREEMENT, BOND AND PLAN ON FILE WITH THE OFFICE OF PLANNING AND ZONING, MITIGATION FOR THIS SUBDIVISION HAS BEEN PROVIDED ON-SITE AS FOLLOWS:

MITIGATION FOR CLEARING IN CRITICAL AREA @ 1:1 REPLACEMENT (ALLOWABLE CLEARING = 20%)

26,706 S.F. OF CLEARING X 1 = 40,059 S.F. OF PLANTING REQUIRED

A FORESTATION AGREEMENT DATED __ _, FOR THE REQUIRED PLANTING OF 40.059 S.F., AND A BOND IN THE AMOUNT OF \$48,070.80 (\$1.20/S.F.), WAS PROVIDED AND IS ON FILE WITH THE OFFICE OF PLANNING AND ZONING.

REFORESTATION WILL BE ACCOMPLISHED ON SITE. PLANTING SHALL OCCUR WITHIN THE OPEN AREAS UNDER EASEMENT FIRST, THEN THE EXISTING FOREST SHALL BE SUPPLEMENTED TO PROVIDE ADDITIONAL SCREENING TO ADJACENT PROPERTY OWNERS AND IN BETWEEN THE PROPOSED LOTS.

COASTAL FLOODPLAIN & HIGH HAZARD AREA STATEMENT

LOT 9 IS AFFECTED BY A COASTAL FLOODPLAIN AND/OR A COASTAL HIGH HAZARD AREA AS ESTABLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) ON THE FLOOD INSURANCE RATE MAPS. THE ELEVATION IS 7.0 FEET. THE FIRST FLOOR ELEVATIONS OF ALL STRUCTURES LOCATED WITHIN THESE AREAS OR LOTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 16, TITLE 1, OF THE ANNE ARUNDEL COUNTY CODE.

TREE BILL SUMMARY

ORIGINAL NET TRACT (BASED ON ORIGINAL SUBDIV. AREA OUTSIDE C.A.) (INCLUDES 1.681 AC. OF NET TRACT IN THIS SUBDIVISION AREA)	7.150 AC.
ORIGINAL CONSERVATION THRESHOLD (BASED ON 25% OF ORIG. NET TRACT) (ORIG. CT)	1.790 AC.
PROPOSED CLEARING UNDER ALL PREVIOUS SUBDIVISIONS	3.760 AC.
ORIGINAL REFORESTATION REQUIREMENT (RR FOR ALL PREVIOUS SUBDIVISIONS) (ORIG. RR)	0.940 AC.
ORIGINAL EASEMENT REQUIREMENT WITH NO MITIGATION (ORIG. CT + ORIG. RR)	2.730 AC.
PROPOSED CLEARING (OUTSIDE THE C.A.) WITH THIS SUBDIVISION	0.452 AC.
REFORESTATION REQUIREMENT THIS SUBDIVISION (NEW RR) (0.452 X 0.25)	0.113 AC.
TOTAL REQUIRED UNDER REVISED EASEMENT FOR ORIG. & THIS SUBDIVISION WITH NO MITIGATION (ORIG. CT. + ORIG. RR + NEW RR)	2.843 AC.
TOTAL EXISTING EASEMENT ON EX. LOTS 1-5	0.930 AC.
TOTAL EASEMENT REQUIRED THIS SUBDIVISION (2.843 AC 0.930 AC.)	1.913 AC.
TOTAL EASEMENT PROVIDED WITH THIS SUBDIVISION EASEMENT PROVIDED OUTSIDE THE CRITICAL AREA - 0.621 AC EASEMENT PROVIDED WITHIN CRITICAL AREA - 2.283 AC.	2.904 AC.
(USE OF EASEMENT WITHIN THE CRITICAL AREA TO MEET TREE BILL REQUIREMENTS WAS BREVIOUSLY	DDDOVED BY OD

(USE OF EASEMENT WITHIN THE CRITICAL AREA TO MEET TREE BILL REQUIREMENTS WAS PREVIOUSLY APPROVED BY OPZ)

AREA IN EASEMENT ABOVE REQUIREMENT

INCL. 0.071 AC. OF MITIGATION PROVIDED FOR 0.284 AC. OF FUTURE CLEARING PERMITTED OUTSIDE THE C.A. INCL. 0.920 AC. OF REFORESTATION AREA FOR CRITICAL AREA CLEARING

FOREST CONSERVATION TABULATIONS							
LOT NO.	LOT AREA OUTSIDE	ALLOWABLE CLEARING	CLEARING SHOWN	FUTURE CLEARING			
	CRITICAL AREA	OUTSIDE C.A.	PER FINAL PLAN	REMAINING W/O MITIGATION			
LOT 6	54,921 S.F.	23,094 S.F.	17,409 S.F.	5,685 S.F.			
	1.261 AC.	0.531 AC.	0.400 AC.	0.131 AC.			
LOT 7	0 AC. (N/A)	0 AC. (N/A)	0 AC. (N/A)	0 AC. (N/A)			
LOT 8	0 AC. (N/A)	0 AC. (N/A)	0 AC. (N/A)	0 AC. (N/A)			
LOT 9	14,076 S.F.	7,966 S.F.	2,280 S.F.	5,686 S.F.			
	0.323 AC.	0.183 AC.	0.052 AC.	0.131 AC.			
OPEN SPACE	4,209 S.F	1,000 S.F.	0 S.F.	1,000 S.F.			
"A"	0.097 AC.	0.022 AC.	0 AC.	0.022 AC.			
TOTAL	73,206 S.F.	32,060 S.F.	19,689 S.F.	12,371 AC.			
	1.681 AC.	0.736 AC.	0.452 AC.	0.284 AC.			

ALLOWABLE CLEARING IS THE AMOUNT THAT HAS BEEN MITIGATED BY RETAINING ADDITIONAL WOODLANDS IN EASEMENT. IF CLEARING EXCEEDS THIS AMOUNT AT PERMIT THEN ADDITIONAL MITIGATION WILL BE REQUIRED.

SEE CRITICAL AREA TABULATIONS FOR PORTIONS OF LOTS WITHIN THE CRITICAL AREA.

CRITICAL AREA CLEARING AND IMPERVIOUS CALCULATIONS

TOTAL OF LOT IN THE CRITICAL AREA	IMPERVIOUS ALLOWED 15% OF SITE IN C.A. HELD AND DIVIDED AMONG AREAS	IMPERVIOUS SHOWN PER FINAL DEVELOPMENT PLAN	IMPERVIOUS REMAINING FOR FUTURE USE	TOTAL WOODLANDS IN THE CRITICAL AREA	CLEARING ALLOWED 20% OF WOODS IN C.A. HELD AND DIVIDED AMONGST AREAS	CLEARING SHOWN IN C.A. PER DEVELOPMENT PLAN	CLEARING REMAINING FOR FUTURE USE
LOT 6 (partly in LDA) 2,660 S.F.	0 S.F. 0 AC.	0 S.F. 0 AC.	0 S.F. 0 AC.	0 S.F. 0 AC.	0 S.F. 0 AC.	O S.F. O AC.	0 S.F. 0 AC.
LOT 7 (partly in LDA) 49,313 S.F. 1.132 AC.	6,500 S.F. 0.149 AC.	5,366 S.F. 0.123 AC.	1,134 S.F. 0.026 AC.	41,276 S.F. 0.947 AC.	25,760 S.F. 0.592 AC.	19,760 S.F. 0.454 AC.	6,000 S.F. 0.138 AC.
LOT 8 (partly in LDA) 47,385 S.F. 1.088 AC.	6,000 S.F. 0.138 AC.	4,727 S.F. 0.109 AC.	1,273 S.F. 0.029 AC.	15,317 S.F. 0.352 AC.	4,446 S.F. 0.102 AC.	1,446 S.F. 0.033 AC.	3,000 S.F. 0.069 AC.
LOT 9 (entirely in LDA) 92,207 S.F.	21,620 S.F. 0.496 AC.	13,890 S.F. 0.319 AC.	7,730 S.F. 0.177 AC.	86,281 S.F. 1.981 AC.	13,450 S.F. 0.308 AC.	0 S.F. 0 AC.	7,950 S.F. 0.182 AC.
	N/A - 0 S.F. ,967 S.F. 0 AC.	N/A 0 S.F. 0 AC.	N/A 0 S.F. 0 AC.	N/A 0 S.F. 0 AC.	N/A 0 S.F. 0 AC.	N/A 0 S.F. 0 AC.	N/A 0 S.F. 0 AC.
TOTAL IN C.A. 227,467 S.F. 5.220 AC.	34,120 S.F. 0.783 AC. (15%)	23,983 S.F. 0.551 AC. (10.5%)	10,137 S.F. 0.232 AC. (4.5%)	145,520 S.F. 3.341 AC.	29,104 S.F. 0.668 AC. (20%)	26,706 S.F. 0.613 AC. (18.4%)	16,950 S.F. 0.389 AC. (11.6%)

PORTIONS OF LOT 6, LOT 9 AND OPEN SPACE "A" ARE LOCATED OUTSIDE OF THE CRITICAL AREA. THESE AREAS ARE SUBJECT TO TREE BILL 71-94. SEE TREE BILL NOTES/SUMMARY.

IMPERVIOUS AREA PERMITTED IS 15% OF THE ENTIRE AREA WITHIN THE CRITICAL AREA. THIS AMOUNT WAS HELD OVERALL AND DIVIDED AMONGST THE AREAS TO ALLOW FOR SUFFICIENT IMPERVIOUS AREA

CLEARING PERMITTED IS 20% OF THE EXISTING WOODLANDS WITHIN THE CRITICAL AREA. THIS AMOUNT WAS HELD OVERALL AND DIVIDED BETWEEN THE AREAS TO ALLOW FOR SUFFICIENT CLEARING FOR

MITIGATION FOR CLEARING UP TO 20% IS 1:1 REPLACEMENT. SEE FORESTATION NOTES FOR MITIGATION PROVISIONS.

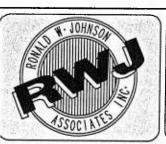
(PUBLIC SEWER & WATER)

(PRIVATE INDIVIDUAL WELLS AND SEPTIC SYSTEMS)

PLAT NO.

PLAT 2 OF 4

2003



Ronald W. Johnson Associates, Inc.

Consulting Engineers . Land Planners . Surveyors

2661 Riva Road Building 400, Suite 420 Annapolis, MD 21401 Phone: 410.841.5221 410.266.6612 Fax: 410.841.5124 Email: StacyK@RWJAI.com

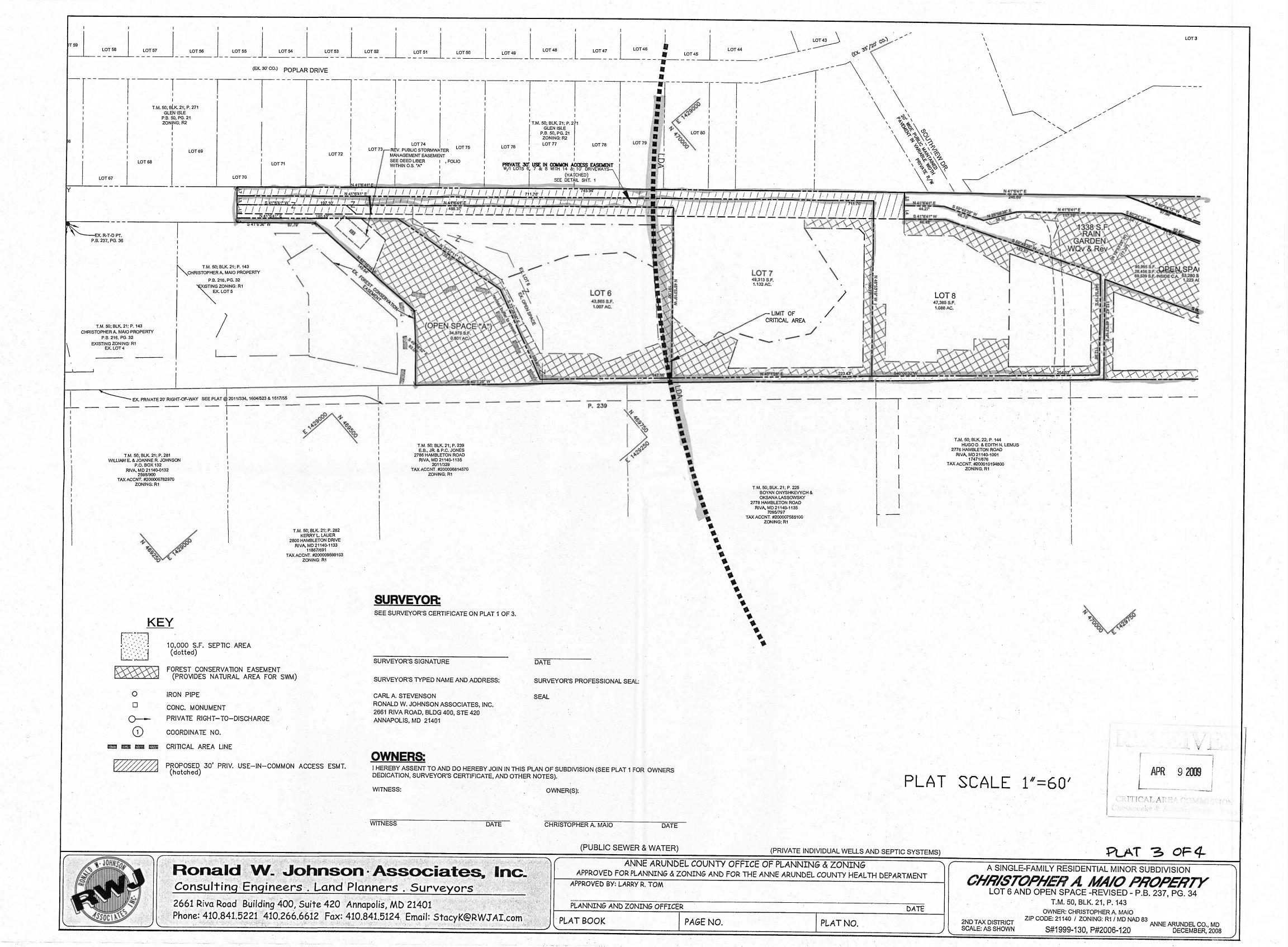
ANNE ARUNDEL COUNTY OFFICE OF PLANNING & ZONING APPROVED FOR PLANNING & ZONING AND FOR THE ANNE ARUNDEL COUNTY HEALTH DEPARTMENT APPROVED BY: LARRY R. TOM

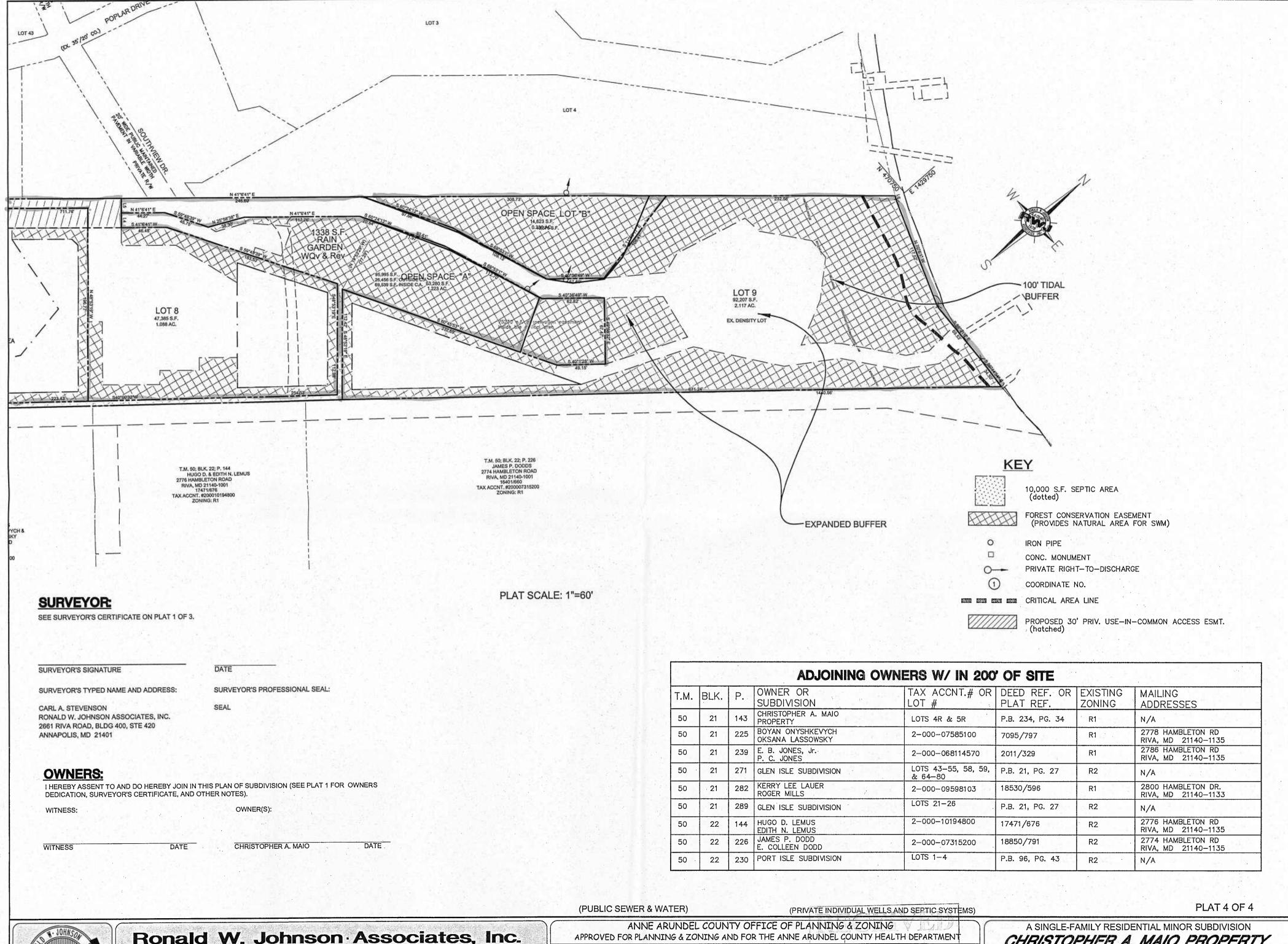
PLANNING AND ZONING OFFICER DATE PLAT BOOK PAGE NO.

A SINGLE-FAMILY RESIDENTIAL MINOR SUBDIVISION

CHRISTOPHER A. MAIO PROPERTY LOT 6 AND OPEN SPACE -REVISED - P.B. 237, PG. 34

T.M. 50, BLK. 21, P. 143 OWNER: CHRISTOPHER A. IVO.
ZIP CODE: 21140 / ZONING: R1 / MD NAD 83
ANNE ARUNDEL CO., MD
DECEMBER, 2008 2ND TAX DISTRICT SCALE: AS SHOWN





Ronald W. Johnson Associates, Inc.

Consulting Engineers . Land Planners . Surveyors

2661 Riva Road Building 400, Suite 420 Annapolis, MD 21401 Phone: 410.841.5221 410.266.6612 Fax: 410.841.5124 Email: StacyK@RWJAI.com APPROVED BY: LARRY R. TOM

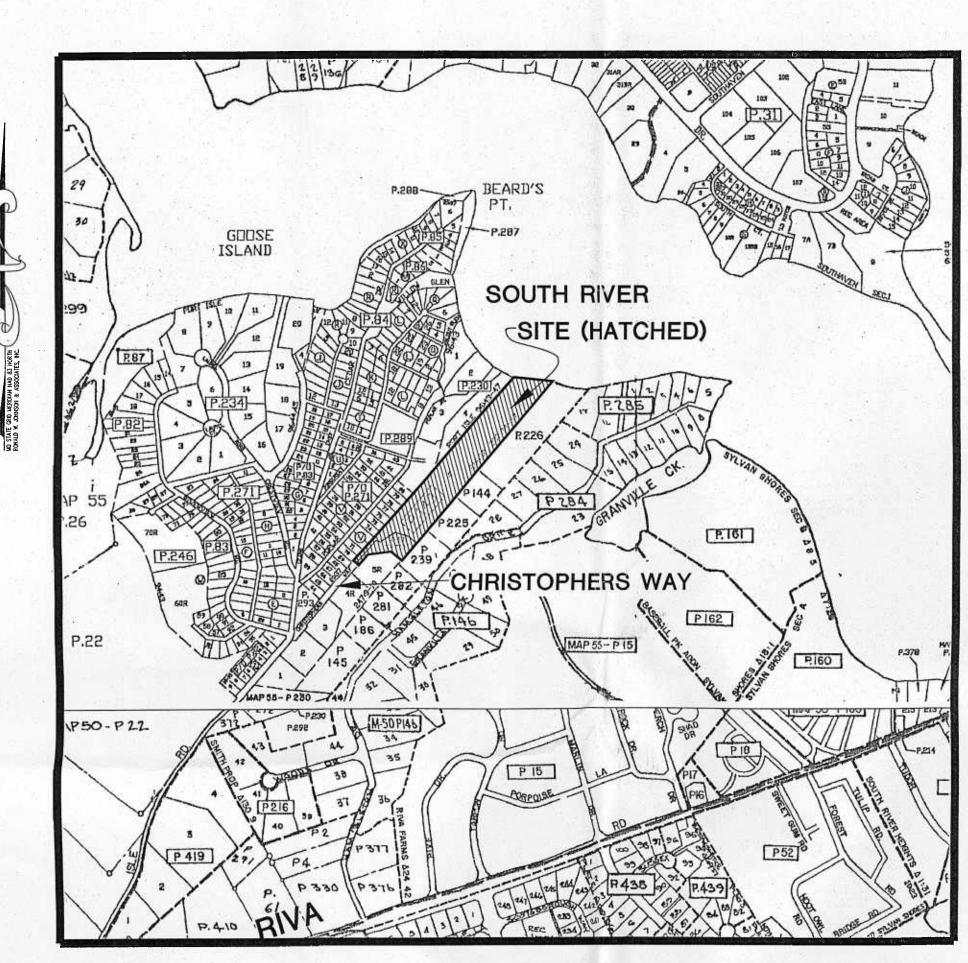
APR 9 2009 PLANNING AND ZONING OFFICER DATE PAGE NO. PLATINO. PLAT BOOK

CHRISTOPHER A. MAIO PROPERTY LOT 6 AND OPEN SPACE -REVISED - P.B. 237, PG. 34

OWNER: CHRISTOPHER A. MAIO
ZIP CODE: 21140 / ZONING: R1 / MD NAD 83
ANNE ARUNDEL CO., MD
DECEMBER, 2008 T.M. 50, BLK. 21, P. 143 2ND TAX DISTRICT SCALE: AS SHOWN

CHRISTOPHER A. MAIO PROPERTY

FINAL DEVELOPMENT / CRITICAL AREA / FOREST CONSERVATION PLANS PRIVATE ROAD/STORMDRAIN/STORMWATER MANAGEMENT PLANS



ADJOINING OWNER & TAX MAP - SCALE: 1"=600"

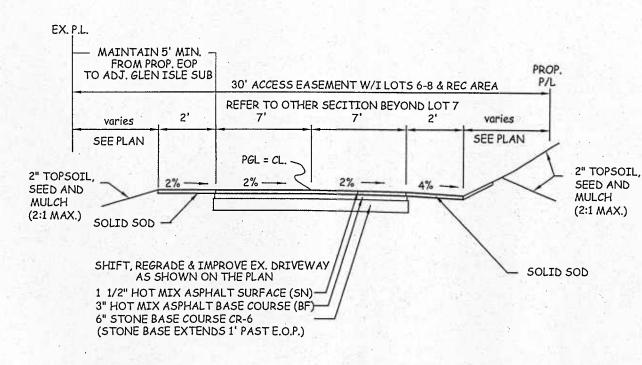
ADJOINING OWNERS W/ IN 200' OF SITE							
T.M.	BLK.	P.	OWNER OR SUBDIVISION	TAX ACCNT.# OR LOT #	DEED REF. OR PLAT REF.	EXISTING ZONING	MAILING ADDRESSES
50	21	143	CHRISTOPHER A. MAIO PROPERTY	LOTS 4R & 5R	P.B. 234, PG. 34	R1	N/A
50	21	225	BOYAN ONYSHKEVYCH OKSANA LASSOWSKY	2-000-07585100	7095/797	R1	2778 HAMBLETON RD RIVA, MD 21140-1135
50	21	239	E. B. JONES, Jr. P. C. JONES	2-000-068114570	2011/329	R1	2786 HAMBLETON RD RIVA, MD 21140-1135
50	21	271	GLEN ISLE SUBDIVISION	LOTS 43-55, 58, 59, & 64-80	P.B. 21, PG. 27	R2	N/A
50	21	282	KERRY LEE LAUER ROGER MILLS	2-000-09598103	18530/596	R1	2800 HAMBLETON DR. RIVA, MD 21140-1133
50	21	289	GLEN ISLE SUBDIVISION	LOTS 21-26	P.B. 21, PG. 27	R2	N/A
50	22	144	HUGO D. LEMUS EDITH N. LEMUS	2-000-10194800	17471/676	R2	2776 HAMBLETON RD RIVA, MD 21140-1135
50	22	226	JAMES P. DODD E. COLLEEN DODD	2-000-07315200	18850/791	R2	2774 HAMBLETON RD RIVA, MD 21140-1135
50	22	230	PORT ISLE SUBDIVISION	LOTS 1-4	P.B. 96, PG. 43	R2	N/A

PRIVATE ACCESS EASEMENT STATEMENT W/I LOTS 6-8 FOR LOTS 6-9 & REC. AREA

THE 30' WIDE PRIVATE USE-IN-COMMON ACCESS EASEMENT WITHIN LOT 6. 7 & 8 IS INTENDED TO PROVIDE ACCESS TO AND FROM LOTS 6, 7, 8, 9 AND THE RECREATION AREA. THE OWNERS OF THESE LOTS ARE RESPONSIBLE FOR THE MAINTENANCE OF THE ACCESS EASEMENT AND ARE NOT ELIGIBLE TO RECEIVE COUNTY SERVICES PROVIDED TO THE OWNERS OF LOTS ABUTTING COUNTY ROADS AS MORE FULLY SET FORTH IN A DECLARATION OF ACCESS EASEMENT AND MAINTENANCE AGREEMENT RECORDED AMONG THE LAND RECORDS OF ANNE ARUNDEL COUNTY, MARYLAND IN LIBER

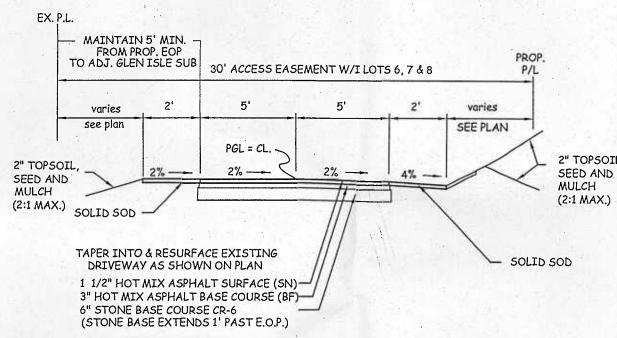
PAVED APRON STATEMENT

A PAVED APRON, CONSTRUCTED IN ACCORDANCE WITH A.A. CO. STD. I/6 SHALL BE CONSTRUCTED FOR LOTS 6, 7 AND 8 WITHIN AND TO THE ULTIMATE ACCESS EASEMENT LINE OF THE INTERSECTING PRIVATE ACCESS EASEMENT/COMMON DRIVEWAY PRIOR TO ISSUANCE OF A USE IN OCCUPANCY PERMIT AT TIME OF BUILDING PERMIT. THE DRIVEWAY ACCESS TO LOT 6 IS EXISTING.



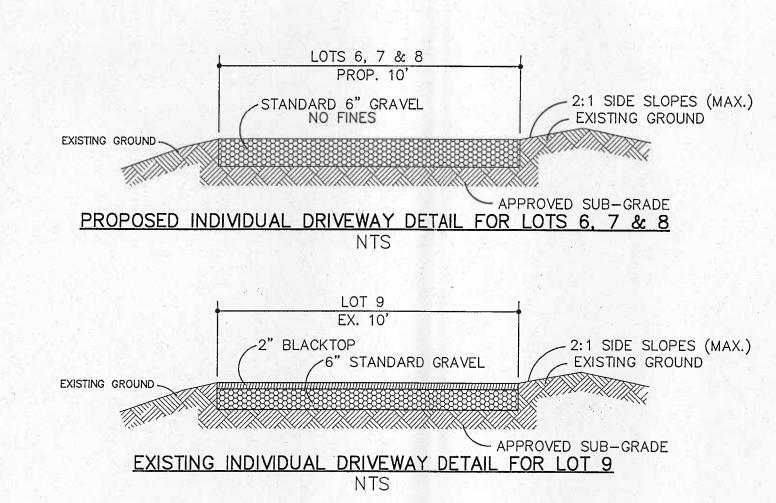
TYPICAL SECTION FOR COMMON 14' DRIVEWAY THRU LOT 7 (SERVES LOTS 6-9 & RECREATION AREA) N.T.S.

FROM END OF CHRISTOPHERS WAY TO DRIVEWAY APRON ON LOT 7



SERVES LOTS 8, 9 & REC. AREA TYPICAL SECTION FOR COMMON DRIVEWAY

FROM END OF 14' COMMON DRIVEWAY TO END OF ACCESS EASEMENT



DENIED ACCESS STATEMENT

LOTS 6, 7, AND 8 SHALL GAIN ACCESS VIA CHRISTOPHERS WAY AND THE PRIVATE 30' ACCESS EASEMENT WITHIN LOT 9. ACCESS SHALL NOT BE OBTAINED VIA SOUTHVIEW DRIVE

THIS SUBDIVISION (EXISTING OPEN SPACE AND LOT 6) WERE PREVIOUSLY PLATTED ON THE PLAT OF THE "CHRISTOPHER A. MAIO PROPERTY." AND RECORDED AMONG THE LAND RECORDS OF ANNE ARUNDEL COUNTY. MARYLAND IN PLAT BOOK 237, PAGES 34-37, AND IS

- 1. ALL UTILITIES INCLUDING GAS, ELECTRIC, AND COMMUNICATIONS SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE WITH THE PUBLIC SERVICE COMMISSIONS STATEWIDE RULES OF JULY 14, 1968.
- COORDINATES AS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN
- 3. THIS SUBDIVISION LIES WITHIN ZONE C, AN AREA OF MINIMAL FLOODING AND ZONE A6(el.7.0), AN AREA OF 100 YEAR FLOODPLAIN AS SHOWN ON
- 5. THIS SUBDIVISION IS TO BE SERVED BY INDIVIDUAL PRIVATE WELLS AND
- 6. SEE BELOW FOR RECREATION REQUIREMENTS

DENSITY CALCULATION

300,673 S.F. AC. TOTAL THIS SUBDIVISION AREA 270,566 S.F. NET AREA FOR DENSITY 270,566 S.F. /40,000 S.F. = 6.76 = 6 LOTS PERMITTED 12 AC.± IN TOTAL ORIGINAL TRACT PRIOR TO SUBDIVISION 11.309 AC. NET AREA FOR DENSITY R1 PERMITTED DENSITY = 1 LOT PER 40,000 S.F 12 AC. / 40,000 S.F. OR 0.918 AC. = 13 LOTS PERMITTED

OPEN SPACE STATEMENT/CALCULATION

IN ACCORDANCE WITH ARTICLE 17, SECTION 3-506 (b) OF THE A.A.Co. CODE, 30% OF THE SUBDIVISION AREA IS REQUIRED TO BE IN OPEN SPACE INCLUSIVE OF THE 300,673 S.F. or 6.902 AC. REQUIRED OPEN SPACE (30%) -90,202 S.F. or 2.071 AC.

TOTAL OPEN SPACE PROVIDED -(30.5%) 91,636 S.F. or 2.103 AC.

TOTAL LOTS PROVIDED ALL SUBDIVISIONS = 9 LOTS

RECREATION AREA REQUIREMENTS/PROVISIONS

IN ACCORDANCE WITH ARTICLE 17, SECTION 3-506 (b) AND (c) OF THE A.A.Co. CODE THE REQUIRED RECREATION AREA HAS BEEN PROVIDED AS FOLLOWS: RECREATION AREA REQUIRED - 3 LOTS X 1,000 S.F. =3,000 S.F. DRY GROUND (ACTIVE) AREA REQUIRED 75% = 2,250 S.F. RECREATION AREA PROVIDED = 3,000 S.F. DRY GROUND AREA PROVIDED = 3,000 S.F.

FEE IN LIEU WAS PAID FOR LOT 9 BY CASH RECEIPT #2241957 ON 6/29/2001 THEREFORE, RECREATION AREA IS ONLY REQUIRED FOR LOTS 6, 7 AND 8, AND IS COUNTED TOWARD REQUIRED OPEN SPACE. (SEE OPEN SPACE STATEMENT/ CALCULATION).

MODIFICATION NOTE

MODIFICATION NO.

ERIC E. SEE, CERTIFIED PROFESSIONAL

2444 SOLOMONS ISLAND ROAD, SUITE 217, ANNAPOLIS, MD 21401

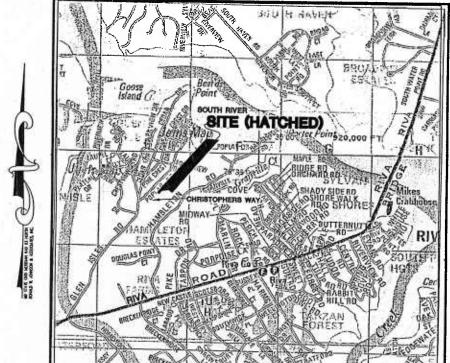
SEE ENVIRONMENTAL SERVICES, INC.

FOREST CONSERVATION CERTIFICATION

CHRISTOPHER A. MAIO LOT 6 AND OPEN SPACE

I HEREBY CERTIFY THAT THE ENVIRONMENTAL INFORMATION SHOWN ON THIS SIMPLIFIED FOREST STAND DELINEATION MAP/FOREST CONSERVATION PLAN FOR THE CHRISTOPHER A.

LOCATIONS ARE APPROXIMATE, AND HAVE NOT BEEN FIELD SURVEYED. PROPERTY



VICINITY MAP - SCALE:1"=2000' Copyright ADC The Mop People Permitted Use Number 203011835

OWNER/DEVELOPER

CHRISTOPHER A. MAIO 2801 CHRISTOPHERS WAY RIVA, MD 21140

SITE ADDRESS

2801 CHRISTOPHERS WAY RIVA, MD 21140

R1 SETBACKS

FRONT -	40'
SIDE -	15'
SIDE ST	40'
REAR -	35'
MIN. WIDTH	-
@ THE B.R.L	125'
ARTERIAL - 50' (TO SIDE & REAR OF BUILDING)	0
MAX. HEIGHT -	451

AREA TABULATIONS

TOTAL PLAT AREA EX. LOT 6 - 270,346 S.F./6.206 AC. EX. OPEN SPACE - 30,327 S.F./0.696 AC. TOTAL NO. SINGLE-FAMILY RESIDENTIAL LOTS 209,037 S.F./4.799 AC. LOT 6 - 43,865 S.F. OR 1.007 AC. LOT 7 - 49,313 S.F. OR 1.132 AC. LOT 8 - 47,385 S.F. OR 1.088 AC. LOT 9 - 92,207 S.F. OR 2.117 AC. TOTAL OPEN SPACE/RECREATIONAL AREA(22.6%) 67,903 S.F. OR 1.559 AC. REVISED OPEN SPACE "A" - 53,280 S.F. OR 1.223 AC. (CONTAINS 3,000 S.F. OF ACTIVE RECREATION AREA) OPEN SPACE "B" - 14,623 S.F. OR 0.336 AC. EXISTING ZONING AREA OUTSIDE OF THE CRITICAL AREA 1.682 AC. (SUBJECT TO TREEBILL) CRITICAL AREA DESIGNATION- LDA 5.220 AC. (SUBJECT TO CRITICAL AREA LAW) C/A6(el.7.0) IN C - 6.792 AC.± IN A6(el.7.0) - 0.11 AC.± TOTAL FOREST CONSERVATION EASEMENT (PROVIDES NATURAL AREA FOR SWM) 3.135 AC. F.C.E. #1 - 95,995 S.F. OR 2.204 AC. IN CRITICAL AREA — 69,539 S.F. OR 1.505 AC. OUT OF CRITICAL AREA — 26,456 S.F. OR 0.699 AC.

SUBDIVISION POTENTIAL NOTE

THERE IS NO FURTHER SUBDIVISION POTENTIAL FOR THIS PROPERTY

F.C.E. # 2 - 40,570 S.F. OR 0.931 AC.

(ENTIRELY W/I CRITICAL AREA)

RECEIVED

P06-0120 00

MAIO PROPERTY IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE. SPECIMEN TREE PLANNING AND ZONI BOUNDARIES AND TOPOGRAPHY HAVE BEEN PROVIDED BY RONALD W. JOHNSON ASSOCIATES

DEVELOPMENT

	INDEX TO SHEETS					
NO.	DESCRIPTION					
1	TITLE SHEET: NOTES, TABLES, MAPS & DETAILS					
2	CRITICAL AREA & FOREST CONSERVATION NOTES, TABLES & DETAILS / FORESTATION PLAN					
3	GRADING, SEDIMENT & EROSION CONTROL NOTES DETAILS & SEQUENCE					
4	FINAL DEVELOPMENT, FOREST CONSERVATION & PRIVATE RD/SD/SWM PLANVIEW					
5	EX. & DEVELOPED DRAINAGE AREA MAPS (OUTFALL STUDY)					
6	PRIVATE STORMWATER MANAGEMENT NOTES, DETAILS, TABLES & CREDITS					

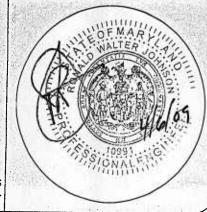
TITLE SHEET: NOTES, TABLES, MAPS & DETAILS



Ronald W. Johnson Associates, Inc. Consulting Engineers Land Planners Surveyors

2661 Riva Road Building 400, Suite 420 Annapolis, MD 21401 410.841.5221 410.266.6612 Fax 410.841.5124

"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. 10991, EXPIRATION DATE; 6-23-2010."



FINAL DEVELOPMENT, CRITICAL AREA & FOREST CONSERVATION PLANS PRIVATE ROAD, STORMDRAIN & STORMWATER MANAGEMENT PLANS A SINGLE-FAMILY RESIDENTIAL SUBDIVISION SCALE AS SHOWN The state of the s CHRISTOPHER A. MAIO DRAWN BY SRK PROPERTY CHECKED BY: EV LOT 6 AND OPEN SPACE - REVISED P.B. 237, PG. 34 SHEET #1 OF 5 TAX MAP 50, BLOCK 21, PARCEL 143 PROJECTNO: 2263.0 OWNER: CHRISTOPHER A. MAIO ANNE ARUNDEL CO., MD PROPOSAL NO.: SCALE: AS SHOWN S# 1999-130. P#2006-120 DECEMBER, 2008 2. DEVELOPMENT OF LOTS 6 THROUGH 9 AND THE OPEN SPACE AREA SHALL ONLY BE UNDERTAKEN IN ACCORDANCE WITH THE APPROVED FOREST CONSERVATION/CRITICAL AREA PLAN ON FILE WITH THE OFFICE OF PLANNING AND ZONING AND THE CALCULATIONS PROVIDED BELOW OR ADDITIONAL MITIGATION WILL BE REQUIRED.

3. THE NATURAL AREA EASEMENTS ARE SUBJECT TO A REVISED DEED OF EASEMENT AND AGREEMENT (REVISED NATURAL AREA EASEMENT) RECORDED AMONG THE LAND RECORDS OF ANNE ARUNDEL COUNTY, MARYLAND IN LIBER , FOLIO .

COASTAL FLOODPLAIN & HIGH HAZARD AREA STATEMENT

LOT 9 IS AFFECTED BY A COASTAL FLOODPLAIN AND/OR A COASTAL HIGH HAZARD AREA AS ESTABLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) ON THE FLOOD INSURANCE RATE MAPS. THE ELEVATION IS 7.0 FEET. THE FIRST FLOOR ELEVATIONS OF ALL STRUCTURES LOCATED WITHIN THESE AREAS OR LOTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 16, TITLE 1, OF THE ANNE ARUNDEL COUNTY CODE.

TREE BILL SUMMARY

ORIGINAL NET TRACT (BASED ON ORIGINAL SUBDIV. AREA OUTSIDE C.A.) (INCLUDES 1.681 AC. OF NET TRACT IN THIS SUBDIVISION AREA)	7.150 AC.
ORIGINAL CONSERVATION THRESHOLD (BASED ON 25% OF ORIG. NET TRACT) (ORIG. CT)	1.790 AC.
PROPOSED CLEARING UNDER ALL PREVIOUS SUBDIVISIONS	3.760 AC.
ORIGINAL REFORESTATION REQUIREMENT (RR FOR ALL PREVIOUS SUBDIVISIONS) (ORIG. RR)	0.940 AC.
ORIGINAL EASEMENT REQUIREMENT WITH NO MITIGATION (ORIG. CT + ORIG. RR)	2.730 AC.
PROPOSED CLEARING (OUTSIDE THE C.A.) WITH THIS SUBDIVISION	0.452 AC.
REFORESTATION REQUIREMENT THIS SUBDIVISION (NEW RR) (0.452 X 0.25)	0.113AC.
TOTAL REQUIRED UNDER REVISED EASEMENT FOR ORIG. & THIS SUBDIVISION WITH NO MITIGATION (ORIG. CT. + ORIG. RR + NEW RR)	2.843 AC.
TOTAL EXISTING EASEMENT ON EX. LOTS 1-5	0.930 AC.
TOTAL EASEMENT REQUIRED THIS SUBDIVISION (2.843 AC 0.930 AC.)	1.913 AC.
TOTAL EASEMENT PROVIDED WITH THIS SUBDIVISION EASEMENT PROVIDED OUTSIDE THE CRITICAL AREA - 0.621 AC EASEMENT PROVIDED WITHIN CRITICAL AREA - 2.283 AC.	2.904 AC.
(USE OF EASEMENT WITHIN THE CRITICAL AREA TO MEET TREE BILL REQUIREMENTS WAS PREVIOUSLY AF	PROVED BY O

INCL. 0.071 AC. OF MITIGATION PROVIDED FOR 0.284 AC. OF FUTURE CLEARING PERMITTED OUTSIDE THE C.A.

INCL. 0.920 AC. OF REFORESTATION AREA FOR CRITICAL AREA CLEARING

AREA IN EASEMENT ABOVE REQUIREMENT

	FORES	T CONSERVATIO	N TABULATION	
LOT NO.	LOT AREA OUTSIDE CRITICAL AREA	ALLOWABLE CLEARING OUTSIDE C.A.	CLEARING SHOWN PER FINAL PLAN	FUTURE CLEARING REMAINING W/O MITIGATION
LOT 6	54,921 S.F.	23,094 S.F.	17,409 S.F.	5,685 S.F.
	1.261 AC.	0.531 AC.	0.400 AC.	0.131 AC.
LOT 7	0 AC. (N/A)	0 AC. (N/A)	0 AC. (N/A)	0 AC. (N/A)
LOT 8	0 AC. (N/A)	0 AC. (N/A)	0 AC. (N/A)	0 AC. (N/A)
LOT 9	14,076 S.F.	7,966 S.F.	2,280 S.F.	5,686 S.F.
	0.323 AC.	0.183 AC.	0.052 AC.	0.131 AC.
OPEN SPACE	4,209 S.F	1,000 S.F.	0 S.F.	1,000 S.F.
	0.097 AC.	0.022 AC.	0 AC.	0.022 AC.
TOTAL	73,206 S.F.	32,060 S.F.	19,689 S.F.	12,371 AC.
	1.681 AC.	0.736 AC.	0.452 AC.	0.284 AC.

ALLOWABLE CLEARING IS THE AMOUNT THAT HAS BEEN MITIGATED BY RETAINING ADDITIONAL WOODLANDS IN EASEMENT. IF CLEARING EXCEEDS THIS AMOUNT AT PERMIT THEN ADDITIONAL MITIGATION WILL BE REQUIRED

EACH LOT/AREA.
4) MITIGATION FOR CLEARING UP TO 20% IS 1:1 REPLACEMENT. SEE FORESTATION NOTES FOR MITIGATION PROVISIONS.

FOREST CONSERVATION WORKS	HEET
NET TRACT AREA	
A. TOTAL TRACT AREA (AREA OUTSIDE CRITICAL AREA) B. AREA WITHIN 100-YEAR FLOODPLAIN C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION D. NET TRACT AREA (D = A - B - C)	A. = 1.681 AC B. = 0 C. = 0 D. = 1.681 AC
LAND USE CATEGORY	
E. AFFORESTATION THRESHOLD (D X 20 %) F. CONSERVATION THRESHOLD (D X 25 %)	E. = 0.336 AC F. = 0.420 AC
EXISTING FOREST COVER	
G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD (1) IF G <= E THEN H = 0 AND I = 0, GO TO L	G. = $\frac{1.4 \text{ AC.}}{1.064 \text{ AC.}}$
2) IF G > E THEN H = G - E, GO TO I 1. AREA OF FOREST ABOVE THE CONSERVATION THRESHOLD (1) IF G <= F THEN I = 0, GO TO L (2) IF G > F THEN I = G - F, GO TO J	I. = <u>0.098 AC.</u>
BREAK EVEN POINT	
J. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION (1) IF I > 0 THEN J = (0.2 X I) + F, GO TO K K. CLEARING PERMITTED WITHOUT MITIGATION (K = G - J)	J. = 0.440 AC K. = 0.960 AC
PROPOSED FOREST CLEARING	
L. TOTAL AREA OF FOREST TO BE CLEARED M. TOTAL AREA OF FOREST TO BE RETAINED (M = G - L)	L. = 0.452 AC. M. = 0.948 AC
PLANTING REQUIREMENTS	
N. REFORESTATION FOR CLEARING ABOVE THE AFFORESTATION THRESHOLD (1) IF L = K THEN N = 0, P = 0, Q = 0, R = 0, S = 0, GO TO T (2) IF M > F THEN N = L X 0.25, P = 0, GO TO Q	N. = 0.113
(3) IF M <= F THEN N = I X 0.25, GO TO P P. REFORESTATION FOR CLEARING BELOW THE AFFORESTATION THRESHOLD (1) IF G > F AND M > F THEN P = 0, Q = 0 GO TO R (2) IF G > F AND M <= F THEN P = 2.0 X (F-M), Q = 0, GO TO R	P. = 0
(3) IF G <= F THEN P = 2.0 X L, Q = 0, GÒ TÓ R Q. CREDIT FOR RETENTION ABOVE THE CONSERVATION THRESHOLD (1) IF M > F THEN Q = M - F, GO TO R	Q. = 0
(2) IF M <= F THEN Q = 0, GO TO R R. TOTAL REFORESTATION REQUIRED (1) IF Q > N AND M > E THEN R = 0, S = 0, GO TO T (2) IF Q <= N AND M > E THEN R = (N + P) - Q, S = 0, GO TO T	R. = 0.113
(3) IF Q <= N AND M <= E THEN R = N + P, GO TO S S. AFFORESTATION REQUIRED BY WORKSHEET CALCULATION (1) IF G < E AND M < E THEN S = E - G, GO TO T (2) IF G < E AND M = E THEN S = 0, GO TO T	S. = 0
(2) IF G < E AND M = E THEN S = 0, GO TO T	$\tau = 0.1137$

TREE PRESERVATION PROTECTION NOTES

T. TOTAL REFORESTATION AND AFFORESTATION REQUIREMENT T = (R+S)

(USE 0 FOR ALL NEGATIVE NUMBERS THAT RESULT FROM THE CALCULATIONS)

- 1. THE FIELD SUPERINTENDENT/SUPERVISOR SHALL BRIEF ALL CONTRACTORS REGARDING THE FOLLOWING APPLICABLE TREE PRESERVATION NOTES PRIOR TO
- PROTECTIVE DEVICES SHALL BE INSTALLED UNDER THE DRIPLINE OF ALL TREES TO BE PRESERVED PRIOR TO CONSTRUCTION OR DISTURBANCE WITHIN
- 3. TEMPORARY STORAGE OF ANY CONSTRUCTION MATERIAL INCLUDING: FILL, FELLED TREES, CONSTRUCTION SUPPLIES OR EQUIPMENT WITHIN THE DRIPLINES OF PROTECTED TREES SHALL BE PROHIBITED. 4. THE ROUTING OF HEAVY EQUIPMENT, INCLUDING CARS, TRUCKS, AND BULLDOZERS
- OR EARTHMOVERS WITHIN THE DRIPLINES OF PROTECTED TREES SHALL BE PROHIBITED. 5. WHENEVER POSSIBLE, GRADING, FILLING, TRENCHING, TUNNELING, OR OTHER 5. WHENEVER POSSIBLE, GRADING, FILLING, TRENCHING, TOWNELING, OR OTHER ACTIVITY HARMFUL TO PLANT GROWTH SHALL TAKE PLACE OUTSIDE THE DRIPLINE OF ALL TREES TO BE PRESERVED. IF ANY DISTURBANCE IS PROPOSED WITHIN THE DRIPLINE, PRIOR APPROVAL IS REQUIRED BY THE DEPARTMENT OF PLANNING AND CODE ENFORCEMENT AND THE LANDCAPE ARCHITECT. REMEDIAL MEASURES INCLUDING BUT NOT LIMITED TO CANOPY/ROOT PRUNING, AERATION, WATERING,
- FERTILIZING AND THE USE OF ANTI-TRANSPIRANTS MAY BE BE RECOMMENDED. 6. PROTECTION OF TREES AFTER CONSTRUCTION:
- A) AFTER CONSTRUCTION IS COMPLETED, TEMPORARY BARRIERS, SURPLUS MATERIALS AND ALL DEBRIS SHALL BE REMOVED FROM THE SITE. B) TREES WOUNDED DURING CONSTRUCTION SHALL HAVE THEIR WOUNDS CLEANED TORN BARK CUT, AND WOUNDS PROPERLY SHAPED AND PROTECTED DURING
- 7. THERE WILL BE NO CLEARING, CUTTING, TRIMMING, REMOVAL OF VEGETATION, DUMPING,

SEE BLAZE ORANGE FENCE DETAIL SHT. 3

		CLEARI	CRITI	CAL AREA PERVIOUS	CALCULATION	S	
TOTAL OF LOT IN THE CRITICAL AREA	IMPERVIOUS ALLOWED 15% OF SITE IN C.A. HELD AND DIVIDED AMONG AREAS	IMPERVIOUS SHOWN PER FINAL DEVELOPMENT PLAN	IMPERVIOUS REMAINING FOR FUTURE USE	TOTAL WOODLANDS IN THE CRITICAL AREA	CLEARING ALLOWED 20% OF WOODS IN C.A. HELD AND DIVIDED AMONGST AREAS	CLEARING SHOWN IN C.A. PER DEVELOPMENT PLAN	CLEARING REMAINING FOR FUTURE USE
LOT 6 (partly in LDA) 2,660 S.F.	0 S.F. 0 AC.	0 S.F. 0 AC.	0 S.F. 0 AC.	0 S.F. 0 AC.	0 S.F. 0 AC.	0 S.F. 0 AC.	0 S.F. 0 AC.
_OT 7 (partly in LDA) 49,313 S.F. 1.132 AC.	6,500 S.F. 0.149 AC.	5,366 S.F. 0.123 AC.	1,134 S.F. 0.026 AC.	41,276 S.F. 0.947 AC.	25,760 S.F. 0.592 AC.	19,760 S.F. 0.454 AC.	6,000 S.F. 0.138 AC.
LOT 8 (partly In LDA) 47,385 S.F. 1.088 AC.	6,000 S.F. 0.138 AC.	4,727 S.F. 0.109 AC.	1,273 S.F. 0.029 AC.	15,317 S.F. 0.352 AC.	4,446 S.F. 0.102 AC.	1,446 S.F. 0.033 AC.	3,000 S.F. 0.069 AC.
LOT 9 (entirely in LDA) 92,207 S.F.	21,620 S.F. 0.496 AC.	13,890 S.F. 0.319 AC.	7,730 S.F. 0.177 AC.	86,281 S.F. 1.981 AC.	13,450 S.F. 0.308 AC.	0 S.F. 0 AC.	7,950 S.F. 0.182 AC.
OPEN SPACE	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	_ 0 s.f.	0 S.F.	0 S.F.	o s.f.	0 S.F.	0 S.F.	0 S.F.
O.S "A" & O.S. "C" PARTLY IN LD - 4	4,967 S.F.	O AC.	O AC.	O AC.	0 AC.	O AC.	O AC.

0.232 AC.

FOR EACH LOT/AREA. NO LOT WITHIN THE CRITICAL AREA CONTAINS GREATER THAN 25% IMPERVIOUS AS REQUIRED BY LAW.

CLEARING PERMITTED IS 20% OF THE EXISTING WOODLANDS WITHIN THE CRITICAL AREA. THIS AMOUNT WAS HELD WERALL AND DIVIDED BETWEEN THE AREAS TO ALLOW FOR SUFFICIENT CLEARING FOR

0.991 AC.

FORESTATION NOTES & CALCULATION IN ACCORDANCE WITH THE FORESTATION AGREEMENT, BOND AND PLAN ON FILE WITH THE OFFICE OF PLANNING AND ZONING, MITIGATION FOR THIS SUBDIVISION HAS BEEN PROVIDED ON-SITE AS FOLLOWS: NO. TYPE

T. = 0.113 AC.

6 UT PRUNUS VIRGINIANA

8 T NYSSA SYLVATICA

T LIRIODENDRON TULIPFERA

MITIGATION FOR CLEARING IN CRITICAL AREA @ 1:1 REPLACEMENT (ALLOWABLE CLEARING = 20%) 26,706 S.F. OF CLEARING X 1 = 40,059 S.F. OF PLANTING REQUIRED A FORESTATION AGREEMENT DATED ______, FOR THE REQUIRED PLANTING OF 40,059 S.F., AND A BOND IN THE AMOUNT OF \$48,070.80 (\$1.20/S.F.), WAS PROVIDED AND IS ON FILE WITH THE OFFICE OF PLANNING AND ZONING. REFORESTATION WILL BE ACCOMPLISHED ON SITE. PLANTING SHALL OCCUR WITHIN THE OPEN AREAS UNDER EASEMENT FIRST, THEN THE EXISTING FOREST SHALL BE SUPPLEMENTED TO PROVIDE ADDITIONAL SCREENING TO ADJACENT PROPERTY OWNERS AND IN BETWEEN THE Xref \\Rwja01\Project\Project CoWide\2263-final\XREF\NOTE\ENV-FORLOC.dwg **PLANTING CALCULATION** PLANTING REQUIRED/PROVIDED = 40,059 S.F. REFORESTATION PLANTING CREDIT CALCULATION: (1) 1-1/2" CAL. TREE W/ (2) 2-3 GAL. SHRUBS = 400 S.F. PLANTING REQUIRED 40,059 S.F./400 = 100.14 = 100 TREES W/200 SHRUBS CRITICAL AREA REFORESTATION PLANTING LIST ROOT TYPE SPACING QTY. SIZE SPECIES COMMON NAME 1 S AMELANCHIER CANADENSIS SERVICE BERRY 2-3 GAL. CONTAINER 10' O/C 60 2 S HAMAMELIS VIRGINIANA WITCHHAZEL 10' O/C 2-3 GAL. CONTAINER 60 S RHODODENDRON ATLANTICUM DWARF AZALEA 2-3 GAL. CONTAINER 10' O/C | 80 4 UT CERCIS CANADENSIS 1.5" CAL. B&B EASTERN REDBUD 5 UT CRATAEGUS CANBYI CANBY'S HAWTHORN 1.5" CAL. B&B 20' O/C

CHOKE CHERRY

BLACK GUM

YELLOW POPLAR

1.5" CAL

1.5" CAL.

1.5" CAL.

B&B

B&B

B&B

20' O/C

30' O/C

30' O/C

ALL PLANT MATERIAL MUST CONFORM TO THE SIZE REQUIREMENTS AS SHOWN ON THE PLANT LIST. ALL TREES AND SHRUBS MUST BE PLANTED IN A HOLE TWO TIMES THE ALL TWINE AND WIRE BASKETS MUST BE REMOVED FROM BALLED AND BURLAPPED PLANT MATERIAL. DO NOT PLANT OR ALLOW ROOT BALL TO SETTLE DEEPER THAN IT THE TOP 1/3 OF ALL BURLAP MUST BE PULLED BACK INTO HOLE AT TIME OF PLANTING. 6. AN EARTH SAUCER 2" HIGH MUST BE BUILT AROUND ALL TREES. 7. ALL TREES ARE TO BE MULCHED TO A THICKNESS OF A MINIMUM OF 3". 3. ALL TREES ARE TO BE STAKED AS PER PLANTING DIAGRAM i.e. THREE WIRES SET 120' APART. ALL WIRES ARE TO RUN THROUGH TWO-PLY RUBBER HOSE TO PROTECT 10. ALL STAKES ARE TO BE DRIVEN 3' INTO THE GROUND - NEVER INTO THE ROOT BALL. 11. ALL STAKING MATERIALS ARE TO BE REMOVED ONE YEAR AFTER PLANTING. TREES 3'-5' CALIPER: USE STAKES TREES OVER 5' CALIPER: ANCHOR WITH DEADMAN SEE SPECIFICATIONS FO RUBBER HOSE-URNBUCKLE---3" MULCH-4" SAUCER AROUND TREE-TREE PLANTING DETAIL

PLANTING NOTES

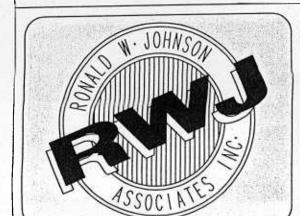
END TIPS) BY 1/3 RETAINING NORMAL PLANT SHAPE. REFER TO SPECIFICATIONS FOR MORE INFORMATION. SHRUB PLANTING DETAIL

CUT AND REMOVE BURLAP DR WIRE BASKET FROM TOP 1/3 OF ROOT BALL 2" SAUCER AROUND TREE PIT VARIABLE GRADE (EXISTING)_ PLANTING MIX, SEE SPECS UNDISTURBED DR COMPACTED TREE PLANTING AND STAKING ON SLOPE

FORESTATION PLAN - 1"=60"

PLANT SYMBOLS

CRITICAL AREA & FOREST CONSERVATION NOTES, TABLES & DETAILS/FORESTATION PLAN



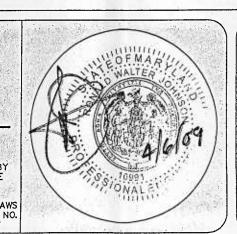
TOTAL IN C.A.

227,467 S.F.

Ronald W. Johnson Associates, Inc. Consulting Engineers Land Planners Surveyors

0.668 AC.

266 Riva Road Building 400, Suite 420 Annapolis, MD 21401 410.841.5221 410.266.6612 Fax 410.841.5124



FINAL DEVELOPMENT, CRITICAL AREA & FOREST CONSERVATION PLANS PRIVATE ROAD, STORMDRAIN & STORMWATER MANAGEMENT PLANS CHRISTOPHER A. MAIO CHECKED BY: PVV P.B. 237, PG. 34 #2 OF 5

PROJECTNO: 2263.0

PROPOSAL NO .:

PROPERTY LOT 6 AND OPEN SPACE - REVISED TAX MAP 50, BLOCK 21, PARCEL 143 OWNER: CHRISTOPHER A. MAIO ZIP CODE: 21409 / ZONING: R1 / MD NAD 83

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ANNE ARUNDEL COUNTY
- DEPARTMENT OF PUBLIC WORKS STANDARD DETAILS AND SPECIFICATIONS FOR CONSTRUCTION SEPTEMBER 1988 AND THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF HIS CONSTRUCTION WITH THE CONSTRUCTION BY THE OTHER CONTRACTORS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND REPLACING ANY EXISTING FENCES, DRIVEWAYS, ETCETERA, DAMAGED OR REMOVED DURING
- THE EXISTING UTILITIES AND OBSTRUCTIONS SHOWN ARE FROM THE BEST AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION BEFORE STARTING CONSTRUCTION. NEITHER THE OWNER, NOR THE ENGINEER, WARRANT OR GUARANTEE THE COMPLETENESS OR CORRECTNESS OF THE INFORMATION.
- THE CONTRACTOR SHALL NOTIFY THE ANNE ARUNDEL COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS, ANNAPOLIS, MARYLAND, (410) 222-78-780, 48 HOURS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
- UNLESS OTHERWISE INDICATED ON THESE PLANS, BALTIMORE GAS AND ELECTRIC COMPANY IS CUSTODIAN OF ALL UTILITY POLES AND OWNS THEM JOINTLY WITH THE CHESAPEAKE AND POTOMAC TELEPHONE COMPANY OF MARYLAND.
- ALL POLES SHALL BE BRACED WHEN NECESSARY AT THE CONTRACTOR'S EXPENSE. THE UTILITY POLES SHALL BE RELOCATED AT THE OWNER'S EXPENSE ONLY IN CASES WHERE THEY WILL INTERFERE WITH CONSTRUCTION.
- EXCESS MATERIAL FROM EXCAVATION MUST BE PLACED ON AN APPROVED SITE. IF AN APPROVED SITE IS NOT AVAILABLE THE CONTRACTOR WILL SUBMIT TO THE SOIL CONSERVATION DISTRICT, ANNAPOLIS, MARYLAND, (410) 222-7822, A PLAN FOR APPROVAL PRIOR TO DUMPING OF EXCESS EXCAVATION MATERIAL.
- NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING SERVICES AND MAINS, AND ANY DAMAGE TO THEM DUE TO CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL NOTIFY MISS UTILITIES 1-800-257-7777 THREE (3) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
- PROPERTY SHOWN HEREON IS TAKEN FROM A FIELD SURVEY BY RONALD W. JOHNSON ASSOCIATES, INC.
- ELEVATIONS AND CONTOURS SHOWN ON THESE PLANS ARE TAKEN FROM AERIAL TOPO BY POTOMAC AERIAL SURVEYS, FREDERICK, MARYLAND. THE CONTRACTOR SHALL VERIFY THE ELEVATIONS AND CONTOURS TO HIS OWN SATISFACTION PRIOR TO STARTING WORK. ANY DISCREPENCIES SHALL BE BROUGHT TO THE ENGINEER'S
- 15. ALL UTILITIES INCLUDING GAS, ELECTRIC, AND COMMUNICATIONS SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE WITH THE PUBLIC SERVICE COMMISSIONS STATEWIDE RULES OF JULY 14, 1968.
- THIS SITE LIES WITHIN ZONE C, AN AREA OF MINIMAL FLOODING, ANZONE A6 (EL. 7.0) AN AREA OF 100 YEAR FLOODING AS SHOWN ON F.I.R.M. MAP No. 38.
- 17. THIS SITE IS TO BE SERVED BY PRIVATE SEPTIC SYSTEMS AND WELLS.

SEQUENCE OF CONSTRUCTION (FOR LOTS)

THE CONTRACTOR SHALL NOTIFY ANNE ARUNDEL COUNTY "INSPECTIONS AND PERMITS" 48 HOURS PRIOR TO COMMENCING WORK. 410-222-7780.

Pre-Construction Meeting: Notify the Department of Inspections and Permits at least 48 hours before commencing work. Work may not commence until the permitee of the responsible personnel have met on the site with a representative of the Department of Inspections and Permits to review the approved plans.

Phase I	
Clear for and Install stabilized construction entrance.	1 DAY
2. Clear for and Install reinforced silt fence as shown on the plan.	1 DAY
Obtain phase one inspection. 3.	2 DAYS

1. Clear minimum area for driveway. Immediately stabilize slopes with seed and curlex where shown on plan. Grade and install driveway to garage location, only disturbing that area, which can be permanently stablized in the same working

6 MONTHS 2. Clear remaining building envelope, grade for and begin house construction. Building construction may not proceed past the ground floor until all remaining disturbed areas have been permanently or temporarily stabilized. During building construction beyond the ground floor, all disturbed areas must be stabilized at the end of each business day. Backfill and temporarily stabilize disturbed areas with seed and mulch throughout course of work. Install well, septic, and other utilities. Refer to topsoiling specs. when necessary.

3. Install stormwater management drywells surrounding perimeter with silt fence to 3 WEEKS prevent contamination. Temporarily block inflow pipes. Device must be Inspected by engineer during construction.

4. When grass is growing and with the approval of the Inspector, remove any remaining reinforced silt fence, and unblock flow to SWM drywells.

CONSTRUCTION AND MATERIAL SPECIFICATIONS:

I. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGEO FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE IN THE SOIL SURVEY PUBLISHED BY USOA-SCS IN COOPERATION WITH MARYLANO AGRICULTURAL EXPERIMENTAL STATION.

II. TOPSOILS SPECIFICATIONS — SOIL TO BE USEO AS TOPSOIL MUST MEET THE FOLLOWING:

- i. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGAROLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTUREO SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONE, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH OR OTHER MATERIALS LARGER THAN 1 1/2 IN DIAMETER
- II. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSONGRASS, NUTSEOGE, POISON IVY, THISTLE OR OTHERS, AS SPECIFIED.
- iii. WHERE THE SUBSOIL IS EITHER HIGHLY EROOIBLE OR COMPOSEO OF HEAVY CLAYS, GROUND LIMESTONEO SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1.000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATEO AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBEO IN THE FOLLOWING PROCEOURES.
- III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
- I. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENOMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABLIZATION - SECTION I - VEGETATION STABILIZATION METHODS AND MATERIALS.

IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:

- i. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS OICTATING FERTILIZER AND LIME AMENDMENTS REQUIREO TO BRING THE SOIL INTO COMPLIANCE
- a. PH FOR TOPSOIL SHALL BE BETWEEN 6.0 ANO 7.5. IF THE TESTED SOIL DEMONSTRATES A pH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PERSCRIBED TO RAISE THE pH TO
- b. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
- c. TOPSOIL HAVING SOLUMBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
- d. NO SOD OR SEED SHALL BE PLACEO ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USEO FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENOED BY QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN PLACE OF NATURAL TOPSOIL.

ii. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIEO IN 20.0 VEGETATIVE STABLIZATION - SECTION I - VEGETATION STABILIZATION

V. TOPSOIL APPLICATION

i. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES, SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE, AND SEDIMENT TRAPS AND BASINS.

ii. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED SHALL BE MAINTAINED, ALBEIT 4" TO 8" HIGHER IN ELEVATION.

- iii. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF OEPRESSIONS OR WATER POCKETS.
- iv. TOPSOIL SHALL NOT BE PLACEO WHILE THE TOPSOIL OR SUBSOIL IS IN FROZEN OR MUDDY CONDITION WHEN THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY BE OTHERWISE DETRIMENTAL TO PROPER GRAOING AND SEEDBED PREPARATION.
- VI. ALTERNATIVE FOR PERMANENT SEEDING INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERICAL FERTILIZER, COMPOSTED SLUOGE, AND AMENDMENTS MAY BE APPLIED AS SPECIFIED
- I. COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING
- THAT ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND OEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06. b. COMPOSTEO SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT

a. COMPOSTEO SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS

- PHOSPHORUS, AND 0.2 PERCENT POTASSIUM ANO HAVE A pH OF 7.0 TO 8.0. IF THE COMPOST OOES NOT MEET THESE REQUIREMENTS, THE APPRORPIATE CONSTITUENTS MUST BE ADDEO TO MEET THE REQUIREMENTS PRIOR TO USE.
- c. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.
- d. COMPOSTEO SLUDGE SHALL BE AMENDEO WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB/1,000 SQUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION RATE.

REFERENCES: GUIDELINE SPECIFICAITONS, SOIL PREPARATION AND SODDING. MD-VA, PUB#1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES. REVISED, 1973.

STANDARDS AND SPECIFICATIONS FOR TOPSOIL

<u>OEFINITION</u>

PLACEMENT OF TOPSOIL OVER A PREPAPRED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW pH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRAOATION.

CONDITIONS WHERE PRACTICE APPLIES:

- I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE: a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
- b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
- c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
- d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- II. FOR THE PURPOSE OF THESE STANOAROS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIOERATION AND DESIGN AND ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

ANNE ARUNDEL SOIL CONSERVATION DISTRICT

DETAILS AND SPECIFICATIONS FOR VEGETATIVE ESTABLISHMENT

FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: I) SEVEN CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, OITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); ii) FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADEO AREAS ON THE PROJECT SITE; iii) THE ABOVE REQUIREMENTS DO NOT APPLY TO THOSE AREAS WHICH ARE SHOWN ON THE PLAN AND ARE CURRENTLY BEING USEO FOR MATERIAL STORAGE OR FOR THOSE AREAS ON WHICH ACTUAL CONSTRUCTION ACTIVITIES ARE CURRENTLY BEING PERFORMED OR TO INTERIOR AREAS OF A SURFACE MINE SITE WHERE THE STABILIZATION MATERIAL WOULD CONTAMINATE THE RECOVERABLE RESOURCE MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE THAT THE STABILIZED AREAS CONTINUOUSLY MEET THE APPROPRIATE REQUIREMENTS OF THE '1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL'.

PERMANENT SEEDING:

plus clay) would be acceptable.

LIME AND FERTILIZER WILL BE APPLIED PER SOIL TESTS RESULTS FOR SITES GREATER THAN 5 ACRES. SOIL TESTS WILL BE DONE AT COMPLETION OF INITIAL ROUGH GRADING OR AS RECOMMENDED BY THE SEDIMENT CONTROL INSPECTOR. RATES AND ANALYSES WILL BE PROVIDED TO THE GRADING INSPECTOR AS WELL AS THE CONTRACTOR.

1. OCCURRENCE OF ACIO SULFATE SOILS (GRAYISH BLACK COLOR) WILL REQUIRE COVERING WITH A MINIMUM OF 12 INCHES OF CLEAN SOIL WITH 6 INCHES MINIMUM CAPPING OF TOP SOIL. NO STOCKPILING OF MATERIAL IS ALLOWED. IF NEEDED, SOIL TESTS SHOULD BE DONE BEFORE AND AFTER A 6 WEEK INCUBATION PERIOD TO ALLOW OXIDATION OF SULFATES.

THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE: a. Soil pH shall be less than 6.0 and 7.0.

b. Soluble salts shall be less than 500 parts per million (ppm c. The soil shall contain less than 40% clay but enough fine grained material (>30% silt plus clay) ta provide the capacity to hold a maderate amount of moisture. An exception is if lovegrass or serecia lespedeza is to be planted, then o sandy soil (<30% silt

d. Soil shall cantain 1.5% minimum organic matter by weight. Soil must contain sufficient pore space to permit adequate root penetration. f. If these conditions cannot be met by soils on site, adding top soil is required in accordance with Section 21 Standard and Specification for Top Soil or amendments made as recommended by certified agronomist.

AREA TO BE SEEDED SHALL BE LOOSE AND FRIABLE TO A DEPTH OF AT LEAST 3 INCHES. THE TOP LAYER SHALL BE LOOSENED BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING OCCURS. FOR SITES LESS THAN 5 ACRES, APPLY 100 POUNDS OF DOLOMITIC LIMESTONE AND 21 POUNDS OF 10-10-10 FERTILIZER PER 1,000 SQUARE FEET. HARROW OR DISK HIMF AND FERTILIZER INTO THE SOIL TO A DEPTH OF AT LEAST 3 INCHES ON SLOPES FLATTER

C. SEEDING: APPLY 5-6 POUNDS PER 1,000 SQUARE FEET OF TALL FESCUE BETWEEN FEBRUARY 1 AND APRIL 30 OR BETWEEN AUGUST 15 AND OCTOBER 31. APPLY SEED UNIFORMLY ON A MOIST FIRM SFEDBED WITH A CYCLONE SEEDEO DRILL, CULTIPACKER SEEDER OR HYDROSEEDER (SLURRY INCLUDES SEEDS AND FERTILIZER, RECOMMENDED ON STEEP SLOPES ONLY). MAXIMUM SEED DEPTH SHOULD BE 1/4 INCH IN CLAYEY SOILS AND 1/2 INCH IN SANDY SOILS WHEN USING OTHER THAN THE HYDROSEEDER METHOD. IRRIGATE WHERE NECESSARY TO SUPPORT ADFOLIATE GROWTH UNTIL VEGETATION IS FIRMLY ESTABLISHED. IF OTHER SEED MIXES ARE TO BE USEO, SELECT FROM TABLE 25, ENTITLED "PERMANENT SEEDING FOR LOW MAINTENANCE AREAS" FROM THE CURRENT STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. MIXES SUITABLE FOR THIS ARE 1, 3 AND 5-7. MIXES 5-7 ARE SUITABLE IN NON-MOWABLE SITUATIONS.

D. MULCHING: MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING. DURING THE TIME PERIOOS WHEN SEEOING IS NOT PERMITTED, MULCH SHALL BE APPLIED IMMEDIATELY AFTER.

MULCH SHALL BE UNROTTEO, UNCHOPPED, SMALL GRAIN STRAW APPLIEO AT A RATE OF 2 TONS PER ACRE OR 90 POUNDS PER 1,000 SQUARE FEET (2 BALES). IF A MULCH ANCHORING TOOL IS USED, APPLY 2.5 TONS PER ACRE. MULCH MATERIALS SHALL BE RELATIVELY FREE OF ALL KINDS OF WEEDS AND SHALL BE COMPLETELY FREE OF PROHIBITED NOXIOUS WEEDS. SPREAD MULCH UNIFORMLY, MECHANICALLY OR BY HANO, TO A DEPTH OF 1-2 INCHES.

(cont'd)

ANNE ARUNDEL SOIL CONSERVATION DISTRICT DETAILS AND SPECIFICATIONS FOR VEGETATIVE ESTABLISHMENT

E. SECURING STRAW MULCH:

STRAW MULCH SHALL BE SECURED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE MOVEMENT BY WIND OR WATER. THE FOLLOWING METHODS ARE PERMITTED:

(i) USE A MULCH ANCHORING TOOL WHICH IS DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE TO A MINIMUM OEPTH OF 2 INCHES. THIS IS THE MOST EFFECTIVE METHOO FOR SECURING MULCH, HOWEVER, IT IS LIMITED TO RELATIVELY

FLAT AREA WHERE EQUIPMENT CAN OPERATE SAFELY. (ii) WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. IF MIXED WITH WATER, USE 50 POUNDS OF WOOO CELLULOSE FIBER PER 100 GALLONS OF WATER.

(iii) LIQUID BINDERS MAY BE USED. APPLY AT HIGHER RATES AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF SLOPES. THE REMAINDER OF THE AREA SHOULD APPEAR UNIFORM AFTER BINDER APPLICATION. BINDERS LISTED IN THE 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL OR APPROVED EQUAL SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURERS.

(iv) LIGHTWEIGHT PLASTIC NETTING MAY BE USED TO SECURE MULCH. THE NETTING WILL BE STAPLED TO THE GROUNO ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

2. TEMPORARY SEEDING:

LIME: 100 POUNDS OF DOLOMITIC LIMESTONE PER 1,000 SQUARE FEET. FERTILIZER: 15 POUNDS OF 10-10-10 PER 1,000 SQUARE FEET.

SEED: PERENNIAL RYE - 0.92 POUNDS PER 1,000 SQUARE FEET (FEBRUARY 1 THROUGH APRIL 30 OR AUGUST 15 THROUGH NOVEMBER 1)

MILLET - 0.92 POUNDS PER 1,000 SQUARE FEET (MAY 1 THROUGH AUGUST 15). MULCH: SAME AS 1 O AND E ABOVE.

3. NO FILLS MAY BE PLACED ON FROZEN GROUND. ALL FILL TO BE PLACED IN APPROXIMATELY HORIZONTAL LAYERS, EACH LAYER HAVING A LOOSE

THICKNESS OF NOT MORE THAN 8 INCHES, ALL FILL IN ROADWAYS AND PARKING AREAS IS TO BE CLASSIFIED TYPE 2 AS PER ANNE ARUNDEL COUNTY CODE - ARTICLE 16, SECTION 2-308, AND COMPACTED TO 90% DENSITY; COMPACTION TO BE DETERMINED BY ASTM D-1557-66T (MODIFIED PROCTOR). ANY FILL WITHIN THE BUILDING AREA IS TO BE COMPACTED TO A MINIMUM OF 95% AS DETERMINED BY METHODS PREVIOUSLY MENTIONED. FILLS FOR POND EMBANKMENTS SHALL BE COMPACTED AS PER MD-378 CONSTRUCTION SPECIFICATIONS. ALL OTHER FILLS SHALL BE COMPACTED SUFFICIENTLY SO AS TO BE STABLE AND PREVENT EROSION AND SLIPPAGE.

INSTALLATION OF SOD SHOULD FOLLOW PERMANENT SEEDING DATES. PERMANENT SOD IS TO BE TALL FESCUE, STATE APPROVED SOO; LIME AND FERTILIZER PER PERMANENT SEEDING SPECIFICATIONS AND LIGHTLY IRRIGATE SOIL PRIOR TO LAYING SOD. SOD IS TO BE LAID ON THE CONTOUR WITH ALL ENDS TIGHTLY ABUTTING, JOINTS ARE TO BE STAGGEREO BETWEEN ROWS. WATER AND ROLL OR TAMP SOD TO INSURE POSITIVE ROOT CONTACT WITH THE SOIL. ALL SLOPES STEEPER THAN 3:1, AS SHOWN, ARE TO BE PERMANENTLY SOOOEO OR PROTECTEO WITH AN APPROVED EROSION CONTROL NETTING. ADDITIONAL WATERING FOR ESTABLISHMENT MAY BE REQUIRED. SOD IS NOT TO BE APPLIED ON FROZEN GROUND. SOD SHALL NOT BE TRANSPLANTED WHEN MOISTURE CONTENT (DRY OR WET) ANO/OR EXTREME TEMPERATURE MAY ADVERSELY AFFECT ITS SURVIVAL. IN THE ABSENCE OF ADEQUATE RAINFALL, IRRIGATION SHOULO BE PERFORMED TO INSURE ESTABLISHED SOD.

5. MINING OPERATIONS: SEDIMENT CONTROL PLANS FOR MINING OPERATIONS MUST INCLUDE THE FOLLOWING SEEDING DATES AND MIXTURES:

FOR SEEOING DATES OF:

FEBRUARY 1 THROUGH APRIL 30 AND AUGUST 15 THROUGH OCTOBER 31, USE SFFO MIXTURE OF TALL FESCUE AT THE RATE OF 2 POUNDS PER 1,000 SQUARE FEET AND SERICEA LESPEDEZA AT THE RATE OF 0.5 POUNDS PER 1,000 SQUARE FEET.

TOPSOIL SHALL BE APPLIED AS PER THE STANDARD AND SPECIFICATION FOR TOPSOIL FROM THE CURRENT MARYLAND STANDAROS AND SPECIFICATIONS FOR SOIL

NOTE: USE OF THIS INFORMATION DOES NOT PRECLUDE MEETING ALL OF THE REQUIREMENTS OF THE "MARYLANO STANOARDS AND SPECIFICATIONS FOR SOIL EROSION AND SECIMENT

NOTE: PROJECTS WITHIN 4 MILES OF THE BWI AIRPORT WILL NEED TO ADHERE TO MARYLAND AVIATION ADMINISTRATION SEEDING SPECIFICATION RESTRICTION.

CONSULTANT'S CERTIFICATION

"The Developer's plan to control silt and erosion is adequate to contain the silt and erosian an the praperty covered by the plan. I certify that this plan of erosian and sediment control represents a practical and workable plan based on my personal knowledge of this site, and was prepared in accordance with the requirements of the Anne Arundel Soil Conservation District Plan Submittal Guidelines and the current Maryland Standards and specifications for Sediment and Erosion Control.

I have reviewed this erosion and sediment contral plan with the owner/developer."
MD P.E. License# 10991
MD Land Surveyor License#
MD Landscape Architect
NameRonald_W. Johnson
Firm Name: Ronald W. Johnson Associates, Inc.
Street Address: 2661 RIVA ROAD, BLD. 400, STE, 420

ANNAPOLIS, MARYLAND 21401 410-841-5221

STANDARD RESPONSIBILITY NOTES I (WE) CERTIFY THAT:

- 1. A. ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THIS SEDIMENT AND EROSION CONTROL PLAN, AND FURTHER, AUTHORIZED THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE ANNE ARUNDEL SOIL CONSERVATION DISTRICT BOARD OF SUPERVISORS OR THEIR AUTHORIZED
- B. ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENT'S APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

RESPONSIBLE PERSONNEL ON SITE: CHRISTOPHER A. MAIO

C. IF APPLICABLE, THE APPROPRIATE ENCLOSURE WILL BE CONSTRUCTED AND MAINTAINED ON SEDIMENT BASIN(S) INCLUDED IN THIS PLAN. SUCH STRUCTURE(S) WILL BE I COMPLIANCE WITH THE ANNE ARUNDEL COUNTY CODE.

2. THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS, AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORMWATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORMWATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED

3. INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT STABILIZATION SHALL BE COMPLETED WITHIN SEVEN CALENOAR DAYS FOR THE SURFACE SURFACE OF ALL CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND FOURTEEN DAYS FOR ALL OTHER DISTURBED OR GRAOEO AREAS ON THE PROJECT SITE. TEMPORARY STABILIZATION OF THE SURFACE OF PERIMETER CONTROLS. DIKES, SWALES, DITCHES AND PERIMETER SLOPES MAY BE ALLOWED AT THE

OISCRETION OF THE SEDIMENT CONTROL INSPECTOR.

4. THE SEDIMENT CONTROL APPROVALS ON THIS PLAN EXTEND ONLY TO AREAS AND PRACTICES IOENTIFIED AS PROPOSEO WORK.

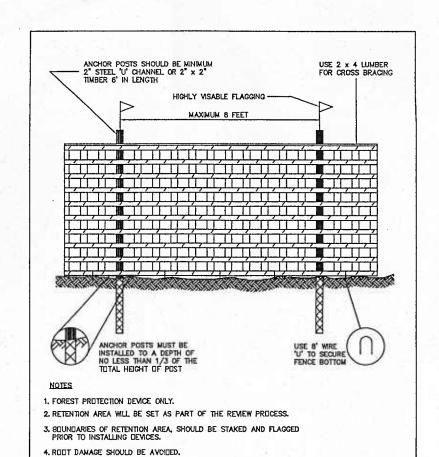
5. THE APPROVAL OF THIS PLAN FOR SEDIMENT AND EROSION CONTROL DOES NOT RELIEVE THE DEVELOPER/CONSULTANT FROM COMPLYING WITH ANY FEDERAL, STATE OR COUNTY REQUIREMENTS APPERTAINING TO ENVIRONMENTAL ISSUES.

6. THE DEVELOPER MUST REQUEST THAT THE SEDIMENT CONTROL INSPECTOR APPROVE WORK COMPLETED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN, THE GRADING OR BUILDING PERMIT, AND THE ORDINANCE. 7. ALL MATERIALS SHALL BE TAKEN TO A SITE WITH AN APPROVED SEDIMENT AND CONTROL PLAN

8. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF TWO ACRES, APPROVAL OF THE SEDIMENT CONTROLS INSPECTOR SHALL BE REQUIRED ON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. THIS WILL REQUIRE FIRST PHASE INSPECTIONS. GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THE INITIAL APPROVAL BY THE SEDIMENT AND EROSION CONTROL INSPECTOR IS GIVEN.

- APPROVAL SHALL BE REQUESTED ON FINAL STABILIZATION OF ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES BEFORE REMOVAL OF CONTROLS.
- 10. EXISTING TOPPOGRAPHY MUST BE FIELD VERIFIED BY RESPONSIBLE PERSONNEL TO SATISFACTION OF THE SEDIMENT CONTROL INSPECTOR PRIOR TO COMMENCING WORK.

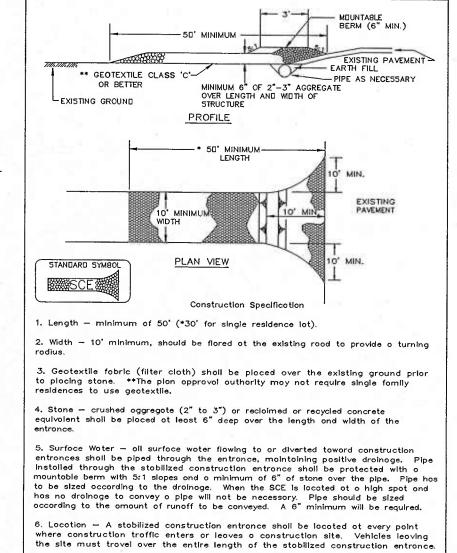
(PRINT) NAME: CHRISTOPHER A. MAIO TITLE: DEVELOPER/OWNER ADDRESS: 2801 CHRISTOPHERS WAY TELEPHONE: (410)-451-2212



BLAZE ORANGE PLASTIC MESH

5. PROTECTIVE SIGNAGE MAY ALSO BE USED.

6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.



DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

DETAIL 22A - REINFORCED SILT FENCE APPROVED BY MDE 2-7-05 48' MINIMUM LENGTM FENCE PDST ORIVEN A MINIMUM OF 16' INTO GROUND 8' MAXIMUM CENTER TO GEDTEXTILE CLASS F - B' MINIMUM DEPTM IN PERSPECTIVE VIEW 48' MINIMUM FENCE-POST LENGTM FILTER FENCE POST SECTION GROUND EMBED GEDTEXTILE CLASS F - FENCE POST ORIVE CROSS SECTION FILTER FABRIC-TIE RSF-∠velded wire fence JUINING TWO ADJACENT FABRIC SECTIONS TOP VIEW

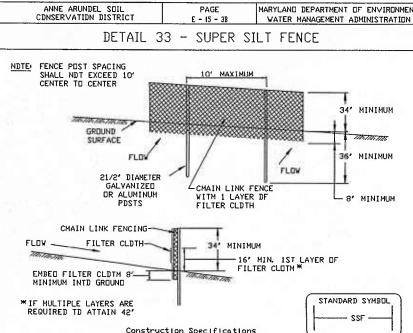
SOIL CONSERVATION SERVICE

PAGE MARYLAND DEPARTMENT OF ENVIRONMENT F - 17 - 3 WATER MANAGEMENT ADMINISTRATION

1. Metal fence post shall be a minimum of 48' long driven 16' minimum into the ground. Post shall be standard T or U section weighting not less than 1.00 pound per linear foot. 50 lbs/in (min.) Tensile Modulus 20 lbs/in (min.) Testi MSMT 509 0.3 gal ft^e/ minute (max.) Testi MSMT 322 Test MSMT 322

Construction Specifications

Filtering Efficiency 75% (min.) 4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.



Fencing shall be 42' in height and constructed in accordance with the latest Maryland State Mighway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42' fabric and 6' length

Chain link fence shall be fastened securely to the fence posts with wire ties. e lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence

3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24° at the top and mid section 4. Filter cloth shall be embedded a minimum of 8' into the ground.

5. When two sections of filter cloth adjoin each other, they shall be overlapped 6. Maintenance shall be performed as needed and silt buildups removed when 'bulges develop in the silt fence, or when silt reaches 50% of fence height 7. Filter cloth shall be fastened securely to each fence post with wire ties or

staples at top and mid section and shall meet the following requirements for Tensile Strength 50 lbs/in (min.) Tensile Modulus 20 lbs/in (min.) Test: MSMT 509 0.3 gal/ft*/minute (max.) Filtering Efficiency 75% (min.) Test: MSMT 322 U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMEN WATER MANAGEMENT ADMINISTRATION



Ronald W. Johnson Associates, Inc. Consulting Engineers Land Planners Surveyors

2661 Riva Road Building 400, Suite 420 Annapolis, MD 21401 410,841,5221 410,266,6612 Fax 410,841,5124

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PROFESSIONAL ENGINEER UNDER THE LAWS
OF THE STATE OF MARYLAND, LICENSE NO.



FINAL DEVELOPMENT, CRITICAL AREA & FOREST CONSERVATION PLANS PRIVATE ROAD, STORMDRAIN & STORMWATER MANAGEMENT PLANS PROJECTNO: 2263.0 RITICALAREA PROPOSAL NO.:

GRADING SEDIMENT & EROSION CONTROL NOTES, DETAILS & SEQUENCE

AS SHOWN DRAWN BY SRK **PROPERTY** CHECKED BY: PUVV_ P.B. 237, PG. 34 #3 OF 5

CHRISTOPHER A. MAIO LOT 6 AND OPEN SPACE - REVISED TAX MAP 50, BLOCK 21, PARCEL 143 OWNER: CHRISTOPHER A. MAIO ZIP CODE: 21409 / ZONING: R1 / MD NAD 83 ANNE ARUNDEL CO., MD SCALE: AS SHOWN S# 1999-130, P#2006-120 DECEMBER, 2008

"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. 10991, EXPIRATION DATE; 6-23-2010."

CHECKED BY: PV

CHIEF, RIGHT-OF-WAYEL BEN PROPOSAL NO.:

CHIEF ENGINEER

ASSISTANT CHIEF ENGINEER

APPROVED

LOT 6 AND OPEN SPACE - REVISED

P.B. 237, PG. 34

TAX MAP 50, BLOCK 21, PARCEL 143 OWNER: CHRISTOPHER A. MAIO ZIP CODE: 21409 / ZONING: R1 / MD NAD 83

SCALE: AS SHOWN S# 1999-130, P#2006-120 DECEMBER, 2008

ANNE ARUNDEL CO., MD

NATURAL AREA CREDIT NOTE

CREDIT HAS BEEN GIVEN FOR THE NATURAL AREA CONSERVED ON-SITE THEREBY RETAINING PRE DEVELOPMENT HYDROLOGIC AND WATER QUALITY CHARACTERISTICS. A SIMPLE WATER QUALITY CREDIT HAS BEEN GRANTED FOR THE NATURAL AREA PERMANENTLY PROTECTED UNDER CONSERVATION EASEMENT. THE CONSERVATION AREA IS SUBTRACTED FROM THE TOTAL SITE AREA WHEN COMPUTING THE WATER QUALITY VOLUME. THE POST DEVELOPMENT CURVE NUMBER USED TO COMPUTE CHANNEL PROTECTION AND OVERBANK FOR THE NATURAL AREA HAS BEEN ASSUMED TO BE WOODS IN GOOD CONDITION.

STORMWATER MANAGEMENT SIZING CRITERIA SUMMARY TABLE				
MINIMUM SIZING CRITERIA AND SYMBOL	DRAINAGE AREA AC.	BMP PRACTICE CATEGORY	NOTES REQUIRED VOLUMES TO BE DETERMINED AT TIME OF FINAL PLAT/PLAN.	
WATER QUALITY VOLUME (WQv)	6.902 AC. (SITE AREA)	BMP #6 BMP #3	THE NATURAL AREA CREDIT HAS BEEN UTILIZED FOR THIS SUBDIVISION. THIS REDUCES THE "A" WHEN COMPUTING WATER QUALITY VOLUME REQUIRED.	
RECHARGE VOLUME (Rev)	6.902 AC. (SITE AREA)	BMP #6 BMP #3	RECHARGE WILL BE PROVIDED 100% WITHIN THE INFILTRATION TRENCHES ON THE LOTS.	
CHANNEL PROTECTION VOLUME (Cpv)	6.902 AC. (SITE AREA)	BMP #6	THE NATURAL AREA CREDIT HAS BEEN UTILIZED FOR THIS SUBDIVISION. THIS ALLOWS THE AREA UNDER EASEMENT TO BE ASSUMED AS WOODS IN GOOD CONDITION WHEN COMPUTING THE POST DEVELOPMENT PEAK DISCHARGE RATE FOR THE ONE YEAR STORM THEREBY REDUCING THE PEAK DISCHARGE RATE. SINCE THE RATE IS LESSS THAN 2.0 C.F.S., CHANNEL PROTECTION IS NOT REQUIRED.	
OVERBANK FLOOD PROTECTION (Qp10)	D.A. #1-#5 SEE LOCATION SHT.5	BMP #6 BMP #3	THE NATURAL AREA CREDIT HAS BEEN UTILIZED FOR THIS SUBDIVISION. THIS ALLOWS THE AREA UNDER EASEMENT TO BE ASSUMED AS WOODS IN GOOD CONDITION WHEN COMPUTING THE POST DEVELOPMENT PEAK DISCHARGE RATE FOR THE TEN YEAR STORM THEREBY REDUCING THE VOLUMES REQUIRED. INFILTRATION TRENCH ES PROVIDED FOR AFTER CREDIT VOLUMES REQUIRED.	
EXTREME FLOOD VOLUME (Qf)	D.A. #1-#5 SEE LOCATION · SHT.5	N/A	PROPOSED DEVELOPMENT IS OUTSIDE 100 YEAR FLOODPLAIN; NO DEVELOPMENT IN DOWNSTREAM FLOWPATH. NOT REQUIRED.	

B.2.A INFILTRATION TRENCH GENERAL NOTES AND SPECIFICATIONS

AN INFILTRATION DRYWELL MAY NOT RECEIVE RUN-OFF UNTIL THE ENTIRE CONTRIBUTING AREA TO THE INFILTRATION TRENCH HAS RECEIVED FINAL STABILIZATION.

- HEAVY EQUIPMENT AND TRAFFIC SHALL BE RESTRICTED FROM TRAVELING OVER THE PROPOSED LOCATION OF THE INFILTRATION TRENCH TO MINIMIZE COMPACTION OF SOIL.
- EXCAVATE THE INFILTRATION TRENCH TO THE DESIGN DIMENSIONS. EXCAVATED MATERIALS SHALL BE PLACED AWAY FROM THE TRENCH SIDES TO ENHANCE TRENCH WALL STABILITY, LARGE TREE ROOTS MUST BE TRIMMED FLUSH WITH THE TRENCH SIDES IN ORDER TO PREVENT FABRIC PUNCTURING OR TEARING OF THE FILTER FABRIC DURING SUBSEQUENT INSTALLATION PROCEDURES. THE SIDE WALLS OF THE TRENCH SHALL BE ROUGHENED WHERE SHEARED AND SEALED BY

A CLASS "C" GEOTEXTILE OR BETTER (SEE SECTION 24.0, MATERIAL SPECIFICATIONS, 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, MDE, 1994) SHALL INTERFACE BETWEEN THE TRENCH SIDE WALLS AND BETWEEN THE STONE RESERVOIR AND GRAVEL FILTER LAYERS. A PARTIAL LIST OF NON-WOVEN FILTER FABRICS THAT MEET THE CLASS "C" CRITERIA FOLLOWS. ANY ALTERNATIVE FITLER FABRIC MUST BE APPROVED BY THE PLAN APPROVAL AUTHORITY.

Amoco 4552, GEOLON N70, WEBTEC N07, Carthage FX-805, Mirafi 180-N

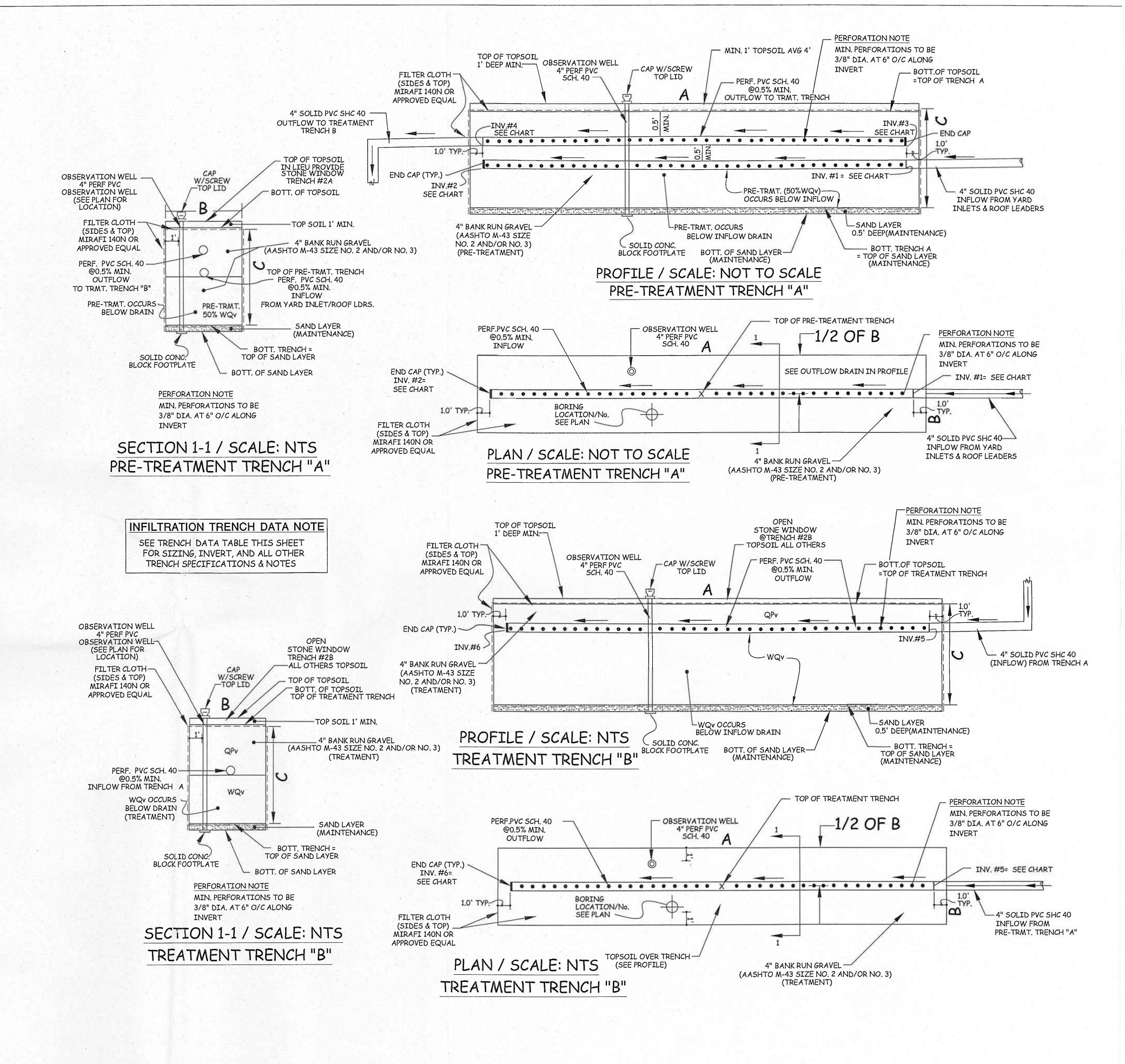
THE WIDTH OF THE GEOTEXTILE MUST INCLUDE SUFFICIENT MATERIAL TO CONFORM TO TRENCH PERIMETER IRREGULARTIES AND FOR A 6-INCH MINIMUM TOP OVERLAP. THE FILTER FABRIC SHALL BE TUCKED UNDER THE SAND LAYER ON THE BOTTOM OF THE INFILTRATION TRENCH FOR A DISTANCE OF 6 TO 12 INCHES. STONES OR OTHER ANCHORING OBJECTS SHOULD BE PLACED ON THE FABRIC AT THE EDGE OF THE DRYWELL TO KEEP THE TRENCH OPEN DURING WINDY PERIODS, WHEN OVERLANPS ARE REQUIRED BETWEEN ROLLS, THE UPHILL ROLL SHOULD LAP A MINIMUM OF 2 FEET OVER THE DOWNHILL ROLL IN ORDER TO PROVIDE A SHINGLED EFFECT.

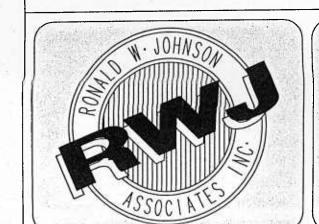
- IF A 6 INCH SAND FILTER LAYER IS PLACED ON THE BOTTOM OF THE INFILTRATION TRENCH, THE SAND FOR THE INFILTRATION TRENCH SHALL BE WASHED AND MEET AASHTO M-43, SIZE NO. 9 OR NO. 10. ANY ALTERNATIVE SAND GRADATION MUST BE APPROVED BY THE PLAN APPROVAL AUTHORITY.
- THE STONE AGGREGATE SHOULD BE PLACED IN A MAXIMUM LOOSE LIFT THICKNESS OF 12 INCHES. THE GRAVEL (ROUNDED "BANK RUN" GRAVEL IS PREFERRED) FOR THE INFILTRATION TRENCH SHALL BE WASHED AND MEET ONE OF THE FOLLOWING AASHTO M-43, SIZE NO. 2 AND/OR NO.3.
- FOLLOWING THE STONE AGGREGATE PLACEMENT, THE FILTER FABRIC SHALL BE FOLDED OVER THE STONE AGGREGATE TO FORM A 6-INCH MINIMUM LONGITUDINAL LAP. THE DESIRED FILL SOIL OR STONE AGGREGATE SHALL BE PLACEDOVER THE LAP AT SUFFICIENT INTERVALS TO MAINTAIN THE LAP DURING SUBSEQUENT BACKFILLING.
- CARE SHALL BE EXERCISED TO PREVENT NATURAL OR FILL SOILS FROM INTERMIXING WITH THE STONE AGGREGATE, ALL CONTAMINATED STONE AGGREGATE SHALL BE REMOVED AND REPLACED WITH THE UNCONTAMINATED STONE AGGREGATE.
- VOIDS MAY OCCUR BETWEEN THE FABRIC AND THE EXCAVATION SIDES. THIS IS TO BE AVOIDED, REMOVING BOULDERS OR OTHER OBSTACLES FROM THE TRENCH WALLS IS ONE SOURCE OF SUCH VOIDS. THEREFORE, NATURAL SOILS SHOULD BE PLACED IN THESE VOIDS AT THE MOST CONVENIENT TIME DURING CONSTRUCTION TO ENSURE FABRIC CONFORMITY TO
- VERTICALLY EXCAVATED WALLS MAY BE DIFFICULT TO MAINTAIN IN AREAS WHERE SOIL MOISTURE IS HIGH OR WHERE SOFT COHESIVE OR COHESIONLESS SOILS ARE DOMINANT. THESE CONDITIONS MAY REQUIRE LAYING BACK OF THE SIDE
- PVC DISTRIBUTION PIPES SHALL BE SCHEDULE 40 AND MEET ASTM-D-1785. ALL FITTINGS SHALL MEET ASTM-D-2729. PERFORATIONS SHALL 3/8 INCH IN DIAMETER. A PERFORATED PIPE SHALL BE PROVIDED ONLY WITHIN THE INFILTRATION TRENCH AND SHALL TERMINATE 1 FOOT SHORT OF THE INFILTRATION TRENCH WALL. THE END OF THE PVC PIPE SHALL BE CAPPED. NOTE: PVC IPE WITH A WALL THICKNESS CLASSIFICATION OF SDR-35 MEETING ASTM-D-3034 IS AN ACCEPTABLE SUBSTITUTE FOR SCHEDULE 40 IPE.
- 11. THE OBSERVATION WELL IS TO CONSIST OF 6-INCH DIAMETER PERFORATED PVC SCHEDULE 40 PIPE (M278 OR F758, TYPE PS 28) WITH A CAP SET 6 INCHES ABOVE GROUND LEVER AND IS TO BE LOCATED NEAR THE LONGITUDINAL CENTER OF THE INFILTRATION TRENCH. THE PIPE SHALL HAVE A PLASTIC COLLAR WITH RIBS TO PREVENT ROTATION WHEN REMOVING THE CAP. THE SCREW TOP LID SHALL BE A CLEANOUT WITH A LOCKING MECHANISM OR SPECIAL BOLT TO DISCOURAGE VANDALISM. THE DEPTH TO THE INVERT SHALL BE MARKED ON THE LID. THE PIPE SHALL BE PLACED VERTICALLY WITHIN THE GRAVEL PORTION OF THE INFILTRATIION TRENCH AND A CAP PROVIDED AT THE BOTTOM OF THE PIPE. THE BOTTOM OF THE CAP SHALL REST ON THE INFILTRATION TRENCH BOTTOM.
- CORRUGATED METAL DISTRIBUTION PIPES SHALL CONFORM TO AASHTO-M-36, AND SHALL BE ALUMINIZED IN ACCORDANCE WITH AASHTO-M-274. ALUMINIZED PIPE IN CONTACT WITH CONCRETE SHALL BE COATED WITH AN INERT COMPOUND OF PREVENTING THE DELETERIOUS EFFECT OF THE ALUMINUM ON THE CONCRETE. PERFORATED DISTRIBUTION PIPES SHALL CONFORM TO AASHTO-M-36, CLASS 2 AND SHALL BE PROVIDED ONLY WITHIN THE INFILTRATION TRENCH AND SHALL TERMINATE 1 FOOT SHORT OF THE INFILTRATION TRENCH WALL, AN ALUMINIZED METAL PLATE SHALL BE WELDED TO THE END OF THE PIPE.
- IF A DISTRIBUTION STRUCTURE WITH A WET WELL IS USED, A 4-INCH DRAIN PIPE SHALL BE PROVIDED AT THE OPPOSITE ENDS OF THE INFILTRATION TRENCH DISTRIBUTION STRUCTURE. TWO (2) CUBIC FEET OF PROUS BACKFILL MEETING AASHTO-M-43, SIZE NO. 57 SHALL BE PROVIDED AT EACH DRAIN.
- 14. IF A DISTRIBUTION STRUCTURE IS USED, THE MANHOLE COVER SHALL BE BOLTED TO THE FRAME.

PRIVATE SWM PRACTICES MAINTENANCE & INSPECTION NOTES AND SCHEDULE (GROUP 3 - B. INFILTRATION DRYWELLS)

- 1. The infiltration drywell must be inspected several times during the first few months of operations after major storms, then annually thereafter. Inspections shall examine evidence of surface ponding, clogging, etc. Water levels in observation wells should be recorded over a several day period to check drywell drainage.
- 2. Buffer strips must be inspected annually. Growth should be vigorous and dense. Any bare spots, burned out areas, or eroded areas must be re-seeded or re-sodded immediately. Watering and/or fertilizing should be provided during the first few months after strip is established and may periodically be needed during periods of drought.
- 3. Buffer strips must be mowed at least twice a year to prevent woody growth and for proper maintenance. More frequent mowing may be required in residential areas. Extreme care should be taken to ensure that buffer strip is not mowed too short and that baggers be used to prevent clippings from clogging the drywell.
- 4. The pre-treatment inlets of underground drywells should be checked periodically and cleaned out when sediment depletes more than 10% of available capacity. Sediment removal can be performed manually or by use of a vacuum pump. Inlet and outlet pipes must be checked for clogging and vandalism. 5. Any adjacent trees may require trimming to ensure that the drip-line does not extend over a drywell surface so that tree
- leaves do not clog the drywell. Any seedling growth that develops in vicinity of a drywell should be removed to prevent root puncture which may cause sediment to enter drywell. 6. Clogging of surface drywell can be addressed by carefully removing the top layer of stone, removing clogged filter fabric, by carefully removing the top layer of stone, removing clogged filter fabric, installing new filter fabric and cleaning or
- 7. Rehabilitation of a clogged underground drywell requires the removal of the topsoil, vegetation or structural (paved, concrete, etc.) layer, removal of the protective plastic layer, removal of the entire stone aggregate layer, removal of the bottom filter fabric, tilling of the subsoil layer to promote better infiltration and then replacement of each layer.

MINIMUM SIZING CRITERIA AND SYMBOL	DRAINAGE AREA AC.	BMP PRACTICE CATEGORY	NOTES REQUIRED VOLUMES TO BE DETERMINED AT TIME OF FINAL PLAT/PLAN.
WATER QUALITY VOLUME (WQv)	6.902 AC. (SITE AREA)	BMP #6 BMP #3	THE NATURAL AREA CREDIT HAS BEEN UTILIZED FOR THIS SUBDIVISION. THIS REDUCES THE "A" WHEN COMPUTING WATER QUALITY VOLUME REQUIRED.
RECHARGE VOLUME (Rev)	6.902 AC. (SITE AREA)	BMP #6 BMP #3	RECHARGE WILL BE PROVIDED 100% WITHIN THE INFILTRATION TRENCHES ON THE LOTS.
CHANNEL PROTECTION VOLUME (Cpv)	6.902 AC. (SITE AREA)	BMP #6	THE NATURAL AREA CREDIT HAS BEEN UTILIZED FOR THIS SUBDIVISION. THIS ALLOWS THE AREA UNDER EASEMENT TO BE ASSUMED AS WOODS IN GOOD CONDITION WHEN COMPUTING THE POST DEVELOPMENT PEAK DISCHARGE RATE FOR THE ONE YEAR STORM THEREBY REDUCING THE PEAK DISCHARGE RATE. SINCE THE RATE IS LESSS THAN 2.0 C.F.S., CHANNEL PROTECTION IS NOT REQUIRED.
OVERBANK FLOOD PROTECTION (Qp10)	D.A. #1-#5 SEE LOCATION SHT.5	BMP #6 BMP #3	THE NATURAL AREA CREDIT HAS BEEN UTILIZED FOR THIS SUBDIVISION. THIS ALLOWS THE AREA UNDER EASEMENT TO BE ASSUMED AS WOODS IN GOOD CONDITION WHEN COMPUTING THE POST DEVELOPMENT PEAK DISCHARGE RATE FOR THE TEN YEAR STORM THEREBY REDUCING THE VOLUMES REQUIRED. INFILTRATION TRENCH ES PROVIDED FOR AFTER CREDIT VOLUMES REQUIRED.
EXTREME FLOOD VOLUME (Qf)	D.A. #1-#5 SEE LOCATION SHT.5	N/A	PROPOSED DEVELOPMENT IS OUTSIDE 100 YEAR FLOODPLAIN; NO DEVELOPMENT IN DOWNSTREAM FLOWPATH, NOT REQUIRED.

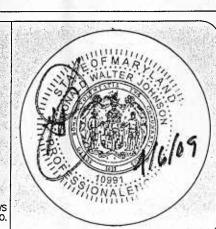




Ronald W. Johnson Associates, Inc. Consulting Engineers Land Planners Surveyors

2661 Riva Road Building 400, Suite 420 Annapolis, MD 21401 410,841,5221 410,266,6612 Fax 410,841,5124

"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.



FINAL DEVELOPMENT, CRITICAL AREA & FOREST CONSERVATION PLANS PRIVATE ROAD, STORMDRAIN & STORMWATER MANAGEMENT PLANS CHRISTOPHER A. MAIO DRAWN BY SRK **PROPERTY** CHECKED BY: LOT 6 AND OPEN SPACE - REVISED

SHEET

OF 5

PROJECT NO .: 2263.0

PROPOSAL NO .:

P.B. 237, PG. 34 TAX MAP 50, BLOCK 21, PARCEL 143 OWNER: CHRISTOPHER A. MAIC ZIP CODE: 21409 / ZONING: R1 / MD NAD 83 SCALE: AS SHOWN S# 1999-130, P#2006-120 DECEMBER, 2008