

10/27

MSA.S. 1829-5709

Comments
10/26/06
MSA.S. 1829-5709
11/20/11

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/

November 12, 2008

Amanda M. Paoletti
Cecil County Government
Office of Planning and Zoning
County Administration Building
200 Chesapeake Boulevard, Suite 2300
Elkton, MD 21921

**RE: Bohemia Crossing Subdivision
Environmental Assessment and Preliminary Development Plan
TM 54, Parcels 11 and 33**

Dear Ms. Paoletti:

Thank you for providing information regarding the environmental assessment (EA) and preliminary development plan for the above referenced minor subdivision. The applicant is proposing to create an 18-lot subdivision. The site area is 50.25 acres, of which 6.19 acres is located within the Critical Area and designated Resource Conservation Area (RCA). No development is proposed within the RCA portion of the project.

Based on the information provided, we have the following comments:

1. It does not appear that the 110-foot Buffer has been properly expanded for steep slopes on either the EA or the preliminary development plan. Applicants must extend the Buffer for steep slopes according to the Cecil County Zoning Ordinance §196.2.b. and COMAR 27.01.09.01C(7), which states that "...In the case of contiguous slopes 15 percent or greater, the Buffer shall be expanded four feet for every one percent of slope, or the top of the slope, whichever is greater in extent." In addition, the 110-foot Buffer must be expanded for any hydric or highly erodible soils located contiguous to the Buffer. Please have the applicant revise the site plans and EA to reveal an accurate Buffer. Furthermore, in order to verify its accuracy, please have the applicant provide samples of the methodology used on this site to calculate the expanded Buffer.
2. It is our understanding that the applicant submitted an application for subdivision prior to July 1, 2008. Please note that Ch. 119, 2008 Laws of Maryland at 765 contains provisions in regards to a new 200-foot Buffer which may be applicable to this subdivision. Under these provisions, a subdivision located in the RCA must provide a new 200-foot Buffer *unless* an application for

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Annapolis: (410) 974-2609 D.C. Metro: (301) 586-0450

subdivision was submitted before July 1, 2008 *and* is legally recorded by July 1, 2010. Should the applicant fail to have the subdivision plat recorded by the July 1, 2010 deadline, then a 200-foot Buffer will apply to this project. Please ensure that the applicant is aware of this requirement, as stated in Chapter 119 of the 2008 Laws of Maryland.

3. The EA, as well as the plat, should, at a minimum, include the following information in the notes section:
 - a. Information stating that the 110-foot and Expanded Buffer will be fully forested in three-tier vegetation, as found in COMAR 27.01.09.01 and §196.3 of the Cecil County Code, must be included as a note on the Environmental Assessment.
 - b. No disturbance is permitted within the 110-foot and expanded Buffer per §196 of the Cecil County zoning Ordinance.

Thank you for the opportunity to provide comments. If you have any questions, please contact me at 410-260-3483.

Sincerely,

A handwritten signature in black ink that reads "Nick Kelly". The signature is written in a cursive, slightly slanted style.

Nick Kelly
Natural Resource Planner
cc: CE 702-06

Martin O'Malley
Governor

Anthony G. Brown
Lt. Governor



Margaret G. McHale
Chair

Ren Serey
Executive Director

STATE OF MARYLAND
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September 23, 2008

Mr. Anthony DiGiacomo
Cecil County Department of Planning and Zoning
129 East Main Street
Elkton, MD 21921

**RE: Bohemia Crossing Subdivision
TM 54, Parcels 11 and 33**

Dear Mr. DiGiacomo:

Thank you for providing information regarding the above referenced minor subdivision. The applicant is proposing to create an 18-lot subdivision. The site area is 50.25 acres, of which 6.19 acres is located within the Critical Area and designated Resource Conservation Area (RCA). No development is proposed within the RCA portion of the project.

Based on the information provided, we have the following comments:

1. The applicant states that a 110-foot Buffer is provided. However, it is difficult to delineate the Buffer on the site plan. Please have the applicant revise the site plan to more clearly depict the 110-foot Buffer.
2. The 110-foot Buffer must be expanded for steep slopes. Applicants must extend the Buffer for steep slopes according to the Cecil County Zoning Ordinance §196.2.b. and COMAR 27.01.09.01C(7), which states that "...In the case of contiguous slopes 15 percent or greater, the Buffer shall be expanded four feet for every one percent of slope, or the top of the slope, which is greater in extent." In addition, the 110-foot Buffer must be expanded for any hydric or highly erodible soils located contiguous to the Buffer.
3. It is our understanding that the applicant submitted an application for subdivision prior to July 1, 2008. Please note that Ch. 119, 2008 Laws of Maryland at 765 contains provisions in regards to a new 200-foot Buffer which may be applicable to this subdivision. Under these provisions, a subdivision located in the RCA must provide a new 200-foot Buffer *unless* an application for subdivision was submitted before July 1, 2008 *and* is legally recorded by July 1, 2010. Should the applicant fail to have the subdivision plat recorded by the July 1, 2010 deadline, then a 200-foot Buffer will apply to this project. Please ensure that the applicant is aware of this requirement, as stated in Chapter 119 of the 2008 Laws of Maryland.

4. The site plan reveals the location of an intermittent stream, taken from the USGS Quad maps. The 2008 changes to the Critical Area law amended the definition of a tributary stream to mean a "perennial or an intermittent stream within the Critical Area that has been identified by site inspection or in accordance with local program procedures approved by the Commission." As of July 1, 2008 all the requirements of the Critical Area law shall apply, and be applied, by a local jurisdiction. Please have the applicant field verify the stream.
5. Based on the development density restrictions in the RCA of one dwelling unit per twenty acres, the Critical Area portion of the site is limited to one dwelling unit, which currently exists. A note should be included on the plat and Environmental Assessment that the development rights for the RCA are exhausted.
6. GIS data reveals that the property is located in a potential area where a species of concern is located. The applicant must receive a letter from the Department of Natural Resources Wildlife and Heritage Division (WHS) evaluating the property for any rare, threatened, or endangered species location onsite. If future development is proposed within the RCA, a site-specific survey of the RCA should be done to determine whether these species occur near the proposed development. If species are found, the applicant will be required to prepare a revised Environmental Assessment (EA) that includes habitat protection, provisions per proposed §197.12b(1) and §200.2. A copy of the revised EA should be referred to this office for review and comment.

Thank you for the opportunity to provide comments. If you have any questions, please contact me at 410-260-3483.

Sincerely,



Nick Kelly
Natural Resource Planner
cc: CE 702-06

Robert L. Ehrlich, Jr.
Governor

Michael S. Steele
Lt. Governor



Martin G. Madden
Chairman

Ren Serey
Executive Director

**STATE OF MARYLAND
CRITICAL AREA COMMISSION
CHESAPEAKE AND ATLANTIC COASTAL BAYS**

1804 West Street, Suite 100, Annapolis, Maryland 21401
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www.dnr.state.md.us/criticalarea/

October 25, 2006

Mr. Anthony DiGiacomo
Cecil County Department of Planning and Zoning
129 East Main Street
Elkton, MD 21921

RE: Bohemia Crossing, Lots 1-13
TM 54, Parcels 11 and 33

Dear Mr. DiGiacomo:

Thank you for providing information regarding the above referenced minor subdivision. The applicant is proposing to create a 13-lot subdivision. The site area is 50.25 acres of which 6.19 acres is located within a Resource Conservation Area (RCA).

Based on the information provided, I have the following comments:

1. The applicant must provide a 110-foot Buffer around tributary streams, which are defined as either perennial or intermittent. Additionally, the Buffer must be expanded for steep slopes and/or erodible soils as defined in Cecil County Zoning Code Section 196.b.
2. Based on the development density restrictions in the RCA of one dwelling unit per twenty acres, the Critical Area portion of the site is limited to one dwelling unit.
3. The intent of the Critical Area portion of the site should be clarified as it appears that Parcel 'B' is currently developed. Given that nearly all of this area may be within the expanded 110-foot Buffer, the applicant will be limited to the same use and footprint of what currently exists.

Thank you for the opportunity to provide comments. If you have any questions, please contact me at 410-260-3475.

Sincerely,

A handwritten signature in cursive script that reads "Kate Schmidt".

Kate Schmidt
Natural Resource Planner
CE 702-06

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Annapolis: (410) 974-2609 D.C. Metro: (301) 586-0450



Robert L. Ehrlich, Jr., Governor

Michael S. Steele, Lt. Governor

C. Ronald Franks, Secretary

November 22, 2006

Mr. William S. Twupack
JCM Environmental
Pencader Corporate Center
100 Lake Drive, Suite 3
Newark, DE 19702

RE: Bohemia Crossing Property, East Side of Old Telegraph Road in Bohemia Mills Area, Cecil County, Maryland.

Dear Mr. Twupack:

The Wildlife and Heritage Service has determined that there are no State or Federal records for rare, threatened or endangered species within the boundaries of the project site as delineated. As a result, we have no specific requirements pertaining to protection measures at this time. Please note however that the utilization of state funds, the need to obtain a state-authorized permit, or changes to the plan might warrant additional evaluations that could lead to protection or survey recommendations by the Wildlife and Heritage Service. Please contact us again for further coordination if this project falls into one of those categories.

We would also like to point out that our initial evaluation of this project should not be interpreted as meaning that it is not possible for rare, threatened or endangered species to be present. Certain species could be present without documentation because adequate surveys may not have been conducted in the past. Although we are not requiring any surveys, we would like to bring to your attention that Wildlife and Heritage Service's Natural Heritage database records do indicate that there are occurrences of the Tidewater Mucket (*Leptodea ochracea*) and the Eastern Lampmussel (*Lampsilis radiata*) in very close proximity to the project site, immediately downstream in Bohemia Mill Creek. While both of these species have uncertain status in Maryland, they are thought to be rare, and we would encourage conservation of these freshwater mussels by maintaining water quality and buffering the shoreline of the property, if at all possible, with an undisturbed minimum 100 ft. vegetated buffer.

Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER #2006.2612.ce
Cc: D. Brinker, DNR

Tawes State Office Building • 580 Taylor Avenue • Annapolis, Maryland 21401

410.260.8DNR or toll free in Maryland 877.620.8DNR • www.dnr.maryland.gov • TTY users call via Maryland Relay



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401
410/573-4575



November 30, 2006

JCM Environmental
William S. Twupack
Pencader Corporate Center
100 Lake Drive, Suite 3
Newark, Delaware 19702

RE: Bohemia Crossing on east side of Old Telegraph Road Cecil county Maryland

Dear William S. Twupack

This responds to your letter, received September 27, 2006, requesting information on the presence of species which are federally listed or proposed for listing as endangered or threatened within the vicinity of the above reference project area. We have reviewed the information you enclosed and are providing comments in accordance with section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the project impact area. Therefore, no Biological Assessment or further section 7 Consultation with the U.S. Fish and Wildlife Service is required. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. For information on the presence of other rare species, you should contact Lori Byrne of the Maryland Wildlife and Heritage Division at (410) 260-8573.

An additional concern of the Service is wetlands protection. Federal and state partners of the Chesapeake Bay Program have adopted an interim goal of no overall net loss of the Basin's remaining wetlands, and the long term goal of increasing the quality and quantity of the Basin's wetlands resource base. Because of this policy and the functions and values wetlands perform, the Service recommends avoiding wetland impacts. All wetlands within the project area should be identified, and if construction in wetlands is proposed, the U.S. Army Corps of Engineers, Baltimore District, should be contacted for permit requirements. They can be reached at (410) 962-3670.

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interests in these resources. If you have any questions or need further assistance, please contact Devin Ray at (410) 573-4531.

Sincerely,

Mary Ratnaswamy

Mary J. Ratnaswamy, Ph.D.

Program Supervisor, Threatened and Endangered Species

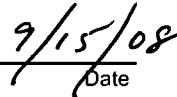
**FOREST CONSERVATION NARRATIVE &
CHESAPEAKE BAY CRITICAL AREA ASSESSMENT**

BOHEMIA CROSSING

PREPARED AT THE REQUEST OF:

Landmark Engineering, Inc.
100 West Commons Boulevard
Suite 301
New Castle, Delaware 19720


DNR Qualified Forest Professional


Date

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PURPOSE

The following narrative provides an overall description of the forest conservation practices to be implemented for the development of the Bohemia Crossing Property. This narrative is to accompany the Forest Conservation Plan prepared by Landmark Engineering, Inc.

This narrative has been prepared and submitted at the request of Mr. Eugene Weymouth and Landmark Engineering, Inc. for the above referenced project. This narrative and Forest Conservation Plan have been prepared in accordance with the provisions of the Cecil County Forest Conservation Regulations and the "Forest Conservation Technical Manual" prepared by the Cecil County Office of Planning and Zoning. All data in this report is based on the Forest Stand Delineation Plan completed by JCM Environmental, Inc. and approved by Cecil County Office of Planning and Zoning on November 16, 2006.

EXISTING CONDITIONS

The subject property is located on the east side of Old Telegraph Road in Warwick, Maryland. The western portion of the project (Parcels 'A' & 'B') are located in Cecil County, Maryland and the eastern portion (Parcel 'C') is located in New Castle County, Delaware. This report will deal primarily with Parcel A&B, hereafter referred to as the study area, but will provide some data for the entire site. The study area is further identified as Tax Parcels 11 and 33 on Cecil County Tax Map 54 and zoned Southern Agricultural Residential (SAR). Currently the property is owned by Eugene E. Weymouth. The study area is bordered to the north by lands of Bohemia Development Company, Inc. (Lot 11), Frank Dinbokowitz (Lot 10), Dean Kratzer (Lot 9) on Tax Map 49, Parcel 40, the west by Old Telegraph Road, the southwest by lands of Clarke Cushing (P.36), the south by Bohemia Mill Pond and the east by Parcel 'C'. The 50.25± acre study area contains approximately 6.19± acres within the Chesapeake Bay Critical Area Resource Conservation Area (RCA). The north and central portion of the study area is in active agricultural production with woodlands to the south and west. One dwelling is located in the southwest corner off of Old Telegraph Road. The dwelling is accessed from a gravel lane off of Old Telegraph Road. Based on the approved Forest Stand Delineation completed by this firm, the study area contains 26.76± acres of forest cover.

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Figure 2. 2007 Aerial Photograph (not to scale, for reference only)

PROPOSED DEVELOPMENT

The purpose of the project is to construct 15 single family residential homes in the northern portion of the property. Lots 1-10 are located within Cecil County, Maryland with the remaining 5 lots situated in New Castle County, Delaware. These homes will be accessed by upgrading the existing access road off of Old Telegraph Road and served by on-site wells and septic systems.

FOREST CLEARING

The current subdivision design will utilize the existing agricultural field and require minimal forest clearing. The majority of the 4.15± acre forest clearing is required for construction of the storm water management facility. Additional clearing is required for road construction and to accommodate site distance issues along Old Telegraph Road. Specimen trees 5 and 7 will be removed for construction of the storm water facility. No development (forest clearing, grading or structures) is proposed within the Chesapeake Bay Critical Area (RCA).

WETLAND PERMITTING

The proposed access road to the subdivision will require improvements to meet current road standards. A joint Federal/State Application for non-tidal wetland impacts associated with the access road was filed in March of 2008 under tracking # 200861068. JCM personnel met with Maryland Department of the Environment on the property in May 2008 to review the proposed impacts and are awaiting comments at this time.

SYNOPSIS

According to the Cecil County Forest Conservation Regulations, the following thresholds will apply for this project:

SITE DATA (PROJECT)

Total Project Area:	62.54 acres
Total 100-Year Floodplain:	8.33 acres
Total Forest within Project:	29.49 acres
Total Area New Castle County (Parcel C):	12.29 acres
100 Year Floodplain NCC:	3.92 acres
Existing Forest Cover NCC:	2.73 acres

SITE DATA (Study Area)

Total Area Cecil County (Parcel A & B):	50.25 acres
100 Year Floodplain:	4.41 acres
Total Chesapeake Bay Critical Area (RCA):	6.19 acres
Net Tract Area:	39.60 acres
Total Forest w/in CBCA:	2.19 acres
Afforestation Percentage (20%):	7.93 acres
Conservation Threshold (50%):	19.83 acres
Existing Forest (NTA):	26.76 acres
Proposed Clearing (NTA):	4.15 acres
Forest Cover to Remain:	22.61 acres
Reforestation Required:	0.00 acres
Afforestation Required:	0.00 acres

FOREST CONSERVATION MEASURES

Tree protection fencing will be placed along the limits of disturbance in order to protect the forest retention areas. This highly visible fence will act as a barrier for construction equipment and vehicular traffic. Prior to any work, a pre-construction meeting will be held at the site with the contractor, project manager and a representative of the Cecil County Office of Planning and Zoning. The purpose of the meeting will be to inspect all tree protection devices and identify all forest retention areas, specimen trees, the limits of disturbance and stockpile areas. Stockpile staging areas have been established on site for equipment, vehicular and debris storage during site work. Following all tree removal and grading, tree protection fencing will be removed. At this time tree protection signs will be placed along the perimeter of the forest retention areas to identify the area for permanent protection.

The forest conservation areas will be placed into conservation easements for permanent protection. These easements will also protect the 2.19 acres of forest cover located within the Chesapeake Bay Critical Area. The implementation of these practices along with proper education of contractors and construction personnel will insure the protection of the on-site forest retention areas.

**PRELIMINARY
STORMWATER MANAGEMENT DESIGN REPORT
FOR
BOHEMIA CROSSING**

Prepared For:

Eugene E. Weymouth
5714 Kennett Pike
Wilmington, DE 19807
(302) 652-3296

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SEP 18 2008

Prepared By:

Landmark Consulting Engineering, Inc.
950 West Valley Road
Suite 3104
Wayne, PA 19087

CRITICAL AREA COMMISSION

C 1836

June 2007
Revised September 17, 2008



Kevin McLaughlin

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.: 32078, Expiration Date: June 12, 2009.

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PRELIMINARY
STORMWATER MANAGEMENT NARRATIVE

BOHEMIA CROSSING

Introduction

The subject property is located on the east side of Old Telegraph Road north of Great Bohemia Creek in Warwick, Maryland. The western portion of the project (Parcels A and B) are located in Cecil County, Maryland and the eastern portion (Parcel C) is located in New Castle County, Delaware. The land in Maryland is zoned Southern Agricultural Residential (SAR). The onsite Chesapeake Bay Critical Area Resource Conservation Area (RCA) totals 6.19+/- acres. This report will deal exclusively with the 40.20 acres (gross developed area of 19.65 +/- acres includes existing and proposed rights-of-way, and lot area) of the tract that are located in Cecil County, Maryland, hereafter referred to as the Study Area. The Study Area currently drains overland in a southerly direction into on onsite creek, which discharges in a southerly to Old Bohemia Creek

The proposed development of the site consists of subdividing the Maryland property into ten (10) single family residential building lots. The Delaware portion of the site will be subdivided into five (5) building lots. Site access is from Old Telegraph Road in Maryland by way on a new street Centennial Circle, wholly located in Maryland, which will service all lots within the development.

Offsite Areas

The Pre-Development and Post-Development Stormwater Management Calculations are based on the proposed 21.92± acre limit of disturbance area, which includes the subject property and proposed road right of way.

A culvert is proposed under Centennial Circle. Culvert calculations are based on a drainage area of 74.35± acre, which includes the upstream off-site run-off and some onsite discharge collected and conveyed to the culvert. The culvert discharge will be conveyed in a southerly direction to the Great Bohemia Creek. (See Appendix D for culvert calculations).

Natural Detention/Retention Features

No existing features create natural detention/retention structures.

Basis of Assumption

On-site and off-site analysis was used to determine on and off site CN values. An on-site time of concentration path was utilized for the detention basin design.

On-Site Soils

The soils shown for this site on the Cecil County Soil Survey map includes Collington loam (CtB2, CtC3, & CtD3), and Matapeake loam (MnB2). According to the General Soil Map of

Cecil County, Maryland, the soils underlain are classified as Sassafras-Woodstown association and Matapeake-Butlertown association. The soils shown are a mixture of Hydrologic Soils Groups "B".

Stormwater Quantity Management Summary

The subject property is located in the Transition Region, which contains predominantly coastal plain characteristics for topography and soils, within the Chesapeake Bay Watershed. In accordance with Cecil County Stormwater Management Code, the site is required to meet both the Coastal Plain stormwater quantity control requirements and the Coastal Plain peak rate requirements for any increased impervious areas associated with this project. It is the intention of the client to provide onsite Best Management Practices (BMP's) to address stormwater quality in accordance with the most recent version of the 2000 Maryland Best Management Handbook and Cecil County Code Chapter 251 Stormwater Management Ordinance. Stormwater quantity reductions associated with this project will be credited through the design provides disconnection of roofs and driveways, directing runoff from these areas across adjacent lawn areas, and infiltrating stormwater generated by the additional impervious from the proposed street at the location of an onsite above-ground detention system.

Onsite infiltration was performed at the preliminary location of the proposed detention basin was performed by Geo-Technology Associates, Inc. Test results will be incorporated into the proposed design to the greatest extent practical. The infiltration test results are listed in Table 1. See the complete Geotechnical Report Section in Appendix D of the Stormwater Management Design Report for additional geotechnical information.

Table 1: Summary of Test Pit Result

Test Pit #	Infiltration Rate in/hr	Bottom Elev. (ft)
TP1	2.5	23.5
TP2	20.0	26.0
TP3	6.0	26.5

In the Coastal Plain Region, the following minimum control requirements will be applied in accordance with the Design Manual: (Ref. § 251-9.A.1 Minimum control requirements)

1. Water quality volume.
2. Recharge volume.
3. Overbank flood protection volume for the two-year frequency storm event.

Waivers/Watershed management plans

Stormwater quantity waivers from the requirements set forth in the Cecil County Stormwater Regulations is requested for this project based on the criteria set forth in § 251-6.4 and § 251-9.A.3. § 251-6.B.4 states that a site qualifies for a quantity control waiver if there is less than a ten percent (10%) increase in the 2 year storm's peak discharge between pre and post-development conditions.

	<u>2 Year</u>	<u>10 Year</u>	<u>100 Year</u>
Pre-Development	6.31 cfs	29.29 cfs	68.71 cfs
Post-Development	27.88 cfs	68.23 cfs	125.18 cfs
After Routing	3.46 cfs	16.18 cfs	27.79 cfs

NOTE: The above discharge summary is based upon the preliminary detention basin design. The final detention basin design may result in a smaller detention basin when the infiltration aspects of the onsite soils are considered and if the basin release flow rates more closely approximate the allowable pre-development flow rates.

The study area to be developed is located within the Transition Region contains predominantly Coastal Plain characteristics for topography and soils, then the minimum control requirements and applicable waiver provision as specified for the Coastal Plain will be applied. Soil found onsite contains greater than 50% of soils classified in the Sassafra-Woodstown and Matapeake-Butlertown Soil Associations. To be considered predominantly Coastal Plain topography the average slope on the site to be developed, from the highest elevation to the lowest elevation, will be 8% or lower. (Ref. § 251-9.A.3 Minimum control requirements)

Erosion & Sedimentation Control Summary

Erosion control will be performed by utilizing silt fencing, construction entrances, and sediment trap to shield and capture pollutant run-off from discharging off-site.

Methodology

The methodology prescribed by the SCS TR-55 Manual is used to establish CN values for both the existing and developed conditions based on Hydrologic Group "B" soils. Post Ground covers are assumed to be lawn in good condition.

Hydraflow Hydrographs 2004 version 8 software was used for performing the Pre and Post Development Drainage analysis. The hydrographs were generated based on the precipitation amounts dictated by the NRCS Cecil County, Maryland IDF curves. The results of the analysis indicate that the proposed development will increase runoff rates and volume due to an increase in impervious surfaces. A stormwater management facility is designed to reduce the increased runoff rates in accordance with the stormwater management requirements for Cecil County. The post-development 2-year runoff rate has been reduced to be below the 10% increase of the 2-year pre-development rate. Additionally, the post-development 10 and 100-year runoff rates have been reduced to be below the pre-development 10 and 100-year rates accordingly.

Conclusion

The calculations contained in this report demonstrate that the site, as constructed in accordance with preliminary land development plans for this project, will provide adequate water quality

management in accordance with the Cecil County Stormwater Regulations and the Maryland Stormwater Code.

Maintenance

Maintenance of the lawn areas on each lot will be the responsibility of the individual lot owner. At this time, it appears that the detention basin will be maintained by a homeowners association.

Erosion and Sediment Control

Erosion control for the project consists of protecting all adjacent parcels from overland sediment flow and keeping sediment out of the existing Bohemia Creek.

Based on our field review and given the use of properly installed and maintained erosion control measures during construction, we anticipate no adverse downstream impacts due to this project.



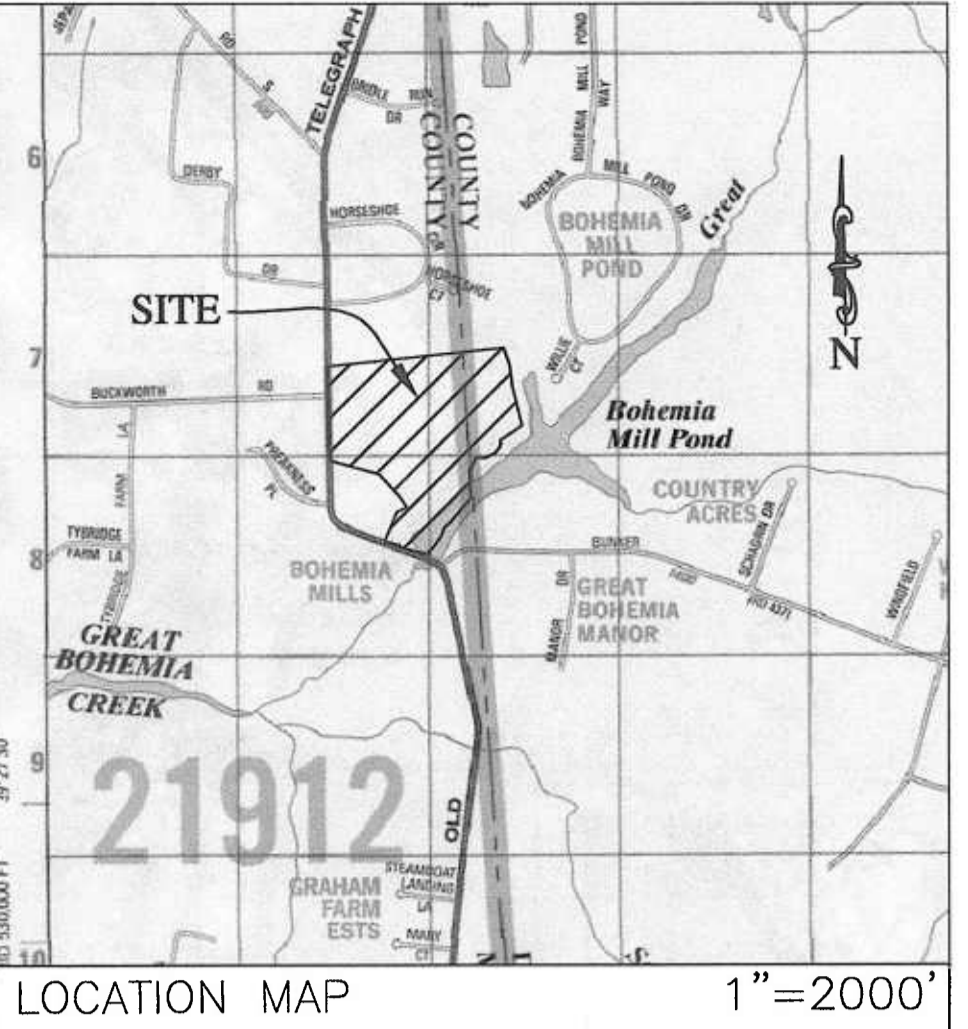
PARCEL: A	PARCEL: B	SITE DATA	
PARCEL: 11 (TAX MAP 54)	PARCEL: 33 (TAX MAP 54)	TOTAL PROJECT AREA:	62.54 ACRES
DEED REF: WAS 156/21 NOS 517/335	DEED REF: WAS 244/637	TOTAL 100-YEAR FLOODPLAIN:	8.33 ACRES
		TOTAL FOREST WITHIN PROJECT:	29.49 ACRES
		TOTAL AREA NEW CASTLE COUNTY (PARCEL C):	12.29 ACRES
		100 YEAR FLOODPLAIN:	3.92 ACRES
		EXISTING FOREST COVER:	2.75 ACRES
		STUDY AREA:	
		TOTAL AREA CECIL COUNTY (PARCEL A&B):	50.25 ACRES
		100 YEAR FLOODPLAIN:	4.41 ACRES
		TOTAL CHEESAPEAKE BAY CRITICAL AREA (CA):	6.19 ACRES
		NET TRACT AREA:	39.65 ACRES
		AFFORESTATION PERCENTAGE (20%):	7.93 ACRES
		CONSERVATION THRESHOLD (50%):	19.83 ACRES
		EXISTING FOREST (47A):	26.76 ACRES
		TOTAL FOREST WITHIN CECIL:	2.19 ACRES
		TOTAL FOREST CLEARING:	4.15 ACRES
		RETAINED FOREST COVER:	22.61 ACRES
		AFFORESTATION REQUIRED:	D.DD ACRES

STAND	PRIORITY RATING	TOTAL FOREST AGE	TOTAL FOREST AGE OUTSIDE CBA	CBA AGE	PROPOSED CLEARING
A	MODERATE	20.41 AC.	.80 AC.	4.05 AC.	
B	LOW	0.59 AC.	0 AC.	0.00 AC.	
C	MODERATE	5.76 AC.	1.39 AC.	D.10 AC.	

NO.	COMMON NAME	SCIENTIFIC NAME	DBH (INCHES)	SAVE/REMOVE
1	RED MAPLE	ACER RUBRUM	40.1"	SAVE
2	SOUTHERN RED OAK	QUERCUS FALGATA	37.3"	SAVE
3	RED MAPLE	ACER RUBRUM	33.0"	SAVE
4	SOUTHERN RED OAK	QUERCUS FALGATA	>30"	SAVE
5	TULIP POPLAR	LIRIODENDRON TULIPIFERA	33.0"	REMOVE
6	RED MAPLE	ACER RUBRUM	31.0"	SAVE
7	SOUTHERN RED OAK	QUERCUS FALGATA	36.3"	REMOVE
8	AMERICAN STYPHONIA	PLATANUS OCCIDENTALIS	31.4" & 30"	SAVE
9	TULIP POPLAR	LIRIODENDRON TULIPIFERA	34.3"	SAVE

SYMBOL	NAME	HOMO	DEPTH TO WATER TABLE (FEET)	K FACTOR
C142	COLLINGTON LOAM	-	5"	.28
C142	COLLINGTON LOAM	-	5"	.28
C143	COLLINGTON LOAM	-	5"	.28
C143	COLLINGTON LOAM	-	5"	.28
C143	COLLINGTON LOAM	-	5"	.28
W1	MIXED ALLUVIAL SAND	X	-	.28
S142	SASSAFRAS SANDY LOAM	-	5"	.28
S143	SASSAFRAS SANDY LOAM	-	5"	.28
S144	SASSAFRAS SANDY LOAM	-	5"	.28
S145	SASSAFRAS SANDY LOAM	-	5"	.28
S146	SASSAFRAS SANDY LOAM	-	5"	.28
S147	SASSAFRAS SANDY LOAM	-	5"	.28
S148	SASSAFRAS SANDY LOAM	-	5"	.28
S149	SASSAFRAS SANDY LOAM	-	5"	.28
S150	SASSAFRAS SANDY LOAM	-	5"	.28
T14	TYPICAL MARSH	X	-	-

LINE	BEARING	LENGTH	LINE	BEARING	LENGTH
L1	N 89°02'30" E	32.00'	L21	N 89°02'30" E	139.30'
L2	N 07°04'40" E	246.30'	L22	S 77°41'34" E	98.00'
L3	N 04°34'40" E	21.30'	L23	S 58°34'40" E	78.54'
L4	S 83°30'40" E	236.45'	L24	S 30°40'30" W	40.00'
L5	N 30°40'30" E	46.82'	L25	N 30°40'30" E	36.61'
L6	S 04°12'30" W	24.18'	L26	N 89°02'30" E	84.16'
L7	S 70°04'40" E	102.72'	L27	S 70°04'40" E	90.00'
L8	S 10°34'30" E	152.86'	L28	S 03°04'30" E	23.81'
L9	S 30°02'30" E	113.87'	L29	N 82°04'30" E	68.00'
L10	S 30°02'30" E	134.02'	L30	N 33°02'30" E	43.47'
L11	S 50°42'40" E	83.84'	L31	S 89°04'30" E	43.40'
L12	S 33°04'40" E	44.70'	L32	S 70°04'40" E	38.14'
L13	N 82°04'30" E	348.30'	L33	S 07°04'30" E	22.81'
L14	N 12°30'30" E	87.87'	L34	N 03°04'40" E	233.28'
L15	N 49°01'10" E	90.13'			
L16	N 70°04'30" E	47.00'			
L17	N 89°04'30" E	38.80'			
L18	N 89°04'30" E	81.81'			
L19	N 23°02'30" E	68.30'			
L20	N 03°04'40" E	110.38'			

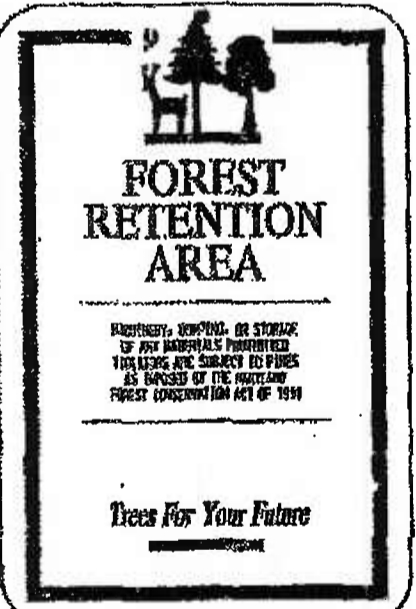


LEGEND

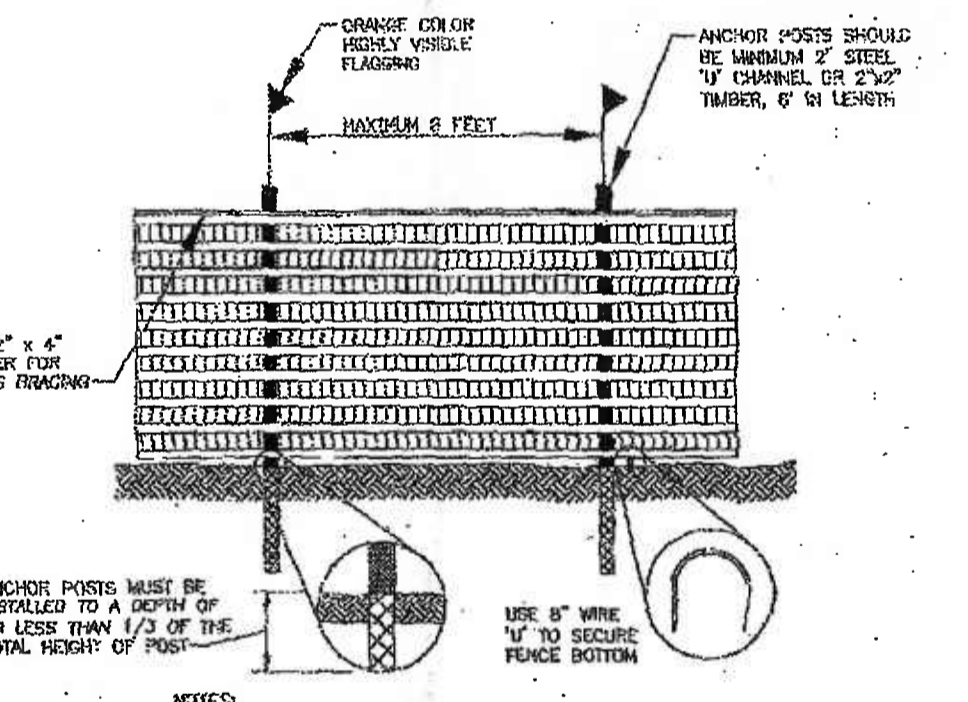
- PROPERTY LINE
- EXISTING CONTOUR
- EXISTING TREELINE
- SOIL DELINEATION LINE
- MeB2
- CiC2
- MeB2
- CiC2
- PRECAUTIONARY SLOPES (15%-25%)
- PROHIBITIVE SLOPES (>25%)
- 3
- C17
- NON-TIDAL WETLANDS W/ FLAG NUMBER
- FOREST STAND BOUNDARY
- WATERS OF THE U.S.
- 110' RIPARIAN BUFFER
- CBCAL
- CHEESAPEAKE BAY CRITICAL AREA
- 25' STATE WETLAND BUFFER
- EXISTING FOREST TO BE CLEARED
- TREE PROTECTION FENCE
- PROPOSED WELL LOCATION
- PROPOSED DWELLING
- PROPOSED SEPTIC RESERVE AREA
- PROPOSED LOT
- SPECIMEN TREE TO BE REMOVED
- PROPOSED TREE LINE
- PROPOSED TREE PROTECTION SIGN
- STOCKPILE
- STOCKPILE/STAGING AREA

NOTES

- BOUNDARY AND TOPOGRAPHY BASED ON SURVEY BY LANDMARK ENGINEERING, INC., DATED MARCH, 2007.
- SOIL BOUNDARY AND INFORMATION FROM CECIL COUNTY SOIL SURVEY, USDA, 1973.
- 100 YEAR FLOOD PLAN INFORMATION FROM FEMA PANEL NO. 2400180055A & 1000030000.
- WETLANDS AND WATERS OF THE U.S. SHOWN HEREIN ARE BASED ON FORMAL WETLAND DELINEATION PERFORMED BY JCM ENVIRONMENTAL, INC. MAY, 2007. THE PROJECT IS CURRENTLY UNDER REVIEW BY MDE UNDER TRACKING NUMBER 20080108 FOR THE PROPOSED ROAD IMPROVEMENTS.
- THE ON-SITE FOREST COVER IS NOT PART OF A >100 ACRE FORESTED TRACT.
- NO DEVELOPMENT (CLEANING, GRADING OR CONSTRUCTION) WILL OCCUR WITHIN THE CHEESAPEAKE BAY CRITICAL AREA, RESOURCE CONSERVATION AREA, AS SUCH, NO IMPROVED SURFACES WILL BE GRATED IN THE C.B.C.A. AS A PART OF THIS DEVELOPMENT.
- THE DEVELOPMENT RIGHTS FOR THE RESOURCE CONSERVATION AREA(RCA) ARE EXHAUSTED.



SIGN DETAIL
NO SCALE



DETAIL - FOREST PROTECTION OPTION: PLASTIC FENCE MESHING
NOT TO SCALE

SEQUENCE OF CONSTRUCTION -- FOREST CONSERVATION

1. PRECONSTRUCTION MEETINGS/SITE WALK WITH CONTRACTORS AND OTHER RESPONSIBLE PARTIES TO DEFINE PROTECTION MEASURES TO BE UTILIZED AND TO PRINT OUT PROTECTION LINES TO BE SAVED.
2. STAKE OUT LIMITS OF DISTURBANCE AND TREE PROTECTION FENCING LOCATIONS.
3. INSTALL TREE PROTECTION FENCING TO BE INSPECTED BY THE PROJECT ENGINEER OR THE PROJECT ECOLOGIST AND CECIL COUNTY PLANNING AND ZONING.
4. PROCEED WITH TREE REMOVAL AND SITE IMPROVEMENTS AS PER APPROVED BROWNE CONTROL PLAN - TO BE INSPECTED BY CECIL COUNTY PLANNING AND ZONING.
5. TREE PROTECTION SIGNING SHALL BE REMOVED AFTER ALL FINISHED GRADING AND UTILITY CONSTRUCTION HAS OCCURRED AND WITH APPROVAL FROM THE LOCAL OFFICE OF PLANNING AND ZONING.
6. INSTALL TREE PROTECTION SIGNAGE IN AREAS INDICATED ON PLAN.

CERTIFICATION OF PLAN APPROVAL

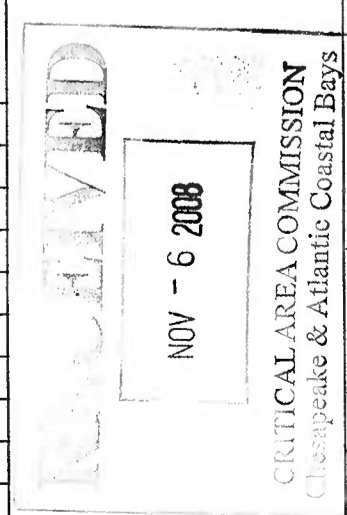
APPROVED: _____ BY: _____
DATE: _____ DIRECTOR
OF PLANNING AND ZONING OF NEW CASTLE COUNTY

William S. Dupack 11/9/08
WILLIAM S. DUPACK
DNR CERTIFIED FOREST PROFESSIONAL

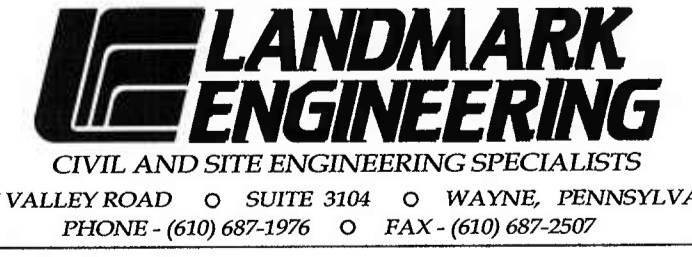
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OWNER
EUGENE E. WEYMOUTH
5714 KENNETT PIKE
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(PHONE) 302-652-3296

DATE	REVISIONS	CHECKED BY
9/15/08	REV. PER COUNTY COMMENTS	K.M.C.A.
10/9/08	REV. CBA BUFFER AREA	K.M.C.A.
10/29/08	REV. PER COUNTY COMMENTS	K.M.C.A.



PRELIMINARY FOREST CONSERVATION PLAN/CRITICAL AREA ENVIRONMENTAL ASSESSMENT FOR **BOHEMIA CROSSING**
2nd ELECTION DISTRICT
CECIL COUNTY, MARYLAND



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SCALE: 1" = 100' DRAWN BY: DK

DESIGNED BY: DK CHECKED BY: K.M.C.A. DRAWING NAME: NEWFOREST-DEL

DATE: 9-10-08 COMM. NO.: C-1836 FILE NO.: SHEET NO. 1 of 1

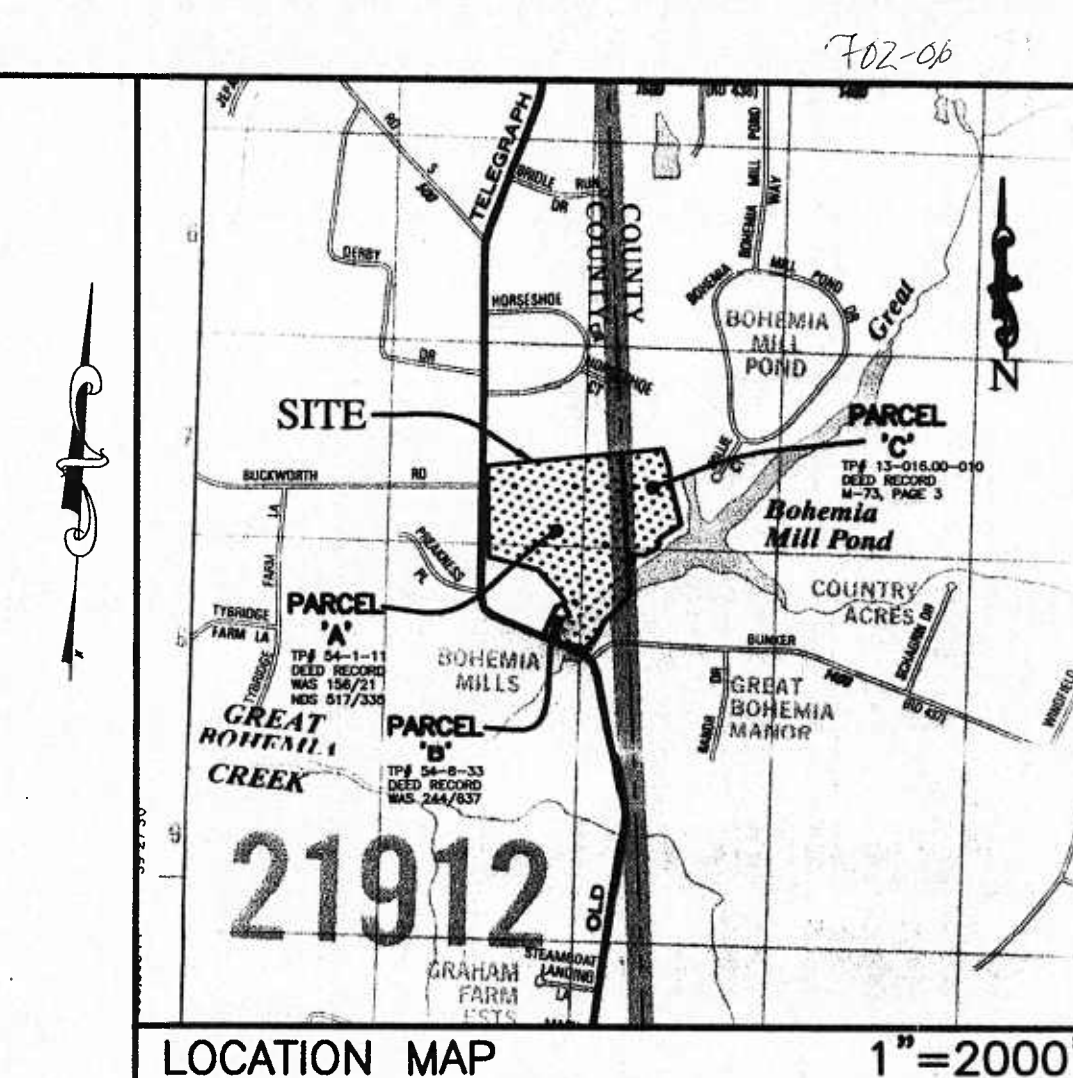
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THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.

ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND THE RULES AND REGULATIONS THEREBY APPURTENANT

PRELIMINARY MAJOR LAND DEVELOPMENT PLAN BOHEMIA CROSSING

2nd ELECTION DISTRICT
CECIL COUNTY, MARYLAND



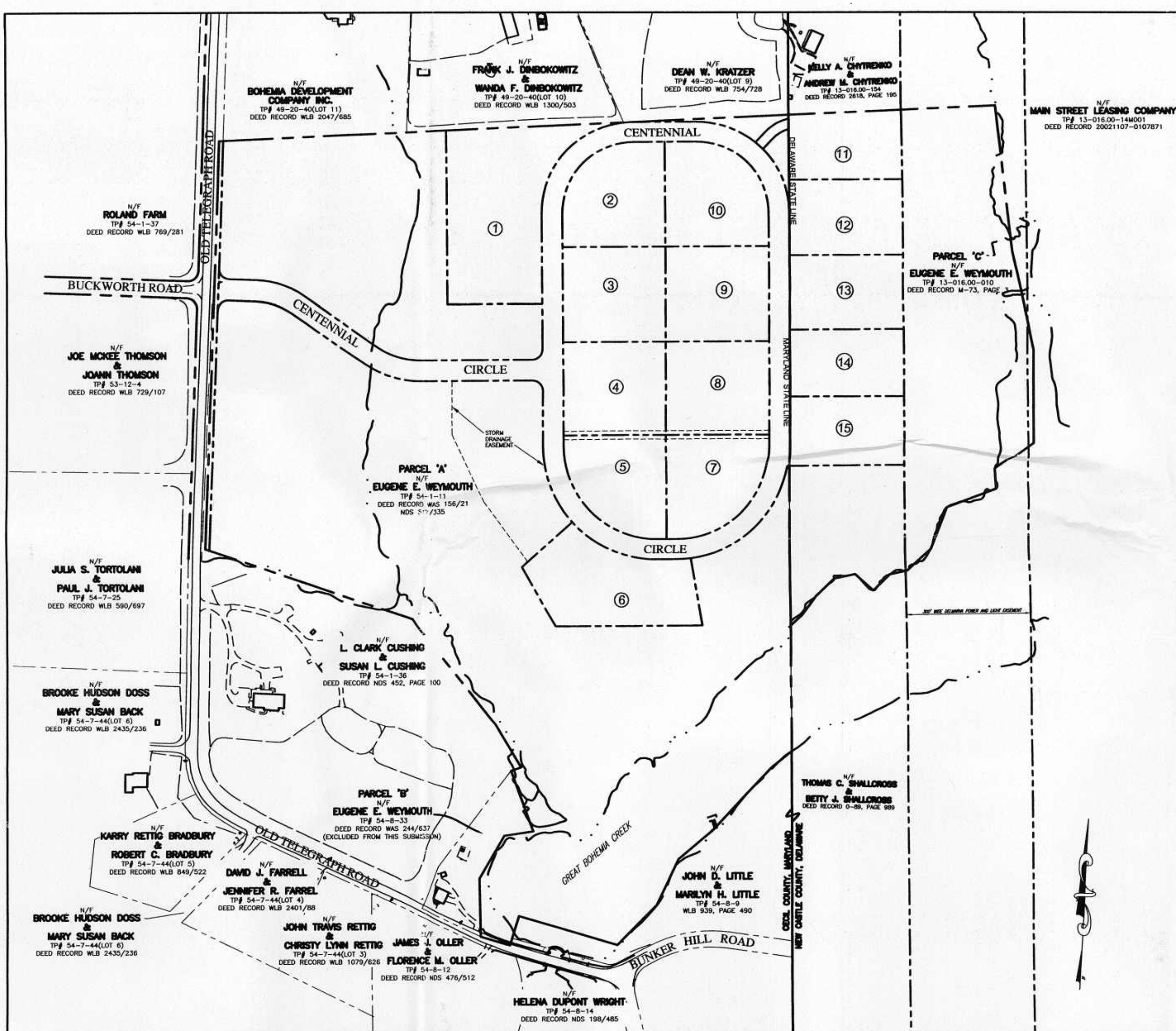
LOCATION MAP 1"=2000'

NOTE: PARCEL 'B' IS NOT PART OF THIS DEVELOPMENT

ZONING REGULATIONS	CECIL COUNTY, MD REQUIRED/PERMITTED	CECIL COUNTY, MD PROVIDED	NEW CASTLE COUNTY, DE REQUIRED/PERMITTED	NEW CASTLE COUNTY, DE PROVIDED
ZONING DISTRICT:	SAR-SOUTHERN AGRICULTURAL RESIDENTIAL	SAR	S-SUBURBAN	S
DEVELOPMENT TYPE:	SINGLE FAMILY (MAJOR SUBDIVISION)	SINGLE FAMILY (MAJOR SUBDIVISION)	SINGLE FAMILY	SINGLE FAMILY
MINIMUM PARCEL SIZE:	50 AC. OR GREATER	49.20 ACRES	1 AC. TO <50 AC.	12.29 ACRES
MAXIMUM SITE DENSITY: (DWELLING PER ACRE)	1/5 AC.(BONUS DENSITY) 4 MINOR/PER SALDO SEC. 2.4-1	9 LOTS 4 LOTS 13 LOTS TOTAL	0.67 (= 8 LOTS)	5 LOTS
MINIMUM OPEN SPACE:	15%(7.38 AC.)	60.60%(29.81 AC.)	15%(1.84 AC.)	58.83%(7.23 AC.)
MINIMUM COMMON OPEN SPACE PER BONUS DENSITY:	60%(29.52 AC.)	60.60%(29.81 AC.)	N/A	N/A
LOT UTILITY SYSTEMS (ON-SITE OR PUBLIC):	O.S.	O.S.	P	O.S.
MINIMUM LOT AREA:	20,000 S.F.(0.46 AC.)	43,931 S.F.(1.01 AC.)	43,560 S.F.(1.00 AC.)	43,970 S.F.(1.009 AC.)
MINIMUM LOT WIDTH:	80 FT.	225 FT.	150 FT.	159 FT.±
MINIMUM FRONT YARD:	40 FT.	40 FT.	40 FT.	40 FT.
MINIMUM SIDE YARD(2):	10 FT.	10 FT.	12 FT.	12 FT.
MINIMUM REAR YARD:	40 FT.	40 FT.	40 FT.	40 FT.
MAXIMUM BUILDING HEIGHT:	35 FT.	35 FT.	35 FT.	35 FT.
MINIMUM ROAD FRONTAGE:	100/25 FT.	25.01 FT.	150 FT.	159 FT.±

AREA/DENSITY TABLE	CECIL COUNTY, MD	NEW CASTLE COUNTY, DE	SITE TOTAL
ITEMS	PARCEL 'A' = 49.20 AC.	PARCELS 'A' & 'C' = 12.29 AC.	61.49 AC.(100%)
PROPOSED NUMBER OF LOTS:	4 MINOR AND 6 MAJOR	5	15
PROPOSED LOT AREA:	14.32 AC.(29.10%)	5.06 AC.(41.17%)	19.38 AC.(31.52%)
PROPOSED DENSITY:	1 DU/8.2AC.	1.012 DU/AC.	1.292 DU/AC.
EXISTING ROAD RIGHT OF WAY AREA:	0.68 AC.(1.38%) (MAJOR COLLECTOR-OLD TELEGRAPH ROAD)	0.00 AC.(0.00%)	0.68 AC.(1.10%)
PROPOSED ROAD RIGHT OF WAY AREA:	0.23 AC.(0.47%) (MAJOR COLLECTOR-OLD TELEGRAPH ROAD)	0.00 AC.(0.00%)	0.23 AC.(0.37%)
PROPOSED ROAD RIGHT OF WAY AREA:	4.16 AC.(8.45%) (MINOR RESIDENTIAL ROAD CENTENNIAL CIRCLE)	0.00 AC.(0.00%)	4.16 AC.(6.76%)
PROPOSED DEVELOPED AREA:	19.39 AC.(39.4%)	5.06 AC.(41.17%)	24.45 AC.(39.76%)
PROPOSED COMMON OPEN SPACE AREA:	29.81 AC.(60.6%)	7.23 AC.(58.83%)	37.04 AC.(60.24%)

- GENERAL NOTES**
- SOURCE OF TITLE: TAX PARCEL MAP 54, PARCEL 11 (LOT 1) - WAS-156/21(PARCEL "A") & TAX PARCEL MAP 54, PARCEL 33 (LOT 8) - WAS 244/63(PARCEL "B") AND ONE PARCEL IN NEW CASTLE COUNTY, DELAWARE (PARCEL "C") - TP13-016.00-010 - DEED RECORD M-73, PAGE 3.
 - BOUNDARY AND TOPOGRAPHY INFORMATION BASED ON SURVEY PERFORMED BY LANDMARK ENGINEERING INC. DATED MARCH, 2007.
 - 100 YEAR FLOOD PLAIN INFORMATION FROM FEMA PANEL NO. 240190065A AND 100030300C.
 - WETLANDS AND WATERS OF THE U.S. SHOWN HEREON ARE BASED ON FORMAL WETLAND DELINEATION PERFORMED BY JCM ENVIRONMENTAL, INC. DATED MAY, 2007. THE PROJECT IS CURRENTLY UNDER REVIEW BY M.D.E. UNDER TRACKING NUMBER 200801068 FOR THE PROPOSED ROAD IMPROVEMENTS.
 - BASIS OF BEARING: GPS OBSERVATION MARYLAND STATE PLANE COORDINATE SYSTEM NAD 1983 (1996), ELEVATION DATUM NAVD 1988.
 - A SURVEY FOR AND PRODUCTION OF AN AS-BUILT PLAN OF SITE IMPROVEMENTS WILL BE IMPLEMENTED AFTER ALL CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED AND SITE STABILIZATION HAS BEEN ACHIEVED.
 - THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AND SHALL COORDINATE ALL CONSTRUCTION PHASES WITH THE UTILITY COMPANIES INVOLVED.
- DELMARVA POWER 410-287-7144
VERIZON 410-539-9900
MISS UTILITY 800-257-7777
MD DEPT. OF THE ENVIRONMENT & SEDIMENT CONTROL 410-901-4030
CECIL CO. DEPT. OF PUBLIC WORKS 410-996-5267
STATE HIGHWAY ADMINISTRATION 410-588-1565
CECIL SOIL CONSERVATION DISTRICT 410-398-4411, EXT-3
- CONTACT THE CECIL COUNTY DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION STAFF AT (410) 996-1267 AND CONDUCT A PRE-CONSTRUCTION MEETING ON SITE AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. FAILURE TO CONDUCT THE REQUIRED PRE-CONSTRUCTION MEETING WITH A DEPARTMENT OF PUBLIC WORKS INSPECTOR PRESENT MAY EXPOSE THE OWNER/DEVELOPER AND/OR CONTRACTOR TO ADDITIONAL WORK AND/OR FINES OR PENALTIES.
 - ALL CONSTRUCTION SHALL BE MARKED FOR PEDESTRIAN AND VEHICULAR TRAFFIC.
 - THE CONTRACTOR SHALL GRADE SITE WITHIN THE LIMITS OF CONSTRUCTION AND SHALL WARP PAVING AS NECESSARY TO ENSURE POSITIVE DRAINAGE IN THE DIRECTION INDICATED BY THE ARROWS SHOWN.
 - THE CONTRACTOR SHALL ADJUST ALL EXISTING UTILITY BOXES, MANHOLES, ETC., WHICH ARE TO REMAIN, TO CONFORM TO FINAL GRADES.
 - ALL JOINTS ABUTTING EXISTING PAVING SHALL BE SAW CUT AND ASPHALT SEALANT APPLIED.
 - ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH RECOMMENDATIONS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
 - ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN STRICT CONFORMANCE WITH THE CECIL COUNTY ROAD CODE AND STANDARD SPECIFICATIONS, THE CECIL COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR WATER AND SEWER MAINS, AND MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS (JANUARY 2001) AND LATEST REVISIONS.
 - THESE DRAWINGS SHOW INFORMATION OBTAINED FROM THE BEST AVAILABLE RECORDS REGARDING PIPES, CONDUITS, TELEPHONE AND ELECTRIC LINES, ETC., AND OTHER STRUCTURES AND CONDITIONS WHICH EXIST ALONG THE LINES OF THE WORK, BOTH AT AND BELOW THE SURFACE OF THE GROUND. THE OWNER AND ENGINEER DISCLAIM ANY RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION BEING SHOWN ONLY FOR THE CONVENIENCE OF THE CONTRACTOR, WHO MUST VERIFY THE INFORMATION GIVEN TO HIS OWN SATISFACTION. IF THE CONTRACTOR RELIES ON SAID INFORMATION, HE DOES SO AT HIS OWN RISK. THE GIVING OF THIS INFORMATION ON THE CONTRACTOR DRAWINGS WILL NOT RELIEVE THE CONTRACTOR OF HIS OBLIGATIONS TO SUPPORT AND PROTECT ALL PIPES, CONDUITS, TELEPHONE AND ELECTRIC LINES AND OTHER STRUCTURES.
 - CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES AND ROADS PRIOR TO THE START OF ANY CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF LANDMARK CONSULTING ENGINEERS, INC. AND THE CECIL COUNTY DEPARTMENT OF PUBLIC WORKS WITH PROPOSED MODIFICATIONS NEEDED. CORRECTIONS OF ALL DISCREPANCIES SHALL BE DISCUSSED WITH LANDMARK CONSULTING ENGINEERS, INC.
 - ALL STORMWATER MANAGEMENT FACILITIES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUMES I & II (MARYLAND DEPARTMENT OF THE ENVIRONMENT) AND THE USDA NATURAL RESOURCES CONSERVATION SERVICE MARYLAND CONSERVATION PRACTICE STANDARD POND CODE 378 (JANUARY 2000). THESE CONSTRUCTION DRAWINGS ARE INTENDED TO REFLECT THE RELEVANT REQUIREMENTS; HOWEVER, ANY LACK OF SPECIFIC DETAILS ON THESE DRAWINGS SHALL NOT RELIEVE ANY OF THE REQUIREMENTS OF THESE AND OTHER RELEVANT CODES.
 - PARCEL "B" IS OTHER LANDS OWNED BY EUGENE E. WEYMOUTH. PARCEL "B" IS NOT PART OF THIS PROPOSED SUBDIVISION.
 - PARCEL "C" IS OTHER LANDS OWNED BY EUGENE E. WEYMOUTH. PARCEL "C" IS NOT PART OF THIS APPLICATION AND IS SHOWN FOR INFORMATION PURPOSES ONLY.
 - WHERE DEEMED NECESSARY BY THE UTILITY COMPANIES, THE OWNER, THE DESIGNER OR DEPARTMENT OF PUBLIC WORKS, UTILITY POLES SHALL BE RELOCATED AT THE DEVELOPER'S EXPENSE.
 - A PUBLIC WORKS AGREEMENT IS REQUIRED AND SHALL BE OBTAINED PRIOR TO ANY STREET OR STORM DRAINAGE CONSTRUCTION.
 - AN INSPECTION AND MAINTENANCE AGREEMENT SHALL BE OBTAINED FOR THE PRIVATE STORMWATER MANAGEMENT FACILITIES.
 - ALL DRIVEWAYS SHALL BE PAVED TO AT LEAST THE PROPOSED RIGHT-OF-WAY. THE DRIVEWAY PAVING SHALL BE COMPLETED FOR ALL PLANNED LOTS AT THE TIME WHEN THE SURFACE COURSE FOR THE PROPOSED INTERNAL ROADS ARE INSTALLED. ANY DRIVEWAY EXCEEDING 2% UP-GRADE SLOPE FROM THE ROADWAY SHALL BE PAVED TO THE CREST.
 - ALL DEVELOPMENT RIGHTS WITHIN THE RESOURCE CONSERVATION AREA(RCA) ARE EXHAUSTED.
 - PROPOSED STREET ADVERTISEMENTS PROVIDED BY NEW CASTLE COUNTY GIS AND MAPPING SERVICES.
 - ALL PRIVATE SEPTIC SYSTEMS SHALL BE A MINIMUM OF 25 FEET FROM THE CENTER OF AN OPEN DRAINAGE SWALE WITH A SIDE SLOPE GREATER THAN 25% IN THE CASE OF AN OPEN DRAINAGE SWALE WITH A SIDE SLOPE OF LESS THAN 25%, THE PRIVATE SEPTIC SYSTEM SHALL BE A MINIMUM OF 25 FEET FROM THE TOP OF BANK. NO PRIVATE SEPTIC SYSTEM SHALL BE LOCATED WITHIN A STORM SEWER EASEMENT FOR AN UNDERGROUND STORM SEWER PIPE.
 - A GROUNDWATER APPROPRIATION PERMIT EXEMPTION SHALL BE FILED WITH MARYLAND DEPARTMENT OF THE ENVIRONMENT PRIOR TO FINAL PLAN APPROVAL.
 - ALL PERTINENT REQUIREMENTS IMPOSED BY THE STATE OF DELAWARE IN REGARDS TO STORM WATER MANAGEMENT, LOT GRADING, BUILDING PERMITS, ETC. SHALL BE COMPLIED WITH.



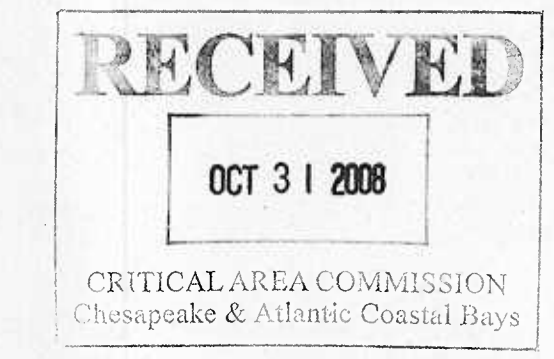
VICINITY MAP 1"=200'

PLAN INDEX	
COVER SHEET	1 OF 9
EROSION AND SEDIMENT CONTROL COVER SHEET	2 OF 9
EROSION AND SEDIMENT CONTROL PLAN	3 OF 9
EROSION AND SEDIMENT CONTROL NOTES AND SPECIFICATIONS	4 OF 9
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RECORD/SITE LAYOUT PLAN	6 OF 9
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ROAD IMPROVEMENTS AND CONSTRUCTION DETAILS	9 OF 9

COVER SHEET FOR
BOHEMIA CROSSING
2nd ELECTION DISTRICT
CECIL COUNTY, MARYLAND

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OWNER
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WILMINGTON, DE 19807
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REVISIONS	CHECKED BY
10-16-08 PER 10/01/08 T.A.C. COMMENTS	KMA

LANDMARK CONSULTING ENGINEERS, INC.
CIVIL AND SITE ENGINEERING SPECIALISTS
950 WEST VALLEY ROAD • SUITE 3104 • WAYNE, PENNSYLVANIA
PHONE - (610) 687-1976 • FAX - (610) 687-2507

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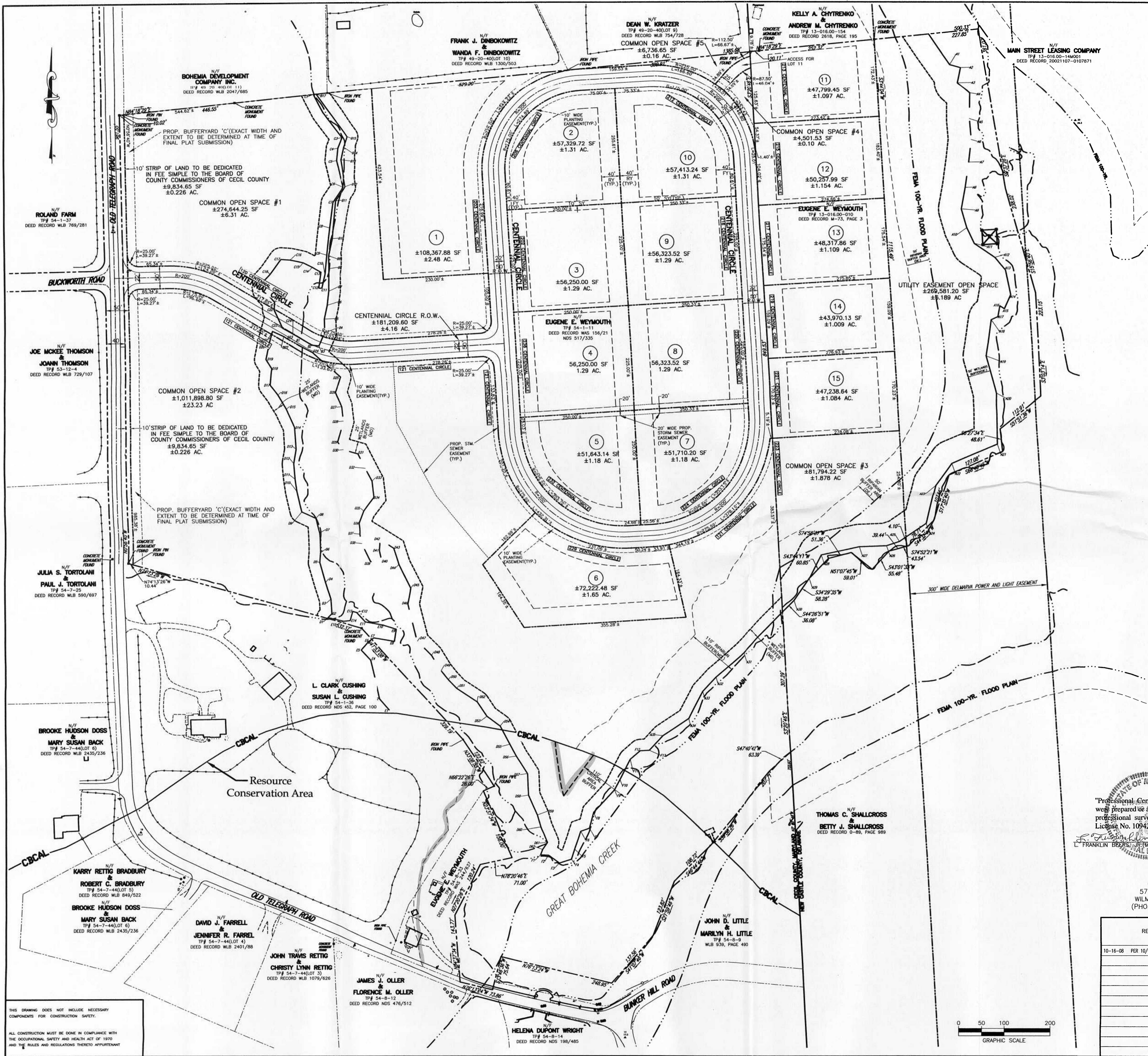
SCALE: 1" = 200' DRAWN BY: KCB
DESIGNED BY: KCB CHECKED BY: KMA/CB DRAWING NO.: C-1836 FILE NO.: SHEET 1 OF 9

DATE: 09-17-08 COMM. NO.: C-1836

"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. 32078 Expiration Date: June 12, 2009".

Kevin McAgon
KEVIN MCGON(MARYLAND PROFESSION ENGINEER #32078) DATE 10/16/08

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND THE RULES AND REGULATIONS THEREIN APPROPRIATE.



LEGEND

- EXIST. FEATURES (ROADWAYS, BUILDINGS, ETC.)
- EXIST. SITE PERIMETER BOUNDARY
- EXIST. ADJOINING PROPERTY BOUNDARY
- EXIST. STATE BOUNDARY LINE
- EXIST. STREAMS AND WATER
- CBICAL --- CHESAPEAKE BAY CRITICAL AREA LINE/ RESOURCE CONSERVATION AREA BOUNDARY
- PROP. LOT LINES
- MD. / DE. MARYLAND / DELAWARE DESIGNATIONS
- M-00 P-00 TAX MAP AND PARCEL NUMBERS
- NON-TIDAL WETLANDS
- FEMA 100-YR. FLOOD PLAN
- RIPARIAN BUFFER
- SOIL BOUNDARY (MeB2, MeC3)
- [121] CENTENNIAL CIRCLE --- PROPOSED STREET ADDRESS

RECEIVED
OCT 31 2008
CRITICAL AREA COMMISSION
Chesapeake & Atlantic Coastal Bays

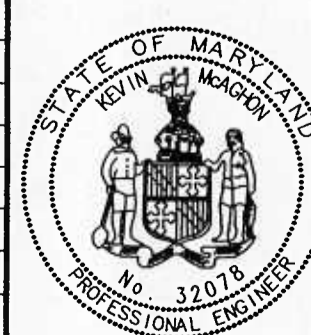
"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional surveyor under the laws of the State of Maryland, License No. 10942, Expiration Date: June 22, 2010".
FRANKLIN BEERS, JR. MARYLAND PROFESSIONAL LAND SURVEYOR #10942 DATE 10/15/08

"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. 32078, Expiration Date: June 12, 2009".
KEVIN MCAGHON (MARYLAND PROFESSIONAL ENGINEER #32078) DATE 10/15/08

PRELIMINARY RECORD PLAN
FOR
BOHEMIA CROSSING
2nd ELECTION DISTRICT
CECIL COUNTY, MARYLAND

CONTACT: GEORGE HOBBS, 5714 KENNETT PIKE, WILMINGTON, DE 19807, (PHONE) 302-545-5263
OWNER: EUGENE E. WEYMOUTH, 5714 KENNETT PIKE, WILMINGTON, DE 19807, (PHONE) 302-652-3296

REVISIONS	CHECKED BY
10-16-08 PER 10/01/08 T.A.C. COMMENTS	KMA



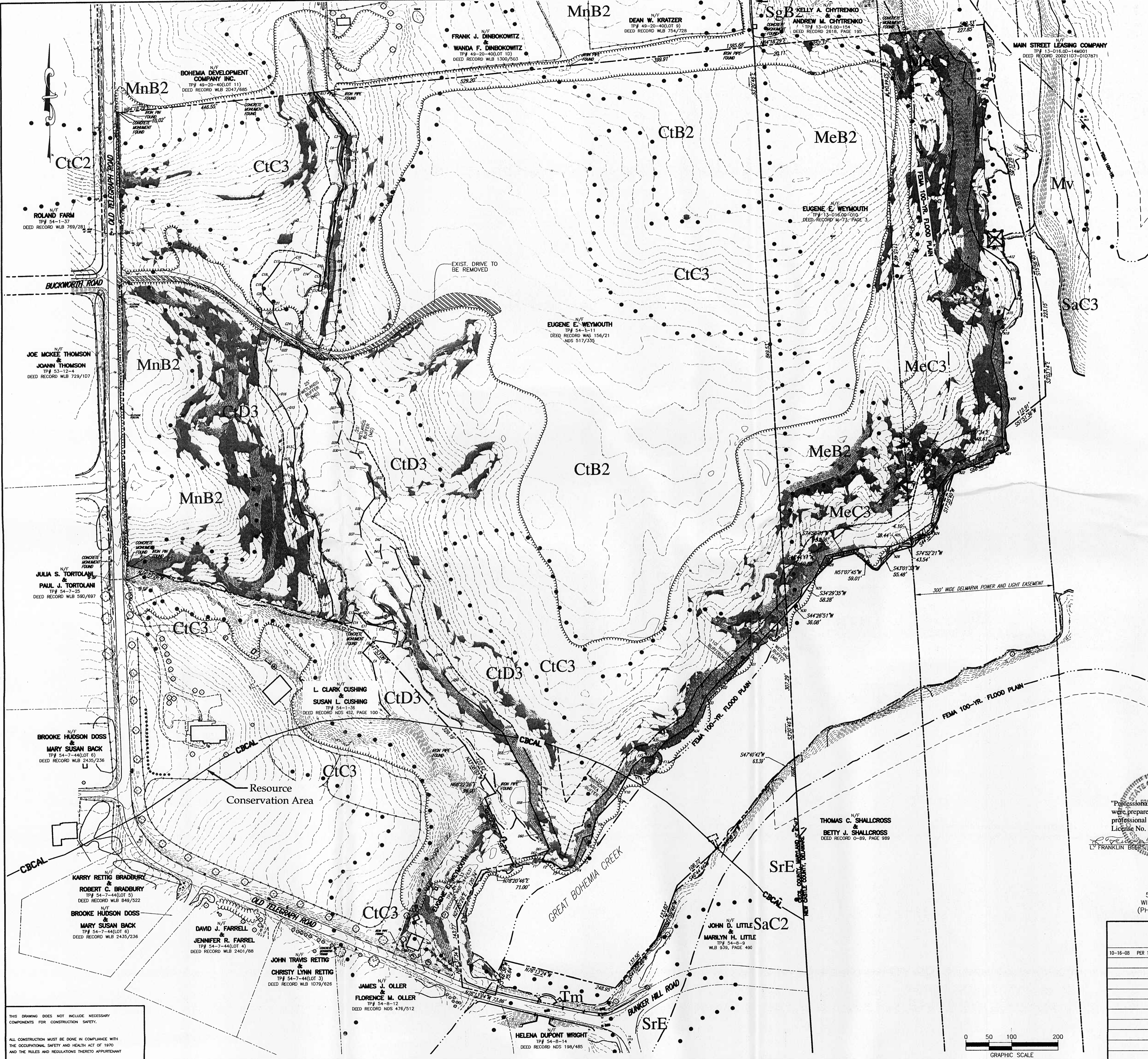
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SCALE: 1" = 100'	DRAWN BY: DK
DESIGNED BY: DK	CHECKED BY: KMA
DATE: 9-17-08	FILE NO. C-1836
COMM. NO.	RECORD PLAN
	SHEET NO. 6 OF 9

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AREAS OF NATURAL CONSTRAINTS

RESOURCE CONSERVATION AREA (RCA)	GROSS TRACT AREA	GROSS W/W DEVELOP. AREAS	NEW CASTLE CO. DE GROSS W/W DEVELOP. AREAS
FEMA 100-YR FLOOD PLAN	4.64 AC.	4.64 AC.	0.00 AC.
NON-TIDAL WETLAND AREAS	8.33 AC.	4.41 AC.	0.00 AC.
RIPARIAN AND WETLAND BUFFER AREAS	5.52 AC.	5.16 AC.	0.15 AC.
PRECAUTIONARY SLOPES (15 - 25% SLOPES)	6.12 AC.	4.64 AC.*	0.14 AC.
PROHIBITIVE SLOPES (25%+)	5.27 AC.	2.90 AC.	0.12 AC.
WATER AREAS (GREAT BOHEMIA CREEK)	2.41 AC.	1.66 AC.	0.05 AC.
	4.46 AC.	4.37 AC.	0.00 AC.

(NOTES: * MD - INCLUDES 25' FROM CENTERLINE OF INTERMITTENT STREAM, 25' FROM EDGE OF WETLAND AREAS AND 110' FROM EDGE OF BODIES OF WATER
 ** DE - 50' FROM EDGE OF BOTH FLOOD PLAN LINE AND WETLAND AREAS)

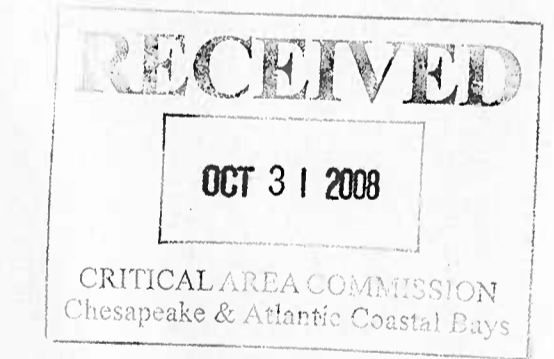
LEGEND

	EXIST. FEATURES (ROADWAYS, BUILDINGS, ETC.)
	EXIST. SITE PERIMETER BOUNDARY
	EXIST. ADJOINING PROPERTY BOUNDARY
	EXIST. STATE BOUNDARY LINE
	EXIST. EASEMENT BOUNDARY
	EXIST. STREAMS AND WATER
	EXIST. CONTOURS
	CHESAPEAKE BAY CRITICAL AREA LINE / RESOURCE CONSERVATION AREA BOUNDARY
	EXIST. TREE LINE
	PRECAUTIONARY SLOPES (15-25% SLOPES)
	PROHIBITIVE SLOPES (25%+ SLOPES)
	MD. / DE. MARYLAND / DELAWARE DESIGNATIONS
	M-00 P-00 TAX MAP AND PARCEL NUMBERS
	NON-TIDAL WETLANDS
	FEMA 100-YR FLOOD PLAN
	RIPARIAN BUFFER
	SOIL BOUNDARY

SOILS LEGEND

CtC2	- COLLINGTON LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED
CtC3	- COLLINGTON LOAM, 5 TO 10 PERCENT SLOPES, SEVERELY ERODED
MnB2	- MATAPEAKE SILT LOAM, 2 TO 5 PERCENT SLOPES, SEVERELY ERODED
SaC2	- SASSAFRAS SANDY LOAM, 5 TO 10 PERCENT SLOPE, SEVERELY ERODED
SrE	- SASSAFRAS AND AURA SOILS, 15 TO 40 PERCENT SLOPES
Tm	- TIDAL MARSH

NOTE
 1. BOUNDARY AND TOPOGRAPHY INFORMATION BASED ON SURVEY PERFORMED BY LANDMARK ENGINEERING INC. DATED MARCH, 2007.



"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional surveyor under the laws of the State of Maryland, License No. 10942, Expiration Date: June 22, 2010".
 L. FRANKLIN BEESLEY, JR. (MARYLAND) PROFESSIONAL LAND SURVEYOR #10942 DATE 10/30/08

"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. 32078, Expiration Date: June 12, 2009".
 KEVIN MCAGHON (MARYLAND) PROFESSIONAL ENGINEER #32078 DATE 10/30/08

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EXISTING CONDITIONS PLAN FOR
BOHEMIA CROSSING
 2nd ELECTION DISTRICT
 CECIL COUNTY, MARYLAND

REVISIONS	CHECKED BY
10-16-08 PER 10/01/08 T.A.C. COMMENTS	KMA

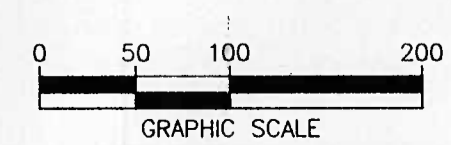


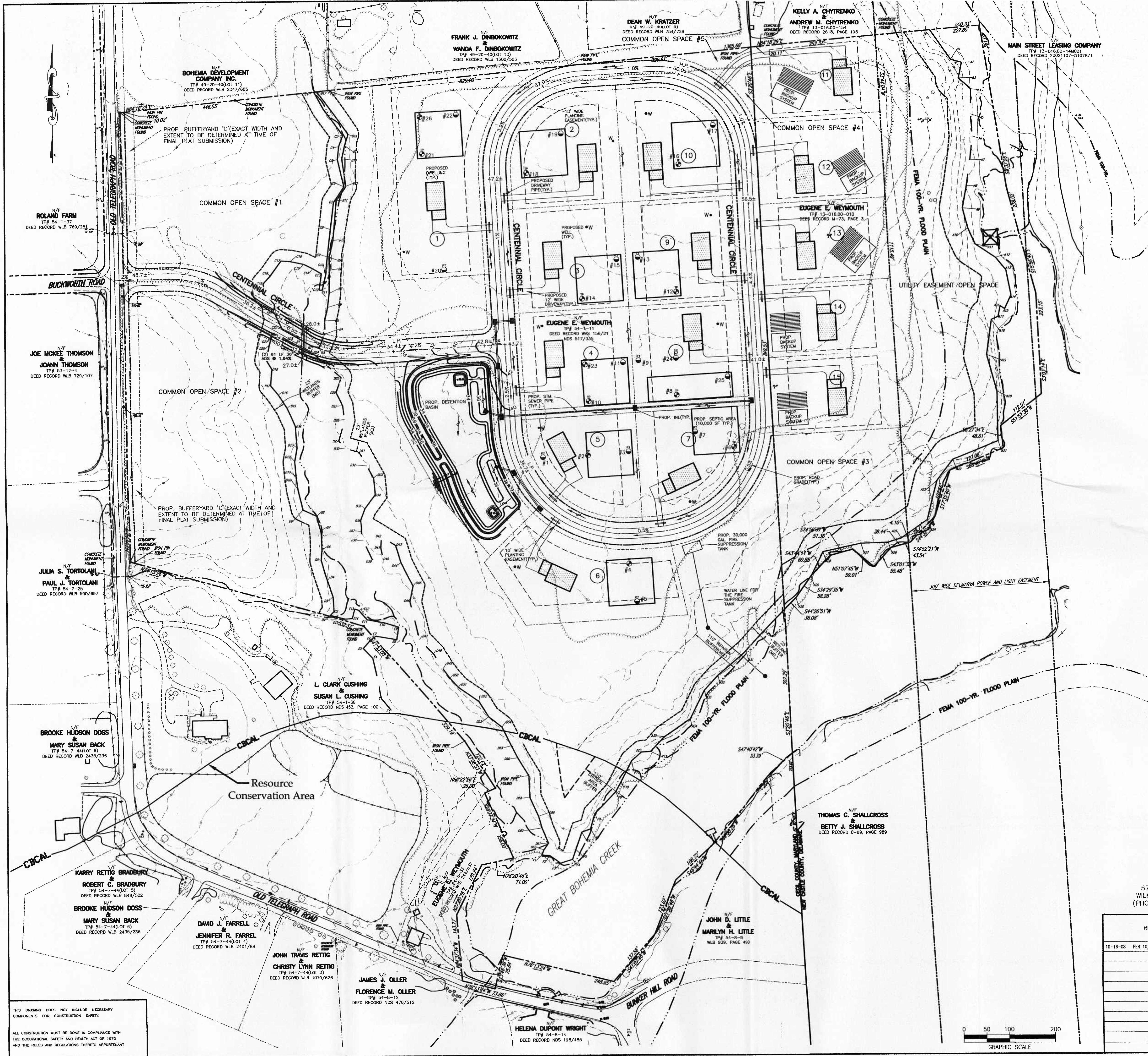
LANDMARK CONSULTING ENGINEERS, INC.
 CIVIL AND SITE ENGINEERING SPECIALISTS
 950 WEST VALLEY ROAD • SUITE 3104 • WAYNE, PENNSYLVANIA
 PHONE - (610) 687-1976 • FAX - (610) 687-2507

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SCALE: 1" = 100'	DRAWN BY: DK
DESIGNED BY: DK	CHECKED BY: KMA
DATE: 9-17-08	FILE NO. C-1836
COMM. NO.	SHEET NO. 7 OF 9

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PERCOLATION DATA TABLE

HOLE #	DEPTH	RATE
1	13'	NO TEST
3	11'	2 MIN.
5	11'	7 MIN.
7	12'	6 MIN.
9	12'	22 MIN.
11	7'	16 MIN.
13	11'	12 MIN.
15	10'	7 MIN.
17	11'	12 MIN.
19	11'	12 MIN.
20	13'	NO TEST
22	10'	15 MIN.
24	13'	NO TEST
25	12'	8 MIN.

LEGEND

- EXIST. FEATURES (ROADWAYS, BUILDINGS, ETC.)
- EXIST. SITE PERIMETER BOUNDARY
- EXIST. ADJOINING PROPERTY BOUNDARY
- EXIST. STATE BOUNDARY LINE
- EXIST. EASEMENT BOUNDARY
- EXIST. STREAMS AND WATER
- EXIST. CONTOURS
- CBICAL --- CHESAPEAKE BAY CRITICAL AREA LINE/ RESOURCE CONSERVATION AREA BOUNDARY
- EXIST. TREE LINE
- PRECAUTIONARY SLOPES (15-25% SLOPES)
- PROHIBITIVE SLOPES (25%+ SLOPES)
- PROP. LOT LINES
- MD. / DE. MARYLAND / DELAWARE DESIGNATIONS
- M-00 P-00 TAX MAP AND PARCEL NUMBERS
- NON-TIDAL WETLANDS
- FEMA 100-YR --- FLOOD PLAN
- RIPARIAN BUFFER
- SOIL BOUNDARY
- Mc3 • PROPOSED SPOT GRADE
- McB2 • PROPOSED INL/STORM SEWER
- W • PROPOSED WELL
- 3B --- PROPOSED CONTOUR
- TP • SEPTIC TEST PIT LOCATION
- PT • SEPTIC PERCOLATION HOLE LOCATION (PERCOLATION HOLES WERE LOCATED BY FIELD SURVEY)

RECEIVED
OCT 31 2008
CRITICAL AREA COMMISSION
Chesapeake & Atlantic Coastal Bays

"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. 32078 Expiration Date: June 12, 2009".
Kevin McChown
KEVIN MCCHOWN, MARYLAND PROFESSIONAL ENGINEER #32078 DATE

PRELIMINARY GRADING/ STORMWATER MANAGEMENT PLAN
FOR
BOHEMIA CROSSING
2nd ELECTION DISTRICT
CECIL COUNTY, MARYLAND

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10-16-08 PER 10/01/08 TAC COMMENTS	KMCA



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